



Addiction and Lifestyles in Contemporary Europe: Reframing Addictions Project (ALICE RAP)

Adolescents as customers of addiction

Deliverable 16.1, Work Package 16

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List of abbreviations

A&E	Accident & emergency department
ADHD	Attention deficit hyperactivity disorder
AGREE	Appraisal of Guidelines Research & Evaluation instrument
ALICE RAP	Addictions and Lifestyles in Contemporary Europe – Reframing Addictions Project
AMPHORA	Alcohol Public Health Research Alliance
AMSTAR	A Measurement Tool to Assess Systematic Reviews
BA	Brief advice
BAC	Blood alcohol content/concentration
CBA	Controlled before-and-after study
CBT	Cognitive Behavioural Therapy
DARE	Drug Abuse Resistance Education
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, published by the American Psychiatric Association
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ESPAD	European school surveys project on drugs and other substances
ETS	Environmental tobacco smoke
EU	European Union
FAS	Foetal Alcohol Syndrome
FASD	Foetal Alcohol Spectrum Disorders
GDL	Graduated driver licensing
HBSC	Health behaviour in school-aged children
HIV/AIDS	Human immunodeficiency virus/Acquired immunodeficiency syndrome
ICD	International Classification of Diseases published by the World Health Organization
IREFREA	European Institute of Studies on Prevention
LAAM	Levo- α -acetylmethadol
LJMU	Liverpool John Moores University
MA	Meta-analysis
MI	Motivational interviewing
NA	Not applicable
NAS	Neonatal abstinence syndrome
NR	Not reported
NRT	Nicotine replacement therapy
OECD	Organisation for Economic Co-operation and Development
PFAS	Partial Foetal Alcohol Syndrome
PICOS	Population - Intervention - Comparator - Outcome - Study design
RAPI	Rutgers Alcohol Problem Index
RCT	Randomised controlled trial
Reitox	Réseau Européen d'Information sur les Drogues et les Toxicomanies (European information network on drugs and drug addiction)
UN	United Nations
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization



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Executive summary

Introduction

ALICE RAP Work Package 16 is the first project to provide comprehensive summative information on how young people's addictive behaviours are addressed in EU Member State policy documents on alcohol, tobacco, illegal drugs, and gambling. A series of related activities were carried out between 2011 and 2013, including: an overview of EU policy documents relating to the four behaviours of interest; an online survey with policy experts in 20 European countries; the development of a framework of policies and interventions; a systematic review of reviews on the effectiveness of potential policies and interventions; a review of existing policy scales and indices; and the development of a policy evaluation framework.

Policy mapping and review

A structured online questionnaire was sent to policy experts in 32 European countries to identify young people targeted components in Member State policy. Policy experts from 20 countries provided information on national or regional policy documents on alcohol, tobacco, illegal drugs or gambling. Findings from this online survey suggested that general addiction or substance use policies represented the key documents on young people's addictive behaviours. Policy development was seen by policy experts as a negotiation process between a variety of stakeholders, including industry representatives; but it appeared that young people were not usually involved in this process. Prevention programmes and age limits were reported as the main approaches for addressing young people's legal addictive behaviours; for illegal drugs, the emphasis was on prevention and treatment. The success of illegal drugs policies was perceived positively, even though evaluations of policy impact on health and behaviour were reported relatively rarely. The effectiveness of alcohol and tobacco policies was believed to be hampered by industry's failure to comply with existing regulations. The complexity of funding mechanisms made it difficult to determine the value of resources allocated to policies and programmes addressing young people's addictive behaviours. Overall, there were differences in how alcohol, tobacco, illegal drugs and gambling were addressed in policy. The most pronounced differences were observed between the substances as a group and gambling, with the latter tending to be governed through legislation (cf policy) and situated within a market/business context (cf health and criminal justice).

Review of reviews

A systematic review of reviews was conducted to assess the effectiveness of policy options for addressing young people's addictive behaviours, with an emphasis on the approaches identified through the policy mapping. High quality systematic reviews of quantitative primary studies evaluating the effectiveness of policies or interventions were included if they were written in English, provided separate information on young people aged 25 years or under; reviewed a policy or intervention approach addressing substance use (alcohol, tobacco, illegal drugs) or gambling, or related health and social harms; and reported behavioural outcomes in young people related to substance use or gambling. A lack of reviews specific to young people was anticipated in relation to gambling, and therefore reviews of studies in any population were eligible for inclusion and transferability of findings to young populations would be considered as part of the synthesis. Searches were conducted using electronic databases (Medline, PsycINFO, Cochrane Library; 2000-2012), and supplemented by hand searches up until March 2013. Of the 2960 unique publications identified through these searches, 65 high quality reviews met the inclusion criteria. A bespoke framework of policies and interventions was developed using data from the surveys and literature search to review and synthesise the evidence, comprising eleven broad approaches:

1. Control and regulation of supply
2. Gambling/substance-free zones
3. Age limits
4. Taxation and pricing
5. Control and regulation of advertising, marketing and sponsorship
6. Warning labels
7. Prevention programmes
8. Treatment and social reintegration
9. Harm reduction
10. General delivery structures and quality assurance measures
11. General approaches

The included review-level evidence concentrated on three areas: prevention; treatment; and harm reduction (mostly interventions to address the potential harms to children resulting from parental participation in addictive behaviours, rather than reduction of harm in young drug users). Despite the extensive research undertaken in these areas, there was little high quality evidence to conclude 'what works' to address young people's addictive behaviours. The findings from the review can be summarised as follows:

Prevention - Mass media campaigns should only be delivered as part of multiple component programmes to support school based prevention; standalone mass media campaigns for illegal drug use were at best ineffective, and at worst associated with increased drug use. With regard to school based prevention, information provision alone was not considered an effective strategy, whereas skills development programmes were found to prevent alcohol, tobacco and some types of illegal drug use. However, studies often examined manualised classroom based programmes, and it was not possible to identify effective mechanisms of change or mediating programme components.

Treatment - The evidence was inconclusive on the effectiveness of psychosocial treatment approaches for addictive behaviours in young people, with some evidence to suggest that cognitive behavioural therapy (CBT) when delivered in combination with other interventions and certain types of family-based therapy may be effective in reducing substance use. Overall, there was insufficient evidence to judge the effectiveness of pharmacological treatment for alcohol and illegal drug use; pharmacological approaches appeared to be ineffective for smoking cessation in young people.

Harm reduction – Non-pharmacological smoking cessation interventions in pregnancy were effective in improving birth weight and reducing the likelihood of pre-term birth. Server liability laws and graduated driver licensing may be effective in reducing motor vehicle crashes among young drivers, but the applicability of these findings to contemporary Europe was questionable.

Taxation and pricing – Higher prices on cigarettes were considered effective in preventing and reducing young people's smoking. However, the magnitude of the effect was less clear, as the price elasticity estimates differed between individual studies and by type of outcome.

General approaches – There was limited evidence to suggest that developmental interventions in preschool can have beneficial effects on tobacco and cannabis use in adult life; and there was conflicting evidence regarding the effects of non drug specific home visitation on child outcomes, and the effects of developmental interventions in preschool on alcohol use in adult life.

Insufficient evidence was found to judge the effectiveness of other approaches of interest, including: control and regulation of supply; gambling or substance-free zones; age limits; control and regulation of advertising, marketing and sponsorship; warning labels; general delivery structures and quality assurance measures. The evidence base with regard to gambling was also limited, as only two

reviews met the inclusion criteria, even though reviews in adult populations were eligible for inclusion. Searches indicated that the use of systematic review methods is not yet as common in the gambling field as it is in the substance use field.

Review of existing policy scales and indices

Existing policy scales and indices were reviewed regarding their adequacy for examining young people targeted components of national policy. Three scales were reviewed, two of which focussed on alcohol (*AMPHORA scale to measure the strictness and comprehensiveness of alcohol policies; Alcohol Policy Index*) and one on tobacco (*Tobacco Control Scale 2010*). There was limited information available on the validity and reliability of these scales, and questions remained regarding the scientific evidence base underpinning their development. A comparison of the scales with the findings from earlier activities in the Work Package found that young people targeted components of policy were included in the existing scales only to a limited extent. The three scales were therefore deemed to be not fully appropriate for assessing and comparing countries with regard to how they address *young people's* addictive behaviours through policy. Prevention programmes in particular were not given much emphasis in the existing scales, despite prevention being a key strategy for addressing young people's addictive behaviours. None of the reviewed policy scales included prevention programmes as a separate broad approach (i.e., it was subsumed under other categories), and different types of prevention programmes were not distinguished, although the effectiveness of prevention actions differs by the specific approach taken. Through the activities in this Work Package, numerous examples of young people specific elements were identified that could be considered in the development of a young people specific scale (or a general scale sensitive to young people targeted measures). However, the evidence base was not considered to be sufficiently well developed with regard to young people to allow the construction of a useful young people specific scale (i.e., a scale that is both comprehensive, and based upon sound scientific evidence of effectiveness).

Young People's Addictive Behaviours Policy Evaluation Framework

As a final activity in this Work Package, the foundations for a policy evaluation framework regarding young people's addictive behaviours were developed. The framework comprised three elements:

1. Written government policy
2. Implementation
3. Outcomes in young people

Written government policy was understood as the overarching framework to guide (government) activities in relation to a particular policy area, by specifying what population needs are considered a priority by government, and how they are to be addressed. Six criteria developed as part of this Work Package were suggested as useful indicators for judging the quality of written government policy, namely: availability of relevant policy; methods for policy development (including how scientific evidence was incorporated); policy content; policy changes; monitoring and evaluation of policy implementation and success; and resource allocation.

Implementation of what has been set out in policy included the policies and interventions chosen based on an understanding of target population needs and the scientific evidence of effectiveness; as well as general and specific delivery structures and quality assurance measures to support the uptake of policies and interventions by relevant stakeholders. This element could be assessed by referring to process indicators, changes in the intermediate target population (e.g., general practitioners, retailers of tobacco products, or servers of alcohol beverages), and policy scales assessing what policies and interventions have been implemented in a given country.

Outcomes in young people were the final element in the policy evaluation framework. The aim of policy development and implementation was presented as the reduction of harms suffered by young people in relation to addictive behaviours (i.e., alcohol, tobacco, illegal drug use and gambling). This included harms suffered during youth or in later life (as a long-term consequence of participation in addictive behaviours); across a range of domains (i.e., not limited to health issues); and harms arising not only from young people's own actions, but also those arising from others' participation in addictive behaviours (e.g., parental smoking). This element could be assessed by measuring harms, common risk factors, and young people's participation in addictive behaviours.

It was not possible to prescribe specific indicators for consideration in the evaluation of policy, as the choice of indicators depends on a number of factors, including strategic decisions (e.g., what outcomes are considered a priority) and pragmatic limitations (e.g., what data are available or measurable). However, the framework outlined perspectives and types of indicators to consider in policy evaluation, and should therefore be a useful tool for Member States in developing methodologies for the evaluation of policies in relation to young people's addictive behaviours.

Discussion

In this Work Package, *policy* was understood primarily as referring to the written strategies adopted by government to address a specific issue (e.g., for drug use, such a document might be called a drugs policy, strategy, or action plan). Legislation was not considered a policy but was seen as an instrument to achieve policy objectives. This understanding of policy was useful for examining alcohol and illegal drugs; however, it was less suitable for examining tobacco and gambling. The online survey suggested that at a national level these areas were more likely to be governed through legislation (cf policy). Furthermore, differences between countries with regard to the level of formalisation of government policy documents and governance structures meant that this concept of policy was better suited to describe the situation in some countries than in others. Overall, the focus of this work was on *activities implemented or supported by government*, and thus other aspects, such as informal activities (e.g. social control) or natural cessation of addictive behaviours, were not reviewed.

With regard to the review of reviews, a number of limitations precluded a direct translation of review findings into policy recommendations. The discussion considered the following issues: the heterogeneity of interventions within seemingly homogeneous approaches; focus on manualised approaches and lack of knowledge regarding effective 'ingredients' that could be adapted more flexibly; differential effects of actions (e.g., by population sub-group); differences in the size, scope, and quality of the evidence base across different behaviours and policy approaches; methodological limitations in general and the challenges of evaluating some types of approaches; insufficient evidence for most approaches of interest; limited consideration of children, adolescents and young adults in the available literature, particularly in relation to policies and interventions targeted at the general population; unknown generalisability of findings; and the need to consider how actions might affect other outcomes not considered in this review. These were not necessarily limitations of the review methodology, but provided insight into the state of the current evidence with regard to young people's addictive behaviours.

A weakness of the review undertaken was a lack of available evidence on the effectiveness of most approaches of interest. This evidence gap was likely compounded by the review inclusion criteria, in particular the restriction to high quality reviews. This restriction was necessary for a number of reasons, but it also meant that evidence from primary studies not yet systematically reviewed using robust methodologies was not captured. A brief appraisal of recent reviews of reviews with a similar scope suggested that these included a greater body of evidence, but the robustness of review

findings was questionable given that the quality of included reviews and primary studies did not appear to have been fully taken into account.

Recommendations, particularly of approaches seeking to restrict young people's behaviours or to change cognitions underlying choices to pursue addictive behaviours, must be based on the strongest possible research designs with the best possible study execution. The current state of the evidence base with regard to young people, however, requires researchers and decision makers to compromise between quality and quantity, which – at its extreme ends – comprises the following two options: i) referring to high quality evidence only, but being left with little material upon which to draw conclusions (i.e., discarding the majority of available evidence); or ii) considering a larger body of evidence that may have significant methodological limitations and thus running the risk of recommending an approach as 'effective' based on flawed review findings.

Although the review provided some evidence on a limited number of approaches, its strength lies in using a systematic review methodology, documenting methods for the selection and assessment of studies in a transparent way, focussing on higher quality evidence and considering methodological as well as other limitations in the interpretation of evidence. To the authors' knowledge, this was also the first review of reviews focussing on young people and examining a range of policy options with regard to alcohol, tobacco, illegal drugs, and gambling. Where the review was unable to identify high quality evidence, it can be understood as a scoping exercise to identify gaps and the need for high quality reviews.

Conclusions

A major challenge for evidence based policy making is that the currently available evidence base regarding young people is incomplete. Current recommendations with regard to effective approaches for addressing young people's addictive behaviours should be, at best, made with reference to 'promising' approaches, rather than approaches proven to be effective. A further challenge lies in the practical need to balance the evidence base with what is feasible and desirable in the real world, including not only stakeholder views but also existing infrastructures.

Recommendations for policy and decision makers

- Ensure the availability of well formulated policy documents (e.g., national strategy, action plan) developed in line with evidence and international good practice recommendations. There is a need for dedicated policies particularly in the fields of tobacco and gambling, and respective policies could be modelled on those already available for alcohol and illegal drugs.
- For gambling in particular, formulate public health priorities in relation to young people and the general population (where these are not yet available).
- Develop the infrastructures required for the successful implementation of effective policies and interventions.
- Acknowledge that current activities rely on an incomplete evidence base and that careful consideration must be given to the activities being implemented, including unintended effects and opportunity costs (e.g., if new investments are made in one activity, then how does this affect (the financial security of) other activities?).
- Where evidence suggests that actions are ineffective or have iatrogenic effects, policy makers should seek to understand whether modifying these programmes in line with good practice recommendations would lead to an increased likelihood of success (e.g. emerging

evidence suggests that mass media approaches to prevention are only effective when delivered in support of an evidence based school or multicomponent programme). All modifications should be accompanied by consideration of the ethics of intervention, and rigorous research into the effects of changing an activity. Policy makers should disinvest in approaches which have been consistently shown to have no beneficial effect.

- Where evidence of effectiveness is unclear, implement policies and interventions only as part of sufficiently funded scientific research projects to evaluate the effectiveness of these actions using robust research methodologies.

Recommendations for researchers

- Where primary studies are available but high quality reviews are lacking, synthesise available evidence in well documented systematic reviews. Meta-analyses, in particular, should take into account the heterogeneity of interventions. There is also a need for the uptake of systematic review methods in the gambling field in particular, where traditional or semi-systematic literature reviews are still being used to examine the effectiveness of interventions.
- Where no or few primary studies are available and evidence is needed to inform policy making, conduct primary studies using the most rigorous study designs possible, preferably under real world conditions. Research trials should, where possible, adopt a realist approach to identifying intervention effectiveness, seeking to understand mechanisms of change, differential outcomes for sub populations, and the effects of context and complex systems on outcomes.
- In effectiveness trials, focus on behavioural outcomes rather than process data or mediators. Although in some cases interventions may address factors that are too distal and so preclude measurement of final outcomes (i.e., behavioural outcomes in young people), in some cases data collection appears to focus on process data or mediators although behavioural outcomes in young people could be measured (e.g., success of tobacco retail restrictions measured via test purchasing only; success of gambling interventions measured as changes in knowledge or attitudes). Careful consideration should also be made of the choice of primary and secondary outcomes of interventions research. Although some interventions aim to address important policy targets (e.g., lifetime use of substances), these should be chosen because of robust prediction of meaningful health or social outcomes, rather than the political priority of the behaviour.
- Consider (and report) the effects of policies and interventions on young people, including (as appropriate) children, adolescents, and young adults; not only when policies and interventions are specifically targeted at young people. In particular, the group of 18 to 25 year olds should be presented and analysed separately from the adult population.



Purpose of this report

This report represents one of three documents describing work undertaken as part of the two-year Work Package 16 on “Adolescents as customers of addiction” within the Addictions and Lifestyles in Contemporary Europe – Reframing Addictions Project (ALICE RAP). The three documents are:

- Deliverable 16.1 Adolescents as customers of addiction (this document)
- Background report 1: Policy mapping and review
- Background report 2: Review of reviews

This document is the *main report*; it describes the background to the Work Package, summarises activities undertaken by the research team, and discusses these in relation to the Work Package objectives.

The *background reports* supplement the main report by documenting in detail the methods and results pertaining to the two key activities of the Work Package, supported by extensive appendices. They are available as separate PDF files.

Introduction

At the start of this project, there was no comprehensive summative information available on how young people's addictive behaviours are addressed in EU Member State policy documents. Where relevant information was available, this was fragmented and often focused on single behaviours (e.g., illegal drug use) and/or a particular type of approach (e.g., prevention programmes). However, without a wider perspective, integrating a range of policies and interventions as well as a different types of addictive behaviours, it was not possible to fully understand how young people's addictive behaviours are addressed in policy.

The goal of ALICE RAP Work Package 16 was to fill this gap by identifying and comparing different policy approaches to young people's addictive behaviours in relation to alcohol, tobacco, illegal drugs, and gambling. "Addictive behaviours" were defined as those behaviours that can become compulsive and continue despite causing health and social harms (e.g., neglecting other areas of life). Particular attention was given to how policies addressing such behaviours in young people are developed and to what extent they have been shown to be effective. While policies are intended to prevent addictive behaviours, there is also the possibility that they may (inadvertently) promote addictive behaviours (e.g., by increasing the opportunities for young people to engage in addictive behaviours).

The specific objectives of Work Package 16 were:

- Objective 1: To identify, collate, classify, and review recent EU Member State policies on substances (drugs, alcohol, and tobacco) and gambling, with a particular focus on environmental and cultural priorities;
- Objective 2: To provide an integrative overview of the likely effectiveness of young people targeted environmental and cultural components of national policies on addictive behaviours and a framework for identifying policy impact;
- Objective 3: To provide a searchable electronic point of access to reviewed data.

The activities in this Work Package corresponded to these objectives. Objective 1 was translated into a policy mapping and review exercise, whereas Objective 2 was translated into a systematic review of reviews on the effectiveness of policies and interventions. In line with Objective 3, all information gathered and produced in these tasks will be presented on the Internet (following submission of this report).

Specifically, the *policy mapping and review* aimed to identify young people targeted components of EU Member state policy documents concerning alcohol, tobacco, illegal drugs, and gambling, and to review them in relation to their scope (with a particular reference to environmental and cultural priorities), their quality (focussing on their development), as well as their correspondence with EU policy.

This was done by i) collating and reviewing EU policy documents on addictive behaviours with regard to how young people are addressed therein; and ii) by conducting an online survey with experts in European countries to collect and review data on relevant national (and regional) policies.

The purpose of the *review of reviews* was to assess the effectiveness of the policy approaches identified in the policy mapping in producing positive outcomes in young people. In follow-up to the policy mapping and review conducted in the first stage of the Work Package, the review sought to answer the following questions:

- Which of the approaches listed in government policy have been shown to be effective in producing positive outcomes in young people?
- Does government policy list any approaches that have been shown to have no or iatrogenic effects?
- Does government policy list any approaches that have not yet been evaluated (i.e., are there any gaps in the scientific evidence)?
- Does the literature report any effective policy approaches that are not currently considered in government policy?
- What methods are used to evaluate policies and interventions, and what indicators are used to measure policy/intervention success?

To answer these questions, we conducted a review of existing high quality reviews of scientific studies evaluating the effectiveness of policies and interventions.

The following sections summarise the methods used as well as the findings emerging from these activities. Full details on both activities are provided in the two background reports (*Background report 1: Policy mapping and review; Background report 2: Review of reviews*).

I: Policy mapping and review

Methods

The first activity of Work Package 16 was a scoping exercise to obtain a better understanding of how young people are currently addressed in EU policy on addictive behaviours. Major EU policy documents on alcohol, tobacco, illegal drugs, and gambling published between January 2000 and March 2012 were retrieved through Internet searches and assessed with regard to whether they included young people specific elements. Thirteen key documents were identified and reviewed with regard to i) the extent to which they addressed young people (e.g., mentioned in passing vs. separate chapter); and ii) in what context young people were addressed (e.g., public health or criminal justice orientation).

As the second activity within the policy mapping and review, an online survey was undertaken between April and June 2012, requesting national policy experts to identify government policy documents of relevance to young people's addictive behaviours and to provide commentary on these documents using a structured questionnaire. The research team developed a bespoke list of six criteria to judge the quality of policy documents (see Box 1 in Appendix), which guided the development of survey questions as well as the data analysis. National policy experts were identified through a nomination process. Of the 32 countries invited to make nominations (EU 27 + Croatia¹, Iceland, Norway, Switzerland and Turkey), 20 countries submitted nominations for a total of 105 experts across the four policy areas of interest. Of these, 68 experts from 20 countries² took part in the survey, including public servants as well as academic researchers. Most participants reported being directly involved in policy development, monitoring and/or evaluation. The questionnaire covered four policy areas (alcohol, tobacco, illegal drugs, and gambling), but participating experts completed it only in relation to their main area(s) of expertise. Information on alcohol policy was available for 19 countries, on tobacco from 11 countries, on illegal drugs from 20 countries, and on gambling from 10 countries. The data analysis was conducted on a country basis rather than at the level of individual respondents (i.e., if multiple responses from the same country were available for a particular policy area, these were considered together). Where a sufficient number of policies was available, the analysis considered only policies (i.e., alcohol and illegal drugs); otherwise legislation was also considered (i.e., tobacco and gambling). Full details on the methodology are provided in *Background report 1: Policy mapping and review* (available as a separate document).

Results

The aim of the policy mapping and review was to obtain an understanding of the availability and quality of policy documents at EU and Member State level referring to addictive behaviours in young people, with a particular reference to environmental and cultural aspects. The present report presents a summary of findings, whereas detailed findings are provided in *Background report 1: Policy mapping and review* (available as a separate document).

¹ Croatia was not yet an EU Member State at the time of conducting the study.

² The following countries were represented in the survey: Austria, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Spain, Sweden, United Kingdom, Croatia, Iceland, Switzerland.

Young people in EU policies on addictive behaviours

Our initial scoping exercise and review of EU policy documents suggested that young people specific components are available in alcohol, tobacco and gambling policy documents (with some identified documents focussing specifically on young people), but that this was not the case for illegal drugs.

- With regard to *alcohol*, our review suggested that written EU alcohol policy places great emphasis on protecting young people from alcohol-related harms; ‘young people’ form one of the priority themes in the EU strategy to support Member States in reducing alcohol related harm. Aims and strategies demonstrate a public health approach, addressing the potential health and social harms suffered by young people as a consequence of their own and others’ alcohol use. The strategy highlights that in order to protect young people from alcohol related harm, it is not sufficient to just target their own drinking levels, but also to try and protect them from the harmful effects of others’ drinking. For example, the strategy makes specific reference to the harm suffered by children in families with alcohol problems, as well as the occurrence of foetal alcohol disorders resulting from reduce exposure to alcohol in utero.
- With regard to *tobacco*, our review suggested that written EU tobacco policy addresses young people as the vulnerable target of the tobacco industry’s marketing and promotion strategies. Strategies therefore focus on the promotion of smoke-free environments and on restricting possibilities for the marketing and promotion of tobacco products.
- With regard to *illegal drugs*, our review suggested that written EU drugs policy does not place a particular emphasis on young people. Drug demand reduction activities are targeted at the general public, including adults, young people, and other vulnerable groups. Young people are recognised as one of the target groups for demand reduction activities, but are not considered separately from other populations. The focus on drug demand reduction demonstrates a public health approach. The new EU Drugs Strategy published after our review had been completed did not alter our conclusions.
- With regard to *gambling*, at the time of writing, there was no written EU policy available with regard to gambling although relevant documents were in the process of being developed. Our review suggested that EU activity with respect to gambling was situated within the context of market competition, whereas alcohol, tobacco and illegal drugs issues were more likely to be discussed in a public health context. However, public health concerns were clearly visible in the documents published by the EC, in particular with regard to gambling addiction and young people. The EC communication “*Towards a comprehensive European framework for online gambling*” (published after completion of our review) addresses young people’s needs in a separate section, and young people specific components will also be included in future policy documents that are under development (such as the planned EC Recommendations on the common protection of consumers of gambling services and on responsible gambling advertising)³.

³ This area is currently being developed and readers are therefore advised to consult the EC’s web portal on gambling for the most up to date information: http://ec.europa.eu/internal_market/gambling/index_en.htm

Young people in government policies on addictive behaviours

At the level of individual EU Member States, the following generalised findings from the online survey can be highlighted regarding the breadth and quality of policy documents in relation to young people (see Table 1 in the Appendix for further details):

- (A) *Policy availability.* Our online survey suggested that policies focussing specifically on young people *and* addictive behaviours are not commonly available at national government level. Guidance regarding young people's addictive behaviours may be found in national youth strategies, health strategies, addiction strategies and/or strategies specific to a particular substance or behaviour (e.g., national drugs strategy). Experts' accounts suggest that even where a national youth strategy is available, general addiction or substance policies represent the key documents on young people's addictive behaviours. The integration of young people issues within more general policies can be interpreted in different ways, which must consider the extent to which young people are addressed within these policies. For example, are young people only mentioned in passing or are the needs of young people discussed in a separate chapter? The survey indicates that young people are referred to in most addiction or substance policies; but the actual extent to which young people are addressed within general policies could not be determined on the basis of respondents' assessments.
- (B) *Policy development.* Our survey suggested that young people are not commonly involved in the development of policy or legislation. Respondents indicated the involvement of health and social services in policy making, which is likely to include practitioners working with young people and families. These may act as advocates for young people where these are not directly involved. With regard to the scientific evidence base of policy, the survey indicates that needs assessments and scientific literature reviews are utilised by a majority of countries to develop policy (cf legislation). However, respondents presented policy development as a negotiation process between a variety of stakeholders, including political parties, academics, the industry and the general public. Even where the industry or general public were not directly involved, policy seeks to balance the evidence base with what is (politically) feasible or desirable in the real world. This, in return, can lead to a lack of transparency, particularly in the final steps of the policy making process.
- (C) *Policy content.* Our survey suggested that policies can target different sub-groups of young people, depending on the context. For example, it was reported that bans on sales of alcoholic beverages and tobacco products commonly refer to children up to 18 years of age, but measures to prevent driving under the influence of alcohol or drugs may target older age groups. Young people aged 11-18 years emerged as a priority group, although countries also reported activities for narrower age groups or younger children. Prevention programmes and age limits appeared to be the main approaches to addressing young people's legal addictive behaviours; for illegal drugs, the emphasis was on prevention and treatment programmes (see Table 2 in the Appendix). Respondents also emphasised the importance of meta-approaches, such as having (young people specific) action plans and relevant legislation in place, which reflect also environmental and cultural priorities. Only few punitive measures were reported; instead of being punished or criminalised, young people appeared as a group to be protected (e.g., from the vested interests of the industry). Policies and interventions described in the online survey were used to develop a framework of policies and interventions (see Table 5 in the Appendix). A public health orientation was visible with regard to alcohol, tobacco and illegal drugs, with the Ministry of Health leading on policy development and implementation. Overall, the examples

given by respondents highlight the variety of possible government activities to address young people's addictive behaviours (see Table 3 in the Appendix).

- (D) *Policy changes.* No clear picture emerged from the online survey with regard to how young people's elements of policies have changed over recent years. Only few countries reported such changes and there was no particular pattern of changes across countries. This may suggest that the priorities and strategies in relation to young people's addictive behaviours are less contentious than overall policy directions and therefore less amenable to frequent change. It may, however, also indicate failure to incorporate new scientific or empirical evidence and amend priorities and strategies accordingly.
- (E) *Implementation, monitoring and evaluation.* The success of illegal drugs policies was evaluated positively by respondents due to decreasing prevalence rates among young people, even though evaluations of policy were reported relatively rarely. The effectiveness of alcohol and tobacco policies was believed to be hampered by industry's failure to comply with existing regulations (e.g., age limits, advertising regulations). All reporting countries were able to identify surveys of young people's alcohol, tobacco, and illegal drug use – international research efforts have clearly played a prominent role in producing this favourable situation. However, even though surveys were available, our survey suggested that the data is not necessarily used to monitor or evaluate policies. There appeared to be room for improvement both on the side of researchers and policy makers to ensure that survey data can be and is used to develop and monitor policy.
- (F) *Resource allocation.* Respondents indicated that the complexity of funding mechanisms as well as the diversity of possible funding streams made it difficult to determine the value of resources allocated to policies and programmes addressing young people's addictive behaviours. The survey suggested that, overall, resources have stayed the same over recent years, although there are differences between countries, particularly where these have been affected by the global economic recession. The survey indicated the availability of industry support for research and prevention activities in many reporting countries. This should be viewed critically, particularly where certain approaches are supported by the industry and others are not. These issues also highlight the need for greater transparency.

With respect to the four policy areas under investigation, the following conclusions could be drawn from the online survey:

- In comparison with the other two substances under investigation, policy approaches to *alcohol* differed in that the main aim appeared to be a reduction of use or harm rather than complete abstinence. With regard to young people, acute adverse effects in non-dependent users (such as alcohol poisoning) appeared to be a relatively greater concern than long term outcomes such as alcohol dependence or hepatotoxicity.
- *Tobacco* use is less of a 'public disorder' issue in comparison with the other behaviours studied, as it does not lead to the same types of short-term health and social problems. However, public tobacco use behaviour is controlled at EU level through the use of strategies such as controls on smoking in public places. At a national level, we found that dedicated tobacco policies were not as common as those for alcohol and illegal drugs, whereas legislation played a comparatively greater role. Advertising, marketing and sponsorship controls were better developed due to past successes of European harmonisation activities (which are still under development with regard to alcohol and gambling).

- *Illegal drugs* are distinguished from the other three policy areas by their legal status, which impacts also on the range of possible interventions (regulatory measures not applicable). Consequently, although there are exceptions, the main aim tends to be abstinence rather than reduced use. The control (rather than regulation) of these substances and the corresponding international efforts over the past decades appear to have developed and institutionalised this policy area the most, with nearly all countries reporting the existence of written government drugs policies, as well as the monitoring and evaluation of policy.
- In comparison with the other policy areas, and from a public health perspective, *gambling* is a field ‘under development’. Our study also indicated that policy documents are currently underutilised as a tool for addressing gambling’s addictive potential. Gambling is generally addressed through laws and regulations with a business orientation (government lead tends to be the Ministry of Economics/Finance); our survey could not identify any gambling policies, and monitoring and evaluation efforts appear to be limited. The field seems less formalised in terms of governance structures (e.g., government departments, policy making procedures) and research (e.g., relative lack of major prevalence studies, difficulties in recruiting experts for the survey). It was therefore also difficult to assess what the policy priorities and problem definitions were with regard to young people. Where business orientation leads to more liberal government approaches, addictive behaviours in young people may be (inadvertently) promoted as the opportunities to engage in such behaviours will be increased. It will be important to observe how this field will develop in the future, and whether it will be able to draw upon the experiences of developing substance related research and governance structures (e.g., EMCDDA 2012). The on-going EU activities on gambling described above could provide an impetus for national governments to formalise and extend their efforts to address gambling-related harms.

Limitations

Potential pitfalls of the study methodology were already alluded to in the conclusions above. Although a single survey with a consistent set of questions for all countries and all four policy areas was preferable for increased comparability of results, differences between countries included in the samples as well as the policy areas studied meant that the survey could not account for all contexts equally well:

- The survey appeared to be most suitable for national situations in which well structured government policy documents and formalised governance structures are present, whereas in other situations some questions appeared to be not applicable and other questions may have been more useful. This affected those countries where formal policies and governance structures are not available, not yet well developed, or only available at sub-national levels.
- The questions were appropriate for the analysis of alcohol and illegal drugs policies, reflecting the professional specialism of the research team in charge of the survey. However, the survey’s capacity to explore tobacco and gambling, where (dedicated) policies appear to play a comparatively small role, was limited. This was evidenced by the low response rates to these two topics, which also necessitate a careful consideration of the data (in particular its generalisability to other European countries for these two topics).
- Although clear separation of the four policy areas in the survey made sense for countries where these areas are addressed individually in policy and practice, it posed somewhat of a challenge for countries with integrated approaches (e.g., wider health or addiction policies). Nevertheless,

the separate data collection and analysis allowed insights into differences between policy approaches by topic that would not have been possible otherwise.

In comparison to a document analysis, conducting an online survey with experts to analyse and review policies had clear advantages, such as being able to review a large number of documents and obtaining important contextual information. However, there were also some limitations to the survey methodology:

- The survey had to find a careful balance between collecting factual data about government policy documents on the one hand, and asking for (subjective) expert assessments of policy on the other hand. This is also reflected in participants' comments: some academics were reluctant to participate in a 'form filling' exercise and felt that their expertise was not sufficiently utilised, whereas some public servants did not wish to give a personal opinion on the effectiveness of policy. This also highlights the difficulties of using one questionnaire for two different professional groups.
- The survey did not manage to capture data for all six quality criteria equally well. Although important considerations and issues emerged, survey responses did not allow an in-depth discussion of the extent to which young people are addressed in general policy, policy changes in recent years, and resource allocation⁴. This may indicate that other methods, such as document analysis or interviews with experts, are needed for a more detailed analysis of such questions.

Despite these limitations, the survey did permit an overview of policy approaches to young people's addictive behaviours as intended.

⁴ The EMCDDA's profiles on national drug-related public expenditure suggest that the extent and quality of information on resource allocation differs between countries, with some countries being able to provide estimates but others only able to provide limited and incomplete information. See: <http://www.emcdda.europa.eu/countries/public-expenditure>

2: Review of reviews

Methods

This activity consisted of a systematic review of reviews aiming to assess the effectiveness⁵ of the policy approaches identified in the policy mapping (see previous section). Due to the breadth of our review (i.e., range of policies and interventions; range of addictive behaviours), the research team anticipated a high number of relevant primary studies which would make a review of primary studies unworkable. Consequently, a systematic ‘review of reviews’ approach was adopted. The review of reviews was conducted following an *a priori* developed protocol, adapted from standard systematic review methodologies.

We included high quality systematic reviews of quantitative primary studies evaluating the effectiveness of policies or interventions, if they provided information on young people aged 25 years or under; studied a policy or intervention addressing substance use (alcohol, tobacco, illegal drugs) or gambling, or related health and social harms; and reported behavioural outcomes in young people related to substance use or gambling. Reviews reporting only non-behavioural outcomes (e.g., attitudes, knowledge), proxy measures (e.g., tobacco sales to young people, parental smoking) or process outcomes (e.g., retention in treatment), were not eligible for inclusion. We anticipated a lack of reviews specific to young people in relation to gambling, and therefore reviews of studies in any population were eligible for inclusion, with special attention given to any studies conducted with young people. Where review inclusion criteria did not match our own inclusion criteria, studies and findings of relevance to our review had to be clearly identified and analysed separately from other studies and findings. Only reviews in the English language published since the year 2000 were eligible for inclusion.

Searches were initially conducted in September 2012 using electronic databases (Medline, PsycINFO, Cochrane Library), and supplemented by hand searches (including grey literature) up until March 2013. Of the 2960 unique publications identified through these searches, 65 high quality reviews met our inclusion criteria, citing a total of 1,107 unique references to relevant primary studies. The process of selecting relevant reviews is shown in the Appendix in Figure 1. Full details of the search strategy and processes for study selection, quality assessment, data extraction and synthesis are provided in *Background report 2: Review of reviews* (available as a separate document).

Results

The aim of the review of reviews was to assess the effectiveness of the policy approaches identified in the earlier policy mapping and review in producing positive outcomes in young people. The present report presents a summary of findings, whereas detailed findings, including evidence tables, are provided in *Background report 2: Review of reviews* (available as a separate document).

⁵ In this report, we use the term ‘effectiveness’ to refer to effectiveness trials (i.e., conducted under real world circumstances) as well as efficacy trials (i.e., conducted under ideal settings).

Evidence of effectiveness

In the Appendix, Table 6 provides an overview of findings from the review of reviews. The findings are organised according to the eleven approaches identified in our framework of policies and interventions (see Table 5 in the Appendix). The following conclusions can be highlighted on the effectiveness of policies and interventions to address young people's addictive behaviours, as well as the quantity and quality of available evidence:

1. *Control and regulation of supply*: This section sought to review evidence regarding the effectiveness of measures to control or regulate the availability of substances or gambling opportunities in addressing young people's addictive behaviours. We found that there was insufficient high quality review-level evidence to draw any conclusions regarding the effectiveness of such approaches in producing positive outcomes in young people. Through our reviews of reviews approach we were only able to identify a single primary study on youth smoking, but this considered a number of different approaches together. Our literature search suggested that review-level evidence on alcohol supply restrictions is available but this has focussed on general population effects rather than young people specifically.
2. *Gambling/substance-free zones*: This section sought to review statutory restrictions on where (young) people can participate in addictive behaviours. We were unable to identify any relevant high quality review-level evidence to judge the effectiveness of such measures. One high quality review of smoking restrictions in relation to sporting organisations identified no suitable primary studies for inclusion, and so we were unable to draw conclusions from this review. There were a number of reviews available regarding the effectiveness of smoking bans in public places and work places. However, these were not of high quality or it was not possible to isolate the effects of such policies on young people's smoking. This suggests that relevant primary studies are available, but that high quality reviews of smoking bans are needed which focus specifically on the implications for young people.
3. *Age limits*: This section sought to review evidence on regulations establishing a minimum age pertaining to sales (i.e., retailer must not sell product to a person below this age), purchasing and/or actual use of addictive goods and services. Insufficient evidence was available to judge the effectiveness of fines for merchants who sell tobacco products to minors. One review included a single study in which this was one tobacco access ordinance considered among others. It was therefore not possible to draw any conclusions. An inspection of excluded studies indicated that methodological approaches used in primary studies are not suitable to judge the effectiveness of age limits in addressing young people's participation in addictive behaviours. Studies or interventions typically include multiple components, incorporating different approaches (e.g., control of supply, age limits, community-based prevention), and so it is not always possible to isolate the effects of individual components. The majority of currently available research does not appear to report young people's behaviours as the main outcome, but measures of compliance. Although measuring retailer compliance is an important indicator of enforcement, knowledge of behavioural outcomes in young people is needed if the effectiveness of the intervention is to be judged. There is also a need for high quality reviews to summarise existing primary study evidence.
4. *Taxation and pricing*: This section reviewed evidence on taxation and pricing of addictive goods and services. The strongest evidence we found was in relation to cigarette pricing. Two relatively recent high quality reviews of a large number of primary studies concluded that there was

consistent evidence to suggest that higher prices were effective in preventing and reducing young people's smoking. However, the magnitude of the effect was less clear, as the pooled estimates differed by type of outcome and there was large variability in individual study estimates. The evidence included in those reviews also suggested that pricing has been examined more often than taxation. Evidence on alcohol taxation and pricing was available but could not be included because it did not meet our inclusion criteria. Two complex reviews (i.e., examining multiple interventions, populations and outcomes) did not present the studies and findings of interest to our review separately from other studies and findings. This suggests that primary studies exist but that high quality reviews focussing on the implications of alcohol taxation and pricing for young people's drinking are still needed.

5. *Control and regulation of advertising, marketing and sponsorship*: This section sought to review evidence on the effectiveness of controls and regulations regarding advertising, marketing and sponsorship. We found that there was insufficient evidence to judge the effectiveness of this approach. One review identified a single primary study of relevance, from which it was not possible to draw any conclusions specific to advertising. An inspection of excluded reviews suggested that as some approaches, such as standardised packaging, are still in the early stages of implementation and available research has investigated hypothetical rather than actual effects on behaviour. Reviews were available on the impact of advertising on young people's smoking (one of which included 19 primary studies), suggesting that this may be an area where more research has been undertaken so far. There are a number of methodological and other challenges in researching measures to control and regulate advertising, marketing and sponsorship. Our review indicated that more high quality reviews with a specific focus on advertising restrictions and young people are needed.
6. *Warning labels*: This section sought to review evidence on the effectiveness of health warning labels in addressing young people's participation in addictive behaviours. There was insufficient evidence to draw conclusions from regarding the effectiveness of this approach. We identified no high quality review which reported the effects on young people's participation in addictive behaviours in a suitable format. One excluded review of warnings on tobacco products identified three studies in young people, but these had substantial methodological limitations. Our literature searches found a number of primary studies investigating this topic as well as a number of reviews on alcohol and tobacco which did not meet minimum requirements concerning study quality. The lack of high quality review-level evidence focussing on the effects of warning labels on the behavioural outcomes in young people was notable given that this is an area of major interest and activity with respect to European tobacco control⁶. Although a lack of evidence must not be misunderstood to mean lack of effect, our review suggests a need for higher quality reviews in this area.
7. *Prevention programmes*: This section reviewed prevention programmes implemented with schools pupils, families and/or communities. The strongest evidence found was in relation to school based prevention, particularly with respect to smoking. Effective multicomponent programmes also tended to have a school component. Although effective approaches for alcohol and drug prevention were identified, these were small in number and tended to be manualised programmes rather than programme components. Whole school approaches to prevention were reviewed and presented by two reviews as an effective means to change

⁶ The display of warning messages is mandatory on all tobacco products in the EU, and the EU has commissioned a number of studies in this area. See: http://ec.europa.eu/health/tobacco/products/health-warnings/index_en.htm

behaviour. However, the amount of evidence available for consideration of whole school approaches was limited compared to programmed classroom approaches, and therefore more research is required before these can be recommended. There was strong evidence to suggest that mass media campaigns should only be delivered as part of multiple component programmes to support school based prevention. Standalone mass media campaigns for illegal drug use were at best ineffective, and at worst associated with increased drug use. Evidence was conflicting regarding the effectiveness of parental and family programmes for prevention of participation in addictive behaviours. Although some of these types of approach produce positive results with respect to tobacco and alcohol, it was not possible to reach a conclusion on their effectiveness with regard to illegal drugs. Evidence was stronger for pre-school programmes, which were judged to be effective in preventing smoking. Insufficient evidence was available to judge the effectiveness of a number of prevention approaches; including (financial) incentives to school children not to smoke; prevention for indigenous, or minority ethnic groups; and prevention of problematic gambling. Reviews examining these topics found no or very little original research eligible for inclusion. The majority of the evidence identified concerned universal approaches to prevention. Reviews of indicated prevention were lacking, and selective approaches were generally limited to the assessment of outcomes in groups who were already participating in a particular behaviour (although had not reached criteria of dependence/addiction, therefore were classed as prevention), rather than those categorised on the basis of other risk factors. From the evidence identified it was not possible to make recommendations on these types of prevention approach.

8. *Treatment and social reintegration*: This section reviewed evidence on the effectiveness of treatment and social reintegration to produce beneficial outcomes in young people. We found that the evidence was inconclusive on the effectiveness of psychosocial treatment approaches for addictive behaviours in young people. There was evidence to suggest that treatment based upon cognitive behavioural therapy (CBT) may be effective, particularly when combined with other treatment approaches. There was also evidence that family-based therapy may be an effective treatment, and that education or counselling approaches may be ineffective for this population. Overall, the evidence suggested that psychosocial treatment can be effective for young people but that more high quality research is required to understand the best approaches. There was a lack of high quality review-level evidence on pharmacological treatment for addictive behaviours. Where evidence was available, it was difficult to draw conclusions due to the lack of consistent treatment approaches and outcome measures. There was some evidence to suggest that pharmacological approaches are ineffective for smoking cessation in young people. The majority of high quality review-level evidence available was for smoking cessation, whereas there was a lack of suitable evidence regarding alcohol and gambling treatment approaches. A large number of alcohol reviews were excluded because they were not judged to be high quality reviews.
9. *Harm reduction*: This section reviewed approaches which do not necessarily seek to prevent or reduce young people's participation in addictive behaviours *per se*, but whose primary aim can be seen as the reduction of harms resulting from young people's own or others' participation in addictive behaviours. The strongest evidence we found was in relation to smoking cessation interventions targeting pregnant women. A Cochrane review of more than 20 primary studies found that smoking cessation interventions in pregnancy increased birth weight and reduced preterm birth (excluding nicotine replacement therapy, see below). Limited evidence was found to suggest that: medication and non-pharmacological intervention for children with Foetal Alcohol Spectrum Disorders (FASD) can produce positive behavioural outcomes in affected

children; pharmacological treatment can be beneficial for newborn infants which were exposed to opiates *in utero*; server liability laws can reduce all-cause motor vehicle fatalities among underage drinkers; graduated driver licensing can be effective in reducing the rates of alcohol-related crashes among young drivers. The strength of conclusions for these approaches was limited by small numbers of trials, small sample sizes, other methodological weaknesses or concerns regarding the applicability of interventions or findings to current day Europe. Evidence was conflicting regard the effectiveness of: home visitation; nicotine replacement therapy; and interventions targeting environmental tobacco smoke in the home. The number of high quality primary studies included in these reviews was limited, and so the evidence base may become clearer as more trials are conducted. Insufficient evidence was available to judge the effectiveness of: prevention/treatment of maternal alcohol or drug use; behavioural counselling targeting alcohol-impaired driving or riding; drink driving awareness programs; alcohol server training; and treatment for drug-induced psychosis. Reviews examining these topics found no or very little original research eligible for inclusion. Overall, our review suggests a need for further trials using robust methodologies in this area as well as high quality reviews with a specific focus on the implications for young people.

10. *General delivery structures and quality assurance measures*: This section sought to review evidence on the effectiveness of general delivery structures and quality assurance measures in addressing young people's addictive behaviours. We found that there was insufficient evidence to draw conclusions. We identified no high quality reviews which reported the effects on young people's participation in addictive behaviours in a suitable format. A number of excluded reviews indicated that research has been undertaken with regard to workforce development (e.g., education for retailers, servers in bars, health care providers) and enforcement activities (e.g., fines/sanctions for retailers violating regulations, increased police patrols around licensed premises) in relation to alcohol, tobacco, and gambling. However, the available evidence did not allow us to draw conclusions with regard to how such activities might affect young people's behaviour, as they frequently measured other outcomes.

11. *General approaches*: This section reviewed approaches whose content is not specific to alcohol, tobacco, illegal drugs or gambling but which may still have beneficial effects on those outcomes. We found limited evidence to suggest that developmental interventions in preschool can have beneficial effects on tobacco and cannabis use in adult life (but not necessarily alcohol use, see below). One high quality review identified a number of studies with long-term follow-up, but the validity of their findings was limited by methodological weaknesses and questions concerning the generalizability of results. There was conflicting evidence regarding the effectiveness of non drug specific home visitation and the effects of developmental interventions in preschool on alcohol use. With regard to home visitation, heterogeneity of how interventions are delivered, by whom, and what content is covered, may provide an explanation for conflicting findings. Based on the retrieved studies, general approaches which, although not drug specific, sought to improve drug related outcomes, appeared to target pregnancy and the early post partum period.

In the online survey (see previous chapter), prevention programmes and age limits were reported as the main approaches described in EU Member State policy documents to address young people's legal addictive behaviours, whereas for illegal drugs, the emphasis was on prevention and treatment programmes. Respondents also emphasised the importance of general delivery structures and quality assurance measures.

Most high quality evidence investigated the effectiveness of prevention programmes. Our findings highlight that the catch-all term ‘prevention’ comprises a range of different activities, implemented in different settings and underpinned by different theoretical frameworks, which vary in terms of their effectiveness. For example, information provision curricula and standalone media campaigns were associated with no or iatrogenic effects, whereas skills development programmes were more likely to produce beneficial effects. However, most identified prevention evidence referred to specific manualised programmes rather than approaches (e.g. *Life Skills Training* vs. school skills based work). This limits the applicability of the retrieved evidence for the European context, as opportunities for implementation of manualised approaches are currently limited in many EU Member States. Moreover, studies of programme adaptation (cultural and geographic) show that great care is needed when implementing programmes developed in other countries (Burkhart 2013), and that each stage in the adaptation needs to be carefully researched (Ferrer-Wreder et al. 2012). Consequently, even if funding is available and implementation structures are in place, manualised approaches often take years of adaptation and study before they can be delivered as part of routine educational activities. Identifying components and mechanisms of behaviour change (for all types of addictive behaviour) in prevention is therefore important because it allows for the delivery of actions which can be locally generated (thus improving target group compliance), and are science based.

Lack of relevant high quality review-level evidence for most areas (including age limits, treatment and general delivery structures) did not allow us to assess fully which of the other approaches mentioned in policy documents or the online survey respectively have been shown to be effective in producing positive outcomes in young people, and which approaches have been shown to have no or iatrogenic effects.

Gap analysis

As part of this work, we sought to explore whether government policy includes any approaches that have not yet been evaluated (i.e., gaps in the scientific evidence) and whether the literature reports any effective policy approaches that are not currently considered in government policy.

With regard to *gaps in the scientific evidence*, our findings can be summarised as follows (see also Tables 4 and 5 in the Appendix):

- We found that the included review-level evidence concentrated on three areas: prevention; treatment; and harm reduction. The evidence base on (school based) prevention programmes was the largest, with 27 reviews overall reporting prevention studies and 13 reviews reporting specifically on school based prevention. However, as highlighted above, despite the extensive research undertaken in this area, important questions remain about the effective components of prevention programmes. With regard to treatment, 19 reviews met our inclusion criteria, of which 15 provided evidence (i.e. the other four reviews identified no primary studies eligible for inclusion); mostly with respect to (psychosocial) interventions for smoking cessation. For harm reduction, 22 reviews met our inclusion criteria, of which 18 provided evidence; most of these reviews were of interventions to address the potential harms to children resulting from parental/familial participation in addictive behaviours (i.e., not ‘classical’ harm reduction measures such as needle exchange).
- For the other eight approaches, between zero and four reviews met our inclusion criteria. There were three areas (gambling or substance-free zones; warning labels; and general delivery structures and quality assurance measures) for which we were not able to draw any conclusions

due to lack of original or review-level evidence. Evidence for a further three approaches (control and regulation of supply; age limits; and control and regulation of advertising, marketing and sponsorship⁷) came solely from a single cross-sectional study included in the same review, which had examined a number of youth access restrictions. Our ability to draw conclusions with regard to those approaches was therefore very limited. The evidence base was better for taxation and pricing, where we identified two high quality reviews with a large number of primary studies focussing on young people. With regard to general approaches, we identified three reviews of home visitation and one review of developmental interventions in preschool; however, we identified no eligible reviews of policies/interventions targeting more distal determinants of health.

- With regard to the different substances/behaviours, the evidence base was largest for tobacco, with 27 reviews providing evidence on the effectiveness of tobacco related policies and interventions. There were 23 reviews providing evidence with regard to illegal drugs, and 20 reviews providing evidence with regard to alcohol. This was in contrast to gambling, where only two reviews met our inclusion criteria (one for prevention, and one for treatment), even though we also considered reviews in adult populations eligible for inclusion.
- Consequently, **high quality review-level evidence meeting our inclusion criteria was not available for most policies and interventions of interest.** We identified a number of policies and interventions for which relevant primary studies appeared to be available, but high quality reviews of this evidence with a specific focus on behavioural outcomes in young people were not available. For example, one of the reasons for the lack of evidence with regard to gambling was that nearly all identified literature reviews were traditional literature reviews which did not document methods for literature search and/or did not assess quality of included studies, and even those reviews using systematic methods were not sufficiently rigorous to be considered 'high quality'.
- There were also a number of policies and interventions for which there appeared to be a **lack of relevant high quality original research.** Our review included nine reviews which, although meeting our inclusion criteria, did not provide any evidence, as they identified no primary studies eligible for inclusion; for example on the treatment of inhalant dependence and abuse; waterpipe smoking cessation; pharmacologic interventions for pregnant women enrolled in alcohol treatment; and policy interventions implemented through sporting organisations for promoting the 'responsible' use of alcohol and to prevent smoking. In addition, our review indicated the availability of primary studies which did not measure behavioural outcomes in young people, but measured changes in targeted mediators (e.g., changes in young people's knowledge about the dangers of gambling; the impact of alcohol server training programmes on bar staff serving practices; the impact of age limit regulations on the number of illegal tobacco sales to young people).

⁷ In September 2013, a protocol was published for a Cochrane review on the effectiveness of alcohol advertising bans or restrictions to reduce alcohol consumption in adults and adolescents (Siegfried et al. 2013), which should make an important contribution to this research area.

With regard to whether the literature suggested any *effective policy approaches not reported through the online survey* (although this does not necessarily mean they are not implemented at a national or local level), the following findings can be highlighted:

- Our review found evidence for the effectiveness of **pricing of tobacco products** in preventing and reducing young people's smoking. Although high quality reviews (focussing specifically on young people) are still needed to judge the effectiveness of taxation and pricing for alcohol and gambling, this is an approach worthy of further consideration. In the online survey, only 3 out of 16 countries (19%) reported taxation and pricing measures as strategies to produce desired outcomes in relation to young people's alcohol use/dependence, and only 2 out of 7 countries (29%) did so in relation to young people's tobacco use/dependence.
- We also found strong evidence in relation to **smoking cessation interventions targeting pregnant women**. A Cochrane review of more than 20 primary studies found that psychosocial smoking cessation interventions in pregnancy increased birth weight and reduced preterm birth rates. However, this approach was mentioned by only one out of seven countries (14%) reporting on tobacco in the online survey.
- There was also evidence to suggest that **server liability laws** can reduce all-cause motor vehicle fatalities among underage drinkers; and that **graduated driver licensing** can be effective in reducing the rates of alcohol-related crashes among young drivers. Although these findings should be viewed with caution as the evidence came exclusively from outside Europe (and was partly based on studies conducted in the 1980s), this may also be an area worthy of further research and consideration. Measures to prevent drunk driving were reported by seven out of 16 countries (44%) reporting on alcohol policies in the online survey; however, only two of these made specific reference to lower BAC limits for new drivers and no country reported the availability of server liability laws.

Limitations

A weakness of our review was a lack of available evidence on the effectiveness of most approaches included in our framework of policies and interventions (see Table 5 in the Appendix). More specifically, limitations can be seen as issues pertaining to the procedures for study selection; the suitability of a 'review of reviews' approach for the topics under investigation; and general issues affecting reviews of reviews.

- We used the same inclusion and exclusion criteria across all approaches, but they did not affect evidence across all approaches in the same way. For example, limiting our review to reviews reporting behavioural outcomes did not exclude a large number of prevention or treatment reviews, as most of the reviews published in the last decade report these outcomes. However, this criterion did lead to the disproportionate exclusion of reviews in other fields, such as age limits (commonly measuring illegal sales to minors, although concerns have been raised over the validity of this outcome as a proxy for young people's behaviours) or standardised packaging (commonly asking hypothetical questions about future behaviour should standardised packaging be introduced), and in relation to gambling (reporting non-behavioural outcomes, such as knowledge and attitudes).
- Our search strategy was developed to allow us to identify a sufficient number of high quality reviews with which to judge the effectiveness of different types of policies and interventions addressing young people's addictive behaviours. We did not assess publication bias using

statistical tests. However, it is unlikely that reviews identified through additional sources would have met our inclusion criteria (particularly with regard to being 'high quality').

- The 'review of reviews' approach was necessary given the breadth of policies and interventions of interest as well as the range of addictive behaviours under investigation. However, it was more suitable for approaches which have already been explored through many primary studies and extensively reviewed. It was less suitable for approaches where fewer primary studies have been carried out (and where there is consequently less of a need for reviews). An implication of this is that it is also less appropriate for approaches which are more difficult to investigate (such as nationwide policies and programmes in which the entire population participates and there is no possibility for a control group); leading to an over representation of approaches which can be studied through randomised controlled trials. For these reasons, in some cases the review of reviews approach took the form of a scoping exercise to identify gaps and the need for high quality reviews, rather than enabling us to comment on evidence of effectiveness.
- We limited our review to high quality reviews, to ensure that we could have confidence in the review authors' methods and conclusions and that reviews would provide sufficient information which would allow us to extract data in a satisfactory manner. Generally speaking, reviews of 'high quality' were those which had conducted sufficiently rigorous searches for literature, reported in detail on the characteristics of included primary studies, and considered the scientific quality of included studies in formulating conclusions. Quality was assessed using the AMSTAR instrument (Shea et al. 2007a; Shea et al. 2007b; Shea et al. 2009). This instrument focuses on the detail presented in a review; publication limitations, such as restrictive word counts, and journal instructions to authors on data presentation may therefore have influenced study quality rating. We also excluded reviews which did not report the studies and findings of interest to our review separately from other studies and findings. These criteria led to the exclusion of many relevant reviews, including primary studies which had not been reviewed in any of the high quality review work. This affected gambling in particular, as the overall quality of available reviews was found to be much lower than in the substance use field. Lowering the quality threshold would have allowed us to include more gambling reviews, but it would have also undermined the credibility of our review findings. This indicates the need for high quality systematic reviews in the gambling field before a review of reviews can be carried out.
- Some limitations are not specific to this project, but are challenges of the 'reviews of reviews' approach in general. For example, the inclusion of a large number of high quality reviews does not automatically mean a large number of high quality primary studies included in those reviews. In fact, we included nine reviews which included no eligible trials at all, and a number of reviews which reported very few trials with very small sample sizes and other methodological limitations. Limiting our review to high quality reviews, however, ensured that we were aware of such problems and that we could take them into account in our analysis.

3: Development of a policy evaluation framework

Review of existing policy scales and indices

The data from the online survey as well as our review of reviews allow a young people focussed review of existing scales and indices of country policies on addictive substances and behaviours. In relation to substance use policies, Ritter (2007) distinguishes seven types of metrics which could be used to judge a country's position in relation to a particular policy area (and to compare countries), depending on whether they focus on government spending, cost-of-illness, consumption and patterns of use, burden of disease, composite harm, cost-effectiveness, or policy statements.

Our data was most suitable for a review of scales measuring policy statements. These policy scales allow tracking of changes in individual country's policy priorities across time, or comparison of countries with regard to *how many and what types of policies they have in place* to control potentially harmful behaviours in the general population. Specifically, we examined the "AMPHORA scale to measure the strictness and comprehensiveness of alcohol policies" (Karlsson et al. 2012) as the most recent example of a scaling tradition going back to Davies & Walsh (1983); the "Alcohol Policy Index" (Brand et al. 2007); and the "Tobacco Control Scale 2010" (Joossens & Raw 2011). These scales were chosen in collaboration with colleagues working in ALICE RAP Work Package 14. No equivalent scales were identified for illegal drugs or gambling; such scales were being developed at the time of writing within the ALICE RAP project in Work Area 5, Work Package 14 (Karlsson, Lindeman & Österberg) and could therefore not be considered in this review.

Although produced by independent research teams, the development of these scales appears to have followed a similar process. First, it was determined which policies should be included in the scale, based on what is considered effective and/or good practice. Second, weights and points were assigned to the different types of approaches, based on scientific evidence on their strength of effect and/or expert assessments of their importance. Third, relevant data was collected for each country of interest to clarify which policies have been put in place. Data was usually obtained through secondary data analysis (e.g., published reports and policy documents) and was in some cases verified or supplemented by contacting national experts. Finally, a score was calculated for each country, based on which policies have been put in place and how many points these policies are 'worth'.

Countries may then be ranked in order to identify those that have relatively more or less effective and/or comprehensive sets of policies in place⁸. Such scales also permit a range of other analyses. For example, potential for further improvement and the existence of ceiling effects can be judged by comparing the score achieved by the relatively best or worst 'performing' country to the maximum or minimum score obtainable on the scale (i.e. if all or none of the policies are in place). The study by Brand and colleagues (2007) is notable in that it takes the exercise one step further by examining the relationship between the attained policy score (with a potential range from 0 to 100 points) and the behaviour of interest (in this case, per capita alcohol consumption). They estimated that an increase of 10 points on the Alcohol Policy Index was associated with a reduction in the yearly alcohol consumption per person by 1 litre.

⁸ Brand et al. (2007: 755) note that in a simple additive model countries that have many weak policies in place can achieve similar scores to countries that have only a few but very strong policies in place ("compensatory" effect). A high score on the index does not indicate comprehensiveness *per se*.

Limited information was available on the validity and reliability of these scales. The data provided by Brand and colleagues (2007) on the relationship between the attained policy score and the behaviour of interest can serve as an indicator of construct validity, although, as Ritter (2007) notes, the validity of the index would need to be examined against additional measures including alcohol related harms. Further limitations of such scales highlighted by Ritter (2007) include that they do not consider the level of actual implementation (i.e., the analysis is limited to ‘what countries say they do’) and that they do not consider policy effects (costs, burden, harms). Karlsson and colleagues (2007, 2011) also note a number of limitations with regard to such scales. For example, such scales cannot account for informal means of control and regulation (e.g., through societal norms), and may therefore disadvantage countries where addictive behaviours are regulated informally rather than through formal policy (see also Eisenbach-Stangl 2011). Consequently, such scales can only account for what is measurable (similarly Joossens and Raw 2006). Our review indicated that the processes for selecting policies and interventions for inclusion in the scale and assigning weights and points was not entirely transparent, and the challenges of making such decisions are acknowledged by Karlsson and colleagues (2011) who have also revised their alcohol scale to include new evidence of effectiveness. Both reviews cited by these authors as main sources of evidence (Babor et al. 2010a; Anderson 2009) were not eligible for inclusion in our review; one was partly based upon other reviews, and both publications did not document the use of systematic methods for reviewing and appraising the quality of the included evidence (see also the discussion section in this report). Overall, such scales appear to represent (although there are differences between scales): i) a measure of the completeness of policy approaches (i.e., how many and what policy approaches are supported by government); and ii) a measure of the likelihood that a national policy programme will be effective, based partly on scientific evidence of effectiveness and partly on expert consensus (particularly in areas where evidence is scarce or conflicting).

Young people targeted activities are included in these scales to a limited extent. The AMPHORA alcohol scale (Karlsson et al. 2012) does not make explicit reference to young people, although they are implicated in some items which concern actions most commonly targeted towards younger drinkers. These are age limits, prevention programmes (not specifically in relation to young people, although in practice many of these programmes target school aged populations) as well as different BAC⁹ level regulations for inexperienced drivers (minimum driving age in most EU countries is 18 years). The Alcohol Policy Index (Brand et al. 2007) makes explicit reference to young people; specific policies include the legal alcohol purchase age, legal blood alcohol limit for youth (although no age range or definition of youth is provided), as well as graduated licensing for young drivers. The Tobacco Control Scale (Joossens & Raw 2011) does not make explicit reference to young people but includes relevant policies, namely smoking bans in educational places and spending on public information campaigns (including educational programs).

In the Appendix, Table 7 compares the broad approaches developed for this report (see chapter on policy mapping) with the approaches or topics included in the existing policy scales. Although a detailed discussion of the scales is beyond the scope of this report, already at this general level important observations can be made in relation to young people targeted policies¹⁰. The following sections suggest how young people specific policy scales might be developed from the existing policy scales using the findings from our online survey as well as our review of reviews.

⁹ Blood alcohol content

¹⁰ Table 7 also indicates some general ‘gaps’ in the existing scales, which, as they are not young people specific, will not be discussed here in detail. One discussion of the two alcohol scales has been offered by Eisenbach-Stangl (2011), and a general discussion of the existing scales, their similarities and differences will be provided by colleagues working on ALICE RAP Work Area 5, Work Package 14 (Karlsson, Lindeman & Österberg).

- *Control and regulation of supply:* General measures to control and regulate supply are included in both alcohol scales, but not in the existing Tobacco Control Scale. The data obtained through our online survey provides young people specific examples of such measures. For example, restrictions on supply within or near places, in which young people spend a lot of time, such as educational or child care facilities, could be considered in (young people targeted) policy scales. Our review of reviews found that licensing of tobacco retailers, bans on the sale of single cigarettes, and vending machine restrictions have been investigated specifically in relation to their effects on young people, although the evidence was insufficient to judge the effectiveness of these measures.
- *Gambling/ substance-free zones:* General measures falling under this heading are included in the AMPHORA alcohol scale (drinking in public places) and in the Tobacco Control Scale, but they are not young people specific. The definition of gambling/ substance-free zones in settings that are particularly relevant to young people (e.g., schools) could be included to make the scales more young people oriented. The reviews of reviews identified insufficient evidence to judge the effectiveness of these measures in relation to young people's behaviours.
- *Age limits:* Age limits are included in both alcohol scales. In the Alcohol Policy Index, this measure is subsumed under *physical availability*, even though it can also serve to curb young people's demand. However, the items considered in the scales do not sufficiently capture the complexity of age limits regulations which emerged from our online survey (e.g., distinctions between purchasing/possession/drinking and sales/serving/offering); our review of reviews suggested that it is currently unknown whether more comprehensive restrictions are more effective than less comprehensive ones (e.g., banning illegal sales but not purchasing or youth drinking or smoking). The Tobacco Control Scale does not consider age limits at all. Age limits could be included as a separate approach in such scales, and in greater detail, as our online survey data suggested that they are considered a key strategy to addressing young people's addictive behaviours. It has been suggested they are effective in reducing (alcohol related) harms (Babor et al. 2010a), but we were unable to confirm this based on our review of reviews due to lack of evidence. Greater attention could also be given to the availability of policies supporting their enforcement, such as proof of age and test purchasing schemes or mechanisms to monitor and sanction businesses not adhering to these regulations.
- *Taxation and pricing:* General pricing is considered in all three scales. Our review found evidence for the effectiveness of pricing of tobacco products in preventing and reducing young people's smoking (further research is needed with regard to alcohol and gambling), highlighting the importance of this approach for young people. Young people specific examples could also be added to future policy scales. Although no young people specific policies were mentioned by the experts partaking in our online survey, such measures do exist; for example special taxation on beverages believed to be more popular with young people (such as flavoured/ sweetened alcoholic beverages or pre-mixed spirits). However, we were not able to identify any high quality review-level evidence examining young people specific measures.
- *Control and regulation of advertising, marketing and sponsorship:* The existing scales focus on restrictions on exposure (e.g., in which types of media is advertising restricted?) but they do not consider restrictions on content (e.g., restrictions on the portrayal of young people). The examples provided by respondents to the online survey also highlighted other young people specific measures which could be considered in future (young people specific) policy scales, such as the supply of toys and games that resemble controlled goods, or the ban of industry

sponsorship of events specifically targeted at young people. Our review of reviews found that bans on free-standing displays of tobacco products and bans on the distribution of free tobacco samples have been investigated specifically in relation to their effects on young people, although the evidence was insufficient to judge the effectiveness of these measures.

- *Warning labels:* Warning labels are included in the AMPHORA alcohol scale and in the Tobacco Control Scale. Brand et al. (2007) excluded warning labels on alcoholic beverage containers in their Alcohol Policy Index on purpose due to lack of evidence of effectiveness. Our online survey and review of reviews could not identify any young people specific examples of warning labels; and we were unable to find any suitable evidence providing evidence on the effectiveness of warning labels.
- *Prevention programmes:* The existing scales do not place much emphasis on prevention programmes, which contrasts with the findings from our online survey (i.e., important role of prevention programmes in experts' accounts of policies for young people) and our review of reviews (i.e., relatively well developed evidence base concerning prevention in comparison with other approaches, and evidence of effectiveness for certain types of prevention activities). None of the reviewed policy scales include prevention programmes as a separate broad approach. The AMPHORA scale subsumes prevention programmes under *public policy*, distinguishing between 'alcohol prevention programs/strategies' in general and 'nation-wide awareness-raising activities'. The Alcohol Policy Index does not include prevention programmes in general, but considers 'community mobilization programs to increase public awareness of, and prevent alcohol problems' under *drinking context* (it is not clear whether this includes school and family based prevention programmes). The Tobacco Control Scale contains only a proxy measure by considering the 'spending on public information campaigns'; according to the notes accompanying the scale, this refers to mass communication campaigns, tobacco control projects, educational programs, and support for non-governmental organisations (Joossens & Raw 2011: 7). To ensure that the scales are appropriate for young people targeted policies, our online survey and review suggest that 'prevention programmes' should be included as a separate approach. Moreover, different types of prevention activities should be distinguished according to what has been shown to be effective. Information-based approaches such as (standalone) mass media campaigns and school-based information provision have been shown to be ineffective but continue to be among the most popular approaches in EU Member States. Asking about prevention programmes or the money spent on prevention in general is therefore not a valid indicator of how well countries are doing in this area (e.g., a lot of funding may go to activities that have been shown to be ineffective).
- *Treatment and social reintegration:* These measures could also receive more attention in policy scales. Treatment is included in the Tobacco Control Scale but not specifically in relation to young people; it is not included at all in the AMPHORA alcohol scale and it was deliberately excluded from the Alcohol Policy Index "because [the ...] investigation focused on public health measures aimed at prevention" (Brand et al. 2007: 753). However, in the online survey conducted as part of this Work Package, respondents from six countries (38%, n=16) reported measures related to treatment and social reintegration as key approaches to addressing young people's alcohol use. Responses to the online survey also underlined the importance of measures to divert (young) offenders away from the criminal justice system into treatment. Our review of reviews indicated that the effects of psychosocial and pharmacological treatment have been investigated specifically in relation to young people's behaviours in a number of reviews, although the evidence proved to be inconclusive. The importance attached to treatment and

social reintegration in the online survey and the retrieved evidence suggests that such measures could be included in future policy scales, both in relation to the general population as well as specifically with regard to young people. It has been suggested that treatment and social reintegration activities can produce improvements on a variety of outcomes (Sumnall & Brotherhood 2012), but we found insufficient high quality evidence to judge the effectiveness of these approaches for young people. Similarly to prevention, a general ‘treatment’ category including potentially ineffective approaches would be of little use in judging and comparing countries. Further evidence is needed to develop an understanding about what treatment approaches work best with young people, and what specific approaches should consequently be included in policy scales.

- *Harm reduction:* Both alcohol scales include measures to address driving under the influence of alcohol; additionally, the Alcohol Policy Index includes measures to prevent and manage aggression. However, interventions to protect children and young people from the consequences of their parents’ addictive behaviours (e.g., substance use during pregnancy) are not currently considered in any of the existing scales. The strongest evidence we found in our review of reviews of harm reduction (in its wider sense) was in relation to smoking cessation interventions in pregnancy.
- *General delivery structures and quality assurance measures:* ‘Meta approaches’ could be given greater consideration in the calculation of policy indices. The existing scales include limited or no information on such approaches despite the importance attached to them by the experts in our online survey. While some of these approaches are of a general nature, the survey data also provides young people specific examples such as young people targeted action plans, funding schemes, or research, which could be considered in (young people targeted) policy scales. We were unable to identify any high quality review-level evidence examining the effects of such approaches on young people’s addictive behaviours.
- *General approaches:* This category was initially included based on experts’ responses to the online survey (see previous chapters), and developed further to account for ecological views on young people’s health and wellbeing. Such activities are not measured in any of the reviewed scales. Although it may not be appropriate for policy scales to include a category which is not specific to the substance or behaviour in question, the importance of general education, health and social care, as well as wider policies (e.g., social inclusion policies, economic and employment strategies), could be acknowledged.

In conclusion, this analysis suggests that the existing policy scales and indices are not fully appropriate for assessing and comparing countries with regard to how they address *young people’s* addictive behaviours through policy. Through our online survey as well as our review of reviews we were able to identify examples of young people specific elements that could be considered in the development of a young people specific scale (or a general scale that is sensitive to young people targeted measures). However, a scale developed based on this discussion would merely measure *comprehensiveness* of young people targeted policy rather than its (likely) *effectiveness*. Our review of reviews identified very little clear-cut review-level evidence of high quality, so that a scale including only policies and interventions with strong evidence of effectiveness would be extremely limited (i.e., contain only few activities). Therefore, at this point in time it does not seem possible to construct a young people specific scale that is both comprehensive as well as based on sound evidence of effectiveness. The quality threshold of our review could be lowered to allow more types of intervention to potentially be reviewed and identified as effective, but this may mean that an

approach is viewed as effective on the basis of flawed review findings. Subsequently, a country might score high on a policy scale that comprises policies which do not have rigorous evidence behind them.

In summary, our review suggested that the evidence base is not yet sufficiently well developed with regard to young people to allow the development of a useful young people specific scale. Nevertheless, our findings will inform the development of future policy scales, such as new illegal drugs¹¹ and gambling scales (work undertaken in Work Package 14).

Young People's Addictive Behaviours Policy Evaluation Framework

The previous sections illustrated a number of different perspectives on policy, including: the availability of written policy documents; the context within which policy is developed and implemented; the potential content of policy and its integration with available scientific evidence of effectiveness; and instruments for assessing and comparing countries in terms of their policies on addictive behaviours. As a final activity in our Work Package, we developed a policy evaluation framework integrating all phases of our work. The proposed policy evaluation framework builds upon and extends earlier models developed by the authors to understand and appraise (drug) policy (see Brotherhood & Sumnall 2011: 36; Sumnall & Brotherhood 2012: 53).

In a review of metrics to judge a country's position in relation to alcohol policy, Ritter (2007: 618) concluded by stating, "Perhaps the challenge from here is to develop a multidimensional index that can accommodate the dimensions of costs, consumption, harms, and cost-effective alcohol control policy responses". Whilst the data collected through the activities in this Work Package did not allow us to construct such an index, we developed a framework which could inform the development of such indices in the future. The framework is shown in the Appendix as Figure 2 (at the end of this report).

The framework comprises three elements:

4. Written government policy
5. Implementation
6. Outcomes in young people

In Figure 2, the left-hand column specifies each of the three elements further, whereas the right-hand column contains suggestions for specific indicators that could be used to measure and judge policy with respect to each element.

Written government policy is understood as the overarching framework to guide (government) activities in relation to a particular policy area, by specifying which population needs the government wishes to address, and how. A written, well formulated and dedicated government policy is essential for many reasons. We have argued elsewhere (Brotherhood & Sumnall 2013) that governments should not rely exclusively on legislation as a tool for addressing addictive behaviours, as legislation does not usually discuss population needs or outline government priorities and strategies in the same way as a policy can. In addition, responses to our online survey indicated that legislation on the same topic can be delivered across a number of different legislative acts, making it difficult to grasp the whole picture. In such cases, a written policy document can serve as a means

¹¹ Although it is recognised that some of the discussed approaches are not applicable with regard to illegal drugs, as these substances are controlled under international conventions.

for connecting different pieces of legislation and provide an overall context. A written document defining desired outcomes and specifying the policies and interventions required to achieve these outcomes is also a prerequisite for any evaluation, as it is not possible to evaluate what has been achieved without knowing what was intended.

For this element, we suggest the six criteria developed during the first stage of this Work Package as useful indicators for judging the quality of written government policy (see Box 1 in Appendix; for details on how the criteria were developed, see *Background report 1: Policy mapping and review*). The criteria consider a) whether relevant policy and legislation is available, and whether young people are given special consideration therein; b) why and how policy was developed, in particular which stakeholders were involved in formulating policy, and how scientific evidence of effectiveness was incorporated; c) what target populations and needs, policy aims, and policies and interventions are specified, and whether this has been done in line with good practice recommendations¹²; d) how policy changes and develops over time, and what motivates these changes (e.g., changing population needs or changing governments following elections); e) if and how policy is implemented, monitored and evaluated in relation to its effectiveness and implementation fidelity; f) whether the resources allocated to the implementation of the policy are sufficient and whether the source of funding could lead to a conflict of interest (e.g., if industry could promote the implementation of ineffective approaches).

It is also important that policy is based upon sound evidence of effectiveness. Further work is still needed to develop ‘menus’ of effective actions which decision makers can choose from in the formulation of policy. Some efforts in this direction have already been made with respect to some types of behaviour; for example, the recently published UNODC International Standards on Drug Use Prevention (UNODC 2013). However, our review of reviews suggested that the evidence base must be developed further before such recommendations are possible. Registries of effective programmes are also available¹³, but these often focus on copyrighted manualised programmes rather than effective ‘ingredients’ of prevention. The transportability of most of these types of programme into different geographies, contexts and cultures is uncertain, and it is unlikely that structures exist in many countries to deliver them as part of national strategies. However, there are several examples of where manualised programmes developed outside of Europe (Burkhart 2013) have been successfully introduced, in accordance with programme adaptation theory. Work undertaken in ALICE RAP Work Package 18 (Faggiano) seeks to identify active intervention mediators and components of evidence-based prevention programmes. By identifying and implementing the essential mechanisms of an activity that are responsible for producing behavioural change it is possible to develop activities that retain the ‘active ingredients’ of an intervention approach, without having to preserve the entire intervention structure.

Implementation refers to the implementation of what has been set out in policy. This includes the policies, interventions, and actions that have been defined based on an understanding of target population needs and the scientific evidence of effectiveness. To increase the likelihood of their

¹² A detailed discussion of what constitutes good practice is beyond the scope of this report, but for example aims should be formulated based on scientifically derived knowledge about potential target populations and their needs; and should be formulated in a way that makes them amenable to evaluation (e.g., including quantitative benchmarks of success). Further guidance can be found, for example, in the European Drug Prevention Quality Standards (Brotherhood & Sumnall 2011).

¹³ International examples include SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP), <http://nrepp.samhsa.gov/>; and the EDDRA database provided by the European Monitoring Centre of Drugs and Drug Addiction (EMCDDA), <http://www.emcdda.europa.eu/themes/best-practice/examples>. Examples of registries at country level include “Grüne Liste Prävention” which was developed to support the implementation of Communities that Care (CTC) in Germany, <http://www.gruene-liste-praevention.de/nano.cms/datenbank/alle>.

effectiveness, policies and interventions should be implemented, for example, with sufficient coverage of the intended target populations and a high level of fidelity. However, high quality implementation of effective policies and interventions is only possible if the necessary (infra)structures and procedures are also in place. This element therefore also comprises general and specific delivery structures and quality assurance measures, which support the uptake of policies and interventions by relevant stakeholders. General delivery structures are understood as those that are not specific to any particular approach, whereas specific delivery structures support the implementation of particular policies and interventions (e.g., proof of age schemes to support enforcement of minimum age limits). Examples are provided in Table 5 (see Appendix), although our review of reviews did not explore which of these were most effective in supporting implementation. In relation to drug prevention, the International Standards on Drug Use Prevention refer to the summary of such structures as a ‘prevention system’ (UNODC 2013), although again, no research has been conducted to determine whether actions delivered via specified structures lead to better outcomes.

Implementation should be assessed using process indicators, as would be done in the process evaluation of any intervention. Process data could relate, for example, to the target population (e.g., % target population reached, service utilisation), the policies and interventions implemented (cf what was set out in policy), activities to support implementation (e.g., workforce development, community mobilisation), activities for monitoring and evaluation (e.g., utilisation of surveys), or the use of resources (e.g., programme costs). Findings from our online survey indicated that the effectiveness of policies, in particular minimum age limits and advertising controls, is often hampered by weak adherence to regulations by intermediate target audiences (e.g., the industry). We have therefore also included changes in the intermediate target population within this element. Our review of reviews indicated that that the successes of delivery structures and quality assurance measures are often solely judged by measuring the changes produced in intermediate target populations, such as general practitioners, retailers of tobacco products, or servers of alcohol beverages. However, these outcomes should be seen as mediators to produce changes in the ultimate target population (i.e., young people), and not regarded as outcomes in themselves. This distinction is particularly important where behavioural changes in intermediate target populations do not necessarily lead to behavioural changes in ultimate target populations (e.g., retailers may stop selling cigarettes to young people but young people may still obtain cigarettes from other sources, such as friends and family).

The policy scales reviewed in the previous section (and similar instruments) have also been placed within this element, although some caution is warranted in this interpretation. In using such policy scales to assess policy, it is important to consider: i) whether policy scales report only intentions, or whether they allow insight into what is actually being implemented; ii) whether the country specific information reported in the scales is based on written policy documents and/or expert judgements of the overall country situation; and iii) to what extent the items included in the scales are based upon sound scientific evidence of effectiveness. Depending on the answers (which will also differ between different scales), policy scales might be placed in any of the three elements included in our policy evaluation framework. Given the scarcity of high quality evidence upon which to judge the effectiveness of policies and interventions, we see the current role of policy scales as providing information on what activities and delivery structures are available in different countries. As such, policy scales have been positioned in our framework as indicators of implementation, even though the currently available scales may not be entirely suitable for this purpose.

Outcomes in young people are the final element in our policy evaluation framework. Although it has been argued that “there is no consensus about which outcomes [from effective drug policy] are the

most important” (Ritter 2009: 477), our framework presents the aim of policy development and implementation as the reduction of harms suffered by young people in relation to addictive behaviours (i.e., alcohol, tobacco, illegal drug use and gambling). This includes harms suffered either during youth or in later life (as a long-term consequence of participation in addictive behaviours); across a range of domains (i.e., not limited to health); and harms arising not only from young people’s own participation in addictive behaviours, but also those arising from others’ participation in addictive behaviours (e.g., parental smoking).

This element can be assessed by measuring harms, but even the brief list of possible harms provided in the framework (Figure 2 in Appendix) highlights the multitude of possible harms that could be considered. As a result, decisions must be made with regard to what indicators to include (and consequently what to exclude), and this can present a challenge. Attempts have been made to create composite ‘harm indices’ which integrate different data sources to provide an overall estimate of the level of harms related to addictive behaviours. As an example, the UK Home Office developed the ‘Drug Harm Index’ to judge the government’s successes in reducing drug-related harms (MacDonald et al. 2005; Home Office 2009). This Index combined 19 national indicators of harm into a single time-series index: health impacts (incidence of HIV, Hepatitis B, Hepatitis C, drug-related deaths, drug-related mental health and behavioural problems, drug overdoses, drug-related neonatal problems); community harms (community perceptions of drug use/dealing as a problem, drug dealing offences); domestic drug-related crime (burglary, theft of vehicle, theft from vehicle, bike theft, other theft, robbery); and commercial drug-related crime (shoplifting, burglary, theft of vehicle, theft from vehicle). The accompanying report acknowledges that a number of harms, although important, could not be included as they are not (currently) measurable (e.g., proportion of unemployment or homelessness as a consequence of drug use) (MacDonald et al. 2005). Ritter (2009) provides a discussion of existing indices used in the field of illegal drugs, highlighting what outcomes have been included as well as the potential challenges and caveats of constructing indices (e.g., weighting of different indicators, potential for over-simplified interpretation and use for purposes other than intended).

Another challenge in the measurement of harms is that, particularly with regard to negative long term consequences, there can be a great delay between participation in addictive behaviours and the emergence of negative consequences. This can mean that the successes of policy cannot be fully assessed until many years after policy was introduced. It could also be argued that one should not wait until the occurrence of harms in order to judge policy success; both from an ethical point of view and as this would inhibit policy development. Therefore, while it is important to collect information that allows an assessment of the longer term impact of policy (i.e., when manifestation of harms would be expected), it is also important to assess policy success in the short term through collection of data on intermediate indicators.

For this purpose, we suggest collecting data on common risk factors which research has shown to be strongly associated with a range of risky behaviours, including addictive behaviours; as well as data on young people’s participation in addictive or risky behaviours as a proxy indicator of harm¹⁴. The choice of example indicators provided in the policy evaluation framework (Figure 2 in the Appendix) was informed by the desired outcomes for young people described by policy experts in our online survey (see *Background report 1: Policy mapping and review*) as well as the outcomes reported in

¹⁴ It is important to note, however, that “the relationship between [drug] use (prevalence or quantity) is not linear with harm, and varies by drug type and using context” (Ritter 2009: 477). Ritter consequently argues that drug ‘use’ is not a proxy for ‘harm’ (ibid.), in the sense that indices considering only use would be incomplete and that an inclusive approach to judging policy success would consider both consumption and harms.

the reviews included in our review of reviews (see *Background report 2: Review of reviews*). The framework thus emphasises that although research frequently measures young people's alcohol, tobacco, illegal drug use and gambling as the final (proxy) outcome, a public health perspective suggests that international and national policy are ultimately seeking to prevent and reduce the potential acute and long term negative consequences of participation in addictive behaviours rather than participation in these behaviours *per se*. This has been described as the *predictability* of outcomes (Fernandez-Hermida et al., 2012) and refers to the extent to which research outcomes relate to meaningful health or social outcomes; for example, injury, morbidity, mortality, quality of life, educational and economic achievements.

We were unable to prescribe specific indicators for consideration in the evaluation of policy, as the choice of indicators will depend on a number of factors, including the type of policy being evaluated (not only by approach but also whether in relation to alcohol, tobacco, illegal drugs or gambling) and the priorities specified in international and national policy. For example, the European Council Recommendation of 30 November 2009 on smoke-free environments specifically recommended the following eight key process and outcome indicators for the monitoring and evaluation of measures to reduce exposure to tobacco smoke¹⁵:

Processes

- (a) Knowledge, attitudes and support for smoke-free policies among the general population and possibly specific groups, for example, bar workers;*
- (b) enforcement of and compliance with smoke-free policies;*

Outcomes

- (a) reduction in exposure of employees to second-hand tobacco smoke in workplaces and public places;*
- (b) reduction in content of second-hand tobacco smoke in the air in workplaces (particularly in restaurants) and public places;*
- (c) reduction in mortality and morbidity from exposure to second-hand tobacco smoke;*
- (d) reduction in exposure to second-hand tobacco smoke in private homes;*
- (e) changes in smoking prevalence and smoking-related behaviours;*
- (f) economic impacts.*

Furthermore, pragmatic and methodological considerations may also inform the choice of indicators and data, and will likely include: availability of data at a national level (i.e., not limited to regions or major cities); repetition of data collection at regular intervals (e.g., annually); use of a consistent design to ensure comparability of data across different time points; and, where data is based upon surveys, use of probabilistic sampling to ensure representativeness of data for wider population, and sufficiently large sample sizes to allow analysis of the main sub-groups of interest for policy evaluation.

Potential data sources for information on the suggested indicators include regular national and regional surveys providing high quality data useful to policy making, as well as archival and record linkage data (e.g., from hospital records and police reports). Where data collection is not yet well developed, our policy evaluation framework may serve as a basis for developing monitoring systems,

¹⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009H1205%2801%29:EN:NOT>



although other resources will also need to be considered¹⁶. Of relevance to this aspect, our online survey indicated that available population surveys (e.g., carried out as part of research projects) are currently under utilised as tools for policy development and evaluation.

In summary, our policy evaluation framework contains suggestions for perspectives and indicators to consider in the evaluation of policy, and will be useful in developing methodologies for the evaluation of policies in relation to young people's addictive behaviours.

¹⁶ Major resources include: the key indicators developed by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (<http://www.emcdda.europa.eu/themes/key-indicators>); the European Model Questionnaire (<http://www.emcdda.europa.eu/html.cfm/index19541EN.html>); the European Commission's portal on indicators (e.g., <http://ec.europa.eu/health/indicators/portal/>).

Discussion

This project is the first to provide comprehensive summative information on how young people's addictive behaviours are addressed in EU Member State policy documents. *Addictive behaviours* were understood as those behaviours that can become compulsive and continue despite causing health and social harms (e.g., neglecting other areas of life). In this Work Package, we focussed on behaviours relating to alcohol, tobacco, illegal drugs, as well as gambling, in line with the topics covered by the wider ALICE RAP project¹⁷.

Between 2011 and 2013, a series of related activities were carried out to examine young people targeted components of policy, including: an overview of EU policy documents relating to the four behaviours of interest; an online survey with policy experts in 20 European countries; the development of a framework of policies and interventions; a systematic review of reviews on the effectiveness of policies and interventions; a review of existing policy scales and indices; and the development of a policy evaluation framework.

In this piece of work, *policy* was understood primarily as referring to the written strategies adopted by government to address a specific issue (e.g., for drug use, such a document might be called a drugs policy, strategy, or action plan). Such a policy document would typically outline the current situation, specify priorities and/or aims, and outline actions that government and other stakeholders take in response. Legislation was not considered a policy but was seen as an instrument to achieve policy objectives. Although it is recognised that policy documents are interpreted and implemented differently between, as well as within, countries, this approach was considered most appropriate to discuss governmental priorities and the role of young people targeted components within these. However, other interpretations of the term are also possible, and we used these where appropriate. For example, policy may refer to the "set of laws and programmes" implemented by a government to influence behaviour (Babor et al. 2010: 4); and this meaning was relevant to our review of existing policy scales. As part of this Work Package, we also developed a framework of policies and interventions, where the term took on a different meaning, primarily as an activity distinguished from intervention. Overall, our focus was on *activities implemented or supported by government*, and thus we did not review other aspects, such as informal activities (e.g. social control) or natural cessation of addictive behaviours.

This understanding of policy was useful for examining alcohol and illegal drugs; however, it was less suitable for examining tobacco and gambling. Our online survey suggested that at a national level these areas were more likely to be governed through legislation (cf policy). With regard to gambling, the survey could not identify *any* gambling policy documents, with the ten reporting countries describing only gambling laws and regulations. Furthermore, differences between countries with regard to the level of formalisation of government policy documents and governance structures meant that this concept of policy was better suited to describe the situation in some countries than in others. This experience is in line with other authors' observations that attempts to measure country performance, for example by using policy scales, can disadvantage countries which do not have formal policies in place. It has been argued that such differences must not be interpreted

¹⁷ Novel psychoactive substances were considered separately through our online survey, and the findings were used to inform the development of a dedicated ALICE RAP policy briefing (Sumnall et al. 2013). We did not focus specifically on the misuse of prescription medicines or inhalants, although papers examining these substances were also eligible for inclusion in our review of reviews.

simply as a reflection of poorer ‘performance’ but should also be seen in the light of different needs and cultural contexts which may not have necessitated the formulation of written policy (e.g., Eisenbach-Stangl 2011).

Specifically in relation to young people, our *policy and mapping and review* found that young people specific components were prominent in EU policy documents on alcohol, tobacco and gambling, whereas EU policy on illegal drugs tended to view young people as one target group amongst others. Our online survey collected expert views on national and regional policy documents. This indicated that general addiction or substance policies represent the key documents on young people’s addictive behaviours. Young people were explicitly mentioned in policy in the majority of reporting countries, although the extent to which young people were considered was not always clear. The Ministry of Health was mentioned most frequently as having main responsibility for the development of policies relating to alcohol, tobacco, and illegal drugs. With regard to gambling, however, the main responsibility for policy development lay most frequently with the Ministry of Economics/Finance. Policy development was seen by policy experts as a negotiation process between a variety of stakeholders; but it appeared that young people were not usually involved in this process. Scientific evidence of effectiveness was more likely to be considered in the development of alcohol and illegal drugs policies; and none of the five countries reported the use of needs assessment or scientific evidence of effectiveness in the formulation of gambling policy or legislation. Prevention programmes and age limits were reported as the main approaches to addressing young people’s legal addictive behaviours; for illegal drugs, the emphasis was on prevention and treatment. Consequently, where policy referred to specific sub-groups of young people, these tended to be under-age youth (for legal behaviours) and at-risk groups. The success of illegal drugs policies was evaluated positively, even though evaluations of policy were reported relatively rarely, whereas the effectiveness of alcohol and tobacco policies was believed to be hampered by industry’s failure to comply with existing regulations.

Our systematic *review of reviews* identified 65 review papers deemed to be of high quality. These reviews examined the effectiveness of policies or interventions in addressing young people’s addictive behaviours or related harms, although for gambling, studies in any population were considered. Based on the findings from the online survey and the range of activities described in the retrieved reviews, as well as other relevant materials, we developed a bespoke framework of policies and interventions, comprising eleven broad approaches:

1. Control and regulation of supply
2. Gambling/substance-free zones
3. Age limits
4. Taxation and pricing
5. Control and regulation of advertising, marketing and sponsorship
6. Warning labels
7. Prevention programmes
8. Treatment and social reintegration
9. Harm reduction
10. General delivery structures and quality assurance measures
11. General approaches

We found that there was little high quality review-level evidence available to conclude ‘what works’ to address young people’s addictive behaviours. *Approaches with some evidence for effectiveness* included: higher prices on cigarettes; well planned mass media campaigns delivered as part of multi-component programmes to support school or community based prevention of tobacco use; school

based programmes focussing on skills development to prevent alcohol, tobacco and illegal drug use; pre-school intervention to prevent smoking and illegal drug use; cognitive behavioural therapy (CBT) when delivered in combination with other interventions; certain types of family-based therapy to reduce alcohol and illegal drug use; non-pharmacological smoking cessation interventions in pregnancy; and server liability laws and graduated driver licensing to reduce motor vehicle crash rates. *Approaches with evidence of ineffectiveness or iatrogenic effects* included: standalone mass media campaigns; school based activities consisting only of information provision; mentoring; and pharmacological approaches for smoking cessation. *Evidence was insufficient or conflicting* for the majority of approaches reviewed, including (but not limited to): supply restrictions; smoking bans; age limits; advertising restrictions; warning labels; family based prevention; community based prevention; computer and web based interventions; home visitation; classical harm reduction measures; and interventions targeting special populations.

However, caution is warranted in the interpretation of these findings and the use of these findings to formulate (policy) recommendations. Potential considerations do not necessarily reflect limitations of our review methodology, but provide some insight into the state of the current evidence with regard to young people's addictive behaviours:

- *Heterogeneity of interventions* – Our review of existing policy scales highlighted that referring to broad categories such as ‘prevention programmes’ in general is not a useful approach, as it does not allow a distinction between effective and ineffective activities. However, even at a more detailed level, the same ‘label’ can refer to a variety of intervention approaches, delivery modes, etc. This may be one explanation for conflicting findings regarding approaches such as family or community based prevention, non-pharmacological treatment, or computer and web based interventions, where the label does not dictate intervention content and where taxonomies for describing interventions are not yet well developed. It is also reflected above in referring to ‘certain types of’ family-based therapy, as one review suggested that effectiveness differed according to the specific type of family based therapy; however, other reviews simply referred to family based therapy in general without distinguishing particular types. It was therefore not possible to determine effective broad policy strategies. Where labels mask the variety of possible intervention approaches, their usefulness must be questioned and more appropriate (i.e., specific) labels used.
- *Lack of knowledge regarding effective ‘ingredients’* – Following on from the previous point, a ‘label’ tells us little about effective programme components. For example, considering skills development programmes: which skills should be developed, and using what methods? Should prevention only ever be delivered through manualised programmes (which require well developed delivery structures), or can less formal activities be developed which incorporate effective components of such programmes? We found that the included reviews most frequently examined specific classroom based manualised programmes, making it difficult to identify effective programme components that could usefully inform the development of prevention activities. Although mediation analysis of manualised programmes has been undertaken, this data has not yet been reviewed in accordance with our study criteria. Review authors also frequently noted this limitation of the evidence base, and recommendations for policy and practice were often limited to named programmes. The current evidence base, particularly regarding prevention, would require careful adaptation of manualised programmes, which comes with its own set of challenges and

potential caveats in the European context (see previous chapters for a more detailed discussion).

- *Differential effects* – We found that the evidence was often not clear-cut, and that effects differed, for example, by outcome or follow-up time. Special consideration must also be given to differential effects in different sub-groups of young people (e.g., universality of intervention effects according to risk level, baseline participation in behaviour, gender, age). This was addressed in few reviews, and these suggested that this is an under developed research area that requires further attention in the future. This raises questions about the usefulness of trying to identify ‘effective’ activities as such, without knowing how they affect different population groups with the potential to increase inequalities.
- *Size, scope, and quality of the evidence base* – The evidence base was not equally well developed across the behaviours and approaches of interest. Of the included reviews, the evidence was largest for tobacco, followed by illegal drugs and alcohol. Twenty reviews or more were available for each of these substances. In contrast, only two gambling reviews were included in our review. We also found that the evidence concentrated on prevention, treatment, and harm reduction (for the latter, mostly on interventions to address the potential harms to children resulting from parental participation in addictive behaviours), whereas evidence was limited for the remaining approaches. Considering the inclusion criteria of our review, this indicates in which areas high quality systematic reviews focussing on behavioural outcomes in young people (or any population for gambling) have been carried out or not. Our analysis of excluded reviews suggested that in some areas, relevant primary studies are available, but they have not yet been reviewed using robust review methodologies; and that in other areas, these gaps are due to lack of relevant primary studies. For consistency, we used the same search and review procedures across all behaviours and types of policy and intervention, but as the size and nature of the evidence based differed between behaviours and approaches, we were able to draw upon more knowledge in some areas than in others. The implications of this are discussed in more detail below.
- *Methodological limitations and challenges* – Closely in relation to the previous point, it must be acknowledged that some approaches are relatively easier to research using robust evaluation methodologies than others. This includes activities that have a relatively long history of development and implementation (cf approaches that are currently being developed and introduced, such as standardised cigarette packaging) as well as activities that can be researched using randomised controlled trials (cf full coverage programmes, such as legislation, where a proper control group does not exist, although alternative methodologies are being developed such as interrupted time series designs). Furthermore, although we disregarded findings based on few trials with major methodological weaknesses, it must be noted that nearly all primary studies included in the reviewed reviews suffered from methodological limitations to some degree. Furthermore, even though we described our reviews as being of ‘high quality’, few reviews met all our expectations with regard to quality (e.g., no review met all AMSTAR criteria in full).
- *Lack of evidence does not necessarily mean lack of effect* – Following on from the previous points, approaches already being implemented should not be discontinued because insufficient evidence is available to judge their effectiveness (cf where evidence is available and has shown that an activity has no or iatrogenic effects). It is of primary importance

though that activities with an uncertain evidence base are only delivered as part of well designed research studies. Our review does, however, still highlight the need for high quality systematic reviews focussing on young people in many areas to obtain a better understanding of their effectiveness.

- *Limited consideration of children, adolescents and young adults* – We found that reviews rarely examined the effects of policies and interventions separately in young people, unless the policy or intervention was specifically targeted at young people. This also explains the disproportionately larger amount of evidence concerning prevention, treatment, and family based harm reduction, as relevant activities carried out under those approaches are typically targeted at young people only. Policies and interventions targeted at the general population were usually not discussed in relation to young people, and even where this was the case, information was often so limited that it was not possible to include these reviews in our evidence review. Another challenge was that reviews tended to separate children (e.g., those aged 18 years or under; ‘underage’) from all adults (e.g., > 18 years), and rarely distinguished adults further by age (except in the case of college students). This did not correspond to our inclusive definition of young people, which considered children, adolescents, and young adults¹⁸. Other reviewers have also found that “it was rarely possible to separate the 19-25’s from the rest of the adult populations studied” (Thomas et al. 2011). Consequently, although we intended to provide evidence for young people up to 25 years, the majority of included reviews referred to children or adolescents.
- *Unknown generalisability of findings* – The applicability of interventions and findings to current day Europe was sometimes questionable, particularly where studies have been carried out more than a decade ago and/or exclusively in North America, as was the case for server liability laws and graduated driver licensing. Other authors have also commented that interpretation of scientific evidence for the purposes of policy development “will depend not only on study design and magnitude of effect, but also on the relevance and generalisability of the findings” (Strang et al. 2012: 71). Another point for consideration is that many studies included in the reviews (except in the case of natural experiments) were probably efficacy studies carried out under ideal circumstances (e.g., delivered by research staff or well trained teachers), and so it is unknown how these interventions would work under real-world circumstances. The level of detail provided in the reviews did not allow us to explore this issue.
- *Effectiveness regarding what outcome?* – Our review of reviews focussed on behavioural outcomes in young people, including substance use and gambling, as well as manifest harms, such as adverse neonatal outcomes or fatalities due to motor vehicle accidents; and so any statements of effectiveness relate to such outcomes. We did not consider other outcomes, such as knowledge or attitudes towards substance use or gambling, or process data, such as treatment retention; and so we cannot comment on the ‘effectiveness’ of reviewed approaches regarding such outcomes. Approaches that are ineffective in changing behaviours may still play an important role, however, for example in shaping public opinion and supporting the implementation of other measures (Thomas et al. 2008; Anderson et al. 2009). The included reviews reported very limited evidence concerning unintended

¹⁸ Throughout our Work Package, we used a working definition of young people as those being aged 25 years or below, including children, although we acknowledged, where appropriate, that definitions may vary.

outcomes, for example whether increases in cigarette prices would increase the role of the black market.

We sought to use the findings of our review of reviews to construct a *young people specific policy scale*, which could be used to assess the extent to which national policies include young people targeted components. However, although we were able to identify numerous examples of young people specific elements through our online survey and review of reviews, we found that the evidence base was not yet sufficiently well developed with regard to young people to allow the development of a useful scale for young people targeted components of policy (i.e., a scale that is both comprehensive and based upon sound scientific evidence of effectiveness).

A weakness of our review was consequently a lack of available evidence on the effectiveness of most approaches included in our framework of policies and interventions. It could be argued that this apparent evidence gap was artificially created through our inclusion criteria, in particular our restriction to high quality reviews.

The ‘review of reviews’ approach was necessary given the breadth of policies and interventions of interest as well as the range of addictive behaviours under investigation. However, it was less suitable for approaches where fewer primary studies have been carried out (and where there is less of a need for reviews), and resource limitations did not permit (systematically) retrieving and assessing primary studies for these approaches separately.

Imposing quality restrictions in review methodology is not uncommon, and a number of reviews included in our synthesis either excluded primary studies deemed to be of low quality or limited their synthesis to high quality studies only (the difference being whether studies of moderate quality were included or not). In some cases, a higher level of quality was implicated in the inclusion criteria (e.g., only stronger research designs, such as randomised controlled trials, eligible, vs. any study design, including uncontrolled and post-test only designs). Some reviews include only reviews published by the Cochrane Collaboration as a proxy for quality (Pieper et al. 2012). In meta analyses, it is possible to consider study quality by conducting sensitivity analysis which investigates how the review findings (i.e., pooled estimate) change depending on whether all or only a sub set of higher quality studies are included. In a narrative synthesis, as in our review of reviews, such analyses are relatively more difficult to undertake. Besides this consideration, the primary reasons for limiting our review to high quality reviews were: i) to ensure that we could have confidence in the review authors’ methods and conclusions, and that ii) reviews would provide sufficient information which would allow us to extract data in a satisfactory manner.

Generally speaking, we understood reviews of ‘high quality’ as those which had conducted sufficiently rigorous searches for literature, reported in detail on the characteristics of included primary studies, and considered the scientific quality of included studies in formulating conclusions. Quality was assessed using the AMSTAR instrument (Shea et al. 2007a; Shea et al. 2007b; Shea et al. 2009). This instrument focuses on the detail presented in a review; it is therefore not necessarily a measure of the risk of bias, as meeting few AMSTAR criteria may be due to inadequate reporting. Publication limitations, such as restrictive word counts, and journal instructions to authors on data presentation may therefore have unduly influenced study quality rating. In line with Cochrane Collaboration recommendations against basing judgement on reporting rather than conduct (Higgins & Green 2011), we refrained from calculating summary scores using AMSTAR but used them as a decision aid in making expert judgements regarding the overall methodological adequacy of reviews.

The restriction to high quality reviews meant that we could not include evidence from primary studies, if these were only included in literature reviews not meeting our quality threshold. We identified a number of policies and interventions for which relevant primary studies appeared to be available, but which had not yet been reviewed using robust systematic review methodologies with a specific focus on behavioural outcomes in young people. Where possible, these studies have been discussed in *Background report 2: Review of reviews*.

The evidence we present is therefore somewhat more limited in quantity than that presented in other review of reviews. A review of reviews on drug prevention policies and interventions (including alcohol and tobacco measures) was conducted to inform the development of the International Standards on Drug Use Prevention (UNODC 2013: Appendix II). The review was not limited to young people, although due to the focus on prevention most studies had been carried out in young people. Reviews deemed ‘not acceptable’ were excluded, whereas ‘good’ and ‘acceptable’ reviews were eligible for inclusion. Seventy out of 137 retrieved reviews were included. Reviews published by the Cochrane Collaboration, Campbell Collaboration or as part of the Community Guide were not assessed for methodological quality (assigned a ‘good’ rating by default); and of the remaining reviews, most reviews were deemed to be of ‘acceptable’ quality. The quality of the primary studies included within reviews was not reported.

A number of reviews of reviews with relevance to our topics of interest have been published in recent years. In a series on adolescent health, Catalano and colleagues (2012) examined preventive policies and interventions to improve adolescent health on a broad variety of outcomes, including substance use, and Toumbourou and colleagues (2007) reviewed interventions aimed at the prevention and reduction of harms related to alcohol, tobacco, illegal drug use and non-medical use of prescription medications in adolescents. In a series on alcohol and global health, Anderson and colleagues (2009) reported the findings of a review on the effectiveness and cost effectiveness of policies and programmes to reduce the harm caused by alcohol, which also informed the development of the WHO European action plan to reduce the harmful use of alcohol 2012–2020. In a series on addiction, Strang and colleagues (2012) reviewed interventions “intended to prevent or at least minimise the damage that illicit drugs do to the public good” (2012: 71). The latter two reviews were not limited to young people, but some young people specific findings were also presented.

All four papers focussed on existing reviews, in some cases including reviews of reviews, and supplemented this review-level evidence base with primary studies in a targeted manner. For example, Toumbourou and colleagues included “well-done and influential empirical [primary] studies” (2007: 1391), and Strang and colleagues (2012) included primary studies (randomised controlled trials where feasible) for interventions that have not been studied in rigorous reviews. Systematic search strategies were reported in three reviews (although detail was lacking), whereas Catalano and colleagues (2012) reported a ‘purposive’ rather than a systematic approach to reviewing the literature. In this latter review, programmes and policies were selected only if they had statistically significant effects at least one year post-intervention. Toumbourou and colleagues (2007) also focussed on interventions that have been shown to be effective, although interventions known to be ineffective or areas of uncertainty were also noted. All four reviews appeared to include large numbers of studies, but the total number was not stated in any review, and there was no summative information on how many reviews and primary studies formed the underlying evidence base. Authors’ approaches concerning the quality of included studies differed. Catalano and colleagues (2012) provided no information on the quality of included studies. Toumbourou and colleagues (2007: 1391) included reviews meeting “quality standards for systematic selection and methodological evaluation of studies”, as well as “well-done” primary studies, but details on the

quality of included reviews or the primary studies included within those reviews were not given. Anderson and colleagues (2009) did not report efforts to assess the quality of reviews, and the quality of studies included within reviews was commented upon in a few instances only. The authors did, however, rate the level of evidence for each of the 32 types of policy or intervention presented in their evidence table. The level of evidence for each type of policy or intervention was graded as follows: 1=more than one systematic review; 2=one systematic review; 3=two or more randomised controlled trials; 4=one randomised controlled trial; 5=observational evidence; 6=not assessed¹⁹. Most types of policy or intervention were described using one systematic review only. Strang and colleagues included “evidence of good scientific quality” (2012: 72), but details of quality assessment were not provided, and study quality was commented upon in some instances only. As has been noted earlier, publication restrictions may have prevented these authors from including more methodological detail, but the available documentation suggests that the reviews described above did not conduct a systematic quality assessment which considered the quality of reviews as well as the quality of primary studies included within reviews.

These reviews had different inclusion criteria concerning populations, interventions, and outcomes than our review, and so the search results (e.g., numbers of included reviews) are not comparable. Of interest to our review, however, is that all of these reviews reported evidence of effectiveness for approaches, for which we could not identify any suitable evidence. The strength of these reviews is consequently that they drew upon a larger body of evidence and presented evidence for areas for which we only could only conclude there were research gaps. An inspection of the underlying evidence base for these other reviews showed, however, that the evidence statements were based upon reviews which had been excluded from our own (e.g., not considered high quality), or that they referred to single primary studies, which in some cases was only evident upon consulting the reference lists. Making recommendations based on single studies can be problematic insofar as interventions may not produce the same results when replicated, and when implemented as part of general delivery structures. If review findings were based on studies of unknown quality, or based on single studies, then the robustness of review findings should be questioned.

Considering the methods and findings of these reviews in relation to our own, it means that the current state of the evidence base requires researchers and decision makers to compromise between quality and quantity, which – at its extreme ends – consists of the following two options: i) referring to high quality evidence only, but being left with little material upon which to draw conclusions (i.e., discarding the majority of available evidence); or ii) considering a larger body of evidence that may have significant methodological limitations.

This appears to be especially the case if we are interested in the effects of (general population targeted) measures on behavioural outcomes in young people. In the absence of relevant high quality evidence, limited and potentially flawed evidence may seem better than no evidence, but is this really the case? In practitioner’s everyday practice of working with young people, ‘softer’ forms of evidence, such as practitioners’ own experience, may usefully inform action (particularly when more robust evidence is not available); but higher methodological standards must be applied when specific types of policies and interventions are to be recommended by decision makers and researchers. A comparison with clinical practice in this regard is useful. In a commentary entitled *The arrogance of preventive medicine*, Sackett (2002: 363) provocatively argued:

¹⁹ There appeared to be discrepancies in the rating system, as some approaches were graded as ‘1’, even though only one review was cited as evidence in the table.

“... surely the fundamental promise we make when we actively solicit individuals and exhort them to accept preventive interventions must be that, on average, they will be the better for it. Accordingly, the *presumption* that justifies the *aggressive assertiveness* with which we go after the unsuspecting healthy must be based on the highest level of randomized evidence that our preventive manoeuvre will, in fact, do more good than harm. Without evidence from positive randomized trials (and, better still, systematic reviews of randomized trials) we cannot justify soliciting the well to accept any personal health intervention. There are simply too many examples of the disastrous inadequacy of lesser evidence as a basis for individual interventions among the well: supplemental oxygen for healthy premies [premature babies] (causing retrolental fibroplasia), healthy babies sleeping face down (causing SIDS), thymic irradiation in healthy children, and the list goes on.” (emphasis in original)

Although the level of evidence accepted in clinical practice may be unattainable for many public health measures, this should not mean that the level and quality of evidence do not matter in public health. Randomised controlled trials may not be feasible or desirable, but recommendations, particularly of approaches seeking to restrict young people’s behaviours or to change cognitions underlying choices to pursue addictive behaviours, must be based on the strongest possible research designs with the best possible study execution.

Another paradoxical situation we found ourselves in is that, on the one hand, in the analysis of our online survey, we judged the quality of policy documents based on whether they incorporated scientific evidence of effectiveness; whereas on the other hand, following our review of reviews, we were unable to make any strong recommendations regarding the effectiveness of certain types of policies or interventions for incorporation in policy. By exaggerating the quality of the evidence in an attempt to provide policy makers with necessary scientific evidence to inform their policy making, researchers may inadvertently put policy makers in a position similar to Sackett’s “[innocent] ‘demanding’ patients who insist on receiving some bogus preventive interventions of unknown efficacy, for they are simply doing their best to improve their lives in an ‘evidence-vacuum’” (2002: 363). There are numerous examples of reviews published by the Cochrane Collaboration (generally regarded as setting the benchmark for systematic review methodologies), which identified no trials suitable for inclusion, often because available evidence did not meet inclusion criteria with regard to study design (e.g., only uncontrolled trials with short term follow up available) (for example Priest 2008b in our review).

Lowering the quality threshold in our review would have allowed us to include more reviews and provide evidence on a larger number of policies and interventions, but it would have also undermined the credibility of our review findings, and we may have recommended an approach as ‘effective’ based on flawed review findings. Although our review may provide some evidence only on a limited number of approaches, the strength of our review lies in using a systematic review methodology, documenting our methods for the selection and assessment of studies in a transparent way, focussing on higher quality evidence and considering methodological as well as other limitations in the interpretation of evidence. To our knowledge, this is also the first review of reviews focussing on young people and examining a range of policy options with regard to alcohol, tobacco, illegal drugs, and gambling. Where our review was unable to identify high quality evidence, it can be understood as a scoping exercise to identify gaps and the need for high quality reviews.

Conclusions

In summary, our review of reviews suggested that current recommendations with regard to effective approaches for addressing young people's addictive behaviours should be, at best, made with reference to 'promising' approaches, rather than approaches proven to be effective. We found that there is a need in research for a greater focus on behavioural outcomes in young people, particularly for policies and interventions not targeted specifically at children and adolescents, and also in relation to gambling. In certain areas, original research evidence conducted in the real world using robust methodologies is still needed, whereas in other areas it is available but is yet to be synthesised using systematic review methodologies with a young people's focus.

The review also highlighted some challenges for evidence based policy making, in that current policy making must rely on an incomplete evidence base. Potentially effective interventions that have not received rigorous empirical attention may have been excluded. Still, there is value in our findings to policy makers. In the area of prevention in particular, the current review found, in line with previous reviews and good practice recommendations, that standalone information provision and media campaigns are unlikely to be effective; yet, these continue to be among the most widely implemented activities in Europe. In addition, findings from our online survey highlighted the practical need to balance the evidence base with what is feasible and desirable in the real world, including not only stakeholder views but also existing infrastructures.

In the light of these findings, and to integrate all phases of our work, we developed the foundations of a *Young People's Addictive Behaviours Policy Evaluation Framework*. This framework is intended to assist policy makers and researchers in developing systems and methodologies for the multi-faceted evaluation of national policies. The framework comprised three elements:

1. Written government policy
2. Implementation
3. Outcomes in young people

Briefly, the framework proposes six criteria that could be used to assess the nature and quality of written government policy; and distinguishes between the assessment of implementation (using process indicators and referring to changes in intermediate populations) and the assessment of outcomes in young people (measured as harms, common risk factors, and young people's participation in addictive behaviours). This is in line with findings from our online survey and review of reviews, which indicated that poor implementation can hamper the effectiveness of policies and interventions. Thus, the framework accounts for the need for evidence based interventions, as well as the context within which these are planned, implemented, and evaluated.

Implications for policy and practice

"There is a strong and urgent need for research to be nurtured and supported in the field of drug prevention globally. [...] What can be done in the meantime? Should policy makers wait for the gaps to be filled before implementing prevention initiatives? What can be done to prevent drug use and substance abuse, and ensure that children and youth grow healthy and safe NOW? The gaps in the science should make us cautious, but not deter us from action" (UNODC 2013: 5).

This statement from the UNODC International Standards on Drug Use Prevention raises the important point that lack of (high quality) evidence must not mean that policy makers take no action, discount existing or promising approaches, lose interest in scientific evidence, or stop investing in policies and interventions to address young people's addictive behaviours. Instead, the findings of our Work Package indicate that policy makers should:

- Ensure the availability of well formulated policy documents (e.g., national strategy, action plan) developed in line with evidence and international good practice recommendations. There is a need for dedicated policies particularly in the fields of tobacco and gambling, and respective policies could be modelled on those already available for alcohol and illegal drugs.
- For gambling in particular, formulate public health priorities in relation to young people and the general population (where these are not yet available).
- Develop the infrastructures required for the successful implementation of effective policies and interventions.
- Acknowledge that current activities rely on an incomplete evidence base and that careful consideration must be given to the activities being implemented, including unintended effects and opportunity costs (e.g., if new investments are made in one activity, then how does this affect (the financial security of) other activities?).
- Where evidence suggests that actions are ineffective or have iatrogenic effects, policy makers should seek to understand whether modifying these programmes in line with good practice recommendations would lead to an increased likelihood of success (e.g. emerging evidence suggests that mass media approaches to prevention are only effective when delivered in support of an evidence based school or multicomponent programme). All modifications should be accompanied by consideration of the ethics of intervention, and rigorous research into the effects of changing an activity. Policy makers should disinvest in approaches which have consistently been shown to have no beneficial effect.
- Where evidence of effectiveness is unclear, implement policies and interventions only as part of sufficiently funded scientific research projects to evaluate the effectiveness of these actions using robust research methodologies.

Implications for research

We found that there is a need in research for a greater focus on behavioural outcomes in young people, particularly for policies and interventions not targeted specifically at children and adolescents, and also in relation to gambling. As a consequence, researchers should:

- Where primary studies are available but high quality reviews are lacking, synthesise available evidence in well documented systematic reviews. Meta-analyses, in particular, should take into account the heterogeneity of interventions. There is also a need for the uptake of systematic review methods in the gambling field in particular, where traditional or semi-systematic literature reviews are still being used to examine the effectiveness of interventions.

- Where no or few primary studies are available and evidence is needed to inform policy making, conduct primary studies using the most rigorous study designs possible, preferably under real world conditions. Research trials should, where possible, adopt a realist approach to identifying intervention effectiveness, seeking to understand mechanisms of change, differential outcomes for sub populations, and the effects of context and complex systems on outcomes.
- In effectiveness trials, focus on behavioural outcomes rather than process data or mediators. Although in some cases interventions may address factors that are too distal and so preclude measurement of final outcomes (i.e., behavioural outcomes in young people), our review highlighted a number of examples where data collection appears to focus on process data or mediators although behavioural outcomes in young people could be measured (e.g., success of tobacco retail restrictions measured via test purchasing only; success of gambling interventions measured as changes in knowledge or attitudes). Careful consideration should also be made of the choice of primary and secondary outcomes of interventions research. Although some interventions aim to address important policy targets (e.g., lifetime use of substances), these should be chosen because of robust prediction of meaningful health or social outcomes, rather than the political priority of the behaviour.
- Consider (and report) the effects of policies and interventions on young people, including (as appropriate) children, adolescents, and young adults; not only when policies and interventions are specifically targeted at young people. In particular, the group of 18 to 25 year olds should be presented and analysed separately from the adult population.

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Full reference lists are provided in the two background reports (*Background report 1: Policy mapping and review; Background report 2: Review of reviews*), available as separate documents.

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APPENDIX

Box 1: Six quality criteria for the appraisal of governmental policy documents

- (A) *Policy availability* – the availability of relevant policy and legislation, particularly policy specifically focussing on young people;
- (B) *Policy development* – what methods, ‘evidence’ and criteria are used to formulate policy, and if and how the general public (particularly young people) help to determine the content and objectives of policy;
- (C) *Content of policy* – how young people are defined and addressed in policy, including the content of policy (e.g., desired outcomes for young people);
- (D) *Policy changes in recent years* – previous policies and time trends, in particular changes in how young people’s addictive behaviours are addressed;
- (E) *Implementation, monitoring and evaluation* – if and how policy is implemented, monitored, and evaluated in relation to its effectiveness and implementation fidelity;
- (F) *Resource allocation* – the priority placed on young person focussed strategies in relevant funding streams, as well as the role of industry funding.

Table 1: How do government policies on addictive behaviours address young people?

	Alcohol	Tobacco	Illegal drugs	Gambling
A - Policy availability	<ul style="list-style-type: none"> • 15 countries (79%, N=19) reported having written government alcohol policies in place; 12 countries at a national level and 3 countries at a regional level • In Malta, the alcohol policy was being finalised at the time of the survey and had not yet been officially published – the new draft policy is included in this survey • Policies in 8 countries (53%, N=15) focus exclusively on alcohol, whereas the remaining policies encompass other substances and/or addiction or health more generally • Young people are mentioned in all these policies (100%, N=15), and 9 countries (60%, N=15) reported a special focus on young people • Of all countries, 2 countries reported subsidiary policies specifically focussing on young people and alcohol (Czech Strategy on the prevention of risk behaviours in school settings; Icelandic Health Action Plan) 	<ul style="list-style-type: none"> • 5 countries (45%, N=11) reported having written tobacco policies in place; 4 countries at a national level and 1 country at a regional level (United Kingdom); 5 countries (45%, N=11) reported that legislation was available but no dedicated policy • This section therefore refers to policies and laws to account for the low number of responses and available policies • Of the 5 countries reporting policies, dedicated tobacco plans are only available in England and Northern Ireland; of the 6 countries reporting on laws only, laws focussing exclusively on tobacco were reported by Latvia and Iceland; the other reported policies and laws cover also other substances and behaviours • Young people are explicitly mentioned in policy or legislation in 8 countries (72%, N=11) • Of all countries, 1 country reported subsidiary policies specifically focussing on young people and tobacco (Swedish public health policy) 	<ul style="list-style-type: none"> • 19 countries (95%, N=20) reported having written drugs policies in place; 17 countries at a national level and 2 countries at a regional level (Austria and United Kingdom) • At the time of the survey, a new drugs strategy for the period 2012-2020 was being finalised in Hungary – the new draft policy is included in this survey • 10 countries (53%, N=19) reported that policy focuses exclusively on illegal drugs (in some cases including new psychoactive substances) • Young people are mentioned in policy in 18 countries (95%, N=19); in 1 country (Portugal) drugs policy addresses only the general population (over 25 years old) • 4 countries (20%, N=20) reported subsidiary policies specifically focussing on young people and illegal drugs (Hungarian National Youth Strategy; Austrian regional plans; Croatian National Youth Programme; and Icelandic National Health Plan) 	<ul style="list-style-type: none"> • A written government gambling policy/strategy is not available in any reporting country (N=10) – in all 10 countries gambling is addressed only through laws and regulations which focus exclusively on gambling • This section therefore refers to laws and regulations in reporting countries (not policies) • Young people are mentioned in gambling laws/regulations in 8 countries (89%, N=8) • 2 countries (20%, N=10) reported subsidiary documents specifically focussing on young people and gambling (Austrian youth protection laws; Portuguese Contratos dos distribuidores dos Jogos Santa Casa)

	Alcohol	Tobacco	Illegal drugs	Gambling
B - Policy development	<ul style="list-style-type: none"> In 11 countries (79%, N=14), the Ministry of Health was primarily responsible for developing the alcohol policy The Ministry of the Interior was (co)responsible for developing the alcohol policy in 2 countries, and the Ministry of Justice in 1 country The main groups involved in the policy making process were national government officials (e.g., policy makers, commissioners) (reported by 13 countries, N=14), health and social services (including drug and alcohol services and youth services), and expert consultants (each reported by 10 countries) Young people were explicitly involved in 3 countries (21%, N=14) (Lithuania, Portugal, Northern Ireland (UK)), whereas industry representatives were explicitly involved in the alcohol policy making process in 6 countries (43%, N=14) Holding expert meetings and consultations was the most common method for policy development – reported by 13 countries (100%, N=13); other popular methods included intradepartmental consensus and review of existing policies (reported by 10 countries respectively) 	<ul style="list-style-type: none"> In 10 countries (91%, N=11), the Ministry of Health was primarily responsible for developing the tobacco policy In none of these countries (N=11) did the Ministries of the Interior or of Justice hold main responsibility for developing the tobacco policy The main groups involved in the development were national government officials (reported by 9 countries, N=11), and to a lesser extent health and social services (including smoking cessation services and youth services) and the voluntary sector/civil society (NGOs) (each reported by 5 countries) Young people were explicitly involved in the policy making process in 1 country (Lithuania), whereas industry representatives were explicitly involved in developing tobacco policies/laws in 3 countries (27%, N=11) The most common methods (each reported by 8 countries; 73%, N=11) were expert meetings and consultations and intradepartmental consensus Needs assessment informed policy development in 6 countries (55%, N=11); a review of international scientific literature was conducted in 	<ul style="list-style-type: none"> In 13 countries (68%, N=19), the Ministry of Health was responsible for developing the drugs policy; in 10 countries (53%) the national drugs agency was responsible for drugs policy development (in 5 cases together with the Ministry of Health) The Ministry of the Interior was (co)responsible for developing the drugs policy in 6 countries, and the Ministry of Justice in 5 countries The main groups involved in the development were national government officials (reported by 17 countries; N=17), as well as health and social services (including drugs services and youth services) and the voluntary sector/civil society (NGOs) (each reported by 15 countries; 88%, N=17) Young people were explicitly involved in the policy making process in 4 countries (24%, N=17) (Vienna (Austria), Czech Republic, Lithuania, Northern Ireland (UK)), whereas industry representatives were involved in defining drugs policy in 2 countries (12%, N=17) (Cyprus, England (UK)) Expert meetings and consultations were the most common method for policy development (16 countries; 84%, N=19); followed by 	<ul style="list-style-type: none"> In 6 countries (86%, N=7), the Ministry of Economics/Finance was mainly responsible for developing the gambling laws/regulations The Ministry of Health was not responsible for developing the gambling laws/regulations in any country; the Ministry of Justice in 1 country (Switzerland); the Ministry of the Interior in none of these countries (N=7) The main groups involved in the policy making process were national government officials (reported by 7 countries, N=7), and regional and local government officials (reported by 3 countries) Young people were explicitly involved in none of these countries (N=7), whereas industry representatives were involved in developing gambling regulations in 2 countries (29%, N=7) (France, Switzerland) Information on the methods used for the development of these laws was only provided by 5 countries – the only methods reported were intradepartmental consensus (3 countries), review of existing policies (2 countries) and expert meetings and consultations (1 country) Needs assessment or reviews of

	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Needs assessment was used for policy development in 9 countries (69%); a review of international scientific literature also in 9 countries (69%, N=13) 	<p>3 countries (27%, N=11) to inform policy development</p>	<p>intradepartmental consensus (14 countries; 74%, N=19)</p> <ul style="list-style-type: none"> Policy was based upon needs assessment in 11 countries (58%, N=19) and on a review of international scientific literature in 12 countries (63%, N=19) 	<p>international scientific literature were utilised in none of these countries (N=5)</p>
C - Content of policy	<ul style="list-style-type: none"> 8 countries (67%, N=12) reported that the policy refers to international definitions in specifying ‘problematic’ alcohol use (e.g., ICD, DSM) 6 countries (50%, N=12) reported that the policy uses a bespoke problem definition (e.g., drunkenness, binge drinking, drunk-driving) (in 2 cases this was in addition to the international definitions) None of these countries (N=14) reported that the policy singles out particular alcoholic beverages - not in relation to the general public or in relation to young people Alcohol policy most commonly refers to young people who are under-age (9 countries; 69%, N=13) 	<ul style="list-style-type: none"> No country (N=7) reported that the policy refers to international definitions in specifying ‘problematic’ tobacco use 5 countries (71%) reported that ‘problematic’ tobacco use is not defined in any way; respondents from Sweden and France suggested that all forms of smoking are considered problematic in young people 4 countries (50%, N=8) reported that particular tobacco products (mostly cigarettes) are singled out in relation to young people but these are also singled out in relation to the general population – only one country reported emphasis on a particular product which is not highlighted in relation to the general population (sweetened tobacco in France) Documents most commonly refer to young people who are under-age (6 countries; 75%, N=8); this is particularly so in legislation; tobacco 	<ul style="list-style-type: none"> 12 countries (63%, N=19) reported that the policy refers to international definitions in specifying ‘problematic’ drug use, particularly the EMCDDA definition Several respondents noted that any illegal drug use is considered problematic, highlighting also issues of public perceptions and political stances Most policies do not single out particular substances in relation to young people; 5 countries (26%, N=19) highlighted the role of cannabis (but three of these countries highlighted cannabis also in relation to the general population) Drugs policy most commonly refers to young people at risk of using drugs (14 countries; 74%, N=19), as well as school pupils, young people who already use drugs, and young people who are drug dependent (each reported by 13 countries; 68%, 	<ul style="list-style-type: none"> 1 country (20%, N=5) reported that the Gambling and Lotteries law refers to the ICD-10 Classification (Latvia), and no country reported a bespoke problem definition in relation to gambling Most laws do not single out particular games in relation to young people - 3 countries (43%, N=7) reported that the policy highlights particular games, such as lotteries, casino games, slot machines, and gambling machines placed in locations other than licensed casinos Most commonly, gambling laws/regulations refer to no specific sub-groups of young people (5 countries; 71%, N=5); 2 countries (29%, N=7) reported that regulations explicitly refer to young people who are under-age (Portugal, United Kingdom)

	Alcohol	Tobacco	Illegal drugs	Gambling
		policy most commonly refers to young people from families with complex needs and young people at risk of tobacco use (each reported by 3 countries, N=4)	N=19)	
D – Policy changes	<ul style="list-style-type: none"> • 6 countries (46%, N=13) reported the availability of previous alcohol policies; in the other countries there were previously only laws or more general documents • Of these, 3 countries (50%, N=6) indicated major changes concerning young people – two countries reported a greater focus on young people (e.g., youth representation in policy making process), and one country highlighted the potential impact of general changes to pricing and licensing on young people 	<ul style="list-style-type: none"> • 4 countries (44%, N=9) reported the availability of previous tobacco policies; this included three of four countries with a policy currently in place and one country where there is currently only legislation in place (Latvia) • 1 country indicated that the current policy puts a greater focus on young people; the other countries reported no changes with regard to young people 	<ul style="list-style-type: none"> • 14 countries (88%, N=16) reported the availability of previous drugs policies • 7 countries (50%, N=14) indicated that there had been major changes concerning young people (e.g., the creation of dedicated delivery structures in Northern Ireland (UK) and Croatia, greater focus on harm reduction approaches in Vienna (Austria) and Spain, a more repressive approach in France, focus on specific substances such as cannabis and “smart drugs” in the Czech Republic, increased focus on those at risk in Northern Ireland (UK) and Greece) 	<ul style="list-style-type: none"> • 4 countries reported the availability of previous laws/regulations • 2 countries (50%, N=4) indicated that there had been major changes concerning young people; for example, it was reported that in 2004 age controls at casinos were made optional in Portugal

	Alcohol	Tobacco	Illegal drugs	Gambling
E – Implementation, monitoring and evaluation	<ul style="list-style-type: none"> In 14 countries (93%, N=15), the Ministry of Health has a main responsibility for alcohol policy delivery The Ministry of the Interior has a main responsibility for policy delivery in 2 countries (13%, N=15); there are a further 7 countries (47%) where the Ministries of the Interior or Justice assist with alcohol policy delivery The implementation and effectiveness of alcohol policy in relation to young people is monitored in 9 countries (69%, N=13) – this is most commonly done by the government department responsible for policy development and implementation (7 countries; 78%, N=9) 6 countries (46%, N=13) reported that alcohol policies have been evaluated, including government led or commissioned evaluations in 6 countries and an independent evaluation in 1 country Respondents’ ratings of policy implementation ranged from 1 to 72 with a median country score of 39.5 (N=12)²⁰; ratings of policy 	<ul style="list-style-type: none"> In 10 countries (91%, N=11), the Ministry of Health has a main responsibility for implementing tobacco policy The Ministry of the Interior has a main responsibility for policy delivery in 1 country (9%, N=11); in a further 4 countries (36%, N=11) the Ministries of the Interior or of Justice assist with the delivery of tobacco policy 6 countries (67%, N=9) reported that the implementation and effectiveness of tobacco policy is monitored – this is most commonly done by the government department responsible for policy development and implementation (5 countries; 83%, N=6) 2 countries (22%, N=9) reported evaluations of tobacco policy – this included one external evaluation commissioned by government and one independent evaluation Respondents’ ratings of policy implementation ranged from 4 to 79 with a median country score of 32 (N=9); ratings of policy effectiveness ranged from 5 to 92 with a median country score of 31 (N=8); noting 	<ul style="list-style-type: none"> In 11 countries (58%, N=19), the Ministry of Health has a main responsibility for implementing drugs policy; in 9 countries (47%, N=19), the National drugs agency has a main responsibility for drugs policy delivery (in some cases in addition to the Ministry of Health) The Ministries of the Interior or of Justice have a main responsibility for drugs policy delivery in 7 countries (36%, N=19), and assist with policy delivery in a further 11 countries (56%) The implementation and effectiveness of drugs policy in relation to young people is monitored in 12 countries (71%, N=17) – this is most commonly done by the government department responsible for policy development and implementation (10 countries; 83%, N=12) 11 countries (65%, N=17) reported that drugs policy has been evaluated – evaluations led or commissioned by government were reported by 10 countries and independent evaluations by 4 countries Respondents’ ratings of policy 	<ul style="list-style-type: none"> In 6 countries (67%, N=9), the Ministry of Economics/Finance has a main responsibility for the implementation of gambling laws and regulations The Ministry of Justice has a main responsibility for delivery of gambling laws in 2 countries (22%, N=9), and in a further 2 countries the Ministries of Justice or Interior assist with the implementation The national gambling regulatory public authority does not have a main responsibility for development or implementation of regulations in any reporting country; it has a supportive role in implementing regulations in 3 countries (33%, N=9) Only 1 country (14%, N=7) reported that the implementation and effectiveness of gambling laws in relation to young people is monitored; this is done by the government department responsible for the development and implementation of laws (Austria) Evaluations have not been carried out in any of these countries (N=6), although 2 countries stated that

²⁰ Implementation: 0 = very poor, 100 = very good; Effectiveness: 0 = not at all successful, 100 = very successful

	Alcohol	Tobacco	Illegal drugs	Gambling
	<p>effectiveness ranged from 1 to 89 with a median country score of 46 (N=11); with some respondents highlighting poor adherence by the industry to sales and advertising regulations and lack of control by the government</p>	<p>that many regulations are not adhered to well enough (e.g., ban of tobacco sales to minors)</p>	<p>implementation ranged from 11 to 100 with a median country score of 73 (N=19); ratings of policy effectiveness ranged from 11 to 95 with a median score of 69 (N=19); mostly due to the decrease in young people's drug use over the past years</p>	<p>evaluations are planned for the future</p> <ul style="list-style-type: none"> • Respondents' ratings of implementation (enforcement) ranged from 1 to 100 with a median country score of 22 (N=5); ratings of effectiveness ranged from 1 to 95 with a median country score of 14 (N=5); with one respondent noting that gambling policy is not being assessed and another respondent noting that he has been "fighting" for years to establish specific norms for the protection of young people
F – Resource allocation	<ul style="list-style-type: none"> • 3 countries (18%, N=17) reported a slight increase in resources allocated to policies and programmes addressing young people and alcohol; 9 countries (53%) reported no changes to resource allocation; and 5 countries (29%) reported small or large decreases • Several respondents highlighted details of national funding structures that made it difficult to answer that question (e.g., no alcohol specific funds available, availability of several different funding streams) 	<ul style="list-style-type: none"> • 6 countries (75%, N=8) reported no changes to resource allocation; and 2 countries (25%) reported large decreases in resources allocated to policies and programmes addressing young people and tobacco (no country reported an increase in resources; N=8) • One respondent reporting a stable situation noted that there is 'competition' between the different substances with regard to resource allocation, with tobacco receiving comparatively less resources than illegal drugs 	<ul style="list-style-type: none"> • 4 countries (22%, N=18) reported large or small increases in resources allocated to policies and programmes addressing young people and illegal drugs; 6 countries (33%) reported no changes to resource allocation; and 8 countries (44%) reported small or large decreases • 5 countries (28%, N=18) highlighted the role of general funding cuts and/or the current financial crisis 	<ul style="list-style-type: none"> • 1 country (17%, N=6) reported a slight increase in resources allocated to policies and programmes addressing young people and gambling; 4 countries (67%, N=6) reported no changes to resource allocation; and 1 country (17%) reported a strong decrease • One of the countries reporting no changes highlighted that the resources are very scarce and that work often relies on volunteers
Basis	<ul style="list-style-type: none"> • National and regional policy (as reported by experts) 	<ul style="list-style-type: none"> • National and regional policy and legislation (as reported by experts) due to low number of responses and 	<ul style="list-style-type: none"> • National and regional policy (as reported by experts) 	<ul style="list-style-type: none"> • National legislation only (as reported by experts) due to lack of policy

	Alcohol	Tobacco	Illegal drugs	Gambling
		policies		
Countries	<ul style="list-style-type: none"> 19 countries: <i>Austria (Styria)</i>, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Latvia, Lithuania, Malta, <i>Netherlands (no regional example available)</i>, Portugal, Romania, Spain, Sweden, <i>United Kingdom (England and Northern Ireland)</i>, Croatia, Iceland, Switzerland 	<ul style="list-style-type: none"> 11 countries: Cyprus, Czech Republic, France, Germany, Greece, Latvia, Lithuania, Romania, Sweden, <i>United Kingdom (England and Northern Ireland)</i>, Iceland 	<ul style="list-style-type: none"> 20 countries: <i>Austria (Vienna)</i>, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Spain, Sweden, <i>United Kingdom (England, Wales, Northern Ireland)</i>, Croatia, Iceland, Switzerland 	<ul style="list-style-type: none"> 10 countries: Austria, France, Greece, Hungary, Latvia, Malta, Portugal, Sweden, United Kingdom, Switzerland

Notes: Countries – formatting indicates availability of **national policy**, *regional policy*, or legislation/other documents only. Please see the respective report sections for further commentary.

Table 2: Number of countries reporting examples of particular approaches in response to open-ended questions about policy content, by policy area

Approach	Alcohol	Tobacco	Illegal drugs	Gambling
Control and regulation of supply	8 (50%)	4 (57%)	4 (21%)	None
Gambling/ substance-free zones	None	2 (29%)	None	None
Age limits	10 (63%)	5 (71%)	None	2 (50%)
Taxation and pricing	3 (19%)	2 (29%)	None	None
Control and regulation of advertising, marketing and sponsorship	7 (44%)	2 (29%)	None	None
Warning labels	None	None	None	None
Prevention programmes	13 (81%)	6 (86%)	19 (100%)	None
Treatment and social reintegration	6 (38%)	2 (29%)	14 (74%)	None
Harm reduction	9 (56%)	1 (14%)	6 (32%)	None
General delivery structures and quality assurance measures	11 (69%)	6 (86%)	11 (58%)	3 (75%)
General approaches	1 (6%)	None	2 (11%)	None
<i>Countries reporting at least one approach in response to specified questions (N)</i>	<i>16 countries</i>	<i>7 countries</i>	<i>19 countries</i>	<i>4 countries</i>

Notes: The most commonly cited approaches are highlighted (top 3 within each policy area). Responses refer to policy as well as legislation (where policy is not available). Percentages are based on the number of countries reporting at least one approach in response to the specified questions. A limited number of respondents skipped these questions or could not identify any (young people targeted) approaches within their policy or legislation; these countries are not included in the table. Regional data is included where available.

Table 3: Examples of interventions and policies reported in response to open-ended questions about policy content, by approach, focus on young people, and policy area

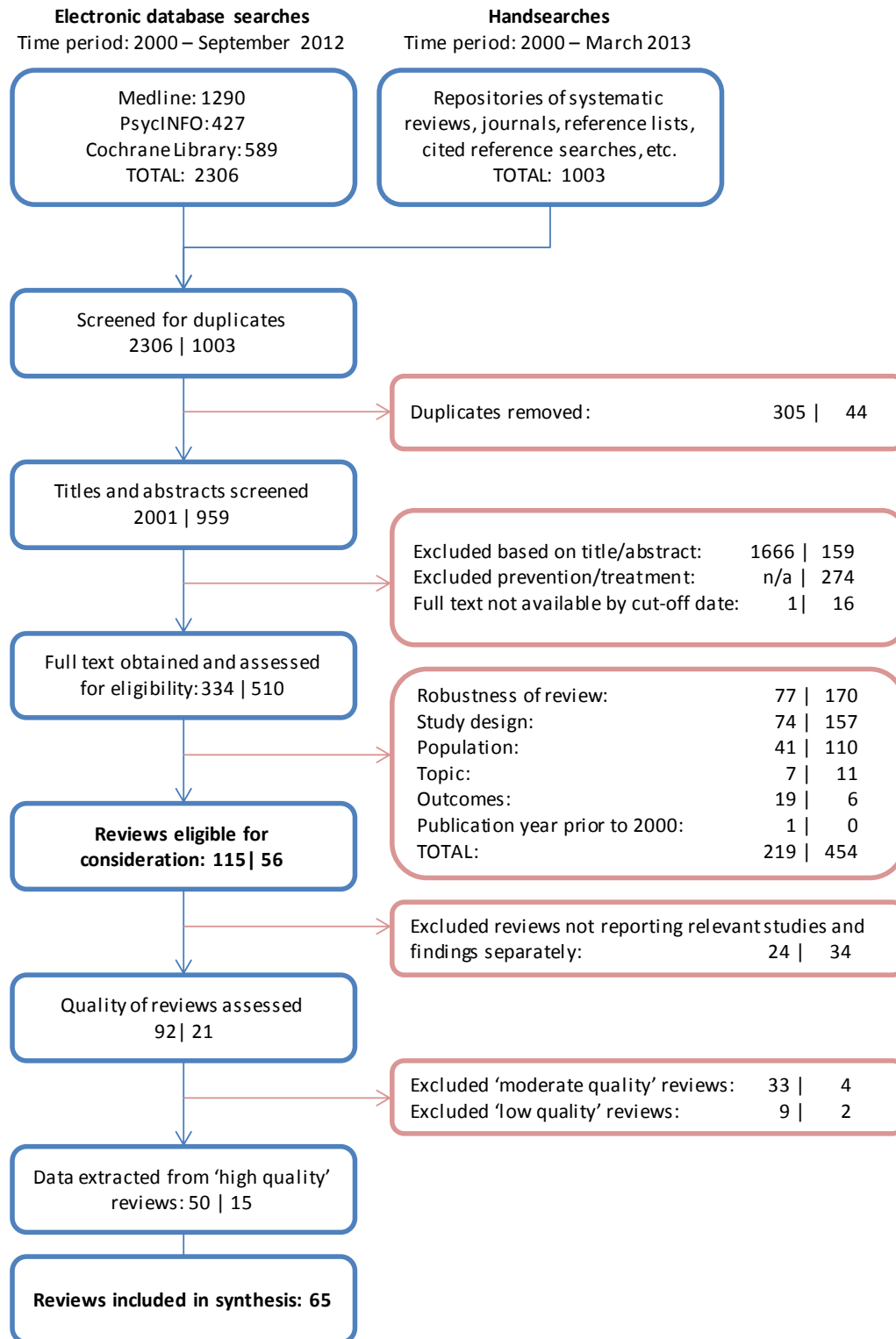
Approach	Examples of reported interventions and policies	Area*
Control and regulation of supply	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Within supermarkets and general retail stores, placing and selling controlled goods in a section clearly separated from where products which may appeal to young people are displayed and sold, such as sweets, snacks, toys, or soft drinks • Banning sales of controlled goods within the distance of 200m from any entrance of education, health, child and youth care institutions <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Targeting illegal production or sale of controlled goods • Restricting the sale of components needed for the production/ manufacturing of controlled goods (e.g., indoor cultivation of cannabis) 	<p>A</p> <p>A</p> <p>A, T, D</p> <p>D</p>
Gambling/ substance-free zones	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Ban of controlled goods/ behaviours in antenatal clinics and child health care settings (e.g., “smoke free” policy) • Ban of controlled goods/ behaviours in school yards <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Ban of controlled goods/ behaviours in public indoor facilities (e.g., smoking ban) 	<p>T</p> <p>T</p> <p>T</p>
Age limits	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Banning sales of controlled goods to young people (under-age/ minors) • Forbidding or restricting the access of young people to premises that offer controlled goods/ services (example of restrictions: unless accompanied by an adult) • Proof of age schemes • Test purchasing <p><i>General examples not applicable</i></p>	<p>A, T</p> <p>A, G</p> <p>A</p> <p>A</p>
Taxation and pricing	<p><i>No young people specific examples reported</i></p> <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Introducing a minimum price per unit • Supporting the affordability of less addictive alternatives (e.g., alcohol free beverages) • Restricting promotional activities which may promote or encourage excessive use of controlled goods/ services 	<p>A</p> <p>A</p> <p>A</p>
Control and regulation of advertising, marketing and sponsorship	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Banning industry sponsorship of events specifically targeted at young people • Banning supply of products that resemble controlled goods to young people <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Banning industry sponsorship (e.g., of sporting events) • Supporting the image of less addictive alternatives (e.g., alcohol free beverages) • Banning display at point of sales • Introducing plain packaging of controlled goods 	<p>A</p> <p>T</p> <p>A</p> <p>A</p> <p>T</p> <p>T</p>
Warning labels	<i>No examples were reported</i>	
Prevention programmes	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Information campaigns for young people • School-based education/ prevention/ health promotion • Training for teachers and prevention workers • Targeted and outreach programmes (e.g., young people out of school) • Family-based prevention programmes • Specific health care services (e.g., health care for students) • Interventions targeting the night-time economy 	<p>A, D</p> <p>A, T, D</p> <p>A, D</p> <p>A, D</p> <p>A, D</p> <p>A</p> <p>A, D</p>

Approach	Examples of reported interventions and policies	Area*
	<ul style="list-style-type: none"> Web or telephone based information and support service <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> Media campaigns, awareness-raising campaigns Supporting the development of workplace policies regarding controlled substances/ behaviours Health care services for prevention 	A, D A, T, D A, D T
Treatment and social reintegration	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> Offering treatment tailored to the needs of young people Supporting screening/referral in non-specialist young people's services Using substance-related accident and emergency hospital attendances to advise young people about controlled substances/ behaviours Diverting young people away from the criminal justice system to treatment <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> Diverting offenders away from the criminal justice system to treatment where the offence is substance related Interventions in non-specialist settings (e.g., smoking cessation in dental care) Facilitating access to housing, education, employment 	A, D A, D A D A, D T A, D
Harm reduction	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> Support for children of dependent people Brief interventions in maternity care and child care <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> Interventions to address driving under the influence of substances (e.g., information campaigns) Lower BAC (blood alcohol concentration) level for new drivers Needle and syringe exchange programmes 	A A, T A, D A D
General delivery structures and quality assurance measures	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> Young people or prevention specific action plan Multi agency collaboration in addressing young people's needs Support of young people specific projects and organisations (e.g., financial support to local youth projects) Providing training to those working with young people Research focussing on young people <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> Establishing specialised authorities Addressing all substances or addictive behaviours together Inclusion of addiction related issues in other policy areas (e.g., community safety policies) Dedicated funding structures (e.g., earmarked funding) Stakeholder involvement (e.g., engaging businesses, parents, communities) Research (e.g., on prevalence, effective interventions and policies) Monitoring and evaluation procedures 	T, D A, D A, T, D T T A, T, G A, T, D A, D T, D A, D A, T, D A, T, D
General approaches	<p><i>No young people specific examples reported</i></p> <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> Community support services Developing and strengthening the public healthcare system 	A, D D

* The policy area in relation to which the example was reported (A=Alcohol, T=Tobacco, D=Drugs (illegal), G=Gambling). However, in many cases examples are applicable to the other policy areas.

Notes: Policies and interventions were categorised into broad approaches and according to their population focus after data collection. Not all reported interventions and policies are shown in this table. The term "controlled goods/behaviours" is used here to refer to alcohol, tobacco and illegal drug use as well as gambling.

Figure 1: Flowchart of selection of relevant reviews



Notes: Several reasons for exclusion may apply but only one reason was recorded in this table to avoid double counting of studies. Symbol “|” distinguishes electronic database from handsearching results.

Table 4: Allocation of included reviews to approaches and behaviours of interest

First author (year)	Approach										Topic				
	Control and regulation of supply	Gambling or substance-free zones	Age limits	Taxation and pricing	Control and regulation of advertising marketing and sponsorship	Warning labels	Prevention programmes	Treatment and social reintegration	Harm reduction	General delivery structures and quality assurance measures	General approaches	Alcohol	Tobacco	Illegal drugs	Gambling
Baxter (2011)									x				x		
Brinn (2010)							x						x		
Bryant (2011)								x					x		
Calabria (2011)								x				x		x	
Carson (2011)							x						x		
Carson (2012)							x						x		
Civiljak (2010)							x	x					x		
Clark (2002)								x						x	
Cleary (2010)									x					x	
Coleman (2012)									x				x		
Coren (2013)								x				x		x	
Cowlishaw (2012)								x							x
D'Onise (2010)							x				x	x	x	x	
Faggiano (2005)							x							x	
Ferri (2013)							x							x	
Fletcher (2008)							x				x	x	x		
Foxcroft (2011b)							x				x				
Foxcroft (2011c)							x				x				
Foxcroft (2011d)							x				x				
Gates (2006)							x							x	
Gray (2007)							x								x
Grimshaw (2006)								x					x		
Hetteema (2010)							x	x					x		
Hutton (2011)							x	x					x		
Jackson (2012)							x				x	x	x		
Johnston (2012)							x						x		
Khadjesari (2011)							x				x				
Kim (2011)								x					x		
Konghom (2010)								(x)						(x)	
Lui (2008)									(x)		(x)				
Lumley (2009)									X				x		
Maziak (2007)								(x)					(x)		
McGuire (2001)									(x)					(x)	
Minozzi (2008)									x					x	
Minozzi (2009)								x						x	

First author (year)	Approach											Topic			
	Control and regulation of supply	Gambling or substance-free zones	Age limits	Taxation and pricing	Control and regulation of advertising marketing and sponsorship	Warning labels	Prevention programmes	Treatment and social reintegration	Harm reduction	General delivery structures and quality assurance measures	General approaches	Alcohol	Tobacco	Illegal drugs	Gambling
Moreira (2009)							x					x			
Müller-Riemenschneider (2008)							x						x		
Myung (2009)							x	x					x		
Osborn (2010a)									x					x	
Osborn (2010b)									x					x	
Peadon (2009)									x			x			
Petrie (2007)							x					x	x	x	
Premji (2007)									x			x			
Priest (2008a)									x		x		x		
Priest (2008b)	(x)	(x)							(x)			(x)	(x)		
Rammohan (2011)									x			x			
Ranney (2006)	x		x		x		x	x					x		
Rice (2009)				x									x		
Russell (2011)									x			x			
Shoptaw (2009b)									x					x	
Smith (2009)									(x)			(x)			
Soole (2008)							x							x	
Stade (2009)									x			x			
Stead (2006)									(x)				(x)		
Stead (2012)									(x)				(x)		
Terplan (2007)									x					x	
Thomas (2007)							x						x		
Thomas (2008)				x									x		
Thomas (2011)							x					x		x	
Thomas (2013)							x						x		
Turnbull (2012)									x		x	x		x	
Vaughn (2004)								x				x		x	
Villanti (2010)								x					x		
Whitworth (2009)									x		x	x	x	x	
Williams (2007)									(x)			(x)			
All included reviews	2	1	1	2	1	0	27	19	22	0	4	24	31	24	2
Reviews including primary studies*	1	0	1	2	1	0	27	15	18	0	4	20	27	23	2

* In the table, parentheses "(x)" indicate reviews which did not provide any evidence, as no trials met the inclusion criteria of the original review. These reviews are not included in the sums presented in the last row of this table.

Table 5: Framework of policies and interventions

The following table provides an overview of policy choices for addressing young people's addictive behaviours or related harms, based upon all phases of our work. Examples are not limited to young people specific measures, as measures targeting other population groups (e.g., general population) may also have implications for young people's behaviours. Policies and interventions are arranged within a framework comprising eleven broad approaches:

12. Control and regulation of supply
13. Gambling/substance-free zones
14. Age limits
15. Taxation and pricing
16. Control and regulation of advertising, marketing and sponsorship
17. Warning labels
18. Prevention programmes
19. Treatment and social reintegration
20. Harm reduction
21. General delivery structures and quality assurance measures
22. General approaches

A first draft of the framework was developed by integrating the categories used in existing policy scales (e.g., AMPHORA alcohol scale, Alcohol Policy Index, Tobacco Control Scale) and by adding the young people targeted policies and interventions described by experts in our online survey, so that similar policies and interventions would be grouped together and new categories created where necessary. Specific examples from the online survey were highlighted. This draft was then developed further by considering policies and interventions described in a wider set of documents, including EU policy documents, existing taxonomies (e.g., Ritter & McDonald 2008) and other literature reviews. Following our review of reviews, this *a priori* list was revised to include those interventions and policies which, although described in the scientific literature, had not been specifically mentioned in policy documents, by survey respondents, or in existing taxonomies. The precise methods for developing the framework are described in the two background reports (*Background report 1: Policy mapping and review*; *Background report 2: Review of reviews*, available as separate documents), including references for the documents upon which the framework is based.

The primary purpose of the framework was to serve as an internal working document over the course of this Work Package. In the first stage, during the online survey, the initial draft was used to categorise the young people targeted policies and interventions reported by experts in our online survey. In the second stage, during the review of reviews, the framework was used to categorise the scientific literature based on what policies and interventions were reviewed, to prepare the evidence synthesis by approach, and to identify gaps in the evidence.

As the framework was specifically developed to facilitate the categorisation of policies and interventions, we did not seek to develop an exhaustive list of all policies and interventions that could be undertaken to address young people's addictive behaviours. We did not explore whether approaches are applicable to all four areas of interest (i.e., alcohol, tobacco, illegal drugs, and gambling). Instead, we listed approaches only as they occurred in the literature or online survey. Consequently, some approaches may be listed for one substance/behaviour but not another, even though they may be equally applicable to both substances/behaviours. *Background report 2: Review of*



reviews includes a brief discussion of the challenges and caveats involved in creating a ‘master list’ of all possible policy options.

Importantly, the framework does not make any recommendations about what is effective; and inclusion of policies and interventions in this framework does not mean that these are endorsed by the ALICE RAP partnership. The framework includes some policies and interventions that have been shown to be effective as well as some policies and interventions shown to have no or undesired effects. The effectiveness of **most** policies and interventions included in this framework to address young people’s addictive behaviours is uncertain (i.e., the evidence base is not sufficiently well developed to state if they are effective, or under which circumstances). Our review of reviews identified no or insufficient evidence for most approaches, conflicting evidence for a number of approaches, and very little clear-cut evidence regarding the effectiveness of policies and interventions. Initially, we intended to map the policies and interventions listed in the entire framework against the findings of our review of reviews to highlight measures which have been found to be effective. However, due to the scarcity and complexity of relevant high quality evidence, this was not possible. Table 6 summarises the findings from our review of reviews, indicating for which policies and interventions high quality review-level evidence was available and what this evidence was.

Despite these limitations, to our knowledge this is the first framework to illustrate the diverse range and complexity of possible policies and interventions targeting different behaviours (i.e., alcohol, tobacco, illegal drugs, and gambling) and representing different approaches (e.g., not limited to prevention or a binary distinction such as environmentally vs. individually targeted approaches). Therefore, although developed as an internal working document to support the activities of this Work Package, the framework may be useful for informing future discussions and evidence reviews and ultimately support the policy making process.

1. Control and regulation of supply

Note: The first four sections consider measures which aim to restrict (young) people's opportunities to participate in addictive behaviours. This first section focusses on measures pertaining to the production and sale of substances as well as the provision of gambling services; for gambling/substance-free zones (e.g., smoking bans), see section 2; for age limits, see section 3; for taxation and pricing, see section 4.

Measures targeting legal production/sales	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Control of production of alcoholic beverages (e.g., state monopoly, licensing regulations, no licensing system) • Control of off-premise sales of alcoholic beverages <ul style="list-style-type: none"> – State monopoly, licensing regulations, no licensing system for off-premise sales of alcoholic beverages – Restrictions on locations for off-premise sales of alcoholic beverages – <i>Example from online survey: Within supermarkets and other general retail stores, alcoholic products should be placed in a section clearly separated from the sale of other products that might appeal to minors, such as sweets, snacks, toys, or soft drinks and paid for at that same place.</i> – Restrictions on outlet density, size and number of outlets for off-premise sales of alcoholic beverages – Restrictions on sales days/hours for off-premise sales of alcoholic beverages – Restrictions on the types of beverages or container sizes that can be sold – Rationing sales – Restrictions on over-the-counter sales / removing products from self-service displays in retail outlets (e.g., store shelves) • Control of on-premise sales of alcoholic beverages <ul style="list-style-type: none"> – Same types of measures as for off-premise sales – <i>Examples from online survey: Prohibition of open bar parties inside or outside of universities; Ban on sales of alcohol products in student sport clubs, in sport</i> 	<ul style="list-style-type: none"> • Control of sales of tobacco products <ul style="list-style-type: none"> – Licensing of tobacco retailers • Regulation of the contents and emissions of tobacco products <ul style="list-style-type: none"> – Definition of maximum limits for tar, nicotine and carbon monoxide yields of cigarettes – Restrictions on the use of ingredients which have the effect of increasing the addictive properties of tobacco products • Restrictions on the sale of certain types of tobacco for oral use • Ban on sale of single cigarettes • Restrictions on over-the-counter sales / removing products from self-service displays in retail outlets (e.g., store shelves) • Requirement for manufacturers and importers of tobacco products to disclose to governmental authorities information about the contents and emissions of tobacco products <ul style="list-style-type: none"> – <i>Example from policy: "Member States shall require manufacturers and importers of tobacco products to submit to them a list of all ingredients, and quantities thereof, used in the manufacture of those tobacco products by brand name and type" (Directive 2001/37/EC)</i> • Restrictions on the sale of tobacco from vending machines <ul style="list-style-type: none"> – General restrictions on the sale of tobacco from vending machines – Vending machine locks – Young people specific restrictions on tobacco vending machines (e.g., restricted access) • Restrictions on tobacco distance sales for 	<ul style="list-style-type: none"> • Prohibition – prescription/licensing system – legalisation • Restrictions to prevent non-medical use of prescription medicines <ul style="list-style-type: none"> – Restrict list of prescribers (e.g., only certain professionals may prescribe drugs) – Restrict use to hospitals/clinics – Withdraw prescription availability (i.e., withdraw medicine from the market) • Restrictions on/control of new psychoactive drugs • Regulatory strategies to minimise the availability of inhalants • Restrictions on over-the-counter sales / removing products from self-service displays in retail outlets (e.g., store shelves) 	<ul style="list-style-type: none"> • Control of gambling opportunities (e.g., complete ban, public monopoly, closed/open licensing system, not regulated at all) • Restrictions on locations for land-based gambling providers <ul style="list-style-type: none"> – Distance regulations for land-based gambling providers (e.g., minimum distance from schools, youth centres etc.) • Restrictions on different types of games (casinos and gaming arcades, electronic gaming machines, gaming tables, national lotteries, poker and other skill games, sports betting) <ul style="list-style-type: none"> – Legal or illegal – Land-based conditions – Online conditions – E.g., restricting certain forms of games or bets that are considered by experts to be the most risky (e.g., casino games or in sports betting restricting bets to final results only) • Modification of game features and design <ul style="list-style-type: none"> – Reduction in speed of games – Defining minimum intervals between games – Defining maximum size of bets – Automatic 'cash outs' after a set period of playing time • Cross-border restrictions on the offer of licensed on-line gambling services

	<p><i>facilities of schools and educational institutions except for those events, which is organised for 18 years of age or over only; Ban on alcohol sales on premise, within the distance of 200 metres from any entrance of Educational, health, child and youth care institution except for kitchen for catering.</i></p> <ul style="list-style-type: none"> Restrictions on sales of alcoholic beverages at particular events <ul style="list-style-type: none"> Culture events (opera, theatre, cinema, ballet etc.) Sports events (football, hockey etc.) <i>Example from online survey: Ban on sales of alcohol products containing over 5% of alcohol on sport events for a defined period of time (2 hours before starting and 1 hour after ending of the events)</i> Public celebrations and festivities 	<p>general retail, such as sales via the Internet, to adults by using adequate technical means</p>		
Restrictions on the sale of drug paraphernalia			<ul style="list-style-type: none"> Restrictions on the sale of drug paraphernalia <ul style="list-style-type: none"> <i>Example from online survey: define measures for reducing the sale of components needed for indoor cultivation of cannabis</i> 	
Measures targeting illegal production/sales	<ul style="list-style-type: none"> Policies targeting illegal production or sales and unregulated providers <ul style="list-style-type: none"> In general (no specific example given) Prohibition of methanol to denature alcohol Legalisation of unrecorded alcohol with subsequent quality control Instructing the producers of unrecorded alcohol on how to avoid the problems detected Computerised tracking, tax stamps to facilitate the identification of illicit products Control of selling medicinal alcohol / selling only small container sizes 	<ul style="list-style-type: none"> Policies targeting illegal production or sales and unregulated providers <ul style="list-style-type: none"> Legislation against illicit trade in tobacco products Labelling of packets and outer packaging to allow determining the country of origin Labelling of packets and outer packaging to allow determining the final destination Tracking and tracing systems Sanctions/penalties 	<ul style="list-style-type: none"> Policies targeting illegal production or sales and unregulated providers <ul style="list-style-type: none"> <i>Example from online survey: Reduce supply of illicit drugs and psychotropic substances and their precursors through strengthening control of circulation of these substances</i> 	<ul style="list-style-type: none"> Policies targeting unregulated gambling providers (no specific examples identified)
Measures to promote alternatives	<ul style="list-style-type: none"> Availability of low or non-alcoholic beverages 			



<p>Specific delivery structures and quality assurance measures</p>	<ul style="list-style-type: none"> Control visits by enforcement authorities at off-premise sale outlets Control visits by enforcement authorities at on-premise sale outlets Keg-registration laws Enforcement authority for the supervision of off-premise sales of alcoholic beverages Enforcement authority for the supervision of on-premise sales of alcoholic beverages 	<ul style="list-style-type: none"> Sanctions/penalties against sellers and distributors in breach of regulations Guidelines for testing and measuring the content and emissions of tobacco products 	<ul style="list-style-type: none"> Enforcement <ul style="list-style-type: none"> Street-level enforcement Crackdowns/Raids Undercover operations Policing (e.g., community policing, intensive policing, zero tolerance policing) Imprisonment of drug dealers and other suppliers Measures to prevent non-medical use of prescription medicines <ul style="list-style-type: none"> Enforcement of prescription guidelines Prescription registers and monitoring / Monitoring the use of multiple family doctors Require prescription (versus over-the-counter) availability Profile patients (i.e., doctors profile patients to determine appropriate prescribing and diagnostic action) Authoritative advice to physicians about prescribing Controls on administering opiate substitution therapy Enforcement of laws affecting physicians and patients (e.g., making 'doctor shopping' illegal) Enforcement authority <ul style="list-style-type: none"> <i>Example from online survey: The Organised Crime Task Force Drugs Expert Group sharing information and intelligence, and monitoring and overseeing joint action by its partner organisations, to ensure on-going disruption of the drugs market, and help reduce the availability of drugs</i> 	<ul style="list-style-type: none"> Checks and controls by regulating authority on operators as an intrinsic part of post-licensing monitoring
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2. Gambling or substance-free zones

Note: This section focusses on statutory measures that ban (young) people from participating in addictive behaviours in certain locations. For restrictions on where alcohol and tobacco may be sold and gambling services offered, see the previous section on control and regulation of supply. For voluntary (smoking) bans, see the sections on prevention (for schools) and harm reduction (for self-imposed restrictions at home).

Restrictions on participating in addictive	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Restrictions on drinking in public places (e.g., 	<ul style="list-style-type: none"> Restrictions in (indoor) workplaces (excluding 	<ul style="list-style-type: none"> Drug-free zones (i.e., banishing drug 	[No specific approaches identified.]



behaviours in certain locations	partially prohibited)	cafes and restaurants) <ul style="list-style-type: none"> Restrictions in cafes and restaurants Restrictions in public transport (e.g., trains) Restrictions in indoor public places and other public places (e.g., educational, health, government and cultural places) <ul style="list-style-type: none"> Restrictions in schools (e.g., smoke free schools) <i>Examples from online survey: Ban smoking in public indoor facilities; Smokefree antenatal clinics and child health care settings; Smokefree school yards</i> <i>Example of definition of 'public places': "places accessible to the general public or places of collective use, regardless of ownership or right to access" (Council Recommendation of 30 November 2009 on smoke-free environments)</i> 	offenders from high-drug-use areas)	
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> Sanctions/penalties for violating these restrictions 	<ul style="list-style-type: none"> Sanctions/penalties for violating smokefree laws Community mobilisation/education 		

3. Age limits

Note: This section focusses on measures that define a legal minimum age which young people must reach to be able to participate in some types of addictive behaviours. Such measures make it illegal for retailers to sell alcoholic beverages or tobacco products to young people under this age, or to give them access to gambling services. Provisions can also make it illegal for young people who are underage to purchase or use such products or services.

Legislation defining age limits	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Age limits for off-premise alcohol sales Age limits for on-premise alcohol service <ul style="list-style-type: none"> <i>Example from online survey: Under-age people are forbidden access to premises that sell alcohol unless accompanied by an adult</i> Different minimum age for different types of alcoholic beverages 	<ul style="list-style-type: none"> Minimum age laws <ul style="list-style-type: none"> <i>Example from online survey: Ban selling tobacco products to minors and purchasing or receiving of tobacco products by minors</i> 	[May be applicable with regard to prescription medicines, inhalants, or new psychoactive substances but no approaches were reported by survey respondents, in the reviewed literature or policy documents.]	<ul style="list-style-type: none"> Minimum age laws, online Minimum age laws, land-based <ul style="list-style-type: none"> <i>Example from online survey: People under 21 years of age are forbidden access to premises that offer gambling.</i> Different minimum age for different types of games <ul style="list-style-type: none"> <i>Example from online survey: Underaged people are allowed to play specific games (technical - entertaining), which are appropriate to their age and placed in a different area in the premises, and only with the supervision of a parent or an adult.</i>



<p>Specific delivery structures and quality assurance measures</p>	<ul style="list-style-type: none"> • Requirement for sellers to display sign stating minimum age <ul style="list-style-type: none"> – <i>Example from online survey: Require all sellers of alcoholic products to place a clear and prominent indicator about the prohibition of alcohol sales to minors</i> • Awareness campaigns <ul style="list-style-type: none"> – directed at young people – directed at servers/sellers • Server training as a requirement of licensing • Proof of age schemes / ID checks • Enforcement by the police or other authorities • Control visits by enforcement authorities <ul style="list-style-type: none"> – Test purchasing • Sanctions/penalties targeting sellers (e.g., licence suspension) <ul style="list-style-type: none"> – <i>Example from online survey: Enforce penalties against sellers and distributors who are found guilty of contravening the law. Such penalties shall include the withdrawal of a licence to sell or distribute alcohol, or temporary or permanent closures of the premises of operation of business, so as to ensure compliance with relevant legislation.</i> 	<ul style="list-style-type: none"> • Requirement for sellers to display sign stating minimum age / prohibition of sales to minors • Education of retailers and the community • Proof of age schemes / ID checks • Control visits by enforcement authorities <ul style="list-style-type: none"> – Test purchasing • Sanctions/penalties against sellers and distributors in breach of regulations (e.g., warning, fines, suspension of licence) <ul style="list-style-type: none"> – <i>Example from online survey: tougher sanctions against retailers who break the law with regard to underage sales of tobacco products</i> 		<ul style="list-style-type: none"> • Requirement for sellers to display sign stating minimum age <ul style="list-style-type: none"> – <i>Example from online survey: A sign indoors or outdoors of the premises should be attached, depicting that it is forbidden for underaged people to enter.</i> • Requirement for gambling websites to display a clear message that minors are not permitted to participate in online gambling activities • Customer identification (e.g., electronic identification for online gambling) • Age verification <ul style="list-style-type: none"> – prior to start of the game – upon pay-out – online vs. land-based ‘face-to-face’ identification • Checks and controls by regulating authority on operators as an intrinsic part of post-licensing monitoring • Mystery shopping exercises to check the possibilities of minors accessing online sites
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4. Taxation and pricing

Note: This section considers the effectiveness of taxation and pricing measures to address (young) people’s participation in addictive behaviours.

Taxation and pricing measures, including restrictions on promotions and other financial incentives	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Excise duty <ul style="list-style-type: none"> – In general – Increased taxes on beverages that are thought to be more popular with young people (e.g., flavoured/sweetened alcoholic beverages and pre-mixed spirits (“alcopops”)) – Increased taxes on beverages with higher alcohol content • Comparative price level (i.e., considering how pricing relates to pricing in other EU countries) • Minimum pricing (minimum unit price per 	<ul style="list-style-type: none"> • Tax policies • Restrictions on sales to and/or importations by international travellers of tax- and duty-free tobacco products • Price policies • Comparative price level (i.e., considering how pricing relates to pricing in other EU countries) • Restrictions on the sale of cigarettes individually or in small packets (e.g., fewer than 20 cigarettes) to reduce the affordability of such products (specially to minors) 	<ul style="list-style-type: none"> • Cost or reimbursement (to prevent non-medical use of prescription medicines) 	<ul style="list-style-type: none"> • Tax policies

	<p>gram or litre of pure alcohol)</p> <ul style="list-style-type: none"> Restrictions on promotional activities <ul style="list-style-type: none"> <i>Example from online survey: Restrict promotional activities which may promote or encourage excessive drinking</i> Restrictions on the use of direct and indirect price promotions, discount sales, sales below cost and flat rates for unlimited drinking or other type of volume sales 	<ul style="list-style-type: none"> Restrictions on promotional activities / financial incentives 		
Measures to promote alternative goods/services	<ul style="list-style-type: none"> Policies addressing the affordability of alcohol free beverages <ul style="list-style-type: none"> Non-alcoholic beverages at lower prices <i>Example from online survey: Affordability of alcohol free beverages shall be supported</i> 			
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> Sanctions/penalties targeting industry for violations of sales promotion legislation 		<ul style="list-style-type: none"> Law enforcement (as a means to keeping prices of illegal drugs high) 	

5. Control and regulation of advertising, marketing and sponsorship

Note: This section considers statutory or voluntary measures to control or regulate advertising, marketing and sponsorship activities in relation to addictive goods and services. We also include approaches such as standardised packaging (e.g., of cigarette packs) under this heading.

Restrictions on exposure to advertising	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Restrictions on exposure <ul style="list-style-type: none"> <i>Example from online survey: Advertising of alcoholic beverages is prohibited in theatre or cinema before 8 pm., or for programs prepared for children and young people (before, during and immediately after the program)</i> Restrictions on advertising in traditional broadcast media (television, radio, cinema) Restrictions on advertising in traditional non-broadcast media (print media, billboards, branded merchandise) Restrictions on point-of-sale advertising 	<ul style="list-style-type: none"> Restrictions on exposure <ul style="list-style-type: none"> Restrictions on advertising in traditional broadcast media (television, radio, cinema) Restrictions on advertising in traditional non-broadcast media (print media, billboards, branded merchandise) Restrictions on display of tobacco products at the point of sales Restrictions on point-of-sale advertising Restrictions on advertising on tobacco vending machines 	<p>[May be applicable with regard to prescription medicines, inhalants, or new psychoactive substances but no approaches were reported by survey respondents, in the reviewed literature or policy documents.]</p>	<ul style="list-style-type: none"> Restrictions on exposure <ul style="list-style-type: none"> Young people specific restrictions (e.g., advertisements not directed at minors, not broadcast (TV or radio) or communicated during specific programmes aimed at young people on mainstream channels, or for certain period of time before or after such programmes; not displayed close to areas that children frequent, such as billboard advertising close to schools) Restrictions on advertising in traditional broadcast media (television, radio, cinema) Restrictions on advertising in traditional non-broadcast media (print media, billboards, branded merchandise)



				<ul style="list-style-type: none"> - Restrictions on online commercial communications, such as pop-up promotional images on non-gambling sites
Regulations on content of advertising messages	<ul style="list-style-type: none"> • Restrictions on content <ul style="list-style-type: none"> - Restrictions on content specifically in relation to young people (e.g., avoiding the use of humour, glamour and other youth-appealing aspects) - Alcohol advertisements can only refer to actual characteristics of the product (name, ingredients, origin, vol. % etc.) • Health warnings as part of alcohol advertising, promotion and sponsorship 	<ul style="list-style-type: none"> • Restrictions on content <ul style="list-style-type: none"> - Restrictions on content specifically in relation to young people - Restrictions on all forms of tobacco advertising, promotion and sponsorship that promote a tobacco product by any means that are false, misleading or deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions - Restrictions on descriptions such as “low-tar”, “light”, “ultra-light”, “mild” that suggest a product is less harmful than others • Health warnings as part of tobacco advertising, promotion and sponsorship 		<ul style="list-style-type: none"> • Restrictions on content <ul style="list-style-type: none"> - Restrictions on content specifically in relation to young people • Provision of certain key information on any form of advertising <ul style="list-style-type: none"> - Details of the regulating authority - Statement that underage gambling is not allowed - Factually correct information, for example as to the winning and losing possibilities, the risks of chasing losses - Warning messages against excessive gambling
Restrictions on marketing	<ul style="list-style-type: none"> • Restrictions on direct marketing using technologies such as the Internet, podcasts and text messaging • Restrictions concerning the portrayal of alcohol and alcohol product placement (e.g., in films, television shows, songs, and other cultural productions) • Restrictions on promotional activities (other than financial) 	<ul style="list-style-type: none"> • Restrictions on direct marketing using technologies such as the Internet, podcasts and text messaging • Restrictions on the use of tobacco brand names on non-tobacco products or services (e.g., cigarette branded clothes, watches, etc.) • Restrictions on the use of promotional items (ashtrays, lighters, parasols, etc.) and tobacco samples, the use and communication of sales promotion, such as a discount, a free gift, a premium or an opportunity to participate in a promotional contest or game • Restrictions on distributing free tobacco products to the public and especially to minors • Restrictions on the production and sales of sweets, snacks, toys or any other objects intended for children in the form of tobacco products <ul style="list-style-type: none"> - Example from online survey: Ban manufacturing, selling and purchasing (by 		<ul style="list-style-type: none"> • Restrictions on direct marketing using technologies such as the Internet, podcasts and text messaging • Restrictions on direct or indirect engagement of operators in unsolicited mail, including to persons who have self-excluded themselves from a site • Marketing restrictions, land-based • Marketing restrictions, online • Restrictions on merchandising (e.g., replica jerseys, computer games) • Restrictions on sales promotions and sign-up bonuses or free practice games • Different marketing restrictions for different types of games

		<p><i>minors) of products that resemble cigarettes and other tobacco products (e.g., electronic cigarettes)</i></p> <ul style="list-style-type: none"> Restrictions on packaging: <ul style="list-style-type: none"> Standardized cigarette packaging (i.e., only one standardised form and size of cigarette packs), such as restrictions on appearance (cuboid shape) Plain packaging (the removal of trademarks, logos, colours and graphics, except for the government health warnings and for the brand name, presented in a standardized typeface) 		
Restrictions on sponsorship	<ul style="list-style-type: none"> Restrictions on sponsorship by the alcohol industry <ul style="list-style-type: none"> in general of sporting events of events specifically targeted towards young people 	<ul style="list-style-type: none"> Restrictions on industry sponsorship <ul style="list-style-type: none"> of sporting events and other international events of radio programmes 		<ul style="list-style-type: none"> Restrictions on industry sponsorship <ul style="list-style-type: none"> Sports sponsorship
Promoting alternatives	<ul style="list-style-type: none"> Approaches to support the marketing of alcohol free beverages 			
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> Regulatory frameworks <ul style="list-style-type: none"> Advertising voluntary code by the industry / Self-regulation of alcohol marketing Legally binding codes Enforcement of existing advertising restrictions Monitoring of alcohol marketing practices <ul style="list-style-type: none"> <i>Example from online survey: Monitoring the ban of sponsorship from alcohol providers</i> Sanctions/penalties targeting industry for violations of relevant legislation (e.g., advertising/product placement legislation, sponsorship legislation) Enforcement authority for the supervision of alcohol advertising 	<ul style="list-style-type: none"> Sanctions/penalties against sellers and distributors in breach of regulations 		<ul style="list-style-type: none"> Advertising guidelines / codes of conduct <ul style="list-style-type: none"> Self-regulatory/voluntary frameworks Legally binding frameworks

6. Warning labels

Note: This section focusses on measures which seek to label addictive goods and services with (health) warnings. For health warnings integrated in advertisements, see the previous section on control of advertising, marketing and sponsorship; and for health warnings as part of informational/educational programmes, see the section on prevention.

Direct health warning labels	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Health warning labels on alcohol containers 	<ul style="list-style-type: none"> Health warning labels on cigarette packs and hand rolling tobacco <ul style="list-style-type: none"> Rotating Large, clear, visible and legible Minimum size of warning (i.e., percentage of packet) Pictorial health warnings Display of cessation information (e.g., quit-lines, websites) 	[May be applicable with regard to prescription medicines, inhalants, new psychoactive substances but no approaches were reported by survey respondents, in the reviewed literature or policy documents.]	<ul style="list-style-type: none"> Health warning labels on gambling machines Health warning messages on gambling websites, signs warning users about the addictive potential of gambling
Labels containing information about contents	<ul style="list-style-type: none"> Product labelling on alcohol products similar to that used for foodstuffs 	<ul style="list-style-type: none"> Requirement to display information about the toxic constituents of the tobacco products and the emissions that they produce <ul style="list-style-type: none"> <i>Example from policy: "tar, nicotine and carbon monoxide yields of cigarettes measured in accordance with Article 4 shall be printed on one side of the cigarette packet in the official language or languages of the Member State where the product is placed on the market, so that at least 10 % of the corresponding surface is covered" (Directive 2001/37/EC)</i> 		

7. Prevention programmes

Note: This section focusses on prevention programmes implemented with schools pupils, families and/or communities. It is not always possible to distinguish clearly between indicated prevention and treatment along the continuum of care. As a general rule, we consider an intervention to be treatment if it is carried out with a population that is treatment-seeking or meets diagnostic criteria for dependence, and prevention if it is carried out with an unselected/'at risk' population. Where interventions may be carried out with either population, these are listed in both sections (i.e., prevention and treatment).

General prevention programmes (no approach specified)	Multiple substances/behaviours			
	<ul style="list-style-type: none"> Health promotion <ul style="list-style-type: none"> <i>Examples from online survey: Health promotion programmes in schools; Health promotion policy in the educational system</i> Prevention programmes targeting other behaviours (e.g., sexual health) 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> Alcohol prevention programs/strategies Targeted prevention 	<ul style="list-style-type: none"> Tobacco prevention programs/strategies Targeted prevention 	<ul style="list-style-type: none"> Universal prevention Selective prevention Indicated prevention Interventions addressing non-medical use of 	<ul style="list-style-type: none"> Gambling prevention programs/strategies 	



			prescription medicines	
Schools and higher education based approaches	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • 'Healthy schools' (i.e., multi-component school programmes to promote child health and wellbeing in several areas) • Environmental or classroom management programmes 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> • School-based programmes <ul style="list-style-type: none"> – Education – Social or life skills training programmes – School / university policies prohibiting alcohol use • College student normative education (e.g., alcohol expectancy challenges, social norms changes) 	<ul style="list-style-type: none"> • School-based programmes <ul style="list-style-type: none"> – Education – Non-smoking competitions (i.e., classes agree to remain smoke free in order to win prizes) 	<ul style="list-style-type: none"> • School-based programmes <ul style="list-style-type: none"> – Knowledge/ information provision – <i>Examples from online survey: Provide information on drug use and drug related consequences to pupils in boarding schools</i> – Affective education – Skills training (e.g., social and emotional competence training, life skills training) • School drugs policies • Drug testing in schools 	<ul style="list-style-type: none"> • Initiatives regarding education and awareness of minors and parents on Internet content and the safe use of the Internet <ul style="list-style-type: none"> – e-safety curricula in schools (equipping children and young people with knowledge and skills to navigate the Internet safely) • Education 	
Family based approaches	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Family home visitation with disadvantaged families (drug specific) 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> • Family or parenting programmes <ul style="list-style-type: none"> – Support for parents (e.g., information, guidance) – Family skills training 	<ul style="list-style-type: none"> • Family-based prevention 	<ul style="list-style-type: none"> • Family or parenting programmes <ul style="list-style-type: none"> – Information/education for parents concerning drug harms – Parenting skills for drug dependent women – Early years education and care programme for very young children from disadvantaged families 	<ul style="list-style-type: none"> • Parental control tools to prevent access to gambling websites (e.g., requirements that Internet service providers offer parental control software free of charge or ask customers if they want such software at the time of purchase) 	
Community based approaches and multi-component programmes	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Multicomponent or community-based programmes <ul style="list-style-type: none"> – Community mobilization programmes 	<ul style="list-style-type: none"> • Multicomponent or community-based programmes 	<ul style="list-style-type: none"> • Multicomponent or community-based programmes 	
Mass media	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Nation-wide awareness-raising activities / Information-based public education campaigns <ul style="list-style-type: none"> – <i>Example from online survey: Media campaign</i> – Counter-advertising – Drinking guidelines – Social marketing programmes 	<ul style="list-style-type: none"> • Nation-wide awareness-raising activities / Mass media campaigns <ul style="list-style-type: none"> – <i>Example from online survey: Increase public awareness on tobacco related harm</i> 	<ul style="list-style-type: none"> • Nation-wide awareness-raising activities / Mass media campaigns <ul style="list-style-type: none"> – <i>Example from online survey: dedicated website</i> • Social marketing • Media advocacy (strategic use of the media to raise awareness and educate) 	<ul style="list-style-type: none"> • Nation-wide awareness-raising activities <ul style="list-style-type: none"> – Public education and information campaigns – Consumer information on gambling and health at points of sale (e.g., pamphlets, signs in casinos) – <i>Example from other literature: clear and transparent information about games:</i>

	<ul style="list-style-type: none"> – Consumer information on alcohol and health at points of sale (e.g., pamphlets) – Media advocacy (strategic use of the media to raise awareness and educate) – Information campaigns specifically for young people 		<ul style="list-style-type: none"> • Telephone support 	<p><i>duration, stakes, wins, losses, maximum loss per hour, chances to win; information about potential risks: economic, social, mental problems and disorders (Bühringer et al., 2013)</i></p> <ul style="list-style-type: none"> • Signposting to helplines or websites offering advice and support (e.g., helpline number printed on tickets, information on helplines and signposting to dedicated support sites on gambling sites)
Computer and web based approaches	<ul style="list-style-type: none"> • Computer- and web-based interventions 	<ul style="list-style-type: none"> • Computer- and web-based interventions 	<ul style="list-style-type: none"> • Computer- and web-based interventions 	<ul style="list-style-type: none"> • Computer- and web-based interventions • In-game messaging (e.g., targeting irrational gambling beliefs)
Mentoring and peer led approaches	<ul style="list-style-type: none"> • Mentoring • Peer-led learning/information projects and initiatives 		<ul style="list-style-type: none"> • Mentoring and peer support programmes 	
Leisure time	<ul style="list-style-type: none"> • Approaches addressing the night-time economy 		<ul style="list-style-type: none"> • Interventions in the night life environment (e.g., clubbing scene) • Outreach prevention programmes • Alternative leisure activities / Community programs for young people (e.g., sporting activities, cultural programmes, vocational programmes, network of drug free youth) <ul style="list-style-type: none"> – <i>Example from online survey: Alternative leisure activities, spare time activities, extracurricular activities</i> 	<ul style="list-style-type: none"> • Information and counselling services on gambling premises • Reality checks (displaying at regular intervals information about the amount of time and money a player has spent on a machine) • Self-limitation (time) • Self-exclusion • Imposed (operator based) exclusion • Cooling off periods (cooling off allows players to voluntarily lock their account for a short period, in order to prevent themselves from online gambling participation) • Availability of a self-assessment tool to determine one's risk
Targeted prevention, including prevention in health care settings	<ul style="list-style-type: none"> • Programmes in health care services • Screening/referral • Brief intervention/Early intervention (e.g., in primary care, social welfare settings and accident and emergency departments) <ul style="list-style-type: none"> – <i>Example from online survey: Using alcohol-related A&E attendances to advise young people about their drinking</i> 	<ul style="list-style-type: none"> • Health care services for smoking prevention • Screening/referral • Brief interventions 	<ul style="list-style-type: none"> • Screening • Brief interventions / early intervention • Motivational interviewing <ul style="list-style-type: none"> – in general medical settings – in educational settings 	<ul style="list-style-type: none"> • Referral to specialist agencies • Brief interventions
Prevention at the workplace	<ul style="list-style-type: none"> • Workplace-based prevention <ul style="list-style-type: none"> – Workplace alcohol and drug policies – Prevention/ counselling at workplaces for 		<ul style="list-style-type: none"> • Workplace prevention programmes 	



	<p>persons with alcohol related needs</p> <ul style="list-style-type: none"> - Mandatory screening 			
Criminal justice interventions			<ul style="list-style-type: none"> • Drug education in prison (e.g., counselling interventions for young offenders) 	
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> • Community alcohol action plans • Legal obligation to include alcohol prevention in the school curriculum/health policies • Sanctions/penalties for students in breach of school/university policies • Public funds earmarked for alcohol prevention / Dedicated budget for prevention of alcohol use disorders • Professional standards and guidelines • Workforce development <ul style="list-style-type: none"> - <i>Example from online survey: Teachers' training</i> • Public officials specialised in alcohol prevention 	<ul style="list-style-type: none"> • Earmarked funding for tobacco prevention • Workforce development <ul style="list-style-type: none"> - Training or sensitization and awareness programmes on tobacco control addressed to persons such as health workers, community workers, social workers, media professionals, educators, decision-makers, administrators and other concerned persons • Stakeholder involvement <ul style="list-style-type: none"> - <i>Example from online survey: Increased participation from parents, NGOs, industry/trade in prevention</i> 	<ul style="list-style-type: none"> • Enforcement in the school setting <ul style="list-style-type: none"> - <i>Example from online survey: Search and confiscation in the school setting, with school staff having the necessary information, advice and the power to act</i> • Professional guidance / Standardisation of prevention interventions <ul style="list-style-type: none"> - <i>Examples from online survey: Workplace Alcohol and Drug Policy Guidance; Procedures for setup of effective programs (logic model)</i> • Workforce development <ul style="list-style-type: none"> - <i>Examples from online survey: Training for prevention workers and therapists; Trainings and seminars for teachers on drug prevention activities; teacher education concerning the harmfulness and impact of drugs and other addictive substances; Increase number of professionals to adequately meet the needs of the school population and changing trends; Establish new positions in the school setting to assist the teaching staff; set up multidisciplinary teams to work with addicts and their families</i> • Stakeholder involvement <ul style="list-style-type: none"> - <i>Examples from online survey: Identifying schools as having a clear role to play in preventing drug and alcohol misuse; schools to work with local voluntary organisations, the police and others to prevent drug or alcohol misuse; Greater participation by parents, non governmental organisations and the business community in preventive work</i> 	<ul style="list-style-type: none"> • Due diligence obligation for the on-line operator (e.g., recording on-line players' behaviour to determine a probable pathological gambler) • Checks and controls by regulating authority on operators as an intrinsic part of post-licensing monitoring • Public funds earmarked for gambling prevention • Customer support, inter alia for treating information requests and for handling complaints • Workforce development <ul style="list-style-type: none"> - Providing staff with training about problem gambling and responsible gambling, to enhance early recognition of related problems and to approach and support such gamblers - Code of Conduct for responsible business behaviour signed by all employees

8. Treatment and social reintegration

Note: This section focusses on measures pertaining to treatment and social reintegration. It is not always possible to distinguish clearly between indicated prevention and treatment along the continuum of care. As a general rule, we consider an intervention to be treatment if it is carried out with a population that is treatment-seeking or meets diagnostic criteria for dependence, and prevention if it is carried out with an unselected or 'at risk' population. Where interventions may be carried out with either population, these are listed in both sections (i.e., prevention and treatment).

Psychosocial treatment	Multiple substances/behaviours			
	<ul style="list-style-type: none"> Counselling services covering a range of health behaviours <ul style="list-style-type: none"> <i>Example from online survey: roll out of a 'one stop shop' service in areas of identified need to those young people affected by substance misuse, but also addressing issues such as suicide and self-harm; mental health and wellbeing; sexual health; relationship issues; resilience; and coping skills</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Special helpline Brief interventions Motivational interviewing Cognitive behavioural therapy Peer self-help programmes Family therapy Computer- and web-based interventions 	<ul style="list-style-type: none"> Individual counselling services (e.g., face-to-face, quit-line/telephone support) Group counselling Brief interventions for smoking cessation <ul style="list-style-type: none"> In primary care/ health care facilities (e.g., dental care) In educational institutions In workplaces In sporting environments Motivational interviewing Cognitive behavioural therapy Computer- and web-based interventions (including mobile phone text messaging) Quit-and-win contests, Incentive schemes Relapse prevention 	<ul style="list-style-type: none"> Counselling (e.g., telephone information and counselling services) Brief interventions / early intervention Motivational interviewing Cognitive behavioural therapy (individual and group) Psychodynamic psychotherapy Peer self-help programmes (e.g., 12-step) Family therapy Therapeutic community / residential therapeutic programme Computer- and web-based interventions <ul style="list-style-type: none"> <i>Example from online survey: Internet based counselling</i> Contingency management (e.g., the use of voucher reinforcement for drug-free urine samples) Relapse prevention Case management 	<ul style="list-style-type: none"> Counselling (e.g., telephone helpline) Brief interventions Motivational interviewing Cognitive behavioural therapy (individual and group) Peer self-help programmes
Pharmacological treatment	<ul style="list-style-type: none"> Pharmacological treatment <ul style="list-style-type: none"> Disulfiram Opioid antagonists (e.g., naltrexone) Glutamate antagonists (e.g., acamprosate) Pharmacological treatment for the management of withdrawal <ul style="list-style-type: none"> Benzodiazepine 	<ul style="list-style-type: none"> Pharmacological treatment <ul style="list-style-type: none"> Nicotine replacement therapy Nicotine antagonists (e.g., Bupropion) Nicotine agonists (e.g., Lobeline) Non-nicotinic aids to smoking cessation (e.g., Nicobrevin) 	<ul style="list-style-type: none"> Withdrawal treatment / Detoxification <ul style="list-style-type: none"> Opioid agonist medication (methadone, morphine, heroin) Alpha adrenergic medication (clonidine, lofexifine) Opioid antagonist medication (naloxone, naltrexone) Symptomatic medication (brufen, maxolone) Substitution/Maintenance treatment <ul style="list-style-type: none"> Methadone Buprenorphine 	<ul style="list-style-type: none"> Pharmacological Treatment <ul style="list-style-type: none"> Selective serotonin reuptake inhibitors (SSRIs) (e.g., fluvoxamine) Naltrexone

			<ul style="list-style-type: none"> - Heroin - Naltrexone - Levo-α-acetylmethadol (LAAM) - Morphine 	
Other forms of treatment		<ul style="list-style-type: none"> • Nation-wide awareness-raising activities / Mass media campaigns • Self-help materials 	<ul style="list-style-type: none"> • Non-pharmacological withdrawal treatment / detoxification (e.g., acupuncture) 	
Special populations	<ul style="list-style-type: none"> • Specialised/tailored treatment for young people <ul style="list-style-type: none"> - Interventions for sub-groups of young people (e.g., homeless youth) • Dual diagnosis programmes / Programmes for those affected by co-morbidity 	<ul style="list-style-type: none"> • Interventions for waterpipe smoking 	<ul style="list-style-type: none"> • Specialised/tailored treatment for young people <ul style="list-style-type: none"> - Interventions for sub-groups of young people (e.g., homeless youth) • Interventions for inhalant use • Dual diagnosis programmes / Programmes for those affected by co-morbidity 	
Criminal justice interventions	<ul style="list-style-type: none"> • Diversion to (voluntary or mandated) education or treatment, arrest referral schemes 		<ul style="list-style-type: none"> • <i>Example from online survey: support for young people involved with the law</i> • Diversion to (voluntary or mandated) education or treatment, arrest referral schemes <ul style="list-style-type: none"> - <i>Example from online survey: Referral of young people arrested for the first time to treatment</i> • Drug courts • Treatment programmes in prison • Parole programmes • Post-release programs (i.e., continuum of treatment and support opportunities between custody and release of offenders back into the community for young and adult offenders) 	
Social reintegration	<ul style="list-style-type: none"> • <i>Example from online survey: Services to assist clients with a common employability barrier (e.g., history of drug/alcohol misuse, homelessness and ex-prisoners/ex-offenders) to enter employment</i> 		<ul style="list-style-type: none"> • Social rehabilitation programmes for young people • Education and employment related programmes • Supported housing 	
Specific delivery structures and quality assurance measures	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Delivery structures covering a range of addictions <ul style="list-style-type: none"> - <i>Example from online survey: Development of a commissioning framework for all addiction services</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Dedicated budget for alcohol use disorder 	<ul style="list-style-type: none"> • Network of free smoking cessation support 	<ul style="list-style-type: none"> • Establishment of treatment facilities 	<ul style="list-style-type: none"> • Earmarked funding for problem gambling

	<p>treatment</p> <ul style="list-style-type: none"> Alcohol liaison nurses (primarily in health and criminal justice settings) Stakeholder involvement <ul style="list-style-type: none"> <i>Example from online survey: adoption of a recovery approach and user involvement</i> 	<p>(e.g., cessation support network covering whole country)</p> <ul style="list-style-type: none"> Reimbursement of medications / Reducing Patient Out-of-Pocket Costs for Effective Cessation Therapies Interventions targeting health care providers <ul style="list-style-type: none"> Education to health care providers Reminder systems prompting providers to interact with patients about tobacco use at every encounter Recording of smoking status in all medical notes or patient files, supported by legal or financial incentive Family doctors reimbursed for providing brief advice Feedback to health care providers (these interventions use retrospective assessment of provider performance in the identification of patient tobacco use status, the delivery of advice to quit, or a combination of both to inform and to motivate providers) 	<ul style="list-style-type: none"> <i>Examples from online survey: Establish inpatient treatment unit for children under 18 years age; Making liaison and diversion services available in police custody suites and at courts; Transitional arrangements to adult services at local level</i> Workforce development <ul style="list-style-type: none"> <i>Examples from online survey: Training for prevention workers and therapists; Developing skills base of partners and service providers; set up multidisciplinary teams for work with addicts and their families</i> Stakeholder involvement <ul style="list-style-type: none"> <i>Example from online survey: Service User involvement</i> 	<p>services</p>
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9. Harm reduction

Note: This section focusses on approaches which do not necessarily seek to prevent or reduce young people’s participation in addictive behaviours per se, but whose primary aim can be seen as the reduction of harms resulting from young people’s own or others’ participation in addictive behaviours. This includes approaches addressing parental/familial smoking, prevention of alcohol related violence and injury (including specific road safety measures), disease and overdose prevention and treatment (particularly in relation to illegal drugs), as well as measures to prevent gambling-related debt. Hence, our working definition of ‘harm reduction’ spans a wider range of measures than would traditionally fall under this term from an illicit drugs perspective.

General harm reduction measures	<p>Multiple substances/behaviours</p> <ul style="list-style-type: none"> Outreach programmes / Low threshold services (providing social and health services including counselling, needle and syringe programmes, shelter and medical care) 			
Approaches addressing parental/familial participation in addictive behaviours	<p>Multiple substances/behaviours</p> <ul style="list-style-type: none"> Health promotion interventions targeted at women of childbearing age which aim to identify and modify risk factors before pregnancy 			
	<p>Alcohol</p> <ul style="list-style-type: none"> Psychosocial interventions to address alcohol use in pregnancy or following child birth <ul style="list-style-type: none"> Brief interventions in maternity care and child care Counselling for pregnant women on alcohol related issues Counselling for pregnant women with 	<p>Tobacco</p> <ul style="list-style-type: none"> Psychosocial interventions to address tobacco use in pregnancy or following child birth <ul style="list-style-type: none"> Giving feedback to the mothers on foetal health status or nicotine by-products measurements Brief interventions for pregnant women (universal or targeted) 	<p>Illegal drugs</p> <ul style="list-style-type: none"> Psychosocial interventions to address drug use in pregnancy or following child birth <ul style="list-style-type: none"> Services for pregnant drug dependent women – prenatal Postnatal support for drug dependent mothers Pharmacological treatment to address drug 	<p>Gambling</p>



	<p>alcohol related needs</p> <ul style="list-style-type: none"> - Prenatal care for pregnant women with alcohol or drug related needs - Psychosocial interventions for pregnant women enrolled in alcohol treatment programs • Interventions for children and youth with foetal alcohol spectrum disorders (FASD) • Support for children of alcohol dependent people <ul style="list-style-type: none"> - <i>Example from online survey: Low-threshold support offers/possibilities for relatives of people with alcohol problems (especially young people) to protect them from physical and psychological violence</i> - Counselling for children in families with alcohol related needs 	<ul style="list-style-type: none"> - Motivational interviewing - Cognitive behavioural therapy - Incentive schemes - Interventions based on stages of change • Pharmacological treatment to address tobacco use in pregnancy • Approaches to reduce children’s exposure to environmental tobacco smoke <ul style="list-style-type: none"> - Voluntary / self-imposed home smoking restrictions - School based programmes aimed at changing parental smoking behaviours to reduce children’s exposure to environmental tobacco smoke - Written information about environmental tobacco smoke - Counselling - Home visitation by nurse or health worker - Feedback to parents of biological evidence of children’s ETS absorption as a stimulus for parental behaviour change 	<p>use in pregnancy</p> <ul style="list-style-type: none"> • Interventions for opiate exposed newborns (i.e., diagnosed with Neonatal Abstinence Syndrome) • Support for young people whose parents use illegal drugs 	
<p>Road safety measures</p>	<ul style="list-style-type: none"> • Drink-driving laws • Existence of maximum limit for BAC-level • Existence of several different BAC limits <ul style="list-style-type: none"> - for aggravated drunk-driving - for inexperienced or young drivers (‘zero tolerance’) - for professional drivers • Graduated driver licensing (e.g., restrictions on BAC-levels and night-time driving for new drivers) • Information campaigns (focusing on drink/drug driving and enforcement measures, such as prenotification about random breath testing) • Behavioural counselling • Community mobilisation • Designated driver and safe-ride programmes • Coordination of public transport and venue closing times • Court-mandated treatment for recidivist 		<ul style="list-style-type: none"> • Information campaigns (focusing on drink/drug driving) 	



	<p>drink-drivers</p> <ul style="list-style-type: none"> • Enforcement of drunk driving measures: <ul style="list-style-type: none"> – Enforcement of existing BAC limits – Random breath testing – Sobriety checkpoints – Alcohol ignition locks (e.g., voluntary, obligatory for some or all drivers) – Sanctions/penalties for those in breach of drink-driving laws (e.g., on-the-spot fines, driving licence penalty points, driving licence suspension) 			
<p>Violence and injury prevention</p>	<ul style="list-style-type: none"> • Restrictions to buy alcoholic beverages while intoxicated • Alcohol server liability for damages caused by actions of patrons ('Dram Shop Laws') (i.e., laws which define legal responsibilities of licensees for behaviour of patrons after they leave the premises) • Late-night lockouts of licensed premises (restricting trading hours and entry to licensed premises) (the lockout allows licensed venues to continue trading after a certain time but will not allow the entry or re-entry of patrons after that time; i.e., if patrons go outside, they will not be permitted to re-enter the venue) • Safer drinking environments • Safe glassware (polycarbonate glassware) • Safety-orientated design of premises • Bar policies for preventing intoxication • Security staff in bars <p>Specific delivery structures and quality assurance measures:</p> <ul style="list-style-type: none"> • (Mandatory) Server training programmes <ul style="list-style-type: none"> – To ensure responsible beverage service – To prevent and manage aggression • Voluntary codes of bar practice • Guidelines and (minimum) standards to decrease the likelihood of alcohol-related harm (e.g., as part of licensing system) <ul style="list-style-type: none"> – for the design of serving premises 			



	<ul style="list-style-type: none"> - on server training - on monitoring and enforcing of licensing laws • Information provision (e.g., media campaigns promoting licensing laws) • Local licensing forums with community participation • Enforcement by police and liquor licence inspectors <ul style="list-style-type: none"> - Plain-clothes licensing inspectors - Uniformed police presence - Training of licensing officers and police • Sanctions for servers or serving establishments in breach of licensing regulations • Incentives for good practice by licensees • Sanctions for licensing bodies that fail to regulate drinking environments effectively 			
Disease and overdose prevention/treatment	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Public education about the care of intoxicated persons at risk of fatal overdose 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> • Thiamine fortification of drinks and flour 		<ul style="list-style-type: none"> • Needle and syringe programmes • Provision of injecting equipment other than needles and syringes • Regulations on paraphernalia for injecting drug use • Hepatitis B vaccination for users • HIV prevention/education • HIV/hepatitis testing • Safe injecting rooms / Supervised Drug consumption rooms • Overdose prevention <ul style="list-style-type: none"> - Naloxone distribution - Education (improving witness responses, education on overdose prevention, training users in Cardiopulmonary resuscitation (CPR), ambulance responses to overdose) • Substitution treatment (e.g., prescribed heroin) • Harm reduction programmes in prison 		



			<ul style="list-style-type: none"> • Treatment for drug related psychosis • Targeted media campaigns to at-risk groups (e.g., overdose prevention campaign, HIV testing campaign) 	
Approaches addressing other potential harms of participation in addictive behaviours			<ul style="list-style-type: none"> • Civil penalties (e.g., fines, community service, loss of benefits) to reduce harms arising from criminal penalties 	<ul style="list-style-type: none"> • Self-limitation (financial) • Compulsory 'deposit limit setting' by customers (e.g., for roulette, gambling machines, online services) • Minimum waiting time for increasing deposit limits • Restrictions on cash machine location and withdrawal limits • Cash machines equipped with programmes to block access to cash advances • Restrictions on the use of credit - no playing on credit, negative balance or wagering a bet if the registered player account does not have the necessary funds • Restrictions on cheque cashing and cash payment of prizes • Debt-related or money-management counselling

10. General delivery structures and quality assurance measures

Note: This section focusses on what may also be called 'meta approaches'. Unlike the approaches listed in the other sections, measures under this heading are not targeted directly at target populations or the industry. Rather, they provide the necessary context and infrastructures to facilitate the high quality implementation of effective policies and interventions. Specific delivery structures and quality assurance measures are listed in the respective sections (e.g., measures to support implementation of minimum age laws are listed under '3. Age limits'). Therefore, in this section we include general measures which are not tied to any particular approach.

Policy and legislation, including enforcement	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Policies addressing several substances and/or addictive behaviours • Inclusion of substance/addiction related issues in other policy areas / integration of policies into broad economic and welfare policies <ul style="list-style-type: none"> – <i>Example from online survey: alcohol and drugs recognised in the community safety strategy</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> • National alcohol plan/strategy • Regional alcohol plan/strategy • General alcohol control legislation • Definition of sanctions/penalties targeting sellers and consumers • Law enforcement (as a general category) <ul style="list-style-type: none"> – <i>Example from online survey: Protection of young people shall mainly be addressed through more consistent enforcement of</i> 	<ul style="list-style-type: none"> • National tobacco plan/strategy • Regional tobacco plan/strategy • General tobacco control legislation • Enforcement (as a general category) 	<ul style="list-style-type: none"> • International treaties/conventions • National drugs plan/strategy <ul style="list-style-type: none"> – <i>Examples from online survey: Development of action plan on drug prevention in recreational settings</i> • Regional drugs plan/strategy • General drug control legislation • Criminal laws on drug use • Criminal penalties targeting sellers and 	<ul style="list-style-type: none"> • General gambling legislation • Control of gambling providers <ul style="list-style-type: none"> – Senior management of gambling providers directly accountable to the regulatory agency – Selection criteria for staff in gambling sites – Control of staff in gambling sites 	

	<i>existing regulations. Further measures to regulate the market shall be mainly instituted if they serve the protection of young people and violence prevention.</i>		consumers <ul style="list-style-type: none"> • Law enforcement (as a general category) • Police cautions 	
Research and information	<ul style="list-style-type: none"> • Research • Monitoring and evaluation • Publication of annual reports on alcohol situation and policy responses 	<ul style="list-style-type: none"> • Research • Monitoring and evaluation • Periodic reports on tobacco situation and policy responses • Documentation database <ul style="list-style-type: none"> – <i>Example from online survey: Create a database for tobacco related legislation and policy</i> 	<ul style="list-style-type: none"> • Research • Monitoring and evaluation 	<ul style="list-style-type: none"> • Research • Monitoring and evaluation • National register of licensed operators of gambling services
Funding	<ul style="list-style-type: none"> • Public funds designated for alcohol research/monitoring programmes • Support for providers (technical, financial) 	<ul style="list-style-type: none"> • Tobacco control spending • Support for providers (technical, financial) 	<ul style="list-style-type: none"> • Dedicated funding mechanism • Support for providers (technical, financial) 	
Workforce	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Multi-agency, multi-level collaboration and cross-sector partnerships <ul style="list-style-type: none"> – <i>Examples from online survey: Collaboration of substance misuse services, youth offending, mental health and children’s services in addressing young people’s needs</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Authorities dealing with alcohol administration and supervision (e.g., general enforcement authority; coordinating body, such as national alcohol council) <ul style="list-style-type: none"> – <i>Examples from online survey: Establishment of law enforcement units; Organisation in charge of evaluating the strategy</i> • Multi-agency, multi-level collaboration and cross-sector partnerships • Workforce development 	<ul style="list-style-type: none"> • Enforcement authority (general) <ul style="list-style-type: none"> – <i>Example from online survey: Set up a special unit for the control of the implementation of tobacco regulations</i> • Workforce development <ul style="list-style-type: none"> – <i>Example from online survey: Provide education/training for professionals working in all fields related to tobacco / health care / children</i> 	<ul style="list-style-type: none"> • Multi-agency taskforces or partnerships, multi-level collaboration and cross-sector partnerships <ul style="list-style-type: none"> – Drug Action Teams – <i>Examples from online survey: coordination between criminal justice and health and social interventions</i> – Coordination mechanism between local and national level • Workforce development 	<ul style="list-style-type: none"> • Independent gambling regulatory authority (e.g., enforcement of regulations) • Multi-agency, multi-level collaboration and cross-sector partnerships
Stakeholder involvement and international cooperation	<ul style="list-style-type: none"> • Stakeholder involvement <ul style="list-style-type: none"> – <i>Examples from online survey: Engaging stakeholders, communities, experts; A dialogue should be launched with the business community to encourage the development of further initiatives by business enterprises and improve self-monitoring pursuant to current legislation and voluntary codes.</i> 	<ul style="list-style-type: none"> • International cooperation <ul style="list-style-type: none"> – National focal points for tobacco control with a view to exchanging information and best practices as well as policy coordination with other Member States 	<ul style="list-style-type: none"> • Stakeholder involvement <ul style="list-style-type: none"> – <i>Example from online survey: encourage involvement of civil society and social partners</i> • International cooperation 	<ul style="list-style-type: none"> • Stakeholder involvement • International cooperation

11. General approaches

Note: This section focusses on approaches whose content is not specific to alcohol, tobacco, illegal drugs or gambling but which may still have effects on those outcomes. An ecological framework for adolescent health presented by Blum and colleagues (2012) highlights the importance of considering macro-level factors in understanding young people's development, such as political events, economic forces, national priorities, and norms or values; as well as the role of schools, workplaces, family, and neighbourhoods. Policies and interventions of relevance to this section are consequently those which take place in, or seek to modify, those contexts. As such, the list of potentially relevant policies and interventions is endless and we only provide a limited number of examples which we do not consider to be exhaustive.

Individual	<p>Multiple substances/behaviours</p> <ul style="list-style-type: none"> • Exercise
School	<ul style="list-style-type: none"> • Early childhood education
Family	<ul style="list-style-type: none"> • Family home visitation with disadvantaged families (not drug specific) • Support for children in families where abuse, mental illness or mental disability is present
Workplace	<ul style="list-style-type: none"> • Workplace wellness programmes
Neighbourhood/Community	<ul style="list-style-type: none"> • Community support services • Community-building/neighbourhood enhancement programmes (suburb/community renewal programs, including physical improvements, provision of social programs, sports and recreation programs, providing employment and education for whole of community) • Crime prevention through environmental design (CPTED) • General road safety measures
Health and social care	<ul style="list-style-type: none"> • Developing and strengthening the public healthcare system / improving overall public health
Macro level	<ul style="list-style-type: none"> • Employment (i.e., measures stimulating economic growth) • Reducing poverty

Table 6: Evidence synthesis – Overview of findings from review of reviews

Overview of review-level evidence on the effectiveness of policies and interventions addressing young people’s addictive behaviours

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
1. Control and regulation of supply						
Licensing of tobacco retailers	NR	?	NR	NR	1	Review identified only one cross sectional study.
Ban on sale of single cigarettes	NR	?	NR	NR	1	
Vending machine restrictions	NR	?	NR	NR	1	
Availability of low or non-alcoholic beverages	?	NR	NR	NR	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
2. Gambling/substance-free zones						
Indoor and/or outdoor, partial or total smoking bans	NR	?	NR	NR	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
3. Age limits						
Fines for merchants who sell tobacco products to minors	NR	?	NR	NR	1	Review identified only one cross sectional study.
Other measures	NR	NR	NR	NR	0	
4. Taxation and pricing						
Increases in cigarette price	NR	+	NR	NR	2	Few studies distinguished between social groups in determining effectiveness. The strongest available evidence suggested that males were more responsive to price than females.
Increases in cigarette tax	NR	?	NR	NR	1	
Other measures	NR	NR	NR	NR	0	
5. Control and regulation of advertising, marketing and sponsorship						
Ban on free-standing displays of tobacco products	NR	?	NR	NR	1	Review identified only one cross sectional study.
Ban on distribution of free tobacco samples	NR	?	NR	NR	1	
Other measures	NR	NR	NR	NR	0	
6. Warning labels						
Health warning labels	NR	NR	NR	NR	0	
Other types of labels	NR	NR	NR	NR	0	

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
7. Prevention programmes						
7.1 School based approaches to prevention						
'Whole school' approaches	X	+	X	NR	2	Iatrogenic effects on cannabis use reported in one study.
Universal (manualised) programmes (in general)	+	X	+/0	?	7	For alcohol, the outcomes most amenable to change were drunkenness and heavy episodic drinking, and evidence was derived from specific manualised programmes (e.g., Good Behavior Game; Life Skills Training; and Unplugged) rather than types of approaches. Conflicting findings with regard to tobacco; one review suggested that effectiveness may be greater in baseline non-smokers. With respect to illegal drugs, reviews highlighted that effectiveness depended on type of approach. No studies directly compared the effectiveness of the different types of approach (e.g., skills vs knowledge). One review suggested effectiveness for preventing cannabis use but not other substance use, and that effectiveness may be greater in 'low risk' youth.
Skills training	+	+	+/0	NR	4	One review suggested that studies of resistance skills training appeared to show greater effectiveness than those of generic skills training. The same review suggested greater effectiveness in 'low risk' youth.
Social influence programmes	NR	+/0	X	NR	3	Findings from two reviews suggested social influence programmes may be effective as part of multi component programmes but not in isolation.
Combined social influence + social competence programme	NR	+	NR	NR	1	
Knowledge/information provision	NR	0	0	NR	2	
Affective education	NR	NR	0	NR	1	
Theatre and drama based education	NR	NR	0	NR	1	
Incentives	NR	?	NR	NR	1	
School based component as part of multicomponent interventions	NR	X	NR	NR	3	Conflicting findings between reviews. Discrepancies likely due to consideration of different types of multicomponent programmes. However, multicomponent programmes with a school component were more likely to be effective
Interventions targeting special populations (indigenous youth)	NR	?	NR	NR	1	
Other measures	NR	NR	NR	NR	0	
7.2 Family based approaches to prevention						
Family or parenting programmes	X	X	?	NR	6	Conflicting findings between reviews. Effectiveness likely to depend on the specific type of intervention and child age. Difficult to draw firm conclusions as reviews included a variety of family based approaches, including manualised family based programmes and multicomponent programmes (i.e., school or community based

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
						programme with family component). Interventions appeared to be universal, not targeted. Two reviews suggested that 'active involvement' of parents was an effective ingredient. Evidence from two reviews suggested that effectiveness may be greater in younger children (i.e., pre-school to early adolescent).
7.3 Community based approaches to prevention						
Multicomponent or community-based programmes	+/0	X	X	NR	5	Most approaches reviewed were centred on school-based provision, with 'add-on' activities, rather than true community programmes. Conflicting findings between primary studies and reviews, likely due to heterogeneity of interventions and definitions. Some reviews suggested that multi component programmes were more effective (e.g., school based programme with community and family elements), whereas sub analysis conducted in one alcohol review suggested that multiple component programmes were not more effective than single component approaches.
7.4 Other prevention approaches						
Mentoring	0	NR	0	NR	1	
Social norms/ personalised feedback	+/0	NR	NR	NR	2	Computer and web based as well as individual face-to-face feedback probably effective, whereas mailed, group feedback, and social marketing based approaches more likely to be ineffective.
Mass media campaigns	NR	+/0	X/-	NR	3	Effectiveness depends on how media campaigns are designed and implemented. Well planned campaigns integrated in multi component programmes (e.g., school, community) appeared to be more effective than low intensity, stand alone media campaigns.
Motivational interviewing (MI) Brief interventions	NR	+	+/?	NR	2	For smoking prevention, MI appeared to be more effective when applied for a total of less than one hour and when the protocol includes training or fidelity practices. For illegal drug use, brief interventions appeared to be effective at the short term follow-up (up to 3 months), but there was insufficient evidence to judge long term effectiveness.
Computer and web based interventions	+	0/?	NR	NR	5	Beneficial effects appeared to be more likely in college students than in adolescents. Further high quality trials needed to judge effectiveness in adolescents.
Educational video + in-game warning messages	NR	NR	NR	?	1	
Other measures	NR	NR	NR	NR	0	
8. Treatment and social reintegration						
8.1 Psychosocial interventions						
Counselling	?	?	?	NR	2	

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
Educational approaches (e.g., in health care setting)	NR	?	NR	NR	1	
Cognitive behavioural therapy (CBT)	+/?	+/?	+/?	+/? (adults)	5	Alcohol and illegal drug use outcomes were not distinguished in these reviews. One review on alcohol and drugs suggested that group CBT may be more effective than individual CBT. Three reviews suggested that effectiveness may be increased if CBT is delivered in combination with other interventions. With regard to gambling, CBT appeared to be effective in the short term but there was no evidence regarding its long-term effectiveness.
Motivational interviewing (MI)	NR	+	NR	? (adults)	2	
Motivational enhancement	NR	+/?	NR	?	3	Motivational enhancement may be effective when delivered in combination with other approaches; insufficient evidence to judge effectiveness of motivational enhancement in isolation.
Family therapy	+/?	NR	+/?	NR	3	Alcohol and illegal drug use outcomes were not distinguished in these reviews. One review on alcohol and drugs suggested that multi-dimensional family therapy may be more effective than functional family therapy, family systems therapy, and family education.
Community reinforcement	?	NR	?	NR	1	Alcohol and illegal drug use outcomes were not distinguished in this review. May be effective but number/quality of trials was insufficient.
Computer and web based interventions	NR	0/?	NR	NR	3	Appeared to be ineffective to reduce adolescent smoking; findings from one trial in college students suggested beneficial effects but this evidence was insufficient to draw firm conclusions.
Interventions for waterpipe smoking cessation	NR	?	NR	NR	1	Review identified no trials eligible for inclusion.
Psychosocial interventions targeting inhalant dependence and abuse	NR	NR	?	NR	1	Review identified no trials eligible for inclusion.
Interventions targeting special populations (homeless and runaway youth)	?	NR	?	NR	1	
Other measures	NR	NR	NR	NR	0	
8.2 Pharmacological interventions						
Serotonin 3 receptor antagonist	?	NR	NR	NR	1	
Nicotine replacement therapy (NRT) (e.g., gum, patch)	NR	0	NR	NR	2	
Bupropion	NR	0	NR	NR	1	
Other pharmacological smoking cessation interventions (e.g., Lobeline, Nicobrevin)	NR	?	NR	NR	2	Reviews identified no trials eligible for inclusion.
Buprenorphine-naloxone maintenance vs	NR	NR	?	NR	1	



Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
buprenorphine detoxification						
Levo- α -acetylmethadol (LAAM) vs methadone	NR	NR	+/?	NR	2	In participants with a mean age of 25-26 years, LAAM maintenance appeared to be more effective but there was insufficient evidence to draw any conclusions relating to its safety. Insufficient evidence to judge effectiveness in adolescents.
Pharmacological interventions targeting inhalant dependence and abuse	NR	NR	?	NR	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Perinatal/neonatal outcomes	Cognitive and physical development	Skills and behavioural development	Child exposure to ETS and related harms		
9. Harm reduction						
9.1 Approaches addressing parental/familial participation in addictive behaviours						
Universal pre-pregnancy health promotion including substance use advice	?	NR	NR	NR	1	Review contained only one relevant study.
Non drug specific home visitation for post-partum women with a drug or alcohol problem	NR	X/0	NR	NR	1	Conflicting findings regarding effects on psychomotor development; no study found significant differences for cognitive development
Psychosocial/educational interventions to prevent or reduce maternal substance use during or following pregnancy	+/?	NR	NR	NR	4	Evidence from one review that smoking cessation interventions in pregnancy increased children's birth weight and reduced preterm. Insufficient evidence with regard to alcohol and illegal drugs.
Pharmacological interventions for maternal substance use cessation during or following pregnancy	?/X	NR	NR	NR	5	Insufficient evidence regarding alcohol. Conflicting evidence regarding the use of nicotine replacement therapy during pregnancy, with some indications of adverse effects. Insufficient evidence to judge effectiveness of methadone treatment during pregnancy. One review concluded that severity of neonatal abstinence syndrome did not appear to differ according to whether mothers were on high- or low-dose methadone maintenance therapy.
Non-pharmacological interventions for children with foetal alcohol spectrum disorders (FASD)	NR	?	?	NR	2	
Pharmacological interventions for children with FASD	NR	?	NR	NR	2	
Measures to reduce children's exposure to environmental tobacco smoke (ETS)	NR	NR	NR	X	2	Beneficial effects found in some studies but not others.
Pharmacological interventions for opiate exposed newborns	?	NR	NR	NR	3	

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Perinatal/ neonatal outcomes	Cognitive and physical development	Skills and behavioural development	Child exposure to ETS and related harms		
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Substance use	Alcohol-related motor vehicle crashes	All-cause motor vehicle fatalities	Other harms		
9.2 Violence and injury prevention (including specific road safety measures)						
Graduated driver licensing (GDL)	NR	+	+	+/?	1	
Alcohol server liability ('dram shop liability')	NR	NR	+	NR	1	
Behavioural counselling interventions targeting alcohol-impaired driving or riding	?	?	?	?	1	Review identified no trials eligible for inclusion.
Drink driving awareness programs	?	?	?	?	1	Review identified no trials eligible for inclusion.
Alcohol server training	?	?	?	?	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Mortality (e.g., fatal overdose)	Physical health (e.g., infectious diseases)	Psychological /psychiatric conditions	Other outcomes		
9.3 Disease and overdose prevention and treatment						
Treatment for amphetamine psychosis	NR	NR	?	NR	1	Review identified only one trial eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
10. General delivery structures and quality assurance measures						
Any measures falling under this heading	NR	NR	NR	NR	0	

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Perinatal / neonatal outcomes	Cognitive and physical development	Skills and behavioural development	Child exposure to ETS and related harms		
11. General approaches						
Home visitation	?/X	NR	NR	X	3	Insufficient evidence regarding pre-pregnancy health promotion. Conflicting findings regarding effects of post-partum home visits on psychomotor development; no study found significant differences for cognitive development. Conflicting findings regarding effectiveness in reducing child exposure to ETS. Heterogeneity in how interventions were implemented.
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
Early childhood education	X	+	+	NR	1	Some evidence of iatrogenic effects for binge drinking.
Other measures	NR	NR	NR	NR	0	

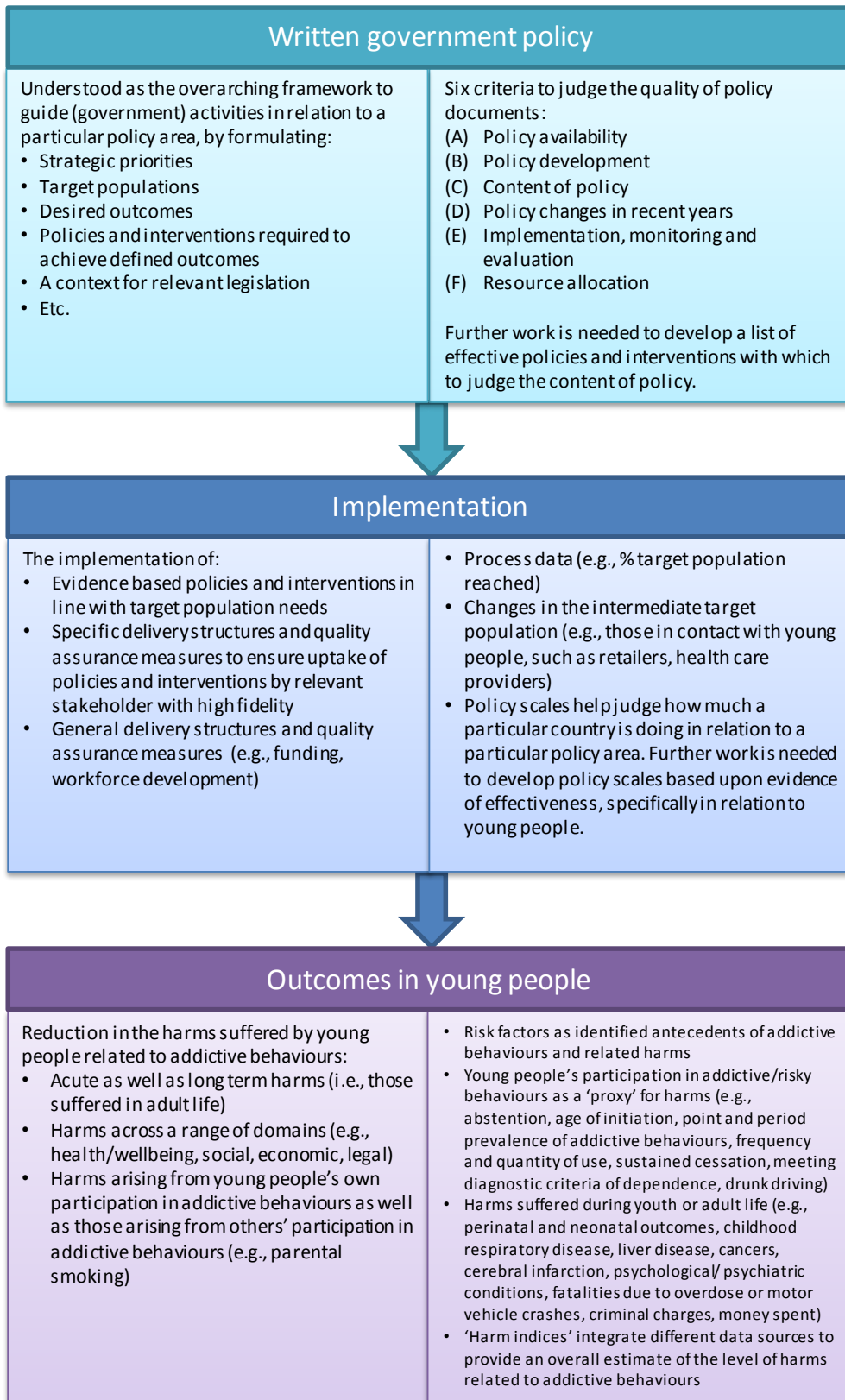
Key:

- + Evidence suggests policy/intervention has beneficial effect (i.e., reduced substance use, gambling, or related harms)
- Evidence suggests policy/intervention has undesired effect (i.e., increased substance use, gambling, or related harms)
- 0 Evidence suggests policy/intervention has no effect
- ? Insufficient evidence (e.g., small number of studies, methodological limitations)
- X Conflicting findings mean it is currently not possible to draw conclusions as to the effectiveness of this policy/intervention
- +/? Evidence suggests effects differ by specific policy/intervention type (e.g., content, how delivered), population group, outcome, follow-up time, etc.
- NR No high quality review-level evidence identified / outcome not considered in included review (in some cases may not be applicable)

Table 7: Comparison of approaches considered in existing policy scales and those considered in this report

Approaches considered in ALICE RAP WP 16	Corresponding headings/topics in existing policy scales		
	AMPHORA scale of alcohol policies (Karlsson et al. 2012)	Alcohol Policy Index (Brand et al. 2007)	Tobacco Control Scale 2010 (Joossens & Raw 2011)
• Control and regulation of supply	• Control of production, retail sale and distribution of alcoholic beverages	• Physical availability	(not included)
• Gambling/ substance-free zones	• Control of production, retail sale and distribution of alcoholic beverages	(not included)	• Smoke free work and other public places
• Age limits	• Age limits and personal control	• Physical availability	(not included)
• Taxation and pricing	• Alcohol taxation and price	• Alcohol prices	• Price of cigarettes and other tobacco products
• Control and regulation of advertising, marketing and sponsorship	• Control of advertising, marketing and sponsorship of alcoholic beverages	• Alcohol advertising	• Comprehensive bans of advertising and promotion • Plain packaging (under “Large direct health warning labels”)
• Warning labels	• Control of advertising, marketing and sponsorship of alcoholic beverages	(deliberately excluded due to lack of evidence of effectiveness)	• Large direct health warning labels
• Prevention programmes	• Public policy	• Drinking context	(included only indirectly through category “Spending on public information campaigns”)
• Treatment and social reintegration	(not included)	(deliberately excluded due to focus on public health measures aimed at prevention)	• Treatment to help dependent smokers stop
• Harm reduction	• Control of drunk driving	• Physical availability • Drinking context • Motor vehicles	(not included)
• General delivery structures and quality assurance measures	• Regulation by law (under “Starting points”) • Public policy	(not included)	• Spending on public information campaigns
• General approaches	(not included)	(not included)	(not included)

Figure 2: Young People’s Addictive Behaviours Policy Evaluation Framework





Addiction and Lifestyles in Contemporary Europe: Reframing Addictions Project (ALICE RAP)

Adolescents as customers of addiction

Deliverable 16.1, Work Package 16

Background report 1: Policy mapping and review

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Further project information is available at <http://www.alicerap.eu/>

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PURPOSE OF THIS REPORT

This report represents one of three documents describing work undertaken as part of the two-year Work Package 16 on “Adolescents as customers of addiction” within the Addictions and Lifestyles in Contemporary Europe – Reframing Addictions Project (ALICE RAP). The three documents are:

- Deliverable 16.1 Adolescents as customers of addiction (main report)
- Background report 1: Policy mapping and review (this document)
- Background report 2: Review of reviews

The *main report* describes the background to the Work Package, summarises activities undertaken by the research team, and discusses these in relation to the Work Package objectives.

The *background reports* document in detail the methods and results pertaining to the two key activities of the Work Package. The background reports are intended as supplements to the main report and should not be read independently of the main report. Introductions, summaries and discussions of findings are only provided in the main report.

This document is the first background report providing further detail on the methods and results of the policy review and online survey undertaken during the first year of the Work Package.

An earlier version of this report was submitted to the funding agency in September 2012.

YOUNG PEOPLE IN EU POLICIES ON ADDICTIVE BEHAVIOURS: POLICY REVIEW

Methods

The first activity of Work Package 16 was a scoping exercise to obtain a better understanding of how young people are currently addressed in EU policy on addictive behaviours. We sought to retrieve those EU policy documents on alcohol, tobacco, illegal drugs, and gambling published since the year 2000, which are most relevant to young people.

EU policies were retrieved initially by searching the Public Health web portal of the European Commission¹; the portal includes dedicated pages on alcohol², tobacco³, and illegal drugs⁴ policies but not for gambling. A separate search using Internet search engines was carried out to identify EU gambling policy, and information was found on the Internal Market web portal of the European Commission⁵. Further documents were retrieved by following up hyperlinks contained on web pages and bibliographical references in already retrieved documents. Professional colleagues, including those in the ALICE RAP network, were also consulted to identify relevant materials. Final searches for this scoping exercise were carried out in March 2012⁶.

Our searches resulted in more than 30 documents related to EU and international policy on alcohol, tobacco, illegal drugs or gambling. International documents included those published by the World Health Organisation (WHO), such as the WHO European action plan to reduce the harmful use of alcohol 2012–2020 and the WHO Framework Convention on Tobacco Control. Although important to EU policy, we did not include these materials in the present overview as our focus was on EU specific documents. All retrieved materials were screened to identify key documents for presentation in this report. Thirteen documents were selected and are presented below in reverse chronological order, paying special attention to how young people are addressed therein.

Although documents are of relevance to young people even if they only refer to the general population, the aim of this study was to identify and discuss *young people specific* elements of policy. The documents were therefore assessed based on how much they focused on young people's addictive behaviours. This was also determined by whether a document made specific reference to young people⁷. The summaries in the following sections consequently focus on those parts of the documents where young people are explicitly addressed.

¹ Available at: http://ec.europa.eu/health/index_en.htm

² Available at: http://ec.europa.eu/health/alcohol/policy/index_en.htm

³ Available at: http://ec.europa.eu/health/tobacco/policy/index_en.htm

⁴ Available at: http://ec.europa.eu/health/drugs/policy/index_en.htm

⁵ Available at: http://ec.europa.eu/internal_market/services/gambling_en.htm

⁶ Since the original submission of this report in September 2012, a number of new documents have been published (including the EU Drugs Strategy 2013-2020 and the EC Communication "Towards a comprehensive European framework on online gambling"), which are not considered in this report.

⁷ Including young people, youth, child/ren, childhood, adolescents, adolescence, minors, school pupils, students.

Results

Alcohol

Written EU alcohol policy placed great emphasis on protecting young people from alcohol-related harms; 'young people' formed one of the main strategy's priority themes. Aims and strategies demonstrated a public health approach, addressing the potential health and social harms suffered by young people as a consequence of their own and others' alcohol use.

An EU strategy to support Member States in reducing alcohol related harm [COM(2006) 625 final]

The first of the five priority themes is "Protect young people, children and the unborn child":

- Identifies three aims related to young people:
 - "Aim 1: To curb under-age drinking, reduce hazardous and harmful drinking among young people, in cooperation with all stakeholders.
 - Aim 2: To reduce the harm suffered by children in families with alcohol problems.
 - Aim 3: To reduce exposure to alcohol during pregnancy, thereby reducing the number of children born with Foetal Alcohol Disorders" (p. 8).
- Of concern are: the relatively high mortality rates in the 15-29 age group attributable to hazardous alcohol consumption; the increasing proportion of young people with harmful and hazardous consumption patterns, including "binge-drinking" and high frequency under-age drinking; and the impact of alcohol consumption by pregnant women on the foetus (pp. 6-7)
- The policy stresses the negative impact of young people's alcohol consumption on their health and social wellbeing, as well as their educational attainment (p. 8)
- The document gives examples of effective measures implemented by Member States (p. 9)

Young people are also mentioned in the other priority themes within the strategy:

- Priority theme "Reduce injuries and deaths from alcohol-related road traffic accidents":
 - Highlights that 35% to 45% of fatalities in young people aged 18-24 are due to traffic accidents, and that young people aged 15-34 are more likely to be involved in alcohol-related road accidents (p. 9); specific measures for young people are recommended.
- Priority theme "Inform, educate and raise awareness on the impact of harmful and hazardous alcohol consumption, and on appropriate consumption patterns":
 - The aim is "To increase EU citizens' awareness of the impact of harmful and hazardous alcohol consumption on health, especially the impact of alcohol on the foetus, on under-age drinkers, on working and on driving performance" (p. 11, emphasis added).
 - The good practice recommendations identify children and young people (as well as their parents) as an important target group for health education and awareness raising interventions
- Priority theme "Develop, support and maintain a common evidence base":
 - One of the aims is: "To obtain comparable information on alcohol consumption, especially on young people; definitions on harmful and hazardous consumption, on drinking patterns, on the social and health effects of alcohol; and information on the impact of alcohol policy measures and of alcohol consumption on productivity and economic development" (p. 11, emphasis added).

- The priority theme “Prevent alcohol-related harm among adults and reduce the negative impact on the workplace” does not explicitly mention young people.

The policy identifies actions to be implemented by the European Commission to address the priority themes in line with the set aims. The following actions are the most important for this study:

- “Support the monitoring of young people’s drinking habits, and of the harm they suffer, with a particular focus on the increased alcohol consumption among girls and the increase in ‘binge-drinking’.”
- “Develop, in cooperation with Member States and stakeholders, strategies aimed at curbing under-age drinking. This would take the form of exchanges of good practice to address issues such as selling and serving, irresponsible marketing, and the image of excessive alcohol use conveyed through the media and by role models, and could possibly be taken forward within the Alcohol and Health Forum (...) and in the implementation of the European Youth Pact”.
- “Support Member States and stakeholders in their efforts to develop information and education programmes on the effect of harmful drinking and on responsible patterns of consumption”.
- “Explore, in cooperation with Member States and business organisations, the possibility of developing specific information and education campaigns or similar initiatives to tackle alcohol-related harm at the workplace. In this context, exchange of specific best practice should be pursued, possibly together with other Commission led initiatives such as those on e.g., Corporate Social Responsibility” (p. 13).

The strategy also includes a section on subsidiarity, in which mapping of actions implemented by Member States is encouraged. It is noted that, “Specific measures adopted by Member States to reduce alcohol-related harm with a view to protecting public health are based on their particular cultural contexts. (...) in all cases, they should be evidence-based, proportionate and implemented on a non-discriminatory basis” (p. 14). The document provides examples of national measures implemented in Member States; as well as recommendations for local action.

Council Conclusions on alcohol and young people of 1-2 June 2004

This press release documents the conclusions of the European Council from a meeting held on 1-2 June 2004. The document identifies “the burden of alcohol related avoidable death and suffering, in particular among young people” as “one of the most urgent challenges facing Health Ministers at the European level” (p. 41). The Council emphasises the importance of a common European alcohol strategy (this was published in 2006 and is described above) and underlines that “special attention should be given to young people and alcohol within such a strategy” (p. 41). The document also calls for a public health approach (p. 40).

COUNCIL RECOMMENDATION of 5 June 2001 on the drinking of alcohol by young people, in particular children and adolescents (2001/458/EC)

This document contains a list of recommended actions that Member States should take to address young people’s alcohol use, such as ensuring that the alcohol issue is considered in any health promotion activity. The Council places particular emphasis on the cooperation of Member States with the alcohol industry (producers and retailers of alcoholic beverages) to ensure that alcohol beverages do not appeal to young people. Specifically, the Council identifies several elements relating to the promotion, marketing and distribution of alcoholic beverages which require special attention (e.g., featuring young people in promotion campaigns or using styles associated with youth culture).

Tobacco

Written EU tobacco policy addressed young people as the vulnerable target of the tobacco industry's marketing and promotion strategies. Strategies therefore focussed on the promotion of smoke-free environments and on restricting possibilities for the marketing and promotion of tobacco products.

COUNCIL RECOMMENDATION of 30 November 2009 on smoke-free environments (2009/C 296/02)

In this document, the Council recommends that Member States take appropriate measures to achieve smoke-free environments. Young people are identified as a group for which exposure to second-hand tobacco smoke is particularly dangerous; and the document also states that such exposure could increase their likelihood of taking up smoking (paragraph 5). Recommendation 2 therefore encourages Member States to “develop and/or strengthen strategies and measures to reduce exposure to second-hand tobacco smoke of children and adolescents”.

DIRECTIVE 2003/33/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 May 2003 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the advertising and sponsorship of tobacco products (Text with EEA relevance) (OJ L 152, 20.6.2003, p. 16)

This Directive regulates the advertising of tobacco products in media other than television, as well as tobacco company sponsorship of radio programmes and activities with cross-border impact. In line with the Council Recommendation of 2 December 2002 (described below), the Directive presents young people as worthy of protection from the tobacco industry's marketing and promotion activities (paragraphs 3 and 6).

COUNCIL RECOMMENDATION of 2 December 2002 on the prevention of smoking and on initiatives to improve tobacco control (2003/54/EC)

- The Council Recommendation highlights “a worrying increase in the number of children and adolescents who take up smoking” (paragraph 6) as well as that some of the tobacco industry's strategies “appear to be targeting young people in their educational years, in order to replace the large number of smokers who die annually” (paragraph 7).
- Paragraph 16 refers to “advertising, marketing and promotion practices used by the industry to promote tobacco consumption, which can indiscriminately reach children and adolescents”; examples of such practices are provided. Paragraph 17 highlights that the tobacco industry uses “creative and indirect ways to promote tobacco products, especially with young people”.
- Recommendation 1 therefore asks Member States to “adopt appropriate legislative and/or administrative measures in accordance with national practices and conditions to prevent tobacco sales to children and adolescents”; and provides examples of appropriate measures.
- The Council also recommends prohibitive measures in relation to tobacco advertising and promotion.
- Recommendation 6 asks Member States to “make full use of young people's contributions to youth health-related policies and actions, especially in the field of information, and encourage specific activities which are initiated, planned, implemented and evaluated by young people”.

Illegal drugs

Written EU drugs policy did not place a particular emphasis on young people. Young people were recognised as a target group for demand reduction activities but they were not the only ones. Rather, drug demand reduction activities were targeted at the general public, including adults, young people, and other vulnerable groups. The focus on drug demand reduction demonstrated a public health approach.

EMCDDA Strategy and Work Programme 2010-2012⁸

This document outlines the 2010-2012 strategy of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). The focus of the EMCDDA is on monitoring the drug situation in Europe as well as Member State responses to drug-related needs. Young people are explicitly referred to in the document in relation to data collection, as the EMCDDA collaborates with the European school surveys project on drugs and other substances (ESPAD) and the Health Behaviour in School-aged Children (HBSC) survey groups. The document also highlights the need for a special focus on high-risk groups including early drug users and school leavers in the identification and dissemination of good practice (p. 45).

Young people (and students) are also explicitly mentioned as one of the EMCDDA's target audiences under the broader category of "citizens". According to the document, the information needs of young people relate to having a general overview of the drugs phenomenon as well as clear information on the effects and dangers of individual drugs (p. 20).

EU Drugs Action Plan for 2009-2012 (2008/C 326/09)

The action plan accompanying the EU Drugs Strategy (described below) refers to young people in II. DEMAND REDUCTION, Objective 5 (Prevent the use of drugs and the risks associated with it), Action 10. Examples for the targets for prevention programmes include young people in youth centres and schools, as well as adults in the workplace and in prison. Prevention or delay of first use is the primary objective. Under I. COORDINATION, Objective 4 (Ensure the participation of civil society in drugs policy), Action 8 encourages the involvement of schools in the Commission-led initiative 'The European Alliance on Drugs'.

EU Drugs Strategy (2005-2012)

- One of the policy fields identified in the EU Drugs Strategy is demand reduction, and this is also the most relevant section concerning young people.
- The strategy's aim in this policy field is to achieve: "Measurable reduction of the use of drugs, of dependence and of drug-related health and social risks through the development and improvement of an effective and integrated comprehensive knowledge-based demand reduction system including prevention, early intervention, treatment, harm reduction, rehabilitation and social reintegration measures within the EU Member States. Drug demand reduction measures must take into account the health-related and social problems caused by the use of illegal psychoactive substances and of poly-drug use in association with legal psychoactive substances such as tobacco, alcohol and medicines."
- Early adolescence is identified as a life period which requires special attention.

⁸ Following the original submission of this report in September 2012, the EU Drugs Strategy 2013-2020 was published which is not considered in this report.

- The policy specifies four priorities of which only one mentions young people explicitly (Priority 2: “Improving access to early intervention programmes (measures) especially for young people with experimental use of psychoactive substances”)
- Prevention, early intervention, treatment, social reintegration, and harm reduction activities are targeted at the general population (including, but not limited to, young people).
- Young people are not explicitly mentioned in the other sections of the strategy (e.g., supply reduction).

COUNCIL RECOMMENDATION of 18 June 2003 on the prevention and reduction of health-related harm associated with drug dependence (2003/488/EC)

The Council Recommendation of 18 June 2003 does not place a particular emphasis on young people. One set of recommendations focuses on drug users (e.g., outreach work, treatment, blood borne viruses), while another set of recommendations focuses on the quality of interventions. Although not specific to young people, these recommendations are of relevance to this study because they encourage Member States to make use of scientific evidence of effectiveness, needs assessments, evaluations, quality standards, etc. in addressing drug-related needs.

Gambling

At the time of writing, there was no written EU policy available with regard to gambling and the EU was in the process of developing a policy framework for gambling and betting in the EU Member States, with a focus on online services due to their cross-border impact⁹. EU activity in respect to gambling was situated within the context of market competition, whereas, as shown above, alcohol, tobacco and illegal drugs issues were more likely to be discussed in a public health context. However, public health concerns were clearly visible in the documents published by the EC, in particular with regard to gambling addiction and young people. Considerable attention was given to the topic of under-age gambling as young people were understood to be more likely to develop problematic gambling patterns.

“Framework for Gambling and Betting - Regulatory cooperation between Member States” - Presidency report (30 May 2011)

The latest Presidency report on gambling indicated that Member States are interested in exchange of information and best practice, but not in a harmonisation of rules. The European Court of Justice has ruled that gambling regulation falls under the responsibility of individual Member States, not the EU. Exchange of information and best practices is encouraged with regard to a limited number of topics, including the identification of gambling operator practices which are harmful for young people as well as measures with which to protect players best (pp. 6, 8).

GREEN PAPER On on-line gambling in the Internal Market SEC(2011) 321 final

This paper sets out the context for a consultation held in 2011. Of relevance to this study, the paper highlights the challenges posed by Internet-based gambling, in particular to young people, due to the reduced opportunities for control in comparison with the traditional gambling market (p. 12). The importance of customer identification and age verification for the protection of minors is emphasised (p. 18). A separate section deals with the protection of minors and other vulnerable groups (pp. 24f). The document provides examples of restrictions to the marketing and promotion of

⁹ Following the original submission of this report in September 2012, the EC Communication “Towards a comprehensive European framework on online gambling” was published which is not considered in this report.

online gambling services which are similar to those in EU alcohol and tobacco policy (p. 25). Also of relevance to our study in which young people are defined as those under the age of 25 years, the document considers not only minors, but young adults aged 18-21 are also identified as a vulnerable group of players.

The paper also highlights the role of gambling revenue in public financing of benevolent and public interest activities (including sport events in particular, as well as youth programmes and charity-related activities among others) (pp. 29-31)¹⁰. This is of particular interest to this Work Package, which seeks to investigate not only how policy can protect young people but also how it may (inadvertently) promote addiction. Where business orientation leads to more liberal government approaches to licensing and other regulations, addictive behaviours in young people may be (inadvertently) promoted as the opportunities to engage in such behaviours will be increased. The different approach of the state to gambling in comparison with the other three policy areas (alcohol, tobacco, illegal drugs) is noteworthy.

European Parliament resolution of 10 March 2009 on the integrity of online gambling (2008/2215(INI))

This document addressed some of the issues that were included also in the 2011 Green Paper (described above); including consideration of the reliance of the sports industry on gambling revenue as a source of income; the importance of regulating gambling to preserve public order and to prevent the occurrence of problem gambling and under-age gambling; as well as the particular challenges posed by online gambling due to reduced controls and increased availability of games. The resolution notes that “gambling services are to be considered as an economic activity of a very special nature due to the social and public order and health care aspects linked to it, where competition will not lead to a better allocation of resources” and consequently “emphasises that a pure Internal Market approach is not appropriate in this highly sensitive area” (paragraph 2). The resolution includes a separate section on the “Prevention of consumer detriment” in which several paragraphs refer explicitly to young people and minors.

¹⁰ Note that, for example, “the betting and gaming sector in Italy has long been marked by a policy of expanding activity with the aim of increasing tax revenue”.
(<http://europa.eu/rapid/pressReleasesAction.do?reference=CJF/12/12&format=HTML&aged=0&language=EN&guiLanguage=en>; last accessed 10.05.2012)

YOUNG PEOPLE IN GOVERNMENT POLICIES ON ADDICTIVE BEHAVIOURS: ONLINE SURVEY

Methods

The main activity in this policy mapping and review was an online survey which asked national policy experts to identify relevant government policy documents and to provide commentary using a structured questionnaire. This method was chosen as it was considered the most (cost-)effective way of obtaining the required information. The survey was conducted electronically; in comparison with traditional paper-based approaches, web-based administration has been shown to be more resource-efficient (e.g., no data entry required) and to produce higher response rates (Greenlaw & Brown-Welty 2009). The following sections outline how the survey was developed, conducted and analysed.

Questionnaire development

A structured questionnaire was developed to assess young people targeted components in EU Member State policy documents, with specific attention paid to the availability and importance, scope, and quality of young people components. In line with the aims of this Work Package (see main report), the questionnaire covered four policy areas (alcohol, tobacco, illegal drugs, and gambling). The questionnaire also allowed the research team to collect useful information for the other activities in this Work Package (in particular on policy evaluations and prevalence surveys).

Initially, the research team sought to identify existing tools for the appraisal of governmental policy documents through an Internet search, and by contacting relevant professionals in the field. However, the search did not identify any tool which would have served the purposes of this Work Package. The retrieved tools focused on judging the potential impact of policy but they were less suitable for assessing governmental policy documents as such¹¹. Instead of using these tools, the project team therefore developed a bespoke list of criteria to judge the quality of policy documents. This list was based on existing criteria used to judge the quality of interventions, guideline documents, and on other policy-related questionnaires (described below).

As policy documents specify what actions the government will take to address a certain issue, it is worth considering what quality criteria are usually employed to judge the quality of interventions. Babor and colleagues (2010b) review drug policy¹² approaches in relation to the existing scientific evidence of effectiveness, potential unintended consequences, cost-effectiveness, relevance to the national context (e.g., drug use patterns, political structures, legislation), the generalisability of interventions across populations and countries, and the acceptability of interventions among policy makers and the general population. Such criteria are also useful in judging governmental policy documents, especially in relation to how policy was developed (e.g., was it based on scientific evidence? Was the general public involved in the development of policy?).

¹¹ For example, the purpose of one of the retrieved tools, an Impact Assessment Toolkit, is to identify possible consequences of policies on different dimensions (e.g., economic, social, environmental). Another retrieved tool, the SWOT matrix, is used to identify Strengths, Weaknesses, Opportunities and Threats that may affect the implementation and impact of planned policies.

¹² Babor and colleagues (2010: 4) use the term 'policy' to refer to the "set of laws and programmes" implemented by a government to influence behaviour. In contrast, in this study the term 'policy' refers to a written strategy published by the government outlining how the government will address a particular issue and why. Although it is recognised that such strategies are interpreted and implemented differently across as well as within countries, this approach was considered most appropriate to highlight the *governmental priorities* rather than the variety of individual laws and programmes that may actually be available.

For the appraisal of clinical and public health guidelines, the AGREE II instrument (Brouwers et al. 2010) is a widely accepted tool. It consists of 23 questions which facilitate the assessment of guidelines along six domains: scope and purpose, stakeholder involvement, rigour of development, clarity of presentation, applicability, and editorial independence; as well as two questions for an overall rating. It was not desirable to adapt the AGREE instrument for use in this study because i) some items were not relevant to this Work Package (e.g., clarity of presentation) and ii) the AGREE tool would not have covered all questions of interest (e.g., actual policy content). However, the items contained in the AGREE tool were reviewed to inform the list of quality criteria for this study.

Finally, existing policy questionnaires were reviewed to identify commonly asked questions as well as standardised ways of formulating questions relating to policy. Reviewed questionnaires included the Annual Reports Questionnaire (ARQ) for 2011 of the United Nations Office on Drugs and Crime (UNODC)¹³, the Global Survey on Alcohol and Health for 2012 of the World Health Organization (WHO), and the questions contained in the HP-Source database on Alcohol Policy¹⁴.

To ensure that the work was complementary but not overlapping, the research team coordinated the questionnaire design with ALICE RAP researchers in Work Area 5 (“Governance of addiction”), in particular those colleagues developing scales to measure the comprehensiveness of policies (Work Package 14). These colleagues kindly provided the research team with the “AMPHORA scale to measure the strictness and comprehensiveness of alcohol policies 2010” (Karlsson et al. 2012) (the findings of the online survey were then used to review this scale, see the main report).

As a result of this process, the research team formulated six overarching criteria (see Box 1).

Box 1: Six quality criteria for the appraisal of governmental policy documents

- (A) *Policy availability* – to judge the availability of relevant policy and legislation, particularly policy specifically focussing on young people;
- (B) *Policy development* – to assess what methods, ‘evidence’ and criteria are used to formulate policy, and if and how the general public (particularly young people) help to determine the content and objectives of policy;
- (C) *Content of policy* – to understand how young people are defined and addressed in policy, and to assess the content of policy (e.g., desired outcomes for young people);
- (D) *Policy changes in recent years* – to consider previous policies and time trends, in particular changes in how young people’s addictive behaviours are addressed;
- (E) *Implementation, monitoring and evaluation* – to understand if and how policy is implemented, monitored, and evaluated in relation to its effectiveness and implementation fidelity;
- (F) *Resource allocation* – to judge the priority placed on young person focussed strategies in relevant funding streams, as well as the role of industry funding.

These criteria were then translated into questionnaire sections, and specific questions were formulated to collect detailed information on each criterion (a full copy of the questionnaire is available in the Appendix). To allow comparisons between the four policy areas (alcohol, tobacco, illegal drugs and gambling), questions were designed to be as similar across areas as possible. Equal attention was paid, however, to ensuring that the questions within each area would be specific and relevant to that area (e.g., questions concerning the legal minimum age were relevant for alcohol and tobacco, but not for illegal drugs). The questions were developed first for one area only, and then adapted for each of the remaining three areas, so that similar questions along the six criteria were available for alcohol, tobacco, illegal drugs, and gambling. The draft questionnaire was then

¹³ Available at: <http://www.unodc.org/unodc/en/commissions/CND/10-GlobalData.html>

¹⁴ Available at: <http://hp-source.org/dataoutput.html?module=btg1>

double checked against the EU policies identified earlier to ensure that a comparison between EU and Member State policies would be possible. Finally, questions in each of the four policy areas were piloted using policy documents from the United Kingdom as examples¹⁵. This led to some amendments in the questionnaire, in particular the addition of further predetermined options for multiple choice questions¹⁶. Due to resource limitations, the survey was only developed and offered in the English language.

Additional attention was paid to those (environmental and cultural) policies which might not directly target addictive behaviours but may have indirect or moderating effects on the impact of policy. For example, policy which encourages neighbourhood regeneration or adoption of personal responsibility in social/health choices may be reasonably thought to influence the effects of direct policy activity. An additional questionnaire section was therefore designed to collect information about other policies at national and regional levels that could influence young people's addictive behaviours. A note was included to emphasise that these did not have to be related to alcohol, tobacco, illegal drugs, or gambling but could be from other policy areas. Examples included economic policies, national social protection and inclusion policies, and urban development policies.

Further questions were design to collect background information about survey respondents (e.g., job role, scope of work, main area of work) and additional useful information (e.g., willingness to receive a summary report on the study). A final question allowed participants to leave a general comment about the study.

The questionnaire was developed into an online survey using free software provided at www.socsisurvey.de. This provider was chosen because it offered a high level of flexibility regarding the questionnaire layout and design, including the possibility to insert programme code in languages such as HTML/CSS (e.g., to modify the visual appearance of the questionnaire) and PHP (e.g., to set up filters). The website had been successfully utilised by the researchers for past projects.

The option to set up questionnaire filters was particularly useful as the survey covered four policy areas (alcohol, tobacco, illegal drugs, and gambling). However, it could not be expected that all participants would answer questions concerning all four areas – firstly because individual expertise typically focuses on 1-2 policy areas only; and secondly because the researchers did not wish to place a disproportionate burden on participants' time. Therefore, participants were asked to complete the questionnaire only for their main area of work. The use of filters allowed the research team to create a single survey tailored to respondents' needs. Although the questionnaire contained questions concerning all areas, the filters ensured that during actual survey completion participants received only those questions that were relevant to them, based on their area of work as well as other aspects (e.g., questions about evaluation results were only asked if an evaluation had been carried out). The questionnaire also included a "none of the above" answer option concerning the main area of work. Such respondents were automatically directed towards the end of the survey and asked a limited set of general questions about policies that may influence young people's addictive behaviours. Before launching the survey, the filters were tested for technical functioning by all members of the project team. The location of filters is indicated in the copy of the questionnaire (see the Appendix).

¹⁵ The documents used for piloting were: Youth Alcohol Action Plan (2008) (a new Alcohol Strategy was published in March 2012 after finalisation of the questionnaire); Healthy Lives, Healthy People: A Tobacco Control Plan for England (2011); Drug Strategy 2010 "Reducing Demand, Restricting Supply, Building Recovery: Supporting People to Live a Drug Free Life"; and the Gambling Act 2005 (at the time of writing there was no national gambling policy available in the UK).

¹⁶ Additionally, in the week following the launch of the survey, the preliminary survey data was downloaded and inspected to identify any problems that participants may be experiencing (e.g., if questions were understood as intended). This led to only one minor amendment to the survey (the button for final submission was highlighted on the last page).

The survey questions were supplemented with information to ensure that participants understood the nature of the project and of their participation. This consisted of: a brief introductory page to the questionnaire; a separate web page with detailed information¹⁷; and a page with definitions of main terms¹⁸. Contact details of the lead researcher were displayed at the bottom of each survey page. The ALICE RAP project logo, the European logo, the Seventh Framework Programme logo, and the logo of the LJMU Centre for Public Health were shown on the front page of the survey.

The survey software also allowed participants to access the survey individually if they used a personalised web address. Personalisation of survey access had two main benefits. The research team could track responses even if participants did not disclose their name in the survey or delegated completion of the survey to colleagues; and participants could complete the survey in several sittings (i.e. they could exit the survey at any time and continue later by entering the personalised survey address)¹⁹.

Sampling and survey implementation

The sampling frame of potential survey respondents was constructed using a nomination process. To identify national experts in each policy field for all countries, a nomination form was designed. This form briefly introduced the project and asked for contact details of up to eight suitable experts to take part in the survey (up to two experts for each of the four policy areas). It was explained that nominees should be senior colleagues working for government and/or in academia with an expertise in national (or regional) policy documents on alcohol, tobacco, illegal drugs, and/or gambling. Self-nomination, given fulfilment of these criteria, was encouraged. The affiliation with the ALICE RAP project and the source of funding were clearly indicated in the nomination form.

The survey was targeted at policy experts in the 27 EU Member States, as well as Croatia²⁰, Iceland, Norway, Switzerland and Turkey (32 countries total). It was decided to include 5 European countries which are not currently members of the EU to allow comparisons between EU and non-EU countries. The nomination form was sent to individual contacts and professional networks in these countries, including the EMCDDA's Reitox national focal point network which comprises the EU 27 countries as well as Norway, Croatia and Turkey. This was done in coordination with the EMCDDA who kindly approved the mailing before it was sent to the heads of focal points, and who also agreed on the inclusion of a statement highlighting the EMCDDA's support of the ALICE RAP project. Other networks contacted included the IREFREA network, the EU Prevention Standards Partnership, the Council of Europe's Pompidou Group, and the European Association of Gambling Studies; all of which agreed to cascade the nomination form to network members and colleagues. Project partners in the ALICE RAP network were not contacted separately to ensure the independence of the research and the objectivity of findings (some ALICE RAP partners were involved in the nomination process nevertheless, for example because they are also heads of Reitox focal points). The research team also successfully contacted the Research Institute for Public Health and Addiction (ISGF) in Zurich to obtain nominations for Switzerland. For Iceland, emails were sent to the Ministry of

¹⁷ Available at: <http://www.staff.ljmu.ac.uk/heaakurt/alicerap/information.htm> – this link could be accessed from the bottom of every survey page.

¹⁸ Definitions were provided for the following terms: Addictive behaviours; Gambling (based on the definitions provided in the EC Green Paper on on-line gambling in the Internal Market); New psychoactive substances (based on EMCDDA's annual report 2011, Chapter 8 on "New drugs and emerging trends"); National level; Policy; Regional level; Young people. The web page is available at: <http://www.staff.ljmu.ac.uk/heaakurt/alicerap/definitions.htm> – this link could be accessed at various points in the questionnaire.

¹⁹ This was the only issue that led to technical queries by participants during the implementation of the survey. Participants were hesitant to simply exit the browser as instructed because they were worried that all data would be lost if they didn't 'save' it properly.

²⁰ Croatia joined the European Union as the 28th Member State on 1 July 2013.

Welfare, the Directorate of Health, and the Ministry of the Interior to ask for assistance with the study. ALICE RAP colleagues conducting a survey in Work Area 5 were also contacted to determine if a common sampling frame could be developed; this, however, was not deemed possible due to the different nature of both surveys.

In sum, representatives from 32 countries (EU 27 and 5 non-EU countries) were invited to submit nominations, and the research team received nominations from 20 countries (63% of invited countries) (17 EU countries and 3 non-EU countries). Nominations were received mainly from representatives of the Reitox focal point network. Although the work of the Reitox focal points focuses on illegal drugs, the focal points are typically housed in government or academic departments whose work covers public health or addiction more generally. They were therefore often able to provide nominations not only for experts working in the illegal drugs field, but also for the other policy areas. Some contacts requested further information about the project (e.g., type of questions, language of the questionnaire), so that they could identify the most suitable persons to nominate. Initially, a total of 98 experts were nominated, including: 36 nominees for alcohol; 32 nominees for tobacco; 41 nominees for illegal drugs; 24 nominees for gambling^{21, 22}. Later on, further nominations were received from survey participants, either in addition to themselves or as a replacement (where the nominated person did not self-identify as the most suitable contact to answer the survey), leading to a total of 105 nominated experts²³.

In total, 102 experts from 20 countries were invited to take part in the study²⁴. The invitation consisted of a personalised short email briefly introducing the project and highlighting the web address through which the online survey could be accessed. An official invitation letter, signed by the lead researchers, was attached to the email as a PDF file (see the Appendix for a copy of the letter). This letter contained detailed information about the study aims, the purpose and content of the survey, and information about how to complete it. Participants were informed that the survey would take approximately 1 hour to complete²⁵, although the exact time would depend on their area of work and what policy documents were available in their country. The letter also explained the nature of the personalised survey address and how to complete the survey in more than one sitting if necessary. A link was included to the webpage providing further information on survey completion²⁶. Participants were informed that their personal information would be treated confidentially, and in what form anonymised results from the study would be presented and published. They were also encouraged to contact the research team in case of any questions or comments, technical difficulties, or if they wished to view the survey questions prior to completing the questionnaire. Finally, the invitation letter asked participants to complete the survey by a certain date which was set at three weeks following the invitation. Follow-up emails were sent approximately 10 days and 20 days after the initial invitation to those invitees who had not yet completed the survey.

The survey was available online for over ten weeks from 10th April to 24th June 2012. Initially, the research team intended to close the survey at the end of April but as additional nominations were

²¹ Note that the same individual could be nominated for more than one policy area. In some cases, the same expert was nominated to take part in the survey concerning several policy areas, whereas in other cases, a different individual was nominated for each policy area.

²² See the section on missing data for further commentary on the comparatively lower number of nominations in this area.

²³ This refers to nominations received by email. Survey participants also had the opportunity to nominate suitable colleagues at the end of the questionnaire but these are not included in this figure. Most of these nominees had already been captured through the initial sampling process (confirming the validity of the sample) or they were nominated for an area for which data had already been received from another respondent. These additional nominations were therefore not followed up.

²⁴ Three email addresses consistently returned error messages (e.g., mailbox full), also after additional attempts several days following the initial invitation.

²⁵ This estimate was made based on the piloting of the questionnaire during its development.

²⁶ Available at: <http://www.staff.ljmu.ac.uk/heaakurt/alicerap/information.htm>

received late, the period for survey completion was extended to allow all participants at least three weeks to complete the survey.

Data analysis

Survey data was downloaded and cleaned by the research team. During the cleaning process, responses that contained large amounts of missing data were deleted (e.g., respondent had only opened the first page of the survey). Due to the nature of the survey (collecting information on national policy rather than, for example, investigating the distribution of population characteristics), it was decided to retain also incomplete surveys in the data set as long as they contained some meaningful data. Surveys were considered complete for one policy area if the respondent had accessed all applicable questionnaire sections, and partially complete if the respondent had dropped out of the survey before reaching the final questionnaire section for a particular policy area. General cleaning tasks were also carried out (e.g., checking for discrepancies between answers from the same respondent).

As the data analysis focused on countries rather than individuals, a combined dataset was produced where each case was equivalent to one country. This required sorting, reviewing and synthesising all responses by country. Multiple responses on the same policy area and country were combined into single composite responses in an additive manner. First, the highest quality response was identified by considering the number of questions answered, the level of detail provided in the answers, the background of the respondents, national over regional representation, etc. This formed the baseline response which was then enriched with data from the additional responses. All text responses were retained in the combined answer. Continuous data was combined into a statistical mean per country (e.g., for the scale rating policy effectiveness from 0 to 100), whereas discrete numerical data was handled depending on the type of question. Generally, for questions with binary responses (e.g., availability of policy evaluation), a positive response was recorded if at least one respondent had reported it. Where a combination of answers was not possible, discrepancies were noted.

Some participants had sent additional explanations or corrections to the research team by email after submitting the online survey, and a few respondents submitted a short response by email instead of completing the online survey. In the final step of data cleaning, this information was entered manually into the database so that it could be considered in the analysis alongside the other responses. The email responses were broken down into smaller text units which were allocated to the questions they matched best.

Initially, it was intended to base the analysis only on young people specific government policies. However, as respondents reported only very few young people specific policies, the analysis focused on general policies. Moreover, the data analysis strategy was amended to reflect that policy documents as such play a (comparatively) minor role with regard to tobacco and gambling. Therefore, for tobacco and gambling, reported legislation was also taken into account for countries where policies were not reported. This was also necessary to ensure a sufficient number of cases upon which to base the analysis. For alcohol and illegal drugs, the number of reported policies was sufficient to base the analysis on these documents only, and countries in which only legislation was available were excluded from analyses which referred to policy. Quantitative data was summarised as frequencies, whereas qualitative data (i.e. text responses) was examined separately.

For validation purposes, after data analysis and the write-up of findings, the draft report sections with the survey results were sent to those participants who had expressed an interest in receiving a summary report. Participants were asked to submit feedback on the draft report, particularly with regard to whether it described their country accurately. Of the 49 respondents who had expressed an interest in receiving the summary, 8 respondents (16%) submitted comments (representing five

countries). These provided mostly additional information and examples for inclusion in the report, which were included by the research team. Minor amendments were also made to the report, where comments indicated the need for corrections or clarifications.

Response rates and missing data

In the survey, missing data could occur on three levels: country; policy area; individual questions. This section describes the extent of these forms of missing data as well as possible explanations for their occurrence.

Countries not represented in the survey

Representatives from 32 countries (EU 27 and 5 non-EU countries) were invited to take part in the study or to submit nominations for potential survey participants. Of these, representatives from 20 countries (63%) agreed to take part or submitted nominations. Table 5 (see Appendix) shows response rates and which countries were represented.

The number of respondents per country ranged from one respondent from Italy, Malta, Romania and Spain to eight respondents from the United Kingdom. Responses from Italy, the Netherlands, Romania, and Spain were obtained through the researchers' own professional networks (no nominations from the respective EMCDDA Reitox focal points), which partly explains the lower number of nominees and participants from these countries. For Malta, only one expert had been nominated by the Reitox national focal point. This underlines that the number of responses was influenced by how many nominations had been received (which is likely to reflect how many experts actually exist in a particular country/policy area); and whether, for example, one expert was nominated to cover all policy areas or whether a different expert was nominated for each policy area. The relatively low number of respondents per country is not problematic as such, as the data analysis focussed on countries, not individual respondents (see also section on data analysis). Where regional responses were received in addition to national responses, this increased the number of participants from that country. This was the case in the United Kingdom, where additional responses were received from England, Wales and Northern Ireland, explaining the high number of participants from that country. Regional responses were also received from Austria (Vienna and Styria) and Greece (Attica).

In *all* countries from which nominations were received, at least one representative answered the survey. The reason for missing data at country level is therefore lack of nominations. There were 12 countries (38%, N=32) (10 EU countries and 2 non-EU countries) for which no nominations were received and for which consequently there is no data available. These countries are: Belgium, Bulgaria, Denmark, Estonia, Ireland, Luxembourg, Poland, Slovenia, Slovakia, Finland, Norway and Turkey.

The main reason for lack of nominations appeared to be lack of time or funding, or perceptions over what (resources) the nomination process or participation in the study required. Representatives from two countries refused to submit nominations. In one case, the reason given was that nobody from that country (including authorities and individual experts) could take part in the study due to lack of resources. The research team kindly requested that the country at least send relevant policy documents for inclusion in the analysis. The representative agreed to this procedure; although none were received. In the other case, the representative stated that it was not possible to provide nominations within the given time frame (two weeks). The research team agreed to extend the time frame as necessary but the representative did not respond to any further emails. Some of the Reitox focal points who submitted nominations noted that they had received several similar requests for

information at the same time, including ALICE RAP related requests. This may have diminished the ability of focal points to respond to every single request. Representatives from two countries did not submit any nominations, despite some correspondence about the study and follow-up emails by the research team emphasising the importance of the project. Representatives from ten countries did not respond to the call for nominations at all, despite two reminder emails sent by the research team.

Data not available for certain policy areas

Even though 20 countries are represented in the online survey, data is not equally distributed across the four policy areas. Table 6 (see Appendix) shows what responses were received by country and policy area. The aim was to obtain at least one complete response for each country regarding all four policy areas. An individual response was considered complete if the respondent accessed all applicable questionnaire sections for a particular policy area, and partially complete if the respondent dropped out of the survey before reaching the final questionnaire section for a particular policy area.

Complete responses were received from all 20 countries concerning illegal drugs policies, and from 18 countries concerning alcohol policies. Complete responses concerning tobacco and gambling were received from 9 and 8 countries respectively. Complete responses concerning all four policy areas were available for four countries (France, Greece, Latvia, Sweden). Additionally, there were five instances where at least some information ('partial') was received. Taking these into account, there were 5 countries for which information on all four policy areas was available (countries mentioned above plus United Kingdom), and 11 countries for which information on three policy areas was available. For five countries, data was only available for one or two policy areas. Considering that Table 6 (see Appendix) comprises 80 cells (20 countries x 4 policy areas), this represents a response rate of 75% at this level (information available for 60 out of 80 cells). Conversely, there were 20 instances where data was not at all available for a particular policy area (25% of 80 cells).

Gaps in the data at policy area level were due to the following reasons:

- No nomination (8/20 cells) – during the nomination process, contacts did not (or could not) provide nominations concerning all policy areas
- Wrong nomination (7/20 cells) – invited experts completed the survey but not for the policy areas they had been nominated for²⁷
- No response (5/20 cells) – invited experts did not access or complete the online survey

Even though most participating countries submitted nominations for all four policy areas, six countries were only able to make nominations for 1-3 areas. There were also some countries where 1-2 experts were nominated to answer the survey for all four areas, which was not feasible for them. Lack of nominations was due to individual circumstances (e.g., the contact did not know any experts working in a certain area) or the national structures (e.g., no policy or dedicated government department available for a certain area). This affected *gambling* in particular, where overall fewer nominations were received (e.g., usually only one nominated expert per country – thus a smaller pool of potential respondents in comparison with the other three areas). This is likely related to the nature of the networks contacted (focus on substances) but provides also some insight into the state of the gambling field in comparison with the substance use field (e.g., different administrative

²⁷ The invitation letter stated which policy area was considered to be the nominee's area of expertise (based on the information provided during the nomination process), but during survey completion participants could choose for themselves which area to complete.

structures, policies and strategies not available, not as well developed in terms of addiction research).

Although overall the nomination process proved to be a good method for expert recruitment, it had its limitations. The policy area for which an expert had been nominated was not an exact predictor of the area that the expert would actually complete in the survey. On the one hand, some experts nominated for the area of alcohol policies only completed the survey concerning alcohol policies *and* illegal drugs policies. On the other hand, experts nominated for one area completed the survey only for another. This meant that even if the nominated expert took part in the survey, 'their' policy area remained unanswered. Several experts also replied to the invitation by saying that they were not the right individuals to take part because their work was not policy-oriented. It is possible that they had been nominated nevertheless due to the general meaning of the term 'policy'²⁸. Not being the right contact may have also been a reason for non-response.

Non-response may not appear as a significant factor in Table 6 (see Appendix); however, higher response rates could have compensated for wrong nominations. Out of the 102 experts invited to take part in the study, 68 experts (67%) from all 20 countries answered the survey (see Table 5). At individual country level, response rates were good at over 50% for most countries and at 100% for ten countries. Some nominees gave permission before their contact details were sent to the research team, which is likely to have increased response rates compared with an unsolicited invitation. Exceptions were Germany and Italy where only 27% and 25% of nominated contacts respectively took part in the survey. It is unknown why response rates were lower in these countries. From the e-mail correspondence with survey participants and comments made at the end of the survey, likely reasons for non-response in general might have been:

- The survey may have been (wrongly) perceived as collecting data that was already available elsewhere. This is particularly likely for the illegal drugs field, where the EMCDDA regularly collects policy monitoring data and where information is available on the EMCDDA website (one invited expert refused to complete the survey for this reason). Although the research team highlighted that the study's focus on young people elements of policy would allow novel findings and required bespoke data collection, some participants may have felt that the available information must be sufficient.
- Participants may have felt that it was not a good use of their time to describe and comment on policy. This was evident in the response of one participant who, instead of completing the survey, referred the research team to the web link where the policy documents were available for download. An academic researcher commented that the survey was more appropriate for government officials than for academics.
- The survey may have been perceived as too long and too detailed. This was evident from the comments of some participants who reported spending 3 hours on survey completion. This was not intended by the research team. Even though participants were instructed to select only 1-2 policy areas, some participants picked up to 4 areas, thus increasing the length of the survey. It is also possible that some participants did not work with policies on an everyday basis so that they had to look up information to answer the questions.
- The survey questions may have appeared irrelevant or not applicable to the national situation (e.g., no national policy available for a certain area). The questionnaire suggested referring to the key piece of legislation in the answers where no policy document was

²⁸ While in the survey 'policy' referred to a written government document, those involved in the nomination process may have understood it as referring to the government's activities more generally.

available. However, some respondents noted that it was not possible to identify a single, most important piece of legislation. Some of these respondents provided a brief email response instead of finishing the questionnaire. It is possible that this also deterred some invited experts from starting the survey in the first place. It is therefore likely that survey data is more readily available and of better quality for those countries that have well known government policy documents in place.

Individual questions not answered

Even where a response has been described as 'complete' in Table 6 (see Appendix), it is possible that not all questions were actually answered, as the table indicates only if all applicable questionnaire sections were *accessed* by the respondent. Most questions in the survey were optional, which means that the respondents could progress through the survey without answering many questions. An inspection of the data showed, however, that such concerns were unjustified; if respondents accessed a survey page, they also answered most questions on that page.

Questions were more likely to be left unanswered if they required more work (e.g., open-ended questions asking for a typed answer) or if they were located towards the end of the survey (e.g., due to respondent fatigue, lack of time). It is also worth noting that respondents were instructed to leave questions unanswered if they felt that they were not applicable to their national context.

Most missing data, however, was missing by design due to the use of filters. Filters were used to present respondents with the right questions based on what policy area their work focussed on, but they were also used within policy areas. Most importantly, where respondents stated that the country had neither a policy nor national legislation in place, they were redirected to a later part of the survey to avoid questions which were not applicable to their national situation. Although these respondents could not access all six sections, they are also presented as 'complete' responses in Table 6. Filters were also used at a smaller scale (e.g., questions about the outcomes of evaluation were only presented to respondents who had indicated that an evaluation had taken place).

Where percentages have been calculated, the data analysis is based on valid responses only. For clarity, the number of valid responses per question is indicated where relevant (as 'N=').

Description of the sample

Out of 32 invited countries, the following 20 countries (63%) were represented in the survey: Austria, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Spain, Sweden, United Kingdom, Croatia, Iceland and Switzerland. Older and newer EU Member States were represented, as well as three countries that were not in the EU at the time of conducting the survey²⁹. The countries included in this sample also varied in terms of prevalence rates with regard to young people's alcohol, cigarette and drug use (Hibell et al. 2012). The sample thus covered the majority of EU countries and a wide geographical area, reflecting a variety of populations, systems and structures.

Out of the 102 experts invited to take part in the study, 68 experts (67%) from all 20 countries answered the survey (see previous section for response rates). Of these, 53 experts (78%) completed the survey concerning one policy area or more; and 15 experts (22%) started the survey but did not complete it (the data analysis considered also these incomplete responses, see data analysis section). A variety of participants with regard to the type of employer was intended to ensure a variety of views in the sample. Table 7 (see Appendix) shows that a mix was achieved, although

²⁹ Croatia joined the European Union as the 28th Member State on 1 July 2013.

government officials were somewhat overrepresented in the sample. Just over half of respondents worked for national government, and over a quarter of respondents worked for a university or other research institution. In keeping with this finding, most respondents (88%, N=68) stated that their work was primarily at a national level (Table 8, see Appendix). A high proportion of respondents who work primarily at a national level was important as the survey aimed to investigate national policies and structures. Interestingly, 42 respondents (62%) indicated that their work targeted two or more levels of influence, with 10 respondents indicating that their work covered all levels from local to international.

Over half of respondents described their main area of work as being in alcohol and/or illegal drugs policies (56% and 54% respectively, N=68; Table 9 in Appendix). Fewer respondents indicated a specialisation in tobacco policies (28%) and in gambling policies (18%). Although a majority of participants chose only one main area of work, 29 participants (43%) indicated that their area of work spanned two areas or more, with 3 participants describing their work as covering all four areas (alcohol, tobacco, illegal drugs, as well as gambling). Five participants also indicated other areas of work (e.g., training of professionals, epidemiological studies, or treatment). To ensure that participants would only receive questions relating to their main area of work, the choice of areas determined which questions participants received in the survey (see section on questionnaire development). It should, therefore, be noted that participants were *specifically asked* to choose only 1-2 main areas of work to reduce the time necessary to complete the survey.

On average, respondents had worked in their professional field for 15 years (12 years median), with a range from 1 to 43 years (data not shown). To obtain a clearer picture of participants' involvement with policy development, monitoring and evaluation, the survey also contained specific questions on these topics. Respondents' replies show that a large proportion was directly involved in the development, monitoring or evaluation of policy (Table 10 in Appendix). Participants' involvement in the development of policy took different forms. Some participants stated that they were responsible for coordinating the entire development process, some reported writing particular sections and/or being part of working groups devoted to developing the policy, whilst others acted as reviewers of the draft document. Some participants assisted in the development by providing necessary background information (e.g., prevalence data, literature reviews, information on evidence of effectiveness). With regard to involvement in policy monitoring or evaluation, the sample contained participants who were directly responsible for the evaluation of policy, either as government officials or as external consultants, as well as individuals who were responsible for coordinating and tracking the progress of policy implementation. Some participants reported providing relevant data to inform policy evaluation (e.g., conducting surveys among school pupils or retailers). The survey also asked about the sources used to answer questions concerning policy development and policy changes (see Table 11 in Appendix). The data suggest that participants drew on a range of sources to answer survey questions, relying mostly on information provided within the actual policy documents as well as their own personal knowledge. Examples of other sources used included legislation and treatment data. The lower figures with regard to gambling are likely due to the lack of national gambling policies (see results section for further detail).

Finally, the participant sample was investigated to determine the extent to which the ALICE RAP network was represented. The sampling process did not target the ALICE RAP network explicitly to ensure the independence of the research, but due to the nature of these professional fields some members of the network were possibly also the most suitable experts to take part in the survey. The analysis showed that four survey participants (6%, N=68) were members of the ALICE RAP network.

The characteristics of the sample suggest that most survey respondents were sufficiently experienced and familiar with relevant national policies to answer the survey questions accurately.

This underlines that even though the survey methodology relies on proxy data (expert description of national policy), the reported findings can be considered valid.

Results

In the Appendix, Table 1 presents key data obtained through the online survey across all four policy areas and for each of the six identified quality criteria (see section on questionnaire development for further information; for a copy of the questionnaire see the Appendix). Key items were extracted to allow an overview of how young people are addressed in policy documents on addictive behaviours. The following sections present and discuss these findings in greater depth using additional data from the survey.

A: Policy availability

This section of the survey asked about the availability of relevant legislation and policy, particularly policy specifically focussing on young people.

All reporting countries have *legislation* in place on alcohol (19 reporting countries), tobacco (11 reporting countries), illegal drugs (20 reporting countries), and gambling (10 reporting countries). However, legislation is not always available at the national level. This is the case in Spain where alcohol was reported to be regulated at a regional level rather than nationally. The Spanish respondent described this as “*a legal vacuum or loophole*”, but highlighted that efforts are currently underway to address this gap and develop a national alcohol law. In Austria, young people’s alcohol use is addressed through regional youth protection laws; consequently, regulations, for example, concerning the minimum drinking age, vary between the federal states.

Even where national laws are available, they are not always presented in a single act dedicated to the subject (e.g., alcohol). Respondents indicated that alcohol laws and regulations can be scattered across different pieces of legislation dealing with different aspects (e.g., sales/licensing, serving alcohol, taxation, driving under the influence of alcohol, advertising, protection of minors). Although this may mean that there is a ‘portfolio’ of alcohol laws rather than a single law, it was suggested that in these cases, alcohol-related regulations often consist of a few paragraphs within more general laws such as commercial regulations, traffic regulations, or youth protection laws. Hence, respondents from these countries struggled to identify and describe the ‘key’ pieces of legislation regarding alcohol. The topic of the wider law is likely to determine (and narrow) the scope of the alcohol-related provisions (e.g., focus on taxation issues), which may make a comprehensive approach to the subject more difficult.

A similar situation was reported for tobacco and, to a lesser extent, illegal drugs³⁰. For example, in Austria, the youth protection laws contain young people specific provisions concerning psychoactive substances in addition to the main drug law. Croatia reported that young people’s drug use is only addressed in criminal law, which (inter alia) sets out the obligation to attend counselling instead of being sentenced. Sweden reported that the main responsibility for young people targeted measures lies at a local level with the social welfare service, and consequently the key piece of legislation concerning young people’s illegal drug use is the Social Services Act.

The situation is different with regard to gambling. All reported laws focus exclusively on gambling. Five countries reported the availability of a key piece of legislation, whereas four countries highlighted the existence of several gambling-specific laws.

³⁰ Further information about EU Member States’ and selected Accession States’ drug laws can be found in the EMCDDA’s European Legal Database on Drugs (ELDD), available at <http://www.emcdda.europa.eu/eldd>

Written government policies are most commonly available with regard to illegal drugs, with almost all participating countries reporting the availability of a written drugs policy (see Table 1 in the Appendix); the data suggests that alcohol policies are also frequently available³¹. The situation differs with regard to tobacco and gambling. Although the data for these two policy areas should be treated with caution due to lower response rates, it appears that these two areas are more likely to be governed through laws and regulations rather than bespoke policies. Less than half of reporting countries indicated the availability of tobacco-related policies, and only in one country did such policy focus exclusively on tobacco. With regard to gambling, the survey could not identify *any* gambling policies, with countries only reporting gambling laws and regulations. The data analysis strategy was amended accordingly to include gambling legislation (see data analysis section).

Three countries reported that (certain) policies are available on a regional rather than a national level. It was possible to obtain regional examples for two of these countries and to consequently represent them in the data³². For Austria, regional data were available regarding alcohol from Styria and illegal drugs from Vienna³³; for the United Kingdom, regional data were available for alcohol, tobacco, and illegal drugs from England, Wales, and Northern Ireland (the present report provides combined data; see data analysis section). In both countries, addiction-related issues are largely devolved to governments at the sub-national level (four countries in the United Kingdom; nine federal states in Austria). Hence, strategies and action plans are primarily found at a regional level. In the United Kingdom, the government's current alcohol strategy specifies which aspects of the policy apply to which of the devolved administrations³⁴; with separate strategies available there. In Austria, at the time of the research efforts were underway to develop a nation-wide policy on substance use and addiction. In these two cases, therefore, the data refers to regional rather than national policy and is not representative of the entire country.

With regard to the scope of the reported policies, only half of the described policies on alcohol and on illegal drugs focus exclusively on the substance in question (i.e. alcohol *or* illegal drugs). The other reported policies encompass also other substances (e.g., alcohol, tobacco *as well as* illegal drugs), or addiction and/or health more generally. Most reported tobacco policies also take such an integrated approach, whereas all reported gambling laws and regulations focus exclusively on gambling. It is worth noting that 'integration' may express itself differently. It may mean that all substances are given equal standing. An example is the German National Strategy on Drug and Addiction Policy (adopted in 2012), which addresses alcohol, tobacco, prescription drugs, pathological gambling, online/media addiction, and illegal drugs in separate chapters tailored to each issue. Taking the idea a step further is the Swedish strategy for alcohol, narcotic drugs, doping and tobacco (ANDT), which seeks a fully integrated approach where all substances are addressed together³⁵. Integration may also mean that alcohol and tobacco are subsumed under a wider drugs strategy. Examples include the Cypriot National Strategy on Drugs 2009-2012 and the Romanian National Anti-Drug Strategy 2005-2012, which refer to alcohol and tobacco in parts (particularly on prevention) but are primarily

³¹ The data includes two draft policies which had not yet been officially published at the time of the study. The alcohol policy in Malta was at the draft stage and up for consultation with key stakeholders at the time of the survey. In Hungary, a new drugs strategy was also under finalisation. It was deemed more useful to include these draft policies in the analysis instead of not including any policy from these countries or a policy that would become outdated shortly after the survey. For the purposes of this report, these draft policies are therefore treated as if they had already been published.

³² The Netherlands indicated that alcohol policies are available only at a regional level but the submitted data did not allow a detailed analysis (no regional example available).

³³ Vienna is a city (capital of Austria) as well as one of Austria's nine federal states.

³⁴ On page 5, the strategy states: "The taxation aspects of this strategy will apply UK-wide. The provisions on crime and policing, alcohol licensing and pricing set out in this strategy are only intended to apply to England and Wales. We will work closely with the devolved administrations in Scotland and Northern Ireland to ensure a co-ordinated approach to those issues that is in line with the devolution settlement". Available at: <http://www.homeoffice.gov.uk/publications/alcohol-drugs/alcohol/alcohol-strategy?view=Binary>

³⁵ It is recognised that for such strongly integrated policies, the survey methodology may not have been completely adequate as it artificially separated policy areas that are treated together in policy.

focussed on illegal drugs. This underlines the complexity of the issue: for example, should these policies count as alcohol and tobacco policies³⁶? England presents an interesting case in this regard, as the Drug Strategy 2010 considers the treatment of severe alcohol dependency, but a separate alcohol strategy is also available.

According to survey respondents, young people are mentioned in most policies; and most countries reported that the general policies represent the key document relating to young people. While in some cases policies feature a separate chapter on young people, in other cases respondents highlighted that the consideration of young people in policy and legislation is very limited (e.g., a ban on under-age access to alcohol, tobacco and/or gambling without a more detailed discussion of young people's needs). The exact extent to which young people are addressed in policy (e.g., mentioned only or addressed in a separate section) was difficult to judge as respondents' assessments tended to diverge (where two or more response were available for a particular country). This is therefore an area which may require future consideration. Nevertheless, the fact that most general policies cover young people may explain the low number of young people specific policies that were reported. Only few subsidiary policies on young people and the behaviours in question were reported, and these were mostly general youth or health strategies rather than policies focussing specifically on young people and risk behaviours. Only one country (Czech Republic) reported such a specific policy. The analysis consequently focuses on general policies due to the lack of young people specific policies.

In summary, this data highlights the complexity inherent to policy and legislation aimed at addressing substance use in the general population, and in relation to young people. This complexity reflects, among other things, national structures (e.g., devolved administrations) as well as how understanding of substance use has changed and developed over time (e.g., problem definitions, effective responses, areas to be regulated). It appears that policy approaches to illegal drugs are the most institutionalised, with all reporting countries indicating availability of a drugs policy. This is likely due to the international efforts in this field over the past decades (e.g., UN Conventions, EMCDDA). The situation with regard to alcohol and tobacco in particular is slightly different (for gambling see below). A considerable number of countries reported that policy is not available and that it is also not feasible to identify a 'most important' piece of legislation given the multitude of available laws.

This actually impacted on experts' ability to take part in and complete the survey in these countries. The questionnaire was designed on the premise that each country would have a key policy or alternatively a key piece of legislation in place in relation to which the survey questions could be answered³⁷. However, where this was not the case, it was not feasible to answer the survey in a straightforward manner³⁸. This suggests that the survey was less sensitive to the situation in these countries and is likely to have produced a bias in the sample, in that countries in which *dedicated* policies and/or laws are available were more likely to complete the survey, whereas countries in which behaviours are addressed through a variety of different documents (e.g., different laws, regional policies), or indeed different arrangements, are likely to be under-represented. One participating expert commented that the survey was not suitable to assess the situation in countries where substance use is governed through means other than formal and specific written policy. The

³⁶ The Cypriot experts did not class their drugs strategy as an alcohol strategy, whereas the Romanian expert did. From a methodological point of view, it should therefore be noted that such policies may have been reported (only) in relation to their main theme (e.g., illegal drugs) and under-reported with regard to the other policy areas (e.g., because the survey asked specifically about *alcohol* policies). The data analysis was conducted in line with the classifications made by the experts.

³⁷ If there was no national policy available, the questionnaire suggested referring to the most important piece of legislation when answering questions about policy development, content, etc.

³⁸ Invited participants from Austria (regarding alcohol and illegal drugs) and Hungary (regarding alcohol) contacted the research team to highlight the difficulties in completing the survey in view of the lack of a single national policy or law.

low response rates for tobacco and gambling could therefore be interpreted to indicate different governance structures in these areas.

This complexity, however, really underlines the potential role of written government policy as an overarching framework which can not only guide, but also tie together, the different activities undertaken by government (including legislation) and other stakeholders. Interestingly, one respondent noted that although many laws were available in their country, there was no legislation in place to specifically support the implementation of existing drug policies; highlighting a different aspect to the relationship between policy and legislation.

The data also raises some interesting questions as to whether approaches should be integrated or separated (addressing general population and young people/ different health related behaviours/ several substances together or separately). Although the survey data does not allow a detailed discussion on this, it is worth highlighting some comments made by *different* respondents from Sweden where an integrated policy was introduced in 2011. One respondent argued that the integrated policy, which addresses all substances together whilst recognising differences in their legal status, allows a better focus on the (needs of the) individual, the family and the environment, as well as shared risk and protective factors. Another respondent from Sweden, however, expressed concerns over the wholly integrated approach, arguing that although there are similarities between substances, there are differences which cannot be accounted for unless each behaviour or substance is considered (also) separately. The outcome with regard to tobacco was described by this respondent as: *“tobacco is treated a bit like the step sister”*; suggesting that this area is not given as much attention. Overall, the data seems to suggest that the organisation by substance/behaviour is currently of greater priority than the organisation by population (i.e. whether young people should be addressed separately or as part of a general population approach).

A different picture emerged with regard to gambling. The survey suggests that gambling is governed through comparatively few laws and regulations which focus exclusively on the subject. In comparison with substance use, this may explain the lack of policies in this area. If the documents on gambling are easily ‘manageable’, then there may be no perceived need for an overarching framework. The next sections also highlight crucial differences in policy approaches to substance use and to gambling.

B: Policy development

Through this section of the survey, we sought to assess what methods, ‘evidence’ and criteria were used to formulate policy, and if and how the general public (particularly young people) helped to determine the content and objectives of policy.

The most commonly cited reasons for putting the respective policies in place were to address existing gaps (e.g., no previous policy, previous policy didn’t address certain issues) and to respond to a change in needs and behaviours in society³⁹. With regard to alcohol, most reporting countries cited the need to address existing gaps also as the *main* reason as to why policies were put in place. With regard to policies and legislation in the other areas, opinions on the main reason were more varied. Respondents from the same country also tended to disagree on this question. On tobacco,

³⁹ Respondents could choose from the following answer options (multiple choice question): To address existing gaps (e.g., no previous policy, previous policy didn’t address certain issues), Change in alcohol-related needs and behaviours in society, To adhere to international agreements and conventions, Change in government (e.g., ruling party), Existing government changed its policy direction, Media reporting on alcohol (e.g., alcohol-related incidents) / Pressure from the media for change, Concerns and demands of the general public, New evidence (e.g., effects on health, effective responses), Other (please specify). The options were adapted for each of the four policy areas. *A few countries highlighted in the “other” answer option that the new policy was introduced because the previous policy had expired.*

several countries reported that the main reason for policy development was to adhere to international agreements and conventions. Interestingly, one respondent reported that tobacco laws were changed to harmonize them with existing rules on alcohol, linking this back to the discussion in the previous section about integration. On illegal drugs, several countries suggested that a change in government (e.g., ruling party) had been the main reason for the introduction of the policy. In Hungary, the previous government had introduced a drugs strategy to cover the period 2010-2018, but after elections this strategy was suspended by the new government ahead of schedule. At the time of the online survey, a new drugs strategy was being finalised to replace the suspended strategy. There appeared to be diverging interpretations of these developments. One Hungarian respondent explained that the *“restructuring of the drug strategy became inevitable because of the large scale reconstruction of state administration and public sector, including the [...] health care system and social services [... which meant that] vital components of the drug strategy had changed, and the new strategy had to be adapted”*. Another Hungarian respondent, however, felt that *“the main reason for developing the [new] strategy was to overcome the ‘bad’ practices of the previous liberal governments, to shift the emphasis from harm reduction into the direction of valuing health and healthy choices”*, highlighting issues with the content and underlying values of the strategies. No clear picture emerged with regard to the main reason for introducing gambling legislation.

The Ministry of Health was mentioned most frequently as having main responsibility for the development of policies relating to alcohol, tobacco, and illegal drugs (see Table 1 in Appendix). With regard to gambling, however, the main responsibility for policy development lay most frequently with the Ministry of Economics/Finance. As in the previous section, this highlights differences in how gambling is governed in comparison with the other behaviours. It is also worth noting that for alcohol, tobacco, and gambling, in most countries the main responsibility for policy development lay with one institution only. This was different concerning illegal drugs policies, where 9 out of 19 countries (47%) reported that two institutions shared the responsibility for policy development, and a further 5 countries (26%) reported that three or more institutions collaborated on the development of policy. The second institution most frequently mentioned in this regard was the national drugs agency.

The analysis specifically considered the role of the Ministry of the Interior and the Ministry of Justice to assess whether policy approaches are more public health or criminal justice led. The data suggests that the involvement of these Ministries in policy development is relatively limited, with the exception of illegal drugs policies. In 7 out of 19 countries (37%), either one of these Ministries or both played a major role in the development of the illegal drugs policy. This may be explained through the different legal status of illegal drugs and the greater emphasis on supply reduction measures to address illegal drug use as compared with the other policy areas.

The most frequently cited group involved in policy development were national government officials (e.g., policy makers, commissioners), followed by health and social services for alcohol, tobacco, and illegal drugs policy development. In the case of gambling laws and regulations, regional and local government officials constituted the group cited second most often. Ultimate target populations, such as the general public, former or current substance users or problematic gamblers, and young people, were only rarely involved in the development of alcohol, tobacco, and gambling policy. For example, only one country (Lithuania) reported involving the general public and young people in tobacco policy development. Thus, this is an area which should receive greater attention in future policy development. For illegal drugs, this was more common, with 9 out of 17 countries (53%) reporting that they involved such populations in policy development and four of these countries reporting that young people were involved as part of the development process.

The most common method for policy development was holding expert meetings and consultations. Consensus within the government department or ministry responsible for policy development (described in Table 1 as ‘intradepartmental consensus’) was also a common method, which is in line with the emphasis on involving government officials in policy development. The analysis considered specifically the use of needs assessment and of scientific literature reviews to inform policy development as indicators of evidence-based policy making⁴⁰. The data suggests that such methods are used by a majority of countries to develop substance related policies, although there is further potential for improvement. With regard to tobacco policies, it appears that a review of existing *policies* (at international level, in other countries) is more common than using/conducting literature reviews on evidence of effectiveness, with 6 out of 11 countries (55%) reporting that a review of existing policies had informed the development of their tobacco policy or legislation. The WHO Framework for Tobacco Control was explicitly mentioned by one country. No country reported the use of needs assessment or scientific literature review to inform the development of gambling laws and regulations. A Swedish respondent highlighted an important consideration by noting that the government made an effort to utilise existing knowledge “*but at the end of the day the outcome was all about what was politically feasible*”.

Involving industry representatives⁴¹ in policy development is most common with regard to alcohol (reported by 6 out of 14 countries; 43%). With regard to the other policy areas, only a third of countries or less reported industry involvement in policy making. However, a comment in the survey highlighted the potential influence of the industry even when it is not formally involved in the policy making process. In the Czech Republic, the tobacco industry is not formally involved, yet a respondent reported: “*Unfortunately we just have a ban of sales to minors - due to the support of the tobacco industry. The tobacco industry supports a ban of sales to minors but strongly opposes tax increases or smoke free restaurants or total ban of advertising or pictorial health warnings*”. Industry involvement is also discussed in the section on resource availability below.

C: Content of policy

Through this part of the survey, we aimed to understand how young people are defined and addressed in policy, and to assess the content of policy (e.g., desired outcomes for young people). As policy content is of major interest to this Work Package (informing the subsequent review of policy effectiveness), this section provides more detail than the others.

In the survey, young people were defined as “anyone under the age of 25 years, including children”. The survey asked respondents to indicate if a different age range is used in policy. The data suggests that there are different conceptualisations depending on the focus and context. Firstly, young people are defined as “minors” in line with legal age limits (18 years or similar; see also discussion below on age limits). This is obviously the case in legislation which sets these age limits in the first place, but according to the online survey, the same legal age limits are also referred to in policy, particularly where the focus is on restrictions (e.g., selling and advertising). Secondly, attention is given to a sub-group of minors who are considered to be a priority target group. This generally refers

⁴⁰ The questionnaire contained the following options to describe the methods for policy development (see the appendix for the full questionnaire): Needs assessment (e.g., of drug-related needs in the population), Expert meetings and consultations, Public consultations (face to face), Public consultation (via Internet), Correspondence with party-political manifesto, Consensus within the government department/ministry responsible for policy development, Evaluation of existing programmes in the country (e.g., through Randomised Controlled Trials (RCT)), Review of international scientific literature (e.g., on evidence of effectiveness), Evaluation of the previous drugs strategy in this country, Review of existing policies (at international level, in other countries), Review of good and best practice guidance, Other (please specify).

⁴¹ Industry representatives were defined in the questionnaire as including producers and retailers of alcoholic beverages/tobacco products/ legal highs, gambling operators, the hospitality sector, the advertising industry, trade associations, self-regulatory associations.

to children from 11 to 18 years, although countries use narrower age ranges such as 11-16 or 16-17 years. One respondent from Latvia highlighted that, as the ESPAD⁴² survey focuses on 15 to 16 year old pupils, this age group is also referred to in policy. Thirdly, in some cases a young person appeared to be someone who is no longer a child but not yet a 'real' adult, even though they may have already reached the legal age of majority. The reported categories and age ranges differed between countries, spanning from 13 years to 34 years. However, several respondents also noted that the term was not actually defined in policy. This was particularly the case with illegal drugs policies, where 8 out of 11 countries (73%) reported that no specific age range is mentioned. One comment suggested that referring to an age range may create the false impression of an acceptable minimum age for illegal drug use.

With regard to what sub-groups of young people are explicitly addressed in policy⁴³, the survey responses indicated that, generally, policy tends to refer to young people who are under-age or who are at risk (see also Table 1 in the Appendix). Where alcohol policy refers to specific sub-groups of young people, these are most commonly young people who are under-age for purchasing alcoholic beverages. This is also the case when considering tobacco policy and legislation together; the data suggests, however, that tobacco policies are more likely to refer to young people from families with complex needs and young people at risk of tobacco use or who already use tobacco. Drug policy also refers most commonly to young people at risk of using drugs or to those who are already using or dependent (under-age is not applicable). School pupils are also commonly mentioned in drugs policy. Where gambling laws and regulations make reference to specific sub-groups of young people, these are those who are under-age.

The survey also sought to understand what behaviours or substances are framed as 'problems' in policy. Most countries use existing international definitions to specify 'problematic' use in relation to alcohol and illegal drugs (e.g., ICD⁴⁴, DSM⁴⁵, EMCDDA definitions). Bespoke problem definitions are also common for alcohol, where issues such as 'drunkenness', 'binge drinking' or 'drunk-driving' are highlighted in policy. With regard to tobacco and gambling policy/legislation, it appears uncommon to determine 'problematic' behaviour. Some respondents suggested that this may be because all forms of smoking are considered problematic. It was also highlighted that any illegal drug use (e.g., any use of illegal drugs, under-age use of legal drugs) is considered a problem in the political and public discourse. To reflect this, policy documents may use terms such as 'misuse' or 'abuse' in relation to alcohol (indicating that only certain types of use are considered problematic) but the term 'use' in relation to illegal drugs (any use is considered problematic); this was reported, for example, with regard to the Italian Action Plan. To some extent, this suggests a distinction between a problem definition based on the (likely) negative health and social consequences of substance use and a problem definition based on whether the law is upheld or not.

With regard to whether policy singles out particular alcohol or tobacco products, illegal substances, or games with regard to young people, the data suggested that this is generally not the case. On alcohol, all respondents reported that policy addresses all alcoholic beverages without focussing on particular types, both for the general population as well as for young people. For the other three

⁴² European School Survey Project on Alcohol and Other Drugs

⁴³ The answer options were (multiple choice): The policy does not refer to specific sub-groups of young people, First years of life (prenatal, neonates, babies and very young children), Young people whose parents or family members use illegal drugs, Young people from families with complex needs (e.g., poverty), Young people from ethnic minority groups, School pupils, Truants and pupils excluded from mainstream education, College and university students, Young drivers, Young people in institutional care (not criminal justice system), Young offenders, Young people with ill mental health, Young people with behavioural problems, Young people at risk of using drugs (risk factors not specified), Young people who already use drugs, Young people who are drug dependent, Other (please specify). Answer options were adapted for each of the four policy areas.

⁴⁴ International Classification of Diseases (ICD) published by the World Health Organization (WHO)

⁴⁵ Diagnostic and Statistical Manual of Mental Disorders (DSM) published by the American Psychiatric Association

areas, the majority of policies do not appear to single out particular products, substances or games in relation to young people. Where this is the case, the same product, substance or game is often also highlighted in relation to the general population.

The survey also assessed the risk level targeted by policy approaches (universal, selective, indicated)⁴⁶. For each of the four policy areas, *all* participating countries reported that policy included universal approaches. Differences were noticeable with regard to the inclusion of targeted approaches, whereby most alcohol and illegal drugs policies were reported to target all three risk levels, whereas tobacco and gambling policy/legislation reportedly focus on universal approaches, with fewer countries reporting the inclusion of targeted approaches (2 out of 7 countries with regard to tobacco, and 2 out of 6 countries regarding gambling). This is likely due to the fact that the tobacco and gambling data is based on legislation rather than policy, but may consequently also reflect differences in approaches more generally.

To gain greater insight into policy content, the questionnaire asked respondents to describe (through three separate questions, see the Appendix for a copy of the questionnaire):

- issues and priorities identified in policy;
- policy goals and objectives, desired outcomes for young people; as well as
- strategies, approaches, programmes and/or interventions described in policy to produce the desired outcomes in relation to young people's substance use or gambling behaviour.

The analysis of the data showed a great overlap in the answers to these three questions. In particular, asking about 'issues and priorities' appeared to be a moot question for many participants, as this was determined by the defined policy goals/objectives and strategies (and vice versa). As one respondent put it, "*The goals are to reduce the above mentioned problems*". Therefore, the first two questions are presented together, and answers to all three questions were inspected to identify approaches used to achieve desired outcomes.

In the Appendix, Table 2 provides an overview of the issues, priorities, goals and objectives, and desired outcomes spontaneously mentioned by respondents in relation to policy and young people. The answers were summarised across countries and arranged so that table rows contain similar topics across policy areas. With regard to alcohol, tobacco and illegal drugs, it was reported that most policies contain young people specific ambitions, although a few respondents noted that the policy does not contain any goals specific to young people. Respondents' accounts highlighted a variety of issues, including the availability of substances, advertising, prevention, delay and reduction of use, particular patterns of use, driving under the influence of alcohol or illegal drugs, and the consequences of parental substance use. The data indicated a certain degree of similarity in how alcohol and illegal drugs are viewed in policy. There was, however, a key difference in that the primary aim with regard to alcohol appears to be *reduction of use* and *delaying* the onset of use, whereas for illegal drugs it is more likely to be *prevention of any use*. This is evident in phrases such as "drug free society"; although it must be noted that there were country differences and some countries reported more modest goals (e.g., stabilising use). The data on gambling was very poor on those questions, reflecting that it was based entirely on legislation which does not usually identify particular priorities or desired outcomes.

Respondents were also asked to indicate if the policy sets any quantitative targets for success, as precise measurable objects are required to judge the success of policies. With regard to alcohol, respondents from 3 out of 14 countries (21%) were able to cite goals with specific indicators and set

⁴⁶ In line with the filter criteria for risk-attribution and the overall framework of prevention strategies used by the EMCDDA (see <http://www.emcdda.europa.eu/themes/prevention/responses-in-eu>); the survey included environmental approaches (including legislation) as a fourth category but this was excluded from the data analysis as it appeared to have been ambiguous for participants.

benchmarks; for tobacco, this was the case in 3 out of 9 countries (33%); for illegal drugs, only one country of out 18 (6%) was able to do so (Latvia); and none for gambling. Examples of specific policy goals are (as reported by respondents):

- *Reduce drunkenness from 34.6% to 30% (last year prevalence) for young people aged 15-19 years (Portugal)*
- *By 2012, reduce binge drinking among young people aged 15-24 years by 10% (baseline: 2002) (Switzerland)*
- *By the end of 2015, reduce rates of regular smoking among 15 year olds in England to 12% or less (baseline: 15% in 2009) (England, United Kingdom)*
- *Stabilise life time prevalence of drug use among 15-16 year old pupils (5% in 2009; 3% in 2013; 3% in 2017); reduce last year prevalence of drug use (ecstasy, cannabis, amphetamine) among 15-16 year old pupils (14.4% in 2009; 14.4% in 2013; 12.5% in 2017) (Latvia)*

Conversely, some respondents emphasised that policy/legislation does not contain any quantified targets or indicators for success; this was the case for 3 out of 14 countries regarding alcohol, 2 out of 9 for tobacco, 2 out of 18 for illegal drugs, and 2 countries concerning gambling. The findings therefore highlight a need for greater specificity in the formulation of policy ambitions, as this is also a condition for policy monitoring and evaluation.

Tables 3 and 4 in the Appendix summarise what *approaches* were reported. Before the findings are described and discussed, however, important considerations and caveats regarding data collection and analysis must be highlighted. Firstly, the questions asked what is described in policy or legislation; the data can therefore only indicate political intentions but not actual availability or levels of implementation. Secondly, the questions were broad and open-ended, and did not suggest or ask about particular approaches⁴⁷. Respondents could type their answers freely into a blank input box; the categorisation of approaches shown in the tables was conducted later as part of the data analysis. Consequently, respondents had a high level of freedom in providing these answers (in contrast to most other survey questions, which were predetermined single and multiple choice questions). Respondents could 'choose' how detailed and comprehensive their answer would be; while some respondents gave detailed accounts of policy content, others noted only general approaches or (perceived) top priorities⁴⁸. Moreover, respondents could focus on young people targeted measures only or include also more general measures. It is also worth mentioning that some respondents provided direct quotations from relevant policy documents, whereas others described policy more generally. Therefore, even if a particular approach has not been reported by a country, it is still possible that this approach is mentioned in policy or that it has been implemented⁴⁹.

Consequently, the data does not allow a comparison between individual countries. Such research has already been undertaken by other colleagues for alcohol policies (e.g., Brand et al. 2007; Karlsson et al. 2012) and tobacco policies (e.g., Joossens & Raw 2011). Similar efforts regarding illicit drugs and gambling policies are currently being undertaken within the ALICE RAP project in Work Area 5, Work Package 14 (Karlsson, Lindeman & Österberg). The resulting policy "scales" or "indices" compare individual countries with regard to how many and what types of policies they have in place to control potentially harmful behaviours in the general population (see also review of these scales

⁴⁷ The survey did include separate questions about general legislation, advertising regulations, age limits, as well as general delivery structures and quality assurance measures; and the respective findings are also documented in this report.

⁴⁸ A limited number of respondents referred only to the original policy document (e.g., "please see our drugs strategy page 13") and did not provide a detailed answer. In these cases, the original document was retrieved and main approaches relating to young people extracted for the purposes of this analysis. In all other instances, only the answers provided by participants were considered.

⁴⁹ This became apparent in the analysis of questions about specific approaches (e.g., advertising regulations, age limits). Answers to these questions revealed approaches that had not been described in the general questions on policy content.

in the main report, available as a separate file). The present survey did not wish to replicate these efforts, but to identify young people targeted policy components that could be considered in future exercises of this kind. Moreover, the policy approaches emerging from the survey data served also as the basis for the subsequent review of policy effectiveness (see *Background report 2: Review of reviews*). Open-ended questions with regard to policy content were therefore preferable over closed questions. Despite the limitations noted above, these allowed better insight into which policies were considered to be high on the policy agenda in relation to young people's addictive behaviours.

To understand what *types* of approaches prevail in addressing young people's addictive behaviours, participants' responses were categorised. Firstly, a template of categories was created in Microsoft Excel. This was based on the categories in the existing alcohol and tobacco policy scales mentioned above. For gambling, colleagues from Work Package 14 kindly supplied a draft scale, and with regard to illegal drugs, it was agreed to refer to the categorisation of policy strategies and interventions used by Babor and colleagues (2010b: 262ff) as a template. The categories used in the evidence tables provided by Babor and colleagues in "Alcohol: no ordinary commodity" (2010a: 243) also informed the template. Due to differences between the original scales⁵⁰, the templates for the four policy areas also differed initially. For example, neither alcohol scale features treatment as a policy approach, whereas the tobacco scale does not include prevention. The categories were therefore amended to ensure comparability across all four policy areas (e.g., adding treatment as an option for alcohol policies, and prevention as an option for tobacco). This led to a first draft of categories, consisting of nine broad approaches (e.g., gambling/ substance-free zones) and specific components within each approach (e.g., smoke free workplaces)⁵¹. Secondly, participants' responses to the three open-ended survey questions specified earlier were analysed. All statements that could be classed as policies or interventions were extracted and allocated to the respective category in the template. If a statement could not be allocated to an existing category, a new category was created. Similar statements were grouped together. Based on the survey responses, new components were added to most approaches, and two new broad approaches were also identified: general delivery structures and quality assurance measures; and general approaches. The final list consisted of 11 approaches, which were developed further into a detailed 'framework of policies and interventions' in subsequent work (see *Background report 2: Review of reviews*). The implications of this analysis for the existing scales are discussed separately in the main report (available as separate file).

The results of this analysis are summarised in the Appendix in Tables 3 and 4. Table 3 shows for each of the 11 approaches how many countries reported examples of corresponding policies and interventions⁵². The table consequently provides an indication of what respondents perceived as the prevailing policy strategies for addressing young people's addictive behaviours. Table 4 provides examples of interventions and policies as reported by the national experts. Additionally, young people targeted policies are distinguished from general policies, which, although also relevant to young people's behaviours, are not targeted exclusively at this group.

Respondents reported a variety of policies and interventions and gave (young people targeted) examples for nearly all broad approaches. Across the four policy areas, the most commonly mentioned approaches to addressing young people's addictive behaviours were prevention programmes, general delivery structures and quality assurance measures, and age limits. The least commonly mentioned approaches were warning labels and gambling/ substance-free zones. As respondents were specifically asked about young people, their answers tended to highlight those

⁵⁰ This issue is discussed in greater detail by Work Package 14.

⁵¹ Initially it was intended to use a framework with fewer approaches, such as that commonly used in relation to illegal drugs (supply reduction, demand reduction, harm reduction). However, this framework did not prove useful in categorising policies relating to legal behaviours, many of which can be understood to target both supply and demand (e.g., smoke free work places, age limits, taxation/pricing).

⁵² Although the spreadsheet also contained information on which country had reported what approach, due to the limitations outlined earlier, this information is not reported here.

measures that focus on young people only. Examining each approach in detail, the following observations can be made:

- *Control and regulation of supply:* Measures pertaining to the control and regulation of supply were reported by about half of countries in relation to alcohol and tobacco, by less than a quarter of countries in relation to illegal drugs, and by none for gambling. This is in contrast with the actual availability of supply regulation and control measures. Supply reduction measures are implemented in all countries participating in the survey and form one of the main pillars of (international) drug policy. Physical availability and licensing regulations take a prominent role in the existing alcohol policy scales (described above), and licensing is one of the key policy instruments in relation to gambling. Possible explanations for this result include that supply reduction is regarded as an international rather than a national issue (particularly with regard to illegal drugs); that this approach is not specific to young people (although see Table 4 in the Appendix for young people targeted examples); or that control of goods described as ‘illegal’ was implicit.
- *Gambling/ substance-free zones:* This refers to defined zones (areas, environments, places, etc.) in which gambling or (otherwise legal) substance use is not allowed. Examples include smoke free workplaces or restricted drinking in (certain) public places. It was among the least commonly mentioned approaches, with examples reported only by two countries (Greece and Sweden) and only in relation to smoke free environments. More responses with regard to tobacco could have been expected, given that the Council Recommendation on smoke-free environments was passed in 2009 and that within this recommendation young people are highlighted as a group of beneficiaries (see also section on EU policies in this report). With regard to alcohol, the lack of responses is noteworthy as drinking in public places is regulated in some European countries. Examples of this approach were actually mentioned in response to more specific questions later on in the survey about advertising restrictions; respondents from Greece and Romania described the availability of restrictions specifically on young people’s drinking in public.
- *Age limits:* This refers to the definition of a legal minimum age which young people must reach to engage in certain behaviours. It is the only young people targeted approach as such, and was among the most commonly mentioned ones for legal goods and services. With regard to gambling, it was indeed the main approach besides more general delivery structures (e.g., legislation). While the step from intention to actual enforcement is an important issue with regard to all policies and interventions, this is particularly the case with age limits, as several comments in the survey responses highlighted lack of adherence on the supplier side. It is also shown in the examples provided by respondents, which do not only describe existing regulations but also enforcement schemes (e.g., test purchasing, sanctions against sellers breaching the law).

The survey also contained separate questions concerning the availability of age limits. With regard to alcohol, the legal minimum age was 16/18 years in most reporting countries, which may also vary within countries depending on the alcoholic beverage (higher age limit for stronger beverages) and by region (e.g., between Austrian federal states). The highest age limit of 20 year was reported by Iceland (on all beverages, on and off premise) and Sweden (20 years for off-premise purchases of beer above 3.5 vol% alcohol content, and of wine and spirits above 2.25 vol%). The lowest age limits were reported in the United Kingdom; however, only in relation to *drinking* alcohol. In England, children can drink alcoholic beverages at home or at a friend’s house with the permission of a parent or legal guardian from age 5, and in Northern Ireland from age 14; but alcohol can only be *purchased* at a higher minimum age (18 years). In other countries regulating young people’s drinking (e.g., Austria, Greece), the law applies to

drinking in public places only (including restaurants and bars) but includes no provisions for drinking at home.

It is therefore important to consider which behavioural aspects are regulated by age limits. From the young person's perspective, this could be possession, purchasing, or consumption, gambling or entering a venue in which gambling services are offered. From the supply side, this could concern commercial activities (e.g., business selling/serving) as well as non-commercial activities (e.g., parent/friend offering for free). In some countries, the (same) minimum age applies to *all* of these aspects, whereas in other countries age limits apply only to certain aspects. For example, the Czech Republic, France, Sweden and Switzerland reported that the age limits apply only to the *selling and serving* (and in certain cases offering) of alcohol and tobacco to young people (e.g., businesses must not sell alcohol to minors). Hence, in these countries, the responsibility for compliance with the law lies with the supplier rather than the young person.

With regard to tobacco and gambling, it appears that the provisions are somewhat more straightforward. Most countries reported that there is no minimum age for *smoking*. Age limits apply primarily for businesses selling tobacco products to young people, and in some countries also for purchasing and possession by young people. The minimum age for tobacco in most reporting countries was 18 years (19 years in Romania). Similarly, the minimum age for gambling was 18 years in most countries taking part in the survey, with some types of games allowed for younger age groups (16-17 years). The highest minimum age for gambling was reported by Greece (21 years).

- *Taxation and pricing*: This approach was only mentioned by three countries with regard to alcohol and two countries in relation to tobacco. The examples refer to general taxation and pricing only. Young people specific measures were not mentioned. An example of such measures is additional taxation on beverages that are considered to be more attractive to young people (e.g., flavoured/sweetened alcoholic beverages and pre-mixed spirits). Even though not reported through the survey, such taxation exists in some countries (e.g., 'alcopop tax' in Germany and in Switzerland⁵³).
- *Control and regulation of advertising, marketing and sponsorship*: In response to the open-ended questions about policy content, advertising regulations were reported by nearly half of countries completing the survey for alcohol, and by over a quarter of countries regarding tobacco. However, the survey included also a separate set of questions specifically about advertising regulations. When asked directly about such measures, a higher percentage of countries reported their availability.

All countries reporting on alcohol, tobacco, and gambling stated that advertising restrictions have been put in place. In most cases, these regulations were imposed by the state, although dual systems with voluntary codes by the industry were also reported. In Malta, the draft alcohol policy (under development at the time of this research) contained a commitment to "*strengthen existing restrictions on alcohol advertising and restrict promotional activities which may promote or encourage excessive drinking*". However, several countries pointed out that these restrictions are not actually included in policy but only in existing laws and other regulations, and they are not necessarily referred to in policy (this was perceived as a weakness of policy by some

⁵³ For Germany see: "Alkopopsteuergesetz vom 23. Juli 2004 (BGBl. I S. 1857), das durch Artikel 6 des Gesetzes vom 21. Dezember 2010 (BGBl. I S. 2221) geändert worden ist" (<http://www.gesetze-im-internet.de/alkopopstg/index.html>); for Switzerland see: „Bundesgesetz über die gebrannten Wasser, Art. 23 bis, 2 bis“ (<http://www.admin.ch/ch/d/sr/680/a23bis.html>)

respondents). Other respondents highlighted that restrictions are not necessarily specific to young people, but that they are relevant to young people nevertheless.

The examples given by respondents show that advertising regulations may target exposure or content (see also Babor et al. 2010a). Restrictions on exposure regulate when or where advertisements may be shown. They may define, for example, the type of media (e.g., TV, radio) but may also refer to other aspects, such as point of sale advertising. Greece, Hungary and Romania reported restrictions on advertising near certain types of buildings, such as health and educational facilities. Switzerland also reported several young people targeted restrictions, including a ban on alcohol advertising on school materials (e.g., school bags, cases, fountain pens). Restrictions on content regulate what elements may be used in advertisements (e.g., whether young people may be depicted) and what messages are allowed. These restrictions are usually in line with the relevant EU guidance, for example the Council Recommendation 2001/458/EC of 5 June 2001 on the drinking of alcohol by young people (see the previous chapter of this report). Examples of restrictions on sponsorship and indirect advertising were also reported. In Latvia, it is prohibited to manufacture and trade sweets and snacks, as well as toys and other articles in the form of tobacco products which may appeal to young people. Overall, the data suggests that advertising regulations regarding tobacco are more restrictive than they are with regard to alcohol or gambling. This reflects the European Directive 2003/33/EC of 26 May 2003 which restricts tobacco advertising significantly.

As with age limits, enforcement of regulations is an issue. Respondents from Cyprus and from the United Kingdom highlighted the existence of pre-clearance schemes for alcohol advertising⁵⁴. In Cyprus, non-compliance with advertising regulations is sanctioned by removing the advert in question, publicising the breach, imposing a financial penalty and requiring pre-clearance for future advertising. The Internet poses a particular challenge. For example, a French respondent reported that alcohol advertising is forbidden on websites explicitly dedicated to young people. However, it was argued that the usefulness of this restriction is limited by how difficult it is to enforce in practice, not least because it is difficult to define which websites are for young people only. Similarly, a Greek respondent explained that advertisements for gambling websites must contain certain information (e.g., highlighting age limits) but that these regulations are not adhered to in practice.

- *Warning labels:* This refers to (health) warning labels on products (e.g., alcohol bottles, cigarette packs, gambling machines). This was the only approach for which no examples were provided by the national experts taking part in the survey, even though it is included, for example, in some of the existing alcohol and tobacco control scales. This suggests that warning labels are not spontaneously thought of when considering young people specifically. Examples were mentioned in response to more specific questions about advertising regulations later on in the survey, but only by Malta with regard to its draft alcohol policy (this policy was still in the consultation stage at the time of the research).
- *Prevention programmes:* This category covers a wide range of prevention programmes which are usually carried out as interventions with young people, their families and/or communities. This approach was by far the most frequently mentioned one (except for gambling, where it was not mentioned at all). With regard to illegal drugs, all countries answering the question reported the availability of prevention programmes. This probably reflects the fact that the main aim in relation to young people's illegal drug use is usually prevention, and that prevention is usually thought to target young people (not adults). The variety of reported prevention activities was

⁵⁴ Further information about the scheme in the United Kingdom can be found on the web page of the Advertising Standards Authority (ASA) at <http://www.asa.org.uk/Regulation-Explained/Control-of-ads.aspx>

noteworthy, as well as the reporting of measures to aid implementation (e.g., addressing staffing issues).

- *Treatment and social reintegration:* Examples of treatment and social reintegration measures were mentioned by about a third of countries in relation to alcohol and tobacco, but by nearly three quarters of countries with regard to illegal drugs. Even so, this confirms the greater priority of prevention and suggests that treatment is considered more relevant for adults than young people. It is also noteworthy that no young people targeted examples of smoking cessation were reported. With regard to young people's alcohol use, prevention campaigns and 'harm reduction' measures (e.g., drunk driving campaigns) may be prioritised because alcohol addiction is less common among young people whereas the acute adverse effects of use (e.g., increased risk of accidents and violence) present a greater challenge. No country mentioned treatment or social reintegration with respect to gambling.
- *Harm reduction:* Although this category includes 'classical' harm reduction measures such as needle and syringe exchange programmes, our working definition also encompassed other approaches; for example, interventions aimed at protecting young people (including the unborn child) from harm as a result of their parents' substance use, or campaigns against driving under the influence of drugs. Examples were reported by more than half of reporting countries with regard to alcohol, and by about a third of countries with regard to illegal drugs.
- *General delivery structures and quality assurance measures:* This category includes measures that may not traditionally be considered as policies and interventions but could be described as 'meta approaches'. These provide the necessary basis for the high quality implementation of more specific activities. Examples include having a national action plan, legislation and/or a specialised authority in place, a workforce trained to specific professional competencies, or conducting research and evaluation. Although often neglected (e.g., the existing alcohol and tobacco policy scales make little reference to measures of this kind), the importance of such activities is emphasised by how often corresponding examples were mentioned by survey respondents as a means to addressing young people's addictive behaviours. This was also the only approach for which examples were mentioned across all four policy areas. Further detail on the availability of policy and legislation is provided in the section on policy availability in this chapter.
- *General approaches:* This refers to measures that do not address addictive substances or behaviours specifically but may still influence those outcomes. Examples of general health and social care were mentioned by Northern Ireland and Romania in relation to alcohol and illegal drugs. As these measures do not focus specifically on the behaviours in question, it is not surprising that they were not mentioned more frequently. However, the consideration of these measures is important as they highlight the concomitant issues that alcohol and drug users often face, such as poor health, and countries' efforts to address addictive behaviours within a wider framework of health and wellbeing.

Considering the four policy areas overall, a clear distinction is visible between legal goods/ services (alcohol, tobacco and gambling) and illegal ones (illegal drugs). Regulatory measures defining under what circumstances controlled goods/ services can be supplied (e.g., at what time, in what place, for which population group, at what price) are not applicable to illegal drugs, as the strictest possible regulations are already in place. Consequently, they were not mentioned by the experts answering the survey concerning illegal drugs⁵⁵. A major difference emerged also in respect to treatment,

⁵⁵ Regulatory measures are applicable to prescription drugs; however, respondents considered illegal drug use in their answers (but not the misuse of prescription drugs).

which appeared to be of higher priority with regard to illegal drug use than for alcohol or tobacco use. Respondents' answers in relation to young people's alcohol and tobacco use were similar, with one main difference occurring in the category *Harm reduction* due to the focus on drunk driving with respect to alcohol. The data did not allow a detailed analysis in relation to gambling and should be viewed cautiously for that topic. For gambling, most respondents chose to skip these answers as 'not applicable' due to the lack of policy and the few answers available refer to legislation.

From experts' responses, it is clear that policy approaches to addressing young people's addictive behaviours do not seek to criminalise young people, but to protect them. Where the issues and priorities outlined by survey respondents highlighted negative outcomes of young people's addictive behaviours, these were generally the outcomes relating to young people themselves (e.g., liver disease), not those relating to wider society (e.g., crime, anti-social behaviour, public disorder). It is also evident in the approaches described by respondents. Firstly, interventions and policies intend to protect young people from the vested interests of suppliers of controlled goods and services by regulating what suppliers can and cannot do in terms of sales and promotion. Countries also reported examples of financial penalties and other sanctions for businesses that do not adhere to existing regulations concerning licensing, age limits or advertising. Secondly, reported interventions and policies aim to protect young people from 'themselves', i.e. their own desire to engage in potentially harmful behaviours. This protection takes a range of forms, such as not allowing young people (or making it more difficult for them) to access controlled goods or services (e.g., age limits, pricing), and providing young people, their families and/or communities with information and support to encourage or facilitate engagement in healthy and socially desirable behaviours while discouraging (explicitly or implicitly) the engagement in potentially harmful behaviours.

The data was screened separately to identify any punitive measures or measures that may portray young people as criminals. Punitive measures for users were only reported for France (sanctions for illegal drug use) and Greece (penalties in relation to under-age alcohol use). Another noteworthy measure was reported for England (United Kingdom), where head teachers and authorised staff have a statutory power to search school pupils or their possessions, without consent, if they have reasonable grounds for suspecting that the pupil may have a prohibited item (which includes alcohol, tobacco and cigarette papers, and illegal drugs); school staff can then seize any prohibited item found during a search⁵⁶. The Czech Republic and France reported explicitly that increasing awareness about the illegal status of drugs was a key strategy to addressing young people's addictive behaviours (in the Czech Republic this was primarily because a new penal code had been introduced). However, these were the only examples of such measures reported by respondents. In most cases, where references were made to the criminal justice system, they highlighted opportunities for young people to be diverted away from prison into treatment as well as the importance of linking up the criminal justice system with health and social services. The research team initially considered including *Punitive measures* as a separate broad approach in the analysis but as it was not reported by many countries or included in the existing policy scales, these examples were allocated to the already existing categories (general delivery structures and quality assurance measures, prevention programmes).

The survey data emphasises the possible range of approaches to addressing young people's addictive behaviours, particularly with respect to legal substances and behaviours. Although only one approach (age limits) is specific to young people⁵⁷, young people targeted examples were provided for nearly all broad approaches. Young people's addictive behaviours are consequently

⁵⁶ See also: <http://www.education.gov.uk/aboutdfe/advice/f0076897/screening-searching-and-confiscation>

⁵⁷ In this report, prevention is not considered a young people targeted approach *per se*. Although prevention is often thought of as targeting young people only, programmes can be targeted at adults (e.g., workplace prevention). This is in line with the UNODC's International Standards on Drug Use Prevention, which consider opportunities for prevention over the life course (UNODC 2013).

addressed through general approaches (targeting young people amongst other groups) as well as through more specific strategies which are not restricted to age limits and prevention programmes only.

The examples provided by respondents also indicate potential for innovation. For example, the affordability and 'image' of alternative substances and behaviours (e.g., alcohol free beverages) is not often discussed and may be an area worthy of further exploration. Further ideas can be gained by considering the relevance of approaches across policy areas. In Table 4 (see Appendix), the column "Area" presents only the policy areas in relation to which a particular example was reported. However, in many cases these examples are also applicable to the other policy areas, although they are not always implemented to the same degree. For example, existing advertising regulations concerning tobacco are stricter than those concerning alcohol and gambling, indicating room for stricter measures with regard to alcohol and gambling. Comparing across policy areas, the data also suggests that smoking cessation programmes which are targeted specifically at young people are not currently a high priority. Finally, the data highlights the importance of general delivery structures and quality assurance measures. These meta approaches (or 'infrastructure interventions', Ritter & McDonald 2008) play an important role in enabling effectiveness and efficiency in addressing young people's addictive behaviours, and could therefore be given further consideration in the future.

D: Policy changes in recent years

This section of the survey considered previous policies and time trends, in particular changes in how young people's addictive behaviours are addressed.

The reported alcohol policies were published between 2005 and 2012; tobacco policies between 2010 and 2012; tobacco legislation between 1996 and 2009; drugs policies between 1999 and 2012; and gambling legislation between 1998 and 2011. As noted earlier, the alcohol policy in Malta and the drugs policy in Hungary were still in draft stage at the time of the survey. Most reported policies relating to alcohol, tobacco and illegal drugs were published in 2010 or more recently. The oldest reported policy was the regional drugs policy of Vienna (Austria), which was published in 1999 but is still an active policy. Reported tobacco and gambling legislation tended to be slightly older as legislation is not outdated as frequently as policy, but countries also reported recent pieces of legislation.

The data suggests that most current policies were preceded by earlier policies on the same issue published in the 1990s up to the mid-2000s. With regard to alcohol, however, about half of reporting countries indicated that prior to the current policy there had only been legislation in place, or alcohol had been subsumed under a more general policy (e.g., health policy). In these countries, therefore, the current policy is the first ever alcohol policy.

As it was not deemed feasible for respondents to describe previous policies in detail, the survey focussed on major changes that had taken place between previous and current policies. Major policy changes were reported by most countries (4 out of 6 countries regarding alcohol policy, 2 out of 4 countries regarding tobacco policy, and 12 out of 14 countries regarding illegal drugs policy). The most frequently cited changes were changes in goals and priorities as well as changed policy approaches and strategies⁵⁸. Countries such as Germany and Sweden appear to be moving towards more integrated policies which cover different substances and behaviours. Northern Ireland (United Kingdom) reported a move towards a population-wide approach to alcohol, rather than focussing on

⁵⁸ Respondents could choose among the following options (multiple choice style question): Change in goals and priorities (e.g., supply reduction, demand reduction, harm reduction), Change in target population, Change in policy approaches and strategies, Change in the level of industry involvement, Change in how policy is delivered (e.g., shift in responsibilities to other bodies, creation of new bodies), Change in funding structures, Other (please specify).

specific behaviours such as binge drinking. In the United Kingdom more generally, new approaches are being presented in policy documents, such as minimum pricing of alcohol and changes to the visibility of cigarette packs at point of sales, which are also expected to affect young people once implemented. With regard to illegal drugs, several countries reported a greater focus on the needs of the individual, resulting in a greater focus on targeted interventions and harm reduction measures. A French respondent, however, reported a “*more repressive approach*” in France and a move away from harm reduction in current policy.

Countries also reported a variety of formal and structural changes, for example with regard to how policy is developed (e.g., changes to involvement of stakeholders, see examples below; a more evidence-based approach) and implemented (e.g., creation of new bodies, changed commissioning and funding mechanisms). Whilst these changes are clearly intended to improve delivery structures and coordination among stakeholders, some respondents commented that they may not always have the intended effect. For example, one respondent suggested that the decentralisation of decision making structures in Spain has meant that current drug policies do not have the importance that they had previously. Portugal noted that the National Council on Youth, NGOs and industry representatives are now more involved in alcohol policy development and implementation. For tobacco, Latvia reported that whilst previously the involvement of the tobacco industry was mandatory, it has now been prohibited by law. Latvia’s case is also interesting because it was reported that this country used to have a tobacco policy but has now only got legislation in place. The informant suggested that this is because tobacco is no longer a priority health concern and the available tools for control, restriction and monitoring are considered sufficient. Some respondents also noted changes within the policy documents themselves, such as a clearer goal definition and more detailed descriptions.

The research team was particularly interested in finding out about changes in goals and priorities relating to young people, or policy approaches and strategies to addressing young people’s addictive behaviours. Countries did not, however, report many changes specific to young people (see also Table 1 in the Appendix). Where such changes were reported, they suggested a greater focus on young people, for example, through youth representation in policy development. Overall, it was difficult to identify a particular trend with regard to policy changes.

E: Implementation, monitoring and evaluation

Through this survey section, we aimed to understand how policy is implemented⁵⁹, and if it is monitored and evaluated in relation to its effectiveness and implementation fidelity.

The survey data suggested that the main responsibility for implementing alcohol policy as well as tobacco policy and legislation lies most commonly with the Ministry of Health (see Table 1 in the Appendix). With regard to illegal drugs, it was reported that the Ministry of Health plays a major role in policy implementation in over half of reporting countries; however, the national drugs agency also has a key role to play. The situation is different with regard to gambling. The main responsibility for implementation of gambling laws and regulations appeared to lie most commonly with the Ministry of Economics/Finance. Interestingly, the national gambling regulatory public authority was not reported as having a major role in policy delivery, but appeared to be supporting (not leading on) implementation in a few reporting countries. For alcohol, tobacco and gambling, in most countries the main responsibility for policy development appeared to lie with one institution only. However, with regard to illegal drugs, in most countries the main responsibility for policy implementation is reportedly shared between two or more government ministries or other organisations. The survey

⁵⁹ Legislation, an important instrument for implementation, is discussed in the sections on policy availability and policy content (age limits), and so is not addressed again here.

also asked which ministries assist with policy implementation (but do not hold main responsibility). Although in some countries there are no additional institutions which support implementation, most countries reported two or more ministries that helped with policy implementation. This was particularly so with regard to illegal drugs, where more than half of reporting countries stated that 5 or more ministries assist with implementing policy. The analysis specifically considered the role of the Ministry of the Interior and the Ministry of Justice to assess whether policy approaches are more public health or criminal justice led. The data suggests that these Ministries are involved mostly in a supporting capacity. With regard to illegal drugs, these Ministries led or supported policy implementation in nearly all reporting countries. This mirrors the survey findings on how policy is developed, highlighting the different governance structures for illegal drugs and gambling, as well as the fact that policies are developed and implemented by the same institutions.

According to survey respondents, the implementation and/or effectiveness of alcohol policy, tobacco policy/legislation, and drugs policy is monitored in most reporting countries, although there appeared to be room for improvement (around 70% of reporting countries indicated such efforts). Monitoring was most commonly done by the government department responsible for policy development and implementation. Most participants described the monitoring process in greater detail. As the question asked about the monitoring of implementation as well as of effectiveness, different types of activities were reported:

- Respondents described *annual reporting* mechanisms; for example, in Lithuania, institutions involved in the implementation of the alcohol programme provide annual reports to the Ministry of Health regarding implemented activities, achieved results, and the budget used; the Ministry then prepares a summary report which is submitted to the government. In some countries, *surveys* are used to collect data from organisations responsible for policy implementation.
- The role of *regular update meetings* was highlighted by a Cypriot respondent; there, the coordinator of alcohol related issues is responsible for setting up meetings with all parties involved to discuss progress of implementation, possible difficulties, and possibilities for better coordination among different stakeholders.
- Countries also described the use of *epidemiological surveys*, referring specifically to the EMCDDA key indicators and the European Model Questionnaire (EMQ), and/or to quantitative (outcome) indicators specified in the respective strategies and action plans (e.g., binge drinking prevalence). Several countries mentioned the use of formal *evaluations* (see also below).
- Activities aimed at *monitoring business compliance* with the law were described only in relation to tobacco but then by most countries. Activities include test purchasing exercises, interviews with environmental inspectors, and mechanisms which allow the general public to report violations of the law; highlighting once again the concern in this field over lack of adherence to regulations by businesses.

The survey contained separate questions about the most important national and regional surveys and monitoring systems which measure alcohol/tobacco/illegal drug use or gambling in the general population and among young people, and whether they are used for policy monitoring. All reporting countries were able to identify relevant surveys measuring substance use in the general population as well as among young people. Usually, the same surveys are reportedly used to collect data regarding alcohol, tobacco and illegal drug use.

As regards the general population, these are typically household surveys carried out at regular intervals (e.g., every five years), which can be general or focus on health or addiction. The European health interview survey (EHIS) is important in this context, which was also mentioned by a few respondents. It is led by Eurostat and conducted every five years, covering all EU Member States. It is likely that the national health surveys referred to by respondents form part of this international activity. Other regional and national surveys were also reported, which take place more frequently.

For example, Sweden reported that the Centre for Social Research on Alcohol and Drugs (SoRAD) carries out monthly (telephone) surveys on alcohol consumption among adults aged 16-80 years; and the Swedish Council for Information on Alcohol and Other Drugs (CAN) conducts yearly school surveys among 15-16 year old and 17-18 year old pupils. Both organisations provide regular reports. In addition to yearly reports on the school surveys, CAN produces a yearly comprehensive report on the total alcohol and drug situation (adults and youth) by collecting data from many different sources. In England and Wales, the Crime Survey for England and Wales (formerly the British Crime Survey) provides self-report data on drug use. Other methods reported include alcohol sales figures (reported by Iceland), workplace surveys, treatment demand and death indicators.

With regard to young people, the most commonly mentioned surveys were ESPAD⁶⁰ (conducted every four years among pupils aged 15-16) and the WHO-led HBSC survey⁶¹ (conducted every four years in pupils aged 11, 13, 15). Other international surveys mentioned include the Eurobarometer studies among young people, and the Global Youth Tobacco Survey (GYTS)⁶², which has been carried out in parts of (South) Eastern Europe and was mentioned by two countries. Additional national and regional surveys are also carried out. Examples include the ESCAPAD survey in France (conducted every 2-3 years among 17 year olds) and the survey on Smoking, Drinking and Drug Use Among Young People in England (annual survey among 11-15 year old school pupils). Such surveys may be carried out in addition to international surveys, for example, to capture a particular region, a different age group, to collect data more frequently and/or to measure bespoke indicators defined in policy.

The questionnaire also asked experts to indicate if these surveys are used to monitor the success of policies. Of those countries indicating that the implementation and effectiveness of policies is monitored, 6 out of 9 countries reporting on alcohol (67%), 4 out of 6 countries reporting on tobacco (67%) and 9 out of 12 countries reporting on illegal drugs (75%) stated that these surveys are used for this purpose. Some countries indicated that not all available surveys are used. For example, with regard to illegal drugs, the data suggests that ESPAD data is somewhat more likely to be used than HBSC, even if both surveys are available. The relative under-utilisation of existing data suggests the need for better collaboration between those who carry out surveys and those who develop and monitor policy, to ensure that the data can be (and is) used to inform policy making and evaluation. In this regard, a comment from a French respondent is noteworthy: *“Yes, all of them [the surveys] are used in monitoring the success of policies, even though they are not explicitly built to fulfil this objective”*. Hence, it must not be assumed that such surveys can be easily used by government officials to develop and monitor policy.

With regard to gambling, only one out of seven countries (Austria) reported that the implementation of gambling regulations and laws is monitored; but details were not provided. Switzerland reported that survey data has been used to assess the effectiveness of new casino legislation by comparing the gambling prevalence before and after its introduction. Two out of seven countries (29%) reported that there are no gambling surveys available at all, whereas five countries (71%) were able to identify relevant work. However, these surveys were far less institutionalised than the substance use surveys. For example, in Portugal and Switzerland, these were smaller academic studies carried out by individual groups of researchers, not necessarily covering the whole country and not necessarily designed as surveys that will be repeated at regular intervals. The only two larger studies reported were the British Gambling Prevalence Survey and the Swedish Longitudinal Gambling Studies (SWELOGS); no international study was reported. A separate study on young people’s gambling was only reported by the Swiss respondent. The relative lack of (major) studies on

⁶⁰ <http://www.espad.org/>

⁶¹ <http://www.hbsc.org/>

⁶² <http://www.who.int/tobacco/surveillance/gyts/>

gambling prevalence has also been documented in other European country reports (e.g., Meyer et al. 2009)⁶³.

Evaluations of policy are most common with regard to illegal drugs, where 11 out of 17 countries (65%) reported that drugs policy has been evaluated. These were mostly led or commissioned by government, although a few independent evaluations (e.g., academic research) were also reported. Evaluations were less common concerning alcohol policy (reported by 6 out of 13 countries, 46%) and tobacco policy/legislation (reported by 2 out of 9 countries, 22%). No country reported evaluations of gambling laws/regulations (N=6), although some indicated that evaluations are planned for the future. This underlines once again the different professional cultures and perceptions concerning illegal drugs and gambling.

The survey also asked respondents for their opinion on how well policies are implemented (enforced) and how successful (effective) they are in achieving their goals in relation to young people, on two different scales ranging from 0 (very poor implementation / not at all successful) to 100 (very good implementation / very successful). Within each of the four policy areas, respondents' assessments varied a lot between countries. Where several responses were available from the same country, in some cases these responses were very similar but in other cases respondents' assessments of their country situation were completely different⁶⁴. Keeping this in mind, the data paints a similar picture for alcohol and tobacco, indicating a rather low level of implementation and effectiveness in some countries. For both policy areas, respondents highlighted the lack of adherence by the industry (retailers and producers) to existing regulations and the lack of control/power by the state in terms of enforcement. With regard to tobacco, a survey respondent highlighted *"that in Greece there seems to be a serious implementation deficit, i.e. a huge gap between having a piece of legislation introduced (e.g., prohibiting minors from buying tobacco from kiosks) and having this legislation implemented in real life by the authorities and/or respected by the interested parties (e.g., refusing to sell tobacco to minors)"*.

Respondents' concerns over the industries' lack of compliance with policy and legislation is interesting, considering the legal status of the alcohol and tobacco industries' activities in general as compared with the illegal drugs 'industry' (which breaches existing laws and regulations *per se*). It is therefore striking that respondents' assessments regarding the success of illegal drugs policies were rather positive. This was justified by respondents by pointing to the decreases in young people's drug use, as documented in surveys over the past years. With regard to gambling, respondents' assessments were rather negative. This is likely also due to the lack of monitoring mechanisms and evaluations, which limits the extent to which respondents could actually judge the success of gambling laws and regulations. Respondents' ratings also suggest that the quality of implementation is seen as strongly associated with policy success, as the ratings on those two dimensions tended to be very similar within each of the four policy areas.

In summary, the data suggests that illegal drugs policies are more likely than the other policies to be implemented through collaboration of a wider range of government ministries and are more likely to be monitored and evaluated. It is perhaps not surprising, then, that this area was also rated most favourably by respondents with regard to implementation and effectiveness. The data highlights

⁶³ The ESPAD survey asks about young people's gambling but only to a very limited extent and this data is not presented in the main reports. Since the first survey round in 1995, the survey has included questions about young people's use of slot machines (e.g. "How often (if at all) do you ... play on slot machines (the kind in which you may win money)?", Question C03h in the 2011 questionnaire). However, this question addresses only a specific type of gambling behaviour and does therefore not allow any detailed insights into young people's gambling. The most recent round (2011) contained additional gambling-specific questions ("Have you ever felt the need to bet more and more money?", "Have you ever had to lie to people important to you about how much you gambled?", Questions O11 and O12), but the gambling module was optional and these questions were therefore not asked in all countries.

⁶⁴ Where two or more responses were available for a country, an average score was calculated.

some serious shortcomings in the area of gambling with regard to implementation and monitoring mechanisms. With regard to alcohol and tobacco, the findings suggest the need for better tools to enforce and monitor the industry's adherence to existing regulations to protect young people. The data also raises some questions about how policy makers can make better use of available epidemiological data concerning young people's addictive behaviours.

F: Resource allocation

The final survey section aimed to collect information about the priority placed on young person focussed strategies in relevant funding streams, as well as the role of industry funding. This section considers all reporting countries, regardless of whether they had a policy in place or not.

Most reporting countries stated that over the past several years there have been no or little changes in the amount of resources allocated to policies and programmes addressing young people and alcohol, tobacco, or gambling (see also Table 1 in the Appendix). With regard to illegal drugs, most reporting countries highlighted small or large decreases with regard to funding. Several countries noted that this was due to broader funding cuts and the general economic recession. Hence, it does not necessarily indicate that such programmes are now seen as less important. However, time trends provide no information about the actual amount of money available. Some respondents indicated that funds are scarce, and even though there may not have been a decrease, the financial situation is not ideal.

The survey findings also suggest that it is difficult to determine how much money is allocated to policies and programmes addressing young people's alcohol, tobacco, illegal drug use and gambling. To assess the relative priority placed on young people in funding streams, respondents were asked to estimate the percentage that funds for such programmes and policies made up in the most recent national budget. Only a respondent from England (United Kingdom) was able to answer this question. Most countries indicated that it is not actually possible to clearly identify such funds within the most recent national budget. Sweden provided figures for all four policy areas, but the respondents highlighted the limitations of such figures in light of difficulties to distinguish between activities for legal and illegal substances and because activities may also target other age groups. Hungary and England (United Kingdom) provided figures concerning programmes and policies to address young people's illegal drug use, whereas Wales (United Kingdom) provided figures for children and young people's services more generally; Iceland referred to a general prevention fund (see comment below). Hence, although the survey asked about each policy area separately, the data suggests that funds are not allocated at such a level of detail. Another important consideration, highlighted by several respondents, is that due to the diversity of possible policies and programmes, money may come from different funding streams and go to different organisations, making it difficult to judge the overall amount spent on addressing young people's addictive behaviours. These issues are summarised in the comment of an Icelandic respondent: *"A specific fund for prevention is used for funding both NGO's programs and official programs. [...] It is not the only financing of preventive work but the only figure that can specially be identified in the national budget"*.

The survey also asked whether state revenues generated from alcohol sales, tobacco sales or gambling services respectively⁶⁵ are directly used to fund any of the following activities (multiple choice questions): Research on alcohol and alcohol-related problems, Prevention activities (e.g., media campaigns for alcohol education), Treatment for alcohol dependence, Charitable activities not related to alcohol, Sports events, Other (please specify) (the examples were adapted for tobacco, illegal drugs, and gambling in the respective questionnaire sections). For illegal drugs, the questionnaire referred to revenue generated from alcohol and tobacco sales. A relatively large

⁶⁵ Including general taxation as well as industry specific taxation

proportion of respondents indicated that they did not know the answer to these questions (respondents from 7 out of 18 countries for alcohol; 4 out of 9 countries for tobacco; 5 out of 20 countries for illegal drugs; one out of eight countries for gambling).

With regard to the funding of research, prevention and treatment, the data suggested that it is rather uncommon for state revenues generated from alcohol/tobacco sales or gambling to directly fund such activities. For alcohol, only 3 out of 11 countries (27%) indicated that state revenue from alcohol sales is directly used for alcohol-related research, prevention, and/or treatment; prevention activities were mentioned by all three countries. With regard to tobacco, only Iceland (20%, N=5) indicated that state revenue from tobacco sales is ear-marked for research, prevention, and treatment. The Icelandic respondents reported the existence of an alcohol prevention fund which is based on 1% of the income due to alcohol taxes; moreover, the Icelandic Tobacco Control Act makes it compulsory to allocate at least 0.9% of gross tobacco sales to tobacco control. In Switzerland, this practice also exists with the tobacco control fund, which receives 2.6 centimes from every packet of cigarettes sold⁶⁶. For illegal drugs, 5 out of 15 countries (33%) stated that revenues generated from alcohol or tobacco sales are used to fund research, prevention or treatment relating to illegal drugs; prevention was the most common activity. A Spanish respondent reported that *“in the field of illegal drugs there exists an important fund which comes from drug seizures and is aimed at prevention programmes”*. For gambling, 3 out of 7 countries (43%) reported that gambling state revenue is used to fund gambling-related research, prevention, and treatment. A large proportion of countries, however, made explicit that tax revenues are not ear-marked but go to the general state budget. A Czech respondent commented that there would be no political support for the idea of dedicating taxes to prevention and similar activities.

The survey also asked whether the alcohol/tobacco/gambling industries⁶⁷ voluntarily fund such activities, either directly or indirectly (e.g., through an associated charity). The data suggests that this is relatively common. Concerning alcohol, 12 out of 17 countries (71%) indicated that the alcohol industry funds alcohol-related research or prevention (e.g., educational materials for use in schools). On research, a French respondent explained: *“Producers have a special organisation called IREB (Institut de Recherche sur les Boissons) which is acting as a part of the lobbying activity. They distribute funds to applicants in their Call for research on alcohol. [...] they [also] have a dedicated organisation called ‘Entreprises et prévention’, supposed to initiate prevention in workplaces”*. In the United Kingdom, alcohol prevention activities are carried out by the Drinkaware Trust, funded by the industry at approximately £5.2 million (~ €6.7 million) per year (pledged by the industry until 2012). Hungary reported the funding of harm reduction activities (dedicated driver programmes, responsible drinking campaigns); whereas Sweden reported on self-regulatory codes and their control. With regard to tobacco, 5 out of 9 countries could not provide any information, but 2 countries (50%, N=4) reported industry support for tobacco-related research and prevention. Respondents from France and Iceland emphasised that the industry does not fund such activities⁶⁸. On illegal drugs, 6 out of 14 countries (43%) reported that the alcohol or tobacco industries fund research and prevention; in 5 out of reporting 8 countries (63%), the gambling industry funds gambling-related research and prevention activities. It is noteworthy that industry support of *treatment* was reported only in one country and only in relation to alcohol (Sweden).

Overall, it is difficult to draw a clear picture of resource allocation. The data suggests little change to the amount of money allocated to policies and programmes addressing young people’s addictive

⁶⁶ http://www.bag.admin.ch/tabak_praevention/index.html?lang=en

⁶⁷ Industry was defined in the survey as including producers and retailers of alcoholic beverages/tobacco products, gambling operators, the hospitality sector, the advertising industry, trade associations, and self-regulatory associations.

⁶⁸ It was unclear whether the question had been understood correctly. The Icelandic respondent wrote: “As part of our policy we have never and will never accept any funding from the tobacco industry”. This may suggest that the question was misunderstood as asking about government acceptance of industry funds, and it is therefore not clear whether the industry funds research or prevention activities independently of the government.

behaviours over the past years. Where decreases were reported (illegal drugs), these appear to have been caused by wider societal developments (economic recession) and do not signify a decreased concern over young people's issues. However, these estimates are likely to be based on participants' own professional perceptions, as only few of them were able to identify how much money is actually spent on young people and alcohol/tobacco/illegal drugs/gambling. Moreover, respondents struggled to answer questions about the use of state revenues from alcohol/tobacco sales and gambling. Assessments of funding trends should therefore be viewed with caution, but this also suggests a need for greater transparency on behalf of the government with regard to funding structures.

Another issue worthy of consideration is the relatively common involvement of industry in funding research and prevention activities. On the one hand, it is encouraging that industry recognises its role with regard to corporate social responsibility. Moreover, industry funding may play an important role by compensating for lack of government funding and budget cuts. On the other hand, some respondents suggested that the industry tends to fund programmes with a weak evidence base. One respondent commented, *"Yes, they [the industry] provides it [alcohol research and prevention] and we have some collaborative activities, but the problem is in selective support according to their [the industry's] plans/strategies and their plans/strategies mean that the use is for public relations and advertising. There is no easy way to find a balance between our interests [...] and their ideas. And there is no system and no rules for it still."* Although this topic cannot be discussed here in greater detail, the findings indicate that it may require more attention in the future. Work undertaken in ALICE RAP Area 4 (Business of Addiction) may make an important contribution in this regard.

Other relevant policies

A final section in the questionnaire asked about the availability of other relevant policy documents that could influence young people's addictive behaviours, in particular policies that could *prevent* addictive behaviours as well as those that could be seen to (inadvertently) *promote* addictive behaviours (e.g., by increasing the opportunities for young people to engage in addictive behaviours). The questionnaire listed the following examples of policies that may be relevant: other public health policies, media literacy policies, policies regulating the marketing, availability and pricing of legal substances, policies regulating the marketing or provision of gambling services, trade policies, economic policies, national social protection and inclusion policies, urban development policies (e.g., neighbourhood regeneration), etc.

However, the obtained survey data does not allow a detailed discussion of such policies. Even though some respondents were critical of the available policies in their country (e.g. with regard to their usefulness or effectiveness), no documents were submitted or commented on as 'promoting' addictive behaviours. Some of the documents reported under this section had already been reported within other sections of the survey (e.g., laws, drugs strategies). Newly mentioned documents were *national youth policies* and general *public health policies*, as well as *local level policies* on addictive behaviours; but participants did not provide much detail regarding these policies. The focus on young people and drugs/health specific policies may point to the high degree of professional specialisation in this field which in return may make it more difficult for professionals to consider the implications of policies outside their own field of expertise. It must also be noted that these questions were asked at the end of the survey and therefore fatigue may have prevented participants from considering other policies in detail.

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APPENDIX

Table 1: Key indicators – how do government policies on addictive behaviours address young people?

	Alcohol	Tobacco	Illegal drugs	Gambling
A - Policy availability	<ul style="list-style-type: none"> • 15 countries (79%, N=19) reported having written government alcohol policies in place; 12 countries at a national level and 3 countries at a regional level • In Malta, the alcohol policy was being finalised at the time of the survey and had not yet been officially published – the new draft policy is included in this survey • Policies in 8 countries (53%, N=15) focus exclusively on alcohol, whereas the remaining policies encompass other substances and/or addiction or health more generally • Young people are mentioned in all these policies (100%, N=15), and 9 countries (60%, N=15) reported a special focus on young people • Of all countries, 2 countries reported subsidiary policies specifically focussing on young people and alcohol (Czech Strategy on the prevention of risk behaviours in school settings; Icelandic Health Action Plan) 	<ul style="list-style-type: none"> • 5 countries (45%, N=11) reported having written tobacco policies in place; 4 countries at a national level and 1 country at a regional level (United Kingdom); 5 countries (45%, N=11) reported that legislation was available but no dedicated policy • This section therefore refers to policies and laws to account for the low number of responses and available policies • Of the 5 countries reporting policies, dedicated tobacco plans are only available in England and Northern Ireland; of the 6 countries reporting on laws only, laws focussing exclusively on tobacco were reported by Latvia and Iceland; the other reported policies and laws cover also other substances and behaviours • Young people are explicitly mentioned in policy or legislation in 8 countries (72%, N=11) • Of all countries, 1 country reported subsidiary policies specifically focussing on young people and tobacco (Swedish public health policy) 	<ul style="list-style-type: none"> • 19 countries (95%, N=20) reported having written drugs policies in place; 17 countries at a national level and 2 countries at a regional level (Austria and United Kingdom) • At the time of the survey, a new drugs strategy for the period 2012-2020 was being finalised in Hungary – the new draft policy is included in this survey • 10 countries (53%, N=19) reported that policy focuses exclusively on illegal drugs (in some cases including new psychoactive substances) • Young people are mentioned in policy in 18 countries (95%, N=19); in 1 country (Portugal) drugs policy addresses only the general population (over 25 years old) • 4 countries (20%, N=20) reported subsidiary policies specifically focussing on young people and illegal drugs (Hungarian National Youth Strategy; Austrian regional plans; Croatian National Youth Programme; and Icelandic National Health Plan) 	<ul style="list-style-type: none"> • A written government gambling policy/strategy is not available in any reporting country (N=10) – in all 10 countries gambling is addressed only through laws and regulations which focus exclusively on gambling • This section therefore refers to laws and regulations in reporting countries (not policies) • Young people are mentioned in gambling laws/regulations in 8 countries (89%, N=8) • 2 countries (20%, N=10) reported subsidiary documents specifically focussing on young people and gambling (Austrian youth protection laws; Portuguese Contratos dos distribuidores dos Jogos Santa Casa)

	Alcohol	Tobacco	Illegal drugs	Gambling
B - Policy development	<ul style="list-style-type: none"> • In 11 countries (79%, N=14), the Ministry of Health was primarily responsible for developing the alcohol policy • The Ministry of the Interior was (co)responsible for developing the alcohol policy in 2 countries, and the Ministry of Justice in 1 country • The main groups involved in the policy making process were national government officials (e.g., policy makers, commissioners) (reported by 13 countries, N=14), health and social services (including drug and alcohol services and youth services), and expert consultants (each reported by 10 countries) • Young people were explicitly involved in 3 countries (21%, N=14) (Lithuania, Portugal, Northern Ireland (UK)), whereas industry representatives were explicitly involved in the alcohol policy making process in 6 countries (43%, N=14) • Holding expert meetings and consultations was the most common method for policy development – reported by 13 countries (100%, N=13); other popular methods included intradepartmental consensus and review of existing policies (reported by 10 countries respectively) • Needs assessment was used for policy development in 9 countries (69%); a review of international scientific literature also in 9 countries (69%, N=13) 	<ul style="list-style-type: none"> • In 10 countries (91%, N=11), the Ministry of Health was primarily responsible for developing the tobacco policy • In none of these countries (N=11) did the Ministries of the Interior or of Justice hold main responsibility for developing the tobacco policy • The main groups involved in the development were national government officials (reported by 9 countries, N=11), and to a lesser extent health and social services (including smoking cessation services and youth services) and the voluntary sector/civil society (NGOs) (each reported by 5 countries) • Young people were explicitly involved in the policy making process in 1 country (Lithuania), whereas industry representatives were explicitly involved in developing tobacco policies/laws in 3 countries (27%, N=11) • The most common methods (each reported by 8 countries; 73%, N=11) were expert meetings and consultations and intradepartmental consensus • Needs assessment informed policy development in 6 countries (55%, N=11); a review of international scientific literature was conducted in 3 countries (27%, N=11) to inform policy development 	<ul style="list-style-type: none"> • In 13 countries (68%, N=19), the Ministry of Health was responsible for developing the drugs policy; in 10 countries (53%) the national drugs agency was responsible for drugs policy development (in 5 cases together with the Ministry of Health) • The Ministry of the Interior was (co)responsible for developing the drugs policy in 6 countries, and the Ministry of Justice in 5 countries • The main groups involved in the development were national government officials (reported by 17 countries; N=17), as well as health and social services (including drugs services and youth services) and the voluntary sector/civil society (NGOs) (each reported by 15 countries; 88%, N=17) • Young people were explicitly involved in the policy making process in 4 countries (24%, N=17) (Vienna (Austria), Czech Republic, Lithuania, Northern Ireland (UK)), whereas industry representatives were involved in defining drugs policy in 2 countries (12%, N=17) (Cyprus, England (UK)) • Expert meetings and consultations were the most common method for policy development (16 countries; 84%, N=19); followed by intradepartmental consensus (14 countries; 74%, N=19) • Policy was based upon needs assessment in 11 countries (58%, N=19) and on a review of 	<ul style="list-style-type: none"> • In 6 countries (86%, N=7), the Ministry of Economics/Finance was mainly responsible for developing the gambling laws/regulations • The Ministry of Health was not responsible for developing the gambling laws/regulations in any country; the Ministry of Justice in 1 country (Switzerland); the Ministry of the Interior in none of these countries (N=7) • The main groups involved in the policy making process were national government officials (reported by 7 countries, N=7), and regional and local government officials (reported by 3 countries) • Young people were explicitly involved in none of these countries (N=7), whereas industry representatives were involved in developing gambling regulations in 2 countries (29%, N=7) (France, Switzerland) • Information on the methods used for the development of these laws was only provided by 5 countries – the only methods reported were intradepartmental consensus (3 countries), review of existing policies (2 countries) and expert meetings and consultations (1 country) • Needs assessment or reviews of international scientific literature were utilised in none of these countries (N=5)

	Alcohol	Tobacco	Illegal drugs	Gambling
			international scientific literature in 12 countries (63%, N=19)	
C - Content of policy	<ul style="list-style-type: none"> 8 countries (67%, N=12) reported that the policy refers to international definitions in specifying 'problematic' alcohol use (e.g., ICD, DSM) 6 countries (50%, N=12) reported that the policy uses a bespoke problem definition (e.g., drunkenness, binge drinking, drunk-driving) (in 2 cases this was in addition to the international definitions) None of these countries (N=14) reported that the policy singles out particular alcoholic beverages - not in relation to the general public or in relation to young people Alcohol policy most commonly refers to young people who are under-age (9 countries; 69%, N=13) 	<ul style="list-style-type: none"> No country (N=7) reported that the policy refers to international definitions in specifying 'problematic' tobacco use 5 countries (71%) reported that 'problematic' tobacco use is not defined in any way; respondents from Sweden and France suggested that all forms of smoking are considered problematic in young people 4 countries (50%, N=8) reported that particular tobacco products (mostly cigarettes) are singled out in relation to young people but these are also singled out in relation to the general population – only one country reported emphasis on a particular product which is not highlighted in relation to the general population (sweetened tobacco in France) Documents most commonly refer to young people who are under-age (6 countries; 75%, N=8); this is particularly so in legislation; tobacco policy most commonly refers to young people from families with complex needs and young people at risk of tobacco use (each reported by 3 countries, N=4) 	<ul style="list-style-type: none"> 12 countries (63%, N=19) reported that the policy refers to international definitions in specifying 'problematic' drug use, particularly the EMCDDA definition Several respondents noted that any illegal drug use is considered problematic, highlighting also issues of public perceptions and political stances Most policies do not single out particular substances in relation to young people; 5 countries (26%, N=19) highlighted the role of cannabis (but three of these countries highlighted cannabis also in relation to the general population) Drugs policy most commonly refers to young people at risk of using drugs (14 countries; 74%, N=19), as well as school pupils, young people who already use drugs, and young people who are drug dependent (each reported by 13 countries; 68%, N=19) 	<ul style="list-style-type: none"> 1 country (20%, N=5) reported that the Gambling and Lotteries law refers to the ICD-10 Classification (Latvia), and no country reported a bespoke problem definition in relation to gambling Most laws do not single out particular games in relation to young people - 3 countries (43%, N=7) reported that the policy highlights particular games, such as lotteries, casino games, slot machines, and gambling machines placed in locations other than licensed casinos Most commonly, gambling laws/regulations refer to no specific sub-groups of young people (5 countries; 71%, N=5); 2 countries (29%, N=7) reported that regulations explicitly refer to young people who are under-age (Portugal, United Kingdom)

	Alcohol	Tobacco	Illegal drugs	Gambling
D – Policy changes	<ul style="list-style-type: none"> • 6 countries (46%, N=13) reported the availability of previous alcohol policies; in the other countries there were previously only laws or more general documents • Of these, 3 countries (50%, N=6) indicated major changes concerning young people – two countries reported a greater focus on young people (e.g., youth representation in policy making process), and one country highlighted the potential impact of general changes to pricing and licensing on young people 	<ul style="list-style-type: none"> • 4 countries (44%, N=9) reported the availability of previous tobacco policies; this included three of four countries with a policy currently in place and one country where there is currently only legislation in place (Latvia) • 1 country indicated that the current policy puts a greater focus on young people; the other countries reported no changes with regard to young people 	<ul style="list-style-type: none"> • 14 countries (88%, N=16) reported the availability of previous drugs policies • 7 countries (50%, N=14) indicated that there had been major changes concerning young people (e.g., the creation of dedicated delivery structures in Northern Ireland (UK) and Croatia, greater focus on harm reduction approaches in Vienna (Austria) and Spain, a more repressive approach in France, focus on specific substances such as cannabis and “smart drugs” in the Czech Republic, increased focus on those at risk in Northern Ireland (UK) and Greece) 	<ul style="list-style-type: none"> • 4 countries reported the availability of previous laws/regulations • 2 countries (50%, N=4) indicated that there had been major changes concerning young people; for example, it was reported that in 2004 age controls at casinos were made optional in Portugal
E – Implementation, monitoring and evaluation	<ul style="list-style-type: none"> • In 14 countries (93%, N=15), the Ministry of Health has a main responsibility for alcohol policy delivery • The Ministry of the Interior has a main responsibility for policy delivery in 2 countries (13%, N=15); there are a further 7 countries (47%) where the Ministries of the Interior or Justice assist with alcohol policy delivery • The implementation and effectiveness of alcohol policy in relation to young people is monitored in 9 countries (69%, N=13) – this is most commonly done by the government department responsible for policy development and implementation (7 countries; 78%, N=9) • 6 countries (46%, N=13) reported 	<ul style="list-style-type: none"> • In 10 countries (91%, N=11), the Ministry of Health has a main responsibility for implementing tobacco policy • The Ministry of the Interior has a main responsibility for policy delivery in 1 country (9%, N=11); in a further 4 countries (36%, N=11) the Ministries of the Interior or of Justice assist with the delivery of tobacco policy • 6 countries (67%, N=9) reported that the implementation and effectiveness of tobacco policy is monitored – this is most commonly done by the government department responsible for policy development and implementation (5 countries; 83%, N=6) • 2 countries (22%, N=9) reported evaluations of tobacco policy – this 	<ul style="list-style-type: none"> • In 11 countries (58%, N=19), the Ministry of Health has a main responsibility for implementing drugs policy; in 9 countries (47%, N=19), the National drugs agency has a main responsibility for drugs policy delivery (in some cases in addition to the Ministry of Health) • The Ministries of the Interior or of Justice have a main responsibility for drugs policy delivery in 7 countries (36%, N=19), and assist with policy delivery in a further 11 countries (56%) • The implementation and effectiveness of drugs policy in relation to young people is monitored in 12 countries (71%, N=17) – this is most commonly done by the government department responsible for policy development 	<ul style="list-style-type: none"> • In 6 countries (67%, N=9), the Ministry of Economics/Finance has a main responsibility for the implementation of gambling laws and regulations • The Ministry of Justice has a main responsibility for delivery of gambling laws in 2 countries (22%, N=9), and in a further 2 countries the Ministries of Justice or Interior assist with the implementation • The national gambling regulatory public authority does not have a main responsibility for development or implementation of regulations in any reporting country; it has a supportive role in implementing regulations in 3 countries (33%, N=9) • Only 1 country (14%, N=7) reported that the implementation and effectiveness of gambling laws in

	Alcohol	Tobacco	Illegal drugs	Gambling
	<p>that alcohol policies have been evaluated, including government led or commissioned evaluations in 6 countries and an independent evaluation in 1 country</p> <ul style="list-style-type: none"> • Respondents' ratings of policy implementation ranged from 1 to 72 with a median country score of 39.5 (N=12)⁶⁹; ratings of policy effectiveness ranged from 1 to 89 with a median country score of 46 (N=11); with some respondents highlighting poor adherence by the industry to sales and advertising regulations and lack of control by the government 	<p>included one external evaluation commissioned by government and one independent evaluation</p> <ul style="list-style-type: none"> • Respondents' ratings of policy implementation ranged from 4 to 79 with a median country score of 32 (N=9); ratings of policy effectiveness ranged from 5 to 92 with a median country score of 31 (N=8); noting that many regulations are not adhered to well enough (e.g., ban of tobacco sales to minors) 	<p>and implementation (10 countries; 83%, N=12)</p> <ul style="list-style-type: none"> • 11 countries (65%, N=17) reported that drugs policy has been evaluated – evaluations led or commissioned by government were reported by 10 countries and independent evaluations by 4 countries • Respondents' ratings of policy implementation ranged from 11 to 100 with a median country score of 73 (N=19); ratings of policy effectiveness ranged from 11 to 95 with a median score of 69 (N=19); mostly due to the decrease in young people's drug use over the past years 	<p>relation to young people is monitored; this is done by the government department responsible for the development and implementation of laws (Austria)</p> <ul style="list-style-type: none"> • Evaluations have not been carried out in any of these countries (N=6), although 2 countries stated that evaluations are planned for the future • Respondents' ratings of implementation (enforcement) ranged from 1 to 100 with a median country score of 22 (N=5); ratings of effectiveness ranged from 1 to 95 with a median country score of 14 (N=5); with one respondent noting that gambling policy is not being assessed and another respondent noting that he has been "fighting" for years to establish specific norms for the protection of young people
F – Resource allocation	<ul style="list-style-type: none"> • 3 countries (18%, N=17) reported a slight increase in resources allocated to policies and programmes addressing young people and alcohol; 9 countries (53%) reported no changes to resource allocation; and 5 countries (29%) reported small or large decreases • Several respondents highlighted details of national funding structures that made it difficult to answer that question (e.g., no alcohol specific funds available, availability of 	<ul style="list-style-type: none"> • 6 countries (75%, N=8) reported no changes to resource allocation; and 2 countries (25%) reported large decreases in resources allocated to policies and programmes addressing young people and tobacco (no country reported an increase in resources; N=8) • One respondent reporting a stable situation noted that there is 'competition' between the different substances with regard to resource allocation, with tobacco receiving 	<ul style="list-style-type: none"> • 4 countries (22%, N=18) reported large or small increases in resources allocated to policies and programmes addressing young people and illegal drugs; 6 countries (33%) reported no changes to resource allocation; and 8 countries (44%) reported small or large decreases • 5 countries (28%, N=18) highlighted the role of general funding cuts and/or the current financial crisis 	<ul style="list-style-type: none"> • 1 country (17%, N=6) reported a slight increase in resources allocated to policies and programmes addressing young people and gambling; 4 countries (67%, N=6) reported no changes to resource allocation; and 1 country (17%) reported a strong decrease • One of the countries reporting no changes highlighted that the resources are very scarce and that work often relies on volunteers

⁶⁹ Implementation: 0 = very poor, 100 = very good; Effectiveness: 0 = not at all successful, 100 = very successful

	Alcohol	Tobacco	Illegal drugs	Gambling
	several different funding streams)	comparatively less resources than illegal drugs		
Basis	<ul style="list-style-type: none"> National and regional policy (as reported by experts) 	<ul style="list-style-type: none"> National and regional policy and legislation (as reported by experts) due to low number of responses and policies 	<ul style="list-style-type: none"> National and regional policy (as reported by experts) 	<ul style="list-style-type: none"> National legislation only (as reported by experts) due to lack of policy
Countries	<ul style="list-style-type: none"> 19 countries: <i>Austria (Styria)</i>, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Latvia, Lithuania, Malta, <i>Netherlands (no regional example available)</i>, Portugal, Romania, Spain, Sweden, <i>United Kingdom (England and Northern Ireland)</i>, Croatia, Iceland, Switzerland 	<ul style="list-style-type: none"> 11 countries: Cyprus, Czech Republic, France, Germany, Greece, Latvia, Lithuania, Romania, Sweden, <i>United Kingdom (England and Northern Ireland)</i>, Iceland 	<ul style="list-style-type: none"> 20 countries: <i>Austria (Vienna)</i>, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Spain, Sweden, <i>United Kingdom (England, Wales, Northern Ireland)</i>, Croatia, Iceland, Switzerland 	<ul style="list-style-type: none"> 10 countries: Austria, France, Greece, Hungary, Latvia, Malta, Portugal, Sweden, United Kingdom, Switzerland

Notes: Countries – formatting indicates availability of **national policy**, *regional policy*, or legislation/other documents only.

Please see the respective report sections for further commentary.

Table 2: Expert accounts of issues, priorities, goals/objectives and desired outcomes for young people in policy, by policy area and topic

Topic	Alcohol	Tobacco	Illegal drugs	Gambling
Control and regulation of supply	Availability of alcohol, poor compliance by businesses, educating parents	Availability of tobacco products to minors, poor compliance by businesses	Availability of illegal drugs, perceived availability of illegal drugs, new psychoactive substances	-
Gambling/substance-free zones	-	Smoke free environments	(n/a)	-
Control and regulation of advertising, marketing and sponsorship	Advertising, media representations of alcohol	Advertising	(n/a)	Advertising
Prevalence	Prevalence of drinking among young people – reducing number of young people drinking	Prevalence of smoking among young people – reducing number of young people smoking	(Life time and last year) Prevalence of illegal drug use among young people – reducing demand	-
Preventing any use	Preventing onset of use	Preventing onset of use	Abstinence, “drug free society”, preventing onset of use, increasing access to prevention programmes, reducing experimental/occasional use	-
Delaying onset of use / Age limits	Early onset of drinking – delaying initiation age; underage drinking, defining appropriate age limits	Early onset of smoking – delaying initiation age	Delaying onset of use	Age restrictions
Targeted prevention	-	-	Targeted prevention	Focus on vulnerable groups
Addressing excessive/regular use and negative health and social consequences	Excessive drinking, drunkenness, intoxication, alcohol poisoning, binge drinking, harmful alcohol use, dependence, health and social consequences for young people (e.g., liver disease, problems at school), reducing the amounts consumed by young people	Reducing rates of young people who smoke regularly, smoking cessation	High levels of cannabis use among young people, poly-drug use, preventing experimental/occasional use from becoming regular use, early intervention, treatment, harm reduction, mental health of young people, drug use as a symptom of other problems, awareness among young people and the general population	Excessive gambling, protecting young people from gambling addiction
Driving under the influence of substances	Driving under the influence of alcohol, defining appropriate BAC limits	(n/a)	Driving under the influence of illegal drugs	(n/a)
Protecting young people from the consequences of adults’ addictive behaviours	Support for young people whose parents are problematic alcohol users	Protecting young people from the harms caused by parental smoking (e.g., during maternity)	Support for young people whose parents use illegal drugs	-

Table 3: Number of countries reporting examples of particular approaches in response to open-ended questions about policy content, by policy area

Approach	Alcohol	Tobacco	Illegal drugs	Gambling
Control and regulation of supply	8 (50%)	4 (57%)	4 (21%)	None
Gambling/ substance-free zones	None	2 (29%)	None	None
Age limits	10 (63%)	5 (71%)	None	2 (50%)
Taxation and pricing	3 (19%)	2 (29%)	None	None
Control and regulation of advertising, marketing and sponsorship	7 (44%)	2 (29%)	None	None
Warning labels	None	None	None	None
Prevention programmes	13 (81%)	6 (86%)	19 (100%)	None
Treatment and social reintegration	6 (38%)	2 (29%)	14 (74%)	None
Harm reduction	9 (56%)	1 (14%)	6 (32%)	None
General delivery structures and quality assurance measures	11 (69%)	6 (86%)	11 (58%)	3 (75%)
General approaches	1 (6%)	None	2 (11%)	None
<i>Countries reporting at least one approach in response to specified questions (N)</i>	<i>16 countries</i>	<i>7 countries</i>	<i>19 countries</i>	<i>4 countries</i>

Notes: The most commonly cited approaches are highlighted (top 3 within each policy area). Responses refer to policy as well as legislation (where policy is not available). Percentages are based on the number of countries reporting at least one approach in response to the specified questions. A limited number of respondents skipped these questions or could not identify any (young people targeted) approaches within their policy or legislation; these countries are not included in the table. Regional data is included where available.

Table 4: Examples of interventions and policies reported in response to open-ended questions about policy content, by approach, focus on young people, and policy area

Approach	Examples of reported interventions and policies	Area*
Control and regulation of supply	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Within supermarkets and general retail stores, placing and selling controlled goods in a section clearly separated from where products which may appeal to young people are displayed and sold, such as sweets, snacks, toys, or soft drinks • Banning sales of controlled goods within the distance of 200m from any entrance of education, health, child and youth care institutions 	A A
	<p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Targeting illegal production or sale of controlled goods • Restricting the sale of components needed for the production/ manufacturing of controlled goods (e.g., indoor cultivation of cannabis) 	A, T, D D
Gambling/ substance-free zones	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Ban of controlled goods/ behaviours in antenatal clinics and child health care settings (e.g., “smoke free” policy) • Ban of controlled goods/ behaviours in school yards 	T T
	<p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Ban of controlled goods/ behaviours in public indoor facilities (e.g., smoking ban) 	T
Age limits	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Banning sales of controlled goods to young people (under-age/ minors) • Forbidding or restricting the access of young people to premises that offer controlled goods/ services (example of restrictions: unless accompanied by an adult) • Proof of age schemes • Test purchasing <p><i>General examples not applicable</i></p>	A, T A, G A A
	<p><i>No young people specific examples reported</i></p> <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Introducing a minimum price per unit • Supporting the affordability of less addictive alternatives (e.g., alcohol free beverages) • Restricting promotional activities which may promote or encourage excessive use of controlled goods/ services 	A A A
Control and regulation of advertising, marketing and sponsorship	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Banning industry sponsorship of events specifically targeted at young people • Banning supply of products that resemble controlled goods to young people 	A T
	<p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Banning industry sponsorship (e.g., of sporting events) • Supporting the image of less addictive alternatives (e.g., alcohol free beverages) • Banning display at point of sales • Introducing plain packaging of controlled goods 	A A T T
Warning labels	<i>No examples were reported</i>	
Prevention programmes	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Information campaigns for young people • School-based education/ prevention/ health promotion • Training for teachers and prevention workers • Targeted and outreach programmes (e.g., young people out of school) • Family-based prevention programmes • Specific health care services (e.g., health care for students) • Interventions targeting the night-time economy • Web or telephone based information and support service 	A, D A, T, D A, D A, D A, D A A, D A, D

Approach	Examples of reported interventions and policies	Area*
	<p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Media campaigns, awareness-raising campaigns • Supporting the development of workplace policies regarding controlled substances/ behaviours • Health care services for prevention 	<p>A, T, D A, D T</p>
Treatment and social reintegration	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Offering treatment tailored to the needs of young people • Supporting screening/referral in non-specialist young people's services • Using substance-related accident and emergency hospital attendances to advise young people about controlled substances/ behaviours • Diverting young people away from the criminal justice system to treatment <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Diverting offenders away from the criminal justice system to treatment where the offence is substance related • Interventions in non-specialist settings (e.g., smoking cessation in dental care) • Facilitating access to housing, education, employment 	<p>A, D A, D A D A, D T A, D</p>
Harm reduction	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Support for children of dependent people • Brief interventions in maternity care and child care <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Interventions to address driving under the influence of substances (e.g., information campaigns) • Lower BAC (blood alcohol concentration) level for new drivers • Needle and syringe exchange programmes 	<p>A A, T A, D A D</p>
General delivery structures and quality assurance measures	<p><i>Young people specific examples:</i></p> <ul style="list-style-type: none"> • Young people or prevention specific action plan • Multi agency collaboration in addressing young people's needs • Support of young people specific projects and organisations (e.g., financial support to local youth projects) • Providing training to those working with young people • Research focussing on young people <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Establishing specialised authorities • Addressing all substances or addictive behaviours together • Inclusion of addiction related issues in other policy areas (e.g., community safety policies) • Dedicated funding structures (e.g., ear marked funding) • Stakeholder involvement (e.g., engaging businesses, parents, communities) • Research (e.g., on prevalence, effective interventions and policies) • Monitoring and evaluation procedures 	<p>T, D A, D A, T, D T T A, T, G A, T, D A, D T, D A, D A, T, D A, T, D</p>
General approaches	<p><i>No young people specific examples reported</i></p> <p><i>Examples not targeted specifically at young people:</i></p> <ul style="list-style-type: none"> • Community support services • Developing and strengthening the public healthcare system 	<p>A, D D</p>

* The policy area in relation to which the example was **reported** (A=Alcohol, T=Tobacco, D=Drugs (illegal), G=Gambling). **However, in many cases examples are applicable to the other policy areas.**

Notes: Policies and interventions were categorised into broad approaches and according to their population focus after data collection. Not all reported interventions and policies are shown in this table. The term "controlled goods/ behaviours" is used here to refer to alcohol, tobacco and illegal drug use as well as gambling.

Table 5: Number of respondents and response rates by country

Country	Individual nominations	Individual respondents	% of nominations
Austria	9	6	67%
Cyprus	7	4	57%
Czech Republic	5	5	100%
France	3	2	67%
Germany	11	3	27%
Greece	7	5	71%
Hungary	9	5	56%
Italy	4	1	25%
Latvia	4	4	100%
Lithuania	4	4	100%
Malta	1	1	100%
Netherlands	2	2	100%
Portugal	5	3	60%
Romania	1	1	100%
Spain	1	1	100%
Sweden	6	6	100%
United Kingdom	13	8	62%
Croatia	2	2	100%
Iceland	2	2	100%
Switzerland	6	3	50%
TOTAL	102	68	67%

NB: The 12 countries for which no nominations were received are not shown here.

Table 6: Responses to the online survey by country and policy area

Country	Alcohol	Tobacco	Illegal drugs	Gambling
Austria	complete (3) partial (1)	Wrong nomination / No response	complete (2)	complete (1)
Cyprus	complete (1) partial (1)	complete (1)	complete (1)	Wrong nomination
Czech Republic	complete (1) partial (2)	partial (1)	complete (2)	Wrong nomination
France	complete (2)	complete (2)	complete (1)	complete (1)
Germany	complete (1)	partial (1)	complete (1)	No response
Greece	complete (4)	complete (1)	complete (1)	complete (1)
Hungary	complete (2) partial (1)	Wrong nomination	complete (2) partial (2)	partial (1)
Italy	No response	No response	complete (1)	No nomination
Latvia	complete (1) partial (1)	complete (1)	complete (1)	complete (1)
Lithuania	complete (1) partial (2)	complete (1)	complete (2)	Wrong nomination
Malta	complete (1)	No nomination	complete (1)	complete (1)
Netherlands	partial (1)	No nomination	complete (1)	No nomination
Portugal	complete (1)	No response	complete (2)	complete (1)
Romania	complete (1)	complete (1)	complete (1)	No nomination
Spain	complete (1)	No nomination	complete (1)	No nomination
Sweden	complete (2) partial (1)	complete (3)	complete (2)	complete (1)
United Kingdom	complete (4)	complete (1) partial (1)	complete (5)	partial (1) ⁷⁰
Croatia	complete (1)	Wrong nomination	complete (2)	Wrong nomination
Iceland	complete (1)	complete (1)	complete (1)	No nomination
Switzerland	complete (1)	No response	complete (1) partial (1)	complete (1)
Number of countries for which data is available (including partial responses):				
	19	11	20	10
<i>Of countries for which nominations were received in the policy area:</i>				
	95% (N=20)	61% (N=18)	100% (N=20)	71% (N=14)
<i>Of 32 countries in original sample:</i>				
	59% (N=32)	34% (N=32)	63% (N=32)	31% (N=32)

Note: The 12 countries for which no potential survey respondents were identified are not listed here. The number in brackets indicates how many individual responses were received.

See section on 'response rates and missing data' for explanations of 'complete', 'partial', 'No nomination', 'No response', 'Wrong nomination'.

⁷⁰ With regard to gambling in the United Kingdom, the survey was not actually completed by any nominee. However, the survey had already been completed by the research team concerning the UK gambling legislation as part of the questionnaire pilot phase. It was decided to use this data instead of no data.

Table 7: Respondents' employer

Type of employer	n	% (N=68)
National government	35	51%
Regional government	5	7%
University or other research institution	20	29%
Charity / Non-governmental organisation (NGO)	5	7%
Other	4	6%

Note: Although this was a multiple choice question, only one respondent chose more than one option. Percentages are based on the number of respondents.

Table 8: Respondents' scope of work

Scope of work	n	% (N=68)
Local	16	24%
Regional	20	29%
National	60	88%
International	41	60%

Note: Respondents could choose more than one option. Percentages are based on the number of respondents.

Table 9: Respondents' main area of work

Policy area	n	% (N=68)
Alcohol policies	38	56%
Tobacco policies	19	28%
Illegal drugs policies	37	54%
Gambling policies	12	18%
Other	5	7%

Note: Respondents could choose more than one option. Percentages are based on the number of respondents.

Table 10: Respondents directly involved in policy development, monitoring/evaluation, by policy area

Policy area	Policy development		Policy monitoring or evaluation	
	n	%	n	%
Alcohol	14	52% (N=27)	14	52% (N=27)
Tobacco	7	50% (N=14)	5	38% (N=13)
Illegal drugs	21	64% (N=33)	15	50% (N=30)
Gambling	1	17% (N=6)	2	33% (N=6)

Table 11: Sources of information used by respondents to answer questions, by policy area and questionnaire section

Source of information regarding policy development	Alcohol		Tobacco		Illegal drugs		Gambling	
	n	% (N=27)	n	% (N=15)	n	% (N=33)	n	% (N=8)
Written documentation in the policy documents	16	59%	5	33%	25	76%	3	38%
Written documentation in other government publications	7	26%	0	0%	9	27%	1	13%
Written documentation published elsewhere (not official government sources)	5	19%	0	0%	4	12%	1	13%
Personal communication (e.g., colleagues, experts)	13	48%	5	33%	11	33%	2	25%
Personal knowledge	18	67%	10	67%	25	76%	2	25%
Other source	0	0%	0	0%	2	6%	0	0%
Source of information regarding policy changes	Alcohol		Tobacco		Illegal drugs		Gambling	
	n	% (N=14)	n	% (N=10)	n	% (N=22)	n	% (N=7)
Written documentation in the policy documents	7	50%	4	40%	14	64%	2	29%
Written documentation in other government publications	1	7%	1	10%	6	27%	0	0%
Written documentation published elsewhere (not official government sources)	2	14%	1	10%	5	23%	0	0%
Personal communication (e.g., colleagues, experts)	4	29%	2	20%	7	32%	0	0%
Personal knowledge	7	50%	5	50%	13	59%	1	14%
Other source	0	0%	0	0%	2	9%	1	14%

Note: Respondents could choose more than one option.

Example invitation letter for online survey



Centre for Public Health
Liverpool John Moores University
Henry Cotton Campus
15-21 Webster Street
Liverpool L3 2ET

Liverpool, [date]

EU Study on policy approaches to young people's addictive behaviours

Dear XXX,

We are currently conducting a comparative study of EU Member State policies in relation to young people's addictive behaviours. This study is part of the wider ALICE RAP project (Addictions and Lifestyles in Contemporary Europe - Reframing Addictions Project) (www.alicerap.eu) which is co-funded by the European Union under the Seventh Framework Programme.

At the moment, there is no comprehensive information available on how young people's addictive behaviours are addressed in EU Member State policy documents. Although prevention activities are often targeted at younger age groups, a wider perspective is needed to fully understand how young people's addictive behaviours are viewed in policy. This study aims to fill this gap by identifying and comparing different policy approaches to young people's addictive behaviours in relation to alcohol, tobacco, illegal drugs, and gambling.

For this purpose, we have now launched an online survey with the aim of collecting relevant policy data. The survey is targeted at policy experts in all EU member states, as well as Croatia, Iceland, Norway, Switzerland and Turkey. **We would like to invite you to participate in this survey which you can access at the following personalised address:**

<https://www.soscisurvey.de/alicerap/?s=>

The survey will ask you to identify and comment on policy documents that are relevant to young people's addictive behaviours (in accordance with your area of work). Topics of the survey include: (A) policy availability; (B) policy development; (C) content of policy; (D) policy changes in recent years; (E) implementation, monitoring and evaluation; and (F) resource allocation. You will also be asked to provide some background information about yourself, so that we know who is completing

the survey. If you wish to view the survey questions prior to completing the questionnaire, please contact us and we will be happy to send you an electronic copy.

The survey will take approximately 1 hour to complete. The exact time will depend on your area of work and what policy documents are available in your country. Although the survey covers the areas of alcohol, tobacco, illegal drugs, and gambling, we do not wish to place a disproportionate burden on participants' time. Therefore, you are not expected to complete the questionnaire for all areas, but only for your main area of work (1-2 topics).

Please note that the survey address given above is personalised (indicated by the 8-digit code at the end). This allows you to complete the survey in several sittings, if required. To do so, you must start the survey using the personalised survey address above. If you need to suspend survey completion, please complete and submit the page you are currently answering. When you next access the survey using your personalised survey address, it will start on the last page you submitted. However, we recommend that you complete the survey in one sitting. Further information about survey completion is available at: <http://www.staff.ljmu.ac.uk/heaakurt/alicerap/information.htm>.

The survey findings will be used to prepare a comprehensive overview of policy approaches across countries at a European level. The findings will also inform the development of a common framework to assess the quality and effectiveness of national policies in addressing addictive behaviours in young people.

Finally, we wish to emphasise that any personal information disclosed in the survey will be treated confidentially. The anonymised results from this study will be presented at relevant conferences and published as part of the ALICE RAP project outputs to inform future policy and practice in the EU. Individual information which could identify you (e.g., name, organisation, job title) will not be published.

We would be very grateful if you could assist us with your expertise and time by completing the questionnaire before Tuesday, 8th May 2012.

If for any reason you are unable to complete the survey, please let us know as soon as possible so that we can make alternative arrangements.

Yours sincerely,

Dr Harry Sumnall
Reader in Substance Use

Angelina Brotherhood
Public Health Researcher

Copy of online questionnaire



ALICE RAP – QUESTIONNAIRE

Welcome to the survey: “Addressing young people’s addictive behaviours through policy”

Please note that participants were asked to complete the questionnaire online rather than in print. The electronic version differed in terms of the layout. Importantly, it contained filters which tailored the questions to each respondent in a dynamic way, whereas this static copy contains all possible questions. During actual survey completion, only a sub-set of these questions were asked based on the responses given. The location of filters is indicated throughout the copy for information.

The Centre for Public Health at Liverpool John Moores University (LJMU, UK) (www.cph.org.uk) is currently conducting a comparative study of EU Member State policies in relation to young people’s addictive behaviours. This study is part of the wider ALICE RAP project (Addictions and Lifestyles in Contemporary Europe - Reframing Addictions Project) (www.alicerap.eu) which is co-funded by the European Union under the Seventh Framework Programme.

For this purpose, we are conducting an online survey with policy experts in all EU member states, as well as Croatia, Iceland, Norway, Switzerland and Turkey.

We would be very grateful if you could assist us with your expertise and time by completing this questionnaire. It will take approximately 1 hour to complete, although this will depend on your area of work and what policy documents are available in your country.

You can access further information about the study and its aims by clicking [here](#) (link opens in a new window).

By pressing the “next” button you confirm that you agree to take part in this survey. Please remember that your participation is entirely voluntary and you are free to withdraw at any time.

Thank you for your help.

Dr Harry Sumnall and Angelina Brotherhood
Centre for Public Health, Liverpool John Moores University, UK

[Click here for information about completing the survey](#) (link opens in a new window)

If you have any questions or comments concerning the questionnaire, our involvement in the ALICE RAP project or our work in general, please contact:

Angelina Brotherhood, Public Health Researcher
Centre for Public Health, Liverpool John Moores University, UK
E-mail: a.brotherhood@ljmu.ac.uk, Tel.: +44 151 231 4498
www.cph.org.uk / www.alicerap.eu

Definitions

When completing the questionnaire, please keep in mind the following definitions:

“Addictive behaviours” refers to those behaviours that can become compulsive and continue despite causing health and social harms (e.g., neglecting other areas of life). In this survey, we focus on behaviours relating to alcohol, tobacco, illegal drugs and new psychoactive substances, as well as gambling. **If the policy document you are referring to uses a specific definition of addiction or addictive behaviours, then please specify this in your answers.**

“Gambling” refers to playing any game of chance which requires wagering a stake with monetary value, whether in person or remotely (e.g., via the internet). Examples include playing the lottery, playing poker and other card games, playing on slot machines, and betting on sports and other events. Gambling may take place in a range of settings, including casinos, betting offices, or at home.

“New psychoactive substances” (also known as novel psychoactive drugs, or popularly as ‘legal highs’) refers to newly emerging, psychoactive compounds (or products containing them) that are not controlled under the United Nations drug treaties of 1961 and 1971. They are often marketed as ‘legal’ alternatives to well-known illegal drugs, usually sold through the Internet or in smart shops or head shops. However, many of them may be regulated by food safety laws or national drug control legislation.

“National level” refers to the state as a whole. National policy documents are those that apply to the state as a whole, i.e. ALL of its jurisdictional regions.

“Policy” refers to the written strategies adopted by the government to address a specific issue (e.g., for drug use, such a document might be called a drugs policy, strategy, or action plan). A policy document would typically outline the current situation, specify priorities and/or aims, and outline actions that the government and other stakeholders will take in response. *Current* policy refers to policy that is still in use and has not been superseded by a more recent document. In this survey, legislation is not considered a policy but is seen as an instrument to achieve policy objectives. We ask that you only refer to legislation and other regulatory frameworks if a more strategic policy document does not exist in your country on the given subject.

“Regional level” refers to the jurisdictional regions within a state (first-level administrative divisions). Examples include devolved administrations in the United Kingdom, federal states (Länder) in Germany, regions in Italy and France, etc. Regional policy documents are those that apply only to one or more regions but not to the state as a whole (all jurisdictional regions).

“Young people” refers to anyone under the age of 25 years, including children. If the policy document you are describing refers to a different age range, then please specify this in your answers.

You will be able to access this page again during the questionnaire by clicking on the relevant links at the beginning of each section.

About you and your organisation

Please provide some information about yourself and your organisation. This information is only being collected so that we gain an understanding of who is completing the survey.

Your personal information (e.g., name and contact details) will not be shared with anyone outside of the project team and will not be used for any other purpose than this research.

1. What is your country (country for which you will be answering the questions in this survey)?

If other country, please specify:

2. Are you answering for the country as a whole or only for a jurisdictional region?

- I am answering for the country as a whole
 I am answering only for a jurisdictional region

If you are answering for a jurisdictional region only, which jurisdictional region is it? Please use the English name of the region, if available

3. Your name (optional)

4. Your e-mail address (optional)

So that we can contact you about your answers if needed, please provide a valid e-mail address. We will not contact you unless it is absolutely necessary or you have requested us to do so.

Please remember that we will ensure your anonymity. All reporting will only refer to roles in very general terms that will not allow identification. Identifying details will not be shared with anyone outside of the research team.

5. Name of your organisation/institution (mandatory)

Please also use the English name if possible

6. Position or job role in your organisation/institution (mandatory)

Please provide an English description if possible

7. Type of employer (select all that apply)

- National government
 Regional government
 University or other research institution
 Charity / Non-governmental organisation (NGO)
 Other (please specify):

8. How many years have you been working in your professional area?

_____ years

9. Your individual scope of work (select all that apply)

- Local
 Regional
 National
 International

10. What is your main area of work? (select all that apply)

Please answer accurately as your answer will determine what questions you receive in this survey and the length of time it will take you to complete it. Although overall we must collect information on all of these areas, we do not wish to place a disproportionate burden on your time with this survey. We therefore strongly recommend that you **indicate only 1-2** main areas of work.

- Alcohol policies
 Tobacco policies
 Illegal drugs policies
 Gambling policies
 None of the above
 Other (please specify):

In the online survey, the answer to this question determined which topics were addressed later on.

In order to help us collect information on all areas, after completing the questionnaire please forward the non-personalised survey weblink - <https://www.soscisurvey.de/alicerap/> - to a suitable colleague who can answer regarding the other areas of work that you can't cover. You will also have the opportunity to nominate a suitable colleague at the end of the survey.

Addressing young people's addictive behaviours through ALCOHOL policy

In the online survey, the alcohol section was only asked if "Alcohol policies" was a main area of respondent's work.

A. Identifying policies/strategies that are relevant to young people and alcohol

In the following sections, we wish to identify the most important policy documents relating to young people's alcohol use and investigate how young people are addressed therein (click [here](#) to open the definitions page again in a new window).

Please note: if you indicated that you work in more than one area, then you will find that the questions in this survey are repeated for each area of work. In each section of the survey, please answer the questions only in relation to the indicated topic (i.e. alcohol in this section).

11. Does your country currently have a written government policy/strategy on alcohol?

Please remember that for the purposes of this survey, legislation is not considered a policy in itself but is seen as an instrument to achieve policy objectives. Questions about legislation are included later in this survey.

- Yes, at a national level (covering all jurisdictional regions)
- Yes, but only at a regional level
- Yes, but only at a local level
- No, but such policy will be published within the next 12 months
- No, there are no written policies/strategies on alcohol

12. Does your country currently have legislation on alcohol?

- Yes, alcohol legislation is available
- No, there are no alcohol laws available

If the respondent indicated that there were no policies or laws available, then the next sections were skipped.

13. Do ALL regions / local authorities in your country have a written government policy/strategy on alcohol?

- Yes
- No
- Don't know

This question was only asked if policies were only available on regional/ local level.

As your country only has relevant legislation available (no separate policy or strategy), please answer concerning the most relevant piece of legislation in this area whenever the survey asks you about 'policy'.

This message was only shown if the respondent indicated that only legislation is available (no policies/strategies).

14. Does this policy focus on alcohol only or does it also address other topics?

- Only alcohol
- Alcohol as well as other topics

If you indicated that the policy addresses other topics in addition to alcohol, please indicate what the other topics are (select all that apply)

- Tobacco
- Illegal drugs
- New psychoactive substances ('legal highs')
- Gambling
- Other (please specify):

If you are completing this questionnaire for several topics and your country has a combined policy covering several areas, then some of your answers in this questionnaire may have to be the same in different areas (e.g., concerning development of the policy). In this case it is sufficient to answer the question the first time you see it. When the question is repeated in the next section and your answer would be the same, please write "same as previous".

15. Please provide bibliographic details of the key policy/strategy relating to alcohol

Please also provide relevant weblinks for original language versions of the policy. If this is not a national document then please also indicate which region(s) it applies to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English):

Other bibliographical details:

Weblink: http://

16. Is this document available in English?

Please also provide relevant weblinks for English language versions of the policy

- Yes, at this weblink: http://
- Yes but not available online
- No

17. Which government department/ministry has the MAIN responsibility (leadership) for delivery of this policy?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

18. Which other government departments/ministries are ALSO responsible for the delivery of this policy?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

19. To what extent are young people (including children) explicitly addressed in the key policy/strategy relating to alcohol?

- The policy does not explicitly mention young people
- The policy explicitly mentions young people but there is no separate section/chapter
- The policy features a separate section/chapter on young people
- The policy focuses primarily on young people

If the policy does not explicitly mention young people (including children), then what other specific populations is the policy directed toward?

20. Is this the main policy relating to young people and alcohol?

- Yes, the key policy described above is the most relevant policy document on young people and alcohol in this country
- No, there are subsidiary government policy documents **specifically** focussing on young people and alcohol
- Don't know

The rest of this section on policy availability was only asked if subsidiary government policy documents were available.

21. Please provide bibliographic details of the subsidiary policy documents which specifically focus on young people and alcohol

Please also provide relevant weblinks for original language versions of the policies. If these are not national documents then please also indicate which region(s) they apply to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English):

Other bibliographical details:

Weblink: http://

22. Are these documents available in English?

Please also provide relevant weblinks for English language versions of the policies

- Yes, at this weblink: http://
- Yes but not available online
- No

23. To what extent are young people (including children) explicitly addressed in these subsidiary policy documents/strategies?

- Explicitly mentions young people but there is no separate section/chapter
- Features a separate section/chapter on young people
- Focuses primarily on young people

24. Which government department/ministry has the MAIN responsibility (leadership) for DELIVERY of these subsidiary policies focussing specifically on young people and alcohol?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

25. Which other government departments/ministries are ALSO responsible for the delivery of these policies?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

If there is more than one subsidiary policy focussing specifically on young people and alcohol, please indicate clearly which department/ministry is mainly responsible for which policy.

26. Please rate the importance of these subsidiary policy documents in comparison to the key policy on alcohol

Take into account the practical relevance of the subsidiary policy documents in guiding the work of policy makers and other professionals in your country.

Please rate from 0 to 100 whereby 0 means "Not at all important" and 100 means "Very important":

- Don't know

B. Policy development

The following questions will ask you about how current policy has been developed. Please answer these questions in relation to the most important policy relating to young people and alcohol (depending on what you indicated in the previous questions). If you need to consult colleagues or additional documents in order to answer the questions in this section, please do so. You will be able to indicate the source of the information at the end of this section.

27. Please confirm which document you will refer to in the next questions (i.e. what you consider the most important policy document relating to young people and alcohol)

- Key policy document/strategy on alcohol
- Subsidiary policy documents **specifically focussing on young people** and alcohol (if any)

28. Why was this policy put in place? (select all that apply)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in alcohol-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction
- Media reporting on alcohol (e.g., alcohol-related incidents) / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

29. What was the MAIN reason for putting this policy in place? (tick one option only)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in alcohol-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction

- Media reporting on alcohol (e.g., alcohol-related incidents) / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

30. Which government department/ministry was responsible for DEVELOPING this policy?

You can select more than one department/ministry if there was joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

31. Who was explicitly involved in the development of the policy (e.g., determining its content and objectives)? (select all that apply)

- National government officials (e.g., policy makers, commissioners)
- Regional and local government officials (e.g., policy makers, commissioners)
- Health and social services (including drug and alcohol services and youth services)
- Police and Criminal justice sector representatives
- Voluntary sector/civil society (NGO)
- Industry representatives (e.g., producers and retailers of alcoholic beverages, the hospitality sector, the advertising industry, trade associations, self-regulatory associations)
- Academic experts
- Expert consultants
- Current or former problematic alcohol users (e.g., self-help groups)
- General public
- Young people
- Other (please specify):
- Don't know

32. Were YOU directly involved in the development of the policy?

- Yes
- No

If Yes, please describe your role in the development of the policy.

33. What methods and approaches were used to develop the content of the policy? (select all that apply)

- Needs assessment (e.g., of alcohol-related needs in the population)
- Expert meetings and consultations
- Public consultations (face to face)
- Public consultation (via Internet)
- Correspondence with party-political manifesto
- Consensus within the government department/ministry responsible for policy development
- Evaluation of existing programmes in the country (e.g., through Randomised Controlled Trials (RCT))
- Review of international scientific literature (e.g., on evidence of effectiveness)
- Evaluation of the previous alcohol strategy in this country
- Review of existing policies (at international level, in other countries)
- Review of good and best practice guidance
- Other (please specify):
- Don't know

Please provide further detail concerning your answer to the previous question. For example, describe the type of programme evaluations that have been carried out, criteria for selection and review of scientific evidence, the type of literature review, criteria for selection and review of good and best practice guidance, etc.

34. What is the source of the information which you provided in this section on policy development? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)
- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge

Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

C. Content of the policy

Now, we would like to know more about how young people are addressed in policy documents relating to alcohol. Please answer the following questions taking into account the key alcohol policy and any subsidiary policy documents which you listed earlier.

35. In this survey, “young people” refers to anyone under the age of 25 years, including children. If the alcohol policy documents explicitly refer to a different age range, then please specify this here.

36. What is considered as “problematic” alcohol use in your country’s alcohol policy documents?

For example, do the documents refer to ICD/DSM definitions of dependence/addiction, WHO definitions of hazardous/harmful drinking, or do they provide a bespoke national problem definition?

37. Which types of alcoholic beverages are explicitly addressed in alcohol policy overall? (select all that apply)

- All alcoholic beverages (i.e. policy does not single out particular types of alcoholic beverages)
- Beer
- Alcopops (premixed drinks)
- Wine
- Spirits
- Other (please specify):

38. Which types of alcoholic beverages are explicitly addressed in alcohol policy in relation to young people? (select all that apply)

- Same as above (i.e. policy does not distinguish between young people and the general population with regard to types of beverages)
- All alcoholic beverages (i.e. policy does not single out particular types of alcoholic beverages)
- Beer
- Alcopops (premixed drinks)
- Wine
- Spirits
- Other (please specify):

Please also indicate which policy documents you were referring to in the previous two questions, and indicate page numbers where possible.

39. Does alcohol policy explicitly refer to any specific sub-groups of young people? (select all that apply)

- The policy does not refer to specific sub-groups of young people
- Young people under the legal age for buying alcohol
- First years of life (prenatal, neonates, babies and very young children)
- Young people whose parents or family members are problematic alcohol users
- Young people from families with complex needs (e.g., poverty)
- Young people from ethnic minority groups
- School pupils
- Truants and pupils excluded from mainstream education
- College and university students
- Young drivers
- Young people in institutional care (not criminal justice system)
- Young offenders
- Young people with ill mental health
- Young people with behavioural problems
- Young people at risk of developing problematic alcohol use (risk factors not specified)
- Young people who already use alcohol in a problematic way
- Young people who are alcohol dependent
- Other (please specify):

40. With regard to young people’s alcohol use/dependence, what issues and priorities are identified in alcohol policy?

Please also indicate which policy document you are referring to, and indicate page numbers where possible.

41. What are the defined goals and objectives or desired outcomes for young people in alcohol policy?

If the policy sets any quantifiable targets or indicators for success, then please include these (e.g., reduce number of young people reporting alcohol use by 50%). Please also indicate which policy document you are referring to, and indicate page numbers where possible.

42. What strategies, approaches, programmes and/or interventions are described in policy to produce the desired outcomes relating to young people's alcohol use/dependence?

Please do not describe what is currently available in your country but only what is explicitly described in the policy document. If the policy document refers to a specific programme, please include a brief description so that we can understand what type of activity it is. Please also indicate which policy document you are referring to, and indicate page numbers where possible.

43. Please indicate if the policy includes universal, selective, indicated, and/or environmental approaches (select all that apply)

Note that the policy document may not use this terminology – please read the short definitions provided in the answer options to determine whether the policy includes this type of strategy or not.

- Universal** - addressing an entire population irrespective of risk level, e.g., all school children
- Selective** - addressing specific sub-populations whose risk of developing alcohol dependence is significantly higher than average, either imminently or over their lifetime, e.g., based on their socio-economic background
- Indicated** - addressing individuals who have a higher risk of developing alcohol dependence, e.g., those who are already using alcohol
- Environmental** - addressing the cultural, social, physical, and economic environments in which people make their choices about alcohol use, e.g., legislation/regulation, social norms, built environment

44. Thinking back to how policies are developed, were there any additional criteria or reasons for the choice of the strategies, approaches, programmes and/or interventions you listed above?

For example, evidence to support a certain approach

45. Does the policy include any restrictions in relation to alcohol advertising/marketing and young people?

For example, restrictions to ensure that alcohol advertising is not targeted at young people and does not feature images or messages which are likely to appeal to young people

- Yes, and these restrictions are enforced by the state
- Yes, but these restrictions are based on a voluntary commitment by the alcohol industry
- No
- Other (please specify):

If the policy imposes no restrictions, please tell us why not.

46. With regard to young people and alcohol advertising/marketing, what restrictions are described in alcohol policy?

47. Please indicate which policy document you were referring to in the previous questions on advertising/marketing, and indicate page numbers where possible.

If this is a **separate** document that you have not mentioned so far, then please also provide bibliographic details (title, year of publication, publishing institution – in the original language and in English).

D. Policy changes in recent years

The following questions ask about how policy has changed in recent years. Please answer in relation to the key alcohol policy and any subsidiary policy documents which you listed earlier.

48. Between the year 2000 and the introduction of the current policies described above, what previous policies and strategies were in place regarding alcohol?

Please list bibliographical details for each preceding policy (title, year of publication, publishing institution – in the original language and in English). Please include general alcohol policies as well as documents focussing specifically on alcohol and young people. If the current policies are the first policies available, please tick 'no previous policies'.

- No previous policies
- Don't know

The rest of this section on policy changes was only asked if previous policies were available.

49. Have there been any major changes between previous and current policies?

- Yes
- No
- Don't know

If Yes, what are the major changes between previous policies and current policies? (select all that apply)

- Change in goals and priorities (e.g., alcohol as a health issue versus alcohol as a criminal justice issue)
- Change in target population
- Change in policy approaches and strategies
- Change in the level of industry involvement
- Change in how policy is delivered (e.g., shift in responsibilities to other bodies, creation of new bodies)
- Change in funding structures
- Other (please specify):

Please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

50. Have there been any major changes concerning young people between previous and current policies?

- Yes
- No
- Don't know

If Yes, please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

51. What is the source of the information which you provided in this section on policy changes? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)
- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge
- Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

E. Implementation, monitoring and evaluation

The following questions ask about how policies are implemented, monitored and evaluated. Please answer in relation to the key alcohol policy and any subsidiary policy documents which you listed earlier.

52. What legislation and other regulatory frameworks are in place to support the implementation and success of policies relating to alcohol and young people?

Please focus on the MOST IMPORTANT regulatory frameworks and summarise for each one how it contributes to the achievement of policy objectives.

53. Is there specific legislation to control alcohol advertising/marketing on the internet?

- Yes
- No
- Don't know

54. Is there a minimum legal age for DRINKING alcohol in your country, and if so, what is it?

_____ years

Please provide additional commentary if you feel it is relevant (e.g., different age limits concerning different types of alcoholic beverages, regional differences).

55. What is the minimum legal age for BUYING alcohol in your country?

_____ years

Please provide additional commentary if you feel it is relevant (e.g., different age limits on- or off-premise, different age limits concerning different types of alcoholic beverages, regional differences).

56. Is the implementation and effectiveness of policies relating to alcohol and young people monitored?

- Yes
- No
- Don't know

57. Have any of the alcohol policies mentioned above been evaluated?

Including key and subsidiary documents, current and previous policies

- Yes
- No
- No, but an evaluation is planned for the future
- Don't know

Questions on monitoring were only asked if policies were monitored.

58. Who is in charge of monitoring policy implementation and effectiveness?

- Government department/ministry responsible for policy development and implementation
- Other government department/ministry
- External agency (e.g., consultancy) commissioned by government
- Local authorities
- Other (please specify):

59. Please provide details of the methods used to monitor the implementation and effectiveness of policies relating to alcohol and young people (including which indicators are used).

Questions on evaluation were only asked if policies had been evaluated.

60. What type of evaluation has been carried out?

You can select more than one answer if several different evaluations have been carried out.

- Internal evaluation by government department/ministry responsible for policy development and implementation
- Internal evaluation by other government department/ministry
- External evaluation commissioned by government (e.g., consultancy)
- External evaluation independent of government (e.g., academic research not commissioned by government)
- Other (please specify):

61. Please summarise the main findings of the outcome evaluation, listing relevant outcome indicators and results (e.g., behaviour change).

62. Please summarise the main findings of the process evaluation, listing relevant process indicators and results (e.g., implementation fidelity).

63. Please provide bibliographical details of relevant publications (e.g., evaluation report, scientific paper).

For example: author, title, publishing institution, year of publication – in the original language and in English

64. Are any of these documents available in English?

- Yes
- No

65. Please provide relevant weblinks for original language and English language versions of the evaluations if available.

Weblink original language: http://

Weblink English: http://

The next few questions ask for your **individual** expert opinion on the implementation and effectiveness of policy. Please answer as honestly as possible, even if your individual opinion on this issue is not in line with the official position of the organisation you work for. Remember that this survey is completely anonymous and respondents will not be identified individually; information on your name, organisation or job title will **not** be published.

66. In your expert opinion, how well have policies relating to alcohol and young people been implemented (enforced) in reality?

Please rate from 0 to 100 whereby 0 means "Very poor implementation" and 100 means "Very good implementation":

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

67. In your expert opinion, how successful (effective) have policies relating to alcohol and young people been in achieving their goals?

Please rate from 0 to 100 whereby 0 means "Not at all successful" and 100 means "Very successful":

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

68. Are YOU directly involved in monitoring and/or evaluating policy implementation and effectiveness?

- Yes
- No

If Yes, please describe your role in monitoring and/or evaluating policy.

69. Please list the most important national and regional surveys and monitoring systems measuring alcohol use in the general population.

This can also include internationally conducted studies if they provide nationally representative data.

70. Please list the most important national and regional surveys and monitoring systems measuring alcohol use among young people.

This can also include internationally conducted studies if they provide nationally representative data.

71. Are any of the surveys you listed in the previous questions used to monitor the success of policies?

- Yes
- No
- Don't know

If Yes, please state which surveys are specifically used to monitor policy success.

F. Resources allocated to young people and alcohol

Finally, we wish to find out more about resource allocation regarding young people and alcohol use in your country.

72. What is the recent trend (past several years) in resource allocation to policies and programmes addressing young people and alcohol?

- Large increase in resources
- Small increase in resources
- No or little change in resources
- Small decrease in resources
- Large decrease in resources
- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples and citing relevant sources to support your rating.

73. Are funds dedicated to policies and programmes addressing young people and alcohol clearly identifiable in the most recent national budget?

- Yes
- No
- Don't know

If Yes, what was the amount of funds allocated to policies and programmes addressing young people and alcohol in the most recent national budget?

Euro: €

As percentage of total budget: %

Budget year:

74. What is state revenue generated from the sales of alcoholic beverages directly used for? (select all that apply)

This includes general taxation as well as industry-specific taxation (e.g., VAT, alcohol duty, corporate tax).

- Research on alcohol and alcohol-related problems
- Prevention activities (e.g., media campaigns for alcohol education)
- Treatment for alcohol dependence
- Charitable activities not related to alcohol
- Sports events
- Other (please specify):
- Don't know

75. Does the alcohol industry voluntarily fund any of the following activities directly or indirectly (e.g., through an associated charity)? (select all that apply)

Industry includes producers and retailers of alcoholic beverages, the hospitality sector, the advertising industry, trade associations, and self-regulatory associations.

- Research on alcohol and alcohol-related problems
- Prevention activities (e.g., media campaigns for alcohol education)
- Treatment for alcohol dependence
- Charitable activities not related to alcohol
- Other (please specify):
- Don't know

Please feel free to provide additional commentary regarding this section if you wish.

Addressing young people's addictive behaviours through TOBACCO policy

In the online survey, the tobacco section was only asked if "Tobacco policies" was a main area of respondent's work.

A. Identifying policies/strategies that are relevant to young people and tobacco

In the following sections, we wish to identify the most important policy documents relating to young people's use of cigarettes and other tobacco products (hereafter referred to as "tobacco use") and investigate how young people are addressed therein (click [here](#) to open the definitions page again in a new window).

Please note: if you indicated that you work in more than one area, then you will find that the questions in this survey are repeated for each area of work. In each section of the survey, please answer the questions only in relation to the indicated topic (i.e. tobacco in this section).

76. Does your country currently have a written government policy/strategy on tobacco?

Please remember that for the purposes of this survey, legislation is not considered a policy in itself but is seen as an instrument to achieve policy objectives. Questions about legislation are included later in this survey.

- Yes, at a national level (covering all jurisdictional regions)

- Yes, but only at a regional level
- Yes, but only at a local level
- No, but such policy will be published within the next 12 months
- No, there are no written policies/strategies on tobacco

77. Does your country currently have legislation on tobacco?

- Yes, tobacco legislation is available
- No, there are no tobacco laws available

If the respondent indicated that there were no policies or laws available, then the next sections were skipped.

78. Do ALL regions / local authorities in your country have a written government policy/strategy on tobacco?

- Yes
- No
- Don't know

This question was only asked if policies were only available on regional/ local level.

As your country only has relevant legislation available (no separate policy or strategy), please answer concerning the most relevant piece of legislation in this area whenever the survey asks you about 'policy'.

This message was only shown if the respondent indicated that only legislation was available (no policies/strategies).

79. Does this policy focus on tobacco only or does it also address other topics?

- Only tobacco
- Tobacco as well as other topics

If you indicated that the policy addresses other topics in addition to tobacco, please indicate what the other topics are (select all that apply)

- Alcohol
- Illegal drugs
- New psychoactive substances ('legal highs')
- Gambling
- Other (please specify):

If you are completing this questionnaire for several topics and your country has a combined policy covering several areas, then some of your answers in this questionnaire may have to be the same in different areas (e.g., concerning development of the policy). In this case it is sufficient to answer the question the first time you see it. When the question is repeated in the next section and your answer would be the same, please write "same as previous".

80. Please provide bibliographic details of the key policy/strategy relating to tobacco

Please also provide relevant weblinks for original language versions of the policy. If this is not a national document then please also indicate which region(s) it applies to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English) :

Other bibliographical details:

Weblink: http://

81. Is this document available in English?

Please also provide relevant weblinks for English language versions of the policy

- Yes, at this weblink: http://
- Yes but not available online
- No

82. Which government department/ministry has the MAIN responsibility (leadership) for delivery of this policy?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

83. Which other government departments/ministries are ALSO responsible for the delivery of this policy?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

84. To what extent are young people (including children) explicitly addressed in the key policy/strategy relating to tobacco?

- The policy does not explicitly mention young people
- The policy explicitly mentions young people but there is no separate section/chapter
- The policy features a separate section/chapter on young people
- The policy focuses primarily on young people

If the policy does not explicitly mention young people (including children), then what other specific populations is the policy directed toward?

85. Is this the main policy relating to young people and tobacco?

- Yes, the key policy described above is the most relevant policy document on young people and tobacco in this country
- No, there are subsidiary government policy documents **specifically** focussing on young people and tobacco
- Don't know

The rest of this section on policy availability was only asked if subsidiary government policy documents were available.

Please provide bibliographic details of the subsidiary policy documents which specifically focus on young people and tobacco

Please also provide relevant weblinks for original language versions of the policies. If these are not national documents then please also indicate which region(s) they apply to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English) :

Other bibliographical details:

Weblink: http://

86. Are these documents available in English?

Please also provide relevant weblinks for English language versions of the policies

- Yes, at this weblink: http://
- Yes but not available online
- No

87. To what extent are young people (including children) explicitly addressed in these subsidiary policy documents/strategies?

- Explicitly mentions young people but there is no separate section/chapter
- Features a separate section/chapter on young people
- Focuses primarily on young people

88. Which government department/ministry has the MAIN responsibility (leadership) for DELIVERY of these subsidiary policies focussing specifically on young people and tobacco?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

89. Which other government departments/ministries are ALSO responsible for the delivery of these policies?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

If there is more than one subsidiary policy focussing specifically on young people and tobacco, please indicate clearly which department/ministry is mainly responsible for which policy.

90. Please rate the importance of these subsidiary policy documents in comparison to the key policy on tobacco

Take into account the practical relevance of the subsidiary policy documents in guiding the work of policy makers and other professionals in your country.

Please rate from 0 to 100 whereby 0 means "Not at all important" and 100 means "Very important":

() Don't know

B. Policy development

The following questions will ask you about how current policy has been developed. Please answer these questions in relation to the most important policy relating to young people and tobacco (depending on what you indicated in the previous questions). If you need to consult colleagues or additional documents in order to answer the questions in this section, please do so. You will be able to indicate the source of the information at the end of this section.

91. Please confirm which document you will refer to in the next questions (i.e. what you consider the most important policy document relating to young people and tobacco)

- Key policy document/strategy on tobacco
- Subsidiary policy documents **specifically focussing on young people** and tobacco (if any)

92. Why was this policy put in place? (select all that apply)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in tobacco-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction
- Media reporting on tobacco (e.g., new mortality statistics) / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

93. What was the MAIN reason for putting this policy in place? (tick one option only)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in tobacco-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction
- Media reporting on tobacco (e.g., new mortality statistics) / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

94. Which government department/ministry was responsible for DEVELOPING this policy?

You can select more than one department/ministry if there was joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar

- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

95. Who was explicitly involved in the development of the policy (e.g., determining its content and objectives)? (select all that apply)

- National government officials (e.g., policy makers, commissioners)
- Regional and local government officials (e.g., policy makers, commissioners)
- Health and social services (including smoking cessation services and youth services)
- Police and Criminal justice sector representatives
- Voluntary sector/civil society (NGO)
- Industry representatives (e.g., producers and retailers of tobacco products, the advertising industry, trade associations, self-regulatory associations)
- Academic experts
- Expert consultants
- Current or former smokers
- General public
- Young people
- Other (please specify):
- Don't know

96. Were YOU directly involved in the development of the policy?

- Yes
- No

If Yes, please describe your role in the development of the policy.

97. What methods and approaches were used to develop the content of the policy? (select all that apply)

- Needs assessment (e.g., of tobacco-related needs in the population)
- Expert meetings and consultations
- Public consultations (face to face)
- Public consultation (via Internet)
- Correspondence with party-political manifesto
- Consensus within the government department/ministry responsible for policy development
- Evaluation of existing programmes in the country (e.g., through Randomised Controlled Trials (RCT))
- Review of international scientific literature (e.g., on evidence of effectiveness)
- Evaluation of the previous tobacco strategy in this country
- Review of existing policies (at international level, in other countries)
- Review of good and best practice guidance
- Other (please specify):
- Don't know

Please provide further detail concerning your answer to the previous question. For example, describe the type of programme evaluations that have been carried out, criteria for selection and review of scientific evidence, the type of literature review, criteria for selection and review of good and best practice guidance, etc.

98. What is the source of the information which you provided in this section on policy development? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)
- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge
- Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

C. Content of the policy

Now, we would like to know more about how young people are addressed in policy documents relating to tobacco. Please answer the following questions taking into account the key tobacco policy and any subsidiary policy documents which you listed earlier.

99. In this survey, "young people" refers to anyone under the age of 25 years, including children. If the tobacco policy documents explicitly refer to a different age range, then please specify this here.

100. What is considered as “problematic” tobacco use in your country’s tobacco policy documents?

For example, do the documents refer to ICD/DSM definitions of dependence/addiction or do they provide a bespoke national problem definition?

101. Which tobacco products are explicitly addressed in tobacco policy overall? (select all that apply)

- All tobacco products (i.e. policy does not single out particular products)
- Cigarettes
- Rolling tobacco
- Pipes
- Cigars
- Tobacco for smokeless oral use (e.g., chewing tobacco, snus)
- Waterpipes (e.g., shisha)
- Electronic cigarettes
- Other (please specify):

102. Which tobacco products are explicitly addressed in tobacco policy in relation to young people? (select all that apply)

- Same as above (i.e. policy does not distinguish between young people and the general population with regard to tobacco products)
- All tobacco products (i.e. policy does not single out particular products)
- Cigarettes
- Rolling tobacco
- Pipes
- Cigars
- Tobacco for smokeless oral use (e.g., chewing tobacco, snus)
- Waterpipes (e.g., shisha)
- Electronic cigarettes
- Other (please specify):

Please also indicate which policy documents you were referring to in the previous two questions, and indicate page numbers where possible.

103. Does tobacco policy explicitly refer to any specific sub-groups of young people? (select all that apply)

- The policy does not refer to specific sub-groups of young people
- Young people under the legal age for buying cigarettes and other tobacco products
- First years of life (prenatal, neonates, babies and very young children)
- Young people whose parents or family members smoke cigarettes
- Young people from families with complex needs (e.g., poverty)
- Young people from ethnic minority groups
- School pupils
- Truants and pupils excluded from mainstream education
- College and university students
- Young people in institutional care (not criminal justice system)
- Young offenders
- Young people with ill mental health
- Young people with behavioural problems
- Young people at risk of using tobacco (risk factors not specified)
- Young people who already use tobacco
- Young people who are tobacco dependent
- Other (please specify):

104. With regard to young people’s tobacco use/dependence, what issues and priorities are identified in tobacco policy?

Please also indicate which policy document you are referring to, and indicate page numbers where possible.

105. What are the defined goals and objectives or desired outcomes for young people in tobacco policy?

If the policy sets any quantifiable targets or indicators for success, then please include these (e.g., reduce number of young people reporting daily cigarette smoking by 50%). Please also indicate which policy document you are referring to, and indicate page numbers where possible.

106. What strategies, approaches, programmes and/or interventions are described in policy to produce the desired outcomes relating to young people’s tobacco use/dependence?

Please do not describe what is currently available in your country but only what is explicitly described in the policy document. If the policy document refers to a specific programme, please include a brief description so that we can understand what type of activity it is. Please also indicate which policy document you are referring to, and indicate page numbers where possible.

107. Please indicate if the policy includes universal, selective, indicated, and/or environmental approaches (select all that apply)

Note that the policy document may not use this terminology – please read the short definitions provided in the answer options to determine whether the policy includes this type of strategy or not.

- Universal** - addressing an entire population irrespective of risk level, e.g., all school children
- Selective** - addressing specific sub-populations whose risk of developing tobacco dependence is significantly higher than average, either imminently or over their lifetime, e.g., based on their socio-economic background

[] **Indicated** - addressing individuals who have a higher risk of developing tobacco dependence, e.g., those who are already using tobacco

[] **Environmental** - addressing the cultural, social, physical, and economic environments in which people make their choices about tobacco use, e.g., legislation/regulation, social norms, built environment

108. Thinking back to how policies are developed, were there any additional criteria or reasons for the choice of the strategies, approaches, programmes and/or interventions you listed above?

For example, evidence to support a certain approach

109. Does the policy include any restrictions in relation to tobacco advertising/marketing and young people?

For example, restrictions to ensure that tobacco advertising is not targeted at young people and does not feature images or messages which are likely to appeal to young people

- Yes, and these restrictions are enforced by the state
- Yes, but these restrictions are based on a voluntary commitment by the tobacco industry
- No
- Other (please specify):

If the policy imposes no restrictions, please tell us why not.

110. With regard to young people and tobacco advertising/marketing, what restrictions are described in tobacco policy?

111. Please indicate which policy document you were referring to in the previous questions on advertising/marketing, and indicate page numbers where possible.

If this is a **separate** document that you have not mentioned so far, then please also provide bibliographic details (title, year of publication, publishing institution – in the original language and in English).

D. Policy changes in recent years

The following questions ask about how policy has changed in recent years. Please answer in relation to the key tobacco policy and any subsidiary policy documents which you listed earlier.

112. Between the year 2000 and the introduction of the current policies described above, what previous policies and strategies were in place regarding tobacco?

Please list bibliographical details for each preceding policy (title, year of publication, publishing institution – in the original language and in English). Please include general tobacco policies as well as documents focussing specifically on tobacco and young people. If the current policies are the first policies available, please tick 'no previous policies'.

- No previous policies
- Don't know

The rest of this section on policy changes was only asked if previous policies were available.

113. Have there been any major changes between previous and current policies?

- Yes
- No
- Don't know

If Yes, what are the major changes between previous policies and current policies? (select all that apply)

- Change in goals and priorities
- Change in target population
- Change in policy approaches and strategies
- Change in the level of industry involvement
- Change in how policy is delivered (e.g., shift in responsibilities to other bodies, creation of new bodies)
- Change in funding structures
- Other (please specify):

Please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

114. Have there been any major changes concerning young people between previous and current policies?

- Yes
- No
- Don't know

If Yes, please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

115. What is the source of the information which you provided in this section on policy changes? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)

- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge
- Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

E. Implementation, monitoring and evaluation

The following questions ask about how policies are implemented, monitored and evaluated. Please answer in relation to the key tobacco policy and any subsidiary policy documents which you listed earlier.

116. What legislation and other regulatory frameworks are in place to support the implementation and success of policies relating to tobacco and young people?

Please focus on the MOST IMPORTANT regulatory frameworks and summarise for each one how it contributes to the achievement of policy objectives.

117. Is there specific legislation to control tobacco advertising/marketing on the internet?

- Yes
- No
- Don't know

118. Is there a minimum legal age for SMOKING cigarettes and other tobacco products in your country, and if so, what is it?

_____ years

Please provide additional commentary if you feel it is relevant.

119. What is the minimum legal age for BUYING cigarettes and other tobacco products in your country?

_____ years

Please provide additional commentary if you feel it is relevant.

120. Is the implementation and effectiveness of policies relating to tobacco and young people monitored?

- Yes
- No
- Don't know

121. Have any of the tobacco policies mentioned above been evaluated?

Including key and subsidiary documents, current and previous policies

- Yes
- No
- No, but an evaluation is planned for the future
- Don't know

Questions on monitoring were only asked if policies were monitored.

122. Who is in charge of monitoring policy implementation and effectiveness?

- Government department/ministry responsible for policy development and implementation
- Other government department/ministry
- External agency (e.g., consultancy) commissioned by government
- Local authorities
- Other (please specify):

123. Please provide details of the methods used to monitor the implementation and effectiveness of policies relating to tobacco and young people (including which indicators are used).

Questions on evaluation were only asked if policies had been evaluated.

124. What type of evaluation has been carried out?

You can select more than one answer if several different evaluations have been carried out.

- Internal evaluation by government department/ministry responsible for policy development and implementation
- Internal evaluation by other government department/ministry
- External evaluation commissioned by government (e.g., consultancy)
- External evaluation independent of government (e.g., academic research not commissioned by government)
- Other (please specify):

125. Please summarise the main findings of the outcome evaluation, listing relevant outcome indicators and results (e.g., behaviour change).

126. Please summarise the main findings of the process evaluation, listing relevant process indicators and results (e.g., implementation fidelity).

127. Please provide bibliographical details of relevant publications (e.g., evaluation report, scientific paper).

For example: author, title, publishing institution, year of publication – in the original language and in English

128. Are any of these documents available in English?

- Yes
- No

129. Please provide relevant weblinks for original language and English language versions of the evaluations if available.

Weblink original language: http://

Weblink English: http://

The next few questions ask for your **individual** expert opinion on the implementation and effectiveness of policy. Please answer as honestly as possible, even if your individual opinion on this issue is not in line with the official position of the organisation you work for. Remember that this survey is completely anonymous and respondents will not be identified individually; information on your name, organisation or job title will **not** be published.

130. In your expert opinion, how well have policies relating to tobacco and young people been implemented (enforced) in reality?

Please rate from 0 to 100 whereby 0 means “Very poor implementation” and 100 means “Very good implementation”:

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

131. In your expert opinion, how successful (effective) have policies relating to tobacco and young people been in achieving their goals?

Please rate from 0 to 100 whereby 0 means “Not at all successful” and 100 means “Very successful”:

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

132. Are YOU directly involved in monitoring and/or evaluating policy implementation and effectiveness?

- Yes
- No

If Yes, please describe your role in monitoring and/or evaluating policy.

133. Please list the most important national and regional surveys and monitoring systems measuring use of cigarettes and other tobacco products in the general population.

This can also include internationally conducted studies if they provide nationally representative data.

134. Please list the most important national and regional surveys and monitoring systems measuring use of cigarettes and other tobacco products among young people.

This can also include internationally conducted studies if they provide nationally representative data.

135. Are any of the surveys you listed in the previous questions used to monitor the success of policies?

- Yes
- No
- Don't know

If Yes, please state which surveys are specifically used to monitor policy success.

F. Resources allocated to young people and tobacco

Finally, we wish to find out more about resource allocation regarding young people and tobacco use in your country.

136. What is the recent trend (past several years) in resource allocation to policies and programmes addressing young people and tobacco?

- Large increase in resources
- Small increase in resources
- No or little change in resources
- Small decrease in resources
- Large decrease in resources
- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples and citing relevant sources to support your rating.

137. Are funds dedicated to policies and programmes addressing young people and tobacco clearly identifiable in the most recent national budget?

- Yes
- No
- Don't know

If Yes, what was the amount of funds allocated to policies and programmes addressing young people and tobacco in the most recent national budget?

Euro: €

As percentage of total budget: %

Budget year:

138. What is state revenue generated from the sales of tobacco products directly used for? (select all that apply)

This includes general taxation as well as industry-specific taxation (e.g., VAT, tobacco duty, corporate tax).

- Research on tobacco and tobacco-related problems
- Prevention activities (e.g., media campaigns for tobacco education)
- Smoking cessation and other treatment programmes
- Charitable activities not related to tobacco
- Sports events
- Other (please specify):
- Don't know

139. Does the tobacco industry voluntarily fund any of the following activities directly or indirectly (e.g., through an associated charity)? (select all that apply)

Industry includes producers and retailers of tobacco products, the advertising industry, trade associations, and self-regulatory associations.

- Research on tobacco and tobacco-related problems
- Prevention activities (e.g., media campaigns for tobacco education)
- Smoking cessation and other treatment programmes
- Charitable activities not related to tobacco
- Other (please specify):
- Don't know

Please feel free to provide additional commentary regarding this section if you wish.

Addressing young people's addictive behaviours through ILLEGAL DRUGS policy

In the online survey, the illegal drugs section was only asked if "Illegal drugs policies" was a main area of respondent's work.

A. Identifying policies/strategies that are relevant to young people and illegal drugs

In the following sections, we wish to identify the most important policy documents relating to young people's illegal drug use and investigate how young people are addressed therein (click [here](#) to open the definitions page again in a new window).

Please note: if you indicated that you work in more than one area, then you will find that the questions in this survey are repeated for each area of work. In each section of the survey, please answer the questions only in relation to the indicated topic (i.e. illegal drugs in this section).

140. Does your country currently have a written government policy/strategy on illegal drugs?

Please remember that for the purposes of this survey, legislation is not considered a policy in itself but is seen as an instrument to achieve policy objectives. Questions about legislation are included later in this survey.

- Yes, at a national level (covering all jurisdictional regions)
- Yes, but only at a regional level
- Yes, but only at a local level
- No, but such policy will be published within the next 12 months
- No, there are no written policies/strategies on illegal drugs

141. Does your country currently have legislation on illegal drugs?

- Yes, legislation on illegal drugs is available
- No, there are no drug control laws available

If the respondent indicated that there were no policies or laws available, then the next sections were skipped.

142. Do ALL regions / local authorities in your country have a written government policy/strategy on illegal drugs?

- Yes
- No
- Don't know

This question was only asked if policies were only available on regional/ local level.

As your country only has relevant legislation available (no separate policy or strategy), please answer concerning the most relevant piece of legislation in this area whenever the survey asks you about 'policy'.

This message was only shown if the respondent indicated that only legislation was available (no policies/strategies).

143. Does this policy focus on illegal drugs only or does it also address other topics?

- Only illegal drugs
- Illegal drugs as well as other topics

If you indicated that the policy addresses other topics in addition to illegal drugs, please indicate what the other topics are (select all that apply)

- Alcohol
- Tobacco
- New psychoactive substances ('legal highs')
- Gambling
- Other (please specify):

If you are completing this questionnaire for several topics and your country has a combined policy covering several areas, then some of your answers in this questionnaire may have to be the same in different areas (e.g., concerning development of the policy). In this case it is sufficient to answer the question the first time you see it. When the question is repeated in the next section and your answer would be the same, please write "same as previous".

144. Please provide bibliographic details of the key policy/strategy relating to illegal drugs

Please also provide relevant weblinks for original language versions of the policy. If this is not a national document then please also indicate which region(s) it applies to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English) :

Other bibliographical details:

Weblink: http://

145. Is this document available in English?

Please also provide relevant weblinks for English language versions of the policy

- Yes, at this weblink: http://
- Yes but not available online
- No

146. Is the information on the EMCDDA Portal on national drug strategies up-to-date concerning your country?

If you are unsure please visit the Portal at <http://www.emcdda.europa.eu/policy-and-law/national/strategies> (link opens in a new window)

- Yes
- No

If you indicated that the information on the EMCDDA Portal is not up-to-date, please explain why (e.g., new drugs policy recently been introduced)

147. Which government department/ministry has the MAIN responsibility (leadership) for delivery of the key drugs policy?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

148. Which other government departments/ministries are ALSO responsible for the delivery of this policy?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar

- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

149. To what extent are young people (including children) explicitly addressed in the key policy/strategy relating to illegal drugs?

- The policy does not explicitly mention young people
- The policy explicitly mentions young people but there is no separate section/chapter
- The policy features a separate section/chapter on young people
- The policy focuses primarily on young people

If the policy does not explicitly mention young people (including children), then what other specific populations is the policy directed toward?

150. Is this the main policy relating to young people and illegal drugs?

- Yes, the key policy described above is the most relevant policy document on young people and illegal drugs in this country
- No, there are subsidiary government policy documents **specifically** focussing on young people and illegal drugs
- Don't know

The rest of this section on policy availability was only asked if subsidiary government policy documents were available.

Please provide bibliographic details of the subsidiary policy documents which specifically focus on young people and illegal drugs

Please also provide relevant weblinks for original language versions of the policies. If these are not national documents then please also indicate which region(s) they apply to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English) :

Other bibliographical details:

Weblink: http://

151. Are these documents available in English?

Please also provide relevant weblinks for English language versions of the policies

- Yes, at this weblink: http://
- Yes but not available online
- No

152. To what extent are young people (including children) explicitly addressed in these subsidiary policy documents/strategies?

- Explicitly mentions young people but there is no separate section/chapter
- Features a separate section/chapter on young people
- Focuses primarily on young people

153. Which government department/ministry has the MAIN responsibility (leadership) for DELIVERY of these subsidiary policies focussing specifically on young people and illegal drugs?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

154. Which other government departments/ministries are ALSO responsible for the delivery of these policies?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar

- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

If there is more than one subsidiary policy focussing specifically on young people and illegal drugs, please indicate clearly which department/ministry is mainly responsible for which policy.

155. Please rate the importance of these subsidiary policy documents in comparison to the key policy on illegal drugs

Take into account the practical relevance of the subsidiary policy documents in guiding the work of policy makers and other professionals in your country.

Please rate from 0 to 100 whereby 0 means "Not at all important" and 100 means "Very important":

- Don't know

B. Policy development

The following questions will ask you about how current policy has been developed. Please answer these questions in relation to the most important policy relating to young people and illegal drugs (depending on what you indicated in the previous questions). If you need to consult colleagues or additional documents in order to answer the questions in this section, please do so. You will be able to indicate the source of the information at the end of this section.

156. Please confirm which document you will refer to in the next questions (i.e. what you consider the most important policy document relating to young people and illegal drugs)

- Key policy document/strategy on illegal drugs
- Subsidiary policy documents **specifically focussing on young people** and illegal drugs (if any)

157. Why was this policy put in place? (select all that apply)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in drug-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction
- Media reporting on illegal drugs / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

158. What was the MAIN reason for putting this policy in place? (tick one option only)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in drug-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction
- Media reporting on illegal drugs / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

159. Which government department/ministry was responsible for DEVELOPING this policy?

You can select more than one department/ministry if there was joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- Other (please specify):

160. Who was explicitly involved in the development of the policy (e.g., determining its content and objectives)? (select all that apply)

- National government officials (e.g., policy makers, commissioners)
- Regional and local government officials (e.g., policy makers, commissioners)
- Health and social services (including drugs services and youth services)
- Police and Criminal justice sector representatives
- Voluntary sector/civil society (NGO)
- Industry representatives (e.g., producers and retailers of legal highs, trade associations)
- Academic experts
- Expert consultants
- Current or former drug users (e.g., self-help groups)
- General public
- Young people
- Other (please specify):
- Don't know

161. Were YOU directly involved in the development of the policy?

- Yes
- No

If Yes, please describe your role in the development of the policy.

162. What methods and approaches were used to develop the content of the policy? (select all that apply)

- Needs assessment (e.g., of drug-related needs in the population)
- Expert meetings and consultations
- Public consultations (face to face)
- Public consultation (via Internet)
- Correspondence with party-political manifesto
- Consensus within the government department/ministry responsible for policy development
- Evaluation of existing programmes in the country (e.g., through Randomised Controlled Trials (RCT))
- Review of international scientific literature (e.g., on evidence of effectiveness)
- Evaluation of the previous drugs strategy in this country
- Review of existing policies (at international level, in other countries)
- Review of good and best practice guidance
- Other (please specify):
- Don't know

Please provide further detail concerning your answer to the previous question. For example, describe the type of programme evaluations that have been carried out, criteria for selection and review of scientific evidence, the type of literature review, criteria for selection and review of good and best practice guidance, etc.

163. What is the source of the information which you provided in this section on policy development? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)
- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge
- Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

C. Content of the policy

Now, we would like to know more about how young people are addressed in policy documents relating to illegal drugs. Please answer the following questions taking into account the key drugs policy and any subsidiary policy documents which you listed earlier.

164. In this survey, “young people” refers to anyone under the age of 25 years, including children. If the drugs policy documents explicitly refer to a different age range, then please specify this here.

165. What is considered as “problematic” drug use in your country’s drug policy documents?

For example, do the documents refer to ICD/DSM definitions of dependence/addiction or do they provide a bespoke national problem definition?

166. Which substances are explicitly addressed in drugs policy overall? (select all that apply)

- All drugs (i.e. policy does not single out particular drugs)
- Alcohol
- Tobacco
- Cannabis

- Amphetamines
- Ecstasy
- Hallucinogens
- GHB
- Ketamine
- Cocaine and crack cocaine
- Opioids
- New psychoactive drugs ('legal highs')
- Solvents and inhalants
- Medicines
- Other (please specify):

167. Which substances are explicitly addressed in drugs policy in relation to young people? (select all that apply)

- Same as above (i.e. policy does not distinguish between young people and the general population with regard to substances)
- All drugs (i.e. policy does not single out particular drugs)
- Alcohol
- Tobacco
- Cannabis
- Amphetamines
- Ecstasy
- Hallucinogens
- GHB
- Ketamine
- Cocaine and crack cocaine
- Opioids
- New psychoactive drugs ('legal highs')
- Solvents and inhalants
- Medicines
- Other (please specify):

Please also indicate which policy documents you were referring to in the previous two questions, and indicate page numbers where possible.

168. Does drugs policy explicitly refer to any specific sub-groups of young people? (select all that apply)

- The policy does not refer to specific sub-groups of young people
- First years of life (prenatal, neonates, babies and very young children)
- Young people whose parents or family members use illegal drugs
- Young people from families with complex needs (e.g., poverty)
- Young people from ethnic minority groups
- School pupils
- Truants and pupils excluded from mainstream education
- College and university students
- Young drivers
- Young people in institutional care (not criminal justice system)
- Young offenders
- Young people with ill mental health
- Young people with behavioural problems
- Young people at risk of using drugs (risk factors not specified)
- Young people who already use drugs
- Young people who are drug dependent
- Other (please specify):

169. With regard to young people's illegal drug use/dependence, what issues and priorities are identified in drugs policy?

Please also indicate which policy document you are referring to, and indicate page numbers where possible.

170. What are the defined goals and objectives or desired outcomes for young people in drugs policy?

If the policy sets any quantifiable targets or indicators for success, then please include these (e.g., reduce number of young people reporting drug use by 50%). Please also indicate which policy document you are referring to, and indicate page numbers where possible.

171. What strategies, approaches, programmes and/or interventions are described in policy to produce the desired outcomes relating to young people's drug use/dependence?

Please do not describe what is currently available in your country but only what is explicitly described in the policy document. If the policy document refers to a specific programme, please include a brief description so that we can understand what type of activity it is. Please also indicate which policy document you are referring to, and indicate page numbers where possible.

172. Please indicate if the policy includes universal, selective, indicated, and/or environmental approaches (select all that apply)

Note that the policy document may not use this terminology – please read the short definitions provided in the answer options to determine whether the policy includes this type of strategy or not.

- Universal** - addressing an entire population irrespective of risk level, e.g., all school children

[] **Selective** - addressing specific sub-populations whose risk of developing drug dependence is significantly higher than average, either imminently or over their lifetime, e.g., based on their socio-economic background

[] **Indicated** - addressing individuals who have a higher risk of developing drug dependence, e.g., those who are already using drugs

[] **Environmental** - addressing the cultural, social, physical, and economic environments in which people make their choices about drug use, e.g., legislation/regulation, social norms, built environment

173. Thinking back to how policies are developed, were there any additional criteria or reasons for the choice of the strategies, approaches, programmes and/or interventions you listed above?

For example, evidence to support a certain approach

D. Policy changes in recent years

The following questions ask about how policy has changed in recent years. Please answer in relation to the key drugs policy and any subsidiary policy documents which you listed earlier.

174. Between the year 2000 and the introduction of the current policies described above, what previous policies and strategies were in place regarding illegal drugs?

Please list bibliographical details for each preceding policy (title, year of publication, publishing institution – in the original language and in English). Please include general drugs policies as well as documents focussing specifically on illegal drugs and young people. If the current policies are the first policies available, please tick 'no previous policies'.

() No previous policies

() Don't know

The rest of this section on policy changes was only asked if previous policies were available.

175. Have there been any major changes between previous and current policies?

() Yes

() No

() Don't know

If Yes, what are the major changes between previous policies and current policies? (select all that apply)

[] Change in goals and priorities (e.g., supply reduction, demand reduction, harm reduction)

[] Change in target population

[] Change in policy approaches and strategies

[] Change in the level of industry involvement

[] Change in how policy is delivered (e.g., shift in responsibilities to other bodies, creation of new bodies)

[] Change in funding structures

[] Other (please specify):

Please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

176. Have there been any major changes concerning young people between previous and current policies?

() Yes

() No

() Don't know

If Yes, please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

177. What is the source of the information which you provided in this section on policy changes? (select all that apply)

[] Written documentation in the cited policy documents

[] Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)

[] Written documentation published elsewhere (not official government sources)

[] Personal communication (e.g., colleagues, experts)

[] Personal knowledge

[] Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

E. Implementation, monitoring and evaluation

The following questions ask about how policies are implemented, monitored and evaluated. Please answer in relation to the key drugs policy and any subsidiary policy documents which you listed earlier.

178. What legislation and other regulatory frameworks are in place to support the implementation and success of policies relating to illegal drugs and young people?

Please focus on the MOST IMPORTANT regulatory frameworks and summarise for each one how it contributes to the achievement of policy objectives.

179. Is the implementation and effectiveness of policies relating to illegal drugs and young people monitored?

- Yes
- No
- Don't know

180. Have any of the drugs policies mentioned above been evaluated?

Including key and subsidiary documents, current and previous policies

- Yes
- No
- No, but an evaluation is planned for the future
- Don't know

Questions on monitoring were only asked if policies were monitored.

181. Who is in charge of monitoring policy implementation and effectiveness?

- Government department/ministry responsible for policy development and implementation
- Other government department/ministry
- External agency (e.g., consultancy) commissioned by government
- Local authorities
- Other (please specify):

182. Please provide details of the methods used to monitor the implementation and effectiveness of policies relating to illegal drugs and young people (including which indicators are used).

Questions on evaluation were only asked if policies had been evaluated.

183. What type of evaluation has been carried out?

You can select more than one answer if several different evaluations have been carried out.

- Internal evaluation by government department/ministry responsible for policy development and implementation
- Internal evaluation by other government department/ministry
- External evaluation commissioned by government (e.g., consultancy)
- External evaluation independent of government (e.g., academic research not commissioned by government)
- Other (please specify):

184. Please summarise the main findings of the outcome evaluation, listing relevant outcome indicators and results (e.g., behaviour change).

185. Please summarise the main findings of the process evaluation, listing relevant process indicators and results (e.g., implementation fidelity).

186. Please provide bibliographical details of relevant publications (e.g., evaluation report, scientific paper).

For example: author, title, publishing institution, year of publication – in the original language and in English

187. Are any of these documents available in English?

- Yes
- No

188. Please provide relevant weblinks for original language and English language versions of the evaluations if available.

Weblink original language: http://

Weblink English: http://

The next few questions ask for your **individual** expert opinion on the implementation and effectiveness of policy. Please answer as honestly as possible, even if your individual opinion on this issue is not in line with the official position of the organisation you work for. Remember that this survey is completely anonymous and respondents will not be identified individually; information on your name, organisation or job title will **not** be published.

189. In your expert opinion, how well have policies relating to illegal drugs and young people been implemented (enforced) in reality?

Please rate from 0 to 100 whereby 0 means "Very poor implementation" and 100 means "Very good implementation":

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

190. In your expert opinion, how successful (effective) have policies relating to illegal drugs and young people been in achieving their goals?

Please rate from 0 to 100 whereby 0 means "Not at all successful" and 100 means "Very successful":

Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

191. Are YOU directly involved in monitoring and/or evaluating policy implementation and effectiveness?

Yes

No

If Yes, please describe your role in monitoring and/or evaluating policy.

192. Please list the most important national and regional surveys and monitoring systems measuring drug use in the general population.

This can also include internationally conducted studies if they provide nationally representative data.

193. Please list the most important national and regional surveys and monitoring systems measuring drug use among young people.

This can also include internationally conducted studies if they provide nationally representative data.

194. Are any of the surveys you listed in the previous questions used to monitor the success of policies?

Yes

No

Don't know

If Yes, please state which surveys are specifically used to monitor policy success.

F. Resources allocated to young people and illegal drugs

Finally, we wish to find out more about resource allocation regarding young people and illegal drugs in your country.

195. What is the recent trend (past several years) in resource allocation to policies and programmes addressing young people and illegal drugs?

Large increase in resources

Small increase in resources

No or little change in resources

Small decrease in resources

Large decrease in resources

Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples and citing relevant sources to support your rating.

196. Are funds dedicated to policies and programmes addressing young people and illegal drugs clearly identifiable in the most recent national budget?

Yes

No

Don't know

If Yes, what was the amount of funds allocated to policies and programmes addressing young people and illegal drugs in the most recent national budget?

Euro: €

As percentage of total budget: %

Budget year:

197. Does state revenue generated from the sales of alcohol or tobacco directly fund any of the following activities? (select all that apply)

This includes general taxation as well as industry-specific taxation (e.g., VAT, alcohol/tobacco duty, corporate tax).

Research on illegal drugs and drug-related problems

Prevention activities (e.g., media campaigns for education on illegal drugs)

Treatment for dependence on illegal drugs

Charitable activities not related to illegal drugs

Sports events

Other (please specify):

Don't know

198. Does the alcohol or tobacco industry voluntarily fund any of the following activities directly or indirectly (e.g., through an associated charity)? (select all that apply)

Industry includes producers and retailers, the advertising industry, trade associations, and self-regulatory associations.

- Research on illegal drugs and drug-related problems
- Prevention activities (e.g., media campaigns for education on illegal drugs)
- Treatment for dependence on illegal drugs
- Charitable activities not related to illegal drugs
- Other (please specify):
- Don't know

Please feel free to provide additional commentary regarding this section if you wish.

Current topic relevant to young people's illegal drug use: New psychoactive substances

European countries have used various legislative approaches to regulate the manufacture, distribution, sale and possession of new psychoactive substances (click [here](#) to open the definitions page again in a new window). These include:

- drug control legislation (i.e. controlled/scheduled drugs)
- medicines legislation
- food safety legislation
- consumer protection legislation
- general product safety legislation
- dangerous substances/preparations legislation

Some countries have also amended existing legislation (for example to allow temporary bans to be made for substances that appear to pose public health or social harms). In other cases new legislation has been enacted in order to help deal with the issue.

Because this issue is very topical, we would like to ask you just a few questions to gain an understanding of how new psychoactive substances are regulated in your country.

199. What legislative approaches has your country used to regulate new psychoactive substances? (select all that apply)

- Drug control legislation
- Medicines legislation
- Food safety legislation
- Consumer protection legislation
- General product safety legislation
- Dangerous substances/preparations legislation
- Other (e.g. importation bans, restricted marketing, advertising or sales) – please tell us below about this/these
- None – please tell us below why
- Don't know

If Other or None, please provide further detail concerning your answer to the previous question.

200. Has your country implemented legislation specifically in response to new psychoactive drugs?

- Yes - Please tell us more about the legislation specifically implemented in response to new psychoactive drugs, including the name of the law:
- No, but specific legislation is likely to be introduced in the next 12 months - Please tell us more about the specific legislation which is likely to be introduced in the next 12 months, including the name of the proposed bill:
- No, and specific legislation is unlikely to be introduced in the next 12 months
- Don't know

If you answered 'No, and specific legislation is unlikely to be introduced in the next 12 months', is this because:

- The existing drug controls in your country already provide a suitable response to new psychoactive drugs so no new legislation or amendments are required - please tell us more below
- Legislation may be introduced, but this is likely to take longer than 12 months to develop and/or implement
- New psychoactive drugs are not an issue in your country
- Other reason – please tell us more below
- Don't know

Please provide further detail concerning your answer to the previous question.

Addressing young people's addictive behaviours through GAMBLING policy

In the online survey, the gambling section was only asked if "Gambling policies" was a main area of respondent's work.

A. Identifying policies/strategies that are relevant to young people and gambling

In the following sections, we wish to identify the most important policy documents relating to young people's gambling and investigate how young people are addressed therein (click [here](#) to open the definitions page again in a new window).

Please note: if you indicated that you work in more than one area, then you will find that the questions in this survey are repeated for each area of work. In each section of the survey, please answer the questions only in relation to the indicated topic (i.e. gambling in this section).

201. Does your country currently have a written government policy/strategy on gambling?

Please remember that for the purposes of this survey, legislation is not considered a policy in itself but is seen as an instrument to achieve policy objectives. Questions about legislation are included later in this survey.

- Yes, at a national level (covering all jurisdictional regions)
- Yes, but only at a regional level
- Yes, but only at a local level
- No, but such policy will be published within the next 12 months
- No, there are no written policies/strategies on gambling

202. Does your country currently have legislation on gambling?

- Yes, gambling legislation is available
- No, there are no gambling laws available

If the respondent indicated that there were no policies or laws available, then the next sections were skipped.

203. Do ALL regions / local authorities in your country have a written government policy/strategy on gambling?

- Yes
- No
- Don't know

This question was only asked if policies were only available on regional/ local level.

As your country only has relevant legislation available (no separate policy or strategy), please answer concerning the most relevant piece of legislation in this area whenever the survey asks you about 'policy'.

This message was only shown if the respondent indicated that only legislation was available (no policies/strategies).

204. Does this policy focus on gambling only or does it also address other topics?

- Only gambling
- Gambling as well as other topics

If you indicated that the policy addresses other topics in addition to gambling, please indicate what the other topics are (select all that apply)

- Alcohol
- Tobacco
- Illegal drugs
- New psychoactive substances ('legal highs')
- Other (please specify):

If you are completing this questionnaire for several topics and your country has a combined policy covering several areas, then some of your answers in this questionnaire may have to be the same in different areas (e.g., concerning development of the policy). In this case it is sufficient to answer the question the first time you see it. When the question is repeated in the next section and your answer would be the same, please write "same as previous".

205. Please provide bibliographic details of the key policy/strategy relating to gambling

Please also provide relevant weblinks for original language versions of the policy. If this is not a national document then please also indicate which region(s) it applies to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English) :

Other bibliographical details:

Weblink: http://

206. Is this document available in English?

Please also provide relevant weblinks for English language versions of the policy

- Yes, at this weblink: http://
- Yes but not available online
- No

207. Which government department/ministry has the MAIN responsibility (leadership) for delivery of this policy?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar

- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- National gambling regulatory public authority
- Other (please specify):

208. Which other government departments/ministries are ALSO responsible for the delivery of this policy?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- National gambling regulatory public authority
- Other (please specify):

209. To what extent are young people (including children) explicitly addressed in the key policy/strategy relating to gambling?

- The policy does not explicitly mention young people
- The policy explicitly mentions young people but there is no separate section/chapter
- The policy features a separate section/chapter on young people
- The policy focuses primarily on young people

If the policy does not explicitly mention young people (including children), then what other specific populations is the policy directed toward?

210. Is this the main policy relating to young people and gambling?

- Yes, the key policy described above is the most relevant policy document on young people and gambling in this country
- No, there are subsidiary government policy documents **specifically** focussing on young people and gambling
- Don't know

The rest of this section on policy availability was only asked if subsidiary government policy documents were available.

Please provide bibliographic details of the subsidiary policy documents which specifically focus on young people and gambling

Please also provide relevant weblinks for original language versions of the policies. If these are not national documents then please also indicate which region(s) they apply to.

Title (in the original language and in English):

Year of publication:

Publishing institution (in the original language and in English):

Other bibliographical details:

Weblink: http://

211. Are these documents available in English?

Please also provide relevant weblinks for English language versions of the policies

- Yes, at this weblink: http://
- Yes but not available online
- No

212. To what extent are young people (including children) explicitly addressed in these subsidiary policy documents/strategies?

- Explicitly mentions young people but there is no separate section/chapter
- Features a separate section/chapter on young people
- Focuses primarily on young people

213. Which government department/ministry has the MAIN responsibility (leadership) for DELIVERY of these subsidiary policies focussing specifically on young people and gambling?

You can select more than one department/ministry if there is joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar

- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- National gambling regulatory public authority
- Other (please specify):

214. Which other government departments/ministries are ALSO responsible for the delivery of these policies?

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- National gambling regulatory public authority
- Other (please specify):

If there is more than one subsidiary policy focussing specifically on young people and gambling, please indicate clearly which department/ministry is mainly responsible for which policy.

215. Please rate the importance of these subsidiary policy documents in comparison to the key policy on gambling

Take into account the practical relevance of the subsidiary policy documents in guiding the work of policy makers and other professionals in your country.

Please rate from 0 to 100 whereby 0 means "Not at all important" and 100 means "Very important":

- () Don't know

B. Policy development

The following questions will ask you about how current policy has been developed. Please answer these questions in relation to the most important policy relating to young people and gambling (depending on what you indicated in the previous questions). If you need to consult colleagues or additional documents in order to answer the questions in this section, please do so. You will be able to indicate the source of the information at the end of this section.

216. Please confirm which document you will refer to in the next questions (i.e. what you consider the most important policy document relating to young people and gambling)

- () Key policy document/strategy on gambling
- () Subsidiary policy documents **specifically focussing on young people** and gambling (if any)

217. Why was this policy put in place? (select all that apply)

- To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- Change in gambling-related needs and behaviours in society
- To adhere to international agreements and conventions
- Change in government (e.g., ruling party)
- Existing government changed its policy direction
- Media reporting on gambling / Pressure from the media for change
- Concerns and demands of the general public
- New evidence (e.g., effects on health, effective responses)
- Other (please specify):
- Don't know

218. What was the MAIN reason for putting this policy in place? (tick one option only)

- () To address existing gaps (e.g., no previous policy, previous policy didn't address certain issues)
- () Change in gambling-related needs and behaviours in society
- () To adhere to international agreements and conventions
- () Change in government (e.g., ruling party)
- () Existing government changed its policy direction
- () Media reporting on gambling / Pressure from the media for change
- () Concerns and demands of the general public
- () New evidence (e.g., effects on health, effective responses)
- () Other (please specify):
- () Don't know

219. Which government department/ministry was responsible for DEVELOPING this policy?

You can select more than one department/ministry if there was joint responsibility.

- Ministry of Social Affairs/Welfare or similar
- Ministry of Health or similar
- Ministry of Education or similar
- Ministry of the Interior or similar
- Ministry of Justice or similar
- Ministry of Labour/Employment or similar
- Ministry of Families, Children, Women's Affairs or similar
- Ministry of International Trade or similar
- Ministry of Transport/Roads or similar
- Ministry of Economics/Finance or similar
- National drugs agency
- Agency responsible for law enforcement
- Office of the President or Prime Minister
- National gambling regulatory public authority
- Other (please specify):

220. Who was explicitly involved in the development of the policy (e.g., determining its content and objectives)? (select all that apply)

- National government officials (e.g., policy makers, commissioners)
- Regional and local government officials (e.g., policy makers, commissioners)
- Health and social services (including gambling treatment services and youth services)
- Police and Criminal justice sector representatives
- Voluntary sector/civil society (NGO)
- Industry representatives (e.g., gambling operators, trade associations, self-regulatory associations)
- Academic experts
- Expert consultants
- Current or former problematic gamblers (e.g., self-help groups)
- General public
- Young people
- Sports organisations
- Other (please specify):
- Don't know

221. Were YOU directly involved in the development of the policy?

- Yes
- No

If Yes, please describe your role in the development of the policy.

222. What methods and approaches were used to develop the content of the policy? (select all that apply)

- Needs assessment (e.g., of gambling-related needs in the population)
- Expert meetings and consultations
- Public consultations (face to face)
- Public consultation (via Internet)
- Correspondence with party-political manifesto
- Consensus within the government department/ministry responsible for policy development
- Evaluation of existing programmes in the country (e.g., through Randomised Controlled Trials (RCT))
- Review of international scientific literature (e.g., on evidence of effectiveness)
- Evaluation of the previous gambling strategy in this country
- Review of existing policies (at international level, in other countries)
- Review of good and best practice guidance
- Other (please specify):
- Don't know

Please provide further detail concerning your answer to the previous question. For example, describe the type of programme evaluations that have been carried out, criteria for selection and review of scientific evidence, the type of literature review, criteria for selection and review of good and best practice guidance, etc.

223. What is the source of the information which you provided in this section on policy development? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)
- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge
- Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

C. Content of the policy

Now, we would like to know more about how young people are addressed in policy documents relating to gambling. Please answer the following questions taking into account the key gambling policy and any subsidiary policy documents which you listed earlier.

224. In this survey, “young people” refers to anyone under the age of 25 years, including children. If the gambling policy documents explicitly refer to a different age range, then please specify this here.

225. What is considered as “problematic” gambling in your country’s gambling policy documents?

For example, do the documents refer to the DSM definition of pathological gambling or do they provide a bespoke national problem definition?

226. Which types of games are explicitly addressed in gambling policy overall? (select all that apply)

- All games (i.e. policy does not single out particular types of games)
- Lotteries
- Bingo
- Tombola/raffle
- Scratch cards
- Sports betting
- Betting on horse and dog races
- Casino games
- Poker and other card games
- Slot machines
- Gambling machines that are placed in locations other than licensed casinos
- Media gambling (i.e. games in the editorial content of the media)
- Promotional games (e.g., where participation is linked to purchase of a product)
- Gambling services operated by and for the benefit of recognised charities and non-profit making organisations
- In-person gambling (playing above games in ‘bricks and mortar’ establishments)
- Remote gambling (playing above games on the internet, over mobile devices, etc.)
- Other (please specify):

227. Which types of games are explicitly addressed in gambling policy in relation to young people? (select all that apply)

- Same as above (i.e. policy does not distinguish between young people and the general population with regard to types of games)
- All games (i.e. policy does not single out particular types of games)
- Lotteries
- Bingo
- Tombola/raffle
- Scratch cards
- Sports betting
- Betting on horse and dog races
- Casino games
- Poker and other card games
- Slot machines
- Gambling machines that are placed in locations other than licensed casinos
- Media gambling (i.e. games in the editorial content of the media)
- Promotional games (e.g., where participation is linked to purchase of a product)
- Gambling services operated by and for the benefit of recognised charities and non-profit making organisations
- In-person gambling (playing above games in ‘bricks and mortar’ establishments)
- Remote gambling (playing above games on the internet, over mobile devices, etc.)
- Other (please specify):

Please also indicate which policy documents you were referring to in the previous two questions, and indicate page numbers where possible.

228. Does gambling policy explicitly refer to any specific sub-groups of young people? (select all that apply)

- The policy does not refer to specific sub-groups of young people
- Young people under the legal age for gambling
- First years of life (prenatal, neonates, babies and very young children)
- Young people whose parents or family members are problematic gamblers
- Young people from families with complex needs (e.g., poverty)
- Young people from ethnic minority groups
- School pupils
- Truants and pupils excluded from mainstream education
- College and university students
- Young people in institutional care (not criminal justice system)
- Young offenders
- Young people with ill mental health
- Young people with behavioural problems
- Young people at risk of gambling (risk factors not specified)
- Young people who already gamble
- Young people who are problematic gamblers

[] Other (please specify):

229. With regard to young people's gambling/dependence, what issues and priorities are identified in gambling policy?

Please also indicate which policy document you are referring to, and indicate page numbers where possible.

230. What are the defined goals and objectives or desired outcomes for young people in gambling policy?

If the policy sets any quantifiable targets or indicators for success, then please include these (e.g., reduce number of young people reporting gambling by 50%). Please also indicate which policy document you are referring to, and indicate page numbers where possible.

231. What strategies, approaches, programmes and/or interventions are described in policy to produce the desired outcomes relating to young people's gambling/dependence?

Please do not describe what is currently available in your country but only what is explicitly described in the policy document. If the policy document refers to a specific programme, please include a brief description so that we can understand what type of activity it is. Please also indicate which policy document you are referring to, and indicate page numbers where possible.

232. Please indicate if the policy includes universal, selective, indicated, and/or environmental approaches (select all that apply)

Note that the policy document may not use this terminology – please read the short definitions provided in the answer options to determine whether the policy includes this type of strategy or not.

[] **Universal** - addressing an entire population irrespective of risk level, e.g., all school children

[] **Selective** - addressing specific sub-populations whose risk of developing dependence on gambling is significantly higher than average, either imminently or over their lifetime, e.g., based on their socio-economic background

[] **Indicated** - addressing individuals who have a higher risk of developing dependence on gambling, e.g., those who are already gambling

[] **Environmental** - addressing the cultural, social, physical, and economic environments in which people make their choices about gambling, e.g., legislation/regulation, social norms, built environment

233. Thinking back to how policies are developed, were there any additional criteria or reasons for the choice of the strategies, approaches, programmes and/or interventions you listed above?

For example, evidence to support a certain approach

234. Does the policy include any restrictions in relation to gambling advertising/marketing and young people?

For example, restrictions to ensure that gambling advertising is not targeted at young people and does not feature images or messages which are likely to appeal to young people

() Yes, and these restrictions are enforced by the state

() Yes, but these restrictions are based on a voluntary commitment by the gambling industry

No

() Other (please specify):

If the policy imposes no restrictions, please tell us why not.

235. With regard to young people and gambling advertising/marketing, what restrictions are described in gambling policy?

236. Please indicate which policy document you were referring to in the previous questions on advertising/marketing, and indicate page numbers where possible.

If this is a **separate** document that you have not mentioned so far, then please also provide bibliographic details (title, year of publication, publishing institution – in the original language and in English).

D. Policy changes in recent years

The following questions ask about how policy has changed in recent years. Please answer in relation to the key gambling policy and any subsidiary policy documents which you listed earlier.

237. Between the year 2000 and the introduction of the current policies described above, what previous policies and strategies were in place regarding gambling?

Please list bibliographical details for each preceding policy (title, year of publication, publishing institution – in the original language and in English). Please include general gambling policies as well as documents focussing specifically on gambling and young people. If the current policies are the first policies available, please tick 'no previous policies'.

() No previous policies

() Don't know

The rest of this section on policy changes was only asked if previous policies were available.

238. Have there been any major changes between previous and current policies?

() Yes

() No

() Don't know

If Yes, what are the major changes between previous policies and current policies? (select all that apply)

- Change in goals and priorities
- Change in target population
- Change in policy approaches and strategies
- Change in the level of industry involvement
- Change in how policy is delivered (e.g., shift in responsibilities to other bodies, creation of new bodies)
- Change in funding structures
- Other (please specify):

Please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

239. Have there been any major changes concerning young people between previous and current policies?

- Yes
- No
- Don't know

If Yes, please provide further detail concerning your answer to the previous question, giving examples of changes and referencing relevant materials as necessary.

240. What is the source of the information which you provided in this section on policy changes? (select all that apply)

- Written documentation in the cited policy documents
- Written documentation in other government publications (including government web sites) (e.g., supporting documentation on how the policy was developed)
- Written documentation published elsewhere (not official government sources)
- Personal communication (e.g., colleagues, experts)
- Personal knowledge
- Other (please specify):

If you indicated that you used written documentation from other government publications or other sources, please provide weblinks and bibliographical details of relevant sources (e.g., author, title, publishing institution, year of publication – in the original language and in English)

E. Implementation, monitoring and evaluation

The following questions ask about how policies are implemented, monitored and evaluated. Please answer in relation to the key gambling policy and any subsidiary policy documents which you listed earlier.

241. What legislation and other regulatory frameworks are in place to support the implementation and success of policies relating to gambling and young people?

Please focus on the MOST IMPORTANT regulatory frameworks and summarise for each one how it contributes to the achievement of policy objectives.

242. Is there specific legislation to control gambling advertising/marketing on the internet?

- Yes
- No
- Don't know

243. What is the minimum legal age for gambling in your country (e.g., to enter a betting shop, to buy a lottery ticket, to use an online casino)?

_____ years

Please provide additional commentary if you feel it is relevant.

244. Is the implementation and effectiveness of policies relating to gambling and young people monitored?

- Yes
- No
- Don't know

245. Have any of the gambling policies mentioned above been evaluated?

Including key and subsidiary documents, current and previous policies

- Yes
- No
- No, but an evaluation is planned for the future
- Don't know

Questions on monitoring were only asked if policies were monitored.

246. Who is in charge of monitoring policy implementation and effectiveness?

- Government department/ministry responsible for policy development and implementation
- Other government department/ministry
- External agency (e.g., consultancy) commissioned by government
- Local authorities

[] Other (please specify):

247. Please provide details of the methods used to monitor the implementation and effectiveness of policies relating to gambling and young people (including which indicators are used).

Questions on evaluation were only asked if policies had been evaluated.

248. What type of evaluation has been carried out?

You can select more than one answer if several different evaluations have been carried out.

- Internal evaluation by government department/ministry responsible for policy development and implementation
- Internal evaluation by other government department/ministry
- External evaluation commissioned by government (e.g., consultancy)
- External evaluation independent of government (e.g., academic research not commissioned by government)
- Other (please specify):

249. Please summarise the main findings of the outcome evaluation, listing relevant outcome indicators and results (e.g., behaviour change).

250. Please summarise the main findings of the process evaluation, listing relevant process indicators and results (e.g., implementation fidelity).

251. Please provide bibliographical details of relevant publications (e.g., evaluation report, scientific paper).

For example: author, title, publishing institution, year of publication – in the original language and in English

252. Are any of these documents available in English?

- Yes
- No

253. Please provide relevant weblinks for original language and English language versions of the evaluations if available.

Weblink original language: http://

Weblink English: http://

The next few questions ask for your **individual** expert opinion on the implementation and effectiveness of policy. Please answer as honestly as possible, even if your individual opinion on this issue is not in line with the official position of the organisation you work for. Remember that this survey is completely anonymous and respondents will not be identified individually; information on your name, organisation or job title will **not** be published.

254. In your expert opinion, how well have policies relating to gambling and young people been implemented (enforced) in reality?

Please rate from 0 to 100 whereby 0 means "Very poor implementation" and 100 means "Very good implementation":

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

255. In your expert opinion, how successful (effective) have policies relating to gambling and young people been in achieving their goals?

Please rate from 0 to 100 whereby 0 means "Not at all successful" and 100 means "Very successful":

- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples to support your rating.

256. Are YOU directly involved in monitoring and/or evaluating policy implementation and effectiveness?

- Yes
- No

If Yes, please describe your role in monitoring and/or evaluating policy.

257. Please list the most important national and regional surveys and monitoring systems measuring gambling in the general population.

This can also include internationally conducted studies if they provide nationally representative data.

258. Please list the most important national and regional surveys and monitoring systems measuring gambling among young people.

This can also include internationally conducted studies if they provide nationally representative data.

259. Are any of the surveys you listed in the previous questions used to monitor the success of policies?

- Yes
- No

() Don't know

If Yes, please state which surveys are specifically used to monitor policy success.

F. Resources allocated to young people and gambling

Finally, we wish to find out more about resource allocation regarding young people and gambling in your country.

260. What is the recent trend (past several years) in resource allocation to policies and programmes addressing young people and gambling?

- Large increase in resources
- Small increase in resources
- No or little change in resources
- Small decrease in resources
- Large decrease in resources
- Don't know

Please provide further detail concerning your answer to the previous question, giving relevant examples and citing relevant sources to support your rating.

261. Are funds dedicated to policies and programmes addressing young people and gambling clearly identifiable in the most recent national budget?

- Yes
- No
- Don't know

If Yes, what was the amount of funds allocated to policies and programmes addressing young people and gambling in the most recent national budget?

Euro: €

As percentage of total budget: %

Budget year:

262. What is state revenue generated from gambling services directly used for? (select all that apply)

This includes general taxation as well as industry-specific taxation (e.g., VAT, corporate tax).

- Research on gambling and gambling-related problems
- Prevention activities (e.g., media campaigns for gambling education)
- Treatment for problematic gambling
- Charitable activities not related to gambling
- Sports events
- Other (please specify):
- Don't know

263. Does the gambling industry voluntarily fund any of the following activities directly or indirectly (e.g., through an associated charity)? (select all that apply)

Industry includes gambling operators, trade associations, and self-regulatory associations.

- Research on gambling and gambling-related problems
- Prevention activities (e.g., media campaigns for gambling education)
- Treatment for problematic gambling
- Charitable activities not related to gambling
- Other (please specify):
- Don't know

Please feel free to provide additional commentary regarding this section if you wish.

Addressing young people's addictive behaviours through OTHER policies (OPTIONAL)

In this section, we ask about the availability of any other policies that could influence young people's addictive behaviours. This includes policies that could **prevent** addictive behaviours as well as those that can be seen to (inadvertently) **promote** addictive behaviours (e.g., by increasing the opportunities for young people to engage in addictive behaviours).

Examples of such policies could include: other public health policies, media literacy policies, policies regulating the marketing, availability and pricing of legal substances, policies regulating the marketing or provision of gambling services, trade policies, economic policies, national social protection and inclusion policies, urban development policies (e.g., neighbourhood regeneration), etc. There is no need to mention again the same policies that you listed in the previous sections (if any).

264. Have any other governmental policy documents been published at national level that you feel are relevant to young people's addictive behaviours? (optional)

Remember that in this survey, national policy documents are those that apply to all jurisdictional regions.

- Yes
- No

- Don't know
 Skip this section

265. Please provide bibliographic details of these national policy documents (title, year of publication, publishing institution – in the original language and in English)

266. Are any of these documents available in English?

- Yes
 No

267. Please provide relevant weblinks for original language and English language versions of the policy documents.

Weblink original language: http://

Weblink English: http://

268. Please describe what policies they are and why you feel they are relevant to young people's addictive behaviours.

Please also indicate which policy you are referring to, and indicate page numbers where possible.

269. Have any other governmental policy documents been published at regional level that you feel are relevant to young people's addictive behaviours? (optional)

Remember that in this survey, regional policy documents are those that apply only to one or more jurisdictional regions within a state but not to the state as a whole.

- Yes
 No
 Don't know
 Skip this section

270. Please provide bibliographic details of these regional policy documents (title, year of publication, publishing institution – in the original language and in English)

Please also indicate which region(s) they apply to.

271. Are any of these documents available in English?

- Yes
 No

272. Please provide relevant weblinks for original language and English language versions of the policy documents.

Weblink original language: http://

Weblink English: http://

273. Please describe what policies they are and why you feel they are relevant to young people's addictive behaviours.

Please also indicate which policy you are referring to, and indicate page numbers where possible.

Additional information

A. Survey completion

So that we have a better understanding of how the survey was completed, please let us know if you completed this survey with the collaboration of other people outside of your organisation.

274. Did you complete this questionnaire with the collaboration of other people outside of your organisation?

- Yes
 No

If Yes, then please state the relevant organisation(s) of your collaborators for this questionnaire.

B. Nominating other experts to complete this survey

In order to cover all areas of interest, we are looking for additional experts who can complete the survey concerning the topics that were outside your own work area. If possible, please nominate a suitable colleague from your country to take part in this survey concerning one or more of the **other** areas and provide their contact details below.

Name of nominated expert:

Position or role:

Organisation/institution:

E-mail address of nominated expert:

Nominated expert – main area of work (select all that apply)

- Alcohol policies
 Tobacco policies
 Illegal drugs policies
 Gambling policies

C. Next steps in this project

Once we have received and reviewed all answers to this survey, we will produce a summary report which we would like to share with survey participants for feedback and further comments. After that, in the next stage of this work, we may wish to conduct interviews with a limited number of survey participants on the topics covered in this survey (e.g., via telephone). Please indicate below if you wish to take part in these follow-up activities.

275. Do you wish to receive the summary report resulting from this survey?

If Yes, please remember to provide your contact details below.

- Yes
 No

276. Would you be interested to take part in a follow-up interview?

If Yes, please remember to provide your contact details below.

- Yes
 No

So that we may contact you regarding the summary report and/or the follow-up interview, please enter your contact details below

Name:

E-mail address:

277. Is there any other information that you would like to share with us concerning this survey? (optional)

Thank you for participating!

We greatly appreciate your assistance in completing this survey. If you expressed an interest in the next steps, then we will contact you again via e-mail in a few months.



Addiction and Lifestyles in Contemporary Europe: Reframing Addictions Project (ALICE RAP)

Adolescents as customers of addiction

Deliverable 16.1, Work Package 16

Background report 2: Review of reviews

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Further project information is available at <http://www.alicerap.eu/>

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PURPOSE OF THIS REPORT

This report represents one of three documents describing work undertaken as part of the two-year Work Package 16 on “Adolescents as customers of addiction” within the Addictions and Lifestyles in Contemporary Europe – Reframing Addictions Project (ALICE RAP). The three documents are:

- Deliverable 16.1 Adolescents as customers of addiction (main report)
- Background report 1: Policy mapping and review
- Background report 2: Review of reviews (this document)

The *main report* describes the background to the Work Package, summarises activities undertaken by the research team, and discusses these in relation to the Work Package objectives.

The *background reports* document in detail the methods and results pertaining to the two key activities of the Work Package. The background reports are intended as supplements to the main report and should not be read independently of the main report. Introductions, summaries and discussions of findings are only provided in the main report.

This document is the second background report providing further detail on the methods and results of the review of reviews undertaken during the second year of the Work Package.

METHODS

This review of reviews was conducted following an *a priori* developed protocol¹, adapted from standard systematic review methodologies (e.g., Briss et al. 2000; Petticrew & Roberts 2006; CRD 2009; Higgins & Green 2011; NICE 2012). As available guidance focussed on the process for conducting systematic reviews of *primary studies*, we also inspected published reviews of reviews for those methodological aspects specific to reviews of reviews. The following sections describe the procedures we used to select and review evidence. The reporting follows the recommendations made in the PRISMA statement for reporting systematic reviews and meta-analyses (e.g., Liberati et al. 2009), although due to our ‘review of reviews’ approach not all items were applicable.

Inclusion and exclusion criteria

Application of inclusion and exclusion criteria proceeded in several stages. In the first stages of the study selection process, reviews were deemed eligible for consideration if they met the following criteria:

- *Population: For substance use* – young people aged 25 years or under, including children. Reviews were eligible for consideration if the policy or intervention was targeted at young people or if it affected young people directly (e.g. interventions targeted specifically at pregnant women or parents). Reviews of studies conducted in other populations (e.g., general population) were also eligible for consideration if outcomes in young people were reported. *For gambling* – due to an anticipated lack of reviews specific to young people, reviews of studies in any population were eligible for inclusion, with special attention given to any studies conducted with young people (as for substance use).
- *Intervention: Any policy or intervention addressing substance use (alcohol, tobacco, illegal drugs) or gambling, or related health and social harms.* We developed an *a priori* framework of policies and interventions (see below), which included: control and regulation of supply; gambling or substance-free zones; age limits; taxation and pricing; control and regulation of advertising, marketing and sponsorship; warning labels; prevention programmes; treatment and social reintegration; harm reduction; general delivery structures and quality assurance measures; and general approaches. Other relevant policies and interventions were also eligible for consideration, although we anticipated that the *a priori* defined categories would cover all relevant policies and interventions. Specifically, reviews were eligible for consideration if the policy or intervention under investigation addressed substance use or gambling in its aims or content, if it was carried out with a population specifically chosen in relation to substance use or gambling, or if outcomes relating to substance use or gambling were reported. Reviews of policies and interventions addressing closely related issues (e.g., violence, ADHD) were also eligible if substance or gambling outcomes were reported.
- *Comparator: We did not limit reviews based on what comparator was used in the included primary studies.*
- *Outcome: Any behavioural measure (e.g. abstention, age of initiation, prevalence, frequency or intensity of use, cessation) related to young people’s substance use (alcohol, tobacco, illegal drugs) or gambling.* Reviews reporting measures of health and social harms experienced by young people in relation to substance use and gambling were also eligible for consideration. Reviews reporting only non-behavioural outcomes (e.g., attitudes,

¹ A draft of this protocol was submitted to the funders in September 2012 as part of the interim report.

knowledge), proxy measures (e.g., tobacco sales to young people, parental smoking) or process outcomes (e.g., retention in treatment), were not eligible for consideration.

- *Study design:* Systematic reviews (including narrative reviews as well as meta-analyses) of primary studies to evaluate the effectiveness of policies or interventions using any type of quantitative study design. To determine whether a review was a 'systematic review' (i.e. conducted in line with standard systematic review methodology), we applied a minimum threshold for quality in the full text screening. Reviews were only considered to be 'systematic' if they had an appropriate, clearly-focused and relevant review question, were based on a sufficiently rigorous literature search, assessed and reported the quality of the included primary studies, and described an appropriate analytical methodology. Other types of literature reviews were also eligible for consideration if they met the specified quality criteria. Reviews of reviews were not eligible for consideration unless they also reviewed primary studies. Primary studies of any design, editorials, letters to the editor, opinion pieces and similar materials were not eligible for consideration.
- *Language:* Due to resource limitations, only English language publications were eligible for consideration.
- *Publication year:* Only reviews published since the year 2000 were eligible for consideration. There were no restrictions on the publication years of the primary studies included within these reviews. Final searches were conducted in September 2012 (for electronic databases) and March 2013 (for hand searching).
- *Publication type:* We did not restrict our searches by publication type. Grey literature (i.e., books, reports published independently by government, academic and other organisations, and other literature which is not accessible through electronic library searches) was eligible for consideration in our review. However, reviews not available on the Internet or from University libraries were not included.
- *Country:* We did not restrict our searches by country or geographical region. Applicability of studies to the European context was considered during the data extraction and evidence synthesis.

In the final stages of the study selection process, reviews were deemed 'eligible for inclusion' if they met the following criteria:

- *Relevance of included studies:* All studies had to be relevant or, where this was not the case, relevant studies and findings had to be presented separately from other studies and findings. One of the particular challenges in conducting a review of reviews is whether to apply inclusion criteria at the level of the retrieved reviews or at the level of the primary studies included within those reviews. For example, as our review focussed on young people aged 25 years or under, we could have excluded any review that did not also focus on young people aged 25 years or under, potentially missing important reviews which, although not exclusively focussing on young people, included studies or findings of relevance to young people. We therefore applied our inclusion criteria at the level of primary studies within reviews. This meant that a review was eligible for consideration even if not all the primary studies included within that review were relevant to our own review (e.g., some conducted in young people and others conducted in the general population). Specifically, in the earlier stages of the screening process, a review was eligible for consideration if at least two studies included within that review were relevant to our review (i.e., in line with the criteria outlined above) (except for reviews which included fewer than two studies). However, unless studies

and findings of relevant studies were presented separately from other studies and findings, it was not possible to extract data and to make use of the review authors' conclusions. Therefore, reviews in which relevant studies and findings were not clearly separated from other studies and findings were not eligible for inclusion in our review.

- *Quality of the review:* As retrieving and assessing primary studies was counter to the purpose of conducting a review of reviews, it was essential that i) we could have confidence in the review authors' methods and conclusions and that ii) reviews would provide sufficient information which would allow us to extract data in a satisfactory manner. Therefore, only reviews deemed to be of 'high quality' were eligible for inclusion in our review (methods for quality assessment are described below). Generally speaking, reviews of 'high quality' were those which had conducted sufficiently rigorous searches for literature, reported in detail on the characteristics of included primary studies, and considered the scientific quality of included studies in formulating conclusions. Reviews not rated as high quality were excluded from the synthesis.

Search strategy and study selection process

The review process is depicted in the flowchart of selection of relevant reviews (see Appendix). Publications were retrieved in the first instance by searching electronic databases (Medline, PsycINFO, Cochrane Library) for reviews published from January 2000 to September 2012. Based on previous search strategies devised by the Evidence Review team at the Centre for Public Health at Liverpool John Moores University, complex search strategies utilising controlled vocabulary terms and free text keywords were formulated for each database by considering the inclusion criteria (see Appendix for exact search terms and search results). In order to identify relevant systematic reviews and meta-analyses, we adapted existing search strategies specifically designed to identify reviews (e.g., Montori et al. 2004). Electronic database searches were conducted by one author using the agreed search strategies, and references retrieved through electronic database searches were imported into Endnote.

These searches were supplemented with relevant reviews already known to the authors and other reviews identified by screening the bibliographies of retrieved studies and existing reviews of reviews, by consulting relevant web pages, repositories of systematic reviews, current contents, and by contacting experts in the field. We also collaborated with colleagues at the United Nations Office on Drugs and Crime (UNODC), who were conducting a similar review at the time, to share relevant references. After the initial screening phase, we identified areas where evidence appeared to be sparse and we conducted targeted searches to identify additional materials, including hand searching of journals, simple searches and cited reference searches using retrieved articles (backwards and forwards) in the Web of Science database. Further details are provided in the Appendix. Hand searches were conducted by three authors (some sources were searched in duplicate), and references retrieved through hand searches were collated in Microsoft Excel. Searches and screening were completed in March 2013. Any review for which the full text was not available by that time could not be included in subsequent steps.

Our search strategy was developed to allow us to identify a sufficient number of high quality reviews with which to judge the effectiveness of different types of policies and interventions addressing young people's addictive behaviours. In the first stage of the screening process, titles and abstracts retrieved from the searches were independently screened by two reviewers against the predetermined inclusion criteria to exclude any references that were clearly not relevant. As results from hand searches were screened following the electronic database searches, it was already known that we had retrieved a high number of reviews covering prevention and treatment through the

electronic database searches, and therefore we did not include any additional reviews on prevention or treatment at this stage unless they had been published by the Cochrane Collaboration. Full texts of references judged to be potentially relevant were then retrieved and their relevance was re-assessed by one reviewer and checked by a second reviewer. This was done using a bespoke checklist in which reasons for exclusion were also recorded. Any disagreements were resolved through consensus or by referral to a third reviewer.

The reviews remaining at the end of this process were 'eligible for consideration' in our review. Each of these reviews was then examined specifically to determine whether all included primary studies were relevant to our review, and if not, whether relevant studies and findings were clearly distinguished from other studies and findings. Reviews were classed into three categories: A) 'includes only relevant studies'; B) 'includes some relevant studies, which are clearly identifiable and analysed separately by the review authors'; and C) 'includes some relevant studies, but these are not clearly identifiable and/or not analysed separately by the review authors'. Classification of reviews according to these categories was conducted by one author and checked by a second. Quality assessment was then carried out on reviews classed as 'A' or 'B'; reviews classed as 'C' were excluded and not quality assessed. Finally, only studies deemed to be of high quality were eligible for inclusion in the review. Any disagreements were resolved through consensus or by referral to a third reviewer.

Any duplicate publications identified during this procedure were excluded and added in the flowchart under 'duplicates removed'. Where the same review was available once as a journal article and once as a report, we treated the journal article as the primary reference and consulted the report only if detail in the journal article was lacking. The exception were Cochrane reviews, where we treated the main report as the primary reference even if a journal article had also emerged from the review.

Quality assessment

We used the AMSTAR instrument to assess the quality of relevant reviews (Shea et al. 2007a; Shea et al. 2007b; Shea et al. 2009). In a methodological review of >100 health related reviews of reviews, Pieper and colleagues (2012) found that the AMSTAR instrument was among the most commonly used tools for quality assessment. AMSTAR contains eleven items to examine a review with regard to its methods for literature searches, study selection, reporting of included and excluded studies, quality assessment of included studies, synthesis and other sources of potential bias. Although AMSTAR is intended for use with reviews of randomised controlled trials, for consistency (and as a similar tool for reviews of other study designs was not available at the time of the review²) we used it for all types of reviews. We used the online version of AMSTAR³. In comparison with the version published in the 2007 journal article, this version has been supplemented with specific indicators to help judge whether a criterion has been met or not.

To judge the suitability of AMSTAR for our review, two reviewers independently assessed a sample of five reviews using the instrument, and the assessments were compared and discussed. Based on this pilot test, we made carefully additions to the instrument to ensure that it would be applied consistently by all reviewers (nothing was omitted). For example, we added an additional answer option 'not (adequately) reported' and the possibility to comment on each rating. This was because reviews did not always provide sufficient information to judge whether an item was fully met or

² According to the developers' web page <http://amstar.ca>, a version of AMSTAR for use with non randomized studies was being developed at the time of writing.

³ http://amstar.ca/Amstar_Checklist.php

not⁴. We also took into account the modifications undertaken by the Scottish Intercollegiate Guidelines Network (SIGN) to the AMSTAR instrument in creating a checklist for the appraisal of systematic reviews and meta-analyses⁵. A copy of the instrument we used is available in the Appendix.

According to the AMSTAR website, an overall rating can be produced by calculating how many out of the eleven criteria are met by a review. As we wished to include only high quality reviews, we considered a qualitative judgement to be more appropriate than a quantitative cut-off point. This was because an unweighted summary function would not take into account that some criteria may be more important than others or that some criteria may not be applicable. The quality of each review was therefore summarised based on the individual AMSTAR items and reviewers' expert judgement as being of 'high', 'moderate' or 'low' quality. The review team discussed criteria for ratings. For example, a review which did not report the characteristics of all included primary studies would be more likely to be rated 'low' quality (although the actual rating would also depend on the other items).

The quality of all relevant reviews was assessed by one reviewer and checked by a second. We did not contact review authors for additional information, but if included reviews referenced further materials readily available on the Internet (e.g., separate appendices, project reports), then we downloaded these and considered them as part of the assessment. Any disagreements were resolved through consensus or by referral to a third reviewer.

Categorisation of reviews using an *a priori* framework of policies and interventions

As our review spanned a range of approaches, we developed an *a priori* framework of policies and interventions to categorise retrieved reviews. We could not locate any comprehensive framework covering alcohol, tobacco, illegal drugs, and gambling, and so we developed a bespoke list based on the eleven broad approaches identified during the earlier policy mapping and review (see *Background report 1: Policy mapping and review*), namely:

1. Control and regulation of supply
2. Gambling/substance-free zones
3. Age limits
4. Taxation and pricing
5. Control and regulation of advertising, marketing and sponsorship
6. Warning labels
7. Prevention programmes
8. Treatment and social reintegration
9. Harm reduction
10. General delivery structures and quality assurance measures
11. General approaches

We included examples of specific policies and interventions as mentioned in reviewed policy documents and by respondents to the online survey. In addition, we considered the contents of policy documents not included in the earlier policy mapping to identify relevant activities (e.g., WHO European action plan to reduce the harmful use of alcohol 2012-2020; WHO Framework Convention on Tobacco Control; EU drugs strategy 2013-2020; EC Communication "Towards a comprehensive

⁴ This problem has also been recognised by other authors. For example, Kung and colleagues (2010) propose a revised AMSTAR instrument in which each item is broken down into further criteria, allowing a more differentiated assessment.

⁵ See <http://www.sign.ac.uk/methodology/checklists.html>

European framework on online gambling”). We also reviewed existing taxonomies and lists of policies and interventions, including: the AMPHORA alcohol scale (Karlsson et al. 2012); the Alcohol Policy Index (Brand et al. 2007); an overview of legal, regulatory and socio-political structures relevant to responsible alcohol service (Stockwell 2001); the Tobacco Control Scale (Joossens & Raw 2011); the EMCDDA’s presentation of health and social responses to drug use (EMCDDA 2013b); Ritter and McDonald’s (2008) review of existing classification schemes for illicit drug policy interventions and their own list comprising 108 interventions addressing heroin use; the draft ALICE RAP gambling scale as supplied by colleagues in Work Package 14; the list of ‘24 public health activities to protect active gamblers and to prevent harm’ presented in the ALICE RAP policy briefing on gambling (Bühringer et al. 2013); and examples of demand reduction, supply reduction and harm reduction in gambling (Cantinotti & Ladouceur 2008). We also took into account how other literature reviews structured and presented evidence (e.g., multiple substances: Toumbourou et al. 2007; for alcohol: Anderson et al. 2009b; Babor et al. 2010a; Grube & Nygaard 2001; for illegal drugs: Babor et al. 2010b; Strang et al. 2012; UNODC 2013; for gambling: Reith 2006). Following the evidence synthesis, we revised the *a priori* list and added those interventions and policies which, although described in the scientific literature, had not been specifically mentioned in policy documents, by survey respondents, or in existing taxonomies. The revised framework is shown in the Appendix.

Rather than conducting a systematic content analysis and synthesis of these documents to create a ‘master list of all possible policies and interventions’ (on the feasibility and usefulness of such a list, see Box 1), our aim was to create an internal working document which would help us: i) to organise the evidence synthesis by allocating included reviews to specific categories of approaches; and ii) to identify gaps in the evidence (i.e., approaches mentioned in those documents for which we could not identify high quality reviews with a focus on young people). Therefore, this list was not intended to represent an exhaustive account of all the activities mentioned in those documents or of the policies and interventions that can be undertaken to address young people’s addictive behaviours. For the same reasons, we did not explore whether approaches are applicable to all four areas of interest (i.e., alcohol, tobacco, illegal drugs, and gambling). Instead, we listed approaches only as they occurred in the literature or online survey. Consequently, some approaches may be listed for one substance/behaviour but not another, even though they may be equally applicable to both substances/behaviours. Finally, although we did not seek to limit ourselves to demand reduction activities, certain interventions were purposefully excluded as they were not young people specific and are more relevant at an international level (rather than nationally or locally), including (although not limited to): alternative development, crop eradication/substitution, precursor chemical control, interdiction, high level enforcement through criminal investigations, customs/border control, activities targeting money laundering, and removal of direct tobacco subsidies. With regard to online gambling, policies and interventions to prevent fraud were also excluded as not relevant to our review.

During data extraction, included reviews were allocated to policies and interventions using a code book. Reviews could be allocated to several approaches if they covered a number of policies and interventions, and if so, were considered multiple times in the evidence synthesis. Analysis was conducted on the level of specific policies and interventions, as well as for the approach as a whole, to summarise the evidence on effectiveness and identify gaps in the evidence.

Box 1: A 'master list' of possible policies and interventions?

Although the idea of a 'master list of policies and interventions' is appealing, the feasibility and usefulness of such a list is limited.

Firstly, as Karlsson & Österberg (2007) highlight in their review of alcohol policy scales, it would not be possible to capture the whole range of different policy options in a single list, no matter how much detail such a list would contain. Similarly, Ritter and McDonald (2008: 16) state that "a definite list of all drug policy interventions will never be achieved, because new policy options emerge over time".

Secondly, a list is created for a specific purpose, which also defines the parameters of the list. For example, we have included only limited information regarding measures to address misuse of prescription medicines, inhalants or new psychoactive substances, as these substances were not a focus of our work, and so our list would be of limited value to professionals with a specific interest in these substances (although many of the alcohol and tobacco related approaches could be applicable to these substances also). Furthermore, we chose the eleven broad categories developed during the earlier policy mapping and review to ensure consistency between this report and the earlier report (see *Background report 1: Policy mapping and review*). However, our inspection of other literature reviews indicated that policies and interventions may be grouped in many different ways, suggesting that there is no single best taxonomy to use and the choice of categories will depend on the purpose for which a list is created. In particular, the first sections of our list are often presented by other authors as one group of activities, e.g., as population-level, environmental or regulatory interventions. Decisions about inclusion and categorisation of policies and interventions are also informed by (national, cultural, ...) preferences and views on the drugs issue (Ritter & McDonald 2008), which contradicts the possibility of a list with universal validity.

Thirdly, specific policies and interventions can serve multiple purposes and could therefore justifiably be included in several different categories (see also discussion in Ritter & McDonald 2008). To provide some examples in relation to our list:

- Brief interventions to reduce alcohol or drug use could be carried out with universal or (author defined) 'at risk' populations as well as with treatment-seeking populations, and would consequently constitute prevention in one case and treatment in the other.
- Substitution treatment has been included in our list twice; once under 'treatment' as one aim is, by definition, the reduction of illegal drug use, and once as 'harm reduction'.
- Measures such as restrictions on sales days/hours for on-premise sales of alcoholic beverages or bans on promotional activities (discounts) can be understood as harm reduction interventions to prevent accidents, violence, etc. (Anderson et al. 2009b), but have been included in our list as 'control and regulation of supply' and 'taxation and pricing' measures respectively.
- Treatment programmes in the criminal justice setting can be understood as serving the prevention of drug-related crime (EMCDDA 2013b), but have been included in our list solely under 'treatment'.
- Restrictions on alcohol sales and smoking bans can be seen as gambling demand reduction and gambling harm reduction measures when implemented within gambling premises (Cantinotti & Ladouceur 2008), but we have included such restrictions under the respective alcohol and tobacco headings only.
- Also with regard to gambling, policies and interventions such as self-exclusion, which we categorised as prevention, could also be seen as a form of treatment or harm reduction.

Data extraction

We constructed a standardised data extraction form in Microsoft Access based on the template provided in the NICE guidance on conducting systematic reviews⁶ as well as the approaches to data extraction and presentation taken in other reviews of reviews (e.g., Anderson et al. 2009b; Baird et al. 2009; Fayer et al. 2008; Jackson et al. 2010; Jepson et al. 2010; Jones et al. 2006; Lemmens et al. 2008; Morrison et al. 2003; Thomas et al. 2005; Toumbourou et al. 2007; UNODC 2013). Two reviewers piloted a first draft of the form using two sample reviews, and we finalised the form following a discussion within the review team.

We extracted the following information from each review (a selection of which is presented in the evidence tables, see Appendix):

- Aim of review as stated by review authors
- Review design (e.g., systematic review, meta-analysis)
- Years searched
- Language restrictions
- Inclusion criteria (rephrased using PICOS criteria, if not already presented in this format)
- Exclusion criteria
- Number of included studies: total, by study type and by country
- Number of relevant studies, if different from above: total, by study type and by country
- Actually included populations in reviewed primary studies (e.g., age, sex, health status, co-morbidities), using summary provided by review authors where available
- Risk level(s) (i.e., environmental, universal, selective, indicated, treatment)
- Setting(s) (e.g. school, family, community)
- Location(s) (e.g., urban, rural)
- Applicability of intervention and findings to European context (e.g., taking into account whether the intervention would be feasible within existing delivery structures)
- Allocation to our *a priori* list of policies and interventions (using code book), including an 'other' option
- Description of interventions
- Description of control/comparison conditions (where applicable)
- Outcomes: non-behavioural (e.g., attitudes, knowledge, cognitions), addictive behaviours (e.g., prevalence, discontinuation), harm related to addictive behaviours, other outcomes (e.g., implementation indicators), including information on measurement
- Summary of methods for, and results of, quality assessment as reported by review authors
- Results for all relevant outcomes as reported by review authors
- Information on sample sizes, follow-up and attrition, using summary provided by review authors where available
- Authors' conclusions (copied from conclusions or abstract)
- Limitations identified by original review authors (summarised from discussion section)
- Limitations identified by our review team
- Source of funding
- Comments by our review team

Where all included studies were relevant in a particular review, we extracted data for all included studies. If only a sub set of included studies was relevant to our review, then we extracted some general information in relation to all included studies (e.g., search parameters, inclusion criteria) but

⁶ <http://publications.nice.org.uk/methods-for-the-development-of-nice-public-health-guidance-third-edition-pmg4/appendix-k-examples-of-evidence-tables#k4-example-of-evidence-table-for-review-level-material>

limited most data extraction to the relevant studies only. For this reason, we excluded reviews which did not report studies and findings of interest to our review separately from other studies and findings, as considering these reviews would have necessitated conducting a separate analysis of the relevant primary studies and would not have allowed us to draw upon the review authors' own synthesis and conclusions.

A particular challenge for data extraction in a review of reviews is that the possibilities to extract data concerning primary studies are determined by how information on the primary studies is presented in the original review (e.g., level of detail presented in evidence tables, how studies were categorised, etc.). This was one of the reasons why reviews of moderate or low quality were excluded, as these tend to lack detail concerning the primary studies. As we included only 'high quality' studies, in most instances the level of detail in reporting study characteristics was sufficient and there was no need to contact review authors for further information. Nevertheless, we had to report studies and findings as they were reported by the review authors, as retrieving primary studies is not part of a 'review of reviews' approach. We were therefore limited in choosing, for example, which outcomes to report and in what way.

Data from high quality reviews meeting our inclusion criteria were extracted by one of three reviewers, by quoting the review authors or by paraphrasing. Due to the high number of included studies, it was not possible to systematically check the accuracy of the data extraction for all reviews. We checked 20% sample of all reviews, chosen by inspecting data extraction tables (e.g., to identify seemingly unclear or incomplete data extraction) and reviewer notes (e.g., to check those reviews which had been described as 'difficult to extract data from'). Any discrepancies were highlighted by the second reviewer in the original data extraction form and addressed during data synthesis. Data extraction for additional reviews was checked on an ad-hoc basis during data synthesis.

Data synthesis

The evidence synthesis followed the same structure as the *a priori* list of policies and interventions (see above), with each of the eleven broad approaches corresponding to one section of the synthesis. Within each broad approach, evidence was reviewed by substance/behaviours (i.e., starting with reviews reporting on multiple substances/behaviours, followed by those reporting on alcohol only, on tobacco only, on illegal drugs only, and those reviews reporting on gambling only), and within the same substance/behaviour by specific policy/intervention and finally by publication year (from older to more recent publications).

Based on the information collected during data extraction, we determined the number of included reviews per approach. Review sections were then distributed among three reviewers and prepared following an agreed reporting template outlining what information to include and in what format and style. Each section was checked by a second reviewer, paying particular attention to the accuracy of the conclusions. Any disagreements were resolved through discussion.

Within each section, an 'overview of evidence' was prepared by describing each included review separately and highlighting any overlap of primary studies between reviews; under 'outcomes', outcome variables reported in the reviews were described, followed by summarised results for each review (supplemented by more detailed evidence tables). Where appropriate, reviews reporting on the same type of policy or intervention were grouped together. The results were then synthesised in a narrative format, considering the number of reviews for a particular policy or intervention, the strength of their conclusions, discrepancies between reviews of the same policy/intervention if any, as well as the number and methodological quality of the primary studies. Where available, effect sizes are reported in the evidence tables (see Appendix), but in the review text we limited ourselves

to describing whether an effect was significant and in the desired direction. Where the number of reviews for a particular approach was large enough to warrant sub sections, an overall synthesis for the entire approach was also prepared by comparing findings across specific policies/interventions. In drawing conclusions regarding each approach, we also took into account the availability of reviews which had been excluded as being of moderate/low quality or because studies and findings of relevance to our review had not been presented separately.

In a final step, we created an overview table summarising the results of our review according to an agreed algorithm (included in the Appendix).

Overlap of relevant primary studies

We inspected overlap of relevant primary studies between included reviews to determine the size and nature of the original evidence base underlying the review-level evidence. For example, two reviews of the same policy/intervention may each cite a large number of primary studies. When considering the number of primary studies in the evidence synthesis, simply adding up the number of primary studies would likely lead to an overestimation of the size of the evidence base, as some primary studies would likely be included in both reviews. Another issue of concern would be if reviews of different policies/interventions cite the same studies, as this may indicate ambivalence in how studies have been categorised by review authors.

A trained research assistant extracted references to relevant primary studies from each of the included reviews using Microsoft Excel, and compared references between reviews to identify those which had been cited by more than one review. We limited our overlap analysis to the references to the primary studies relevant to our synthesis, as overlap between reviews concerning other studies would have distorted the findings of our analysis.

RESULTS

Quantity and quality of evidence

Search results

Our search resulted in a total of 2960 unique publications, of which 2001 references had been retrieved through complex searches of electronic databases and 959 had been retrieved through additional searches. Following screening of titles and abstracts, 844 publications were considered to be potentially relevant and re-assessed using the full text. During this assessment, 247 references (29%) were excluded because they did not meet our pre-specified minimum threshold for quality; 231 references (27%) were excluded because they employed the wrong study design (e.g., primary study, review of reviews); and 151 references (18%) were excluded because they did not include studies or findings specific to young people. Fewer references were excluded based on topic, outcomes, or publication year (see flowchart in Appendix for details). The remaining 171 publications were deemed 'eligible for consideration' and classified into categories A, B or C depending on whether relevant studies and findings were analysed and presented separately (see methods section), and 58 reviews classed as category C (i.e., 'includes some relevant studies, but these are not clearly identifiable and/or not analysed separately by the review authors') were excluded from subsequent analyses. This included 20 Cochrane reviews which, although including some studies in young people, did not analyse this data separately. Quality assessment was then carried out on 113 reviews classed as 'A' or 'B', and after excluding reviews of 'moderate' and 'low' quality (see below), 65 high quality reviews were retained and included in the synthesis. The study selection process is summarised in a flowchart in the Appendix.

Quality assessment

Of the 113 reviews assessed for methodological quality, 65 were rated 'high quality', 37 were rated 'moderate quality', and 11 were rated 'low quality'. The Appendix presents results of the quality assessment with respect to each of the eleven AMSTAR criteria as well as the overall rating. The large proportion of 'high quality' reviews is due to the fact that we had already applied a minimum quality threshold during the full text screening. No review met all AMSTAR criteria fully, and three reviews met ten of the eleven criteria in full. Conversely, there was no review that did not meet a single criterion, and eight reviews met only one criterion in full. On average, reviews considered to be 'high quality' met 6.8 AMSTAR criteria in full, whereas reviews of moderate/low quality met 3.3 criteria in full. No reviews of moderate/low quality met more than six criteria in full. Of the 41 reviews published by the Cochrane collaboration, 40 reviews were considered to be 'high quality' and one review was considered to be of 'moderate' quality.

Most assessed reviews documented a comprehensive literature search (i.e., at least two databases plus supplementary search strategy) (AMSTAR criterion #3), included grey literature (#4), and provided characteristics of included studies (#6). As many reviews presented a narrative synthesis (i.e., did not pool individual study findings), the AMSTAR criterion relating to the appropriate combination of individual study findings was considered 'not applicable' in many instances (#9). Most reviews did not assess the likelihood of publication bias using statistical tests (#10), but the usefulness of such tests in reviews employing narrative synthesis can be questioned. A key methodological weakness, especially of reviews deemed to be of 'moderate' or 'low' quality, was poor reporting, so that it was not always clear if an *a priori* design had been used (#1). Several criteria were often only partially met or the review did not provide details on all aspects of a

particular criterion. Generally, we found that study screening would be conducted in duplicate, but not data extraction (#2); lists of included studies would be provided, but not of excluded studies (#5); and funding sources would be stated for the review itself, but not for the included primary studies (#11). Reviews deemed to be of 'moderate' or 'low' quality were less likely to provide a systematic quality assessment for each included study (#7), and to incorporate study quality in the analysis or when formulating conclusions (#8).

Within each section of the evidence synthesis, we describe those reviews that were excluded based on quality.

Description of included reviews

The evidence synthesis is based on 65 reviews deemed to be 'high quality'. Compared with other reviews of reviews, this is a relatively large number of included reviews⁷. Of these, 34 reviews included only studies that were relevant to our review (relevance category A), and 31 reviews included some relevant studies, which were clearly identifiable and analysed separately by the review authors (relevance category B). More than half of included reviews (n=40) had been published by the Cochrane Collaboration, 22 had been published in journals, and three reviews appeared to have been published only as reports. A total of 36 reviews pooled data to perform at least a partial meta-analysis. The number of included primary studies ranged from zero to 134; and this was also the range for relevant primary studies within those reviews. Four reviews contained more than 50 relevant primary studies each. On average, reviews contained 14 relevant primary studies (median: 7 relevant primary studies). About half of reviews included only randomised controlled trials, and the other half included also other study designs. The reference section of this report lists included reviews⁸; evidence tables are contained in the Appendix (in alphabetical order by first author surname).

The Appendix contains an overview showing how included reviews correspond to approaches and behaviours of interest. In terms of allocation to the eleven broad approaches identified in our *a priori* list of policies and interventions (see above), we found that the included review-level evidence concentrated on three areas: prevention; treatment; and harm reduction. The evidence base on (school based) prevention programmes was the largest, with 27 reviews overall reporting prevention studies and 13 reviews reporting specifically on school based prevention. With regard to treatment, 19 reviews met our inclusion criteria, of which 15 provided evidence (i.e. the other four reviews identified no primary studies eligible for inclusion); mostly with respect to (psychosocial) interventions for smoking cessation. For harm reduction, 22 reviews met our inclusion criteria, of which 18 provided evidence; most of these reviews were of interventions to address the potential harms to children resulting from parental/familial participation in addictive behaviours (i.e., not 'classical' harm reduction measures such as needle exchange).

With respect to the other eight approaches, between zero and four reviews met our inclusion criteria. There were nine reviews which, although meeting our inclusion criteria, did not provide any evidence, as they identified no primary studies eligible for inclusion. Consequently, there were three areas (gambling or substance-free zones; warning labels; and general delivery structures and quality assurance measures) for which we were not able to draw any conclusions due to lack of original or review-level evidence. Another issue of concern was that evidence for a further three approaches (control and regulation of supply; age limits; and control and regulation of advertising, marketing

⁷ For example, in a methodological review of 126 health related reviews of reviews, Pieper and colleagues (2012) found a median average of 16 included reviews (interquartile range 7-31; maximum 396).

⁸ In case of several publications arising from the same review, we reference only the publication which we treated as the primary reference.

and sponsorship) came solely from a single cross-sectional study included in the same review, which had examined a number of youth access restrictions. Our ability to draw conclusions with regard to those approaches was therefore very limited. The evidence base was better for taxation and pricing, where we identified two high quality reviews with a large number of primary studies focussing on young people. With regard to general approaches, we identified three reviews of home visitation and one review of early childhood education; however, we identified no eligible reviews of policies/interventions targeting more distal determinants of health. Details of specific interventions and populations studied in the reviews are provided in the evidence synthesis and the evidence tables (see Appendix).

With regard to the different substances/behaviours, most reviews (n=54) focussed on one substance or behaviour only, whereas eleven reviews considered two or three substances/behaviours. None of the included reviews considered all four substances/behaviours of interest. A number of reviews addressed also other topics, such as sexual health, but this evidence is not considered in the present review. Across all approaches, the evidence base was largest for tobacco, with 27 reviews providing evidence on the effectiveness of tobacco related policies and interventions. There were 23 reviews providing evidence with regard to illegal drugs, and 20 reviews providing evidence with regard to alcohol. This was in contrast to gambling, where only two reviews met our inclusion criteria (one for prevention, and one for treatment), even though we also considered reviews in adult populations eligible for inclusion.

Description of excluded reviews

As we excluded > 900 potentially relevant papers during the first stages of the screening process, a list of these references with reason for exclusion is not presented here but is available upon request from the authors. The reference section of this report lists those reviews which were excluded later on in the screening process, as they did not present relevant studies and findings separately (58 reviews) or because they were deemed to be of 'moderate' or 'low' quality only (48 reviews). These excluded studies are described separately for each approach as part of the evidence synthesis (see sub sections entitled 'other available evidence'), and reasons for low numbers of included reviews are discussed there as appropriate.

The low number of included reviews on gambling warrants further explanation at this point. There were two main reasons why gambling reviews were excluded from our review: i) very few reviews using systematic methods appear to have been undertaken with respect to gambling (i.e. most identified reviews were traditional literature reviews which did not document methods for literature search and/or did not assess quality of included studies, and were therefore excluded during the full text screening), and even those reviews using systematic methods were not sufficiently rigorous to be considered 'high quality' (hence excluded following quality assessment using the AMSTAR instrument); ii) many primary studies appear to have assessed non-behavioural outcomes (e.g., knowledge, attitudes) rather than behavioural outcomes (e.g., gambling behaviour, money spent). Our restriction to English language publications may also have led to exclusion of potentially relevant reviews. During our searches, we identified a number of systematic reviews published in German (e.g., Kalke & Thane 2010; Kalke & Buth 2011); however, a preliminary appraisal indicated that even these reviews would probably not have met our inclusion criteria as they did not report on behavioural outcomes and/or because they did not systematically assess the quality of included primary studies.

Overlap of relevant primary studies among included reviews

The 65 included reviews cited a total of 1,107 unique references to relevant primary studies (see appended Microsoft Excel file for details of references to primary studies)⁹. Our analysis showed that 897 references (81%) were cited only once, and 210 (19%) were cited by two or more reviews. Of these, 152 references were cited by two reviews and 58 references were cited by three reviews or more (including two references cited by eight reviews as the most frequently cited ones). Simply adding up the number of references across all included reviews would have resulted in 1,417 references, hence overestimating the real size of the evidence base by 310 references (28%). More than half of this 'excess' was due to those 58 references which had been cited by three reviews or more. A list of these 58 references is provided in the Appendix, indicating also how often they were cited and by which reviews.

The Appendix also includes a table showing how many (relevant) studies and references to relevant studies were included in each review, and how many of these were also cited by other reviews. There were 21 reviews in which at least 50% of references to relevant studies had been cited by at least one other review, including four reviews in which all references to relevant studies had also been cited by at least one other review. Where several reviews have been included for a particular approach, overlap of relevant primary studies among these reviews is described separately as part of the evidence synthesis (see end of sub sections entitled 'overview of evidence').

⁹ The number of primary studies was lower than this figure, as some reviews provided multiple references per study (e.g., where short and long term outcomes have been reported in different publications). Due to the high number of references and resource limitations, it was not possible for us to systematically link references and individual studies, hence we are unable to provide the exact number of unique primary studies included across all reviews.

Evidence synthesis

The following sections present and discuss the retrieved evidence in relation to each of the eleven broad approaches provided in our framework of policies and interventions (see Appendix). Although the present document contains an overview table summarising the results in the Appendix, the overall findings are discussed in the main report (available as a separate file).

I. Control and regulation of supply

Introduction

The first four sections of this evidence synthesis consider measures which aim to restrict (young) people's opportunities to participate in addictive behaviours. This first section focusses on measures pertaining to the production and sale of substances as well as the provision of gambling services. For alcohol, examples of specific measures include restrictions on who can produce and sell alcoholic beverages (e.g., through licensing systems), and where and when these can be sold (e.g., restrictions on outlet density or sales days/hours). For tobacco, relevant examples include restrictions on sale of tobacco from vending machines or removing tobacco products from self-service displays in shops. For illegal drugs, this includes measures targeting the illegal production and sale of banned substances as well as measures to prevent the non-medical use of prescription medicines or restrictions pertaining to new psychoactive substances that fall outside of traditional illegal drug control (e.g. medicines regulations). For gambling, restrictions on locations for land-based gambling providers are a relevant example. These measures are not necessarily specific to young people, although they can have implications for young people as well. Measures specific to young people include supply of goods restrictions in educational or child care facilities. Further examples of relevant policies and interventions are detailed in the framework presented in the Appendix.

Reviewed studies

Overview of evidence

We identified two high quality reviews which considered measures to control or regulate the availability of substances, although only one of these included a relevant study for young people.

Alcohol

- Priest and colleagues (2008b) sought to review policy interventions implemented through sporting organisations for promoting healthy behaviour change. The review authors explicitly listed policies designed to support the 'responsible' use of alcohol (including 'availability of low or non-alcoholic beverages') as interventions of interest. However, no studies met the specified inclusion criteria. According to the review authors, the main reason for exclusion of available studies was study design (only controlled studies were eligible for inclusion in the review). Uncontrolled studies reporting pre- and post-test data could also not be located. The review authors reported that such policies have typically only previously been evaluated as case studies.
- A number of alcohol related reviews were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Tobacco

- Ranney and colleagues (2006) reviewed existing reviews as well as additional primary studies. They identified one primary study of tobacco access restrictions. This study was a cross-sectional survey and considered a range of ordinances and regulations, including: 1. Licensing (requires retailers to have a license to sell tobacco products); 2. Fines for merchants who sell tobacco products to minors; 3. Vending machine restrictions (a complete ban or restricted to adult-only establishment); 4. Ban on free-standing displays of tobacco products; 5. Ban on sale of single cigarettes and; 6. Ban on distribution of free samples. The study was conducted in the USA with 3,831 youth aged 12-17 years, drawn from a random sample of households in 314 towns in Massachusetts. The six provisions described above were used as predictor variables in the analysis. The review authors rated this study as being of 'fair' quality (possible options: good, fair, poor).
- A number of tobacco related reviews were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Illegal drugs

- We identified no reviews of populations, interventions or outcomes related to illegal drugs eligible for consideration in this section.

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in this section.

Outcomes

The study described above measured young people's perceived 'ease of access' to tobacco products, purchase attempts, and tobacco use (all self-report).

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

- *Availability of low or non-alcoholic beverages* – Priest and colleagues (2008b) found no suitable studies of health policy interventions used in sporting settings to promote 'responsible' alcohol use. The review authors concluded that studies using rigorous evaluation techniques are needed.
- *Youth tobacco access restrictions* – Ranney and colleagues (2006) included only one primary study of restricting adolescents' access to tobacco products. There appeared to be no correlation between youth access ordinances and young people's tobacco use. There was conflicting evidence regarding non-behavioural outcomes, with youth living in towns with bans on free-standing displays being less likely to perceive tobacco as easy to purchase, but those living in towns that required tobacco vendors to have a license reporting easy access. That study also found that individual factors associated with tobacco use were being older, living with a smoker, and having a close friend who smokes. The review authors concluded nevertheless that there was sufficient evidence regarding the effectiveness of tobacco prevention strategies that mobilise community support in conjunction with restricting tobacco product distribution, regulating the mechanisms of sale, enforcing access-to-minors laws, and educating and training merchants, as they also took into account the findings of previously conducted reviews (i.e., they did not draw their conclusions based on the single primary study).

In summary, only one high quality review examined the influence of access restrictions on youth addictive behaviours. This review identified a single cross-sectional study which did not suggest that tobacco access restrictions were effective in preventing young people's smoking. Questions to consider in the interpretation of this finding include the limitations of the study design (i.e., it was not an intervention study), the range of ordinances considered within the primary study, the level to which restrictions were actually enforced (i.e., restrictions cannot be effective if they are not enforced), as well as the potential relevance of friends and family as sources of tobacco products (see also our conclusions in the section on age limits). The review by Ranney and colleagues (2006) concluded that tobacco access restrictions were effective, but this was based on another review (which we excluded from the current review as it was not considered to be of high quality) rather than primary studies¹⁰.

Other available evidence

We excluded three reviews because they were not considered to be of 'high quality'. Two were of 'moderate' quality (Bader et al. 2007; Greaves et al. 2006) and one was considered to be of 'low' quality (Reavley & Jorm 2010) (see section on quality assessment for full details). All of these reviews considered supply control measures alongside other types of 'sales restrictions' or 'environmental interventions' (e.g., age limits, advertising restrictions); one in relation to alcohol and two in relation to tobacco.

In addition, we excluded six reviews of measures to control or regulate the availability of alcohol because they did not present the studies and findings of interest to our review separately from other studies or findings (Campbell et al. 2009; Hahn et al. 2010; Hahn et al. 2012; Jackson et al. 2009b; Latimer et al. 2008; Stockwell & Chikritzhs 2009). These examined measures such as restrictions on alcohol outlet density, hours of alcohol sales, and alcohol retail privatisation. Although some results relevant to young people were reported, it was not possible to clearly isolate the studies specific to young people and so these could not be included in our review.

Conclusions

This section sought to review evidence regarding the effectiveness of measures to control or regulate the availability of substances or gambling opportunities in addressing young people's addictive behaviours. Our key findings were:

- There was insufficient high quality review-level evidence to draw any conclusions regarding the effectiveness of such approaches in producing positive outcomes in young people. Through our reviews of reviews approach we were only able to identify a single primary study on youth smoking, but this considered a number of different approaches together.
- Our literature search suggests that review-level evidence on alcohol supply restrictions is available but this has focussed on general population effects rather than young people specifically.

¹⁰ If a review included primary studies as well as reviews, only the primary studies were considered relevant for our review, as we did not wish to conduct a review of 'reviews of reviews'. Instead, we sought to retrieve the identified reviews and we included them separately if they were of high quality. See methodology section for further details.

2. Gambling/substance-free zones

Introduction

This section focusses on statutory measures that ban (young) people from participating in addictive behaviours in certain locations¹¹. Statutory smoking bans are the most obvious example¹², but this approach can also be of relevance with regard to alcohol (e.g., restrictions placed on drinking in public places) and illegal drugs (e.g., defining high-drug-use areas as ‘drug free’ zones from which drug offenders can be banished). We were not able to identify any example of relevant approaches in relation to gambling. Measures specific to young people include the establishment of ‘smoke free’ schools and school yards.

Reviewed studies

Overview of evidence

We were not able to identify any high quality reviews suitable for inclusion which reported relevant primary studies.

Alcohol

- We identified no reviews of alcohol related populations, interventions or outcomes eligible for consideration in this section.

Tobacco

- Priest and colleagues (2008b) sought to review policy interventions implemented through sporting organisations for promoting healthy behaviour change. The review authors explicitly listed policies surrounding smoking (e.g., indoor and/or outdoor, partial or total smoking bans) as interventions of interest. However, no studies met the specified inclusion criteria. According to the review authors, the main reason for exclusion of available studies was study design (only controlled studies were eligible for inclusion in the review). Uncontrolled studies reporting pre- and post-test data could also not be located. The review authors reported that such policies have typically only previously been evaluated as case studies.
- A number of reviews on smoking restrictions were not eligible for inclusion in our review. These are described below under ‘Other available evidence’.

Illegal drugs

- We identified no reviews of populations, interventions or outcomes related to illegal drugs eligible for consideration in this section.

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in this section.

¹¹ For restrictions on where alcohol and tobacco may be *sold* and gambling services *offered*, please see the previous section on control and regulation of supply.

¹² For voluntary smoking bans, please see the sections on prevention (for schools) and harm reduction (for self-imposed restrictions at home).

Due to the lack of suitable studies, we do not present outcomes for this section. In summary, we were unable to draw any conclusions due to lack of evidence meeting our inclusion criteria.

Other available evidence

We excluded four reviews including evidence on restrictions on where (young) people can participate in addictive behaviours because they were not judged to be of 'high quality'. Instead, they were considered to be of 'moderate' quality (Bader et al. 2007; Greaves et al. 2006; Hopkins et al. 2001; Kabir et al. 2010) (please see section on quality assessment for full details). All four papers considered smoking related measures and examined a range of approaches (e.g., government laws, mandated workplace policies, self-imposed home smoking restrictions).

In addition, we could not include three reviews in this section because they did not present the studies and findings of interest to our review separately from other studies and findings (Carson et al. 2011; Meyers et al. 2009; Thomas et al. 2008). In a review of smoking bans in public places and workplaces (Meyers et al. 2009), it was not always possible to ascertain if populations described as 'younger' individuals were indeed under 25 years old. The two other reviews have been included in other sections of our review, but could not be considered here. In a review of community interventions for preventing smoking in young people (Carson et al. 2011), some studies included location restrictions as one intervention component among others. The review authors did not present studies incorporating location restrictions separately from other studies. In addition, due to the multi-component character of such interventions, it would have been difficult to isolate the effects of location restrictions. We have included this review in the section on prevention programmes (section 7). The review by Thomas and colleagues (2008) was not limited to young people and considered also non-behavioural outcomes, such as attitudes. We have included this review in our section on taxation and price (section 4), but we were unable to consider the more general evidence presented concerning restrictions on smoking in workplaces and public places as it was not limited to young people's smoking.

It was noteworthy that these papers considered all types of location restrictions together, whereas in this review we separated statutory restrictions (i.e., laws, discussed in this section) from voluntary or self-imposed restrictions (discussed in other sections: for schools, see prevention; for at home, see harm reduction).

Conclusions

This section sought to review statutory restrictions on where (young) people can participate in addictive behaviours. Our key findings were:

- We were unable to identify any relevant high quality review-level evidence to judge the effectiveness of such measures. One high quality review of smoking restrictions in relation to sporting organisations identified no suitable primary studies for inclusion, and so we were unable to draw conclusions from this review.
- There were a number of reviews available regarding the effectiveness of smoking bans in public places and work places. However, these were not of high quality or it was not possible to isolate the effects of such policies on young people's smoking. This suggests that relevant primary studies are available, but that high quality reviews of smoking bans are needed which focus specifically on the implications for young people.
- Considering our *a priori* list of policies and interventions, we found no reviews suitable for consideration in our review which examined specific location restrictions regarding alcohol and illegal drug use, despite the existence of such measures. We also found no reviews of

measures supporting enforcement and implementation in relation to statutory location restrictions, such as fines or community mobilisation. These gaps may indicate lack of primary research in this area or lack of systematic reviews focussing on young people.

- There was a lack of evidence with regard to gambling, but we had also not identified any corresponding approach during the development of our *a priori* list. Lack of review-level research on this topic could serve as further evidence that this approach may not be applicable to gambling. Locations where gambling opportunities are 'supplied' tend to overlap with locations of gambling 'use' (e.g., gambling establishments), and so the relevant approaches would fall under control and regulation of supply (section 1).

3. Age limits

Introduction

This section focusses on measures that define a legal minimum age which young people must reach to be able to participate in some types of addictive behaviours. Such measures make it illegal for retailers to sell alcoholic beverages or tobacco products to young people under this age, or to give them access to gambling services. Provisions can also make it illegal for young people who are underage to purchase or use such products or services. This approach also includes specific measures to ensure compliance with regulations, such as retailer education, proof of age schemes, and the definition of penalties for sellers in breach of regulations. Further examples of relevant policies and interventions are detailed in the Appendix. This approach was not considered applicable in relation to illegal drugs, although in some countries consumer laws are enacted in order to prevent purchase of novel psychoactive substances (not controlled under national drug control) by certain age groups.

Reviewed studies

Overview of evidence

We identified one high quality review including evidence on the effectiveness of age limits:

Alcohol

- A number of alcohol related reviews were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Tobacco

- Ranney and colleagues (2006) reviewed existing reviews as well as additional primary studies. They identified one primary study of tobacco access restrictions. This study was a cross-sectional survey and considered a range of ordinances and regulations, including: 1. Licensing (requires retailers to have a license to sell tobacco products); 2. Fines for merchants who sell tobacco products to minors; 3. Vending machine restrictions (a complete ban or restricted to adult-only establishment); 4. Ban on free-standing displays of tobacco products; 5. Ban on sale of single cigarettes and; 6. Ban on distribution of free samples. The study was conducted in the USA with 3,831 youth aged 12-17 years, drawn from a random sample of households in 314 towns in Massachusetts. The six provisions described above were used as predictor variables in the analysis. The review authors rated this study as being of 'fair' quality (possible options: good, fair, poor).

- A number of tobacco related reviews were not eligible for inclusion in our review. These are described below under ‘Other available evidence’.

Illegal drugs

- We identified no reviews of populations, interventions or outcomes related to illegal drugs for consideration in this section. This approach was not considered applicable with regard to illegal drugs.

Gambling

- We identified no reviews of gambling related populations, interventions or eligible for consideration in this section.

Outcomes

The study described above measured young people’s perceived ‘ease of access’ to tobacco products, purchase attempts, and tobacco use (all self-report).

In relation to the relevant primary study, the review findings can be summarised as follows (for details please see the evidence tables):

- *Youth tobacco access restrictions* – Ranney and colleagues (2006) included only one primary study of restricting adolescents’ access to tobacco products. There appeared to be no correlation between youth access ordinances and young people’s tobacco use. There was conflicting evidence regarding non-behavioural outcomes (i.e., perceived ‘ease of access’ to tobacco products). Fines for merchants who sell tobacco products to minors were only one among six types of ordinances that were considered. That study also found that individual factors associated with tobacco use were being older, living with a smoker, and having a close friend who smokes. The review authors concluded nevertheless that there was sufficient evidence regarding the effectiveness of tobacco prevention strategies that mobilise community support in conjunction with restricting tobacco product distribution, regulating the mechanisms of sale, enforcing access-to-minors laws, and educating and training merchants, as they also took into account the findings of previously conducted reviews (i.e., they did not draw their conclusions based on the single primary study).

In summary, only one high quality review examined the influence of (a range of) access restrictions on youth addictive behaviours. This review identified a single cross-sectional study which did not suggest that tobacco access restrictions were effective in preventing young people’s smoking. This finding should be viewed with caution as this was not an intervention study. The review authors concluded that tobacco access restrictions were effective, but this was based on another review (which we excluded from the current review as it was not considered to be of high quality) rather than primary studies.

Other available evidence

We excluded four reviews of age limits because they were not judged to be of ‘high quality’. Three were of ‘moderate’ quality (Greaves et al. 2006; Shults et al. 2001; Stead & Lancaster 2005) and one was considered to be of ‘low’ quality (Richardson et al. 2009) (see section on quality assessment for full details)¹³. These reviews addressed the effects of minimum legal drinking age laws as well as

¹³ The review by Richardson and colleagues (2009) was initially rated ‘high quality’ but was reassessed following data extraction as there were unexplained discrepancies between the review text, the evidence tables and the references.

measures to support and enforce implementation, such as educating retailers about their legal obligations, compliance checks, and proof of age schemes. One paper examined alcohol related restrictions, whereas three papers focussed on tobacco. The main outcome reported in the primary studies included in these reviews tended to be retailer compliance (or lack thereof, e.g. illegal sales to minors) rather than young people's smoking behaviour.

In addition, we did not include four reviews in this section because they did not present the studies and findings of interest to our review separately from other studies and findings (Carson et al. 2011; Jackson et al. 2009; Latimer et al. 2008; Thomas et al. 2008). Two papers examined alcohol related restrictions, whereas two papers focussed on tobacco. Two papers have been included in other sections of our review, but could not be considered here. In a review of community interventions for preventing smoking in young people (Carson et al. 2011), some studies included education of tobacco retailers about age restrictions as one intervention component among others. The review authors did not present studies incorporating such components separately from other studies. In addition, due to the multi-component character of such interventions, it would have been difficult to isolate the effects of individual intervention components. We have included this review in the section on prevention programmes (section 7). The other review (Thomas et al. 2008) has been included in our review of taxation and pricing (section 4), but we were unable to consider the evidence presented regarding restrictions on sales to minors. This was because the review presented non-behavioural outcomes (e.g., attitudes) and behavioural outcomes together, whereas our review was limited to behavioural outcomes. In addition, the relevant section examined differential effects among young people (e.g., by sex) but did not discuss the overall effectiveness of the approach for young people.

Conclusions

The section sought to review evidence on regulations establishing a minimum age pertaining to sales (i.e., retailer must not sell product to a person below this age), purchasing and/or actual use of addictive goods and services. Our key findings were:

- Insufficient evidence was available to judge the effectiveness of fines for merchants who sell tobacco products to minors. One review included a single study in which this was one tobacco access ordinance considered among others. It was therefore not possible to draw any conclusions.
- An inspection of excluded studies indicated that primary studies appear to be available with regard to alcohol and tobacco, but there is a lack of high quality reviews summarising this evidence. Considering our *a priori* list of policies and interventions, we identified no suitable evidence regarding gambling, which may indicate a need for primary studies or for high quality reviews.
- Studies or interventions typically include multiple components, incorporating different approaches (e.g., control of supply, age limits, community-based prevention), and so it is not always possible to isolate the effects of individual components. This was also a challenge in the interpretation of the one identified study.
- Restrictions may be undermined in practice. Effectiveness of restrictions is dependent upon the level of actual enforcement; and even where restrictions are well enforced, young people may still obtain alcoholic beverages and cigarettes from other sources, such as family and friends (Stead et al. 2005; Richardson et al. 2009). It has also been suggested that as the compliance rate of retailers increases, youths may move away from retail sources and towards social sources for obtaining cigarettes (Rice et al. 2009: 14). This could also be one interpretation of the findings reported above.

- The majority of currently available research does not appear to report young people's behaviours as the main outcome, but measures of compliance. For example, the excluded review by Stead and colleagues (2005) reported that 12 out of 35 included studies assessed the effect of an intervention on the smoking behaviour of underage youth, whereas 31 studies assessed retailer compliance with the law using test purchases. Although measuring retailer compliance is an important indicator of enforcement, knowledge of behavioural outcomes in young people is needed if the effectiveness of the intervention is to be judged.

Overall, our review indicates that methodological approaches used in primary studies are not suitable to judge the effectiveness of age limits in addressing young people's participation in addictive behaviours. There also appears to be a need for high quality reviews addressing tobacco related measures, although even more so in relation to alcohol and gambling.

4. Taxation and pricing

Introduction

This section considers the effectiveness of taxation and pricing measures to address (young) people's participation in addictive behaviours. For alcohol, this includes measures such as minimum unit pricing, increased taxes on beverages that are believed to be popular with young people, or restrictions on promotional activities which may encourage excessive drinking. For tobacco, this can include restrictions on the sale of cigarettes in small quantities (e.g., fewer than 20 cigarettes) to reduce their affordability (especially for young people). Further examples of relevant policies and interventions are detailed in the Appendix.

Reviewed studies

Overview of evidence

We included two high quality reviews considering the effects of taxation and pricing.

Alcohol

- A number of alcohol related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Tobacco

- Thomas and colleagues (2008) reviewed population-level tobacco control interventions. Twenty studies reporting the effects of changes in price on young people's smoking were relevant to this review section. Studies were econometric analyses modelling the effects of pricing based on survey data. These surveys had been carried out in the USA with school or university students. Review authors used a bespoke quality checklist comprising six criteria to judge the quality of study execution. Across the seven types of interventions which they reviewed, they found that studies of restrictions on sales to minors were the most likely to fulfil the criteria for quality of execution (up to six criteria met), followed by studies of restrictions on smoking in schools (up to four criteria met). The remaining studies, including those on pricing, met between zero and three of the criteria.
- Rice and colleagues (2009) reviewed the effects of cigarette price and tax on the smoking behaviour of young people aged 25 years or under. The review included 45 econometric

analyses (secondary data analyses) of observational survey data. Most of these were cross-sectional surveys, some repeated at several time points, but few were longitudinal studies. Thirty-three studies reported price elasticity estimates and three reported tax elasticities; seven studies reported price estimates and two tax estimates. The populations included in the surveys were between 12 and 25 years old, although age ranges varied between surveys. Most studies were conducted with school pupils. Sample sizes were generally very large, with most studies based on survey data with > 10,000 participants (in some cases > 100,000 participants). Most studies were conducted in North America (42 studies), with one study each originating from Australia, Sweden, and the UK. The review authors highlighted a number of weaknesses concerning the evidence base. The use of predominantly cross-sectional survey designs limited the confidence in their ability to attribute differences in smoking outcomes to price. Nearly all studies controlled for potential confounding covariates but there was great heterogeneity between studies in terms of what variables were considered (e.g., socio-demographic variables, existence of other tobacco control policies, general 'anti-smoking sentiment').

- A number of tobacco related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Illegal drugs

- We identified no reviews of populations, interventions or outcomes related to illegal drugs eligible for consideration in this section.

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in this section.

The two reviews included in this section cited a total of 48 references for included primary studies. Of these, 17 studies were cited by both reviews, indicating that except for three studies, all studies cited by Thomas and colleagues (2008) were also included in the review by Rice and colleagues (2009).

Outcomes

Studies were secondary data analyses, and so they reported measures such as price or tax elasticity. Information on how outcomes had been measured in the original surveys was limited, which was also highlighted as a weakness by Rice and colleagues (2009). Generally speaking, outcomes comprised smoking participation (defined by Rice and colleagues (2009) as referring to 'individual-level analyses of the probability of smoking'), smoking prevalence (referring to 'aggregate state or country-level analyses of the proportion of smokers'); quantity of cigarettes smoked (by smokers or total; as average number of cigarettes or packs smoked per day or as number of days smoked in past 30 days); smoking initiation; smoking cessation as quit attempts and sustained cessation (all measured through self-report surveys).

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

- *Increased price or taxation* – Thomas and colleagues (2008) found evidence from 20 primary studies to suggest that adolescents and college students were sensitive to price and that increasing the price of tobacco products would reduce youth smoking. In terms of differential effects, the review authors concluded that boys, non-white children and older children may be more price-sensitive. However, these latter findings were based on a

smaller sub-set of studies, and none of them was given a high quality rating. Rice and colleagues (2009) concluded that price was an effective instrument in reducing cigarette smoking among young people. Consistent evidence was found to suggest that increased price reduced young people's individual probability of smoking (termed 'smoking participation'), smoking initiation, as well as the number of cigarettes smoked. With regard to smoking cessation, increased price was found to encourage quit attempts but it was not clear whether cessation was sustained. The evidence regarding smoking prevalence rates was limited, but also suggested beneficial effects. Estimated effect sizes differed between studies and between the different types of outcome. The review authors found that there was insufficient evidence on the responsiveness to price across social groups: the strongest available evidence suggested that males were more responsive to price than females; evidence concerning age and ethnicity was less consistent. Fewer studies examined the effects of taxation, and their findings were inconsistent, although no study reported increases in smoking. Studies were based on observational (not experimental) designs and had some methodological weaknesses, limiting the review authors' ability to attribute outcomes directly to the measure.

In summary, we found two high quality reviews on the effectiveness of pricing (and to a lesser extent taxation) to reduce young people's smoking. Drawing on a total of 48 studies, the review authors concluded that pricing was effective in preventing young people's smoking initiation and reducing the quantity of cigarettes smoked. One review also suggested that price increases may encourage young smokers to quit smoking.

Other available evidence

We excluded five reviews on the effects of taxation and pricing because they were not considered to be of 'high quality' according to the our review criteria. Of these, four were judged to be of 'moderate' quality (Bader et al. 2007; Elder et al. 2010; Greaves et al. 2006; Hopkins et al. 2001) and one was judged to be of 'low' quality (Bader et al. 2007) (please see section on quality assessment for full details). One paper reviewed alcohol taxation and pricing, and four papers reviewed tobacco control measures. Three reviews considered special populations: unemployed young adults (Bader et al. 2007); 'high risk' populations, namely youth (< 19 years old), young adults (18-24 years old), persons of low socio-economic status, persons with dual diagnoses, heavy/long-term smokers, and indigenous people (Bader et al. 2011); and indigenous people, youth and people on a low income (Greaves et al. 2006).

In addition, we excluded two reviews because they did not present the studies and findings of interest to our review separately from other studies and findings (Jackson et al. 2009; Meier et al. 2008). Both of these were complex reviews examining a range of interventions (not limited to pricing/taxation), populations, and outcomes in relation to alcohol.

Conclusions

This section reviewed evidence on taxation and pricing of addictive goods and services. Our key findings were:

- The strongest evidence we found was in relation to cigarette pricing. Two relatively recent high quality reviews of a large number of primary studies concluded that there was consistent evidence to suggest that higher prices were effective in preventing and reducing young people's smoking. However, the magnitude of the effect was less clear, as the pooled estimates differed by type of outcome and there was large variability in individual study

estimates (see evidence tables for details). The evidence included in those reviews also suggested that pricing has been examined more often than taxation.

- Evidence on alcohol taxation and pricing was available but could not be included because it did not meet our inclusion criteria. Two complex reviews (i.e., examining multiple interventions, populations and outcomes) did not present the studies and findings of interest to our review separately from other studies and findings. This suggests that primary studies exist but that high quality reviews focussing on the implications of alcohol taxation and pricing for young people's drinking are still needed.
- Considering our *a priori* list of policies and interventions, there were a number of approaches for which no relevant high quality review-level evidence was identified (although primary studies may exist). This included higher taxation on products which may be more appealing to young people (such as sweetened alcoholic beverages or beverages with higher alcohol content), minimum unit pricing for alcohol, restrictions on promotional activities and financial incentives, or policies addressing the affordability of alcohol free beverages. We identified no suitable evidence in this area pertaining to gambling.

Overall, our review found evidence for the effectiveness of pricing of tobacco products in preventing and reducing young people's smoking. High quality reviews (focussing specifically on young people) are needed to judge the effectiveness of taxation and pricing for alcohol and gambling.

5. Control and regulation of advertising, marketing and sponsorship

Introduction

This section considers statutory or voluntary measures to control or regulate advertising, marketing and sponsorship activities in relation to addictive goods and services. This includes restrictions on exposure (e.g., restrictions on where advertisements can be placed) as well as restrictions on content (e.g., what words may be used in advertisements). Specifically in relation to young people, this may mean restricting advertisements in media with a predominately young target audience or prohibiting the portrayal of young (looking) people in advertisements. We also include approaches such as standardised packaging (e.g., of cigarette packs) under this heading. Further examples of relevant policies and interventions are detailed in the Appendix.

Reviewed studies

Overview of evidence

We identified one high quality review which included evidence on measures to control advertising and promotional activities:

Alcohol

- A number of alcohol related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Tobacco

- Ranney and colleagues (2006) reviewed existing reviews as well as additional primary studies. They identified one primary study of tobacco access restrictions. This study was a cross-sectional survey and considered a range of ordinances and regulations, including: 1.

Licensing (requires retailers to have a license to sell tobacco products); 2. Fines for merchants who sell tobacco products to minors; 3. Vending machine restrictions (a complete ban or restricted to adult-only establishment); 4. Ban on free-standing displays of tobacco products; 5. Ban on sale of single cigarettes and; 6. Ban on distribution of free samples. The study was conducted in the USA with 3,831 youth aged 12-17 years, drawn from a random sample of households in 314 towns in Massachusetts. The six provisions described above were used as predictor variables in the analysis. The review authors rated this study as being of 'fair' quality (possible options: good, fair, poor).

- A number of tobacco related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Illegal drugs

- We identified no reviews of populations, interventions or outcomes related to illegal drugs eligible for consideration in this section.

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in this section.

Outcomes

The study described above measured young people's perceived 'ease of access' to tobacco products, purchase attempts, and tobacco use (all self-report).

In relation to the relevant primary study, the review findings can be summarised as follows (for details please see the evidence tables):

- *Youth tobacco access restrictions* – Ranney and colleagues (2006) included only one primary study of restricting adolescents' access to tobacco products. There appeared to be no correlation between youth access ordinances and young people's tobacco use. There was conflicting evidence regarding non-behavioural outcomes (i.e., perceived 'ease of access' to tobacco products). Restrictions on advertising and other promotional activities (i.e., ban on free-standing displays of tobacco products, ban on distribution of free samples) comprised only two among six types of ordinances that were considered, and the findings were not distinguished by type of ordinance. That study also found that individual factors associated with tobacco use were being older, living with a smoker, and having a close friend who smokes. The review authors concluded nevertheless that there was sufficient evidence regarding the effectiveness of tobacco prevention strategies that mobilise community support in conjunction with restricting tobacco product distribution, regulating the mechanisms of sale, enforcing access-to-minors laws, and educating and training merchants, as they also took into account the findings of previously conducted reviews (i.e., they did not draw their conclusions based on the single primary study).

In summary, only one high quality review examined the influence of (a range of) access restrictions on youth addictive behaviours. This review identified a single cross-sectional study which did not suggest that tobacco access restrictions were effective in preventing young people's smoking. This finding should be viewed with caution as this was not an intervention study. The review authors concluded that tobacco access restrictions were effective, but this was based on another review (which we excluded from the current review as it was not considered to be of high quality) rather than primary studies.

The usefulness of this study to inform our conclusions in relation to this section was limited, as the measures examined as part of that study did not include any actual bans on advertising.

Other available evidence

We excluded three reviews of relevance to this topic because they were not judged to be of 'high quality'. Two were of 'moderate' quality (Capella et al. 2011; Greaves et al. 2005) and one was considered to be of 'low' quality (Reavley & Jorm 2010) (see section on quality assessment for full details). One paper focussed on (bans on) cigarette advertising (Capella et al. 2011), one paper reviewed restrictions on point-of-sale advertising among other measures termed 'sales restrictions' (Greaves et al. 2006), and one paper reviewed restrictions on alcohol marketing and promotion among other measures labelled 'environmental interventions' (Reavley & Jorm 2010). For the two latter reviews, it would not have been possible to isolate the effects pertaining specifically to the advertising related control measures. One review examined alcohol related approaches, whereas the others focussed on tobacco.

In addition, we excluded three reviews because they did not present the studies and findings of interest to our review separately from other studies and findings (Capella et al. 2008; Moodie et al. 2012; Thomas et al. 2008). One review of cigarette advertising bans did not present the results on young people separately, even though studies of young people were included (Capella et al. 2008). One review of plain tobacco packaging presented findings on young people separately, but this included also non-behavioural outcomes (e.g., hypothetical questions on how participants thought plain packaging would affect their behaviour) (Moodie et al. 2012). One review of restrictions on advertising of tobacco products identified two primary studies with young people; however, the review authors were interested in differential effects by gender or age, and they did not comment on the overall effectiveness of the approach for young people (Thomas et al. 2008). This paper has been included in another section of our review (section 4), but could not be considered here. All three reviews focussed on tobacco control measures.

There are also a number of advertising related reviews which we excluded at an earlier stage of the screening process. Based on observational studies, these examined the evidence on whether advertising influences young people's smoking behaviours. Examples include a review by Anderson and colleagues (2009a), entitled *Impact of Alcohol Advertising and Media Exposure on Adolescent Alcohol Use: A Systematic Review of Longitudinal Studies*, as well as a Cochrane review by Lovato and colleagues (2011), entitled *Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours*. We were unable to include these, as they did not include evidence regarding the effectiveness of advertising restrictions to reduce drinking or smoking.

Conclusions

This section sought to review evidence on the effectiveness of controls and regulations regarding advertising, marketing and sponsorship. Our key findings were:

- There was insufficient evidence to judge the effectiveness of this approach. One review identified a single primary study of relevance, from which it was not possible to draw any conclusions specific to advertising. An inspection of excluded reviews suggests that as some approaches, such as standardised packaging, are still in the early stages of implementation and available research has investigated hypothetical rather than actual effects on behaviour. Reviews were available on the impact of advertising on young people's smoking (one of which included 19 primary studies), suggesting that this may be an area where more research has been undertaken so far.

- Our *a priori* list of policies and interventions contains a detailed account of possible measures, only few of which have been examined by available high quality reviews. There appears to be a need for high quality reviews focussing on the effects of advertising restrictions on young people's participation in addictive behaviours. In September 2013, a protocol was published for a Cochrane review on the effectiveness of alcohol advertising bans or restrictions to reduce alcohol consumption in adults and adolescents (Siegfried et al. 2013), which should make an important contribution to this research area.
- Considering how evidence is examined in the retrieved reviews, we found that measures which we considered separately in our review, such as control and regulation of supply, age limits, and advertising restrictions, tend to be examined as a group by other authors (as 'access restrictions', 'sales restrictions', 'environmental interventions', 'population-level interventions', etc.). In several cases, evidence statements only referred to the effectiveness of such measures overall (as in the study included above). This may reflect the fact that in practice, such measures are often implemented concurrently, and that they are different from demand and harm reduction programmes. It does, however, limit the possibilities of commenting on the effectiveness of a particular approach, such as advertising restrictions.

Overall, there are a number of methodological and other challenges in researching measures to control and regulate advertising, marketing and sponsorship. Our review indicated that more high quality reviews with a specific focus on advertising restrictions and young people are needed.

6. Warning labels

Introduction

This section focusses on measures which seek to label addictive goods and services with (health) warnings¹⁴. This includes health warnings on containers of alcoholic beverages, on cigarette packs and hand rolling tobacco, on gambling machines and gambling websites.

Reviewed studies

Overview of evidence

We were not able to identify any review suitable for inclusion which reported studies on the effectiveness of warning labels in changing young people's participation in addictive behaviours:

- One review of health warnings on tobacco products was not eligible for inclusion in our review. It is described below under 'Other available evidence'.
- We identified no reviews of populations, interventions or outcomes related to alcohol, illegal drugs or gambling eligible for consideration in this section.

Due to the lack of suitable studies, we do not present outcomes for this section. In summary, we were unable to draw any conclusions due to lack of evidence.

¹⁴ For health warnings integrated in advertisements, please refer to the previous section on control of advertising, marketing and sponsorship; and for health warnings as part of informational/educational programmes, please see the section on prevention.

Other available evidence

We could not include one review in this section because the studies and findings of interest to our review were not presented in a suitable format. Thomas and colleagues (2008) reviewed a number of different approaches to tobacco control, including health warnings on tobacco products. This review was deemed to be of 'high quality' and evidence from this review has been included in our section on taxation and pricing (section 4). The review authors identified five primary studies which assessed the effects of health warnings and labelling of contents on tobacco products, three of which reported results on young people (conducted in Canada or USA). The review authors found that health warnings did not appear to change attitudes or smoking behaviour. Outcomes were smoking prevalence, quantity smoked or individual smoking participation. However, we were not able to include this evidence due to lack of detail in the reporting of results. All studies were reported to have methodological problems, and in all the relevant studies the impact of health warnings was assessed post-implementation only (i.e., no pre-post comparison possible).

A number of reviews of warning labels were excluded at earlier stages of the screening process. Examples include: a review by Stockwell (2006), entitled *A Review Of Research Into The Impacts Of Alcohol Warning Labels On Attitudes And Behaviour*; a review funded by the European Commission and conducted by Sambrook Research International (2009), entitled *A review of the science base to support the development of health warnings for tobacco packages*; and a review by Wilkinson and Room (2009), entitled *Warnings on alcohol containers and advertisements: International experience and evidence on effects*. None of these met our pre-specified minimum requirements concerning study quality to be eligible for consideration in our review (see methodology section for further details).

Conclusions

This section sought to review evidence on the effectiveness of health warning labels in addressing young people's participation in addictive behaviours. Our key findings were:

- There was insufficient evidence to draw conclusions. We identified no high quality reviews which reported the effects on young people's participation in addictive behaviours in a suitable format. One excluded review of warnings on tobacco products identified three studies in young people, but these had substantial methodological limitations.
- Our literature searches found a number of primary studies investigating this topic as well as a number of reviews on alcohol and tobacco which did not meet minimum requirements concerning study quality. The lack of high quality review-level evidence focussing on the effects of warning labels on the behavioural outcomes in young people is notable given that this is an area of major interest and activity with respect to European tobacco control¹⁵. Although lack of evidence must not be misunderstood to mean lack of effect, our review suggests a need for higher quality reviews in this area.

¹⁵ The display of warning messages is mandatory on all tobacco products in the EU, and the EU has commissioned a number of studies in this area. See: http://ec.europa.eu/health/tobacco/products/health-warnings/index_en.htm

7. Prevention programmes

Introduction

This section focusses on prevention programmes implemented with schools pupils, families and/or communities. This approach includes a wide range of activities, such as structured, manualised programmes (e.g., drug education curriculum) and interventions tailored to the individual needs of participants (e.g., counselling); activities with a specific drug/addiction prevention focus and those that promote health more generally. For gambling, we have also included other measures under this heading, such as self- and operator-imposed exclusion. Further examples of relevant policies and interventions are detailed in the Appendix.

Reviewed studies

7.1 School based approaches to prevention

Overview of evidence

We identified 13 high quality reviews that assessed the effectiveness of school based prevention approaches, of which seven were Cochrane reviews.

Multiple substances/behaviours

- Fletcher and colleagues (2008) reviewed ‘whole school’ approaches to drug prevention. Such approaches are not necessarily concerned with the delivery of specific prevention interventions, but involve changes to schools’ overall organisation, policies, working practices, culture, or environment. A total of 22 studies were reviewed, but only four of these were experimental investigations; two of which were conducted in the USA, one in the Netherlands, and one in Australia. The other studies reviewed were observational in nature and are not included in this review. All four studies were considered by the authors to be of high quality. Three of the approaches involved school administrative teams addressing the overall school organisation and ethos, whilst the other implemented new school rules on smoking, drinking, and drug use.
- Jackson and colleagues (2012) reviewed 13 studies of interventions designed to prevent substance use and risky sexual behaviour. Four of these were solely school based programmes, and included outcomes related to smoking, alcohol, and illicit substance use. Two of these programmes were delivered in South Africa, one in Namibia, and one in the USA, and all focused on developing resistance and coping skills. Four other studies were of activities delivered across the whole school or multiple settings (also reviewed by Fletcher and colleagues (2008)), and one further study assessed the effects of a school programme with a parent information component. Although a meta-analysis was conducted, the effect sizes calculated included data from a number of non-school based programmes. The majority of studies were rated as ‘moderate’ using a quality assessment tool, and the authors noted that five ‘weak’ studies did not produce significant intervention effects.

Alcohol

- Foxcroft and colleagues (2011d) reviewed school based universal prevention programmes for alcohol misuse. The review included 53 RCTs, most of which were cluster randomised in design. Overall reporting of trial methodology was considered by the authors to be poor. Components in programs included some common elements: promotion of alcohol

awareness, resilient behaviours, change in beliefs and attitudes, self-esteem, social networking, peer resilience, problem solving, refusal and decision making skills. Programme duration varied across studies from one 50 minute session to three years, and time of last follow up ranged from within one month of programme delivery to 12 years. Most studies were conducted in North America (41 studies), six studies in Europe, six in Australia, one in India, one in Swaziland, and two studies were conducted in multiple countries.

- A number of alcohol related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Tobacco

- Ranney and colleagues (2006) reviewed 102 primary studies and reviews of smoking prevention, cessation and control activities, and this included 10 RCTs conducted in schools. Only one of these was rated methodologically 'good', whilst the others were rated 'fair'; 'poor' quality studies were excluded from the review. Interventions were heterogeneous in terms of the prevention strategies employed and were implemented either within a single school year or over multiple school years. Manualised approaches were frequently employed. Five school-based interventions were conducted within a single school year and used classroom instruction, computer-based programs, competition, parent involvement, community advocacy, and personalised letters. The length of exposure students received ranged from eight weeks to eight months. Five school-based interventions occurred over multiple school years and included classroom instruction, teacher training, parent involvement, extracurricular school activities, community assessment, advocacy, and projects.
- Müller-Riemenschneider and colleagues (2008) reviewed 35 RCTs of interventions designed to prevent smoking in children. Fourteen were delivered in schools, and nine were rated as having 'good' or 'high' methodological quality. The majority of reviewed programmes were manualised. Two 'quit and win' programmes were identified but these were rated as methodologically poor and so were not included in the subsequent meta-analysis.
- Thomas and colleagues (2013) conducted a Cochrane review of the effectiveness of school based approaches to smoking prevention. One hundred and thirty four studies were reviewed, although data could not be analysed from 49 because of the use of unsuitable outcomes. All studies but one were cluster RCTs in design. As such a large number of studies were reviewed, interventions were categorised into five broad approaches: information only; social competence curricula; social influence curricula; combined social influence and social competence; and multimodal programmes which included the school in wider initiatives. The authors concluded that the reviewed studies included a low risk of reporting bias, an unclear risk of selection and detection bias, and a low risk of attrition bias.
- Although the primary aim of Brinn and colleagues (2010) was to review the effectiveness of mass media approaches to smoking prevention (see description in Section 7.4 below), three of the seven included RCTs examined this approach in combination with school based prevention activities and so are included here. Two of the reviewed interventions combined traditional school based curriculum activities with supplementary local TV broadcasts designed to reinforce the prevention message. The third intervention examined the effectiveness of the Project ALERT prevention programme (with or without booster sessions) when delivered to a target group who had also been exposed to the (USA) National Youth Anti-Drug Media Campaign (NYADMC) with an intended degree of campaign exposure of 2.5-youth orientated ads per week. Study bias was assessed according to the Cochrane Review Handbook. The authors stated that all included studies in their review had at least four significant methodological limitations based on the risk of bias assessment.
- Carson and colleagues (2011) reviewed 25 studies on the effectiveness of community based smoking prevention interventions, 21 of which included a school based component. All

studies included a controlled trial design. Intervention duration and intensity differed between studies from a single session to up to three years of blocked activities. There was also large variation in the follow up time in studies, ranging from immediately post intervention to 15 years post intervention. Most studies had been carried out in the USA.

- Johnston and colleagues (2012) reviewed five RCTs of programmes designed to offer incentives for school children to prevent smoking. Four of these were set in schools and concerned the Smokefree Class Competition where classes of children aged 11-14 compete against other classes to remain smoke free for a six month period. Studies were assessed as being of 'variable' quality.
- Carson and colleagues (2012) reviewed two RCTs of school and community based interventions for indigenous youth. Although these two studies specifically targeted Native American youth, they are included in the current review as an example of evidence for the tailoring of prevention approaches to unique populations with particular health needs. One reviewed study consisted of a 10-session skills enhancement programme delivered through the school curriculum, group discussions, and invitations to adults from tribal programmes to be guest speakers. The other study examined a 15 session school curriculum with the addition of a community activity where participants modelled the skills they had learned to parents and other community members. Both studies were classed as having a high risk of bias.
- A number of tobacco related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Illegal drugs

- Faggiano and colleagues (2005) reviewed the effectiveness of school based prevention for illicit drug use. The review included 32 studies, 29 of which were RCTs, and most studies were conducted in the USA. The review categorised intervention approaches according to whether they targeted drug related knowledge or drug related skills and decision making. The included studies reviewed some well known programmes such as DARE, ALERT, Project Towards No Drug Abuse, and Life Skills Training, although most were bespoke interventions subject to a small number of trials (typically 1). The majority of studies assessed outcomes immediately post intervention, although eight studies followed up participants >5 years. All reviewed studies were subject to some bias, including lack of allocation concealment or lack of blinding; although the authors noted these are very difficult to achieve in school curriculum based approaches.
- Soole and colleagues (2008) reviewed school based approaches for illicit drug prevention. Their review included 58 studies, of which 12 were included in a subsequent meta analysis. Although methodological assessment was undertaken (37% of the treatment comparisons were from studies rated as the highest quality), the type of research design was not reported. Interventions reviewed varied greatly in their approach and the majority were based on competency enhancement or social influence approaches. The length of the intervention ranged from six to 50 curriculum based sessions, whilst six programmes were not curriculum based and so the number of sessions was not specified.
- A number of reviews relating to illegal drugs were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Gambling

- Gray and colleagues (2007) reviewed the evidence of early intervention and prevention for problematic gambling. A total of 13 studies, originating mostly from Canada were reviewed, six of which reported behavioural outcomes, and two of these were conducted in schools. Both programmes comprised of classroom curricula teaching about chance, money, and

coping skills, and delivered over 3 x 60 minute sessions. Follow up was conducted up to 9 months post intervention. The reviewers noted weaknesses in both of these studies, particularly regarding the failure to account for clustering in the analyses.

As many reviews reported studies of relevance to school, family and community based prevention, we examined overlap of primary studies in relation to all three sections. The 19 reviews reporting on school, family or community based prevention cited a total of 639 references. This represented more than half of references cited in all 65 reviews included in our review (1114 references total). Consequently, these sections drew on a large amount of original research in comparison with the other sections in this report. At the same time, there was also considerable overlap between reviews. Of the 639 references, 140 references (> 20%) were cited in more than one review, with 90 references cited twice, and one reference to a relevant primary study cited by eight different reviews. All four relevant studies included in Fletcher and colleagues (2008) were included also in other reviews; and more than two thirds of references to relevant primary studies in the reviews by Müller-Riemenschneider and colleagues (2008), Ranney and colleagues (2006) and Thomas and colleagues (2007) were also cited in at least one other review. Only two reviews did not overlap with any other reviews included in these sections (D'Onise et al., 2010; Gray et al., 2007).

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Alcohol*: The included studies assessed period prevalence of alcohol use (over the lifetime; previous year, month); abstinence; weekly alcohol use; the number of drinks consumed per week or use episode; being 'drunk; or 'heavy drinking'; 'hard liquor' use. The use of biochemical validation was not reported in the studies reviewed.
- *Tobacco*: The included studies assessed smoking initiation; smoking prevalence (over the previous 7 or 30 days); regular smoking (e.g., daily, or in 6 of the previous 7 days); number of cigarettes smoked per day. Some studies incorporated biochemical validation (exhaled carbon monoxide, plasma thiocyanate levels, saliva thiocyanate), or a 'bogus' pipeline methodology to try and improve the accuracy of self-report.
- *Illegal drugs*: The included studies assessed period prevalence (over the lifetime, previous year, month) of use of cannabis, inhalants, 'drugs' and 'hard drugs'. The use of biochemical validation was not reported in the studies reviewed.
- *Gambling*: The included studies assessed money spent on gambling; gambling frequency; pathological gambling. All assessments were self-report.

The review findings for young people can be summarised as follows (for full details please see the evidence tables):

Multiple substances/behaviours

- *Whole school interventions* – Fletcher and colleagues (2008) reported the outcomes of whole school interventions that aimed to address use of multiple substances. In general, they concluded that these approaches had mixed effects. Two studies produced significant reductions in the rate of increase in cannabis or a combined substance use indicator in boys but not girls, whilst another reported that fewer pupils reported cannabis use in the previous 6 months. A Dutch intervention which aimed to establish school rules on substances had iatrogenic effects regarding cannabis use, although it appeared to reduce alcohol and tobacco consumption. The authors concluded that whole school approaches were effective in reducing pupils' substance use, although there was a need to understand the precise mechanisms through which this occurred. Jackson and colleagues (2012) conducted a meta-analysis of the effects of programmes that targeted substance use and

risky sexual behaviours. However, as reviewed approaches also included non-school based programmes, an overall effect size is not presented here. For school based programmes, the authors reported that significant reductions were more likely for smoking, but not for other substance use; and this mirrored the findings of the overall meta-analysis. Their analysis of whole school approaches reached the same conclusions as that by Fletcher and colleagues (2008). The authors concluded that the lack of significant programme effects may have been due to delivery after initiation of targeted risk behaviours.

Alcohol

- *Universal school based approaches* – Foxcroft and colleagues (2011d) concluded that it was difficult to identify which programme components made universal school based approaches effective. Across studies, the outcomes most amenable to change were drunkenness and heavy episodic drinking. Overall, the authors recommended that some generic psychosocial and developmental programmes could be considered effective, and three were specifically mentioned: the *Good Behavior Game*; *Life Skills Training*; and *Unplugged*.

Tobacco

- *Universal school based approaches* – Ranney and colleagues (2006) concluded that school based prevention programmes did not appear to be effective in the long term, although the review authors emphasised that most of the studied approaches were effective in the short term (<12 months follow up). Similarly, Müller-Riemenschneider and colleagues (2008) concluded that there was little evidence to suggest that school based manualised programmes were effective in reducing smoking at long term follow up. Individual study findings showed that some programmes were associated with iatrogenic effects as smoking increased in intervention exposed groups. Meta analyses suggested non-significant effects on lifetime, last 30 day, and regular smoking. The authors noted that compared to school based programmes, the evidence for the effectiveness of multisectoral and community based interventions was much stronger, and the pooled effect size of these types of approach was statistically significant. Thomas and colleagues (2013) concluded that interventions with outcomes related to ‘pure prevention’ (i.e., prevention of smoking onset in baseline non-smokers) showed a significant effect at longest follow-up, with an average 12% reduction in initiation compared to the control groups. However, no pure prevention effect was detected on follow ups at less than 12 months. The combined social competence and social influences interventions showed a significant effect at one year and at longest follow-up. Studies that utilised a social influences programme showed no overall effect at any time point; multimodal interventions and those with an information-only approach were similarly ineffective. Studies reporting change in smoking behaviour (i.e., initiation of smoking) over time did not show an overall significant effect, but at an intervention level there were positive findings for social competence and combined social competence and social influences interventions. The authors attempted to conduct a final analysis on changes in point prevalence of smoking, although they were unable to pool the data because of high study heterogeneity.
- *Multicomponent interventions* – Brinn and colleagues (2010) concluded that although evidence was only available from three RCTs, the addition of media components to school based smoking curriculum, particularly when based on social learning theory or the health belief model, seemed to be effective in reducing cigarette initiation or smoking in the last week. Carson and colleagues (2011) reported that 9 of the 10 studies in which multicomponent interventions showed effectiveness in smoking prevention/cessation at the primary follow up point included a school based component. They concluded that interventions were most likely to be effective when they included a school element

delivered by teachers or other school staff, were of sufficient intensity (> 12 months), and were based upon robust theory (e.g., social influences or social learning theory).

- *Incentives* – Johnston and colleagues (2012) concluded that as the number of studies reviewed was small (n=4), there was insufficient high quality evidence to support the use of incentives to prevent smoking initiation in classes of school children. As only one type of programme had been studied, the review authors suggested that future work in this area could study the effects of programmes including individual rather than group level incentives.
- *Interventions targeting special populations* – Neither of the studies reviewed by Carson and colleagues (2012) was effective in reducing tobacco smoking or smokeless tobacco use in Indigenous youth. These authors drew attention to the health inequalities that exist between Indigenous and non-Indigenous populations, and concluded that more high quality trials were needed.

Illegal drugs

- *Universal school based approaches* – Faggiano and colleagues (2005) concluded that compared to education as normal, skills-development-based school programmes were effective in preventing early stage cannabis and ‘hard drug’ use (and drug use assessed immediately post intervention). School based curricula designed to only increase knowledge, or those that focused on affective components of behaviour were not recommended, unless delivered as part of a high quality research trial to assess effectiveness. No studies directly compared the effectiveness of the different types of approach (e.g., skills vs. knowledge). The authors noted that as the effectiveness of school based prevention is likely to be influenced by the wider drugs policy climate and cultural attitudes towards drugs and drug use, it was important that replication took place in different cultural contexts. Soole and colleagues (2008) conducted both a narrative review and meta-analysis. Soole’s narrative review of six studies evaluating resistance skills programmes suggested that these interventions can be effective at reducing cannabis initiation among non-users, particularly in girls. Few studies showed that generic skills training approaches were effective, and where they were, this was in ‘low-risk’ young people. Eleven studies evaluated social influence programs, with around half reporting short term significant programme effects on cannabis use in low risk populations. The findings from competency enhancement evaluations were inconclusive, although the review suggested that peer delivered approaches may be more effective at reducing cannabis use compared to teacher-led interventions. The studies of interventions that included recreational activities and theatre and drama based education reported no significant effects on cannabis use. Findings from the studies included in the meta analysis showed that all types of prevention programmes produced significant short and long term effects on cannabis use. Higher quality studies were associated with larger effect sizes at long-term follow up, but not at short-term follow up. For other drugs including cocaine and amphetamine, the meta analysis did not indicate any significant programme effect at either short- or long-term follow up. Differences in findings compared to Faggiano and colleagues (2005) are related to review methodology, particularly in relation to inclusion criteria and study quality assessment, which were stricter in Faggiano’s work.

Gambling

- *Universal school based approaches* – Gray and colleagues (2007) reported that neither of the two school based gambling programmes reviewed resulted in significant changes in gambling behaviour.

In summary, school based approaches to prevention remain popular and are the most frequently studied type of prevention approach. This is understandable as schools provide access to the core target population of prevention, and classroom curricula provide a means of delivering universal interventions within existing structures. The close links that many schools have with families and communities mean that most prevention programmes have a school component, even if it is not the main focus. Data from the EMCDDA (2012, 2013a) suggests that most EU Member States report full provision of universal school based prevention programmes, mostly addressing substance use. However, there was little high quality evidence to suggest that school based prevention programmes in general were associated with beneficial effects on addictive behaviours. Review outcomes and the transferability of results were dependent upon the behaviour targeted, study quality, and the programmes investigated.

We identified only one high quality review of school based alcohol prevention (Foxcroft et al. 2011d) and its authors were only able to recommend three specific manualised programmes, rather than prevention models (e.g., skills development) or theories (e.g., social influence).

The evidence base for smoking prevention was greater and we identified seven high quality reviews. In general, positive effects were noted by reviewers for preventing the initiation of smoking (i.e., effective in baseline non-smokers). The addition of a media component (either as a reinforcement of classroom activities or as part of a national campaign, and based upon scientific theory) or community and family based components seemed to increase programme effectiveness. Recommendations were made that school based work should be based upon robust theory and be of long duration (>12 months). However, this latter recommendation is probably unfeasible for most educational establishments where there is little curriculum time available for extended duration programmes. Most reviews suggested that there was no strong evidence to suggest that school based programmes assisted in smoking cessation.

Regarding illicit drug prevention, reviews highlighted preventative effects of whole school approaches in reorganising school responses to drug use (although the precise mechanisms of action were unknown), and skills development approaches towards cannabis use (although only at short term follow up). In contrast, curricula designed to only increase knowledge (i.e., provision of factual information) were not recommended.

Finally, evidence of the effectiveness of school based programmes for prevention of (problematic) gambling was lacking and it was not possible to draw any firm conclusions from the limited number of primary studies reviewed.

7.2 Family based approaches to prevention

Overview of evidence

We identified six high quality reviews that assessed the effectiveness of family (or parental/carer) based prevention approaches, three of which were Cochrane reviews.

Multiple substances/behaviours

- Petrie and colleagues (2007) reviewed 20 studies that investigated the effects of parental programmes on children's (aged under 18) use of alcohol, tobacco, and illegal drugs. Sixteen of these studies were RCTs and overall, study quality was deemed to be 'fair', although there were a number of examples of high quality work. Most studies had been carried out in the USA. Most of the approaches reviewed were school based programmes with parental components, and as such there was great heterogeneity in approach. Activities included group parental skills training, child homework tasks requiring parental participation, mailed

booklets, home visiting, or a mixture of these approaches. Overall, programmes could be classified as either directly targeting risk factors for substance use in primary school children; providing activities to ease the primary-secondary school transition; or focused on supporting adolescent independence and decision making.

- D'Onise and colleagues (2011) reviewed evidence of the effects of pre-school programmes on adult health outcomes, including substance use. Twelve studies of eight different programmes were identified, and of these, six studies of five programmes were relevant to our review. All relevant studies had been carried out in the USA. The programmes studied were all manualised approaches and included multiple components, including parental/family elements. A common feature of all but one programme studied was the involvement of external healthcare providers. All studies suffered from methodological weaknesses, including small sample sizes, the control group receiving a mix of programmes/services, use of self-report measures, incomplete outcome measures, and the possibility of residual confounding.
- One review relating to alcohol and illegal drugs was not eligible for inclusion in our review. Please refer to the section 'Other available evidence' below.

Alcohol

- Foxcroft and Tsertsvadze (2011b) reviewed evidence of the effectiveness of universal family psychosocial or educational programmes on the prevention of alcohol misuse. They included 12 RCTs of programmes primarily delivered in the USA. The reviewed programmes varied in duration from 3 weeks to 36 months. Common components included the promotion of awareness in parents and young people; change in beliefs, attitudes and self-esteem; and social, coping, problem-solving, decision making and resilience skills. Reporting of all studies was assessed to be of poor quality and around a third were considered susceptible to bias through confounding or contamination with other prevention activities.

Tobacco

- Thomas and colleagues (2007) reviewed 22 RCTs examining the effectiveness of family based prevention programmes for smoking. Programmes included in the review were mainly manualised approaches and had a wide variety of target outcomes. Only five exclusively targeted smoking, four aimed to prevent substance addiction in general, and others aimed to impact upon areas such as safety and risk taking, cardiovascular disease and gun control. The majority of studies (n=16) were conducted in the USA and follow up ranged from 1 to 29 years. With regard to study quality, six trials were rated as having minimal bias, 10 trials low risk of bias, and six trials were rated as having multiple biases.
- Müller-Riemenschneider and colleagues (2008) reviewed a number of intervention approaches designed to target smoking by young people. Although not specifically examining interventions with a family focus, they did identify a number of community based or multi-component interventions with a prominent family/parental component. Of the 35 intervention RCTs, 13 included easily identifiable family or parental components. There was great variation in approach; some were specific family programmes (e.g., Iowa Strengthening Families; Family-school partnership), whilst others were established programmes with the addition of family components (e.g., DARE, ALERT) or generic curricula with information sessions for parents. Overall, most interventions either consisted of information provision for parents, improving parent-child communication, or aimed to strengthen the parent-school partnership. The majority of studies were rated as high quality by the review authors.

Illegal drugs

- Gates and colleagues (2006) reviewed 17 studies examining the effectiveness of approaches implemented in non-school settings to prevent the use of illegal substances. Most studies had been carried out in the USA. Eight studies examined family based interventions designed to improve family functioning or parenting skills, delivered to parents, children or families, either alone or in groups. The duration of interventions ranged from 5 weeks to 16 months. Overall, the quality of included studies was considered to be poorly reported, and so a complete analysis of bias could not be undertaken.

Gambling

- We identified no reviews of gambling related interventions or outcomes eligible for consideration in this section.

As many reviews reported studies of relevance to school, family and community based prevention, we examined overlap of primary studies in relation to all three sections. The findings are reported in the section on school based approaches to prevention.

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Alcohol*: The included studies assessed period prevalence of alcohol use (lifetime, last 12 months, last 30 days, last week); heavy episodic drinking (>5 drinks in a single use episode); alcohol use frequency; frequency of 'drunkenness'.
- *Tobacco*: The included studies assessed period prevalence and current smoking status; frequency of smoking; heavy smoking (e.g., frequency of smoking >1 pack/week). The majority of indicators were self-reported.
- *Illegal drugs*: The included studies assessed period prevalence (lifetime, last 12 months, last 30 days, last week) of illegal drugs in general and named substances; substance use frequency. Some studies included biochemical validation, but most relied on self report.
- *Gambling*: No high quality reviews were identified.

The review findings for young people can be summarised as follows (for full details please see the evidence tables):

Multiple substances/behaviours

- *Parental programmes targeting multiple substances* – Petrie and colleagues (2007) reported that there was mixed evidence for the effectiveness of parental programmes. The most effective approaches appeared to be those that included active parental involvement, or aimed to develop skills in social competence, self-regulation, and parenting skills. The strongest evidence was found for interventions with pre-teen and early adolescent children where a number of high quality studies showed a significant decrease in the prevalence of use of tobacco, alcohol, and illegal drugs.
- *Pre-school programmes* – D'Onise and colleagues (2011) concluded that pre-school programmes produced long term reductions in the prevalence of lifetime or current smoking. However, one study found an increase in smoking in the intervention group (Project CARE), but as this only included 9 subjects in each arm it was discounted. The authors also concluded that there was good evidence for beneficial programme effects on the absolute risk of cannabis consumption. The evidence with regard to alcohol use was less

clear, as studies found a moderate increase in the absolute risk of heavy episodic drinking in the previous month.

Alcohol

- Foxcroft and Tsertsvadze (2011b) concluded that universal family based programmes to reduce alcohol misuse produced medium to long term effects that were small but significant. However, the authors noted that further work was needed in order to better understand which programme components mediated these effects and how effectiveness might be moderated by differences in implementation context.

Tobacco

- Thomas and colleagues (2007) reported that, based on studies with moderate risk of bias, well conducted family programmes could be effective, but in general most of the studied approaches failed to significantly reduce smoking rates. Family based approaches were not more effective than school based prevention, and there was no association between the length of the programme and effect size. Finally, two programmes which included smoking outcomes but which were not specifically smoking cessation interventions were effective. The authors concluded that it was not possible to draw firm conclusions from the current evidence base about the efficacy of family based interventions or whether the interventions are intense enough to produce a sustained effect. In contrast, Müller-Riemenschneider and colleagues (2008) concluded that there was 'moderate' evidence for the effectiveness of family based interventions. This difference was likely due to the inclusion of a greater number of programmes with school components. However, the review authors also clarified that interventions needed to include 'active involvement' and that provision of information alone was unlikely to be effective. These authors also recommended that family components were added to school based interventions in an attempt to increase the effectiveness of the latter.

Illegal drugs

- Gates and colleagues (2006) concluded that despite some manualised programmes producing reductions in some measures of self-reported cannabis use, in general, because of study quality limitations, there was insufficient evidence to determine whether universal family based approaches were effective in preventing illegal drug use.

In summary, one review suggested that family based pre-school prevention activities were effective in producing long term reductions in smoking prevalence, and might also be effective in reducing the risk of lifetime cannabis use, although the evidence was less robust for this outcome. For other types of family based work, review level evidence suggested that programmed approaches to prevention, where there was active involvement of family members (i.e. not just provided with information) had the potential to produce short to medium term reductions in smoking and alcohol misuse. In contrast, there was a lack of evidence to suggest this type of approach was effective in reducing illegal drug use, at least when delivered as a universal intervention.

7.3 Community based approaches to prevention

Overview of evidence

We identified five high quality reviews that assessed the effectiveness of community based prevention approaches, three of which were Cochrane reviews.

Multiple substances/behaviours

- Jackson and colleagues (2012) reviewed 13 RCTs of interventions designed to prevent substance use and risky sexual behaviour. Six of these studies were community based approaches, or school or family prevention with community components. The majority of studies were rated as 'moderate' using a quality assessment tool.

Alcohol

- Foxcroft and Tsertsvadze (2011c) reviewed 20 RCTs of universal multi-component interventions designed to prevent alcohol misuse. Most (n=17) were conducted in the USA. Aims of interventions were generally the promotion of awareness of alcohol related issues in parents and young people, promotion of resilient behaviours, change in normative beliefs/attitudes, self-esteem and social, refusal and problem-solving skills. Intervention length varied from 2 months to 11 years. Specific characteristics of interventions and providers differed between studies. Study quality was mixed, and the authors noted that there was a high risk of bias due to confounding in nearly half of included studies.
- A number of alcohol related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Tobacco

- Müller-Riemenschneider and colleagues (2008) reviewed 35 RCTs of interventions designed to prevent smoking in children. Ten of these were community based programmes, and seven were rated as being of 'high' quality. The definition of 'community based' in this review comprised any non-school based intervention, and so included interventions delivered to families or by primary care physicians (e.g., consultations).
- Carson and colleagues (2011) reviewed 25 studies of community based smoking prevention, the majority of which (n=15) were RCTs. The review included a broad range of activities, but most included school based components of differing duration and intensity. Of those studies with no school component, programmes and activities included a clean indoor air policy, parent child communication sessions with participants recruited from a migrant education programme, the development of family tobacco prevention policies with clinician visits and mailouts, and educational sessions outside of school. Other intervention elements included financial incentives and other rewards, extracurricular projects, peer role models, media components, and strategies to reduce sales of tobacco to minors (as part of wider community prevention activities). The authors reported that most of the studies reviewed were subject to a number of methodological flaws.

Illegal drugs

- Gates and colleagues (2006) reviewed 17 studies of the effectiveness of drug prevention interventions, including five RCTs of multicomponent community interventions. Components of community interventions varied but included use of local media, anti-drug advertising, community mobilisation, extracurricular activities, and parent support programmes. Four studies examined the addition of community components to school drug prevention curricula. One study, conducted in Chinese villages, examined the effects of a multidimensional intervention that included the community, health clinics, family, and school. Overall, the quality of included studies was considered to be poorly reported, and so a complete analysis of bias could not be undertaken.
- A number of reviews relating to illegal drugs were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in this section.

As many reviews reported studies of relevance to school, family and community based prevention, we examined overlap of primary studies in relation to all three sections. The findings are reported in the section on school based approaches to prevention.

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Alcohol*: The included studies assessed period prevalence of alcohol use (lifetime, last year, last month); frequency of drinking; 'regular' drinking; heavy episodic drinking (>5 drinks per use episode), 'drunkenness'; 'problem drinking'; and a composite measure of 'alcohol involvement'. Few studies reported that self-report data was verified with biochemical validation.
- *Tobacco*: The included studies assessed smoking prevalence (lifetime, last year, last month); abstinence (over the previous 7 or 30 days); regular and 'heavy' smoking. Self report was validated in some studies by exhaled carbon monoxide, plasma thiocyanate levels, or saliva thiocyanate measures.
- *Illegal drugs*: The included studies assessed period prevalence (lifetime, last year, last month, past 90 days, past 6 month) of drugs (named and in general); 'misuse' of drugs; 'problem' substance use.
- *Gambling*: No high quality reviews identified.

The review findings for young people can be summarised as follows (for details please see the evidence tables):

Multiple substances/behaviours

- Jackson and colleagues (2012) reviewed the effectiveness of community based approaches to reduce sexual risk taking and substance use. They concluded that this type of prevention work was most effective when delivered in combination with other components, typically school curricula. Of those approaches solely delivered in the community, the 'Focus on Kids' programme was effective in reducing self-reported tobacco and cannabis smoking (in the previous 6 months), although only when delivered in combination with a parental child-monitoring exercise. The Youth Action Research Programme was also effective in reducing last month cannabis use. None of these types of programme reduced any measure of alcohol use.

Alcohol

- Foxcroft and Tsertsvadze (2011c) concluded that there was evidence that some types of manualised universal community based multi-component programme were effective in preventing alcohol misuse. The authors considered that the associated effect sizes were likely to be small, but potentially meant that the programmes were cost-effective. Additional sub analysis suggested that multiple component programmes were not more effective than single component approaches.

Tobacco

- Müller-Riemenschneider and colleagues (2008) reported that four of the ten interventions reviewed were effective in reducing smoking rates (by up to 11%), whilst two increased smoking behaviour in recipients. Meta-analysis of five studies measuring lifetime smoking produced a non-significant effect size, whilst the pooled effect size of three studies measuring last-month smoking was significant. The authors noted that although the observed effects were modest, community based programmes appeared to be more effective than school based ones. Caution is warranted because of the broad definition of 'community' in this review (i.e., non-school based activities).
- Carson and colleagues (2011) concluded that although there was some evidence to support the effectiveness of community based smoking prevention interventions, the validity of findings was limited by the methodological flaws identified. Overall, they considered that the evidence of effect was 'not strong'. The review authors commented that the interventions most likely to be effective were school based multi-component interventions with intervention delivery by school teachers and other faculty members; those with parental involvement; having an intervention duration >12 months; and those based on social influences or social learning theory.

Illegal drugs

- Gates and colleagues (2006) concluded that there were no 'strong' effects of community based interventions on illegal drug use. Examining individual studies, one study conducted in Chinese villages appeared to show a large reduction in drug use initiation but the reviewers drew attention to the poor quality of the methodology and inconsistencies in the published study data. Two studies which added community components to a school based programme showed small decreases in self-reported cannabis and general substance use, but the effects were small. The final study reported no significant effects.

In summary, studies of community based approaches to addictive behaviours prevention are rare; most of the studies reviewed were delivered as components of wider school or family based work. Interventions in the area of smoking prevention are better developed, reflecting the comprehensive and multisectoral approaches to smoking cessation included in many national health policies. Regardless of greater coverage, the evidence for the effectiveness of community based smoking prevention was weak, and the most effective programmes seemed to be those that included community components in school curricula. Although primary studies tended not to be of high quality, there was evidence that universal community based approaches to alcohol misuse prevention were effective. Furthermore, these types of approach were considered by review authors to be cost effective. There was a lack of evidence on the effectiveness of community based prevention of illegal drug use, and where research had been conducted, review authors considered it to only produce small effects.

7.4 Other prevention approaches

Overview of evidence

We identified 12 high quality reviews that assessed the effectiveness of other types of prevention approach, of which seven were Cochrane reviews.

Multiple substances/behaviours

- Thomas and colleagues (2011) reviewed the evidence of the effectiveness of youth mentoring approaches in preventing substance use (alcohol and illegal drugs). Four RCTs

were included, and the reviewers noted unclear risk of bias in most assessments, but it was not specified whether this was due to poor methodology or poor reporting. The reviewed approaches included mentoring by older community members as part of community service activities in combination with a life skills curriculum and/or parental workshops; and structured recreational activities with older peers. All studies were conducted in populations defined as having low socioeconomic status, and one study was conducted in young people with a HIV+ parent.

Alcohol

- Moreira and colleagues (2009) reviewed social norms based interventions for students recruited from College or University settings. The review included 22 RCTs conducted in students that were mainly recruited from Psychology classes, hence the generalizability of findings was questioned. All of the studies were conducted in the USA, with the exception of three studies conducted in New Zealand. The interventions included personalised individual level feedback, targeted interventions focused on 'high risk' groups such as first year students, or those considered to be at higher risk of developing alcohol problems. The review also included assessments of community based social norms approaches, whereby campaigns referred to normative drinking patterns in the general age group. Feedback was delivered in the form of mailings, web feedback, individual feedback, group face-to-face feedback, and as part of a social marketing initiative. The reviewers noted a number of study limitations such as a lack of researcher blinding or self-reported outcome measures, and concluded that overall, caution was warranted in interpreting the results because few studies provided full methodological detail.
- Khadjesari and colleagues (2011) reviewed the evidence of the effectiveness of standalone computer interventions in reducing alcohol consumption. The publication included 18 RCTs in University/College students, mostly from the USA, and 12 of these were considered suitable for combination in a meta-analysis. The review authors noted that most of the studies failed to include information that would allow for assessment of bias, and the data used in the meta-analysis was mostly skewed, which affected the outcome of the analysis. Most studies delivered the intervention via the Internet. One study sent tailored text-messages to hand-held computers, while the other interventions were available from a computer in a fixed location. With regard to intervention content, most studies consisted of personalized feedback on current levels of drinking and comparison with safe drinking limits. This was often accompanied with normative feedback, associated health risk, information on calculating units and support services. Five studies investigated interventions designed to resemble the campus setting. These included a variety of interactive games and assignments, motivational feedback and information on risk taking and refusal skills.
- A number of alcohol related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Tobacco

- Brinn and colleagues (2010) reviewed seven trials investigating the effectiveness of mass media based campaigns in smoking prevention. With the exception of one study conducted in Norway, all data was obtained from the USA. Although the intensity, media, and duration of campaigns varied greatly, the majority of campaigns were based on social learning theory, and three were combined with a school based curriculum. All studies were considered to have significant methodological limitations according to the Cochrane Handbook.
- Carson and colleagues (2011) reviewed community based smoking prevention studies. Overall, the review included 25 studies with a controlled trial design, most of which had

been carried out in the USA. Nine trials were described as having had media advocacy components, including TV, radio and other local media.

- Hettema and Hendricks (2010) reviewed the evidence of the effectiveness of motivational interviewing for smoking cessation. Their meta-analysis included a total of 31 studies mostly from the USA, seven of which provided data on effects in adolescents (defined as mean age <18). In all trials, motivational interviewing was delivered in combination with several other methods, the most frequent being feedback and literature, brochures or pamphlets. Interventions were delivered in primary and secondary healthcare settings, and populations included adolescents with psychiatric disorders, hospital patients, and community recruits. In relation to all included studies (not limited to adolescent studies), the review authors commented that most of the studies were of medium to high methodological quality.
- Myung and colleagues (2009) conducted a meta-analysis reviewing the effectiveness of web and computer based smoking cessation programmes. Twenty two RCTs were included in the analysis, and of these three concerned young people; one was conducted in the UK and the other two in the USA. Two of the trials were web based, and one was delivered on a standalone computer, although specific intervention details were not reported. Although quality assessment was not provided for individual studies, overall, the analysis showed that study outcomes were not dependent on study quality ratings.
- Civiljak and colleagues (2010) reviewed 20 trials that assessed the effectiveness of Internet based interventions for smoking cessation. Four of these were RCTs conducted with young people. Interventions assessed included a smoking cessation support website; access to a smoking cessation website combined with personalised telephone support; a virtual reality world based on motivational interview concepts; and an online magazine that participants read over 20 weeks, and which introduced smoking cessation topics and offered email access to peer 'coaches'. The authors noted that Internet based studies face particular risks to internal and external validity and that only one included primary study validated self-report of smoking with biochemical test.
- Hutton and colleagues (2011) reviewed 21 RCTs of web based smoking cessation interventions. Six of these were specifically targeted at young people (one was for college students). Studies were conducted in the USA, Canada and Australia. The overall study quality for the five trials with adolescents was rated 'fair' by the review authors, whilst the single study in college students was rated 'good'. Adolescent interventions were all based on theory (e.g., social cognitive theory, social learning theory) and comprised web-based computer sessions and multicomponent interventions combining web sites and emails. In the study with college students, intervention participants received weekly email invitations to visit a web site, interactive quizzes with tailored feedback, and weekly emails from peer coaches. Control students received a single email with links to online academic and health resources.
- A number of tobacco related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Illegal drugs

- Ferri and colleagues (2013) reviewed 23 studies of mass media interventions aimed at influencing young people's drug use. Studies were conducted in the USA, Canada and Australia. Fifteen studies reporting behavioural outcomes in young people (as opposed to non-behavioural outcomes such as attitudes or intentions) were considered relevant to the current review. Relevant studies evaluated TV/radio, printed and Internet advertising either as standalone or multi-component interventions. Three of the reviewed primary studies added a school-based drug prevention curriculum or a combination of peer education, computer resources, campus policy and campus-wide events to the mass media component.

Overall, the quality of the included studies was considered 'acceptable' according to Cochrane Collaboration standards.

- Gates and colleagues (2006) included 2 RCTs that studied the effects of a brief intervention or single session motivational interviewing on illicit drug use in further education colleges and a primary care setting respectively. The college study was considered well controlled with a relatively low risk of bias, whilst the reporting was unclear in the other.
- A number of reviews relating to illegal drugs were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

Gambling

- Gray and colleagues (2007) included one study (out of a total of four in young people) that assessed the effectiveness of an educational video discussing 'irrational beliefs' associated with loss of control whilst gambling. Participants were also presented with randomly presented warnings as part of an electronic roulette game. Although this primary study was considered to be a moderate quality RCT, only an immediate follow up was included and blinding of assessors was unclear.
- A number of gambling related reviews were not eligible for inclusion in this section. These are described below under 'Other available evidence'.

The 12 reviews included in this section cited a total of 185 references. Of these, 13 were cited in two reviews, and 1 reference was cited by three reviews. Reviews on web/computer based interventions by Myung and colleagues (2009), Civljak and colleagues (2010) and Hutton and colleagues (2011) shared several references. They were based on 10 references to primary studies, of which two were cited by all three reviews, and one study was cited by two of these reviews. There was also some overlap between primary studies with respect to the reviews by Moreira and colleagues (2009) and by Khadjesari and colleagues (2011). These reviews examined a total of 33 studies, of which 7 were included in both reviews. There was no or limited overlap between the other reviews included in this section.

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Alcohol*: The included studies assessed period prevalence and frequency of alcohol use, estimates of the quantity of alcohol consumed per use episode, frequency of drinking to intoxication, heavy episodic drinking, frequency of 'feeling drunk', and breath alcohol concentration. No studies included clinically validated measures of alcohol use disorders.
- *Tobacco*: The included studies assessed smoking abstinence (over the previous 7 or 30 days), validated by breath carbon monoxide and cotinine concentration expiration tests; quit attempts; reduction in the number of cigarettes smoked per day; and the number of days on which smoking occurred.
- *Illegal drugs*: The included studies assessed period prevalence of illicit drug use (lifetime, previous year, and previous 30 days) use of illegal drugs in general or named substances; use frequency; amount used; composite measures of substance use involvement. There was no indication that any of the studies reviewed had included biochemical validation of self-report.
- *Gambling*: The included study assessed a number of outcomes pertaining to gambling beliefs, and two measures of gambling behaviour, number of roulette spins, and the amount of money remaining after the gaming session.

The review findings (organised by approach) for young people can be summarised as follows (for details please see the evidence tables):

Multiple substances/behaviours

- *Mentoring* – Thomas and colleagues (2011) concluded that there was no overall evidence to suggest that mentoring approaches resulted in less drug or alcohol use by young people at short (>6 months) and long term follow ups (>12 months). Furthermore, there was no additive effect of including a prevention curriculum in the mentoring programmes studied. Although the relative risk of alcohol use was significantly less at 12 months in one study, this was subject to methodological confounds which reduced confidence in the finding. The review authors considered that one reason underlying the lack of intervention effect was due to the age of the participants studied (9-15 years of age), and low rates of baseline substance use.

Alcohol

- *Personalised feedback* – Moreira and colleagues (2009) concluded that web based and individual face-to-face feedback were probably effective in reducing alcohol misuse up to 3 months after intervention. Mailed, group feedback, and social marketing based approaches were, in general, considered to be ineffective at reducing alcohol misuse. Whilst the meta analysis of Khadjesari and colleagues (2011) suggested that stand alone computer delivered personalised feedback interventions favoured intervention college students, and were more effective than drinking assessments alone, the skewed nature of the data meant that caution was warranted.

Tobacco

- *Mass media* – Brinn and colleagues (2010) concluded that whilst there was some evidence that mass media campaigns could prevent the uptake of smoking in young people, particularly when combined with a school programme, the evidence was not strong and subject to a number of methodological flaws. Carson and colleagues (2011) reported mixed evidence for the effectiveness of adding media components to community based activities; five out of nine reviewed RCTs favoured the intervention, whilst the others produced no significant effects. These reviewers concluded, however, that mass media components were important features of successful community intervention. The most effective had undergone extensive formative work and were delivered with reasonably high intensity over prolonged periods of time.
- *Motivational interviewing* – The meta analysis of Hettema and Hendricks (2010) found that motivational interviews for adolescent smokers had significant combined effect sizes at both follow-up points (<6 months; >6 months). Examining intervention characteristics, the authors concluded that this approach was particularly successful when it is applied for a total of less than one hour and when the protocol includes training or fidelity practices.
- *Web and computer based interventions* – The meta analysis of Myung and colleagues (2009) showed a non-significant effect size of these types of programme in adolescent smoking, in contrast to significant effect in adults. Civljak and colleagues (2010) found that whilst Internet based interventions can assist with smoking cessation in adults, especially if they are suitably tailored and include frequent contacts with the target group, the results for young people were more equivocal. Only one study in college students produced long term reductions in 30 day smoking rates. Hutton and colleagues (2011) also reviewed a similar, but non-overlapping body of evidence and concluded that there was insufficient evidence to support the efficacy of the approaches in adolescents. All of these review authors concluded

that due to a lack of research it was not possible to recommend such interventions for delivery to adolescents or college students.

Illegal drugs

- *Mass media* – In contrast to the tobacco related findings, Ferri and colleagues (2013) concluded that the use of mass media interventions in illicit drug prevention was not clearly supported, as there was inconsistent evidence of effectiveness, and some campaigns were associated with iatrogenic effects. Where mass media campaigns are to be used, it is recommended that they should only be delivered in the context of rigorous, well designed and well-powered evaluations.
- *Brief interventions* – Gates and colleagues (2006) concluded that primary care based motivational interviewing resulted in reduced substance use involvement at both 1 and 3 month follow ups. A brief intervention conducted in further colleges resulted in a large decrease in the frequency of cannabis use, and the amount smoked three months later. However, at one year follow up both of these outcomes were similar to control group levels.

Gambling

- *Educational video plus in-game warning messages* – Gray and colleagues (2007) concluded that presentation of warning messages during roulette games resulted in less money spent, but not fewer games played. However, it should be noted that this conclusion was drawn from a single small study.

In summary, this section reviewed diverse approaches to prevention of addictive behaviours in young people. Whilst well designed and piloted mass media approaches, particularly when combined with school or community based activity, led to a decrease in smoking uptake, there was no evidence that this approach was effective for other types of addictive behaviour. In fact, some mass media campaigns were associated with an increase in young people's illicit drug use.

Internet and electronically delivered interventions were effective in reducing alcohol misuse and gambling in some young populations. However, heterogeneity of intervention approach means that general conclusions about content could not be made. The use of web or computer based delivery of smoking cessation activities is not supported by the current evidence.

Regarding social norms based approaches for alcohol misuse, although review evidence suggested that face to face, standalone computer delivered, and web based feedback were probably effective at reducing a number of indicators of alcohol misuse, these types of studies have generally been conducted in psychology students in the USA, and so would need to be replicated in other countries and other populations. Review authors also noted that there were concerns with the quality of the data included.

Other available evidence

We excluded 22 reviews of prevention programmes because they were not judged to be of 'high quality' according to the review criteria. Of these, 16 reviews were considered to be of 'moderate' quality (Austin et al. 2005; Bader et al. 2007; Barnett & Read 2005; Bender et al. 2011; Carey et al. 2009; Elliott et al. 2005; Fager & Melnyk 2004; Gottfredson & Wilson 2003; Labbe & Maisto 2011; Lemstra et al. 2010; Hopkins et al. 2001; Roe & Becker 2005; Scott-Sheldon et al. 2012; Skara & Sussman 2003; Tobler et al. 2000; Wachtel & Staniford 2010) and six were considered to be of 'low' quality (Brown et al. 2007; Buckley & White 2007; Cuijpers 2002; McBride 2003; Reavley & Jorm 2010; Sullivan & Wodarski 2004) (please see section on quality assessment for full details).

In addition, we excluded eight reviews of prevention programmes because they did not present the studies and findings for young people separately from adult populations and/or because they did not report the studies and findings with relevant behavioural outcomes separately from those with other outcomes (Bauld et al. 2009; Bolier et al. 2011; Disley et al. 2011; Jones et al. 2011; Riper et al. 2009; Schröer-Günther et al. 2011; Wilson et al. 2001; Yuen 2004).

Excluded reviews examined a range of different prevention approaches, including interventions targeting alcohol use by students in higher education (eight reviews) and interventions targeting substance use in special populations (such as vulnerable young people, ethnic minorities or populations in rural settings) (four reviews).

Conclusions

This section reviewed prevention programmes implemented with schools pupils, families and/or communities. Our key findings were:

- The strongest evidence we found was in relation to school based prevention, particularly with respect to smoking. Effective multicomponent programmes also tended to have a school component. Although effective approaches for alcohol and drug prevention were identified, these were small in number and tended to be manualised programmes rather than programme components. Identifying components and mechanisms of behaviour change (for all types of addictive behaviour) in prevention is important because opportunities for implementation of manualised based approaches are currently limited in many European Member States, and even if funding is available and implementation structures are in place, these often take years of adaptation and study before they can be delivered as part of routine educational activities. Identifying programme components that mediate behaviour change allows for the delivery of actions which can be locally generated (thus improving target group compliance), and are science based. However, it is still important that such a mechanistic based approach is also embedded in research, to ensure that the actions are cost effective and are not associated with iatrogenic outcomes.
- Whole school approaches to prevention were reviewed and presented by two reviews as an effective means to change behaviour. The implicit value of such strategies is that by reorientating the school environment towards a healthy preventative approach, opportunities arise for prevention to be infused across several aspects of school life, rather than just through classroom delivery of a programme. Such approaches may also be useful in responding to multiple risk behaviours. However, the amount of evidence available for consideration of whole school approaches was limited compared to programmed classroom approaches, and therefore more research is required before these can be recommended.
- There was strong evidence to suggest that mass media campaigns should only be delivered as part of multiple component programmes to support school based prevention. Standalone mass media campaigns for illegal drug use were at best ineffective, and at worst associated with increased drug use.
- Evidence was conflicting regarding the effectiveness of parental and family programmes for prevention of participation in addictive behaviours. Although some of these types of approach produce positive results with respect to tobacco and alcohol, it was not possible to reach a conclusion on their effectiveness with regard to illegal drugs. Evidence was stronger for pre-school programmes, which were judged to be effective in preventing smoking.
- Insufficient evidence was available to judge the effectiveness of a number of prevention approaches; including (financial) incentives to school children not to smoke; prevention for indigenous, or minority ethnic groups; and prevention of problematic gambling. Reviews examining these topics found no or very little original research eligible for inclusion.

- High quality review level evidence was available for many areas in our *a priori* list of policies and interventions. However, there was a lack of high quality review-level evidence with regard to approaches such as alternative leisure activities (i.e. leisure as a substitute for substance use) and workplace prevention activities. This former approach is a popular approach to prevention across many European countries, often delivered as part of general youth work. It is therefore important that research is conducted in this area.
- The majority of the evidence identified concerned universal approaches to prevention. Reviews of indicated prevention were lacking, and selective approaches were generally limited to the assessment of outcomes in groups who were already participating in a particular behaviour (although had not reached criteria of dependence/addiction, therefore were classed as prevention), rather than those categorised on the basis of other risk factors. From the evidence identified it was not possible to make recommendations on these types of prevention approach. The EMCDDA (2009) has published a thematic paper on indicated prevention of illegal drug use. On the basis of review author constructed logic models, their systematic review (which did not meet the inclusion criteria of this review) concluded that most of the interventions identified had been mischaracterised and were in fact universal or selective prevention programmes. Although high quality individual studies have been published on programmes such as UCPP (ND); Supra-F (SW), HaLT (DE), and Preventure/Adventure (UK), these have not yet been reviewed using a high quality review protocol.

8. Treatment and social reintegration

Introduction

This section focusses on measures pertaining to treatment and social reintegration. We examine evidence on the effectiveness of psychosocial treatment as well as pharmacological treatment, including substitution treatment. It is not always possible to distinguish clearly between indicated prevention and treatment along the continuum of care¹⁶. As a general rule, we considered an intervention to be treatment if it had been carried out with a population that was treatment-seeking or met diagnostic criteria for dependence, and prevention if it had been carried out with an unselected or author-defined 'at risk' population. Where reviews included studies of both populations, these are reported in both sections of this review (i.e., prevention and treatment).

Reviewed studies

8.1 Psychosocial interventions

Overview of evidence

We included 14 high quality reviews of psychosocial treatment approaches relating to addictive behaviours in young people; six of which were Cochrane reviews:

Multiple substances

- Vaughn & Howard (2004) identified 15 studies that evaluated psychosocial approaches to alcohol and drug treatment set within treatment facilities. Participants were substance users aged 14-21 years of age, were predominately white males and included young people within

¹⁶ For a discussion, see EMCDDA (2009).

the criminal justice system. The studies included 13 RCTs and two quasi experimental studies. Treatment was mainly therapy-orientated but also included coping skills and residential treatment. The location of studies was not reported. The authors stated that the methodological quality of studies was generally high, although they recognised that some methodological criteria may not have been fully assessed through the use of their quality assessment tool.

- Calabria and colleagues (2011) identified nine studies that evaluated interventions for young people who misuse alcohol, of which eight studies evaluated counselling interventions. Outcomes across studies included alcohol and drug misuse. The populations across the included studies were varied and included alcohol dependent and high risk groups amongst 11-25 year olds. These counselling interventions varied in approach, utilising motivational interviewing, CBT, family therapy and a community reinforcement approach. It was unclear what level of intervention controls received, if any. Seven studies were RCTs and one study was uncontrolled. Seven studies were located in the USA and one was located in Australia. No analysis of findings was carried out in this review as the authors stated that meta-analysis was not appropriate due to methodological weaknesses of the included studies.
- Coren and colleagues (2013) reviewed interventions that sought to promote reintegration and reduce harmful behaviours amongst homeless young people. Eight studies included outcomes related to alcohol and substance misuse. Participants included adolescents who were homeless or had run away from home, some of whom misused alcohol or other substances. Interventions were typically family based or took place in drop-in services and shelters and included a variety of approaches, some of which were structured programmes and others needs-based. Approaches included family therapies, brief interventions, an intensive group programme and a community reinforcement approach with HIV treatment. Controls typically received usual shelter and drop-in services. The studies included seven RCTs and one CBA, and were all located in the USA. The methodological quality of studies was judged by the authors to be 'low to moderate' and there was stated to be great variation in outcome measures which made comparison of study findings difficult. As a result, not all available data could be included in meta-analysis.

Alcohol

- A number of reviews relating to alcohol, tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Tobacco

- Grimshaw and colleagues (2006) considered 24 studies evaluating interventions that aimed to help young people quit smoking, of which 21 involved psychosocial approaches including 19 RCTs and 2 controlled studies. Study populations included current smokers under 20 years of age. Interventions were varied but included four studies that investigated the impact of the Not on Tobacco intervention. Other approaches included CBT, motivational enhancement and educational sessions and interventions based upon the transtheoretical model. With the exception of one study in the UK and one in Australia, all studies were located in the USA. The authors reported that they included studies with a low, medium and high risk of bias in their review.
- Ranney and colleagues (2006b) identified one study examining the impact of targeted prevention using a psychosocial approach to reduce smoking initiation in cancer surviving adolescents as part of a larger review into tobacco prevention, cessation and control. This RCT examined the impact upon smoking of education and counselling over three months in

comparison to a control group that received brief advice to stop smoking. The study included 103 participants from the USA. The study was considered to be of 'fair' quality.

- Maziak and colleagues (2007) sought to review interventions for waterpipe smoking cessation. They were unable to identify any studies that met their inclusion criteria.
- Villanti and colleagues (2010) identified 14 studies that examined the impact of smoking cessation interventions for young people aged 18-24 years. Across studies, the participants were described as light to moderate smokers. Based upon a variety of theoretical backgrounds, these psychosocial interventions differed greatly and controls typically received a reduced or alternative treatment. Studies included 12 RCTs and two quasi-experimental studies, all from the USA. The authors reported that all studies included in this review were subject to some degree of bias, for example lacking detail on method of randomisation and treatment allocation bias.
- Bryant and colleagues (2011) considered the impact of psychosocial treatment on smoking behaviour and identified six RCTs from the USA aimed at adolescents out of 32 included studies. Populations included high risk smokers including those who were pregnant, with psychiatric disorders, in substance misuse treatment and in schools within disadvantaged and ethnically diverse areas. Treatment approaches included CBT in two studies, motivational enhancement therapy in two studies and an interactive computer programme. One complex intervention included motivational interviewing with written information, nicotine patches and telephone support. Control groups typically received a reduced intervention. The authors considered that four of the six studies were of weak quality.
- Hettema and Hendricks (2010) reviewed studies that evaluated the impact of motivational interviewing as a treatment approach for smoking. The authors identified 31 studies, including seven studies involving adolescents. Where reported, populations included smokers with psychiatric disorders and in medical settings. Across studies motivational interviewing was delivered alongside other approaches including feedback, written information, CBT and video support. Controls received reduced interventions in five studies and no treatment or an attentional placebo in two studies. The location of these studies was not reported. The methodological quality of all studies in the review was judged by the authors to be of a medium to high standard.
- Myung and colleagues (2009) reviewed studies that detailed Web- and computer-based tobacco cessation interventions and identified 22 studies, including three RCTs with adolescents. Two studies were web-based and one was computer-based, and controls received an alternative intervention in each case. The location of these studies was not reported. Overall there was a mixture of high and low quality studies as assessed by the authors, but as no details were provided on the quality of individual studies included in this review the quality of studies for adolescents was unclear. Review authors reported that results did not differ by methodological quality.
- Civiljak and colleagues (2010) considered four studies from the USA that provided psychosocial treatment for adolescents via the Internet. In total, 20 studies aimed at all ages were included in the review. All studies were RCTs and recruited current smokers from schools and colleges who were willing to quit. Websites generally contained individually tailored smoking cessation contents with additional components such as motivational interviewing, peer coaches and telephone calls. Interventions lasted between 5-24 weeks and in three studies controls received an alternative or reduced intervention. The authors reported that methodological issues in the studies included the potential for recruitment bias and baseline differences in smoking status between intervention and control groups in two studies. One study used self-report methods to assess outcomes only and in the same study follow-up was higher amongst controls than the intervention group.
- Hutton and colleagues (2011) examined the impact of web-delivered smoking cessation interventions. The authors included 21 studies in their review, of which six focused on

young people. All of these were RCTs, including five from North America and one from North America and Australia. Across studies, participants were aged 10-24 years and levels of tobacco use varied to include non-smokers, light smokers and heavier smokers at baseline. In four studies all participants were smokers at baseline. The interventions were all web-based and based on CBT, but varied greatly in their components and there was variation in control conditions. The authors reported that methodological study in one study was good and that it was fair in the other five studies that did not describe concealed allocation.

- A number of reviews relating to alcohol, tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Illegal drugs

- Konghom and colleagues (2010) sought to identify evidence on the treatment for inhalant dependence and abuse, including psychosocial approaches. The authors did not identify any studies that met the criteria for inclusion in their review. Two papers were rejected as they were not RCTs and one identified study did not include relevant outcomes. It was not clear what intervention approach these studies utilised.
- A number of reviews relating to alcohol, tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Gambling

- Cowlshaw and colleagues (2012) reviewed 14 studies evaluating psychological therapy approaches to problem gambling. Participants were pathological or problematic gamblers, with a mean age of 44 years. One study was conducted with college students, but we considered also the studies of adult populations for our gambling related review. Interventions across studies were mainly CBT-based; one study used both CBT and motivational enhancement therapy and one study was based upon a 12 step programme. Controls received either a delayed intervention or no intervention. All 14 studies were based on an RCT design. Eleven studies were from North America, two were located in Australia and one in Sweden. The authors reported that studies in this review varied in quality.
- A number of reviews relating to alcohol, tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

The 14 reviews included in this section cited a total of 137 references for included primary studies. Of these, 13 references were cited by two reviews, three references were cited by three reviews, and two references by four reviews. There was some overlap amongst the reviews addressing multiple substances. The two reviews shared two primary studies, but 14 studies were cited by only one review or the other. There was significant overlap between the tobacco related reviews, within and across different intervention types. In total, these nine reviews cited 82 references, of which 16 were cited two to four times. Six out of seven studies included in the review of motivational interviewing (Hettema & Hendricks 2010) were also included in at least one of the other reviews. All of the studies included by Myung and colleagues (2009) were also included in at least one of the other reviews, and over two thirds of the primary studies cited by Civljak and colleagues (2010) and Hutton and colleagues (2011) were also cited by other reviews in this section. The reviews of web and computer based approaches were based on a total of 10 references, of which two were cited by all three reviews. There was no overlap with regard to the reviews included in relation to illegal drugs and gambling (see also table on overlap between primary studies).

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Alcohol use* such as: frequency or quantity of alcohol use, number of drinks, incidence of heavy drinking or disorder, incidence of driving under the influence of alcohol. Measures included self-reported findings for the past 30 or 90 day use and the percentage of drinking days in the past 90 days. Driving records were checked as a form of validated assessment for driving under the influence. Harms related to alcohol use were reported in one review measured through Rutgers Alcohol Problem Index (RAPI) and the Adolescent Drinking Index.
- *Tobacco use* such as: smoking status including measures such as daily smoking behaviour, change in smoking status and self-identifying as a smoker; abstinence at different time periods from short to long-term post intervention including point prevalence abstinence over periods from 48 hours to one month; quit attempts including any attempt to quit and number of cigarettes smoked per day and days smoked, smoking initiation. Some studies used biochemical verification methods using saliva or carbon monoxide testing for some follow ups but this was inconsistently applied and outcomes were more likely to be self-reported.
- *Illegal drug use and dependence* such as: measures of amount of drug use including frequency of substance use, number of drugs used, number of drug use days, and abstinence. Time scales included past 30 and 90 days. Additionally substance use diagnosis, addiction severity and number of problem consequences relating to substance use. Outcomes were self-reported, commonly using the Time Limited Follow Back Interview method, and one primary study utilised biochemical verification for drug use through urinalysis. Harms relating to substance use were reported in one review measured in studies through a revised version of the RAPI and the Problem Oriented Screening Instrument for Teenagers.
- *Gambling behaviour* including: self-reported gambling frequency and clinically diagnosed pathological gambling. Harms measured related to gambling behaviour included amount spent compared to baseline spend on gambling and financial loss. Symptoms of gambling severity and mental well-being were measured using a variety of psychological scales.
- *Other measures* included: suicide ideation and attempts; affective disorders; cigarette purchasing attempts; use of nicotine replacements; family interactions and conflict resolution; delinquency and quality of life; treatment and programme compliance, service utilisation and client satisfaction. Further outcomes included safer or reduced sexual activity; HIV risk behaviour and number of partners; use of hostel or shelter services; use of violence, social, psychological and family functioning; mental well-being.

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

Multiple substances

- *Different approaches* – Vaughn & Howard (2004) found that there was some evidence from studies of a good quality supporting the use of group CBT and multi-dimensional family therapy for reducing adolescent alcohol and illegal drug use in the long-term (authors did not distinguish between alcohol and illegal drug use). The authors also reported that there was evidence of the effectiveness of other approaches having short- or medium-term impacts on substance abuse in this population. These approaches included behavioural therapy, combined CBT and functional family therapy, family systems therapy, functional family therapy, multisystemic treatment, psychoeducational therapy and Botvin Life Skills Training combined with an anti-violence programme and values clarification programme.

There was some evidence of good quality that the following intervention types may have slight or undesirable effects on substance use: individual counselling, family education, adolescent group treatment and individual CBT. Calabria and colleagues (2011) reviewed studies that evaluated interventions to reduce alcohol use in young people and reported outcomes for both drug and alcohol use. The authors found that there was a lack of high quality evidence of which to undertake any synthesis, but concluded that the most effective approaches to reduce substance-related harm in young people include CBT, family therapy and community reinforcement. The evidence described was mainly from the USA and no evidence was identified from Europe. The authors believed that more rigorous evaluations are required to draw further conclusions on intervention effectiveness.

- *Approaches targeting special populations / Social reintegration* – Coren and colleagues (2013) described outcomes relating to reductions in substance use amongst homeless children from interventions as inconclusive. The authors reported that studies typically identified mixed results from interventions by outcome and follow-up time and that when studies were compared they could identify no consistent patterns. Studies were also judged to be of low to moderate methodological quality. It was suggested that family therapy interventions may be an effective approach for reducing alcohol or drug use in comparison to normal services for runaway young people, including when measured at long-term follow up. The authors discussed that interventions may have an impact in changing the pattern of substance use rather than producing overall reductions (e.g., decreased alcohol use but increased cannabis use), but the extent to which this was occurring across studies was unclear.

Alcohol

- No reviews focussing only on alcohol met our inclusion criteria; see above for studies addressing multiple substances/behaviours.

Tobacco

- *Different approaches* – Grimshaw and colleagues (2006) concluded that complex interventions, particularly those that incorporate some stage of change theory, motivational enhancement therapy or CBT, may be effective for smoking cessation among young people including at long-term follow up. Ranney and colleagues (2006) found evidence in one study that education and counselling had no impact on cancer survivors' smoking initiation in comparison to brief advice. Maziak and colleagues (2007) were unable to identify any evidence as to the effectiveness of treatment approaches for water pipe smoking. Villanti and colleagues (2010) reported that four of 14 studies included in their review demonstrated significant positive effects for smoking cessation, two of which lasted past medium-term follow up. Pooled results suggested that interventions based upon social cognitive theory may be effective, although individual studies did not produce significant results. The authors reported that evidence suggested that important components in interventions promoting smoking cessation in young people include proactive recruitment, personalised content and extended support. Bryant and colleagues (2011) reported that there was no support for the effectiveness of behavioural support interventions for smoking cessation at short- or long-term follow-up identified through meta-analysis of four of the six studies included in the review. No long-term effects were identified of two further behavioural interventions, although findings from one study suggested that there were short-term benefits of a group CBT intervention for pregnant adolescents that incorporated nicotine replacement therapy and peer support compared to CBT alone with usual care.
- *Motivational interviewing* – Hettema & Hendricks (2010) concluded that motivational interview interventions may be effective for smoking cessation in young people at both

short-term and long-term follow up times in comparison to those receiving reduced interventions or no treatment. It was largely unclear what aspects of motivational interviewing were effective. The authors reviewed the findings of interventions aimed at other groups and concluded that motivational interviewing may be effective for young people as well as other populations.

- *Computer and web based smoking cessation interventions* – Myung and colleagues (2009) reported that computer- or web-based interventions were not effective for smoking cessation in adolescents, although these interventions did not have an adverse impact either. Civjlak and colleagues (2010) identified inconsistent evidence as to the impact of four Internet-based smoking cessation interventions in adolescent smokers. The authors concluded that, across all interventions to include adult populations, individually tailored web-based smoking cessation interventions that include frequent automated contacts may assist smoking cessation but recognised that evidence was inconsistent. Hutton and colleagues (2011) reported that they found mixed evidence on the use of web-based interventions for tobacco use in school-age young people and college students. Amongst college students, findings were limited by the identification of only one trial for this population and the multifaceted nature of the intervention meant that attributing impact to the web-component was difficult. Interventions aimed at adolescents provided mixed evidence on effectiveness for smoking cessation or prevention. There were some promising short-term findings reported but not across all studies and there was a lack of long-term evidence about intervention effectiveness. The authors concluded that overall the evidence was insufficient to determine the efficacy of web-based interventions on adolescents or college students and identified through one study that adherence to this form of treatment may be a limiting factor.

Illegal drugs

- *Interventions targeting inhalant abuse* – Konghom and colleagues (2010) sought to identify evidence on psychosocial treatments for inhalant dependence and abuse. The authors reported that they were unable to identify any evidence of a good quality regarding treatment for inhalants in either adolescents or adults.
- See also section on multiple substances/behaviours above.

Gambling

- *Different approaches* – Cowlshaw and colleagues (2012) reported that evidence across studies included in their review of predominantly adult populations suggested that CBT is an effective treatment approach to reduce problematic gambling behaviours. Findings indicated that participants who received CBT intervention had better short-term outcomes regarding gambling frequency and diagnosis of pathological gambling. Findings suggested that motivational interviewing may be a less effective approach for reducing gambling frequency. An integrative therapy approach including motivational enhancement therapy and CBT was found to have short-term benefits for both gambling frequency and diagnosis of pathological gambling. There was no evidence regarding the longer-term impact of CBT approaches on gambling frequency or pathological gambling and the authors recognised that the studies had methodological limitations.

In summary, our review suggests that the evidence on the effectiveness of psychosocial interventions for the treatment of addictive behaviours is inconclusive.

There was some high quality evidence to support the use of CBT approaches for illegal drug use and gambling, but this was based upon a limited number of trials. The evidence for CBT interventions for smoking cessation was inconclusive. Overall, there was a lack of evidence regarding the long-term

impact of CBT treatment for addictive behaviours, but some indication that combining CBT with other treatment may be a useful approach.

There was some evidence that motivational interviewing may be effective for smoking cessation, but only one review focussed on this approach and identified only seven trials that included adolescents. Evidence regarding the effectiveness of computer and web based treatment for smoking cessation in young people was inconsistent and insufficient.

The strongest evidence for alcohol and illegal drug treatment was for family-based therapy, which was supported in the findings from three reviews. There was some evidence to suggest that family therapy may be an effective approach for reducing alcohol and illegal drug use in homeless youth, but this evidence was mixed and largely inconclusive.

Evidence from two reviews suggested that educational and counselling approaches (e.g., in school or health care settings) might not be effective in reducing tobacco or illegal drug use in young people, although one of these reviews included only one study.

Overall, the majority of the available high quality evidence identified related to smoking cessation, and there was a lack of evidence regarding the effectiveness of psychosocial treatment for illegal drug and alcohol use. Within the reviews focussing on tobacco, there was some overlap in the primary studies included. Additionally, inconsistency of treatment approaches means it was difficult to judge effectiveness as the evidence for approaches is generally based on a small number of studies. The findings suggest that psychosocial treatment can be effective, but that further high quality evidence is needed to understand which particular approaches work best with young people.

8.2 Pharmacological interventions

Overview of evidence

We included eight high quality reviews of pharmacological treatment approaches relating to addictive behaviours in young people; six of which were Cochrane reviews.

Alcohol

- Calabria and colleagues (2011) identified nine studies evaluating interventions aimed at young people who misuse alcohol, of which one study involved a pharmacological approach. This study evaluated the impact of medicating 12 alcohol dependent young people aged 14-20 years with a serotonin 3 receptor antagonist. The study was uncontrolled and was located in the USA.
- We identified no additional reviews of populations, interventions or outcomes related to alcohol eligible for consideration in our review.

Tobacco

- Grimshaw and colleagues (2006) reviewed studies that evaluated smoking cessation interventions for young people, which included three studies of pharmacological treatment approaches. Treatment included nicotine replacement therapy with bupropion along with group work, nicotine patch with gum and self-help materials or bupropion only. Controls received a mixture of reduced interventions, including nicotine replacement therapy only, nicotine gum and a placebo or reduced dose of bupropion. All three studies were RCTs and located in the USA. The authors described allocation concealment in the three studies as 'adequate'.

- Stead & Lancaster (2006) sought to review studies investigating the effectiveness of Nicobrevin (a proprietary product marketed as an aid to smoking cessation). The authors did not identify any studies regarding any population, including young people, that met the criteria for inclusion in this review. A lack of long-term follow up was cited as a reason why two identified studies were not included.
- Kim and colleagues (2011) identified seven trials in six studies that investigated the effectiveness of pharmacological treatment for a total of 816 adolescents aged 12-20 years of age. Pharmacological approach varied by study and included four trials of nicotine patches, one trial of nicotine gum, one trial of nicotine nasal spray and two trials bupropion. Controls received counselling for smoking cessation. Five studies were from the USA and one was located in the UK. The authors did not highlight any serious methodological weaknesses in these studies.
- Stead & Hughes (2012) sought to review studies investigating the long-term impact of Lobeline for smoking cessation. The authors did not identify any studies regarding any population including young people that met the inclusion criteria for this review. A lack of long-term follow up was cited as the main reason why no studies could be identified.
- A number of reviews relating to tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Illegal drugs

- Clark and colleagues (2002) identified 14 studies that looked at levo- α -acetylmethadol (LAAM) maintenance for heroin dependence. The mean age of participants was 25-26 years and included US war veterans, dependent heroin users, methadone maintained volunteers and those dependent on both heroin and methadone. All interventions involved LAAM although dose and attendance requirements varied greatly across studies. Controls typically received methadone only although in three studies participants could switch between LAAM and methadone. It was noted that for many of the studies included in this review methodological details were lacking.
- Minozzi and colleagues (2009) identified two studies examining maintenance approaches for opiate dependent adolescents. Participants were heroin dependent and aged between 14 and 21 years of age. One study investigated the effectiveness of buprenorphine-naloxone maintenance with counselling and one study investigated LAAM maintenance. Controls in one study received buprenorphine detoxification with counselling and in one study received methadone. The studies included one RCT and one controlled trial, both located in the USA. The authors noted that one of the studies, from 1973, was of very low methodological quality; however, the second included study was assessed as having a low risk of bias.
- Konghom and colleagues (2010) sought to identify evidence of effective treatment for inhalant dependence and abuse, including pharmacological approaches. The authors did not identify any studies that met the criteria for inclusion in their review.
- A number of reviews relating to tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

Gambling

- A number of reviews relating to tobacco, illegal drugs and gambling were not eligible for inclusion in our review. These are described below under 'Other available evidence'.

The eight reviews included in this section cited a total of 100 references for included primary studies. Of these, 3 references were cited by two reviews, both of these in relation to smoking cessation (Grimshaw et al. 2006; Kim et al. 2011). Half of the studies cited by Kim and colleagues

(2011) were also cited in the review by Grimshaw and colleagues (2006). There was no overlap with regard to the other reviews.

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Alcohol use* – measured through self-reported drinking behaviour including number of drinking days, number of drinks and days abstinent from drinking. Time scale was not specified.
- *Tobacco use – smoking abstinence* was measured through biochemically validated methods including measures of CO and saliva cotinine levels over short- and medium-term follow up periods.
- *Illegal drug use* – measured through self-reported and biochemically validated methods, including urinalysis and hair testing, of heroin, opioid, cocaine and benzodiazepine use. Opioid use was measured through the identification of injection sites in participants in one primary study. Harms relating to substance use measured included mortality, maternal withdrawal symptoms (assessed using the Wang Withdrawal Questionnaire), foetal distress and birth weight.
- *Other outcomes* included the side effects of medication in two reviews and retention in treatment in two reviews.

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables).

- *Treatment for alcohol use in underserved young people* – Calabria and colleagues (2011) did not report any outcomes relating to the one study identified that evaluated medication with a serotonin 3 receptor antagonist. The authors concluded that the methodological quality of studies in the review was weak and that meta-analysis was inappropriate. For the relevant study, review authors reported that CBT was given in addition to prescribed medication and this may have influenced any results. The review authors described promising approaches, which did not include medication.
- *Smoking cessation* – Grimshaw and colleagues (2006) reported that there was no evidence that pharmacological treatments or the incorporation of nicotine replacement therapy into psychosocial interventions were effective approaches in young people. Kim and colleagues (2011) reported that there were no significant impacts of pharmacological treatments for smoking cessation amongst adolescents. For approaches including the provision of bupropion or nicotine gum, patch or nasal spray along with counselling, there were no significant differences across trials compared to participants who received counselling only in smoking abstinence measured through biochemically validated means. Similar reductions in smoking were seen across groups. Stead and Hughes (2012) and Stead and Lancaster (2006) found no studies eligible for inclusion in these reviews. The authors concluded that there was no evidence on the effectiveness of the long-term impact of Lobeline and Nicobrevin respectively on smoking cessation.
- *Treatment for opioid dependence* – Clark and colleagues (2002) found that levo- α -acetylmethadol (LAAM) maintenance appeared to be a more effective approach for reducing heroin use compared to methadone maintenance but there was insufficient evidence to draw any conclusions relating to the safety of this approach. Minozzi and colleagues (2009) reported that no substance use at follow up was reported in either LAAM or methadone patients in one trial of low methodological quality. No side effects of either treatment were reported, and no differences in social functioning were found. In a second trial, maintenance treatment with buprenorphine-naloxone was compared with detoxification with

buprenorphine. Self reported opioid use was lower, although still high, at one year follow up in the maintenance group and patients were more likely to be enrolled in other treatment. There was no evidence, however, of treatment effectiveness when results were biochemically validated through urine testing. Drop out numbers favoured the maintenance treatment group and no participants dropped out through side effects. There were no significant impacts on use of other substances at follow up although findings favoured the maintenance treatment group.

- *Treatment for inhalant dependence and abuse* – Konghom and colleagues (2011) sought to identify evidence of the impact of pharmacological treatment for inhalant dependence or abuse. The authors reported that they failed to find any evidence on the effectiveness of interventions in this area.

In summary there was a lack of high quality evidence concerning the effective provision of pharmacological treatments for addictive behaviours in young people. One review included one primary study evaluating medication as a form of alcohol treatment; however, authors concluded that study quality throughout their review was weak and no synthesis was undertaken. Evidence in two reviews (Grimshaw et al. 2006; Kim et al. 2011) suggested that pharmacological treatments for smoking are ineffective or only as effective as psychosocial approaches. There was some evidence across two reviews that levo- α -acetylmethadol (LAAM) maintenance may be effective for opioid use in comparison to methadone maintenance, but findings were limited by the low quality and age of primary studies. Evidence from a single trial comparing maintenance and detoxification treatments was inconclusive. Therefore it appears that there is insufficient evidence available to draw conclusions on effective pharmacological treatment for alcohol, tobacco or illegal drug use. Further high quality studies are required in order to make recommendations as to effective practice in this area.

Other available evidence

We excluded 20 reviews of treatment approaches because they were not judged to be of 'high quality'. Of these, 17 were considered to be of 'moderate' quality (Bader et al. 2007; Barnett & Read 2005; Bender et al. 2006; Bender et al. 2011; Carey et al. 2009; Elliott et al. 2005; Engle & Macgowan 2009; Fager & Melnyk 2004; Gooding & Tarrier 2009; Hopkins et al. 2001; Rooke et al. 2010; Scott-Sheldon et al. 2012; Suls et al. 2012; Toneatto & Ladouceur 2003; Tripodi et al. 2010; Wachtel & Staniford 2010; Waldron & Turner 2008) and three were considered to be of 'low' quality (McDonald et al. 2003; Sullivan & Wodarski 2004; Westphal 2008) (please see section on quality assessment for full details).

In addition, we excluded 23 reviews of treatment approaches because they did not present the studies and findings of interest to our review separately from other studies and findings (Altena et al. 2010; Amato et al. 2013; Bauld et al. 2009; Cahill et al. 2010; Carr & Ebbert 2012; Cleary et al. 2008; David et al. 2006; Denis et al. 2006; Disley et al. 2011; Ebbert al. 2011; Gainsbury & Blaszczynski 2011; Gowing et al. 2009; Hajek et al. 2009; Hughes et al. 2007; Lundahl et al. 2010; McCarthy et al. 2005; Minozzi et al. 2011; Mitchell et al. 2007; Pani et al. 2010; Shoptaw et al. 2009a; Smedslund et al. 2011; Stead et al. 2006c; Stead et al. 2012b).

With regard to alcohol, most reviews (11 reviews) were excluded because they were not judged to be of high quality, of which 5 addressed alcohol use by students in higher education. With regard to tobacco, most reviews (11 reviews) were excluded because they did not present relevant studies and findings separately. All these reviews included a number of studies in young people alongside studies in adult populations, but none of these studies presented a separate analysis for young people and so they could not be included in our review. With regard to illegal drugs, the main reason

for exclusion was that relevant studies and findings were not presented separately (13 reviews). In most reviews, results specific to young people were not presented separately, even though some of the included studies were conducted in this population. One review examined effective interventions for homeless youth, but interventions specific to substance use were not analysed separately (Altena et al. 2010). The excluded reviews on tobacco and illegal drugs covered a range of (mostly non-pharmacological) interventions with no particular intervention or population being addressed by a majority of excluded reviews. With regard to gambling, studies of adult populations (i.e., no young people's focus) were also eligible for inclusion. Three reviews were excluded because they were not considered to be of high quality, and three reviews were excluded because they did not report relevant studies and findings separately. Three of these reviews examined specific psychosocial approaches (CBT, motivational interviewing, Internet-based therapy), whereas the other three examined a range of interventions, including pharmacological treatment.

Conclusions

This section reviewed evidence on the effectiveness of treatment and social reintegration to produce beneficial outcomes in young people. Our key findings were:

- The evidence was inconclusive on the effectiveness of psychosocial treatment approaches for addictive behaviours in young people. There was evidence to suggest that treatment based upon CBT may be effective, particularly when combined with other treatment approaches. There is also evidence that family-based therapy may be an effective treatment, and that education or counselling approaches may be ineffective for this population. Overall, the evidence suggested that psychosocial treatment can be effective for young people but that more high quality research is required to understand the best approaches.
- There was a lack of high quality review-level evidence on pharmacological treatment for addictive behaviours. Where evidence was available, it was difficult to draw conclusions due to the lack of consistent treatment approaches and outcome measures. There was some evidence to suggest that pharmacological approaches are ineffective for smoking cessation in young people.
- The majority of high quality review-level evidence available was for smoking cessation, whereas there was a lack of suitable evidence regarding alcohol and gambling treatment approaches. A large number of alcohol reviews were excluded because they were not judged to be high quality reviews.
- Considering our *a priori* list of interventions, we found that there was a lack of high quality review-level evidence on the effectiveness of some policies and interventions, in particular criminal justice interventions for young people.

9. Harm reduction

Introduction

This section focusses on approaches which do not necessarily seek to prevent or reduce young people's participation in addictive behaviours *per se*, but whose primary aim can be seen as the reduction of harms resulting from young people's own or others' participation in addictive behaviours. This includes approaches addressing parental/familial smoking, prevention of alcohol related violence and injury (including specific road safety measures), disease and overdose prevention and treatment (particularly in relation to illegal drugs), as well as measures to prevent gambling-related debt. Hence, our working definition of 'harm reduction' spans a wider range of

measures than would traditionally fall under this term from an illicit drugs perspective. Further examples of relevant policies and interventions are detailed in the Appendix.

Reviewed studies

9.1 Approaches addressing parental/familial participation in addictive behaviours

Overview of evidence

We included 17 high quality reviews of approaches addressing the potential harms to children resulting from parental/familial participation in addictive behaviours; 13 of which were Cochrane reviews:

Multiple substances/behaviours

- Whitworth & Dowswell (2009) reviewed health promotion interventions targeting women of childbearing age which aimed to identify and modify risk factors before pregnancy. One RCT conducted in Australia with women at higher risk of poor pregnancy outcomes (including recent migrants, lone parents and women with low income) was relevant for our review. As part of the intervention, an especially trained pre-pregnancy midwife conducted home visits. During these visits, genetic, social, health or lifestyle risks for poor pregnancy outcomes were identified and follow-up actions taken (e.g., hospital referral, smoking advice). The study randomised 1579 women but only 786 women were included in the analysis. This was due to relatively large losses to follow up but also because women who did not become pregnant in the follow up period were excluded from the analysis.
- Turnbull & Osborn (2012) reviewed home visits for pregnant or post-partum women with a drug or alcohol problem. Although drug use toxicology or self-reported use was an inclusion criterion for most studies, the interventions themselves were not drug and alcohol specific. The content of the visit included addressing any personal or family issues, emotional support for mothers, relevant information, facilitating mother-infant relation, assessment of mother and infant wellbeing, parental skills training, etc. In some studies mothers were also referred to other services, including substance use treatment. Six trials (5 RCT, 1 quasi-randomised controlled trial) reported child related outcomes. No study provided a major antenatal intervention; all studies were of predominately postpartum home visits. Three studies provided a developmental intervention as a component of the home visiting program; all three studies used the Carolina Preschool Curriculum and Hawaii Early Learning Programme. Studies originated mostly from the USA and Australia. Weaknesses of the primary studies included unclear or inadequate allocation concealment (5 out of 6 studies), large losses to follow up (only 2 out of 6 studies had less than 10% losses post-randomisation) and relatively small sample sizes (ranging from 60 to 227 woman-infant pairs). According to the review authors, most of the relevant studies had substantial methodological limitations, with one study judged to be at high risk of bias.

Alcohol

- Stade and colleagues (2009) reviewed psychological and/or educational interventions for reducing alcohol consumption in pregnant women and women planning pregnancy. The review did not focus on pregnant women participating in alcohol treatment programmes as this population had already been covered in a related Cochrane Review (Lui et al. 2008, reported below). Two RCTs from the USA reported child related outcomes. One study included “current drinkers” (any alcohol use since pregnancy recognition), whereas the other study also included women who reported abstinence at the time of recruitment but

who were identified as being “at risk for prenatal risk drinking”. Women in treatment for alcohol dependence were excluded in both trials. Both studies combined educational and psychological approaches. Review authors reported methodological weaknesses for both studies. Methods for randomisation and allocation concealment were unclear. Levels of attrition were low (less than 10%) in one study but high in the other (26% attrition, and those lost to follow-up were reported as being different in terms of race and education from those participants remaining in the study).

- Lui and colleagues (2008) sought to review the effects of psychosocial interventions for pregnant or post-partum women enrolled in alcohol treatment programmes on maternal, birth and neonatal outcomes. No studies met the specified inclusion criteria. The review authors found that existing trials assessed psychosocial interventions to reduce alcohol consumption in pregnant or reproductive age women, but not pregnant or post-partum women in treatment for alcohol dependence.
- Smith and colleagues (2009) sought to review the effects of pharmacological interventions for pregnant or post-partum women enrolled in alcohol treatment programmes on maternal, birth and neonatal outcomes. No studies met the specified inclusion criteria. The main reason for exclusion of available studies was study design (only randomised or quasi-randomised controlled trials were eligible for inclusion in the review).
- Premji and colleagues (2006) reviewed interventions for children up to 18 years old with Foetal Alcohol Spectrum Disorders (FASD). Three studies (2 RCT, 1 quasi-experimental study) from the USA, Canada and South Africa were included. One study evaluated weekly 1 hour cognitive control therapy sessions delivered by trained therapists over 10 months; and two studies evaluated the use of medication. All studies recruited children with Foetal Alcohol Syndrome (FAS); one study also included children with Partial Foetal Alcohol Syndrome (PFAS). Children’s age ranged from 5 to 12 years and 6 to 16 years in two studies; children in the intervention group of the third study had a mean age of 8.4 years. The sample sizes were very small (ranging from 4 to 12 participants), with a total of 26 children included across the three studies. Review authors highlighted unclear randomisation and allocation concealment as well as short-term follow-up as methodological issues.
- Peadon and colleagues (2009) reviewed treatment for children aged under 18 years with Foetal Alcohol Spectrum Disorders (FASD). Twelve studies of different study designs were included (six RCTs; one quasi-RCT; one controlled trial; four pre- and post-intervention studies). Two studies evaluated pharmacological interventions, seven studies evaluated educational and learning strategies, two studies evaluated interventions focussing on social skills and communication, and one study evaluated a behavioural intervention (Attention Process Training). Participating children were mostly of primary school age with a diagnosis of (partial) FAS; in some studies inclusion criteria comprised additional conditions (e.g., DSM-IV criteria met for attention deficit hyperactivity disorder (ADHD)). Studies originated from the USA (7 studies), Canada (3 studies) and South Africa (2 studies). Although the review itself was considered high quality, the evidence it contained was weak. Sample sizes in most studies were very small, with one study having only one participant. Review authors noted that available research used pre- and post-assessments and retrospective reviews more frequently than RCT designs, and that in the identified RCTs, methods for randomisation, allocation concealment and blinding were often unclear. Follow-up was conducted either immediately post-intervention or within a few weeks. The review authors found that significant methodological weaknesses of the primary studies limited their ability to draw conclusions. In addition, we noted large heterogeneity in intervention approaches and outcomes (e.g., attention, mathematics knowledge, social skills) which made it difficult to synthesise findings.
- A number of reviews considering parental alcohol use were not eligible for inclusion in our review. These are cited below under ‘Other available evidence’.

Tobacco

- Lumley and colleagues (2009) reviewed smoking cessation interventions (including psychosocial interventions and pharmacotherapies as well as other strategies) in women who were pregnant or seeking a pre-pregnancy consultation. The literature search identified a relatively large number of studies focusing on educational and counselling interventions but relatively few focusing on other approaches, such as the use of nicotine patches and rewarding women for giving up smoking. Studies originated mostly from the USA and the United Kingdom. Participants were generally healthy pregnant women who were assessed at recruitment as being smokers. The review included a total of 72 RCTs, of which 21 were relevant to our review (reporting on perinatal outcomes). Review authors summarised study quality across all included trials (not limited to relevant trials); weaknesses across all included trials included lack of blinding, high levels of attrition (including due to miscarriages and terminated pregnancies post-randomisation), and unclear allocation concealment.
- Coleman and colleagues (2012) reviewed studies of nicotine replacement therapy (NRT) (e.g., patch, gum) or other pharmacotherapy during pregnancy. Interventions could also include counselling and information as long as the effects of pharmacotherapy could be isolated. Four RCTs reported child related outcomes (as opposed to maternal smoking cessation). These were conducted in the USA (2 studies), England, and Denmark with healthy women who were daily smokers. Risk of bias was considered to be low in three trials; one study was considered to be at high risk of bias due to lack of blinding. Sample sizes were relatively large (~ 200 participants in three studies, and ~ 1000 participants in fourth), and attrition was low for perinatal outcomes (<10%).
- Priest and colleagues (2008a) investigated measures to reduce children's exposure to environmental tobacco smoke. Nine RCTs which explicitly aimed to improve child health or measured child health outcomes were relevant to our review (as opposed to studies where the main outcome was reduction or cessation of familial/ parental/ carer smoking). Some studies took a universal approach, but most were targeted at particular population groups using different definitions of 'at risk' (e.g., parents smoking at home, children at risk of asthma, parents living in deprived area). Four studies targeted both parents, three studies targeted mothers only, one study targeted families and one study households. Intervention approaches differed but frequently included family home visitation by a nurse or health worker. Five of the relevant studies targeted children with health problems (mostly respiratory problems). Most of these studies were conducted in North America, with some studies from Australia, Japan and Europe (UK, Netherlands). Five out of nine relevant studies were affected by unclear or inadequate allocation concealment; other limitations were not reported.
- Baxter and colleagues (2011) reviewed interventions aiming to establish smoke-free homes in pregnancy and in the neonatal period (up to the age of one year). Five studies measured outcomes in children (infant cotinine levels or respiratory illness; as opposed to parental smoking). These were carried out in families with children < 6 months (3 studies) or with children up to 4 years old (2 studies). Interventions were categorised by the review authors in terms of those based on counselling, counselling plus additional elements and individually adapted programmes. Studies originated from the USA (4 studies) and Finland (1 study). Study quality was assessed using guidance developed by the UK National Institute for Health and Care Excellence (NICE). Review authors reported lack of blinding as the main limitation of study quality, although acknowledging that blinding is difficult to achieve in health promotion interventions. Of the 5 relevant studies, all were RCTs and three studies were considered to be of 'high' quality and two studies of 'good' quality.
- A number of reviews considering parental smoking were not eligible for inclusion in our review. These are cited below under 'Other available evidence'.

Illegal drugs

- Terplan & Lui (2007) reviewed the effects of psychosocial interventions in pregnant women enrolled in illicit drug treatment programmes on birth and neonatal outcomes. Two RCTs from the USA reported child related outcomes. One study was conducted with pregnant women enrolled in methadone maintenance treatment, the other trial was conducted with cocaine dependent pregnant women. The main intervention strategy in both trials was contingency management, although participants in one of the trials took part in additional activities (e.g., relapse-prevention groups). In one trial, participants received \$15/week for three consecutive negative urine screens; in the other trial, \$18 were received for each cocaine-free urine sample, plus a \$20 weekly bonus if all three samples were negative. Sample sizes in these trials were very small, with 12 and 14 women participating respectively. In the latter study, 20 women were randomised but only 14 were analysed. Review authors stated that methods for randomisation and allocation concealment were unclear in both trials.
- Minozzi and colleagues (2008) reviewed studies of methadone treatment for opiate dependent pregnant women. Three RCTs with a total of 96 opiate dependent pregnant women meeting DSM-IV criteria were included. The mean duration of the trials was 16.3 weeks (range 15 to 18 weeks), from a mean gestational age of 23 weeks to delivery. Trials had been conducted in Austria (two studies) and the USA. All three trials reported child outcomes. The methodological quality of two studies was considered good, whereas one study had methodological flaws (unclear allocation concealment, lack of blinding). A major limitation of all studies were very small sample sizes (between 18 and 48 participants), which the review authors highlighted as a possible explanation for non-significant findings. The review authors also noted that although tobacco use during pregnancy can also influence child outcomes, this was only accounted for in one study.
- Cleary and colleagues (2010) reviewed studies of methadone treatment for opioid dependent pregnant women to determine if higher methadone dosage is associated with an increased incidence of neonatal abstinence syndrome (NAS). They included 67 studies (2 RCTs, 28 retrospective cohort studies and 37 prospective cohort studies), of which 29 studies were included in a meta-analysis. Studies had been carried out in the USA (37 studies), Europe (27 studies) and Australasia (3 studies). The review authors noted as limitations that some studies did not define NAS clearly, that potentially confounding factors were rarely considered in analyses and blinding was rarely adequate; significant heterogeneity across studies was also a challenge in this review.
- McGuire & Fowlie (2002) reviewed the administration of naloxone in newborn infants with suspected or confirmed exposure to opiates, either as a result of maternal pain relief prior to delivery or opiate use during pregnancy. The latter studies were of interest to our review. Nine trials included infants of mothers who had received pethidine (meperidine) for pain relief prior to delivery. However, no trials that examined the effects of naloxone in infants of mothers who had used a prescribed or non-prescribed narcotic during pregnancy could be identified by the review authors.
- Osborn and colleagues (2010a) reviewed the use of sedatives (e.g., clonidine) for infants with neonatal abstinence syndrome (NAS). Seven trials of infants with NAS born to mothers with a history of heroin/opiate or methadone use were included. Study locations were not reported by the review authors. The trials were randomised or quasi-randomised (e.g., allocated according to first letter of surname). Review authors reported substantial methodological concerns for most studies, including the use of quasi-random allocation methods and sizeable, largely unexplained differences in reported numbers allocated to each group. Most studies were small, with sample sizes between 20 and 107 participants, and a total of 385 infants across the 7 trials.

- Osborn and colleagues (2010b) reviewed opiate treatment (such as paregoric, morphine or methadone) for infants with neonatal abstinence syndrome (NAS). Nine trials of infants with NAS born to mothers with a history of heroin/opiate or methadone use (and in some instances high rates of poly drug use) were included. Study locations were not reported by the review authors, although funding sources suggested that trials had been conducted in the USA and Germany. Studies were randomised or quasi-randomised. Substantial methodological concerns were reported for all studies, except for two small studies which were of good methodology. As in the review by Osborn and colleagues (2010a), which overlaps regarding three studies, sample sizes were small.
- A number of reviews considering parental drug use were not eligible for inclusion in our review. These are cited below under 'Other available evidence'.

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in our review.

The 17 reviews included in this section cited a total of 215 references for included primary studies. Of these, 12 references were cited by two reviews, and one reference was cited by three reviews. There was no overlap amongst the reviews covering multiple substances/behaviours, the reviews on alcohol treatment in pregnancy, and the reviews on approaches addressing environmental tobacco smoke. With regard to the reviews on treating foetal alcohol spectrum disorder, all 3 studies cited by Premji and colleagues (2006) were also included in the later review by Peadon and colleagues (2009). On approaches addressing smoking during pregnancy, there was some overlap between the review by Lumley and colleagues (2009) and the review by Coleman and colleagues (2012), with half of the studies cited by Coleman also included in the Lumley review (the Coleman review was a partial update of the Lumley review). On the effects of methadone treatment in pregnant women, two of the three studies cited by Minozzi and colleagues (2008) were also included in the review by Cleary and colleagues (2010). Finally, with regard to treating opiate exposed newborns, the two reviews by Osborn and colleagues (2010a, 2010b) overlapped with respect to three trials (see also table on overlap between primary studies).

Outcomes

Studies measured a range of outcomes, including (but not limited to):

- *Maternal substance use and dependence during pregnancy or post-partum*, such as: abstinence, reduction or cessation of alcohol use (self-report); reduction or cessation of tobacco use, including continued cessation in the post-partum period (self-report 7-day point prevalence, in some cases biochemically validated through exhaled CO monitoring and saliva or urine cotinine estimation), cigarettes per day (self-report), cigarettes smoked in presence of child (parental self-report), smoking behaviour in the home (researcher observation); illicit drug use and abstinence (urine toxicology, identification of injection sites), Addiction Severity Index (ASI)
- *Child health and behavioural outcomes*, such as: miscarriage/spontaneous abortion and stillbirth, low/mean birth weight, gestational age at birth, preterm birth, perinatal death, birth defects, length at birth, condition at birth (e.g., Apgar scores at 1 and 5 minutes - Activity, Pulse, Grimace, Appearance, and Respiration), neonatal intensive care unit (NICU) admissions, neonatal abstinence syndrome (e.g., Finnegan scale); cognitive and physical development (measured using existing scales and checklists, such as Bayley Scales of Infant Development); growth in height, weight and head circumference at 3 years; social skills and problem behaviours (teacher & parent report), attention (vigilance task, existing scales), hyperactivity (parent report, existing scales); child exposure to environmental tobacco

smoke (biochemically validated through cotinine in child urine or saliva or proxy through parent report, biochemical validation of parental smoking or environmental monitors), respiratory symptoms/illness such as asthma (parental report); general child health (existing scales); hospitalisation; learning skills (e.g., literacy test, building block task)

- *Other outcomes*, such as: maternal enrolment in treatment and retention in treatment (e.g., at 4 weeks and at 90 days); treatment retention and drop out; maternal health and wellbeing; maternal depression; use of contraception; mode of birth; mother-infant interaction (observation); child abuse (reports, Child Abuse Potential Index (CAPI) and Parent Stress Index); nutrition (self-report); breastfeeding; immunisation rates; parental compliance with paediatric health visits; hospital costs.

For this section, our review focussed on child-related outcomes rather than parental substance use or other outcomes. We therefore excluded studies which did not report child outcomes or which relied on proxy measures only (i.e. a study measuring infant cotinine levels would be included, but a study measuring only maternal cotinine levels would not be considered relevant).

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

Multiple substances/behaviours

- *Home visitation/Health promotion* - Whitworth & Dowswell (2009) found no consistent evidence regarding the effectiveness of pre-pregnancy health promotion to improve neonatal outcomes such as birth weight. The one study reporting child outcomes showed no significant differences between intervention and control groups, except that babies in the intervention group tended to be lighter than those in the control group. The review authors noted a number of possible explanations for this iatrogenic effect, including that differences occurred by chance, that the intervention may have increased stress in mothers, or that babies with anomalies or poor placentation were more likely to stay *in utero*, which meant fewer miscarriages but more very preterm births in the intervention group. The control group in this trial also received a home visit by a pre-pregnancy midwife but no active counselling intervention, which limits our ability to draw conclusions about the effectiveness of home visitation. Turnbull & Osborn (2012) found no consistent evidence regarding the effectiveness of non drug specific home visitation in producing better developmental outcomes in children. In comparison with no home visit or minimal contact, some studies reported positive effects on psychomotor development, but other studies found no such effects; no study found significant differences for cognitive development. Review authors noted that information on important long-term outcomes, such as school success or criminal behaviour, was not available; neonatal outcomes were not considered as most interventions took place post-partum.

Alcohol

- *Prevention/Treatment of maternal alcohol use* - Stade and colleagues (2009) found that only limited information was available on how psychological/educational interventions with non-treatment seeking pregnant women affected child health. Compared with assessment-only or minimal intervention, one study found no significant differences in birth weight, whereas the other study found that the direction of effect depended on the mother's drinking levels at baseline. Lui and colleagues (2008) and Smith and colleagues (2009) found no suitable studies of psychosocial or pharmacological interventions in pregnant women receiving alcohol treatment. They concluded that high quality studies were needed in this population.
- *Interventions for children with Foetal Alcohol Spectrum Disorders (FASD)* - Premji and colleagues (2006) found that there was limited scientific evidence upon which to draw

recommendations regarding efficacious interventions for children and youth with FASD. In comparison with placebo or vitamin C, both studies of pharmacological interventions showed significant reductions in hyperactivity but no differences on measures of attention; whereas cognitive control therapy appeared to produce behavioural improvements. However, studies were very small (ranging from 4 to 12 participants) and had an unclear risk of bias. The review by Peadon and colleagues (2009) included the three studies from the Premji review as well as other studies of non-pharmacological interventions. Review authors found some evidence to suggest that virtual reality training, language and literacy therapy, mathematics intervention and rehearsal training for memory may have beneficial effects; that social skills training may improve social skills and behaviour at home but not at school; and that Attention Process Training may improve attention and non-verbal reasoning. However, very small samples, methodological limitations and heterogeneity of interventions and outcomes limited the validity of these findings.

Tobacco

- *Prevention/Treatment of maternal tobacco use* - Lumley and colleagues (2009) found that, in comparison with information-only or usual care, smoking cessation interventions in pregnancy increased children's birth weight and reduced preterm birth. Review authors highlighted that the safety of nicotine replacement therapy (NRT) in terms of effect on foetal development and birth outcomes remained unclear, with some studies indicating potential adverse effects. In follow-up to this finding, Coleman and colleagues (2012) investigated the use of nicotine replacement therapy (NRT) (e.g., patch, gum) during pregnancy. As before, review authors found that there was insufficient evidence to assess the effectiveness and safety of NRT when used to promote smoking cessation in pregnancy. They reported that although some birth outcomes tended to be better among those infants born to women who had used NRT, other outcomes were not; and a higher rate of caesarean section among women receiving NRT was the only statistically significant difference.
- *Interventions targeting environmental tobacco smoke in the home* - Priest and colleagues (2008a) found that there was insufficient evidence regarding the effectiveness of activities to reduce child exposure to environmental tobacco smoke (ETS) on child health. Some studies reported beneficial intervention effects, but there was no consistent pattern. Moreover, positive effects in children were found even though their exposure to ETS (parental smoking) had not been altered. The review authors suggested that these improvements could be due to other elements of the intervention (e.g. asthma education) rather than the smoking behaviour programme. Baxter and colleagues (2011) found mixed evidence concerning the effectiveness of interventions aiming to establish smoke-free homes in early infancy. Of the five relevant studies, three found no significant effects and two studies found significant reduction in children's exposure to ETS as indicated by infant cotinine levels.

Illegal drugs

- *Treatment of maternal drug use* - Terplan & Lui (2007) found insufficient evidence to assess the effect of psychosocial interventions in pregnant women receiving illicit drug treatment programmes on birth and neonatal outcomes, as only two trials reported relevant data. These two studies suggested some positive effects on birth or neonatal outcomes, but findings did not reach statistical significance. The review authors highlighted that due to the very small sample sizes (12 and 14 participants), the studies were probably not sufficiently powered to detect differences between the groups. Minozzi and colleagues (2008) found insufficient evidence to judge the effects of methadone treatment during pregnancy on birth and neonatal outcomes. The review authors found no significant differences in the

comparison of methadone vs. buprenorphine or oral slow morphine, but the evidence base was weak given the small number of studies, small sample sizes, and the lack of a placebo comparison. Cleary and colleagues (2010) found conflicting evidence regarding the relationship between dosage of methadone treatment for opioid dependent pregnant women and incidence of neonatal abstinence syndrome (NAS). There was a significant association when all types of studies were included in meta-analysis, but no significant association when limiting the meta-analysis to prospective studies or to those using an objective scoring system to diagnose NAS. The review authors concluded that severity of neonatal abstinence syndrome did not appear to differ according to whether mothers were on high- or low-dose methadone maintenance therapy.

- *Interventions for infants exposed to illegal substances in utero* - McGuire & Fowlie (2002) found no studies examining the effects of naloxone in infants of mothers who had used a prescribed or non-prescribed narcotic during pregnancy. In a review of sedatives for opiate withdrawal in newborn infants, Osborn and colleagues (2010a) concluded that infants with NAS due to opiate withdrawal should receive initial treatment with an opiate; that where a sedative is used, phenobarbitone should be used in preference to diazepam; and that in infants treated with an opiate, the addition of phenobarbitone or clonidine may reduce withdrawal severity. However, these conclusions were based on a small number of studies with few participants and other methodological limitations. When reviewing opiate treatment for opiate withdrawal in newborn infants, Osborn and colleagues (2010b) found that opiates compared with supportive care may reduce time to regain birth weight and duration of supportive care but increase duration of hospital stay. When compared with phenobarbitone, opiates may reduce the incidence of seizures but there was conflicting evidence of effect on treatment failure. The review authors highlighted that methodological limitations of the included studies limit the validity of the findings.

In summary, our review of approaches addressing the potential harms to children resulting from parental/familial participation in addictive behaviours highlights the breadth of available interventions and potential outcomes of interest. At the same time, it also suggests that this is, for the most part, an under-researched area. The strongest evidence was available for the prevention/treatment of maternal smoking. One high quality review reporting the results of over 20 primary studies found that smoking cessation interventions in pregnancy increased birth weight and reduced preterm birth. The evidence, however, did not permit any conclusions regarding the effectiveness or safety of nicotine replacement therapy (NRT). It was not possible to draw strong conclusions regarding the other approaches discussed in this section. This was because evidence was lacking, inconsistent or limited by methodological weaknesses (particularly very small sample sizes). Iatrogenic effects were seldom reported.

Our review suggests that few trials using robust methodologies have been conducted to investigate these approaches, and even fewer trials measure and report child-related outcomes. Instead, trials often focus on maternal substance use as the main outcome of interest. The latter point is best exemplified in the review by Lumley and colleagues (2009); although this review included 72 RCTs, only 21 of these reported perinatal outcomes. The number of primary studies in the other reviews was much lower.

Considering our *a priori* list of policies and interventions, we found no reviews of approaches addressing parental participation in gambling. We also found no high quality reviews of approaches to provide support for the children of drug dependent persons. A review of psychological interventions with families of alcohol dependent individuals (Templeton et al. 2010) was of 'moderate' quality only and so could not be included (see also section on other available evidence below).

9.2 Violence and injury prevention (including specific road safety measures)

Overview of evidence

We included four high quality reviews of measures to reduce potential violence and injury resulting from participation in addictive behaviours, including from driving whilst under the influence of alcohol or illegal drugs; two of which were Cochrane reviews.

Alcohol

- Williams and colleagues (2007) sought to review behavioural counselling interventions targeting alcohol-impaired driving or riding. Evaluated interventions needed to be feasible to conduct in primary care or referral from primary care, and studies were excluded if they enrolled selected populations (e.g., patients recruited from an emergency department) that were not representative of patients normally seen in primary care. No studies met the specified inclusion criteria. The review authors did not report the main reason for exclusion and so it was not clear if there were no studies at all with relevance for primary care settings or whether the focus on unselected patients led to exclusion of available studies.
- Priest and colleagues (2008b) sought to review policy interventions implemented through sporting organisations for promoting healthy behaviour change. The review authors explicitly listed policies designed to support the 'responsible' use of alcohol (e.g., drink driving awareness programs and alcohol server training) as interventions of interest. No studies met the specified inclusion criteria. The main reason for exclusion of available studies was study design (only controlled studies were eligible for inclusion in the review). Uncontrolled studies reporting pre- and post-test data could also not be located. The review authors reported that such policies have typically been evaluated as case studies.
- Rammohan and colleagues (2011) reviewed the effectiveness of 'dram shop liability' and initiatives for enhanced enforcement of overservice regulations for preventing excessive alcohol consumption and alcohol-related harm. 'Dram shop liability' means that owners or servers at a bar, restaurant or another on-premise alcohol retail outlet can be held responsible if they served alcoholic beverages to a person who was underage or already intoxicated and who subsequently caused alcohol-attributable harms to others (e.g., an alcohol-attributable motor vehicle crash death). Four of the included studies reported outcomes specific to young people, namely underage drinkers. All were panel studies of States in the USA using econometric models to assess the effects of server liability. Of the relevant studies, three were judged by the review authors to have 'greatest design suitability'. The quality of study execution was judged to be 'good' in two studies and 'fair' in one study. The quality rating for the fourth study was not reported. The review authors highlighted that as the reviewed primary research had been undertaken in the 1980s and 1990s, it may be less applicable to present day.
- Russell and colleagues (2011) reviewed graduated driver licensing (GDL) for reducing motor vehicle crashes among young drivers (under 20 years old). GDL programmes allow the driver to progress from lower to higher risk driving conditions (e.g., supervised -> unsupervised driving). Features of programmes included restrictions such as minimum holding periods for learner licenses, night-time driving restrictions (e.g., supervision by a sober parent or guardian when driving at night time), or limitations on extra passengers. Restrictions on blood alcohol concentration (BAC) were sometimes part of the programme, but in other cases BAC restrictions existed independently of the GDL programme (e.g., introduced prior to GDL programmes, applied to all < 21 year olds). Six studies reported alcohol-related crashes. These studies had been conducted in the USA (3 studies), Canada (2 studies), and New Zealand (1 study). Review authors assessed the strength of the GDL programmes using an existing classification which considers the programme features and whether they are

mandatory. None of the relevant programmes were classed as ‘good’, two were classed as ‘fair’, and programmes in four studies were considered ‘marginal’. All studies were ecological studies and used data obtained from routinely collected sources. The six relevant studies compared outcomes pre and post-implementation of a GDL programme and used internal control groups (i.e. they did not compare jurisdictions with and without a GDL programme but considered different population groups within the same jurisdiction, such as young people vs. adults). A key methodological limitation was limited control for confounding factors, with only one relevant study using multivariate methods to control for confounding.

- A number of alcohol related reviews were not eligible for inclusion in this section. These are described below under ‘Other available evidence’.

Tobacco

- We identified no reviews of tobacco related populations, interventions or outcomes eligible for consideration in this section, although given the topic this may be less surprising.

Illegal drugs

- A number of reviews relating to illegal drugs were not eligible for inclusion in our review. These are described below under ‘Other available evidence’.

Gambling

- We identified no reviews gambling related populations, interventions or outcomes eligible for consideration in this section.

Outcomes

We identified one suitable review providing relevant evidence on graduated driver licensing. In that review, the outcome of relevance to our review was the rate of alcohol-related crashes (measured using hospitalisation data, police reports, BAC of driver above legal limit, night-time single vehicle crashes used as proxy). Other (not drug-related) outcomes reported by studies of graduated driver licensing included all crash types with driver-involved fatal or non-fatal injury, property damage only (PDO) crashes, hospitalisations, night-time crashes, convictions/licence suspensions, injuries in teen passengers, and property damage costs. A second review provided evidence on server liability. Outcomes reported in the review included (but were not limited to): changes in alcohol consumption (e.g., self-reported binge drinking); all-cause motor vehicle fatalities (in which not all crashes were attributable to alcohol); alcohol-related motor vehicle fatalities; single-vehicle night-time crashes; suicide and homicide rates; alcohol-related medical conditions. In this review, data specific to young people was only available for all-cause motor vehicle fatalities.

Initially, we intended to present these two reviews in separate sections (one on specific road safety measures, the other on injury and violence prevention excluding road safety interventions). However, due to the similarity in reported outcomes and the relative absence of studies, the two sections were collapsed.

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

Alcohol

- *Behavioural counselling targeting alcohol-impaired driving or riding* – Williams and colleagues (2007) found no studies of behavioural counselling interventions targeting

alcohol-impaired driving or riding in unselected primary care populations. The review authors concluded that studies examining the effectiveness of primary care counselling to reduce alcohol-related driving were needed.

- *Drink driving awareness programmes / Alcohol server training* – Priest and colleagues (2008b) found no suitable studies of health policy interventions used in sporting settings to promote ‘responsible’ alcohol use. The review authors concluded that studies using rigorous evaluation techniques are needed.
- *Server liability* - Rammohan and colleagues (2011) found that server liability laws were effective in reducing all-cause motor vehicle fatalities among underage drinkers. Although this intervention is not a specific road safety measure, it has important implications for road safety. Effects on young people’s drinking were not reported.
- *Graduated driver licensing* – Russell and colleagues (2011) found that graduated driving licensing was effective in reducing the rates of crashes among young drivers, including alcohol-related crashes. All relevant studies reported reductions in alcohol-related crashes following introduction of graduated driver licensing, although the magnitude of the effect varied. A possible source of bias lies in potential confounding factors that were not accounted for.

In summary, we identified only two high quality reviews providing evidence on the effects of violence and injury prevention measures in young people, one of which was of a specific road safety measure and the other one having important road safety implications. Both of these reviews found the interventions under investigation to have beneficial effects on young people. Server liability appeared to effectively reduce all-cause motor vehicle fatalities among underage drinkers, although this finding was based on few studies conducted in the USA in the 1980s and 1990s. The evidence also suggested that graduated driver licensing reduced alcohol-related crashes among teenage drivers, although the strength of this statement was limited by the possibility of unexplored confounding factors. The other two reviews were not able to locate any trials suitable for inclusion and so it was not possible to draw conclusions regarding the effectiveness of behavioural counselling interventions, drink driving awareness programmes or alcohol server training. Both of these reviews focussed on a particular setting (primary care, sporting organisations) and it is therefore possible that reviews with more inclusive study selection criteria would locate higher quality evidence.

Considering our *a priori* list of policies and interventions, overall there was a lack of high quality reviews focussing on young people. As reported above, initially we intended to separate specific road safety measures from other violence and injury prevention measures. However, due to the small number of included reviews and the similarity in outcomes, the two sections were collapsed.

With regard to road safety measures, we found no high quality reviews focussing on young people for a number of approaches, including information campaigns and enforcement activities. A review of school-based programmes for reducing drunk-driving and riding with drinking drivers (Elder et al. 2005) as well as a review examining BAC laws, minimum drinking age laws, and sobriety checkpoints (Shults et al. 2001) were deemed to be of ‘moderate’ quality only and so were not included. Two other reviews did not present studies and findings separately for young people; this included a review of increased police patrols for preventing alcohol-impaired driving (Goss et al. 2008) and a review of multicomponent programmes with community mobilisation (Shults et al. 2009).

With regard to other violence and injury prevention measures, we expected to review evidence on the effectiveness of harm reduction approaches in drinking environments. No high quality reviews with a young people focus were identified for approaches such as safer drinking environments, server training programmes and other measures to support implementation. We excluded several reviews because they did not present studies and findings specific to young people separately from other populations and age groups (see also section on other available evidence below).

Our review suggests a need for more high quality studies examining drug related road safety measures as well as other violence and injury prevention programmes with a specific focus on the implications for young people. As both reviews in this section included only studies from outside Europe, a high quality review of the measures available in Europe with special consideration of young people would fulfil an important research gap.

9.3 Disease and overdose prevention and treatment

Overview of evidence

We included one high quality review published by the Cochrane group which examined approaches to prevent or treat disease or overdose:

Alcohol

- One review of managed alcohol as a harm reduction intervention for alcohol addiction in populations at high risk for substance abuse (Muckle et al. 2012) was not eligible for inclusion in our review. It is described below under 'Other available evidence'.

Tobacco

- We identified no tobacco related reviews eligible for consideration in this section.

Illegal drugs

- Shoptaw and colleagues (2009b) reviewed the effectiveness of treatment for amphetamine psychosis. One RCT comparing the efficacy and tolerability of olanzapine and haloperidol for the treatment of amphetamine-induced psychosis met the inclusion criteria (i.e., participants were allocated to one drug or the other for the duration of 4 weeks). Participants met DSM-IV criteria for amphetamine psychosis and were mostly male, with a mean age of 23 years and an average duration of amphetamine use prior to randomisation of 4.5 years. Study location was not reported by the review authors but the reference to the original study suggested it was Thailand. The study was double blinded and used simple randomisation but methods for allocations concealment were unclear. The sample size was small (58 participants), with attrition at > 20% due to being lost at follow up or treatment side effects.
- We identified no other reviews eligible for consideration in this section, in particular no reviews on 'classical' harm reduction measures such as needle exchange programmes.

Gambling

- We identified no gambling related reviews eligible for consideration in this section.

Outcomes

The single study included in the review described above reported the following outcomes: Clinical Global Impression, psychotic symptoms (Brief Psychiatric Rating Scale), extrapyramidal side effects (Simpson-Angus Scale and Barnes Akathisia Scale), patient satisfaction (measured by proxy through adverse events such as headache).

The review findings can be summarised as follows (for details please see the evidence tables):

- *Treatment for drug-induced psychosis* – Shoptaw and colleagues (2009b) concluded that the evidence of treatment for amphetamine psychosis was limited. One trial suggested that

both types of medication successfully resolved psychotic symptoms, but that haloperidol was more likely to have produce extrapyramidal symptoms and other side effects. Other trials were not eligible for inclusion in the review.

In summary, we identified one high quality review of pharmacological treatment for amphetamine-induced psychosis. Evidence was only available from a single primary study, which limits our ability to draw conclusions. The review did not have a specific focus on young people, but was included because the population in the reviewed primary study was within our age range of interest.

Our review suggests that there is a lack of high quality review-level evidence concerning the effects of 'classical' harm reduction measures, such as needle and syringe programmes, overdose prevention, and education, vaccination, or testing concerning drug-related infectious diseases, with respect to young people.

Other available evidence

We excluded 12 reviews of harm reduction approaches because they were not judged to be of 'high quality'. Of these, 10 were considered to be of 'moderate' quality (Elder et al. 2005; Hopkins et al. 2001; Kabir et al. 2010; Klassen et al. 2000; Milligan et al. 2011; Niccols et al. 2012b; Ruff et al. 2010; Shults et al. 2001; Task Force on Community Preventive Services 2005; Templeton et al. 2010) and two were considered to be of 'low' quality (Reavley & Jorm 2010; van Beusekom & Iguchi 2001) (please see section on quality assessment for full details). This meant that we could not consider a number of topics as there was no high quality review available, such as the effects of smoke-free home and workplace policies on second-hand smoke exposure levels in children (Kabir et al. 2010), psychological interventions with families of alcohol dependent individuals (Templeton et al. 2010), or school-based programmes for reducing drunk-driving and riding with drinking drivers (Elder et al. 2005).

In addition, we excluded 22 reviews of harm reduction approaches because they did not present the studies and findings of interest to our review separately from other studies and findings (Bauld et al. 2009; Bodner & Dean 2009; Bolier et al. 2011; Brennan et al. 2011; Connock et al. 2007; Dennis & Kingston 2008; Gilinsky et al. 2011; Goss et al. 2008; Jones et al. 2011; Ker & Chinnock 2008; Latimer et al. 2008; Levitt et al. 2007; Lu et al. 2003; Milligan et al. 2010; Muckle et al. 2012; Naughton et al. 2008; Niccols et al. 2012a; Rosen et al. 2012; Ruger & Emmons 2008; Ruger & Lazar 2012; Shults et al. 2009; Sword et al. 2009). This included 14 reviews of interventions targeting parental substance use. The majority of these papers considered cessation of parental substance use as the main outcome of interest, with child related outcomes not reported separately. We were therefore unable to include these papers. Six reviews examined interventions to prevent or reduce alcohol/drug-related violence and injuries in the night-time environment or resulting from driving whilst intoxicated. It was not always possible to ascertain if or which studies were specific to young people (e.g., age not reported, study population described as 'bar patrons'). Another challenge was that interventions in this setting tend to be multi-component or community-based which makes it difficult to single out those intervention elements or outcomes specific to young people. One review of managed alcohol as a harm reduction intervention for alcohol addiction in populations at high risk for substance abuse (Muckle et al. 2012) did not identify any studies eligible for inclusion and excluded a primary study because it contained participants under 18 years of age.

Conclusions

This section reviewed approaches which do not necessarily seek to prevent or reduce young people's participation in addictive behaviours *per se*, but whose primary aim can be seen as the

reduction of harms resulting from young people's own or others' participation in addictive behaviours. Our key findings were:

- The strongest evidence we found was in relation to smoking cessation interventions targeting pregnant women. A Cochrane review of more than 20 primary studies found that smoking cessation interventions in pregnancy increased birth weight and reduced preterm birth (excluding nicotine replacement therapy, see below).
- Limited evidence was found to suggest that: medication and non-pharmacological intervention for children with Foetal Alcohol Spectrum Disorders (FASD) can produce positive behavioural outcomes in affected children; pharmacological treatment can be beneficial for newborn infants which were exposed to opiates *in utero*; server liability laws can reduce all-cause motor vehicle fatalities among underage drinkers; graduated driver licensing can be effective in reducing the rates of alcohol-related crashes among young drivers. However, the strength of these conclusions was limited by small numbers of trials, small sample sizes, other methodological weaknesses or concerns regarding the applicability of interventions or findings to current day Europe.
- Evidence was conflicting regard the effectiveness of: home visitation; nicotine replacement therapy; and interventions targeting environmental tobacco smoke in the home. The number of high quality primary studies included in these reviews was limited, and so the evidence base may become clearer as more trials are conducted. With regard to non-pharmacological interventions, heterogeneity in how interventions are delivered may be an explanation for conflicting findings.
- Insufficient evidence was available to judge the effectiveness of: prevention/treatment of maternal alcohol or drug use; behavioural counselling targeting alcohol-impaired driving or riding; drink driving awareness programs; alcohol server training; and treatment for drug-induced psychosis. Reviews examining these topics found no or very little original research eligible for inclusion. It must be noted that some of these reviews had specific inclusion criteria (e.g., specific drugs, settings).
- There were many areas for which high quality review-level evidence giving special attention to young people was not available. This included harm reduction approaches in drinking environments, 'classical' harm reduction measures (e.g., needle exchange), outreach programmes addressing multiple needs, and all measures related to gambling.

Overall, our review suggests a need for further trials using robust methodologies in this area as well as high quality reviews with a specific focus on the implications for young people.

10. General delivery structures and quality assurance measures

Introduction

This section focusses on what may also be called 'meta approaches'. Unlike the other approaches discussed in our review of reviews, measures under this heading are not targeted directly at target populations or the industry. Rather, they provide the necessary context and infrastructures to facilitate the high quality implementation of effective policies and interventions. Ritter and McDonald (2008: 23) use the term 'infrastructure interventions' to describe research, monitoring and evaluation, and define these as "those [activities] that provide the foundations (or could or should provide the foundations) for many of the other interventions"; and they go on to say that "unlike most of the other approaches that are proximate to impacting on drug use and harm, these three interventions [research, monitoring and evaluation] are more distal, providing evidence about, for or against particular policies and intervention strategies, and their implementation". We have

expanded this definition to include measures such as: national policy documents specific to alcohol, tobacco, illegal drugs and/or gambling; dedicated authorities dealing with these issues; workforce development towards achieving specific professional competencies; and dedicated funding streams (further examples are detailed in the Appendix). As we have included *specific* delivery structures and quality assurance measures (e.g., to support compliance with age limits) in the previous sections, in this section we include general measures which are not tied to any particular approach.

Reviewed studies

Overview of evidence

We were not able to identify any high quality review suitable for inclusion which reported studies on the effectiveness of general delivery structures and quality assurance measures in changing young people's participation in addictive behaviours:

- A number of reviews in relation to alcohol, tobacco and gambling were not eligible for inclusion in this section. These are described below under 'Other available evidence'.
- We identified no reviews of populations, interventions or outcomes related to illegal drugs eligible for consideration in this section.

Due to the lack of suitable studies, we do not present outcomes for this section. In summary, we were unable to draw any conclusions due to lack of evidence.

Other available evidence

We did not identify any review which focussed only on general delivery structures or quality assurance measures; reviews usually considered delivery structures and quality assurance measures alongside other approaches. A number of reviews examined specific delivery structures and these have been considered in the respective sections as applicable (e.g., enforcement specifically in relation to age limits is reported in the section on age limits). In some cases, it was difficult to determine whether the examined approaches were specific to a particular approach (such as age limits) or whether they were of a general nature, and so these reviews are also reported here.

With regard to alcohol, Brennan and colleagues (2011) reviewed responsible beverage service training programmes as well as increased enforcement around licensed premises. Outcomes (e.g., changes in server knowledge and behaviour, police-recorded assaults, hospital-recorded injuries) did not indicate how this affected young people's drinking, and where they did, it was not always possible to ascertain if studies referred to young people specifically. The review by Rammohan and colleagues (2011) was considered to be of 'high quality' and has been included in our section on harm reduction with regard to server liability laws. It also included a review on the enforcement of overservice laws. Outcomes (e.g., alcohol sales to pseudo-intoxicated patron) were not specific to young people. The review by Jones and colleagues (2011) was excluded on similar grounds.

With regard to tobacco, Hopkins and colleagues (2001) examined strategies targeted at health care systems and providers, such as provider education and feedback. This review was rated to be of 'moderate' quality, and the one study which reportedly measured changes in adolescent tobacco use initiation in relation to these approaches was excluded by the review authors. Stead and colleagues (2005) reviewed studies of retailer education and enforcement (e.g., fines). This included interventions specifically in relation to age limits as well as more general interventions. This review was rated to be of 'moderate' quality, and the studies of relevance to this section were not reported separately.

With regard to gambling, Disley and colleagues (2011) reviewed staff development activities for employees working in the gambling industry as well as for those working in health care (e.g., how to recognise and respond to problem gambling). Outcomes related to knowledge or behavioural changes in employees, rather than how this might improve outcomes in the ultimate target populations.

Conclusions

This section sought to review evidence on the effectiveness of general delivery structures and quality assurance measures in addressing young people's addictive behaviours. Our key findings were:

- There was insufficient evidence to draw conclusions. We identified no high quality review which reported the effects on young people's participation in addictive behaviours in a suitable format. A number of excluded reviews indicated that research has been undertaken with regard to workforce development (e.g., education for retailers, servers in bars, health care providers) and enforcement activities (e.g., fines/sanctions for retailers violating regulations, increased police patrols around licensed premises) in relation to alcohol, tobacco, and gambling. However, the available evidence did not allow us to draw conclusions with regard to how such activities might affect young people's behaviour, as they frequently measured other outcomes. There appeared to be a mismatch between the available evidence base and our interest in behavioural outcomes in young people.
- It was not always possible or useful to distinguish between specific and general delivery structures and quality assurance measures. For example, we intended to classify general education to health care providers on how to recognise and address problematic behaviours as a general measure, whereas education to retailers about age limits and to bar servers concerning responsible beverage service would be classed as specific measures to support implementation of those approaches. In practice, inspection of the interventions delivered as part of primary studies suggested that specific measures may also incorporate more general content and vice versa.
- Considering our *a priori* list of policies and interventions, high-quality review level evidence was not identified for a number of possible approaches, including the availability of dedicated policy and legislation, dedicated funding and dedicated authorities. We were therefore not able to judge whether having such structures in place leads to better behavioural outcomes in young people, and we suggest this as an area of interest for future research. A particular challenge for the study of 'meta approaches' lies in the complexity of the relationship between the activity and the outcomes in the ultimate target population (e.g., increased number of mediators).

II. General approaches

Introduction

This section focusses on approaches whose content is not specific to alcohol, tobacco, illegal drugs or gambling but which may still have effects on those outcomes. An ecological framework for adolescent health presented by Blum and colleagues (2012) highlights the importance of considering macro-level factors in understanding young people's development, such as political events, economic forces, national priorities, and norms or values; as well as the role of schools, workplaces, family, and neighbourhoods. Policies and interventions of relevance to this section are consequently

those which take place in, or seek to modify, those contexts. As such, the list of potentially relevant policies and interventions is endless and we have only provided a limited number of examples in the Appendix which we do not consider to be exhaustive. A review of the wider literature to understand how distal determinants of health and disease influence young people's participation in addictive behaviours was beyond the scope of the current review, as we only considered reviews of studies examining policy and intervention effectiveness with specific addictions outcomes.

Reviewed studies

11.1. Home visitation

Overview of evidence

Three high quality reviews of non drug specific home visitation were included; all three reviews were Cochrane reviews.

Multiple substances/behaviours

- Whitworth & Dowswell (2009) reviewed health promotion interventions targeting women of childbearing age which aimed to identify and modify risk factors before pregnancy. One RCT conducted in Australia with women at higher risk of poor pregnancy outcomes including recent migrants, lone parents and women with low income was eligible for consideration in our review. The study randomised 1579 women but only 786 women were included in the analyses. This was due to relatively large losses to follow up but also because women who did not become pregnant in the follow up period were excluded from the analysis. As part of the intervention, an especially trained pre-pregnancy midwife conducted home visits. During these visits, genetic, social, health or lifestyle risks for poor pregnancy outcomes were identified and follow-up actions taken (e.g., hospital referral, smoking advice).
- Turnbull & Osborn (2012) reviewed home visits for pregnant or postpartum women with drug or alcohol related needs. Although drug use toxicology or self-reported use was an inclusion criterion for most studies, the interventions themselves were not drug and alcohol specific. The content of the visit included addressing any personal or family issues, emotional support for mothers, relevant information, facilitating mother-infant relation, assessment of mother and infant wellbeing, parental skills training, etc. In some studies mothers were also referred to other services, including substance use treatment. No study provided a major antenatal intervention; all studies were of predominately postpartum home visits. Six trials (5 RCT, 1 quasi-randomised controlled trial) reported child related outcomes. Studies originated mostly from the USA and Australia. Weaknesses of the primary studies included unclear or inadequate allocation concealment (5 out of 6 studies), large losses to follow up (only 2 out of 6 studies had less than 10% losses post-randomisation) and relatively small sample sizes (ranging from 60 to 227 woman-infant pairs). According to the review authors, most of the relevant studies had substantial methodological limitations, with one study judged to be at high risk of bias.

Alcohol

- See section on multiple substances/behaviours above

Tobacco

- Priest and colleagues (2008a) investigated measures to reduce children's exposure to environmental tobacco smoke. Nine RCTs which explicitly aimed to improve child health

outcomes or measured child health outcomes were relevant to our review (as opposed to studies where the main outcome was reduction or cessation of familial/ parental/ carer smoking). Most of these studies were conducted in North America, with some studies from Australia, Japan and Europe (UK, Netherlands). Some studies took a universal approach, but most were targeted at particular population groups using different definitions of 'at risk' (e.g. parents smoking at home, children at risk of asthma, parents living in deprived area). Six of these studies included family home visitation by a nurse or health worker (although these were not analysed separately). Five out of nine relevant studies were affected by unclear or inadequate allocation concealment; other limitations were not reported.

Illegal drugs

- See section on multiple substances/behaviours above

Gambling

- We identified no reviews of gambling related populations, interventions or outcomes eligible for consideration in our review.

There was no overlap between the three reviews in terms of the relevant primary studies.

Outcomes

Studies measured a range of outcomes, including (but not limited to): maternal/parental substance use during pregnancy or in presence of child (self report, biochemically validated or based on researcher observation); child exposure to environmental tobacco smoke (self report or biochemically validated); child health; neonatal outcomes; child physical and cognitive development; nutrition. For this section, our review focussed on child-related outcomes rather than parental substance use.

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

Multiple substances/behaviours

- *Pre-pregnancy health promotion* - Whitworth & Dowswell (2009) found no consistent evidence regarding the effectiveness of pre-pregnancy health promotion to improve neonatal outcomes such as birth weight. The one study reporting child outcomes showed no significant differences between intervention and control groups, except that babies in the intervention group were on average lighter than those in the control group. The review authors noted a number of possible explanations for this iatrogenic effect, including that differences occurred by chance, that the intervention may have increased stress in mothers, or that babies with anomalies or poor placentation were more likely to stay *in utero*, which meant fewer miscarriages but more very preterm births in the intervention group. The control group in this trial also received a home visit by a pre-pregnancy midwife but no active counselling intervention, which limits our ability to draw conclusions regarding the effectiveness of home visitation.
- *Postpartum home visits* - Turnbull & Osborn (2012) found no consistent evidence regarding the effectiveness of non drug specific home visitation in producing better developmental outcomes in children. In comparison with no home visit or minimal contact, some studies reported positive effects on psychomotor development, but other studies found no such effects; no study found significant differences concerning cognitive development. Review authors noted that information on important long-term outcomes, such as school success or criminal behaviour, was not available.

Tobacco

- *Interventions targeting environmental tobacco smoke in the home* - Priest and colleagues (2008a) found that there was insufficient evidence regarding the effectiveness of activities to reduce child exposure to environmental tobacco smoke (ETS) on child health. Some studies reported beneficial intervention effects, but there was no consistent pattern. Moreover, positive effects in children were found even though their exposure to ETS (parental smoking) had not been altered. The review authors suggested that these improvements could be due to other elements of the intervention (e.g. asthma education) rather than the smoking behaviour programme.

In summary, the included reviews found no clear evidence that home visitation is effective in improving child outcomes. This may be due to the heterogeneity of interventions (e.g., different population groups, aims, contents of visits). In addition, home visitation is often one intervention component among others, making it difficult to isolate its effects.

11.2. Early childhood education

Overview of evidence

Our review included one other high quality review of early childhood education.

Multiple substances/behaviours

- D'Onise and colleagues (2010) reviewed preschool programmes involving a centre-based component (e.g. attendance at preschool as opposed to home-based programmes). Programmes were typically structured and comprised multiple components, including preschool or educational child care as well as, for example, health and social services. Six studies of 5 programmes conducted in the USA with disadvantaged children between 6 weeks and 9 years old were relevant to our review (reporting substance use outcomes). Three of the studies were randomised controlled trials. Weaknesses of the relevant studies included small sample sizes, control group receiving a mix of programmes/services, use of self-report measures, incomplete outcome measures, and possibility of residual confounding (i.e. the existence of additional confounding factors that were not considered in the analysis, such as family characteristics that encouraged children's participation in the intervention). Follow-up measurements were conducted at age 21 for three studies, for the other studies at 22-24 years, 18-35 years, and 27/40 years respectively.

Outcomes

Studies measured a range of health behaviours. In relation to the behaviours of interest, data was collected on the use of legal and illegal substances (lifetime, last month, last 15 years) and negative consequences of substance use.

In relation to the relevant primary studies, the review findings can be summarised as follows (for details please see the evidence tables):

Multiple substances/behaviours

- *Early childhood education* – D'Onise and colleagues (2010) found that there was some evidence of beneficial effects of early childhood intervention on health behaviours such as tobacco and cannabis smoking in later life (age at long term follow up was between 18 and

40 years, i.e. 15+ years after the intervention). The evidence with regard to alcohol use was less clear, with some evidence of iatrogenic effects for binge drinking.

In summary, only one review of early childhood education was identified, suggesting a beneficial effect on tobacco and cannabis use, but inconsistent findings regarding alcohol. The authors of this single review highlighted that the interventions and findings may not be readily transferable due to being undertaken with relatively homogeneous, disadvantaged populations in the USA between the 1960s to 1980s.

Other available evidence

We excluded two reviews because they did not present the studies and findings of interest to our review separately from other studies or findings. Altona and colleagues (2005) reviewed effective interventions for homeless youth. Although substance use outcomes were reported, the review authors' conclusions focussed on all types of outcomes and were not limited to substance use. Dennis and Kingston (2008) reviewed telephone support for women during pregnancy and the early postpartum period, but it was not possible to isolate child-related outcomes.

A review of 'whole school' approaches (Fletcher et al. 2008) has been included in our section on prevention programmes.

Conclusions

This section reviewed approaches whose content is not specific to alcohol, tobacco, illegal drugs or gambling but which may still have beneficial effects on those outcomes. Our key findings were:

- Limited evidence was found to suggest that early childhood education can have beneficial effects on tobacco and cannabis use in adult life (but not necessarily alcohol use, see below). One high quality review identified a number of studies with long-term follow-up, but the validity of their findings was limited by methodological weaknesses and questions concerning the generalizability of results.
- There was conflicting evidence regarding the effectiveness of non drug specific home visitation and the effects of early childhood education on alcohol use. With regard to home visitation, heterogeneity of how interventions are delivered, by whom, and what content is covered, may provide an explanation for conflicting findings.
- Based on the retrieved studies, general approaches which, although not drug specific, sought to improve drug related outcomes, appeared to target pregnancy and the early post partum period. There were a number of areas in our *a priori* list of policies and interventions for which we could not identify any review-level evidence focussing on behavioural outcomes in young people. There appears to be a lack of review-level evidence regarding the effectiveness of general measures addressing distal determinants of health and disease (e.g. poverty, unemployment) in addressing addictive behaviours in young people.

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APPENDIX

Search strategy and terms

Medline (Ovid), 10.09.2012

Criterion	#	Terms	Hits
Population	1	exp Infant/	889,265
	2	exp Child/	1,460,083
	3	exp Minors/	2,105
	4	exp Adolescent/	1,498,462
	5	exp Young Adult/	243,939
	6	exp Adult Children/	613
	7	exp Students/	72,497
	8	(young\$ OR youth\$ OR child\$ OR adolescen\$ OR minor OR minors OR infan\$ OR underage OR (under ADJ1 age) OR pupil\$ OR student\$ OR kid OR kids OR juvenile\$ OR teenage\$).ti,ab.	1,760,503
	9	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8	3,452,343
Intervention	10	exp Policy Making/ OR exp Health policy/	89,000
	11	exp Social Control, Formal/	504,959
	12	exp Legislation as Topic/	130,563
	13	exp adolescent health services/ or exp child care/ or exp community health services/ or exp mental health services/ or exp nursing services/ or exp preventive health services/ or exp "early intervention (education)"/ or exp health education/ or exp health promotion/ or exp needle-exchange programs/ or exp primary prevention/ or exp school health services/ or exp secondary prevention/ or exp rehabilitation/	762,832
	14	exp National Health Programs/	70,508
	15	exp Government Programs/	6,946
	16	exp "Tobacco Use Cessation"/	18,355
	17	exp "Tobacco Use Cessation Products"/	317
	18	(intervention\$ OR program\$ OR approach\$ OR scheme\$ OR service\$ OR campaign\$ OR activit\$ OR project\$).ti,ab.	3,713,766
	19	(policy OR policies OR strateg\$ OR plan OR (action ADJ1 plan) OR concept).ti,ab.	733,795
	20	(law\$ OR legislation OR decree\$ OR regulation\$ OR rule\$).ti,ab.	701,351
21	10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20	5,346,132	
Area/Alcohol	22	exp Alcohols/ [NOT INCLUDED BELOW DUE TO LARGE NUMBER OF IRRELEVANT HITS]	531,234
	23	exp Alcoholic Beverages/	12,652
	24	exp Alcohol Drinking/	46,998
	25	exp Alcohol-Related Disorders/	92,415
	26	exp Alcoholics/	96
	27	exp Alcoholism/	64,430
	28	(alcohol\$ OR drink\$ OR drank\$ OR drunk\$ OR intoxicat\$ OR inebriant OR inebriat\$ OR beer OR wine OR alcopop\$ OR (alco ADJ1 pop\$) OR spirits).ti,ab.	291,956
	29	23 or 24 or 25 or 26 or 27 or 28	323,358
	Area/Tobacco	30	exp Tobacco/ OR exp Nicotine/
31		exp "Tobacco Use Disorder"/	7,151
32		exp Tobacco Industry/	3,268
33		exp Smoking/	112,040
34		(tobacco\$ OR smok\$ OR cigarette\$).ti,ab.	194,162
35		30 or 31 or 32 or 33 or 34	236,910
Area/Drugs	36	exp Marijuana Smoking/	2,189
	37	exp Marijuana Abuse/	3,895
	38	exp Amphetamine-Related Disorders/	1,849
	39	exp Cocaine-Related Disorders/	5,687
	40	exp Inhalant Abuse/	58
	41	exp Opioid-Related Disorders/	17,706
	42	exp Substance Abuse, Intravenous/	11,474
	43	exp Performance-Enhancing Substances/	132
	44	exp Hallucinogens/	20,738
	45	exp Street Drugs/ or exp Designer Drugs/	8,788
	46	exp Psychotropic Drugs/ [NOT INCLUDED BELOW DUE TO LARGE NUMBER OF IRRELEVANT HITS]	311,002
	47	exp Drug Users/	830
	48	exp Drug-Seeking Behavior/ OR exp Behavior, Addictive/	4,545
	49	(drug\$ OR substance\$ OR stimulant\$ OR cannabis OR marijuana OR hashish OR cocaine OR heroin OR opioid\$ OR opiate\$ OR amphetamine\$ OR opium OR ecstasy OR hallucinogen\$ OR (legal ADJ1 high\$)).ti,ab.	1,206,035
	50	36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 47 or 48 or 49	1,225,204
Area/Gambling	51	exp Gambling/	2,908

	52	(gambl\$ OR gaming OR lotter\$ OR betting OR casino\$ OR poker OR (slot ADJ1 machine\$)).ti,ab.	5,563
	53	51 or 52	5,965
Outcome	54	exp Cost-Benefit Analysis/ OR exp Program Evaluation/ OR exp Treatment Outcome/ OR exp "Outcome Assessment (Health Care)"/ OR exp Health Services Research/	790,853
	55	(outcome\$ OR consequence\$ OR result\$ OR chang\$ OR affect\$ OR assess\$ OR evaluat\$ OR effect\$ OR efficac\$ OR costeffect\$ OR success\$ OR impact\$ OR benefi\$ OR increas\$ OR improv\$ OR gain\$ OR decreas\$ OR reduc\$ OR prevent\$ OR delay\$ OR iatrogen\$ OR ineffect\$).ti,ab.	10,868,945
	56	54 or 55	10,868,945
Study type	57	exp Meta-Analysis/	36,189
	58	meta-analysis.mp,pt.	55,785
	59	systematic review.tw.	29,172
	60	(metaanaly\$ OR (meta ADJ1 analy\$) OR (systematic\$ ADJ2 review\$) OR ((research OR evidence) ADJ1 synthesi\$) OR "review of reviews").ti,ab.	70,700
	61	57 or 58 or 59 or 60	85,507
Alcohol	62	9 AND 21 AND 29 AND 56 AND 61	316
	63	limit 62 to (english language and humans and yr="2000 - 2012")	263
Tobacco	64	9 AND 21 AND 35 AND 56 AND 61	348
	65	limit 64 to (english language and humans and yr="2000 - 2012")	277
Drugs	66	9 AND 21 AND 50 AND 56 AND 61	1,166
	67	limit 66 to (english language and humans and yr="2000 - 2012")	998
Gambling	68	9 AND 21 AND 53 AND 56 AND 61 [limited to young people]	12
	69	limit 68 to english language	9
	70	21 AND 53 AND 56 AND 61 [not limited to young people]	45
	71	limit 70 to english language	37
TOTAL			1,575

PsycINFO (EBSCOhost), 10.09.2012

Criterion	#	Terms	Hits
Population	1	AG Childhood	376,082
	2	AG Neonatal	10,880
	3	AG Infancy	39,764
	4	AG Preschool Age	89,286
	5	AG School Age	203,184
	6	AG Adolescence	289,911
	7	AG Young Adulthood	273,359
	8	TI (young* OR youth* OR child* OR adolescen* OR minor OR minors OR infan* OR underage OR (under W1 age) OR pupil* OR student* OR kid OR kids OR juvenile* OR teenage*)	475,813
	9	AB (young* OR youth* OR child* OR adolescen* OR minor OR minors OR infan* OR underage OR (under W1 age) OR pupil* OR student* OR kid OR kids OR juvenile* OR teenage*)	907,922
	10	S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9	1,228,382
Intervention	11	DE "Government Policy Making" OR DE "Laws" OR DE "Legislative Processes" OR DE "Welfare Reform"	26,519
	12	DE "Health Care Policy" OR DE "Health Care Reform"	6,297
	13	DE "Social Control"	1,801
	14	DE "Legal Processes" OR DE "Law Enforcement"	14,123
	15	DE "Drug Laws" OR DE "Marijuana Laws"	1,046
	16	DE "Drug Legalization" OR DE "Marijuana Legalization"	189
	17	DE "Health Education" OR DE "Drug Education" OR DE "Health Promotion"	21,199
	18	DE "Health Care Services" OR DE "Mental Health Services"	44,473
	19	DE "Intervention" OR DE "Early Intervention" OR DE "Family Intervention" OR DE "Group Intervention" OR DE "School Based Intervention"	41,382
	20	DE "Government Programs" OR DE "Welfare Services (Government)"	4,367
	21	DE "Drug Abuse Prevention"	3,105
	22	DE "Drug Rehabilitation" OR DE "Alcohol Rehabilitation" OR DE "Detoxification"	23,754
	23	DE "Smoking Cessation"	7,758
	24	TI (intervention* OR program* OR approach* OR scheme* OR service* OR campaign* OR activit* OR project*)	232,869
	25	AB (intervention* OR program* OR approach* OR scheme* OR service* OR campaign* OR activit* OR project*)	951,874
	26	TI (policy OR policies OR strateg* OR plan OR (action W1 plan) OR concept)	82,838
	27	AB (policy OR policies OR strateg* OR plan OR (action W1 plan) OR concept)	422,549
	28	TI (law* OR legislation OR decree* OR regulation* OR rule*)	28,042
	29	AB (law* OR legislation OR decree* OR regulation* OR rule*)	133,812
	30	S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20 or S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29	1,361,777

Area/Alcohol	31	DE "Alcoholic Beverages" OR DE "Beer" OR DE "Liquor" OR DE "Wine"	1,856
	32	DE "Alcohol Abuse" OR DE "Alcoholism" OR DE "Binge Drinking" OR DE "Alcoholic Psychosis"	35,213
	33	DE "Drinking Behavior" OR DE "Alcohol Drinking Patterns" OR DE "Alcohol Intoxication" OR DE "Social Drinking" OR DE "Acute Alcoholic Intoxication" OR DE "Chronic Alcoholic Intoxication"	19,166
	34	DE "Alcohol Drinking Attitudes"	2,242
	35	DE "Sobriety"	1,180
	36	DE "Underage Drinking"	193
	37	DE "Children of Alcoholics"	782
	38	TI (alcohol* OR drink* OR drank OR drunk* OR intoxicat* OR inebriant OR inebriat* OR beer OR wine OR alcopop* OR (alco W1 pop*) OR spirits)	53,271
	39	AB (alcohol* OR drink* OR drank OR drunk* OR intoxicat* OR inebriant OR inebriat* OR beer OR wine OR alcopop* OR (alco W1 pop*) OR spirits)	106,724
	40	S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39	113,398
Area/Tobacco	41	DE "Nicotine"	7,038
	42	DE "Tobacco Smoking" OR DE "Passive Smoking"	20,050
	43	TI (tobacco* OR smok* OR cigarette*)	19,483
	44	AB (tobacco* OR smok* OR cigarette*)	37,466
	45	S41 or S42 or S43 or S44	41,148
Area/Drugs	46	DE "Drugs" OR DE "Hallucinogenic Drugs" OR DE "Narcotic Drugs" OR DE "Performance Enhancing Drugs"	26,450
	47	DE "Cannabis" OR DE "Hashish" OR DE "Marijuana"	4,201
	48	DE "Cocaine" OR DE "Crack Cocaine"	10,221
	49	DE "Amphetamine" OR DE "Methamphetamine"	7,250
	50	DE "Opiates" OR DE "Heroin"	9,577
	51	DE "Drug Seeking"	365
	52	DE "Drug Abstinence"	1,772
	53	DE "Drug Usage" OR DE "Drug Abuse" OR DE "Intravenous Drug Usage" OR DE "Marijuana Usage"	47,258
	54	DE "Drug Usage Attitudes"	1,833
	55	DE "Inhalant Abuse" OR DE "Glue Sniffing"	521
	56	DE "Drug Dependency" OR DE "Drug Addiction" OR DE "Heroin Addiction"	19,611
	57	TI (drug* OR substance* OR stimulant* OR cannabis OR marijuana OR hashish OR cocaine OR heroin OR opioid* OR opiate* OR amphetamine* OR opium OR ecstasy OR hallucinogen* OR (legal W1 high*))	78,181
	58	AB (drug* OR substance* OR stimulant* OR cannabis OR marijuana OR hashish OR cocaine OR heroin OR opioid* OR opiate* OR amphetamine* OR opium OR ecstasy OR hallucinogen* OR (legal W1 high*))	200,943
59	S46 or S47 or S48 or S49 or S50 or S51 or S52 or S53 or S54 or S55 or S56 or S57 or S58	227,784	
Area/Gambling	60	DE "Gambling" OR DE "Pathological Gambling"	4,331
	61	TI (gamb* OR gaming OR lotter* OR betting OR casino* OR poker OR (slot W1 machine*))	4,390
	62	AB (gamb* OR gaming OR lotter* OR betting OR casino* OR poker OR (slot W1 machine*))	8,340
	63	S60 or S61 or S62	8,766
Outcomes	64	DE "Treatment Outcomes" OR DE "Mental Health Program Evaluation" OR DE "Treatment Effectiveness Evaluation" OR DE "Educational Program Evaluation" OR DE "Evaluation" OR DE "Program Evaluation" OR DE "Costs and Cost Analysis"	71,866
	65	TI (outcome* OR consequence* OR result* OR chang* OR affect* OR assess* OR evaluat* OR effect* OR efficac* OR costeffect* OR success* OR impact* OR benefi* OR increas* OR improv* OR gain* OR decreas* OR reduc* OR prevent* OR delay* OR iatrogen* OR ineffect*)	653,753
	66	AB (outcome* OR consequence* OR result* OR chang* OR affect* OR assess* OR evaluat* OR effect* OR efficac* OR costeffect* OR success* OR impact* OR benefi* OR increas* OR improv* OR gain* OR decreas* OR reduc* OR prevent* OR delay* OR iatrogen* OR ineffect*)	2,244,433
	67	S64 or S65 or S66	2,345,638
Study type	68	MR Meta Analysis	9,542
	69	DE "Meta Analysis"	3,167
	70	MR Systematic Review	5,855
	71	TI (metaanaly* OR (meta W1 analy*) OR (systematic* N2 review*) OR ((research OR evidence) N1 synthesi*) OR "review of reviews")	11,796
	72	AB (metaanaly* OR (meta W1 analy*) OR (systematic* N2 review*) OR ((research OR evidence) N1 synthesi*) OR "review of reviews")	20,760
73	S68 or S69 or S70 or S72	24,816	
Language/ Publication year	74	LA English AND PY 2000-2012	1,433,328
Alcohol	75	S10 and S30 and S40 and S67 and S73 and S74	143
Tobacco	76	S10 and S30 and S45 and S67 and S73 and S74	102
Drugs	77	S10 and S30 and S59 and S67 and S73 and S74	256
Gambling YP	78	S10 and S30 and S63 and S67 and S73 and S74	6
Gambling ALL	79	S30 and S63 and S67 and S73 and S74	27
TOTAL			528

Criterion	#	Terms	Hits
Population	1	MeSH descriptor Infant explode all trees	11,660
	2	MeSH descriptor Child explode all trees	1
	3	MeSH descriptor Minors explode all trees	5
	4	MeSH descriptor Adolescent explode all trees	68,613
	5	MeSH descriptor Young Adult explode all trees	0
	6	MeSH descriptor Adult Children explode all trees	10
	7	MeSH descriptor Students explode all trees	1,750
	8	(young* OR youth* OR child* OR adolescen* OR minor OR minors OR infan* OR underage OR (under NEXT age) OR pupil* OR student* OR kid OR kids OR juvenile* OR teenage*):ti,ab	90,264
	9	(#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8)	144,297
Intervention	10	MeSH descriptor Policy Making explode all trees	45
	11	MeSH descriptor Health policy explode all trees	405
	12	MeSH descriptor Social Control, Formal explode all trees	2,890
	13	MeSH descriptor Legislation as Topic explode all trees	594
	14	MeSH descriptor Health Services explode all trees	60,175
	15	MeSH descriptor National Health Programs explode all trees	628
	16	MeSH descriptor Government Programs explode all trees	321
	17	MeSH descriptor "Tobacco Use Cessation" explode all trees	2,592
	18	MeSH descriptor "Tobacco Use Cessation Products" explode all trees	67
	19	(intervention* OR program* OR approach* OR scheme* OR service* OR campaign* OR activit* OR project*):ti,ab	148,151
	20	(policy OR policies OR strateg* OR plan OR (action NEXT plan) OR concept):ti,ab	32,331
	21	(law* OR legislation OR decree* OR regulation* OR rule*):ti,ab	7,467
22	(#10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21)	202,488	
Area/Alcohol	23	MeSH descriptor Alcoholic Beverages explode all trees	342
	24	MeSH descriptor Alcohol Drinking explode all trees	2,055
	25	MeSH descriptor Alcohol-Related Disorders explode all trees	3,120
	26	MeSH descriptor Alcoholics explode all trees	3
	27	MeSH descriptor Alcoholism explode all trees	2,141
	28	(alcohol* OR drink* OR drank* OR drunk* OR intoxicat* OR inebriant OR inebriat* OR beer OR wine OR alcopop* OR (alco NEXT pop*) OR spirits):ti,ab	13,117
	29	(#23 or #24 or #25 or #26 or #27 or #28)	13,606
Area/Tobacco	30	MeSH descriptor Tobacco explode all trees	204
	31	MeSH descriptor Nicotine explode all trees	1,414
	32	MeSH descriptor "Tobacco Use Disorder" explode all trees	626
	33	MeSH descriptor Tobacco Industry explode all trees	15
	34	(tobacco* OR smok* OR cigarette*):ti,ab	12,715
	35	(#30 or #31 or #32 or #33 or #34)	12,867
Area/Drugs	36	MeSH descriptor Marijuana Smoking explode all trees	145
	37	MeSH descriptor Marijuana Abuse explode all trees	180
	38	MeSH descriptor Amphetamine-Related Disorders explode all trees	116
	39	MeSH descriptor Cocaine-Related Disorders explode all trees	514
	40	MeSH descriptor Inhalant Abuse explode all trees	2
	41	MeSH descriptor Opioid-Related Disorders explode all trees	1,060
	42	MeSH descriptor Substance Abuse, Intravenous explode all trees	310
	43	MeSH descriptor Performance-Enhancing Substances explode all trees	4
	44	MeSH descriptor Hallucinogens explode all trees	120
	45	MeSH descriptor Street Drugs explode all trees	195
	46	MeSH descriptor Designer Drugs explode all trees	5
	47	MeSH descriptor Drug Users explode all trees	21
	48	MeSH descriptor Drug-Seeking Behavior explode all trees	6
	49	MeSH descriptor Behavior, Addictive explode all trees	265
	50	(drug* OR substance* OR stimulant* OR cannabis OR marijuana OR hashish OR cocaine OR heroin OR opioid* OR opiate* OR amphetamine* OR opium OR ecstasy OR hallucinogen* OR (legal NEXT high*)):ti,ab	92,181
51	(#36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50)	92,495	
Area/Gambling	52	MeSH descriptor Gambling explode all trees	160
	53	(gamb* OR gaming OR lotter* OR betting OR casino* OR poker OR (slot NEXT machine*)):ti,ab	
	54	(#52 or #53)	1,141
Outcome	55	MeSH descriptor Cost-Benefit Analysis explode all trees	12,815

	56	MeSH descriptor Program Evaluation explode all trees	3,930
	57	MeSH descriptor Treatment Outcome explode all trees	78,360
	58	MeSH descriptor "Outcome Assessment (Health Care)" explode all trees	81,834
	59	MeSH descriptor Health Services Research explode all trees	1,660
	60	(outcome* OR consequence* OR result* OR chang* OR affect* OR assess* OR evaluat* OR effect* OR efficac* OR costeffect* OR success* OR impact* OR benefi* OR increas* OR improv* OR gain* OR decreas* OR reduc* OR prevent* OR delay* OR iatrogen* OR ineffect*):ti,ab	572,327
	61	(#55 or #56 or #57 or #58 or #59 or #60)	579,120
Alcohol	62	(#9 AND #22 AND #29 AND #61) from 2000 to 2012, in Cochrane Reviews (Reviews only), Other Reviews, Technology Assessments and Economic Evaluations (Word variations have been searched)	1,788 68
Tobacco	63	(#9 AND #22 AND #35 AND #61) from 2000 to 2012, in Cochrane Reviews (Reviews only), Other Reviews, Technology Assessments and Economic Evaluations	1,997 56
Drugs	64	(#9 AND #22 AND #51 AND #61) from 2000 to 2012, in Cochrane Reviews (Reviews only), Other Reviews, Technology Assessments and Economic Evaluations (Word variations have been searched)	6,975 493
Gambling	65	(#9 AND #22 AND #54 AND #61) [limited to young people] from 2000 to 2012, in Cochrane Reviews (Reviews only), Other Reviews, Technology Assessments and Economic Evaluations (Word variations have been searched)	296 4
	66	(#22 AND #54 AND #61) [not limited to young people] from 2000 to 2012, in Cochrane Reviews (Reviews only), Other Reviews, Technology Assessments and Economic Evaluations (Word variations have been searched)	592 12
TOTAL			629

Handsearching of web sites

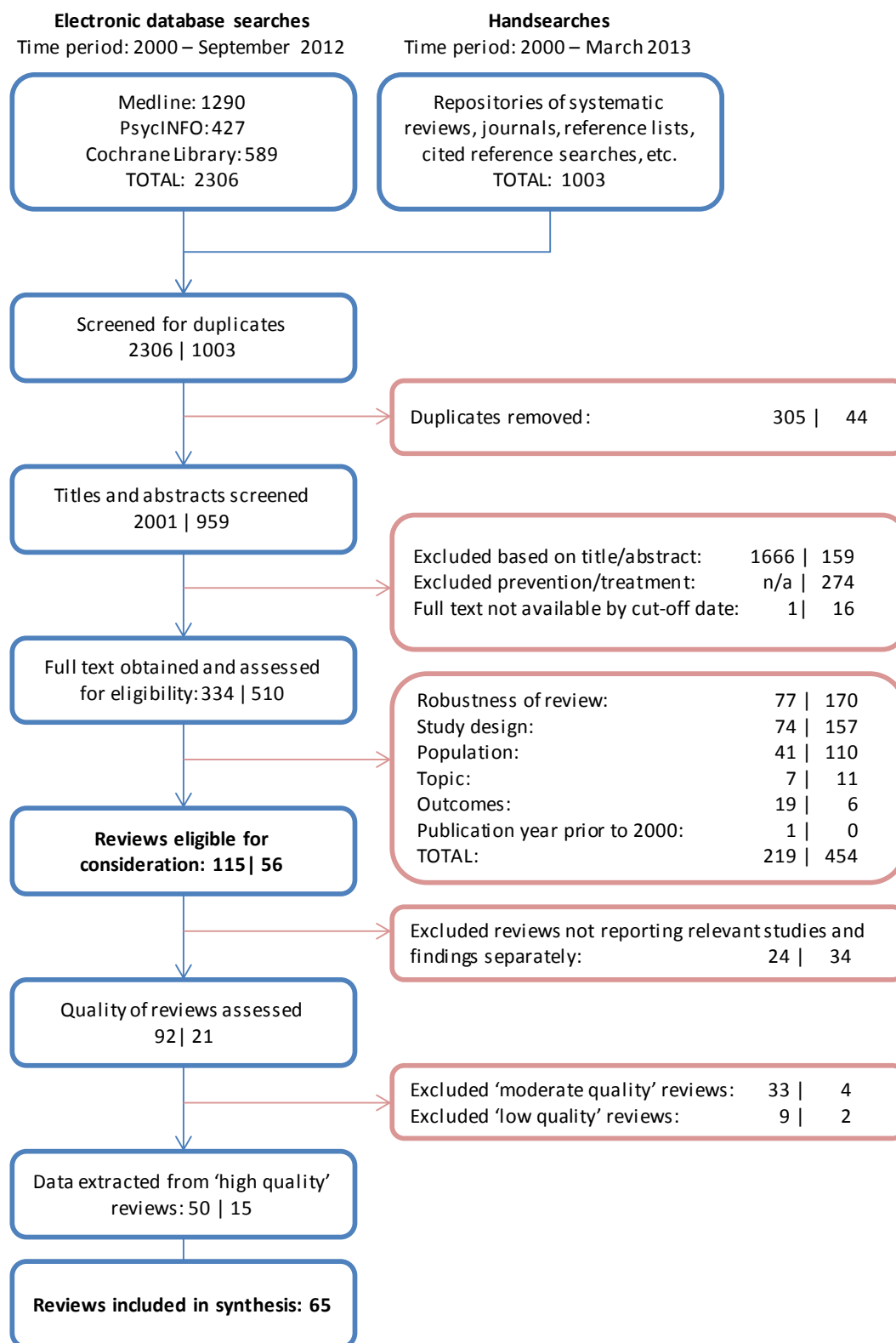
Name	URL	Strategy	Date searched
Repositories of evidence briefings and reviews			
Campbell Collaboration	http://www.campbellcollaboration.org/library.php	basic search + inspection of all available documents	29.1.13
Centre for Reviews and Dissemination, York UK [includes DARE, NHS EED, HTA]	http://www.crd.york.ac.uk	combination of Mesh terms relating to alcohol, tobacco, drugs and gambling and young people	4.2.13
Cochrane Collaboration	http://onlinelibrary.wiley.com/	in addition to automated searches: searched by relevant MeSH qualifier and also by topic; checked age of participants in all substance related reviews to determine whether relevant primary studies were included	29. + 30.01.2013, 19.3.2013
Database of promoting health effectiveness reviews (DoPHER)	http://eppi.ioe.ac.uk/webdatabases/intro.aspx?ID=2	English AND (systematic review OR review OR meta analysis) AND (alcohol OR drugs OR solvents OR tobacco OR problem behaviour) AND (children OR young people); search produced 296 records, inspected all hits	4.2.13
EPPI-Centre	http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=62	looked through all reviews in chronological list up from 2000 onwards	4.2.13
Guide to Community Preventive Services	http://www.thecommunityguide.org/index.html	looked at relevant topic areas in publications list (only Evidence reviews considered), additional searches within the topic areas; majority of retrieved results were economic evaluations or had already been retrieved through other sources	5.2.13
National Institute for Health and Care Excellence (NICE)	http://www.nice.org.uk	inspected all published guidance titles (by type of guidance) and downloaded reviews from supporting evidence pages; searched Clinical Guidelines, Technology appraisals, Public health guidance, Interventional procedures guidance, Diagnostics guidance, Medical technologies guidance	4.2.13
New Zealand Health Technology Assessment (NZHTA)	http://www.otago.ac.nz/christchurch/research/nzhta/#SystematicReviews	looked through list of systematic reviews	4.2.13
PROSPERO	http://www.crd.york.ac.uk/Prospero/	searched for 'alcohol', 'drinking', 'tobacco', 'cigarette', 'nicotine' 'smoking', 'substance', 'drug', 'cannabis', 'marijuana', 'heroin', 'opioid', 'gaming' 'gambling' in any field regardless of status and then considered those that were 'completed' or 'published'	25.3.13
Research in Practice	www.rip.org.uk	Searched for research reviews	7.2.13
Organisational websites			
Centre for Public Health, Liverpool John Moores University	http://www.cph.org.uk/	searched publications for "review", "evidence", "effectiveness", "effective"	7.2.13

European Alcohol Policy Alliance (EUROCARE)	http://www.euocare.org	looked through all topic areas for publications	5.2.13
European Centre for Monitoring Alcohol Marketing (EUCAM)	http://www.eucam.info/	inspected publications list	31.1.13
European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)	http://www.emcdda.europa.eu/	inspected publications list	3.2.13
Institute of Alcohol Studies	www.ias.org.uk	inspected publications list	31.1.13
International Center for Alcohol Policies	http://www.icap.org	looked through publications and references	5.2.13
International Centre for Youth Problems and High-Risk Behaviors, McGill University	http://www.youthgambling.com/	Looked through "research reports" and "publications" for 2000-current	2.2.13
Joseph Rowntree Foundation (JRF)	http://www.irf.org.uk/	inspected publications list; searched independently by two reviewers	31.01.2013 / 03.02.2013
RAND Corporation	http://www.rand.org/pubs/technical_reports.html	search 'alcohol' and limit to RAND reports; same for tobacco, nicotine, drugs, gambling; searched independently by second reviewer	05.02.2013 / 03.02.2013
UK Centre for Tobacco Control Studies (UKCTCS)	http://www.ukctcs.org/ukctcs/index.aspx	looked through publications lists for all years (2008-2013) searching for "review", "meta", and "effect"	5.2.13
United Kingdom Drug Policy Commission (UKDPC)	http://www.ukdpc.org.uk/	inspected publications list	3.2.13
United Nations Office on Drugs and Crime (UNODC)	http://www.unodc.org/	inspected publications list	3.2.13
World Health Organization (WHO)	http://www.who.int/	searched WHO Europe regional page, WHOLIS and IRIS databases using subject or basic key words	5.2.13
Projects			
Alcohol and Education Research Council Alcohol Library	http://alcoholresearchuk.org/alcohol-library/	inspected publications list	31.1.13
AMPHORA	http://www.amphoraproject.net/	inspected publications list	31.1.13
ELSA	http://stap.nl/elsa/elsa_project	checked Deliverables page	9.1.13
Focus on Alcohol Safe Environment (FASE)	http://www.faseproject.eu	retrieved literature reviews for each of the three project areas; searched independently by second reviewer	9.1.2013, 31.01.2013
IREFREA	http://www.irefrea.org/	inspected publications list	31.1.13
Pathways for Health Project (PHP)	http://www.dhs.de/dhs-international/english/pathways-for-health-project.html	inspected list of documents	9.1.13
Journals			
International Journal of Gambling	http://www.tandfonline.com/loi/rigs20#.UlfyxBGw44	searched TOC 2001-2012	4.2.13
Journal of Gambling Studies	http://link.springer.com/journal/10899	searched TOC 2000-2012, saved reviews and followed up references to reviews included in relevant primary studies	01-04.02.2013
Journal of Studies on Alcohol and Drugs	http://www.jsad.com/	retrieved relevant Supplement No 14, 2002	4.2.13
Systematic Reviews	http://www.ncbi.nlm.nih.gov/pmc/journals/1798/	Vols. 1 to 2; 2012 to 2013	25.3.13

Additional strategies employed for identification of relevant reviews:

- Screening of bibliographies of retrieved reviews
- Screening of bibliographies of existing reviews of reviews
- Collaboration with colleagues at the United Nations Office on Drugs and Crime (UNODC): references collated by UNODC to inform development of International Standards on Drug Use Prevention were kindly made available to our research team.
- Requests to colleagues within ALICE RAP network for relevant publications
- Inspection of current contents alerts
- Cited reference searches in Web of Science (backwards and forwards) using already retrieved key papers (reviews and primary studies); conducted 16.01.2013 for the following areas: alcohol minimum age limits, proof of age schemes, test purchasing, warning labels, gambling prevention, legislative changes, decriminalisation, legalisation, alcohol pricing, advertising bans. Further information available from the authors upon request.

Flowchart of selection of relevant reviews



Notes: Several reasons for exclusion may apply but only one reason was recorded in this table to avoid double counting of studies. Symbol “|” distinguishes electronic database from handsearching results.

Quality assessment - Instrument

1. Was an 'a priori' design provided?

The research question and inclusion criteria should be established before the conduct of the review. Note: To score a 'yes' for this factor there must be reference to a protocol, ethics approval, or pre-determined/a priori published research objectives.

Yes(1)

NR - not (adequately) reported (1)

Don't know(1)

No(1)

NA - not applicable (1)

Comment(1)

2. Was there duplicate study selection and data extraction?

There should be at least two independent data extractors and a consensus procedure for disagreements should be in place. Note: 2 people do study selection, 2 people do data extraction, consensus process or one person checks the other's work.

Yes (2)

NR - not (adequately) reported (2)

Don't know(2)

No (2)

NA - not applicable (2)

Comment(2)

3. Was a comprehensive literature search performed?

At least two electronic sources should be searched. The report must include years and databases used (eg, Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated and where feasible the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found. In rare cases this may not apply where authors have carried out a meta analysis focusing on a specified range of major trials in their field. Note: If at least 2 sources + one supplementary strategy used, select "yes" (Cochrane register/ Central counts as 2 sources; a grey literature search counts as supplementary)

Yes (3)

NR - not (adequately) reported (3)

Don't know(3)

No (3)

NA - not applicable (3)

Comment(3)

4. Was the status of publication (ie grey literature) used as an inclusion criterion?

The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc. Note: If review indicates that there was a search for "grey literature" or "unpublished literature," indicate "yes." SIGLE database, dissertations, conference proceedings, and trial registries are all considered grey for this purpose. If searching a source that contains both grey and non-grey, must specify that they were searching for grey/unpublished lit. If 'published in peer review journal' was an inclusion criterion, select "no".

Yes (4)

NR - not (adequately) reported (4)

Don't know(4)

No (4)

NA - not applicable (4)

Comment(4)

5. Was a list of studies (included and excluded) provided?

A list of included and excluded studies should be provided. Note: Acceptable if the excluded studies are referenced. If there is an electronic link to the list but the link is dead, select "no".

Yes(5)

NR - not (adequately) reported (5)

Don't know(5)

No (5)

NA - not applicable (5)

Comment(5)

6. Were the characteristics of the included studies provided?

In an aggregated form such as a table, data from the original studies should be provided on the participants, interventions and outcomes. The ranges of characteristics in all the studies analyzed eg, age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported. Note: Acceptable if not in table format as long as they are described as above. Acceptable if details are not provided for each study individually but across studies.

Yes(6)

NR - not (adequately) reported (6)

Don't know(6)

No (6)

NA - not applicable (6)

Comment(6)

7. Was the scientific quality of the included studies assessed and documented?

'A priori' methods of assessment should be provided (eg, for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo controlled studies, or allocation concealment as inclusion criteria); for other types of studies alternative items will be relevant. Note: Can include use of a quality scoring tool or checklist, eg, Jadad scale, risk of bias, sensitivity analysis, etc., or a description of quality items, with some kind of result for EACH study ("low" or "high" is fine, as long as it is clear which studies scored "low" and which scored "high"; a summary score/range for all studies is not acceptable).

Yes (7)

NR - not (adequately) reported (7)

Don't know(7)

No (7)

NA - not applicable (7)

Comment(7)

8. Was the scientific quality of the included studies used appropriately in formulating conclusions?

The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating recommendations. Note: Might say something such as "the results should be interpreted with caution due to poor quality of included studies." Cannot score "yes" for this question if scored "no" for question 7 -> "not applicable".

Yes (8)

NR - not (adequately) reported (8)

Don't know(8)

No (8)

NA - not applicable (8)

Comment(8)

9. Were the methods used to combine the findings of studies appropriate?

For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (ie, Chi-squared test for homogeneity, I2). If heterogeneity exists a random effects model should be used and/or the clinical appropriateness of combining should be taken into consideration (ie, is it sensible to combine?). Note: Indicate "yes" if they mention or describe heterogeneity, ie, if they explain that they cannot pool because of heterogeneity/variability between interventions. Select "not applicable" for narrative synthesis.

Yes (9)

NR - not (adequately) reported (9)

Don't know(9)

No (9)

NA - not applicable (9)

Comment(9)

10. Was the likelihood of publication bias assessed?

An assessment of publication bias should include a combination of graphical aids (eg, funnel plot, other available tests) and/or statistical tests (eg, Egger regression test, Hedges-Olken). Note: If no test values or funnel plot included, score "no". Score "not applicable" if mentions that publication bias could not be assessed because there were fewer than 10 included studies. Select "no" if narrative synthesis does not comment on possibility of publication bias.

Yes (10)

NR - not (adequately) reported (10)

Don't know(10)

No (10)

NA - not applicable (10)

Comment(10)

11. Was the conflict of interest included?

Potential sources of support should be clearly acknowledged in both the systematic review and the included studies. Note: To get a "yes," must indicate source of funding or support for the systematic review AND for each of the included studies

Yes (11)

NR - not (adequately) reported (11)

Don't know(11)

No (11)

NA - not applicable (11)

Comment(11)

Source of original instrument: http://amstar.ca/Amstar_Checklist.php

Quality assessment - Results

Author (year)	AMSTAR criteria											Overall quality	Comment
	'A priori' design provided	Duplicate study selection and data extraction	Comprehensive literature search documented	Grey literature included	List of included and excluded studies provided	Characteristics of included studies provided	Scientific quality of included studies assessed and documented	Scientific quality used appropriately in formulating conclusions	Methods used to combine study findings appropriate	Likelihood of publication bias assessed	Conflict of interest (source of funding) stated for review and included studies		
Austin (2005)	NR	NR	Yes	No	No	Yes	Yes	Yes	NA	No	No	Moderate	
Bader (2007)	NR	Partially	Yes	Yes	No	NR	Yes	No	NA	No	NR	Moderate	
Bader (2011)	No	Yes	NR	Yes	No	No	NR	No	NA	No	NR	Low	
Barnett (2005)	NR	NR	Yes	Yes	No	NR	NR	NR	NA	No	NR	Moderate	
Baxter (2011)	NR	Partially	Yes	NR	NR	Yes	Yes	Yes	NA	No	NR	High	
Bender (2006)	No	NR	NR	No	No	Yes	NR	NR	NA	No	NR	Moderate	
Bender (2011)	Yes	Partially	Yes	NR	No	Yes	NR	NR	Yes	Yes	NR	Moderate	
Brinn (2010)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	
Brown (2007)	NR	NR	No	No	NA	No	NR	NR	Yes	NR	NR	Low	
Bryant (2011)	Yes	Partially	Yes	Yes	No	Yes	Yes	Yes	Yes	No	NR	High	
Buckley (2007)	Yes	Partially	Yes	Yes	No	No	NR	No	NA	No	NR	Low	
Calabria (2011)	NR	Partially	Yes	No	No	Yes	Yes	NA	NA	NA	NR	High	Did not conduct synthesis of results due to methodological limitations of included studies.
Capella (2011)	No	NR	NR	Yes	Yes	Yes	NR	Yes	NR	No	NR	Moderate	
Carey (2009)	NR	Partially	Yes	Yes	No	Yes	Yes	NR	Yes	No	NR	Moderate	
Carson (2011)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	Yes	NA	NR	High	
Carson (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	NR	High	
Civljak (2010)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	High	
Clark (2002)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	NR	High	
Cleary (2010)	Yes	Yes	Yes	NR	NR	NR	NR	NR	Yes	NR	NR	High	
Coleman (2012)	Yes	Yes	NR	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Coren (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Cowlshaw (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Cuijpers (2002)	NR	NR	NR	No	No	NR	NR	NR	Yes	No	No	Low	

Author (year)	AMSTAR criteria											Overall quality	Comment
	'A priori' design provided	Duplicate study selection and data extraction	Comprehensive literature search documented	Grey literature included	List of included and excluded studies provided	Characteristics of included studies provided	Scientific quality of included studies assessed and documented	Scientific quality used appropriately in formulating conclusions	Methods used to combine study findings appropriate	Likelihood of publication bias assessed	Conflict of interest (source of funding) stated for review and included studies		
D'Onise (2010)	No	NR	Yes	Yes	NR	Yes	Yes	Yes	NA	No	NR	High	
Elder (2005)	Yes	NR	NR	NR	No	NR	Yes	NA	NA	No	No	Moderate	Only those studies rated "good" or "fair" included in the review.
Elder (2010)	Yes	NR	Yes	Yes	NR	NR	NR	No	NA	No	NR	Moderate	
Elliot (2005)	NR	Partially	NR	Yes	No	NR	NR	Yes	NA	No	NR	Moderate	
Engle (2009)	NR	NR	Yes	NR	No	Yes	Yes	Yes	NA	No	NR	Moderate	
Evans (2001)	Yes	NR	Yes	NR	NR	Yes	Yes	Yes	NR	No	No	Moderate	
Fager (2004)	NR	NR	Yes	NR	NR	Yes	NR	NA	NA	No	No	Moderate	
Faggiano (2005)	Yes	Yes	Yes	Yes	Yes	NR	Yes	Yes	Yes	No	NR	High	
Ferri (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Fletcher (2008)	No	Yes	NR	Yes	No	Yes	Yes	Yes	NA	No	NR	High	Only high quality studies included in synthesis.
Foxcroft (2011b)	NR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	No	High	
Foxcroft (2011c)	NR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	NR	High	
Foxcroft (2011d)	NR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	NR	High	
Gates (2006)	Yes	Partially	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	
Gooding (2009)	NR	NR	No	No	No	Yes	Yes	Yes	Yes	NR	No	Moderate	
Gottfredson (2003)	NR	NR	NR	Yes	No	NR	NR	Yes	Yes	Yes	No	Moderate	
Gray (2007)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	Yes	High	
Greaves (2006)	No	Partially	NR	Yes	No	NR	NR	NA	NA	No	NR	Moderate	
Grimshaw (2006)	Yes	NR	NR	Yes	Yes	Yes	Yes	NR	Yes	No	NR	High	
Hettema (2010)	No	Yes	NR	NR	No	Yes	NR	Yes	Yes	Yes	NR	High	
Hopkins (2001)	Yes	Yes	NR	Yes	Yes	NR	Yes	Yes	NA	No	No	Moderate	Characteristics of studies only provided for sub set of included studies.
Hutton (2011)	No	Yes	NR	NR	No	Yes	Yes	Yes	NA	No	NR	High	
Jackson (2012)	NR	Partially	Yes	No	Yes	Yes	Yes	Yes	NA	No	NR	High	Weak studies were excluded.

Author (year)	AMSTAR criteria											Overall quality	Comment
	'A priori' design provided	Duplicate study selection and data extraction	Comprehensive literature search documented	Grey literature included	List of included and excluded studies provided	Characteristics of included studies provided	Scientific quality of included studies assessed and documented	Scientific quality used appropriately in formulating conclusions	Methods used to combine study findings appropriate	Likelihood of publication bias assessed	Conflict of interest (source of funding) stated for review and included studies		
Johnston (2012)	Yes	Partially	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Kabir (2010)	NR	NR	Yes	Yes	No	Yes	NR	Yes	NA	No	NR	Moderate	
Khadjesari (2011)	NR	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	NR	High	
Kim (2011)	NR	Partially	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	High	Low quality studies were excluded from the meta-analysis.
Klassen (2000)	No	Partially	NR	NR	No	Yes	NR	No	NA	No	No	Moderate	
Konghom (2010)	Yes	Yes	NR	Yes	NA	NA	NA	NA	NA	NA	NA	High	No trials met inclusion criteria.
Labbe (2011)	NR	NR	NR	No	NR	Yes	NR	NA	NA	No	No	Moderate	
Lemstra (2010)	NR	Partially	Yes	Yes	No	NR	NR	NR	Yes	NA	NR	Moderate	Included only studies above specified threshold for quality.
Lui (2008)	Yes	Yes	Yes	Yes	Yes	NA	NA	NA	NA	NA	NR	High	No trials met inclusion criteria.
Lumley (2009)	Yes	NR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	NR	High	
Maziak (2007)	Yes	Partially	NR	Yes	NA	NA	NA	NA	NA	No	NR	High	No trials met inclusion criteria.
McBride (2003)	No	NR	Yes	Yes	No	No	Yes	NA	NA	No	No	Low	Included only 'high quality' studies.
McDonald (2003)	No	Yes	No	Yes	No	NR	Yes	Yes	NA	No	No	Low	
McGuire (2001)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	NA	NR	High	No studies of opioid dependent women met inclusion criteria.
Milligan (2011)	No	Partially	Yes	Yes	No	Yes	Yes	NR	Yes	Yes	NR	Moderate	
Minozzi (2008)	Yes	Partially	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Minozzi (2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Moreira (2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Müller-Riemenschneider (2008)	Yes	Yes	NR	No	No	Yes	Yes	Yes	Yes	Yes	NR	High	
Myung (2009)	No	Yes	Yes	NR	Yes	Yes	NR	Yes	Yes	Yes	NR	High	

Author (year)	AMSTAR criteria											Overall quality	Comment
	'A priori' design provided	Duplicate study selection and data extraction	Comprehensive literature search documented	Grey literature included	List of included and excluded studies provided	Characteristics of included studies provided	Scientific quality of included studies assessed and documented	Scientific quality used appropriately in formulating conclusions	Methods used to combine study findings appropriate	Likelihood of publication bias assessed	Conflict of interest (source of funding) stated for review and included studies		
Niccols (2012b)	No	Partially	Yes	Yes	No	Yes	Yes	NR	NA	NR	NR	Moderate	
Osborn (2010a)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	NR	High	
Osborn (2010b)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	NA	NR	High	
Peadon (2009)	No	Yes	Yes	NR	No	Yes	Yes	Yes	NA	NR	NR	High	
Petrie (2007)	No	Yes	Yes	Yes	No	Yes	Yes	Yes	NA	No	NR	High	
Premji (2007)	No	Yes	Yes	Yes	No	Yes	Yes	Yes	NA	No	NR	High	
Priest (2008a)	Yes	Partially	NR	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	
Priest (2008b)	Yes	Yes	Yes	Yes	NA	NA	NA	NA	NA	No	NA	High	No trials met inclusion criteria.
Rammohan (2011)	Yes	Partially	Yes	Yes	No	Yes	Yes	No	NA	No	NR	High	
Ranney (2006)	No	Yes	Yes	NR	No	Yes	Yes	Yes	NA	No	Yes	High	
Reavley (2010)	NR	NR	NR	No	No	No	NR	Yes	NA	No	No	Low	
Rice (2009)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	
Richardson (2009)	NR	Partially	NR	Yes	Yes	Yes	Yes	Yes	NA	No	Yes	Low	Initially rated 'high quality' but reassessed during data extraction as unexplained discrepancies between text, evidence tables and references.
Roe (2005)	No	Yes	Yes	No	No	Yes	Yes	NR	NA	No	No	Moderate	
Rooke (2010)	No	Partially	Yes	NR	Yes	Yes	Yes	Yes	Yes	No	NR	Moderate	
Ruff (2010)	No	NR	NR	No	No	Yes	Yes	NR	NA	No	No	Moderate	
Russell (2011)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	NR	High	
Scott-Sheldon (2012)	No	Yes	Yes	Yes	No	NR	Yes	No	Yes	No	NR	Moderate	
Shoptaw (2009b)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	
Shults (2001)	Yes	NR	Yes	NR	No	NR	Yes	Yes	NA	No	No	Moderate	
Skara (2003)	No	Partially	Yes	Yes	No	Yes	Yes	NR	NA	No	No	Moderate	
Smith (2009)	Yes	Yes	Yes	Yes	Yes	NA	NA	NA	NA	NA	No	High	No trials met inclusion criteria.
Soole (2008)	No	Yes	Yes	No	NR	Yes	NR	NR	Yes	Yes	No	High	

Author (year)	AMSTAR criteria											Overall quality	Comment
	'A priori' design provided	Duplicate study selection and data extraction	Comprehensive literature search documented	Grey literature included	List of included and excluded studies provided	Characteristics of included studies provided	Scientific quality of included studies assessed and documented	Scientific quality used appropriately in formulating conclusions	Methods used to combine study findings appropriate	Likelihood of publication bias assessed	Conflict of interest (source of funding) stated for review and included studies		
Stade (2009)	Yes	Partially	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	
Stead (2005)	Yes	Yes	NR	NR	Yes	Yes	NR	Yes	NA	No	NR	Moderate	
Stead (2006)	Yes	Yes	Yes	Yes	NA	NA	NA	NA	NA	No	NA	High	No trials met inclusion criteria.
Stead (2012)	Yes	Partially	NR	NR	NA	NA	NA	NA	NA	NA	NA	High	No trials met inclusion criteria.
Sullivan (2004)	No	NR	Yes	NR	No	NR	Yes	No	NA	No	No	Low	
Suls (2012)	No	Yes	NR	NR	No	NR	No	NA	Yes	No	NR	Moderate	
Templeton (2010)	Yes	Yes	Yes	Yes	Yes	Yes	NR	NR	NA	No	NR	Moderate	
Terplan (2007)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	High	
Thomas (2007)	Yes	Partially	NR	Yes	Yes	Yes	Yes	Yes	Yes	No	No	High	
Thomas (2008)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	NR	High	
Thomas (2011)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	High	
Thomas (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	NR	High	
Tobler (2000)	No	NR	NR	Yes	No	NR	Yes	Yes	Yes	Yes	No	Moderate	
Toneatto (2003)	NR	NR	NR	NR	No	Yes	NR	Yes	NA	No	No	Moderate	
Tripodi (2010)	NR	Partially	Yes	Yes	No	No	NR	NR	Yes	Yes	NR	Moderate	
Turnbull (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	High	
van Beusekom (2001)	No	NR	Yes	Yes	No	NR	NR	No	NA	No	NR	Low	
Vaughn (2004)	No	Partially	Yes	NR	No	Yes	Yes	Yes	Yes	NR	No	High	
Villanti (2010)	No	Partially	Yes	Yes	No	Yes	Yes	Yes	NA	No	Yes	High	
Wachtel (2010)	No	NR	Yes	NR	No	Yes	Yes	NR	NA	No	No	Moderate	
Waldron (2008)	No	NR	Yes	Yes	No	Yes	NR	No	NA	NR	NR	Moderate	
Westphal (2008)	No	NR	No	No	No	Yes	Yes	Yes	NA	No	No	Low	
Whitworth (2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	No	NR	High	Studies at high risk of bias excluded from synthesis.

Author (year)	AMSTAR criteria											Overall quality	Comment
	'A priori' design provided	Duplicate study selection and data extraction	Comprehensive literature search documented	Grey literature included	List of included and excluded studies provided	Characteristics of included studies provided	Scientific quality of included studies assessed and documented	Scientific quality used appropriately in formulating conclusions	Methods used to combine study findings appropriate	Likelihood of publication bias assessed	Conflict of interest (source of funding) stated for review and included studies		
Williams (2007)	No	Yes	Yes	NR	NR	Yes	Yes	Yes	NA	No	NR	High	Studies rated as having poor quality were excluded. No alcohol related study met inclusion criteria.

NR ... Not (adequately) reported; NA ... Not applicable

Allocation of included reviews to approaches and behaviours of interest

First author (year)	Approach										Topic			
	Control and regulation of supply	Gambling or substance-free zones	Age limits	Taxation and pricing	Control and regulation of advertising marketing and sponsorship	Warning labels	Prevention programmes	Treatment and social reintegration	Harm reduction	General delivery structures and quality assurance measures	General approaches	Alcohol	Tobacco	Illegal drugs
Baxter (2011)								x				x		
Brinn (2010)						x						x		
Bryant (2011)							x					x		
Calabria (2011)							x				x		x	
Carson (2011)						x						x		
Carson (2012)						x						x		
Civljak (2010)						x	x					x		
Clark (2002)							x						x	
Cleary (2010)								x					x	
Coleman (2012)								x				x		
Coren (2013)							x				x		x	
Cowlshaw (2012)							x							x
D'Onise (2010)						x				x	x	x	x	
Faggiano (2005)						x							x	
Ferri (2013)						x							x	
Fletcher (2008)						x					x	x	x	
Foxcroft (2011b)						x					x			
Foxcroft (2011c)						x					x			
Foxcroft (2011d)						x					x			
Gates (2006)						x							x	
Gray (2007)						x								x
Grimshaw (2006)							x					x		
Hettema (2010)						x	x					x		
Hutton (2011)						x	x					x		
Jackson (2012)						x					x	x	x	
Johnston (2012)						x						x		
Khadjesari (2011)						x					x			
Kim (2011)							x					x		
Konghom (2010)							(x)						(x)	
Lui (2008)								(x)			(x)			
Lumley (2009)								x				x		
Maziak (2007)							(x)					(x)		
McGuire (2001)								(x)					(x)	
Minozzi (2008)								x					x	
Minozzi (2009)							x						x	
Moreira (2009)						x					x			
Müller-Riemenschneider (2008)						x						x		

First author (year)	Approach											Topic			
	Control and regulation of supply	Gambling or substance-free zones	Age limits	Taxation and pricing	Control and regulation of advertising marketing and sponsorship	Warning labels	Prevention programmes	Treatment and social reintegration	Harm reduction	General delivery structures and quality assurance measures	General approaches	Alcohol	Tobacco	Illegal drugs	Gambling
Myung (2009)							x	x					x		
Osborn (2010a)									x					x	
Osborn (2010b)									x					x	
Peadon (2009)									x			x			
Petrie (2007)							x					x	x	x	
Premji (2007)									x			x			
Priest (2008a)									x		x		x		
Priest (2008b)	(x)	(x)							(x)			(x)	(x)		
Rammohan (2011)									x			x			
Ranney (2006)	x		x		x		x	x					x		
Rice (2009)				x									x		
Russell (2011)									x			x			
Shoptaw (2009b)									x					x	
Smith (2009)									(x)			(x)			
Soole (2008)							x							x	
Stade (2009)									x			x			
Stead (2006)									(x)				(x)		
Stead (2012)									(x)				(x)		
Terplan (2007)									x					x	
Thomas (2007)							x						x		
Thomas (2008)				x									x		
Thomas (2011)							x					x		x	
Thomas (2013)							x						x		
Turnbull (2012)									x		x	x		x	
Vaughn (2004)								x				x		x	
Villanti (2010)								x					x		
Whitworth (2009)									x		x	x	x	x	
Williams (2007)									(x)			(x)			
All included reviews	2	1	1	2	1	0	27	19	22	0	4	24	31	24	2
Reviews including primary studies*	1	0	1	2	1	0	27	15	18	0	4	20	27	23	2

* In the table, parentheses "(x)" indicate reviews which did not provide any evidence, as no trials met the inclusion criteria of the original review. These reviews are not included in the sums presented in the last row of this table.

Overlap of relevant primary studies among included reviews

For a complete list of references to relevant primary studies included in the reviews, please see the separate Microsoft Excel file.

Review author and year	Relevance category	Nr included studies (total)	Nr relevant studies, if different	Nr references to relevant studies	Multiple references per study	Nr references shared with at least one other review	% of cited refs	Nr references shared with at least two other reviews	% of cited refs
Baxter 2011	B	17	5	5		0	0%	0	0%
Brinn 2010	A	7		29	*	8	28%	1	3%
Bryant 2011	B	32	6	6		3	50%	1	17%
Calabria 2011	A	9		9		2	22%	0	0%
Carson 2011	A	25		56	*	28	50%	10	18%
Carson 2012	A	2		6	*	2	33%	1	17%
Civljak 2010	B	20	4	6	*	5	83%	3	50%
Clark 2002	B	18	14	40	*	0	0%	0	0%
Cleary 2010	A	67		67		4	6%	1	1%
Coleman 2012	B	6	4	11	*	4	36%	0	0%
Coren 2013	B	11	9	9		2	22%	0	0%
Cowlishaw 2012	A	14		22	*	0	0%	0	0%
D'Onise 2010	B	12	6	6		0	0%	0	0%
Faggiano 2005	A	32		44	*	28	64%	15	34%
Ferri 2013	B	23	15	20	*	3	15%	0	0%
Fletcher 2008	B	24	4	4		4	100%	3	75%
Foxcroft 2011b	A	12		24	*	12	50%	6	25%
Foxcroft 2011c	A	20		35	*	19	54%	11	31%
Foxcroft 2011d	A	53		76	*	39	51%	21	28%
Gates 2006	A	17		21	*	10	48%	9	43%
Gray 2007	B	13	6	6		0	0%	0	0%
Grimshaw 2006	A	24		46	*	15	33%	6	13%
Hettema 2010	B	31	7	7		6	86%	3	43%
Hutton 2011	B	21	6	6		6	100%	3	50%
Jackson 2012	A	18		18		6	33%	4	22%
Johnston 2012	A	7		18	*	3	17%	2	11%
Khadjesari 2011	B	24	18	18		7	39%	0	0%
Kim 2011	A	6		6		3	50%	0	0%
Konghom 2010	B	0		0		0	n/a	0	n/a
Lui 2008	A	0		0		0	n/a	0	n/a
Lumley 2009	B	72	21	48	*	5	10%	0	0%
Maziak 2007	B	0		0		0	n/a	0	n/a
McGuire 2002	B	9	0	0		0	n/a	0	n/a
Minozzi 2008	A	3		3		2	67%	0	0%
Minozzi 2009	A	2		2		0	0%	0	0%
Moreira 2009	A	22		22		7	32%	0	0%
Müller-Riemenschneider 2008	A	35		37	*	34	92%	24	65%
Myung 2009	B	22	3	3		3	100%	3	100%
Osborn 2010a	A	7		10	*	4	40%	1	10%
Osborn 2010b	A	9		10	*	5	50%	1	10%
Peadon 2009	A	12		13	*	3	23%	0	0%
Petrie 2007	A	20		20		12	60%	4	20%
Premji 2007	A	3		3		3	100%	0	0%
Priest 2008a	B	36	9	19	*	0	0%	0	0%
Priest 2008b	B	0		0		0	n/a	0	n/a

Review author and year	Relevance category	Nr included studies (total)	Nr relevant studies, if different	Nr references to relevant studies	Multiple references per study	Nr references shared with at least one other review	% of cited refs	Nr references shared with at least two other reviews	% of cited refs
Rammohan 2011	B	11	4	4		0	0%	0	0%
Ranney 2006	B	102	17	17		15	88%	10	59%
Rice 2009	A	45		45		17	38%	0	0%
Russell 2011	B	34	6	7	*	0	0%	0	0%
Shoptaw 2009b	A	1		1		0	0%	0	0%
Smith 2009	A	0		0		0	n/a	0	n/a
Soole 2008	A	58		58		29	50%	14	24%
Stade 2009	B	4	2	3	*	0	0%	0	0%
Stead 2006	B	0		0		0	n/a	0	n/a
Stead 2012	B	0		0		0	n/a	0	n/a
Terplan 2007	B	9	2	2		0	0%	0	0%
Thomas 2007	A	22		35	*	27	77%	14	40%
Thomas 2008	B	84	20	20		17	85%	0	0%
Thomas 2011	A	4		7	*	1	14%	0	0%
Thomas 2013	A	134		353	*	113	32%	44	12%
Turnbull 2012	B	7	6	21	*	0	0%	0	0%
Vaughn 2004	A	15		17	*	1	6%	0	0%
Villanti 2010	A	14		14		3	21%	1	7%
Whitworth 2009	B	4	1	2	*	0	0%	0	0%
Williams 2007	B	17	0	0		0	n/a	0	n/a

List of relevant primary studies included in three reviews or more

Review author and year	Brinn 2010	Bryant 2011	Carson 2011	Carson 2012	Civljak 2010	Cleary 2010	Faggiano 2005	Fletcher 2008	Foxcroft 2011b	Foxcroft 2011c	Foxcroft 2011d	Gates 2006	Grimshaw 2006	Heitema 2010	Hutton 2011	Jackson 2012	Johnston 2012	Müller-Riemenschneider 2008	Myung 2009	Osborn 2010a	Osborn 2010b	Petrie 2007	Ranney 2006	Sole 2008	Thomas 2007	Thomas 2013	Villanti 2010	How often cited?	
Relevance category	A	B	A	A	B	A	A	B	A	A	A	A	A	B	B	A	A	A	B	A	A	A	B	A	A	A	A		
Number of included studies (total)	7	32	25	2	20	67	32	24	12	20	53	17	24	31	21	18	7	35	22	7	9	20	102	58	22	134	14		
Number of relevant studies, if different from above		6			4			4							7	6			3				17						
Multiple references per included study	*		*	*	*		*		*	*	*	*	*				*	*		*	*				*	*			
Number of references shared with at least two other reviews	1	1	10	1	3	1	15	3	6	11	21	9	6	3	3	4	2	24	3	1	1	4	10	14	14	44	1		
Bibliographical references of relevant primary studies																													
An LC, Klatt C, Perry CL, Lein EB, Hennrikus DJ, Pallonen UE, et al. The RealU online cessation intervention for college smokers: a randomized controlled trial. <i>Preventive Medicine</i> 2008;47:194–9.					1										1												1	3	
Ausems M, Mesters I, van Breukelen G, De Vries H. Effects of in-school and tailored out-of-school smoking prevention among Dutch vocational school students. <i>Health Educ Res</i> 2004; 19(1):51-63.																		1					1			1		3	
Aveyard P, Cheng KK, Almond J, Sherratt E, Lancashire R, Lawrence T, et al. Cluster randomised controlled trial of expert system based on the transtheoretical (“stages of change”) model for smoking prevention and cessation in schools. <i>BMJ</i> 1999;319:948–53.													1						1							1		3	
Aveyard P, Sherratt E, Almond J, Lawrence T, Lancashire R, Griffin C, Cheng KK. The change-in-stage and updated smoking status results from a cluster-randomised trial of smoking prevention and cessation using the transtheoretical model among British adolescents. <i>Preventive Medicine</i> 2001;33:313–324.													1					1					1			1		4	
Bell RM, Ellickson PL, Harrison ER. Do drug prevention effects persist into high school? How Project ALERT did with ninth graders. <i>Preventive Medicine</i> 1993;22:463–83.							1																	1		1		3	
Biglan A, Ary DV, Smolkowski K, Duncan T, Black C. A randomised controlled trial of a community intervention to prevent adolescent tobacco use. <i>Tobacco Control</i> 2000;9(1): 24–32.			1									1														1		3	
Bond L, Patton G, Glover S, Carlin JB, Butler H, Thomas L, Bowes G. The Gatehouse Project: can a multilevel school intervention affect emotional wellbeing and health risk behaviours?. <i>Journal of Epidemiology & Community Health</i> 2004;58(12):997–1003.								1			1				1			1										4	
Botvin GJ, Baker E, Dusenbury L, Botvin EM, Diaz T. Long term follow-up results of a randomised drug abuse prevention trial. <i>Journal of the American Medical Association</i> 1995;273:1106–12.							1				1															1		3	
Botvin GJ, Baker E, Renick NL, Filazzola AD, Botvin EM. A cognitive behavioral approach to substance abuse prevention. <i>Addictive Behaviors</i> 1984;9:137–47.							1				1															1		3	

Review author and year	Brinn 2010	Bryant 2011	Carson 2011	Carson 2012	Civljak 2010	Cleary 2010	Faggiano 2005	Fletcher 2008	Foxcroft 2011b	Foxcroft 2011c	Foxcroft 2011d	Gates 2006	Grimshaw 2006	Hetterma 2010	Hutton 2011	Jackson 2012	Johnston 2012	Müller-Riemenschneider 2008	Myung 2009	Osborn 2010a	Osborn 2010b	Petrie 2007	Ranney 2006	Soole 2008	Thomas 2007	Thomas 2013	Villanti 2010	How often cited?
Botvin GJ, Griffin KW, Diaz T, Ifill-Williams M. Drug abuse prevention among minority adolescents: posttest and one-year follow-up of a school-based preventive intervention. <i>Prevention Science</i> 2001;2(1):1–13.							1											1								1		3
Brown EC, Catalano RF, Fleming CB, Haggerty KP, Abbott RD. Adolescent substance use outcomes in the Raising Healthy Children project: a two-part latent growth curve analysis. <i>Journal of Consulting and Clinical Psychology</i> 2005;73(4):699–710.									1									1								1		3
Brown KS, Cameron R, Madill C, Payne ME, Filsinger S, Manske SR, Best JA. Outcome evaluation of a high school smoking reduction intervention based on extracurricular activities. <i>Preventive Medicine</i> 2002;35(5):506–10																		1				1				1		3
Brown RA, Ramsey SE, Strong DR, Myers MG, Kahler CW, Lejuez CW, Abrams DB. Effects of motivational interviewing on smoking cessation in adolescents with psychiatric disorders. <i>Tobacco Control</i> , 2003; 12(Suppl. 4), IV3–IV10.		1											1	1								1						4
Clayton RR, Cattarello A, Walden KP. Sensation seeking as a potential mediating variable for school-based prevention intervention. a two-year follow-up of DARE. <i>Health Communication</i> 1991;3(4):229–39.							1				1													1				3
Clayton RR, Cattarello AM, Johnstone BM. The effectiveness of Drug Abuse Resistance Education (project DARE): 5-year follow-up results. <i>Preventive Medicine</i> 1996; 25:307–18.							1				1													1		1		4
Crone MR, Reijneveld SA, Willemssen MC, et al. Prevention of smoking in adolescents with lower education: a school based intervention study. <i>J Epidemiol Comm Health</i> 2003;57:675-80.																	1	1					1			1		4
De Vries H, Dijk F, Wetzels J, Mudde A, Kremers S, Ariza C, Vitoria PD, Fielder A, Holm K, Janssen K, Lehtovuori R, Candel M. The European Smoking prevention Framework Approach (ESFA): effects after 24 and 30 months. <i>Health Education Research</i> 2006;21(1):116–32. [DOI: 10.1093/ her/cyh048]			1															1								1		3
De Vries H, Mudde A, Leijts I, et al. The European Smoking Prevention Framework Approach (EFSA): an example of integral prevention. <i>Health Educ Res</i> 2003;18:611-26.			1															1								1		3
Eisen M, Zellman GL, Murray DM. Evaluating the Lions- Quest “Skills for Adolescence” drug education program: second-year behavior outcomes. <i>Addictive Behaviors</i> 2003; 28:883–97.											1							1								1		3
Ellickson PL, Bell RM, Harrison ER. Changing adolescent propensities to use drugs: results from Project ALERT. <i>Health Education Quarterly</i> 1993;20(2):227–42.							1				1															1		3
Ellickson PL, Bell RM, McGuigan K. Preventing adolescent drug use: long-term results of a junior high program. <i>American Journal of Public Health</i> 1993;83(6):856–61.							1				1															1		3
Ellickson PL, Bell RM. Drug prevention in Junior High: A multi-site longitudinal test. <i>Science</i> 1990 16 March;247: 1299–1305.							1				1													1		1		4

Review author and year	Brinn 2010	Bryant 2011	Carson 2011	Carson 2012	Civljak 2010	Cleary 2010	Faggiano 2005	Fletcher 2008	Foxcroft 2011b	Foxcroft 2011c	Foxcroft 2011d	Gates 2006	Grimshaw 2006	Hettrema 2010	Hutton 2011	Jackson 2012	Johnston 2012	Müller-Riemenschneider 2008	Myung 2009	Osborn 2010a	Osborn 2010b	Petrie 2007	Ranney 2006	Sooile 2008	Thomas 2007	Thomas 2013	Villanti 2010	How often cited?
Ellickson PL, McCaffrey DF, Ghosh Dastidar B, Longshore DL. New inroads in preventing adolescent drug use: results from a large-scale trial of Project ALERT in middle schools. <i>American Journal of Public Health</i> 2003;93 (11):1830–6.	1										1							1					1	1		1		6
Flay B, Graumlich S, Segawa E, et al. Effects of 2 prevention programs on high-risk behaviors among African American youth. A randomized trial. <i>Arch Paediatr Adolesc Med</i> 2004;158:377– 84.								1				1				1												3
Forman SG, Linney JA, Brondino MJ. Effects of coping skills training on adolescents at risk for substance use. <i>Psychology of Addictive Behavior</i> 1990;4(2):67–76.																								1	1	1		3
Furr-Holden CDM, Lalango NS, Anthony JC, Petras H, Kellam SG. Developmental inspired drug prevention: Middle school outcomes in a school-based randomised prevention trial. <i>Drug and Alcohol Dependence</i> 2004;73: 149–58.							1			1	1							1						1	1	1		7
Guyll M, Spoth RL, Chao W, Wickrama KA, Russell D. Family-focused preventive interventions: evaluating parental risk moderation of substance use trajectories. <i>Journal of Family Psychology</i> 2004;18(2):293–301.									1																1	1		3
Hansen WB, Graham JW. Preventing alcohol, marijuana and cigarette use among adolescents: peer pressure resistance training versus establishing conservative norms. <i>Preventive Medicine</i> 1991;20:414–30.							1				1															1		3
Hecht ML, Marsiglia FF, Elek E, Wagstaff DA, Kulis S, Dustman P, et al. Culturally grounded substance use prevention: an evaluation of the keeping' it R.E.A.L. curriculum. <i>Prevention Science</i> 2003;4(4):233–48.											1													1		1		3
Hollis JF, Polen MR, Whitlock EP, Lichtenstein E, Mullooly JP, Velicer WF, Redding CA. Teen reach: Outcomes from a randomized, controlled trial of a tobacco reduction program for teens seen in primary medical care. <i>Pediatrics</i> , 2005;115, 981–989.													1	1				1										3
Josendal O, Aaro L, Bergh I. Effects of a school-based smoking prevention program among subgroups of adolescents. <i>Health Educ Res</i> 1998; 13: 215–24.																						1			1	1		3
Josendal O, Aaro LE, Torsheim T, Rasbash J. Evaluation of the school-based smoking prevention program "BE smokeFree". <i>Scandinavian Journal of Psychology</i> 2005;46: 189–99.																							1		1	1		3
Koning IM, Vollebergh WA, Smit F, Verdurmen JE, van den Eijnden RJ, ter Bogt T, et al. Preventing heavy alcohol use in adolescents (PAS): Cluster randomised trial of a parent and student intervention offered separately and simultaneously. <i>Addiction</i> 2009;104(10):1669–78.									1	1	1																	3
Lipkus IM, McBride CM, Pollak KI, Schwartz- Bloom RD, Tilson E, Bloom PN. A randomized trial comparing the effects of self-help materials and proactive telephone counseling on teen smoking cessation. <i>Health Psychol</i> 2004; 23(4):397-406.													1	1									1					3
Lynam DR, Milich R, Zimmerman R, Novak SP, Logan TK, Martin C, et al. Project DARE: No Effects at 10- Year Follow-Up. <i>Journal of Consulting and Clinical psychology</i> 1999;67(4):590–3.							1				1													1		1		4

Review author and year	Brinn 2010	Bryant 2011	Carson 2011	Carson 2012	Civjak 2010	Cleary 2010	Faggiano 2005	Fletcher 2008	Foxcroft 2011b	Foxcroft 2011c	Foxcroft 2011d	Gates 2006	Grimshaw 2006	Hettrema 2010	Hutton 2011	Jackson 2012	Johnston 2012	Müller-Riemenschneider 2008	Myung 2009	Osborn 2010a	Osborn 2010b	Petrie 2007	Ranney 2006	Sooile 2008	Thomas 2007	Thomas 2013	Villanti 2010	How often cited?
Madden JD, Chappel JN, Zuspan F, Gumpel J, Mejia A, Davis R. Observation and treatment of neonatal narcotic withdrawal. <i>Am J Obstet Gynecol</i> 1977; 127: 199–201.						1														1	1							3
Mermelstein, R Turner, L. Web-based support as an adjunct to group-based smoking cessation for adolescents. <i>Nicotine & Tobacco Research: Official Journal of the Society for Research on Nicotine and Tobacco</i> , 2006;8(Suppl. 1), S69–S76. doi:10. 1080/14622200601039949					1										1			1	1									4
Patten CA, Croghan IT, Meis TM, Decker PA, Pingree S, Colligan RC, et al. Randomized clinical trial of an Internetbased versus brief office intervention for adolescent smoking cessation. <i>Patient Education and Counseling</i> 2006;64(1-3): 249–58.					1								1		1				1									4
Perry CL, Komro KA, Mortenson-Veblen S, Bosma LM, Farbaksh K, Munson KA, et al. A randomised controlled trial of the middle and junior high school D.A.R.E. and D.A.R.E. Plus programs. <i>Archives of Pediatrics and Adolescent Medicine</i> 2003;157:178–84.			1					1		1	1	1						1				1			1			8
Piper DL, Moberg DP, King MJ. The Healthy for Life Project: behavioral outcomes. <i>Journal of Primary Prevention</i> 2000; Vol. 21:47–73.			1													1								1		1		4
Reddy KS, Arora M, Perry CL, Nair B, Kohli A, Lytle LA, et al. Tobacco and alcohol use outcomes of a school-based intervention in New Dehli. <i>American Journal of Health Behavior</i> 2002;26(3):173–81.										1	1							1							1	1		5
Rosenbaum DP, Flewelling RL, Bailey SL, Ringwalt CL, Wilkinson DL. Cops in the classroom: a longitudinal evaluation of drug abuse resistance education (DARE). <i>Journal of Research Crime Delinquency</i> 1994;31(1):3–31.			1				1																			1		3
Schinke SP, Schwinn TM, Di Noia J, Cole KC. Reducing the risks of alcohol use among urban youth: three-year effects of a computer-based intervention with and without parent involvement. <i>Journal of Studies on Alcohol</i> 2004;65 (4):443–9.										1								1							1			3
Schinke SP, Tepavac L, Cole KC. Preventing substance use among native American youth: Three-year results. <i>Addictive Behaviors</i> 2000;25:387–97.			1	1							1	1												1		1		6
Schofield MJ, Lynagh M, Mishra G. Evaluation of a Health Promoting Schools program to reduce smoking in Australian secondary schools. <i>Health Educ Res</i> 2003; 18(6):678-92.			1															1				1				1		4
Schulze A, Mons U, Edler L, et al. Lack of sustainable prevention effect of the ‘Smoke-Free Class Competition’ on German pupils. <i>Prevent Med</i> 2006;42:33-9.																	1	1								1		3
Simons-Morton B, Haynie D, Saylor K, Crump AD, Chen R. The effects of the Going Places Program on early adolescent substance use and antisocial behavior. <i>Prevention Science</i> 2005;6(3):187–97.										1								1								1		3
Spoth R, Redmond C, Shin C, Azevedo K. Brief family intervention effects on adolescent substance initiation: school-level growth curve analyses 6 years following baseline. <i>Journal of Consulting and Clinical Psychology</i> 2004; 72(3):535–42.									1			1						1							1	1		5

Review author and year	Brinn 2010	Bryant 2011	Carson 2011	Carson 2012	Civljak 2010	Cleary 2010	Faggiano 2005	Fletcher 2008	Foxcroft 2011b	Foxcroft 2011c	Foxcroft 2011d	Gates 2006	Grimshaw 2006	Hettrema 2010	Hutton 2011	Jackson 2012	Johnston 2012	Müller-Riemenschneider 2008	Myung 2009	Osborn 2010a	Osborn 2010b	Petrie 2007	Ranney 2006	Soole 2008	Thomas 2007	Thomas 2013	Villanti 2010	How often cited?
Spoth R, Reyes ML, Redmond C, Shin C. Assessing a public health approach to delay onset and progression of adolescent substance use: latent transition and log-linear analyses of longitudinal family preventive intervention outcomes. <i>Journal of Consulting and Clinical Psychology</i> 1999;67(5):619–30.									1			1													1	1		4
Spoth RL, Randall GK, Trudeau L, Shin C, Redmond C. Substance use outcomes 5 1/2 years past baseline for partnership-based, family-school preventive interventions. <i>Drug and Alcohol Dependence</i> 2008;96(1-2):57–68.										1	1															1		3
Spoth RL, Randall K, Shin C, Redmond C. Randomized study of combined universal family and school preventive interventions: Patterns of long-term effects on initiation, regular use, and weekly drunkenness. <i>Psychology of Addictive Behaviors</i> 2005;19(4):372–81.										1	1															1		3
Spoth RL, Redmond C, Shin C. Randomized trial of brief family interventions for general populations: adolescent substance use outcomes 4 years following baseline. <i>Journal of Consulting and Clinical Psychology</i> 2001;69(4):627–42.									1			1										1			1	1		5
Spoth RL, Redmond C, Trudeau L, Shin C. Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 2002;16(2):129–34.										1	1	1						1				1		1	1	1		8
Stevens MM, Olson AL, Gaffney CA, Tosteson TD, Mott LA, Starr P. A Pediatric, Practice-Based, Randomized Trial of Drinking and Smoking Prevention and Bicycle Helmet, Gun, and Seatbelt Safety Promotion. <i>Pediatrics</i> 2002;109 (3):490–7.			1						1									1							1			4
Storr C, Ialongo N, Kellam S et al. Randomised controlled trial of two primary school intervention strategies to prevent early onset tobacco smoking. <i>Drug Alcohol Depend</i> 2002; 66: 51–60.																						1			1	1		3
Sussman S, Dent CW, Stacy AW, Craig S. One-year outcomes of Project Towards No Drug Abuse. <i>Preventive Medicine</i> 1998;27:632–42.			1				1																	1		1		4
Sussman S, Sun P, McCuller WJ, et al. Project towards no drug abuse: two-year outcomes of a trial that compares health educator delivery to self-instruction. <i>Prevent Med</i> 2003;37:155-62.							1											1						1		1		4
Wu Y, Stanton BF, Galbraith J, Kaljee L, Cottrell L, Li X, et al. Sustaining and broadening intervention impact: randomized trial of 3 adolescent risk reduction approaches. <i>Pediatrics</i> 2003;111(1):32–8.										1		1				1									1			4

Note: Does not include references cited by one or two reviews only – please see separate Microsoft Excel file for complete list of references. Only affected reviews are shown.

Framework of policies and interventions

1. Control and regulation of supply

Note: The first four sections consider measures which aim to restrict (young) people's opportunities to participate in addictive behaviours. This first section focusses on measures pertaining to the production and sale of substances as well as the provision of gambling services; for gambling/substance-free zones (e.g., smoking bans), see section 2; for age limits, see section 3; for taxation and pricing, see section 4.

Measures targeting legal production/sales	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Control of production of alcoholic beverages (e.g., state monopoly, licensing regulations, no licensing system) • Control of off-premise sales of alcoholic beverages <ul style="list-style-type: none"> – State monopoly, licensing regulations, no licensing system for off-premise sales of alcoholic beverages – Restrictions on locations for off-premise sales of alcoholic beverages – <i>Example from online survey: Within supermarkets and other general retail stores, alcoholic products should be placed in a section clearly separated from the sale of other products that might appeal to minors, such as sweets, snacks, toys, or soft drinks and paid for at that same place.</i> – Restrictions on outlet density, size and number of outlets for off-premise sales of alcoholic beverages – Restrictions on sales days/hours for off-premise sales of alcoholic beverages – Restrictions on the types of beverages or container sizes that can be sold – Rationing sales – Restrictions on over-the-counter sales / removing products from self-service displays in retail outlets (e.g., store shelves) • Control of on-premise sales of alcoholic beverages <ul style="list-style-type: none"> – Same types of measures as for off-premise sales – <i>Examples from online survey: Prohibition of open bar parties inside or outside of universities; Ban on sales of alcohol products in student sport clubs, in sport facilities of schools and educational institutions except for those events, which</i> 	<ul style="list-style-type: none"> • Control of sales of tobacco products <ul style="list-style-type: none"> – Licensing of tobacco retailers • Regulation of the contents and emissions of tobacco products <ul style="list-style-type: none"> – Definition of maximum limits for tar, nicotine and carbon monoxide yields of cigarettes – Restrictions on the use of ingredients which have the effect of increasing the addictive properties of tobacco products • Restrictions on the sale of certain types of tobacco for oral use • Ban on sale of single cigarettes • Restrictions on over-the-counter sales / removing products from self-service displays in retail outlets (e.g., store shelves) • Requirement for manufacturers and importers of tobacco products to disclose to governmental authorities information about the contents and emissions of tobacco products <ul style="list-style-type: none"> – <i>Example from policy: "Member States shall require manufacturers and importers of tobacco products to submit to them a list of all ingredients, and quantities thereof, used in the manufacture of those tobacco products by brand name and type" (Directive 2001/37/EC)</i> • Restrictions on the sale of tobacco from vending machines <ul style="list-style-type: none"> – General restrictions on the sale of tobacco from vending machines – Vending machine locks – Young people specific restrictions on tobacco vending machines (e.g., restricted access) • Restrictions on tobacco distance sales for general retail, such as sales via the Internet, to adults by using adequate technical means 	<ul style="list-style-type: none"> • Prohibition – prescription/licensing system – legalisation • Restrictions to prevent non-medical use of prescription medicines <ul style="list-style-type: none"> – Restrict list of prescribers (e.g., only certain professionals may prescribe drugs) – Restrict use to hospitals/clinics – Withdraw prescription availability (i.e., withdraw medicine from the market) • Restrictions on/control of new psychoactive drugs • Regulatory strategies to minimise the availability of inhalants • Restrictions on over-the-counter sales / removing products from self-service displays in retail outlets (e.g., store shelves) 	<ul style="list-style-type: none"> • Control of gambling opportunities (e.g., complete ban, public monopoly, closed/open licensing system, not regulated at all) • Restrictions on locations for land-based gambling providers <ul style="list-style-type: none"> – Distance regulations for land-based gambling providers (e.g., minimum distance from schools, youth centres etc.) • Restrictions on different types of games (casinos and gaming arcades, electronic gaming machines, gaming tables, national lotteries, poker and other skill games, sports betting) <ul style="list-style-type: none"> – Legal or illegal – Land-based conditions – Online conditions – E.g., restricting certain forms of games or bets that are considered by experts to be the most risky (e.g., casino games or in sports betting restricting bets to final results only) • Modification of game features and design <ul style="list-style-type: none"> – Reduction in speed of games – Defining minimum intervals between games – Defining maximum size of bets – Automatic 'cash outs' after a set period of playing time • Cross-border restrictions on the offer of licensed on-line gambling services

	<p><i>is organised for 18 years of age or over only; Ban on alcohol sales on premise, within the distance of 200 metres from any entrance of Educational, health, child and youth care institution except for kitchen for catering.</i></p> <ul style="list-style-type: none"> Restrictions on sales of alcoholic beverages at particular events <ul style="list-style-type: none"> Culture events (opera, theatre, cinema, ballet etc.) Sports events (football, hockey etc.) <i>Example from online survey: Ban on sales of alcohol products containing over 5% of alcohol on sport events for a defined period of time (2 hours before starting and 1 hour after ending of the events)</i> Public celebrations and festivities 			
Restrictions on the sale of drug paraphernalia			<ul style="list-style-type: none"> Restrictions on the sale of drug paraphernalia <ul style="list-style-type: none"> <i>Example from online survey: define measures for reducing the sale of components needed for indoor cultivation of cannabis</i> 	
Measures targeting illegal production/sales	<ul style="list-style-type: none"> Policies targeting illegal production or sales and unregulated providers <ul style="list-style-type: none"> In general (no specific example given) Prohibition of methanol to denature alcohol Legalisation of unrecorded alcohol with subsequent quality control Instructing the producers of unrecorded alcohol on how to avoid the problems detected Computerised tracking, tax stamps to facilitate the identification of illicit products Control of selling medicinal alcohol / selling only small container sizes 	<ul style="list-style-type: none"> Policies targeting illegal production or sales and unregulated providers <ul style="list-style-type: none"> Legislation against illicit trade in tobacco products Labelling of packets and outer packaging to allow determining the country of origin Labelling of packets and outer packaging to allow determining the final destination Tracking and tracing systems Sanctions/penalties 	<ul style="list-style-type: none"> Policies targeting illegal production or sales and unregulated providers <ul style="list-style-type: none"> <i>Example from online survey: Reduce supply of illicit drugs and psychotropic substances and their precursors through strengthening control of circulation of these substances</i> 	<ul style="list-style-type: none"> Policies targeting unregulated gambling providers (no specific examples identified)
Measures to promote alternatives	<ul style="list-style-type: none"> Availability of low or non-alcoholic beverages 			
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> Control visits by enforcement authorities at off-premise sale outlets Control visits by enforcement authorities at on-premise sale outlets Keg-registration laws Enforcement authority for the supervision of off-premise sales of alcoholic beverages Enforcement authority for the supervision of 	<ul style="list-style-type: none"> Sanctions/penalties against sellers and distributors in breach of regulations Guidelines for testing and measuring the content and emissions of tobacco products 	<ul style="list-style-type: none"> Enforcement <ul style="list-style-type: none"> Street-level enforcement Crackdowns/Raids Undercover operations Policing (e.g., community policing, intensive policing, zero tolerance policing) Imprisonment of drug dealers and other 	<ul style="list-style-type: none"> Checks and controls by regulating authority on operators as an intrinsic part of post-licensing monitoring

	on-premise sales of alcoholic beverages		<p>suppliers</p> <ul style="list-style-type: none"> • Measures to prevent non-medical use of prescription medicines <ul style="list-style-type: none"> - Enforcement of prescription guidelines - Prescription registers and monitoring / Monitoring the use of multiple family doctors - Require prescription (versus over-the-counter) availability - Profile patients (i.e., doctors profile patients to determine appropriate prescribing and diagnostic action) - Authoritative advice to physicians about prescribing - Controls on administering opiate substitution therapy - Enforcement of laws affecting physicians and patients (e.g., making 'doctor shopping' illegal) • Enforcement authority <ul style="list-style-type: none"> - <i>Example from online survey: The Organised Crime Task Force Drugs Expert Group sharing information and intelligence, and monitoring and overseeing joint action by its partner organisations, to ensure on-going disruption of the drugs market, and help reduce the availability of drugs</i> 	
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2. Gambling or substance-free zones

Note: This section focusses on statutory measures that ban (young) people from participating in addictive behaviours in certain locations. For restrictions on where alcohol and tobacco may be sold and gambling services offered, see the previous section on control and regulation of supply. For voluntary (smoking) bans, see the sections on prevention (for schools) and harm reduction (for self-imposed restrictions at home).

Restrictions on participating in addictive behaviours in certain locations	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Restrictions on drinking in public places (e.g., partially prohibited) 	<ul style="list-style-type: none"> Restrictions in (indoor) workplaces (excluding cafes and restaurants) Restrictions in cafes and restaurants Restrictions in public transport (e.g., trains) Restrictions in indoor public places and other public places (e.g., educational, health, government and cultural places) <ul style="list-style-type: none"> Restrictions in schools (e.g., smoke free schools) <i>Examples from online survey: Ban smoking in public indoor facilities; Smokefree antenatal clinics and child health care settings; Smokefree school yards</i> <i>Example of definition of 'public places': "places accessible to the general public or places of collective use, regardless of ownership or right to access" (Council Recommendation of 30 November 2009 on smoke-free environments)</i> 	<ul style="list-style-type: none"> Drug-free zones (i.e., banishing drug offenders from high-drug-use areas) 	<p>[No specific approaches identified.]</p>
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> Sanctions/penalties for violating these restrictions 	<ul style="list-style-type: none"> Sanctions/penalties for violating smokefree laws Community mobilisation/education 		

3. Age limits

Note: This section focusses on measures that define a legal minimum age which young people must reach to be able to participate in some types of addictive behaviours. Such measures make it illegal for retailers to sell alcoholic beverages or tobacco products to young people under this age, or to give them access to gambling services. Provisions can also make it illegal for young people who are underage to purchase or use such products or services.

Legislation defining age limits	Alcohol	Tobacco	Illegal drugs	Gambling
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> • Requirement for sellers to display sign stating minimum age <ul style="list-style-type: none"> – <i>Example from online survey: Require all sellers of alcoholic products to place a clear and prominent indicator about the prohibition of alcohol sales to minors</i> • Awareness campaigns <ul style="list-style-type: none"> – directed at young people – directed at servers/sellers • Server training as a requirement of licensing • Proof of age schemes / ID checks • Enforcement by the police or other authorities • Control visits by enforcement authorities <ul style="list-style-type: none"> – Test purchasing • Sanctions/penalties targeting sellers (e.g., licence suspension) <ul style="list-style-type: none"> – <i>Example from online survey: Enforce penalties against sellers and distributors who are found guilty of contravening the law. Such penalties shall include the withdrawal of a licence to sell or distribute alcohol, or temporary or permanent closures of the premises of operation of business, so as to ensure compliance with relevant legislation.</i> 	<ul style="list-style-type: none"> • Requirement for sellers to display sign stating minimum age / prohibition of sales to minors • Education of retailers and the community • Proof of age schemes / ID checks • Control visits by enforcement authorities <ul style="list-style-type: none"> – Test purchasing • Sanctions/penalties against sellers and distributors in breach of regulations (e.g., warning, fines, suspension of licence) <ul style="list-style-type: none"> – <i>Example from online survey: tougher sanctions against retailers who break the law with regard to underage sales of tobacco products</i> 	<p>[May be applicable with regard to prescription medicines, inhalants, or new psychoactive substances but no approaches were reported by survey respondents, in the reviewed literature or policy documents.]</p>	<ul style="list-style-type: none"> • Requirement for sellers to display sign stating minimum age <ul style="list-style-type: none"> – <i>Example from online survey: A sign indoors or outdoors of the premises should be attached, depicting that it is forbidden for underage people to enter.</i> • Requirement for gambling websites to display a clear message that minors are not permitted to participate in online gambling activities • Customer identification (e.g., electronic identification for online gambling) • Age verification <ul style="list-style-type: none"> – prior to start of the game – upon pay-out – online vs. land-based ‘face-to-face’ identification • Checks and controls by regulating authority on operators as an intrinsic part of post-licensing monitoring • Mystery shopping exercises to check the possibilities of minors accessing online sites

4. Taxation and pricing

Note: This section considers the effectiveness of taxation and pricing measures to address (young) people's participation in addictive behaviours.

	Alcohol	Tobacco	Illegal drugs	Gambling
Taxation and pricing measures, including restrictions on promotions and other financial incentives	<ul style="list-style-type: none"> • Excise duty <ul style="list-style-type: none"> – In general – Increased taxes on beverages that are thought to be more popular with young people (e.g., flavoured/sweetened alcoholic beverages and pre-mixed spirits (“alcopops”)) – Increased taxes on beverages with higher alcohol content • Comparative price level (i.e., considering how pricing relates to pricing in other EU countries) • Minimum pricing (minimum unit price per gram or litre of pure alcohol) • Restrictions on promotional activities <ul style="list-style-type: none"> – <i>Example from online survey: Restrict promotional activities which may promote or encourage excessive drinking</i> – Restrictions on the use of direct and indirect price promotions, discount sales, sales below cost and flat rates for unlimited drinking or other type of volume sales 	<ul style="list-style-type: none"> • Tax policies • Restrictions on sales to and/or importations by international travellers of tax- and duty-free tobacco products • Price policies • Comparative price level (i.e., considering how pricing relates to pricing in other EU countries) • Restrictions on the sale of cigarettes individually or in small packets (e.g., fewer than 20 cigarettes) to reduce the affordability of such products (specially to minors) • Restrictions on promotional activities / financial incentives 	<ul style="list-style-type: none"> • Cost or reimbursement (to prevent non-medical use of prescription medicines) 	<ul style="list-style-type: none"> • Tax policies
Measures to promote alternative goods/services	<ul style="list-style-type: none"> • Policies addressing the affordability of alcohol free beverages <ul style="list-style-type: none"> – Non-alcoholic beverages at lower prices – <i>Example from online survey: Affordability of alcohol free beverages shall be supported</i> 			
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> • Sanctions/penalties targeting industry for violations of sales promotion legislation 		<ul style="list-style-type: none"> • Law enforcement (as a means to keeping prices of illegal drugs high) 	

5. Control and regulation of advertising, marketing and sponsorship

Note: This section considers statutory or voluntary measures to control or regulate advertising, marketing and sponsorship activities in relation to addictive goods and services. We also include approaches such as standardised packaging (e.g., of cigarette packs) under this heading.

Restrictions on exposure to advertising	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Restrictions on exposure <ul style="list-style-type: none"> – <i>Example from online survey: Advertising of alcoholic beverages is prohibited in theatre or cinema before 8 pm., or for programs prepared for children and young people (before, during and immediately after the program)</i> – Restrictions on advertising in traditional broadcast media (television, radio, cinema) – Restrictions on advertising in traditional non-broadcast media (print media, billboards, branded merchandise) – Restrictions on point-of-sale advertising 	<ul style="list-style-type: none"> • Restrictions on exposure <ul style="list-style-type: none"> – Restrictions on advertising in traditional broadcast media (television, radio, cinema) – Restrictions on advertising in traditional non-broadcast media (print media, billboards, branded merchandise) – Restrictions on display of tobacco products at the point of sales – Restrictions on point-of-sale advertising – Restrictions on advertising on tobacco vending machines 	<p>[May be applicable with regard to prescription medicines, inhalants, or new psychoactive substances but no approaches were reported by survey respondents, in the reviewed literature or policy documents.]</p>	<ul style="list-style-type: none"> • Restrictions on exposure <ul style="list-style-type: none"> – Young people specific restrictions (e.g., advertisements not directed at minors, not broadcast (TV or radio) or communicated during specific programmes aimed at young people on mainstream channels, or for certain period of time before or after such programmes; not displayed close to areas that children frequent, such as billboard advertising close to schools) – Restrictions on advertising in traditional broadcast media (television, radio, cinema) – Restrictions on advertising in traditional non-broadcast media (print media, billboards, branded merchandise) – Restrictions on online commercial communications, such as pop-up promotional images on non-gambling sites
Regulations on content of advertising messages	<ul style="list-style-type: none"> • Restrictions on content <ul style="list-style-type: none"> – Restrictions on content specifically in relation to young people (e.g., avoiding the use of humour, glamour and other youth-appealing aspects) – Alcohol advertisements can only refer to actual characteristics of the product (name, ingredients, origin, vol. % etc.) • Health warnings as part of alcohol advertising, promotion and sponsorship 	<ul style="list-style-type: none"> • Restrictions on content <ul style="list-style-type: none"> – Restrictions on content specifically in relation to young people – Restrictions on all forms of tobacco advertising, promotion and sponsorship that promote a tobacco product by any means that are false, misleading or deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions – Restrictions on descriptions such as “low-tar”, “light”, “ultra-light”, “mild” that suggest a product is less harmful than others • Health warnings as part of tobacco advertising, promotion and sponsorship 		<ul style="list-style-type: none"> • Restrictions on content <ul style="list-style-type: none"> – Restrictions on content specifically in relation to young people • Provision of certain key information on any form of advertising <ul style="list-style-type: none"> – Details of the regulating authority – Statement that underage gambling is not allowed – Factually correct information, for example as to the winning and losing possibilities, the risks of chasing losses – Warning messages against excessive gambling
Restrictions on marketing	<ul style="list-style-type: none"> • Restrictions on direct marketing using technologies such as the Internet, podcasts and text messaging • Restrictions concerning the portrayal of alcohol and alcohol product placement (e.g., in films, television shows, songs, and other cultural productions) 	<ul style="list-style-type: none"> • Restrictions on direct marketing using technologies such as the Internet, podcasts and text messaging • Restrictions on the use of tobacco brand names on non-tobacco products or services (e.g., cigarette branded clothes, watches, etc.) 		<ul style="list-style-type: none"> • Restrictions on direct marketing using technologies such as the Internet, podcasts and text messaging • Restrictions on direct or indirect engagement of operators in unsolicited mail, including to persons who have self-excluded themselves from a site

	<ul style="list-style-type: none"> Restrictions on promotional activities (other than financial) 	<ul style="list-style-type: none"> Restrictions on the use of promotional items (ashtrays, lighters, parasols, etc.) and tobacco samples, the use and communication of sales promotion, such as a discount, a free gift, a premium or an opportunity to participate in a promotional contest or game Restrictions on distributing free tobacco products to the public and especially to minors Restrictions on the production and sales of sweets, snacks, toys or any other objects intended for children in the form of tobacco products <ul style="list-style-type: none"> Example from online survey: Ban manufacturing, selling and purchasing (by minors) of products that resemble cigarettes and other tobacco products (e.g., electronic cigarettes) Restrictions on packaging: <ul style="list-style-type: none"> Standardized cigarette packaging (i.e., only one standardised form and size of cigarette packs), such as restrictions on appearance (cuboid shape) Plain packaging (the removal of trademarks, logos, colours and graphics, except for the government health warnings and for the brand name, presented in a standardized typeface) 		<ul style="list-style-type: none"> Marketing restrictions, land-based Marketing restrictions, online Restrictions on merchandising (e.g., replica jerseys, computer games) Restrictions on sales promotions and sign-up bonuses or free practice games Different marketing restrictions for different types of games
Restrictions on sponsorship	<ul style="list-style-type: none"> Restrictions on sponsorship by the alcohol industry <ul style="list-style-type: none"> in general of sporting events of events specifically targeted towards young people 	<ul style="list-style-type: none"> Restrictions on industry sponsorship <ul style="list-style-type: none"> of sporting events and other international events of radio programmes 		<ul style="list-style-type: none"> Restrictions on industry sponsorship <ul style="list-style-type: none"> Sports sponsorship
Promoting alternatives	<ul style="list-style-type: none"> Approaches to support the marketing of alcohol free beverages 			
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> Regulatory frameworks <ul style="list-style-type: none"> Advertising voluntary code by the industry / Self-regulation of alcohol marketing Legally binding codes Enforcement of existing advertising restrictions Monitoring of alcohol marketing practices <ul style="list-style-type: none"> Example from online survey: Monitoring the ban of sponsorship from alcohol providers Sanctions/penalties targeting industry for violations of relevant legislation (e.g., 	<ul style="list-style-type: none"> Sanctions/penalties against sellers and distributors in breach of regulations 		<ul style="list-style-type: none"> Advertising guidelines / codes of conduct <ul style="list-style-type: none"> Self-regulatory/voluntary frameworks Legally binding frameworks

	advertising/product placement legislation, sponsorship legislation) • Enforcement authority for the supervision of alcohol advertising			
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6. Warning labels

Note: This section focusses on measures which seek to label addictive goods and services with (health) warnings. For health warnings integrated in advertisements, see the previous section on control of advertising, marketing and sponsorship; and for health warnings as part of informational/educational programmes, see the section on prevention.

Direct health warning labels	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Health warning labels on alcohol containers 	<ul style="list-style-type: none"> Health warning labels on cigarette packs and hand rolling tobacco <ul style="list-style-type: none"> Rotating Large, clear, visible and legible Minimum size of warning (i.e., percentage of packet) Pictorial health warnings Display of cessation information (e.g., quit-lines, websites) 	<p>[May be applicable with regard to prescription medicines, inhalants, new psychoactive substances but no approaches were reported by survey respondents, in the reviewed literature or policy documents.]</p>	<ul style="list-style-type: none"> Health warning labels on gambling machines Health warning messages on gambling websites, signs warning users about the addictive potential of gambling
Labels containing information about contents	<ul style="list-style-type: none"> Product labelling on alcohol products similar to that used for foodstuffs 	<ul style="list-style-type: none"> Requirement to display information about the toxic constituents of the tobacco products and the emissions that they produce <ul style="list-style-type: none"> <i>Example from policy: "tar, nicotine and carbon monoxide yields of cigarettes measured in accordance with Article 4 shall be printed on one side of the cigarette packet in the official language or languages of the Member State where the product is placed on the market, so that at least 10 % of the corresponding surface is covered" (Directive 2001/37/EC)</i> 		

7. Prevention programmes

Note: This section focusses on prevention programmes implemented with schools pupils, families and/or communities. It is not always possible to distinguish clearly between indicated prevention and treatment along the continuum of care. As a general rule, we consider an intervention to be treatment if it is carried out with a population that is treatment-seeking or meets diagnostic criteria for dependence, and prevention if it is carried out with an unselected/‘at risk’ population. Where interventions may be carried out with either population, these are listed in both sections (i.e., prevention and treatment).

General prevention programmes (no approach specified)	Multiple substances/behaviours			
	<ul style="list-style-type: none"> Health promotion <ul style="list-style-type: none"> Examples from online survey: Health promotion programmes in schools; Health promotion policy in the educational system Prevention programmes targeting other behaviours (e.g., sexual health) 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> Alcohol prevention programs/strategies Targeted prevention 	<ul style="list-style-type: none"> Tobacco prevention programs/strategies Targeted prevention 	<ul style="list-style-type: none"> Universal prevention Selective prevention Indicated prevention Interventions addressing non-medical use of prescription medicines 	<ul style="list-style-type: none"> Gambling prevention programs/strategies 	
Schools and higher education based approaches	Multiple substances/behaviours			
	<ul style="list-style-type: none"> ‘Healthy schools’ (i.e., multi-component school programmes to promote child health and wellbeing in several areas) Environmental or classroom management programmes 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> School-based programmes <ul style="list-style-type: none"> Education Social or life skills training programmes School / university policies prohibiting alcohol use College student normative education (e.g., alcohol expectancy challenges, social norms changes) 	<ul style="list-style-type: none"> School-based programmes <ul style="list-style-type: none"> Education Non-smoking competitions (i.e., classes agree to remain smoke free in order to win prizes) 	<ul style="list-style-type: none"> School-based programmes <ul style="list-style-type: none"> Knowledge/ information provision <ul style="list-style-type: none"> Examples from online survey: Provide information on drug use and drug related consequences to pupils in boarding schools Affective education Skills training (e.g., social and emotional competence training, life skills training) School drugs policies Drug testing in schools 	<ul style="list-style-type: none"> Initiatives regarding education and awareness of minors and parents on Internet content and the safe use of the Internet <ul style="list-style-type: none"> e-safety curricula in schools (equipping children and young people with knowledge and skills to navigate the Internet safely) Education 	
Family based approaches	Multiple substances/behaviours			
	<ul style="list-style-type: none"> Family home visitation with disadvantaged families (drug specific) 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> Family or parenting programmes <ul style="list-style-type: none"> Support for parents (e.g., information, guidance) Family skills training 	<ul style="list-style-type: none"> Family-based prevention 	<ul style="list-style-type: none"> Family or parenting programmes <ul style="list-style-type: none"> Information/education for parents concerning drug harms Parenting skills for drug dependent women Early years education and care programme for very young children from disadvantaged families 	<ul style="list-style-type: none"> Parental control tools to prevent access to gambling websites (e.g., requirements that Internet service providers offer parental control software free of charge or ask customers if they want such software at the time of purchase) 	
Community based approaches and multi-component	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Multicomponent or community-based programmes <ul style="list-style-type: none"> Community mobilization programmes 	<ul style="list-style-type: none"> Multicomponent or community-based programmes 	<ul style="list-style-type: none"> Multicomponent or community-based programmes 	

programmes				
Mass media	<ul style="list-style-type: none"> Nation-wide awareness-raising activities / Information-based public education campaigns <ul style="list-style-type: none"> Example from online survey: Media campaign Counter-advertising Drinking guidelines Social marketing programmes Consumer information on alcohol and health at points of sale (e.g., pamphlets) Media advocacy (strategic use of the media to raise awareness and educate) Information campaigns specifically for young people 	<ul style="list-style-type: none"> Nation-wide awareness-raising activities / Mass media campaigns <ul style="list-style-type: none"> Example from online survey: Increase public awareness on tobacco related harm 	<ul style="list-style-type: none"> Nation-wide awareness-raising activities / Mass media campaigns <ul style="list-style-type: none"> Example from online survey: dedicated website Social marketing Media advocacy (strategic use of the media to raise awareness and educate) Telephone support 	<ul style="list-style-type: none"> Nation-wide awareness-raising activities <ul style="list-style-type: none"> Public education and information campaigns Consumer information on gambling and health at points of sale (e.g., pamphlets, signs in casinos) Example from other literature: clear and transparent information about games: duration, stakes, wins, losses, maximum loss per hour, chances to win; information about potential risks: economic, social, mental problems and disorders (Bühringer et al., 2013) Signposting to helplines or websites offering advice and support (e.g., helpline number printed on tickets, information on helplines and signposting to dedicated support sites on gambling sites)
Computer and web based approaches	<ul style="list-style-type: none"> Computer- and web-based interventions 	<ul style="list-style-type: none"> Computer- and web-based interventions 	<ul style="list-style-type: none"> Computer- and web-based interventions 	<ul style="list-style-type: none"> Computer- and web-based interventions In-game messaging (e.g., targeting irrational gambling beliefs)
Mentoring and peer led approaches	<ul style="list-style-type: none"> Mentoring Peer-led learning/information projects and initiatives 		<ul style="list-style-type: none"> Mentoring and peer support programmes 	
Leisure time	<ul style="list-style-type: none"> Approaches addressing the night-time economy 		<ul style="list-style-type: none"> Interventions in the night life environment (e.g., clubbing scene) Outreach prevention programmes Alternative leisure activities / Community programs for young people (e.g., sporting activities, cultural programmes, vocational programmes, network of drug free youth) <ul style="list-style-type: none"> Example from online survey: Alternative leisure activities, spare time activities, extracurricular activities 	<ul style="list-style-type: none"> Information and counselling services on gambling premises Reality checks (displaying at regular intervals information about the amount of time and money a player has spent on a machine) Self-limitation (time) Self-exclusion Imposed (operator based) exclusion Cooling off periods (cooling off allows players to voluntarily lock their account for a short period, in order to prevent themselves from online gambling participation) Availability of a self-assessment tool to determine one's risk
Targeted prevention, including prevention in health care settings	<ul style="list-style-type: none"> Programmes in health care services Screening/referral Brief intervention/Early intervention (e.g., in primary care, social welfare settings and accident and emergency departments) <ul style="list-style-type: none"> Example from online survey: Using alcohol-related A&E attendances to advise young people about their drinking 	<ul style="list-style-type: none"> Health care services for smoking prevention Screening/referral Brief interventions 	<ul style="list-style-type: none"> Screening Brief interventions / early intervention Motivational interviewing <ul style="list-style-type: none"> in general medical settings in educational settings 	<ul style="list-style-type: none"> Referral to specialist agencies Brief interventions
Prevention at the	<ul style="list-style-type: none"> Workplace-based prevention 		<ul style="list-style-type: none"> Workplace prevention programmes 	

workplace	<ul style="list-style-type: none"> - Workplace alcohol and drug policies - Prevention/ counselling at workplaces for persons with alcohol related needs - Mandatory screening 			
Criminal justice interventions			<ul style="list-style-type: none"> • Drug education in prison (e.g., counselling interventions for young offenders) 	
Specific delivery structures and quality assurance measures	<ul style="list-style-type: none"> • Community alcohol action plans • Legal obligation to include alcohol prevention in the school curriculum/health policies • Sanctions/penalties for students in breach of school/university policies • Public funds earmarked for alcohol prevention / Dedicated budget for prevention of alcohol use disorders • Professional standards and guidelines • Workforce development <ul style="list-style-type: none"> - <i>Example from online survey: Teachers' training</i> • Public officials specialised in alcohol prevention 	<ul style="list-style-type: none"> • Earmarked funding for tobacco prevention • Workforce development <ul style="list-style-type: none"> - Training or sensitization and awareness programmes on tobacco control addressed to persons such as health workers, community workers, social workers, media professionals, educators, decision-makers, administrators and other concerned persons • Stakeholder involvement <ul style="list-style-type: none"> - <i>Example from online survey: Increased participation from parents, NGOs, industry/trade in prevention</i> 	<ul style="list-style-type: none"> • Enforcement in the school setting <ul style="list-style-type: none"> - <i>Example from online survey: Search and confiscation in the school setting, with school staff having the necessary information, advice and the power to act</i> • Professional guidance / Standardisation of prevention interventions <ul style="list-style-type: none"> - <i>Examples from online survey: Workplace Alcohol and Drug Policy Guidance; Procedures for setup of effective programs (logic model)</i> • Workforce development <ul style="list-style-type: none"> - <i>Examples from online survey: Training for prevention workers and therapists; Trainings and seminars for teachers on drug prevention activities; teacher education concerning the harmfulness and impact of drugs and other addictive substances; Increase number of professionals to adequately meet the needs of the school population and changing trends; Establish new positions in the school setting to assist the teaching staff; set up multidisciplinary teams to work with addicts and their families</i> • Stakeholder involvement <ul style="list-style-type: none"> - <i>Examples from online survey: Identifying schools as having a clear role to play in preventing drug and alcohol misuse; schools to work with local voluntary organisations, the police and others to prevent drug or alcohol misuse; Greater participation by parents, non governmental organisations and the business community in preventive work</i> 	<ul style="list-style-type: none"> • Due diligence obligation for the on-line operator (e.g., recording on-line players' behaviour to determine a probable pathological gambler) • Checks and controls by regulating authority on operators as an intrinsic part of post-licensing monitoring • Public funds earmarked for gambling prevention • Customer support, inter alia for treating information requests and for handling complaints • Workforce development <ul style="list-style-type: none"> - Providing staff with training about problem gambling and responsible gambling, to enhance early recognition of related problems and to approach and support such gamblers - Code of Conduct for responsible business behaviour signed by all employees

8. Treatment and social reintegration

Note: This section focusses on measures pertaining to treatment and social reintegration. It is not always possible to distinguish clearly between indicated prevention and treatment along the continuum of care. As a general rule, we consider an intervention to be treatment if it is carried out with a population that is treatment-seeking or meets diagnostic criteria for dependence, and prevention if it is carried out with an unselected or 'at risk' population. Where interventions may be carried out with either population, these are listed in both sections (i.e., prevention and treatment).

8. Treatment and social reintegration				
Psychosocial treatment	Multiple substances/behaviours			
	<ul style="list-style-type: none"> Counselling services covering a range of health behaviours <ul style="list-style-type: none"> Example from online survey: roll out of a 'one stop shop' service in areas of identified need to those young people affected by substance misuse, but also addressing issues such as suicide and self-harm; mental health and wellbeing; sexual health; relationship issues; resilience; and coping skills 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Special helpline Brief interventions Motivational interviewing Cognitive behavioural therapy Peer self-help programmes Family therapy Computer- and web-based interventions 	<ul style="list-style-type: none"> Individual counselling services (e.g., face-to-face, quit-line/telephone support) Group counselling Brief interventions for smoking cessation <ul style="list-style-type: none"> In primary care/ health care facilities (e.g., dental care) In educational institutions In workplaces In sporting environments Motivational interviewing Cognitive behavioural therapy Computer- and web-based interventions (including mobile phone text messaging) Quit-and-win contests, Incentive schemes Relapse prevention 	<ul style="list-style-type: none"> Counselling (e.g., telephone information and counselling services) Brief interventions / early intervention Motivational interviewing Cognitive behavioural therapy (individual and group) Psychodynamic psychotherapy Peer self-help programmes (e.g., 12-step) Family therapy Therapeutic community / residential therapeutic programme Computer- and web-based interventions <ul style="list-style-type: none"> Example from online survey: Internet based counselling Contingency management (e.g., the use of voucher reinforcement for drug-free urine samples) Relapse prevention Case management 	<ul style="list-style-type: none"> Counselling (e.g., telephone helpline) Brief interventions Motivational interviewing Cognitive behavioural therapy (individual and group) Peer self-help programmes
Pharmacological treatment	<ul style="list-style-type: none"> Pharmacological treatment <ul style="list-style-type: none"> Disulfiram Opioid antagonists (e.g., naltrexone) Glutamate antagonists (e.g., acamprosate) Pharmacological treatment for the management of withdrawal <ul style="list-style-type: none"> Benzodiazepine 	<ul style="list-style-type: none"> Pharmacological treatment <ul style="list-style-type: none"> Nicotine replacement therapy Nicotine antagonists (e.g., Bupropion) Nicotine agonists (e.g., Lobeline) Non-nicotinic aids to smoking cessation (e.g., Nicobrevin) 	<ul style="list-style-type: none"> Withdrawal treatment / Detoxification <ul style="list-style-type: none"> Opioid agonist medication (methadone, morphine, heroin) Alpha adrenergic medication (clonidine, lofexifine) Opioid antagonist medication (naloxone, naltrexone) Symptomatic medication (brufen, maxolone) Substitution/Maintenance treatment <ul style="list-style-type: none"> Methadone Buprenorphine Heroin Naltrexone Levo-α-acetylmethadol (LAAM) Morphine 	<ul style="list-style-type: none"> Pharmacological Treatment <ul style="list-style-type: none"> Selective serotonin reuptake inhibitors (SSRIs) (e.g., fluvoxamine) Naltrexone
Other forms of treatment		<ul style="list-style-type: none"> Nation-wide awareness-raising activities / Mass media campaigns Self-help materials 	<ul style="list-style-type: none"> Non-pharmacological withdrawal treatment / detoxification (e.g., acupuncture) 	

Special populations	<ul style="list-style-type: none"> Specialised/tailored treatment for young people <ul style="list-style-type: none"> Interventions for sub-groups of young people (e.g., homeless youth) Dual diagnosis programmes / Programmes for those affected by co-morbidity 	<ul style="list-style-type: none"> Interventions for waterpipe smoking 	<ul style="list-style-type: none"> Specialised/tailored treatment for young people <ul style="list-style-type: none"> Interventions for sub-groups of young people (e.g., homeless youth) Interventions for inhalant use Dual diagnosis programmes / Programmes for those affected by co-morbidity 	
Criminal justice interventions	<ul style="list-style-type: none"> Diversion to (voluntary or mandated) education or treatment, arrest referral schemes 		<ul style="list-style-type: none"> <i>Example from online survey: support for young people involved with the law</i> Diversion to (voluntary or mandated) education or treatment, arrest referral schemes <ul style="list-style-type: none"> <i>Example from online survey: Referral of young people arrested for the first time to treatment</i> Drug courts Treatment programmes in prison Parole programmes Post-release programs (i.e., continuum of treatment and support opportunities between custody and release of offenders back into the community for young and adult offenders) 	
Social reintegration	<ul style="list-style-type: none"> <i>Example from online survey: Services to assist clients with a common employability barrier (e.g., history of drug/alcohol misuse, homelessness and ex-prisoners/ex-offenders) to enter employment</i> 		<ul style="list-style-type: none"> Social rehabilitation programmes for young people Education and employment related programmes Supported housing 	
Specific delivery structures and quality assurance measures	Multiple substances/behaviours			
	<ul style="list-style-type: none"> Delivery structures covering a range of addictions <ul style="list-style-type: none"> <i>Example from online survey: Development of a commissioning framework for all addiction services</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> Dedicated budget for alcohol use disorder treatment Alcohol liaison nurses (primarily in health and criminal justice settings) Stakeholder involvement <ul style="list-style-type: none"> <i>Example from online survey: adoption of a recovery approach and user involvement</i> 	<ul style="list-style-type: none"> Network of free smoking cessation support (e.g., cessation support network covering whole country) Reimbursement of medications / Reducing Patient Out-of-Pocket Costs for Effective Cessation Therapies Interventions targeting health care providers <ul style="list-style-type: none"> Education to health care providers Reminder systems prompting providers to interact with patients about tobacco use at every encounter Recording of smoking status in all medical notes or patient files, supported by legal or financial incentive Family doctors reimbursed for providing 	<ul style="list-style-type: none"> Establishment of treatment facilities <ul style="list-style-type: none"> <i>Examples from online survey: Establish inpatient treatment unit for children under 18 years age; Making liaison and diversion services available in police custody suites and at courts; Transitional arrangements to adult services at local level</i> Workforce development <ul style="list-style-type: none"> <i>Examples from online survey: Training for prevention workers and therapists; Developing skills base of partners and service providers; set up multidisciplinary teams for work with addicts and their families</i> 	<ul style="list-style-type: none"> Earmarked funding for problem gambling services

		<p>brief advice</p> <ul style="list-style-type: none">- Feedback to health care providers (these interventions use retrospective assessment of provider performance in the identification of patient tobacco use status, the delivery of advice to quit, or a combination of both to inform and to motivate providers)	<ul style="list-style-type: none">• Stakeholder involvement<ul style="list-style-type: none">- <i>Example from online survey: Service User involvement</i>	
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9. Harm reduction

Note: This section focusses on approaches which do not necessarily seek to prevent or reduce young people's participation in addictive behaviours per se, but whose primary aim can be seen as the reduction of harms resulting from young people's own or others' participation in addictive behaviours. This includes approaches addressing parental/familial smoking, prevention of alcohol related violence and injury (including specific road safety measures), disease and overdose prevention and treatment (particularly in relation to illegal drugs), as well as measures to prevent gambling-related debt. Hence, our working definition of 'harm reduction' spans a wider range of measures than would traditionally fall under this term from an illicit drugs perspective.

General harm reduction measures	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Outreach programmes / Low threshold services (providing social and health services including counselling, needle and syringe programmes, shelter and medical care) 			
Approaches addressing parental/familial participation in addictive behaviours	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Health promotion interventions targeted at women of childbearing age which aim to identify and modify risk factors before pregnancy 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Psychosocial interventions to address alcohol use in pregnancy or following child birth <ul style="list-style-type: none"> – Brief interventions in maternity care and child care – Counselling for pregnant women on alcohol related issues – Counselling for pregnant women with alcohol related needs – Prenatal care for pregnant women with alcohol or drug related needs – Psychosocial interventions for pregnant women enrolled in alcohol treatment programs • Interventions for children and youth with foetal alcohol spectrum disorders (FASD) • Support for children of alcohol dependent people <ul style="list-style-type: none"> – <i>Example from online survey: Low-threshold support offers/possibilities for relatives of people with alcohol problems (especially young people) to protect them from physical and psychological violence</i> – Counselling for children in families with alcohol related needs 	<ul style="list-style-type: none"> • Psychosocial interventions to address tobacco use in pregnancy or following child birth <ul style="list-style-type: none"> – Giving feedback to the mothers on foetal health status or nicotine by-products measurements – Brief interventions for pregnant women (universal or targeted) – Motivational interviewing – Cognitive behavioural therapy – Incentive schemes – Interventions based on stages of change • Pharmacological treatment to address tobacco use in pregnancy • Approaches to reduce children's exposure to environmental tobacco smoke <ul style="list-style-type: none"> – Voluntary / self-imposed home smoking restrictions – School based programmes aimed at changing parental smoking behaviours to reduce children's exposure to environmental tobacco smoke – Written information about environmental tobacco smoke – Counselling – Home visitation by nurse or health worker – Feedback to parents of biological evidence of children's ETS absorption as a stimulus for parental behaviour change 	<ul style="list-style-type: none"> • Psychosocial interventions to address drug use in pregnancy or following child birth <ul style="list-style-type: none"> – Services for pregnant drug dependent women – prenatal – Postnatal support for drug dependent mothers • Pharmacological treatment to address drug use in pregnancy • Interventions for opiate exposed newborns (i.e., diagnosed with Neonatal Abstinence Syndrome) • Support for young people whose parents use illegal drugs 	
Road safety measures	<ul style="list-style-type: none"> • Drink-driving laws • Existence of maximum limit for BAC-level • Existence of several different BAC limits <ul style="list-style-type: none"> – for aggravated drunk-driving – for inexperienced or young drivers ('zero tolerance') – for professional drivers 			
	<ul style="list-style-type: none"> • Information campaigns (focusing on drink/drug driving) 			

	<ul style="list-style-type: none"> • Graduated driver licensing (e.g., restrictions on BAC-levels and night-time driving for new drivers) • Information campaigns (focusing on drink/drug driving and enforcement measures, such as prenotification about random breath testing) • Behavioural counselling • Community mobilisation • Designated driver and safe-ride programmes • Coordination of public transport and venue closing times • Court-mandated treatment for recidivist drink-drivers • Enforcement of drunk driving measures: <ul style="list-style-type: none"> – Enforcement of existing BAC limits – Random breath testing – Sobriety checkpoints – Alcohol ignition locks (e.g., voluntary, obligatory for some or all drivers) – Sanctions/penalties for those in breach of drink-driving laws (e.g., on-the-spot fines, driving licence penalty points, driving licence suspension) 			
Violence and injury prevention	<ul style="list-style-type: none"> • Restrictions to buy alcoholic beverages while intoxicated • Alcohol server liability for damages caused by actions of patrons ('Dram Shop Laws') (i.e., laws which define legal responsibilities of licensees for behaviour of patrons after they leave the premises) • Late-night lockouts of licensed premises (restricting trading hours and entry to licensed premises) (the lockout allows licensed venues to continue trading after a certain time but will not allow the entry or re-entry of patrons after that time; i.e., if patrons go outside, they will not be permitted to re-enter the venue) • Safer drinking environments • Safe glassware (polycarbonate glassware) • Safety-orientated design of premises • Bar policies for preventing intoxication • Security staff in bars <p>Specific delivery structures and quality assurance measures:</p> <ul style="list-style-type: none"> • (Mandatory) Server training programmes <ul style="list-style-type: none"> – To ensure responsible beverage service 			

	<ul style="list-style-type: none"> - To prevent and manage aggression • Voluntary codes of bar practice • Guidelines and (minimum) standards to decrease the likelihood of alcohol-related harm (e.g., as part of licensing system) <ul style="list-style-type: none"> - for the design of serving premises - on server training - on monitoring and enforcing of licensing laws • Information provision (e.g., media campaigns promoting licensing laws) • Local licensing forums with community participation • Enforcement by police and liquor licence inspectors <ul style="list-style-type: none"> - Plain-clothes licensing inspectors - Uniformed police presence - Training of licensing officers and police • Sanctions for servers or serving establishments in breach of licensing regulations • Incentives for good practice by licensees • Sanctions for licensing bodies that fail to regulate drinking environments effectively 			
Disease and overdose prevention/treatment	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Public education about the care of intoxicated persons at risk of fatal overdose 			
	Alcohol	Tobacco	Illegal drugs	Gambling
<ul style="list-style-type: none"> • Thiamine fortification of drinks and flour 		<ul style="list-style-type: none"> • Needle and syringe programmes • Provision of injecting equipment other than needles and syringes • Regulations on paraphernalia for injecting drug use • Hepatitis B vaccination for users • HIV prevention/education • HIV/hepatitis testing • Safe injecting rooms / Supervised Drug consumption rooms • Overdose prevention <ul style="list-style-type: none"> - Naloxone distribution - Education (improving witness responses, education on overdose prevention, training users in Cardiopulmonary resuscitation (CPR), ambulance responses to overdose) • Substitution treatment (e.g., prescribed heroin) • Harm reduction programmes in prison • Treatment for drug related psychosis 		

			<ul style="list-style-type: none"> Targeted media campaigns to at-risk groups (e.g., overdose prevention campaign, HIV testing campaign) 	
<p>Approaches addressing other potential harms of participation in addictive behaviours</p>			<ul style="list-style-type: none"> Civil penalties (e.g., fines, community service, loss of benefits) to reduce harms arising from criminal penalties 	<ul style="list-style-type: none"> Self-limitation (financial) Compulsory 'deposit limit setting' by customers (e.g., for roulette, gambling machines, online services) Minimum waiting time for increasing deposit limits Restrictions on cash machine location and withdrawal limits Cash machines equipped with programmes to block access to cash advances Restrictions on the use of credit - no playing on credit, negative balance or wagering a bet if the registered player account does not have the necessary funds Restrictions on cheque cashing and cash payment of prizes Debt-related or money-management counselling

10. General delivery structures and quality assurance measures

Note: This section focusses on what may also be called 'meta approaches'. Unlike the approaches listed in the other sections, measures under this heading are not targeted directly at target populations or the industry. Rather, they provide the necessary context and infrastructures to facilitate the high quality implementation of effective policies and interventions. Specific delivery structures and quality assurance measures are listed in the respective sections (e.g., measures to support implementation of minimum age laws are listed under '3. Age limits'). Therefore, in this section we include general measures which are not tied to any particular approach.

Policy and legislation, including enforcement	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Policies addressing several substances and/or addictive behaviours • Inclusion of substance/addiction related issues in other policy areas / integration of policies into broad economic and welfare policies <ul style="list-style-type: none"> – <i>Example from online survey: alcohol and drugs recognised in the community safety strategy</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • National alcohol plan/strategy • Regional alcohol plan/strategy • General alcohol control legislation • Definition of sanctions/penalties targeting sellers and consumers • Law enforcement (as a general category) <ul style="list-style-type: none"> – <i>Example from online survey: Protection of young people shall mainly be addressed through more consistent enforcement of existing regulations. Further measures to regulate the market shall be mainly instituted if they serve the protection of young people and violence prevention.</i> 	<ul style="list-style-type: none"> • National tobacco plan/strategy • Regional tobacco plan/strategy • General tobacco control legislation • Enforcement (as a general category) 	<ul style="list-style-type: none"> • International treaties/conventions • National drugs plan/strategy <ul style="list-style-type: none"> – <i>Examples from online survey: Development of action plan on drug prevention in recreational settings</i> • Regional drugs plan/strategy • General drug control legislation • Criminal laws on drug use • Criminal penalties targeting sellers and consumers • Law enforcement (as a general category) • Police cautions 	<ul style="list-style-type: none"> • General gambling legislation • Control of gambling providers <ul style="list-style-type: none"> – Senior management of gambling providers directly accountable to the regulatory agency – Selection criteria for staff in gambling sites – Control of staff in gambling sites
Research and information	<ul style="list-style-type: none"> • Research • Monitoring and evaluation • Publication of annual reports on alcohol situation and policy responses 	<ul style="list-style-type: none"> • Research • Monitoring and evaluation • Periodic reports on tobacco situation and policy responses • Documentation database <ul style="list-style-type: none"> – <i>Example from online survey: Create a database for tobacco related legislation and policy</i> 	<ul style="list-style-type: none"> • Research • Monitoring and evaluation 	<ul style="list-style-type: none"> • Research • Monitoring and evaluation • National register of licensed operators of gambling services
Funding	<ul style="list-style-type: none"> • Public funds designated for alcohol research/monitoring programmes • Support for providers (technical, financial) 	<ul style="list-style-type: none"> • Tobacco control spending • Support for providers (technical, financial) 	<ul style="list-style-type: none"> • Dedicated funding mechanism • Support for providers (technical, financial) 	
Workforce	Multiple substances/behaviours			
	<ul style="list-style-type: none"> • Multi-agency, multi-level collaboration and cross-sector partnerships <ul style="list-style-type: none"> – <i>Examples from online survey: Collaboration of substance misuse services, youth offending, mental health and children's services in addressing young people's needs</i> 			
	Alcohol	Tobacco	Illegal drugs	Gambling
	<ul style="list-style-type: none"> • Authorities dealing with alcohol administration and supervision (e.g., general enforcement authority; coordinating body, such as national alcohol council) <ul style="list-style-type: none"> – <i>Examples from online survey: Establishment of law enforcement units; Organisation in charge of evaluating the strategy</i> 	<ul style="list-style-type: none"> • Enforcement authority (general) <ul style="list-style-type: none"> – <i>Example from online survey: Set up a special unit for the control of the implementation of tobacco regulations</i> • Workforce development <ul style="list-style-type: none"> – <i>Example from online survey: Provide education/training for professionals working in all fields related to tobacco /</i> 	<ul style="list-style-type: none"> • Multi-agency taskforces or partnerships, multi-level collaboration and cross-sector partnerships <ul style="list-style-type: none"> – Drug Action Teams – <i>Examples from online survey: coordination between criminal justice and health and social interventions</i> – Coordination mechanism between local 	<ul style="list-style-type: none"> • Independent gambling regulatory authority (e.g., enforcement of regulations) • Multi-agency, multi-level collaboration and cross-sector partnerships

	<ul style="list-style-type: none"> Multi-agency, multi-level collaboration and cross-sector partnerships Workforce development 	<i>health care / children</i>	<ul style="list-style-type: none"> and national level Workforce development 	
Stakeholder involvement and international cooperation	<ul style="list-style-type: none"> Stakeholder involvement <ul style="list-style-type: none"> <i>Examples from online survey: Engaging stakeholders, communities, experts; A dialogue should be launched with the business community to encourage the development of further initiatives by business enterprises and improve self-monitoring pursuant to current legislation and voluntary codes.</i> 	<ul style="list-style-type: none"> International cooperation <ul style="list-style-type: none"> National focal points for tobacco control with a view to exchanging information and best practices as well as policy coordination with other Member States 	<ul style="list-style-type: none"> Stakeholder involvement <ul style="list-style-type: none"> <i>Example from online survey: encourage involvement of civil society and social partners</i> International cooperation 	<ul style="list-style-type: none"> Stakeholder involvement International cooperation

11. General approaches

Note: This section focusses on approaches whose content is not specific to alcohol, tobacco, illegal drugs or gambling but which may still have effects on those outcomes. An ecological framework for adolescent health presented by Blum and colleagues (2012) highlights the importance of considering macro-level factors in understanding young people's development, such as political events, economic forces, national priorities, and norms or values; as well as the role of schools, workplaces, family, and neighbourhoods. Policies and interventions of relevance to this section are consequently those which take place in, or seek to modify, those contexts. As such, the list of potentially relevant policies and interventions is endless and we only provide a limited number of examples which we do not consider to be exhaustive.

Individual	<p>Multiple substances/behaviours</p> <ul style="list-style-type: none"> • Exercise
School	<ul style="list-style-type: none"> • Early childhood education
Family	<ul style="list-style-type: none"> • Family home visitation with disadvantaged families (not drug specific) • Support for children in families where abuse, mental illness or mental disability is present
Workplace	<ul style="list-style-type: none"> • Workplace wellness programmes
Neighbourhood/Community	<ul style="list-style-type: none"> • Community support services • Community-building/neighbourhood enhancement programmes (suburb/community renewal programs, including physical improvements, provision of social programs, sports and recreation programs, providing employment and education for whole of community) • Crime prevention through environmental design (CPTED) • General road safety measures
Health and social care	<ul style="list-style-type: none"> • Developing and strengthening the public healthcare system / improving overall public health
Macro level	<ul style="list-style-type: none"> • Employment (i.e., measures stimulating economic growth) • Reducing poverty

Evidence tables

Review details	Review search parameters	Included studies	Results
<p>Baxter (2011)</p> <p>Study design: Systematic review</p> <p>Author objectives: “to examine the effectiveness of interventions to encourage the establishment of smoke-free homes in pregnancy and in the year following childbirth”.</p> <p>Funding source: National Institute for Health and Clinical Excellence, UK</p>	<p>Years searched: 1990–2009</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - All households containing a child <12 months of age (or where the majority of infants/children were aged 0–12 months) and a pregnant or recently pregnant woman who smokes. I - Programmes aiming to establish smoke-free homes or targeting ETS C - NR O - NR S - No limit on study design was applied.</p> <p>Exclusion criteria: “Studies were excluded if they did not report data from interventions or where the majority of the study population were children >1 year”.</p>	<p>Number of included studies (total): 17 of which 12 were synthesised</p> <p>Study designs: 12 RCT, 1 trial with non-random allocation, 4 before and after studies (1 RCT and 3 before and after studies were excluded from synthesis)</p> <p>Country: 10 USA, 1 Canada, 2 Sweden, 1 Finland, 1 Italy, 1 UK, 1 China</p> <p>Included studies relevant to our review: 5 studies which measured outcomes in children (infant cotinine levels or respiratory illness)</p> <p>Study designs: all RCT</p> <p>Country: 4x USA, 1 Finland</p> <p>Sample sizes and follow-up: Relevant studies: ~100 - 150 in three studies; > 1,000 in two studies. Details on attrition not reported. Follow-up not systematically reported but review authors note short follow-up times as limitation of studies.</p> <p>Quality of included studies as assessed by review authors: Study quality was appraised using the NICE checklist. Scores for relevant studies: 3 ++, 2 +. In relation to all included studies - “The papers tended to provide limited details regarding characteristics of their study populations”. “The main limitation of study quality at randomized controlled trial (RCT) level was lack of blinding. For studies of health promotion interventions, it is not possible to blind the participants and there are many practical challenges to blinding the assessors. The quality of other designs was commonly limited by small samples, short follow-up, high dropout and poor analysis and/or presentation of data”. “Across the included papers, there was a lack of intervention fidelity, with large numbers of participants reportedly not adhering to the programme”.</p> <p>Limitations identified by review authors: Study quality; specific population included in studies.</p>	<p>Of the 5 relevant studies, 1 study showed significant effects in reducing children’s exposure to ETS as measured by infant cotinine levels, 1 study found a significant effect on infant cotinine levels but not respiratory illness, 3 studies found no significant effect. No relationship between study quality rating and finding. Review authors note that conflicting findings may be due to differences in levels of implementation fidelity or depending on who delivered the intervention. The other studies measured ETS exposure through different means (e.g. maternal self-report) and the findings were similarly mixed.</p>

Review details	Review search parameters	Included studies	Results
<p>Brinn (2010)</p> <p>Study design: Systematic review</p> <p>Author objectives: To review the effectiveness of mass media interventions to prevent smoking amongst young people.</p> <p>Funding source: NHS Centre for Reviews and Dissemination; NHS Research and Development National Cancer Programme</p>	<p>Years searched: 1997-2010</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Under 25 years. I - Mass-media campaigns with the primary aim of preventing smoking, including mass media campaigns combined with school-based programmes. C - NR O - Tobacco use/smoking status, smoking attitudes, knowledge and related behaviours, self esteem and self efficacy, smoking perception, media reach. S - RCT, NRCT, time series.</p> <p>Exclusion criteria: Study design: UBA studies, studies with no baseline measurements.</p>	<p>Number of included studies (total): 7 Study designs: All studies RCT or CCT Country: 6: USA; 1: Norway</p> <p>Included studies relevant to our review: same as above</p> <p>Sample sizes and follow-up: Sample sizes varied greatly; samples were taken from clusters of schools and across communities and studies included up to 23,000 individuals. Rates of attrition varied by study; the authors speculated that this may be due to very different follow up lengths (up to 6 years with 62% attrition rate) and different criteria for being included in the final analysis.</p> <p>Quality of included studies as assessed by review authors: Bias assessed according to the Cochrane Handbook. The authors state that “all included studies in this review had at least four significant methodological limitations based on the risk of bias assessment”.</p> <p>Limitations identified by review authors: Limitations related to methodological limitations as assessed in risk of bias measure.</p>	<p>Tobacco use: three of seven studies reported significant associations between mass media campaigns and a reduction in smoking uptake in young people. Common characteristics of the campaigns included: combining school and media approaches, utilising multiple media outlets and repeated exposure to messages over a minimum of three years. All of these studies contained methodological limitations. Four other studies produced no significant results: these were characterised by short media campaign periods and lacking structured educational elements.</p>

Review details	Review search parameters	Included studies	Results
<p>Bryant (2011)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To assess the methodological quality and effectiveness of behavioural smoking cessation interventions targeted at six disadvantaged groups; the homeless, prisoners, indigenous populations, at-risk youth, individuals with low socio-economic status and individuals with a mental illness”.</p> <p>Funding source: NR</p>	<p>Years searched: Relevant studies published prior to October 2010</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Population not specified in inclusion criteria, although review and search strategy focus on six disadvantaged groups; the homeless, prisoners, indigenous populations, at-risk youth, individuals with low socio-economic status and individuals with a mental illness. I - Behavioural smoking cessation intervention. Studies that included pharmacotherapy as a component of a behavioural intervention were included only when pharmacotherapy was not being tested for effectiveness. C - Another behavioural intervention or usual care. O - Smoking cessation. S - Randomized controlled trials (RCTs) and clinical controlled trials (CCTs). Studies had to be conducted in “developed countries” (United States, Canada, Australia, New Zealand, United Kingdom and western Europe).</p> <p>Exclusion criteria: “Studies that were not published in English, that were case reports or cross-sectional studies, or studies that reported on population-level public health campaigns or pharmacotherapies alone were excluded. Multiple risk factor interventions where smoking cessation was one of a number of health-related outcomes were excluded because of the inability to distinguish the impact of the smoking intervention alone”.</p>	<p>Number of included studies (total): 32 Study designs: 13 RCT, 16 CCT (RCTs where the method of randomization was not described) and 3 cluster RCTs Country: Most studies were conducted in the United States, with one study each conducted in Australia, New Zealand and the United Kingdom.</p> <p>Included studies relevant to our review: 6 studies in at-risk adolescent smokers. Study designs: 1 RCT, 4 CCT (RCTs where the method of randomization was not described) and 1 cluster RCT Country: USA</p> <p>Sample sizes and follow-up: Meta-analysis of short terms effect (up to 3 months): 213 in intervention, 197 in control group. Meta-analysis of long-term effects (6 months or the longest): 187 in intervention, 139 in control group. Sample sizes ranged from 54 to 191 participants (note, one study included 1574 participants but only 62 students were smokers). Withdrawals were highlighted in two of the relevant studies as a weakness, but no details were provided. In relation to all included studies - “Where reported, attrition rates varied from 8–77% at the longest follow-up point”.</p> <p>Quality of included studies as assessed by review authors: Used Effective Public Health Practice Project Quality Assessment Tool for quantitative studies. In relation to all included trials: “The majority (n = 20) were rated low in methodological quality”. “Unrepresentative samples, non-reporting of consent rates, non-reporting of blinding of participants and outcome assessors and high attrition rates were common issues across all studies”. Out of the 6 relevant studies, 4 received a global rating of ‘weak’, 1 ‘moderate’, 1 ‘strong’. Weaknesses of relevant studies related in particular to possibility of selection bias and confounders.</p> <p>Limitations identified by review authors: Small number of studies eligible for inclusion in the review and the small number of studies included in the meta-analysis, no consideration of intervention details (e.g. intensity), different outcomes measures including self-report, limitation to developed countries, low quality studies were included.</p>	<p>No long-term significant effects found among at-risk adolescents. Details: “Six studies examined the effectiveness of cessation interventions for at-risk youth. Four studies used a behavioural support intervention and were combined for meta-analysis. At short-term follow-up a non-significant effect was found (RR 1.55, CI 0.74–3.26, I² = 21%). Three studies were pooled at long-term follow-up and also showed a non significant effect (RR 1.69, CI 0.83–3.41, I² = 0%). Two studies also used a behavioural support intervention but could not be included in the meta-analysis due to the method of reporting of results. Albrecht et al. examined the effectiveness of an 8-week group cognitive behavioural therapy (CBT) group programme for pregnant adolescents incorporating NRT and buddy support compared with a CBT programme alone and usual care. It appeared that the addition of a support person was of modest benefit, with a significant difference found at 8-week follow-up (P = 0.01). No differences were found at 1-year follow-up. Prokhorov examined the effectiveness of a computer-based smoking prevention and cessation programme among disadvantaged high school students. No significant effects were found among a small subsample of adolescent smokers at 18-months follow-up”.</p>

Review details	Review search parameters	Included studies	Results
<p>Calabria (2011)</p> <p>Study design: Systematic review</p> <p>Author objectives: To identify interventions aimed at young people with existing alcohol use problems or at high risk of alcohol related harm, delivered outside educational settings; critique their methodology; identify future opportunities for studies.</p> <p>Funding source: Alcohol Education and Rehabilitation Foundation, Alcohol Action in Rural Communities Program</p>	<p>Years searched: 2005-2009</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Young people who met any of four alcohol related criteria including dependence, at-risk status, referral for treatment, engaging in high-risk alcohol-related behaviour. I - Delivered outside normal education settings. C - NR O - NR S - NR</p> <p>Exclusion criteria: Outcomes: did not focus on alcohol abuse, dependence or related problems. Study design: not peer reviewed.</p>	<p>Number of included studies (total): 9 Study designs: 7 RCT, 2 uncontrolled Country: USA n=8, Australia n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Five studies had follow up rates between 80% and 100%, one study 60-79% and three studies <60%.</p> <p>Quality of included studies as assessed by review authors: Quality was assessed using the Dictionary for the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies. No overall scores were provided. Issues across studies were raised with controlling for baseline differences between groups, reliance solely on self-report measures, non-blinding of outcome assessors and low follow up rates in some studies. Low intent-to-treat rates were reported.</p> <p>Limitations identified by review authors: Unable to undertake meta-analysis, poor methodology of studies.</p>	<p>“Despite their methodological limitations, the studies identified by this systematic review represent best evidence for the effectiveness of interventions for young people with existing alcohol use problems or who participate in behaviour that places them at high risk of harm. The most promising approaches to reduce such harms are CBT, family therapy and community reinforcement. Evaluations using more rigorous methodologies are required before clear conclusions can be reached about the most effective interventions to reduce alcohol-related harms among youth who have existing alcohol use problems, or who participate in behaviour that places them at high risk of harm”.</p>

Review details	Review search parameters	Included studies	Results
<p>Carson (2011)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To determine the effectiveness of multi-component community based interventions in influencing smoking behaviour, which includes preventing the uptake of smoking in young people”.</p> <p>Funding source: Australasian Cochrane Airways Group Network Scholarship, Australia.</p>	<p>Years searched: 2002-2010</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - Under 25 years I - Targeted at communities/large areas, aimed to influence smoking behaviour, multi-component. C - NR O - Validated or self-reported smoking. S - RCT, controlled clinical trials, controlled before and after studies.</p> <p>Exclusion criteria: Intervention: single-component, mass-media only, no community involvement; Study design: did not report baseline characteristics.</p>	<p>Number of included studies (total): 25 Study designs: RCT n=15, CCT n=10 Country: USA n=17, Australia n=3, UK n=2, India n=1, Finland n=1, Europe n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: “The duration of follow up at which smoking status was assessed differed between studies and in some cases was not clear”; included at the end of the intervention (n=3), one year later (n=3), approximately one and a half years later (n=2), three and a half years later (n=1), and in the case of one study, fifteen years after the intervention.</p> <p>Quality of included studies as assessed by review authors: Assessed using the Cochrane tool. Inadequacies as reported by authors: blinding (all studies), allocation concealment (12 studies), incomplete outcome data (five studies, unclear in 12 studies), selective reporting (unclear in 9, high risk in 15 studies), baseline imbalance (unclear in 5 studies, inadequately addressed in 3 studies), contamination (seven studies), selective recruitment (high risk of bias in 7, unclear in 18 studies). No overall quality score provided.</p> <p>Limitations identified by review authors: Studies did not always refer to correct unit of analysis.</p>	<p>Smoking behaviour: “Overall ten interventions presented in the 25 studies demonstrated intervention effectiveness in influencing smoking behaviour including prevention, at primary follow up. One programme statistically and clinically significant short-term benefits (<12 months) (Winkleby 2004) and nine provided longer-lasting effectiveness”.</p> <p>Common features to successful programmes “include nine of the ten incorporating school based multi-component interventions with intervention delivery by school teachers and other faculty members, six had parental involvement in the intervention programme, eight had intervention durations longer than 12 months and nine of the ten interventions were based on the social influences or social learning theory”.</p> <p>“Three of the five studies which included community leader participation with active involvement in both the development and ongoing support of the community programmes were also effective in reducing youth smoking, however the remaining two studies showed significant benefits in favour of the control. Five of the nine studies that included mass media as additional programme components favoured the intervention”.</p> <p>16 studies included in meta-analysis, 8 studies included for any one outcome: “Of the studies categorised as showing evidence of clinically and statistically significant benefit, only two reported outcomes that could be included in the meta-analysis”. “There were no statistically or clinically significant results for weekly, monthly or smokeless tobacco use. For daily smoking and ‘ever smoked’ the point estimates were consistent with a clinical benefit but the number of studies were small and the confidence intervals wide (daily smoking, two studies, OR 0.89 (95% CI 0.69 to 1.15)), (ever smoked, three studies, OR 0.82 (95% CI 0.39 to 1.74))”.</p>

Review details	Review search parameters	Included studies	Results
<p>Carson (2012)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To evaluate the effectiveness of intervention programmes to prevent tobacco use initiation or progression to regular smoking amongst young Indigenous populations”.</p> <p>Funding source: NR</p>	<p>Years searched: start date NR - 2011</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - “Young people aged 25 or less who are members of indigenous populations”. I - To prevent tobacco use initiation, or progression amongst already using participants C - Usual practice, no intervention, reduced intervention or co-intervention participants. O - Primary outcome was self-reported or validated tobacco use status; secondary outcomes were intentions, exposure and costs. S - RCT or CCT.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 2 (plus 1 ongoing study, not included here)</p> <p>Study designs: RCT: 2</p> <p>Country: USA: 2</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample size at baseline 109-1396 participants. One study reported attrition of 18% and participants n=1199 at final follow up at three years. Follow up in the second study was 6 months.</p> <p>Quality of included studies as assessed by review authors: Methodological biases were unclear in the two studies, but both had at least two categories marked as high risk for bias.</p> <p>Limitations identified by review authors: Lack of data, limitation of study designs.</p>	<p>Tobacco use: at final follow up, neither study detected significant differences between intervention groups and controls. One study reported positive post-test intervention effects not maintained at follow up. In one study weekly tobacco use trebled during the study period. In one study reporting outcomes for secondary outcomes, no significant intervention effects were reported except for knowledge which significantly favoured the intervention group at post-test and six month follow up.</p>

Review details	Review search parameters	Included studies	Results
<p>Civiljak (2010)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: "To determine the effectiveness of Internet-based interventions for smoking cessation".</p> <p>Funding source: Department of Primary Care and Social Medicine, Imperial College London, UK. Ministry of Science, Education and Sport, Croatia. NHS Connecting for Health Evaluation Programme, UK.</p>	<p>Years searched: No restrictions on publication year, most recent searches in June 2010.</p> <p>Language restrictions: Any language included.</p> <p>Inclusion criteria (according to PICOS): P - Any smokers who participated in Internet interventions for smoking cessation. I - Internet studies in all settings and from all types of provider, stand-alone or adjust to pharmacotherapy. C - No treatment or with other forms of treatment, such as self-help booklets. O - Smoking cessation at least six months after the start of the intervention were preferred, although trials with follow-up periods of four weeks were also included (self-reported as well as those biochemical validation of abstinence). S - Randomized or quasi-randomized controlled trials.</p> <p>Exclusion criteria: "We excluded trials which used the Internet solely for recruitment and not for delivery of smoking cessation treatment. We also excluded trials where Internet-based programmes were used to remind participants of appointments for treatment that is not conducted online, e.g. face-to-face counselling, or pharmacotherapy. Text messaging interventions were covered in a Cochrane review of mobile phone interventions (Whittaker 2009) and are not covered in this review". "We excluded trials with fewer than four weeks follow up".</p>	<p>Number of included studies (total): 20 Study designs: All RCTs (although randomisation methods not always described) Country: Mostly USA, in addition 1 Switzerland, 1 Norway, 1 Netherlands, 1 England and 1 Republic of Ireland, 2 studies recruited from multiple countries.</p> <p>Included studies relevant to our review: 4 - One in college students, three in adolescents Study designs: All RCTs Country: All 4 USA</p> <p>Sample sizes and follow-up: Sample sizes ranged from 136 (77 intervention, 59 control) to 517 (257 intervention, 260 control) participants per trial. Follow-up periods were at least 4 weeks due to review inclusion criteria; follow-up periods for assessment of long-term abstinence ranged from 3 months to 12 months. One of the studies (An 2008) ascertained smoking status for over 80% of participants at follow up. The remaining three studies ascertained smoking status for 50-80% of participants at follow up. "All studies reported similar proportions loss to follow up in each group except in one study where survey non-response was higher among intervention participants than among controls (Woodruff 2007)".</p> <p>Quality of included studies as assessed by review authors: Cochrane review. "In the two studies (Mermelstein 2006; Woodruff 2007) that randomized schools to conditions there was the potential for bias due to the way in which individual students were recruited once their school was randomized. In both there were differences in the baseline smoking behaviour of intervention and control participants. The two studies also needed to take account of the non-independence of outcomes for students clustered within schools. Mermelstein (2006) used hierarchical linear modelling to allow for clustering. Woodruff (2007) assessed baseline variable intra class correlations and average cluster sizes. Intra class correlations were generally small (0.1 or less) and the magnitude of the effect sizes was below two, so analyses were conducted at the individual level without a school-level cluster term". "Only one of the four studies in adolescents and young people did not use biochemical verification of self-reported abstinence".</p> <p>Limitations identified by review authors: "More rigorous studies comparing the long-term effects of Internet interventions with non-Internet interventions or no intervention at all are needed in order to determine the true long-term effectiveness of the Internet as a tool for smoking cessation".</p>	<p>Summary: "A trial in college students increased point prevalence abstinence after 30 weeks but had no effect on sustained abstinence. Two small trials in adolescents did not detect an effect on cessation compared to control, whilst a third small trial did detect a benefit of a web-based adjunct to a group programme amongst adolescents".</p> <p>Young adult college students: "One study in a population of college students (An 2008) detected a significant effect on 30-day abstinence at 30-week follow up (RR 1.95, 95%CI 1.42 to 2.69) although rates of prolonged abstinence were only six per cent and did not differ between groups".</p> <p>Adolescents: "Patten (2006) compared a home-based Internet delivered intervention (SOS) to a brief office intervention (BOI) for adolescent smoking cessation, and did not detect a difference in abstinence. Rates at 24 and 36 weeks follow up were higher for BOI (RR 0.44, 95% CI 0.14 to 1.36 at 36 weeks). Mermelstein (2006) detected a significant effect of the web-based adjuncts to the group-based approaches for adolescent smoking cessation (crude RR 1.96, 95% CI 1.02 to 3.77; also reported as significant, (p < .05), using mixed model logistic regression to account for clustering within schools). Woodruff (2007) recruited eligible adolescents based on a report of smoking in the past month; at baseline some described themselves as 'former' smokers or had not smoked in the past week. Intervention participants had lower past week abstinence rates at baseline than controls (14% vs. 29%). At the post-assessment, they had significantly higher abstinence rates than controls (35% vs. 22%), but by the final 12-month follow up, the two groups had almost identical past-week abstinence rates (RR 0.93, 95% CI 0.60 to 1.44). The interaction term considering all four assessments was not significant. Intervention participants (68%, n = 52) completed a five item questionnaire assessing their satisfaction with the programme immediately after the post-test assessment; 89% of participants reported they would recommend the programme to another person who smoked".</p>

Review details	Review search parameters	Included studies	Results
<p>Clark (2002)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To compare the efficacy and acceptability of LAAM maintenance with methadone maintenance in the treatment of heroin dependence”.</p> <p>Funding source: State Government of Victoria, Community Support Fund, Australia.</p>	<p>Years searched: Earliest-2000</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - Heroin dependent or in opioid replacement therapy for heroin dependence. I - Levo-α-acetylmethadol (LAAM) C - Methadone O - Included at least one of retention in treatment, reduction in opiate use, abstinence from opiates, global assessments of health, various secondary outcome measures, S - Controlled studies.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 18 of which 15 were included in MA.</p> <p>Study designs: RCT (n=15), controlled prospective studies (n=3)</p> <p>Country: “All of the studies were conducted in the US in the 1970’s apart from recent trials in the US and Australia”.</p> <p>Included studies relevant to our review: 14/15 studies included in MA report on heroin use</p> <p>Study designs: NR</p> <p>Country: NR</p> <p>Sample sizes and follow-up: Sample sizes included in meta-analysis: cessation outcomes n=1454, heroin use outcomes n=983-1262. Breakdown of numbers by group and time not fully reported. Follow up time varied and was not well reported.</p> <p>Quality of included studies as assessed by review authors: Used the Cochrane tool: Quality scores were not used to exclude or weight studies in the MA. All studies in the MA received similar quality scores with the exception of one study that was not randomised and did not control for confounders. Scores for all studies were provided in the tables, but not summarised in text. Most studies were older and therefore methodological details (e.g. related to randomisation, allocation concealment) were not reported. Blinding attempted but success not reported.</p> <p>Limitations identified by review authors: Variations in attendance and dosage might have impacted on findings; political context (e.g. acceptability of LAAM); being able to switch from LAAM to methadone but not the other way round.</p>	<p>Heroin use - non-abstinence: across five studies, there were significantly lower rates of non abstinence in subjects allocated to LAAM treatment (RR 0.81, 95%CI 0.72-0.91, p=0.0003). One study reporting repeated urine test data found a Weighted Mean Difference (WMD) of -10.0, 95%CI -11.5 to -8.5, p<0.00001) in favour of LAAM.</p> <p>Eight studies analysed heroin urine tests as a proportion of all collected samples (including repeated samples, thus violating statistical assumption of independence): RR 0.87 (95%CI 0.72-1.05, p=0.15).</p> <p>Mortality: There was a non-significant trend for mortality to be higher with LAAM RR2.28 (95%CI 0.59-8.90, p=0.2; ten studies).</p> <p>Reasons for drop out “More drop outs were seen due to LAAM side effects than methadone”. Findings unchanged by removing poorest quality trial.</p> <p>In relation to all 15 trials included in MA: Treatment cessation - allocated medicine: LAAM Participants in ten studies were more likely to have ceased treatment than methadone RR 1.36 (95%CI 1.07-1.73, p=0.001). Greatest differences were seen at short term follow up (3 month vs. 6 or 12 month) studies (1.64 vs. 1.24); all opioid substitution therapy: no significant differences between the two groups (RR 1.01, 95%CI 0.58-1.76, p=1[n=2 studies]).</p>

Review details	Review search parameters	Included studies	Results
<p>Cleary (2010)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To determine if there is a relationship between maternal methadone dose in pregnancy and the diagnosis or medical treatment of neonatal abstinence syndrome”.</p> <p>Funding source: Friends of the Coombe and School of Pharmacy, Royal College of Surgeons in Ireland.</p>	<p>Years searched: Inception - 2009</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Opioid dependent pregnant women. I - Methadone dosage. C – NR O - Incidence of NAS in infants. S - Cohort studies and RCTs.</p> <p>Exclusion criteria: Outcomes: insufficient reporting of methadone dosage or outcomes related to NAS. Study design: case reports and case-control studies.</p>	<p>Number of included studies (total): 67 Study designs: RCT n=2, retrospective cohort studies n=28, prospective cohort studies n=37 Country: Europe n=27, USA n=37; Australasia n=3</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: 67 studies reported outcomes of interest for 5139 neonates exposed to methadone in pregnancy.</p> <p>Quality of included studies as assessed by review authors: Authors state that: most studies reported a clearly focussed objective and described population adequately. Some studies did not define NAS clearly, potentially confounding factors were rarely considered in analyses and blinding was rarely adequate. No overall scores are provided.</p> <p>Limitations identified by review authors: Significant heterogeneity across studies, limited reporting of methadone dosage.</p>	<p>29 studies included in the meta-analysis: There was a statistically significant difference in the incidence of NAS in neonates born to women on methadone doses above and below 20 mg and 40 mg. There were no other statistical differences between dosage levels. When only prospective studies or studies using an objective NAS diagnosis are included there were no significant results regarding doses above and below 20mg and 40mg.</p> <p>67 studies were included in the systematic review: 19 reported a relationship between methadone dose and incidence, severity or duration of NAS and 18 did not. 30 studies did not report this relationship. Mean methadone dose across 21 studies appeared higher in those that did not report a relationship compared with studies that did.</p>

Review details	Review search parameters	Included studies	Results
<p>Coleman (2012)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To determine the efficacy and safety of smoking cessation pharmacotherapies, including NRT, varenicline and bupropion (or any other medications) when used to support smoking cessation in pregnancy”.</p> <p>Funding source: La Trobe University 1996 to date, Australia. UK Centre for Tobacco Control Studies: a Public Health Centre of Research Excellence, UK. NIHR National School For Primary Care Research, UK. Victorian Health Promotion Foundation, Australia. Department of Health, UK funding for EPI-Centre, London University, UK. Public Health Branch Victorian Department of Human Services, Australia.</p>	<p>Years searched: Searches conducted in March 2012, publication years NR</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - “Women who are pregnant and who also smoke.” I - NRT or other pharmacotherapy with or without behavioural support/CBT or brief advice for smoking cessation in pregnancy. C - Placebo NRT and additional support of similar intensity as in intervention group OR behavioural support/CBT or brief advice only; trials had to provide very similar (ideally identical) levels of behavioural support or cognitive behaviour therapy (CBT) to participants in active drug and comparator trial arms. O - Primary: Self-reported abstinence from smoking in later pregnancy, Secondary: child outcomes, adherence. S - Randomised controlled trials (RCTs) with designs that permit the independent effects of any type of nicotine replacement therapy (NRT) (e.g. patch, gum etc.) or any other pharmacotherapy on smoking cessation to be ascertained. Parallel- or cluster-randomised design trials.</p> <p>Exclusion criteria: S - quasi-randomised, cross-over and within-participant designs.</p>	<p>Number of included studies (total): 6 Study designs: All RCTs - “Four included studies were placebo-RCTs (Coleman 2012; Kapur 2001; Oncken 2008; Wisborg 2000), two compared NRT plus behavioural support with behavioural support alone (Hotham 2006; Pollak 2007) and in these, participants could not be blinded to treatment”.</p> <p>Country: “Studies were conducted in the USA (n = 2) (Oncken 2008; Pollak 2007) Australia (n = 1) (Hotham 2006), Canada (n = 1) (Kapur 2001), Denmark (n = 1) (Wisborg 2000) and England (n = 1) (Coleman 2012)”.</p> <p>Included studies relevant to our review: 4 Study designs: All RCTs Country: 2 USA, 1 Denmark, 1 England</p> <p>Sample sizes and follow-up: ~ 200 participants in three studies, and ~ 1000 participants in Coleman trial; Attrition was low for perinatal outcomes (<10%); follow-up NR for 2 studies, one study 3 months post-partum, one study 12 months post-partum.</p> <p>Quality of included studies as assessed by review authors: Cochrane review. For all 6 included trials - “The risk of bias was generally low across trials with virtually all domains of the ‘Risk of bias’ assessment tool being satisfied for the majority of studies and an absence of blinding was the principal difference between trials”. Two of the four relevant trials were rated as being at low risk of bias across all 7 risk domains; risk of bias was unclear on 2/7 dimensions for one study, but overall assessment was low risk of bias; one study was rated at high risk of bias due to lack of blinding.</p> <p>Limitations identified by review authors: None</p>	<p>“There was no statistically significance difference in risk of miscarriage/ spontaneous abortion between groups in the three studies that reported this outcome (RR 1.24, 95% CI 0.37 to 4.17, $T^2 = 0.00$, $I^2 = 0\%$, three studies, 1407 women”. “There was no statistically significant difference in the numbers of stillbirths between NRT and control arms of trials (RR 1.98 95% CI 0.55 to 7.07, $T^2 = 0.00$; $I^2 = 0\%$, three studies, 1402 women). Due to a high level of heterogeneity ($I^2 = 87\%$), we did not present a pooled estimate for differences in birth weight between NRT and control groups”.</p> <p>“Data relating to low birth weight also could not be pooled due to similarly high levels of heterogeneity between the four trials reporting this outcome ($I^2 = 80\%$)”.</p> <p>“Preterm births (RR 0.85, 95% CI 0.57 to 1.26, $T^2 = 0.06$, $I^2 = 33\%$, four studies, 1628 women), neonatal intensive care unit admissions (RR 0.94, 95% CI 0.64 to 1.38, $T^2 = 0.00$, $I^2 = 0\%$, three studies, 1386 women) and neonatal deaths (RR 0.28, 95% CI 0.06 to 1.41, $T^2 = 0.00$, $I^2 = 0\%$, three studies, 1386 women) were all less frequent in NRT groups, but differences between NRT and control groups did not reach statistical significance”.</p> <p>“Coleman (2012) also reported the distribution of the following birth outcomes between NRT and placebo groups noting no statistically significant differences: Apgar score at five minutes after birth, cord arterial blood pH, intraventricular haemorrhage, neonatal convulsions, congenital abnormalities, necrotising enterocolitis, mechanical ventilation of infant, assisted vaginal delivery and maternal death. This study also reported a significantly higher caesarean section rate among NRT group women 20.7% (105/507) versus 15.3% (79/517)”.</p>

Review details	Review search parameters	Included studies	Results
<p>Coren (2013)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To summarise the effectiveness of interventions for street-connected children and young people that promote inclusion and reintegration and reduce harms. To explore the processes of successful intervention and models of change in this area, and to understand how intervention effectiveness may vary in different contexts”.</p> <p>Funding source: International Initiative for Impact Evaluation, Inc (3ie)</p>	<p>Years searched: From inception to 2012</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Street-connected children and young people between the ages of 0 and 24 years (inclusive), their families and carers, professionals working with children, young people and their families, the police and employers. I - Any interventions that: involved harm-reduction, inclusion or reintegration programmes for street-connected children and young people, were intended to reduce harms associated with risky sexual activity and substance misuse, and promoted inclusion and reintegration; increased literacy, numeracy and self-esteem; increased participation in education and skills-based employment; provided shelter, housing and drop-in support. C - Either groups who did not receive an intervention, who received standard practice interventions, or who received a different type of intervention. O - Any intervention studies which “aimed to achieve any one of the listed primary or secondary outcomes, or both”. Primary outcome: inclusion and reintegration (i.e. the children and young people entering a residential and/or educational environment that has the potential to provide them with elements of physical safety, medical care, nutrition, counselling, education, inclusion in social and economic opportunities, and room for recreation and personal and spiritual growth that may impact positively on longer term life chances). Secondary outcomes: 1. Safer or reduced sexual activity. 2. Safer or reduced substance use (e.g. reduced sharing of injecting equipment). 3. Increased use of hostel or shelter type services. 4. Literacy. 5. Numeracy. 6. Self-esteem. 7. Depression. 8. Participation in education. 9. Participation in skills-based (rather than exploitative) employment. 10. Reduced use of violence. 11. Increased contact with family. 12. Participation in intervention planning and delivery. S - Randomised controlled trials (RCTs), clinical controlled trials (CCTs), controlled before-and-after trials (CBA) and quasi-randomised trials. Quasi-randomised trials refer to studies which allocate the children and young people to treatment or control conditions depending on methods determined as not truly randomised, for example, on their date of birth or the day of the month they enter the intervention site. Some other quasi-randomised designs, such as regression discontinuity designs, were eligible for inclusion in the review.</p> <p>Exclusion criteria: “We did not include any studies that did not report separate outcomes data on street-connected children and young people in the context of systemic interventions”.</p>	<p>Number of included studies (total): 11 studies evaluating 12 interventions - 8 studies included in meta-analysis and 3 in narrative synthesis only</p> <p>Study designs: 8 RCTs, 2 CBAs, 1 quasi-RCT</p> <p>Country: 9 USA, 1 UK, 1 Korea, “We did not find any sufficiently robust evaluations conducted in low and middle income countries (LMICs) despite the existence of many relevant programmes”.</p> <p>Included studies relevant to our review: 8 studies on safer or reduced substance use (e.g. reduced sharing of injecting equipment) (Baer 2007; Cauce 1994; Milburn 2012; Peterson 2006; Slesnick 2005; Slesnick 2007/08; Slesnick 2009 EBFT; Slesnick 2009 FFT; Rotheram-Borus 2003).</p> <p>Study designs: All RCT except for 1 CBA</p> <p>Country: All USA</p> <p>Sample sizes and follow-up: Of relevant studies, participant numbers were mostly between 100-200 with one study > 300.. Four studies had a follow-up period exceeding six months, while three had a follow-up period of three months or below. The longest follow-up was 24 months (Rotheram-Borus 2003); however the longest follow-up for which raw data were available was 15 months (Slesnick 2009 EBFT; Slesnick 2009 FFT). Follow-up rates at longest follow-up were as follows (in ascending order): 43% (intervention), 49% (control) at 12months (Milburn 2012); 62% (EBFT), 65% (FFT), 62% (control) at 15 months (Slesnick 2009 EBFT; Slesnick 2009 FFT); 66% (intervention), 74% (control) at 24 months (Rotheram-Borus 2003); 80% (total) at 3 months (Peterson 2006); 84% (control), 88% (intervention) at 6 months (Slesnick 2007/08); 88% (intervention), 81% (control) at 6 weeks); 89% (intervention), 88% (control) at 12 months (Slesnick 2005), and 92% (total) at 3 months (Baer 2007) (no attrition reported in Baer 2007; 10 participants were excluded from the analysis due to exclusion criteria). With regard to attrition analysis “available data were too limited for drawing overall conclusions”. Two studies reported differential attrition, although no clear pattern emerged. “Only one study (Slesnick 2009 EBFT; Slesnick 2009 FFT) found no differences between the demographic profiles of drop-outs and retained participants”.</p> <p>Quality of included studies as assessed by review authors: Overall judgement for all included studies: “Study quality overall was low to moderate and there was great variation in the measurement used by studies, making comparison difficult”. “All studies showed a high risk of bias in relation to blinding as it was not possible to blind participants in such interventions”. “We considered the attrition rates good to very good considering the typical characteristics of the research populations, their life</p>	<p>Results with regard to safer or reduced substance use were described by the review authors as “uncertain and of mixed direction”.</p> <p>“According to the authors of three studies, family therapy interventions for runaway adolescents appear to have achieved some statistically significant and lasting (12 to 15 month) benefits in reducing alcohol or drug use, somewhat above the similarly positive benefits for participants receiving SAU (Milburn 2012; Slesnick 2005; Slesnick 2009 EBFT; Slesnick 2009 FFT). The changes in both groups also appear clinically significant.” Milburn study suffered from high attrition. “Interventions may to some degree change the pattern of substance abuse rather than reduce it. For example, in Milburn (2012) intervention participants (with a primarily alcohol using profile) increased their use of marijuana while reducing their use of alcohol and hard drugs”.</p> <p>Details:</p> <ol style="list-style-type: none"> 1. Number of days of alcohol use in last 30 days: No statistically significant or important effect was found at 1 month follow-up and the mixed findings reflected uncertainty (total MD - 0.3, 95% CI -2.25 to 1.59, 2 studies). The combined MD at 3 months was 1.10 (95% CI -0.67 to 2.88) favouring the comparison intervention (2 studies). 2. Percentage days of alcohol use in last 90 days: The combined MD at 3 months was -0.34 (95% CI -2.34 to 1.75), that is clinically small and not statistically significant (2 studies). In a third study, results were uncertain and may have reflected a short term positive change but no maintenance of gains in the longer term. 3. Number of standard drinks in last 90 days: combined MD was small but statistically significant and favoured the intervention group (MD -2.87, 95% CI -5.68 to -0.07). (Slesnick 2009 EBFT; Slesnick 2009 FFT). 4. Adolescent drinking index (ADI) score: combined MD for 3-month data was 1.08 [-4.42, 6.57] (Slesnick 2009 EBFT; Slesnick 2009 FFT). 5. Percentage days of alcohol/ drug use in last 90 days (alcohol and illegal drugs not possible to separate): combined MD at 3 months was -2.97 (95% CI -16.02 to 10.08) (Slesnick 2009 EBFT; Slesnick 2009 FFT). 6. Percentage days of only drug use in last 90 days: combined MD at 3 months was -3.31 (95% CI -16.16 to 9.53) (Slesnick 2009 EBFT; Slesnick 2009 FFT). 7. Number of categories of drug use in last 90 days: No statistically or clinically significant effect was found. The combined MD was 0.14 (95% CI -0.33 to 0.61; 2 studies). A third study found reductions in the short term but no significant differences between intervention and control groups in the

Review details	Review search parameters	Included studies	Results
	<p>AIDS and HIV risks were not included as outcome variables as these topics had been covered in another Cochrane review.</p>	<p>styles and the drop-out rates for interventions in general.” “Four of the twelve included interventions were from studies conducted by one research team (Slesnick 2005; Slesnick 2007/08; Slesnick 2009 EBFT; Slesnick 2009 FFT) and there are similarities in terms of study design, type of intervention, location and population characteristics.”</p> <p>The three studies classed as being at high risk of bias on most dimensions were not considered relevant for this review because they did not report relevant outcomes.</p> <p>Limitations identified by review authors: Control conditions ‘services as usual’ (and of high quality) rather than no-treatment, unclear descriptions of control conditions, lack of consistency in outcome measures, lack of clinical significance even for statistically significant results, maturational effects as confounders cannot be ruled out, unable to include relevant data in the meta-analysis due to different measurement types and time points.</p>	<p>longer term.</p> <p>8. Number of days of marijuana use in last 30 days: results from two studies showed mixed direction of effects and reflected uncertainty. A third study found positive effects in the short term, but not in the long term (no effects for boys and iatrogenic effects for girls).</p> <p>9. Number of days of illicit drug use other than marijuana in last 30 days: results from 2 studies were mixed and reflected uncertainty. - combined MD for 3-month data was 0.22 (95% CI - 1.84 to 2.28).</p> <p>10. Number of problem consequences (POSIT): At 3 months the combined MD was 1.51 (95% CI 0.56 to 2.47), which was statistically significant showing overall benefit for the control group (2 studies). No statistically significant effect was found at 6 months. The combined MD was 0.34 (95% CI -0.67 to 1.34). For Peterson 2006, data on drug use consequences (RAPI) were not available.</p>

Review details	Review search parameters	Included studies	Results
<p>Cowlishaw (2012)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To synthesise evidence from randomised trials of psychological therapies for pathological and problem gambling, in order to indicate the efficacy of therapies and durability of therapy effects, relative to control conditions”.</p> <p>Funding source: Victorian Government, Department of Justice, Australia.</p>	<p>Years searched: 1980-2011</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Pathological or problem gamblers. I - Any psychological therapy intended to reduce pathological or problem gambling C - No treatment, referral to gamblers anonymous, non-specific treatment. O - Primary outcomes - reduction in gambling symptom severity, financial loss or frequency. S - RCT.</p> <p>Exclusion criteria: Interventions: where psychological interventions did not include systematic or face to face time with a clinician; Control: comparisons between different psychological therapies or psychological therapy and a psychopharmacological intervention; Study design: quasi-randomised trials.</p>	<p>Number of included studies (total): 14 Study designs: 14 RCT Country: USA n=7, Canada n=4, Australia n=2; Sweden n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Follow up was at end of treatment (n=7), one week post treatment (n=2), one month post-treatment (n=1), 3-4 months after baseline (n=2), six weeks after baseline (n=2). Further follows up were at 3 months (n=1), six months (n=12), nine months (n=3), 1 year (n=6) and 2 years (n=1) post-treatment. Total participants 1245.</p> <p>Quality of included studies as assessed by review authors: Varied in quality: some provided limited or no description of randomisation method, some studies managed attrition through a method that may overestimate treatment effects.</p> <p>Limitations identified by review authors: “A substantial amount of the evidence comes from studies that suffered from multiple limitations, and these may have led to overestimates of treatment efficacy. Furthermore, the evidence only shows short-term benefits from therapy, and there is insufficient evidence to indicate whether or not treatment effects observed soon after therapy are maintained across longer periods of time”.</p>	<p>CBT approach: gambling frequency (n=7, 505 participants) - significant benefit of therapy at short term follow up (SMD -0.78; 95% CI -1.11 to -0.45), one study that reported long-term effects did not find any significant differences between groups; pathological gambling (n=2) - significant difference between groups with a positive intervention effect on diagnosis at short-term follow up (RR 0.13; 95% CI 0.05 to 0.31).</p> <p>Motivational interviewing: gambling frequency (n=2, 145 participants) - non-significant differences between groups at short term follow up (SMD -0.18; 95% CI -0.50 to 0.15), but one study reported a beneficial therapy effect at 9 months.</p> <p>Integrative therapy: gambling frequency (n=1, 52 participants) - no significant between group differences at short or long term follow ups.</p> <p>Therapy approach based on 12 step model: gambling frequency (n=1, 18 participants) - significant beneficial therapy effect at short-term follow up (SMD - 1.66; 95% CI -2.78 to -0.53); pathological gambling diagnosis: significant beneficial treatment effect at short-term follow up (RR 0.32; 95% CI 0.12) 0.87.</p>

Review details	Review search parameters	Included studies	Results
<p>D'Onise (2010)</p> <p>Study design: Systematic review</p> <p>Author objectives: "To examine the evidence for the adult health impacts of centre-based preschool interventions for preschoolers".</p> <p>Funding source: National Health and Medical Research Council of Australia, National Heart Foundation.</p>	<p>Years searched: 1980-2008</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Included 4-year-old children, i.e. the age at which most children enter preschool (but may also have included a wider age range). I - Preschool programmes involving a centre-based preschool component (but may also have included other intervention components such as home visits). C - NR O - Health outcomes for individuals aged 18 years and over; "health outcomes were defined broadly to encompass the presence or absence of disease, disease risk factors, health behaviours and indicators of well-being". S - "All studies that involved comparison with some type of control group were included (observational, experimental but not descriptive papers)".</p> <p>Exclusion criteria: Conference abstracts, review articles, editorials. One report from the Institute for Developmental Studies met the inclusion criteria but was excluded due to very high attrition (80.7% lost).</p>	<p>Number of included studies (total): 12 studies of 8 programmes</p> <p>Study designs: Of 13 eligible studies, "five publications from three randomised controlled trials (42%), four cohort studies examining attendance at Head Start programmes and four quasi-experimental cohort studies" - one quasi-experimental cohort study was subsequently excluded due to high attrition.</p> <p>Country: All studies were conducted in the USA except for a study conducted in Mauritius.</p> <p>Included studies relevant to our review: 6 studies of 5 programmes</p> <p>Study designs: 3 RCT, 1 quasi-experimental cohort, 1 cohort</p> <p>Country: All USA</p> <p>Sample sizes and follow-up: Total sample sizes at base line ranged from 64 (16 intervention, 25 home visitation, 23 control group) to 1539 participants (989 intervention and 550 control group), with 2 studies ~ 100 participants, and one study NR. Sample sizes at final follow up ranged from 35 to > 2,000 participants (intervention 324, preschool 572, control 1542). Retention rates for 3 studies > 90%, one study 74%, one study NR. Follow-up mostly at age of under 30 years (i.e. about 10-20 years after intervention). Follow up at age 21 for three studies, one study 22-24 years, one study 18-35 years, one study 27 and 40.</p> <p>Quality of included studies as assessed by review authors: Narrative quality assessment using bespoke criteria [1, small sample size (including within subgroups); 2, intervention group mix of services; 3, control group mix of programmes/services; 4, sibling control; 5, post-hoc control group; 6, deviation from random assignment; 7, not randomized; 8, self-report outcome measure; 9, incomplete outcome measure; 10, recall exposure measure; 11, inadequate control for confounding; 12, small randomized controlled trial, possible residual confounding; 13, multiple models similar results; 14, attrition moderate to high (>20%); 15, instrumental variable estimate.] The problems identified for the relevant studies include small sample sizes, control group receiving a mix of programmes/services, use of self-report measures, incomplete outcome measures, and possibility of residual confounding for RCTs.</p> <p>Limitations identified by review authors: Restricted range of health outcomes, reliance on self-report measures (11 studies), small sample sizes (nine studies with <100 in each arm) and a relatively young adult age at follow-up.</p>	<p>"Six studies examined tobacco smoking. For five of the six studies, there was consistent evidence for centre-based preschool programmes reducing the prevalence of current and ever smoking. There was an absolute risk difference (ARD) in the two methodologically rigorous randomized studies, the Perry Preschool study (followed to 40 years of age) and the Abecedarian study (followed to 21 years of age), of 13% and 16%, respectively. The Project CARE intervention was the only study to find an increased risk of smoking in the intervention group, although with wide CIs due to small numbers (n = 9) in both the intervention and control groups."</p> <p>"Other substance use was examined in five studies. There was consistent evidence for a reduction in the absolute risk of marijuana consumption in the methodologically rigorous Perry Preschool, Abecedarian and Project CARE studies (-7 to -23%). There was, however, a moderate increase in the absolute risk of binge drinking in the past month in the Perry Preschool and Abecedarian studies (10 and 13%), but no difference in reports of driving after 'probably drinking too much' in the Perry Preschool study. There was an overall beneficial effect of preschool programmes on cocaine or other illicit drug use; however, the absolute number of participants who reported heroin or LSD use was small".</p> <p>Current smoker (27 years) RR = 0.80, ARD=-11% (-29.0—7.0%). Current smoker (40 years) RR = 0.76, ARD=-13% (-31.4—5.4%). Current smoker RR = 0.81, ARD=-4.2% (-9.7—1.2%). Current smoker ARD=-12.4% (-27.1—2.3%). Current smoker (Head Start exposure 2 years) ARD=-33.3% (-65.6 to -1%). Ever regular smoker RR = 0.71, ARD=-16% (-34.9—2.9%). Ever smoker ARD=-9.6% (26.3—7.1%). Ever smoker (Head Start exposure 2 years) ARD=-52.2% (-88.9 to -15.5%). Ever regular smoker RR = 1.4, ARD = 19% (-13.9—51.9%). Marijuana in last month RR = 0.46, ARD=-21% (-37.9 to -4.1%). Marijuana in last month RR = 0.84, ARD=-7% (-39.9—25.9%). Marijuana in last 15 years RR = 0.68, ARD=-23% (-40.7 to -5.3%). Cocaine or other drug ever RR = 1.67, ARD = 4% (-6.4—14.4%). Cocaine, crack, free base in last 15 years RR = 0.79, ARD=-6% (-22.4—10.4%). Sedatives, sleeping pills, tranquilizers in last 15 years RR = 0.72, ARD=-9% (-25.6—7.6%). Heroin in last 15 years RR = indeterminate, ARD=-9% (-16.4 to -1.6%). LSD/other hallucinogens RR = 0.57, ARD=-3% (-11.5—5.5%). Any substance use age 16 years RR = 0.91, ARD=-2.5% (-8.6—3.6%).</p>

Review details	Review search parameters	Included studies	Results
			<p>Frequent substance use RR = 0.82, ARD=-3% (-7.2—1.1%) Negative effect in those who used drugs/alcohol RR = 0.82, ARD=-9% (-29.9—11.9%). Alcohol use 5+ alcohol drinks in a row in last month RR = 1.37, ARD = 10% (-7.8—27.8%). Alcohol several times a week/daily (27 years) RR = 0.62, ARD=-10% (-24.6—4.6%). 5+ alcohol drinks in a row in last month (40 years) RR = 2.08, ARD = 13% (-1.3—27.3%).</p>

Review details	Review search parameters	Included studies	Results
<p>Faggiano (2005)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To evaluate the effectiveness of school-based interventions in improving knowledge, developing skills, promoting change, and preventing or reducing drug use versus usual curricular activities or a different school-based intervention”.</p> <p>Funding source: National Fund Against Drug - 1996 - Piedmont Region grant No. 239/28.1, Italy.</p>	<p>Years searched: Earliest-2004</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Primary or secondary school pupils. I - School-based. C - Curricular activities, different intervention O - Various drug related outcomes including knowledge, attitude, social and behavioural. S - RCT, CCT, well-conducted observational design, evaluations had to include a well-described intervention.</p> <p>Exclusion criteria: Population: interventions targeting special schools.</p>	<p>Number of included studies (total): 32 Study designs: 29 RCT, 3 controlled prospective studies (CPS) Country: USA n=30, Canada n=1, UK n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Follow up included immediately post-intervention up to 10 years. In total, 46,539 participants were included across the 32 studies. Loss to follow up was reported to be under 25% in 19 studies but ranged to over 40% across all studies.</p> <p>Quality of included studies as assessed by review authors: Risk of bias assessed according to Cochrane methods. Insufficient allocation concealment reported in all studies. The authors concluded that no information bias was likely because of the nature of study setting and nature of data collection methods. One study was marked as high quality, 24 studies were classed as moderate quality, and seven as low quality.</p> <p>Limitations identified by review authors: Issues with the quality of studies, lack of long-term follow up, effect measures not presented in studies.</p>	<p>Knowledge-based interventions: no impact compared to usual curricula controls on drug use.</p> <p>Skills-based interventions: generally positive impacts on generic drug use and hard drug use including long-term follow up. Mixed impacts on cannabis and glue use across studies including in comparison to knowledge-based interventions.</p> <p>Interventions with affective objectives: negative intervention impact on cannabis use reported in two studies and positive impact on stimulant use as reported in one study compared to usual curricula controls.</p>

Review details	Review search parameters	Included studies	Results
<p>Ferri (2013)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To assess the effectiveness of mass media campaigns in preventing or reducing the use of or intention to use illicit drugs amongst young people”.</p> <p>Funding source: No explicit funding. Authors supported by European Monitoring Centre for Drugs and Drug Addiction.</p>	<p>Years searched: Inception to Jan/Feb 2013</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Young people under the age of 26. I - Mass media campaigns explicitly aimed at influencing people’s drug use, intention to use or attitude towards illicit drugs use. C - 1) No intervention; 2) other types of communication interventions such as school-based drug abuse prevention programmes; 3) community-based prevention programmes; 4) lower exposure to intervention; 5) time before exposure to intervention. O - Illicit drug use, intention not to use or the attitude towards illicit drugs. S - Cluster- or individual-randomised controlled trials, controlled trials without randomisation allocating schools, communities or geographical regions, prospective and retrospective cohort studies, interrupted time series and controlled before and after studies.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 23 studies reported in 28 articles; subset of 13 studies (eight RCTs and five ITS) were included in meta-analyses.</p> <p>Study designs: 12 RCTs, 2 prospective cohort studies (PCS), one study was both a RCT and a PCS, 6 interrupted time series and 2 controlled before and after (CBA) studies.</p> <p>Country: 21 USA, 1 USA/Canada and 1 Australia</p> <p>Included studies relevant to our review: 15 studies: Carpenter 2011; Fang 2010; Hornik 2006; Lee 2010; Miller 2000; Newton 2010; Palmgreen 2001; Scheier 2010; Schwinn 2010; Slater 2006; Slater 2011; ColoradoMeth 2011; GeorgiaMeth 2011; HawaiiMeth 2011; Idaho Meth 2010; Wyoming Meth 2011.</p> <p>Study designs: 5 RCTs; one RCT and prospective cohort study; 2 prospective cohort studies; 6 interrupted time series (ITS), 1 controlled before and after (CBA) study.</p> <p>Country: 13 USA, 1 USA/Canada and 1 Australia</p> <p>Sample sizes and follow-up: Three of relevant studies had relatively small samples sizes; three more had around thousand participants, most studies included several thousand participants; one study involved 130,245 youths (Carpenter). No follow-up was applicable for Carpenter (2011) and Meth Project studies. Follow-up was shorter than 12 months for three of the relevant studies (Fang 2010; Lee 2010; Schwinn 2010), and longer than or equal to 12 months for the remaining studies. No details reported with regard to attrition.</p> <p>Quality of included studies as assessed by review authors: Range of instruments used depending on study design. Assessment for all included studies (not reported separately for relevant studies) - “The RCTs had an overall low risk of bias, along with the ITS (apart from the dimension ‘formal test of trend’), and the PCS had overall good quality, apart from the description of loss to follow-up by exposure”.</p> <p>Details: RCTs - “Overall the quality of the included RCTs is acceptable: the stronger dimension is the consideration of risk of attrition bias (incomplete data addressed in the discussion) and the weaker dimension the risk of selection bias (unclear description of method for randomisation). More than half of the studies were clearly free of selective outcome reporting. In one case (Schwinn 2010) there was a clear indication of potential high risk of reporting bias”.</p> <p>ITS - “Overall the studies reported sufficient data points to enable reliable statistical inferences; they also had good strategies to ensure anonymous or computer-administered</p>	<p>RCTs - “Five RCTs (Fang 2010; Lee 2010; Newton 2010; Schwinn 2010; Slater 2006) enrolled 5470 young people and were included in a meta-analysis. Their pooled results show no effect of media campaign intervention (standardised mean difference (SMD) - 0.02; 95% confidence interval (CI) -0.15 to 0.12, heterogeneity P = 0.02). Youngsters exposed to a media campaign tend to use, on average, fewer illicit substances measured through an array of published and unpublished scales including the American Drug and Alcohol Survey (Centers for Disease Control and Prevention), Youth Risk Behavior Survey, Australian National Drug Strategy Household Survey and Global Appraisal of Individual Needs-1”. One study (Newton 2010) showed a reduction of use in the control group; “The theoretical background for the five studies was varied, with two studies based on the social learning theory (Schwinn 2010) and the social ecological framework (Slater 2006) providing the better results, whereas the study based on the social influence approach (Newton 2010) favoured the control group”.</p> <p>RCT + prospective cohort study - “Slater 2011, the only RCT that included a prospective cohort study (the reason why it was not included in the meta-analysis) found evidence that a community-level campaign, adjusted for the effect of a school-level campaign, reduced marijuana uptake compared to no intervention (estimate -0.511; P = 0.026)”.</p> <p>Prospective cohort studies - “Two prospective cohort studies (N = 10,632) found results ranging from non-significantly effective to a significant iatrogenic effect. Scheier (2010) found that over time young participants in the experimental arms reported increasingly more awareness and recalled increasingly more campaign messages, and also a concomitant but not statistically significant decrease in their reported levels of marijuana use. Hornik (2006) measured past-year marijuana use after exposure to a national media campaign as a function of exposure to a specific advertisement at a prior round and found an increase in use (odds ratio (OR) 1.21; 95% CI 1.19 to 1.65), controlled for considered confounders.”</p> <p>ITS - “Five ITS (ColoradoMeth 2011; GeorgiaMeth 2011; HawaiiMeth 2011; Idaho Meth 2010; Wyoming Meth 2011, 26,405) evaluated the Meth Project intervention in five US states [...] Among study participants aged 12 to 17 years old there was no evidence of an effect on past-month prevalence of methamphetamine (odds ratio (OR) 1.16, 95% CI 0.63 to 2.13) and evidence of a [significant] reduction in past-year prevalence (OR 0.59; 95% CI 0.42 to 0.84). Among participants aged between 18 and 24 years old there was no evidence of an effect for past-month (OR 0.72; 95% CI 0.16 to 3.20) or past-year (OR</p>

Review details	Review search parameters	Included studies	Results
		<p>questionnaires and to ensure that interventions did not affect data collection. The reliability of primary outcome measures was also satisfactory for all the studies. The weaker points were the lack of a formal test for trends and the unclear completeness of the data sets for many studies".</p> <p>Prospective cohort studies (PCS) - "Overall, all PCS addressed an appropriate and clearly focused question. In two studies subjects were selected with proper procedures in order to make them comparable in all respects. The same two studies indicated how many of the people asked to take part actually participated in the study. One study (Slater 2011) failed to address these issues. Attrition was 35% in two studies and 42.9% in Slater (2011). Comparison between participants and those lost to follow-up was made only in Scheier (2010)".</p> <p>Limitations identified by review authors: Limited comparability of studies due to different interventions (e.g., type of media used) and outcome measures; RCTs being efficacy rather than effectiveness trials.</p>	<p>0.91; 95% CI 0.43 to 1.94) prevalence of methamphetamine."</p> <p>5th ITS - "In this 32-month study, high sensation-seekers exhibited a significant upward trend in 30-day marijuana use before exposure to the campaign and a significant downward trend after exposure. This finding was reported in both the communities involved in the study (Knox County Time Series (P = 0.001) and the Fayette County Time Series (P = 0.003 and P=0.001 after campaign 1 and 2, respectively))".</p> <p>6th ITS - "One ITS (Carpenter 2011) analysed the relationship between exposure to the 'Above the Influence' campaign in 210 US media markets and adolescent marijuana use from 2006 to 2008. The study showed lower rates of past-month (adjusted odds ratio (AOR) 0.67; 95% CI 0.52 to 0.87) and lifetime (AOR 0.76; 95% CI 0.62 to 0.93) marijuana use among girls in grade eight. For boys in grade eight and both girls and boys in grades 10 and 12 there was no evidence of an association between the campaign and a reduction in marijuana use."</p> <p>CBA - "The only controlled before and after (CBA) study (Miller 2000) found a modest increase in drug use in the control campus, paralleled by a modest decrease in drug use in the experimental campus, without statistical significance".</p>

Review details	Review search parameters	Included studies	Results
<p>Fletcher (2008)</p> <p>Study design: Systematic review</p> <p>Author objectives: “We aimed to (1) identify the effect of school-level changes on drug use and (2) explore the possible mechanisms by which school-level influences on individual drug use might occur”.</p> <p>Funding source: No explicit funding. Authors supported by U.K. Medical Research Council, London School of Hygiene and Tropical Medicine, U.K. Economic and Social Research Council and Medical Research Council.</p>	<p>Years searched: Searches in March 2006, no restrictions by publication date.</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Young people in the age range of 11–16. I - “whole-school” drug prevention interventions, “which went beyond individual-focused, classroom-based drugs education and involved changes to schools’ overall organization, policies, working practices, culture, or environment, and aimed to reduce drug use among young people in the age range of 11–16” (only relevant for intervention studies). C - NR O - Drug use at follow-up. S - Two types of study designs were eligible: 1. Experimental/quasi-experimental - Intervention studies “if they employed a comparison group and included longitudinal data”; “To minimize confounding, a study had either to allocate schools to intervention/comparison arms randomly, restrict or match the intervention and comparison groups according to the major potential confounders, or adjust for major potential confounders in the analysis. To avoid selection bias, attrition rates should not have differed significantly by treatment groups according to age, sex, or SES”. 2. Observational studies “if they used a longitudinal design to measure the temporal relationship between exposure and subsequent outcomes and reported one or more exposure that was a measure of either school-level factors or individual-level school related attitudes or behaviors”; “To be considered of “high quality,” studies were required to minimize problems arising from confounding via adjustment or restriction; age, sex, and SES were again considered to be the major potential confounders. Observational studies were not quality assessed according to any differential attrition rates because observational studies rarely report attrition by exposure category”.</p> <p>Exclusion criteria: “Cross-sectional studies were not included because they cannot provide evidence about temporality and therefore causation”.</p>	<p>Number of included studies (total): 24 = 6 intervention + 18 observational studies Study designs: 3 Cluster RCT, 1 quasi-experimental, 18 longitudinal observational Country: Mostly USA, 1 Netherlands, 1 Australia, 1 Scotland, 1 Sweden</p> <p>Included studies relevant to our review: 4 intervention studies Study designs: 3 Cluster-RCT, 1 Quasi-experimental study (matched control group) Country: 2 USA, 1 Netherlands, 1 Australia</p> <p>Sample sizes and follow-up: Number of participating schools ranged from 8 schools (4 intervention, 4 control) to 26 schools (12 intervention, 14 control). Number of participating students ranged from > 700 students (366 intervention, 372 control) to > 4,000 students (2,221 intervention, 1,790 control). Follow up was 2 years in one study, 3 years in two studies, 4 years in another studies. Unclear if follow-up was post baseline or post intervention. Attrition rates for two studies were < 20%, for one study 27%, for one study high at 49% - this, however, was also the study with the longest follow-up period. “Loss at follow-up ranged between 10% and 49%, but did not differ significantly by allocation condition according to main potential confounders in these studies”.</p> <p>Quality of included studies as assessed by review authors: “All four studies were deemed to be of high quality when judged against the quality-assessment criteria outlined above: three studies randomly allocated schools to an intervention or comparison group; one study matched intervention and control schools according to sociodemographic factors, reported no significant baseline differences in terms of age or gender, and adjusted for prior health behaviours”.</p> <p>Limitations identified by review authors: Limited number of intervention studies, programs varied widely in their scope, combination of whole-schools and curriculum elements does not allow examination of the effect of whole-schools approaches in isolation.</p>	<p>Effects on young people’s drug use: “ The Aban Aya study reported that, 4 years after the start of the intervention, there was a 34% reduction in the rate of increase of a combined measure of alcohol, tobacco, and cannabis use for boys in the intervention group compared to the comparison group. Boys at D.A.R.E. plus schools reported a significantly lower rate of “growth” in the use of drugs other than cannabis, and intentions to use these drugs, compared to the comparison group, after 2 years of the intervention. These interventions had no significant effect on girls’ drug use. Three years after the start of the Gatehouse project, fewer young people in the intervention group than the control group reported having used cannabis in the last 6 months. There was a 3.1% risk difference between the intervention and comparison group, a non significant association. Although the Dutch Healthy School and Drugs project had a significant positive effect on young people’s health-related knowledge, it had no effect on the number of the students who had used cannabis at the end of the intervention; of those students who had used cannabis, cannabis appeared to be used more frequently among students at intervention schools compared to control schools”.</p> <p>Effects on other outcomes: “Three studies reported rates of smoking and drinking separately from young people’s drug use. All three suggested that the interventions had a protective effect for these outcomes. At the end of the D.A.R.E. plus intervention, boys reported fewer occasions when they had drank alcohol in the last month and the last year, and were less likely to be current smokers. Evaluation of the Gatehouse project showed non significant but consistent 3% to 5% protective risk differences, such as for students drinking alcohol in the last month, smoking in the last month, smoking regularly, and their friends’ substance use. The Dutch Healthy School and Drugs project found that students in the intervention were drinking less alcohol than the control group and smoking less”.</p> <p>School conduct: “Three studies reported outcomes relating to school conduct and education. The Aban Aya study found that intervention reduced violent acts, bullying, and truancy, and school suspension for boys. The D.A.R.E. plus intervention had borderline-significant effects on reducing violence at school among boys. The Gatehouse project had no significant impact on measures of bullying, school relationships, and students’ depressive symptoms. The Dutch Healthy School and Drugs project did not aim to influence school relationships”.</p>

Review details	Review search parameters	Included studies	Results
<p>Foxcroft (2011b)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To systematically review evidence on the effectiveness of universal family-based prevention programs in preventing alcohol misuse in school-aged children up to 18 years of age”.</p> <p>Funding source: NR</p>	<p>Years searched: Up to 2010</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Young people 18 years or under attending school. I - Universal family psychosocial or education based prevention program. C - Any alternative intervention or no intervention. O - Primary - alcohol use, incidence of drunkenness. S - RCT</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 12 Study designs: 12 RCT Country: USA n=11, Netherlands n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample size varied from 202 to 3,496. Follow up ranged from post-intervention to long term follow up over a number of years up to 10 years. Attrition was <20% at first follow up in 10 studies and >20% in 2 studies.</p> <p>Quality of included studies as assessed by review authors: Assessed using Cochrane methods. Quality was believed to be limited by studies not accounting for clustering effects at design or analysis. Reporting of features of RCT was assessed to be poor in some studies and over 30% of studies were assessed to be susceptible to bias through confounding or contamination.</p> <p>Limitations identified by review authors: Methodological and reporting weaknesses of included studies.</p>	<p>“Results from 9 trials indicated statistically significantly greater reductions in alcohol use (e.g. alcohol use initiation, mean composite index, frequency/quantity score of alcohol use, alcohol use or being drunk in past year, proportion of youth reporting lifetime alcohol use, alcohol use occasions, initiation and frequency of drunkenness) for the family-based intervention alone groups compared to the control groups”.</p> <p>Follow ups ranged from 2 months to 8 years in these studies and intervention effects were recorded throughout this time period. No factors identified that distinguished these 9 trials from studies that did not report intervention effects.</p>

Review details	Review search parameters	Included studies	Results
<p>Foxcroft (2011c)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To systematically review evidence on the effectiveness of universal multi-component prevention programs in preventing alcohol misuse in school-aged children up to 18 years of age”.</p> <p>Funding source: NIHR</p>	<p>Years searched: Earliest-2010</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Young people up to 18 attending school. I - Any universal multi-component psychosocial or education prevention program. C - Any alternative program or no intervention. O - Self-reported or objective measures of alcohol use or problem drinking, alcohol initiation, drunkenness initiation. S - RCTs</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 20 Study designs: 20 RCT Country: USA n=17, India n=1, Netherlands n=1, Australia n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Length of follow up ranged from 6 months to 11 years post baseline. 57,545 participants were included over the 20 studies. Attrition at first follow-up was generally acceptable across studies, but high attrition at longer-term follow-up was commonly reported.</p> <p>Quality of included studies as assessed by review authors: Cochrane methods. Generally, for random sequence generation, allocation concealment and blinding there was an unknown risk of bias. There was a low risk of bias of selective reporting, and a mixed risk of bias across studies for attrition bias and other bias.</p> <p>Limitations identified by review authors: Issues with selection bias/confounding and reporting of methods amongst included studies. Unable to undertake meta-analysis.</p>	<p>“Results in 12 out of the 20 trials indicated statistically significant reductions in alcohol use amongst adolescents receiving universal multi-component interventions compared to adolescents in the control groups”. For four trials, post-test results only were reported and in the remaining 8 trials significant findings were reported at 3 month to 3 year follow up. Six studies found no intervention effects, one study reported significant effects but questions about analysis were identified by the reviewers and one study found significant intervention effects on a sub-group of baseline drinkers only.</p>

Review details	Review search parameters	Included studies	Results
<p>Foxcroft (2011d)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To review evidence on the effectiveness of universal school-based prevention programs in preventing alcohol misuse in school-aged children up to 18 years of age”.</p> <p>Funding source: Internal: Oxford Brookes University, UK. External: NIHR, UK.</p>	<p>Years searched: Earliest-2010</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Young people under 18 years attending school. I - School-based educational or psychosocial prevention programs (alcohol specific or generic). C - Any alternative prevention program or standard curriculum. O - Self-reported or validated measures of alcohol consumption or problem drinking. S - RCT only.</p> <p>Exclusion criteria: Outcomes: measures related to perceptions/attitudes or awareness.</p>	<p>Number of included studies (total): 53 Study designs: 53 RCT Country: North America n=41, Europe n=6, Australia n=6, India n=1, Swaziland n=1, multiple countries n=2.</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Time of last follow up ranged from one month to 12 years post-baseline. “The attrition rates (at first follow-up) of 26 trials were acceptable (<= 20%) and for 21 trials not acceptable (> 20%). One trial reported no loss to follow-up (Brewer 1991).The attrition rates were not reported for 6 trials”. Study samples varied widely from <100 participants to >5,000 randomised. Majority of studies randomised over 3,000 individuals. Largest study randomized >19,500 pupils. Only a few studies had fewer than 100 participants.</p> <p>Quality of included studies as assessed by review authors: Quality was assessed using standard Cochrane methods. Across all studies, there was a largely unclear risk of selection bias and performance bias/ detection bias, a low risk of reporting bias and equal low, unclear and high risk of attrition bias and other bias. “The reporting quality of trials was poor, only 3.8% of them reporting adequate method of randomisation and program allocation concealment. Incomplete data was adequately addressed in 23% of the trials”.</p> <p>Limitations identified by review authors: Failure of some studies to account for clustering effects in design or analysis, high/differential attrition.</p>	<p>Alcohol specific programs (n=11) - in six studies intervention groups had significant reductions in alcohol misuse compared with controls including immediate post-test and long-term follow up. There were no significant differences between groups in alcohol misuse in five studies.</p> <p>Generic programs (n=39) - in 14 studies intervention groups had significant reductions in alcohol misuse compared with controls including from immediate post-test to long-term follow up. “In 24 trials, there was no statistically significant difference in the effectiveness between the intervention programs and the control/standard curriculum groups”. One trial seemed to increase alcohol use although confounders or chance cannot be ruled out. Generic programs based on psychosocial or developmental approaches were more likely to report significant results in comparison to controls. The authors concluded that “there were no discernible pattern in characteristics that would distinguish studies with positive results from negative results”.</p> <p>Effectiveness often only in relation to particular sub groups (e.g. baseline non-drinkers, by gender or ethnicity) or type of outcome.</p> <p>“All trials that evaluated the Life Skills Training (LST) program yielded positive results in favour of the intervention (Botvin 1984; Botvin 1995; Botvin 2001; Botvin 2003; Schinke 2000; Spoth 2002). Similarly, two of the three trials that evaluated the GBG program (van Lier 2009, Furr-Holden 2004, Kellam 2008) demonstrated positive results in favour of the intervention. Trials that evaluated the ALERT (Ellickson 1990; Ellickson 2003; Ringwalt 2009; St. Pierre 2005) or drug abuse resistance education program (DARE) (Clayton 1991; Perry 2003; Ringwalt 1991) showed no effects (i.e., statistically non-significant)”.</p>

Review details	Review search parameters	Included studies	Results
<p>Gates (2006)</p> <p>Study design: Systematic review</p> <p>Author objectives: To review the evidence about the effects of non-school interventions to prevent or reduce drug use by young people.</p> <p>Funding source: EDAP Project (Evidence for Drugs and Alcohol Policy) sponsored by the European Community-Directorate Public Health (Grant Agreement SPC.2002454).</p>	<p>Years searched: Earliest-2004</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Young people aged up to 25. I - Non-school based. C - No-intervention or alternative intervention. O - Drug-related use, dependence, mortality, initiation, hospitalisation, criminal activity. S - Comparison studies.</p> <p>Exclusion criteria: Population: where age not defined or over 26. Interventions: treatment settings, those where it was not possible to separate school-based and non school-based intervention effects, those focussing on non-addictive drugs.</p>	<p>Number of included studies (total): 17 Study designs: 17 RCT Country: USA n=15, UK n=1, China n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: The follow-up periods varied from immediate post-intervention to six years. Eight studies followed up participants for > 1 year.</p> <p>Quality of included studies as assessed by review authors: Many of the RCTs in this review were affected by methodological problems or poor reporting. High losses to follow up in studies. Review authors noted issues with cluster analysis in some studies.</p> <p>Limitations identified by review authors: Variation in study approaches; loss to follow up high in studies.</p>	<p>Education and skills training (n=2): no intervention effects on drug or cannabis use amongst young women.</p> <p>Family interventions (n=5): “generally showed no clear differences between groups”. Analysis of three interventions (Focus on Families, Iowa Strengthening Families Program [ISFP]) and Preventing the drug free years indicated positive programme effects compared to comparison groups who received no intervention on cannabis use outcomes. At six year follow-up (ISFP) lifetime use: adjusted RR 0.55, 95% CI 0.32 to 0.95; past year use adjusted RR 0.44, CI 0.20-0.96. Brief intervention/ motivation interviewing (n=2): scores on a drug use scale were higher amongst controls than the intervention group at one month (p=0.05) and three months (p=0.04) follow up in one study. In one other study there were significant decreases in cannabis use frequency in intervention group use of cannabis (15.7 to 5.4 times per week) but not in controls (13.3-16.9 times per week).</p> <p>Multi component interventions: one study reported finding reductions in drug use initiation in males in villages that received community interventions compared to those that did not (authors noted methodological weaknesses of this study). In interventions including school education plus community elements - generally no effects or marginally significant intervention effects on substance misuse reported. In one study, self-reported cannabis use was significantly lower in community and school education group compared to school education only, but numbers of cannabis users was low in both groups. There were no effects on cannabis use of one study on native Americans.</p>

Review details	Review search parameters	Included studies	Results
<p>Gray (2007)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To determine which primary preventions and associated early interventions work best on problem gamblers who are recruited from the general community”.</p> <p>Funding source: NR</p>	<p>Years searched: Earliest-2006</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Members of the general community. I - All types of interventions and primary prevention for gambling. C - NR O - Gambling behaviour, change in scores on measures of outcomes related to gambling. S - Randomised or quasi randomised controlled trials.</p> <p>Exclusion criteria: Participants: “People engaged in any primary, general practice or outpatient care and those who had been diagnosed with pathological gambling”.</p>	<p>Number of included studies (total): 13 Study designs: 13 RCT Country: Canada n=11; USA n=1; Australia n=1</p> <p>Included studies relevant to our review: 6 [measuring behavioural outcomes] Study designs: RCT n=6 Country: Canada n=4, USA n=1, Australia=1</p> <p>Sample sizes and follow-up: Sample sizes ranged from 29 to 1193 participants (majority of studies < 300 participants). The warning message program included post-test follow up only, and in all other five studies follow up was conducted up to six months and longer. Longest follow up time in one study was 24 months. Two of the six studies reported losses to follow up being due to participants declining or not being located. Four studies did not report attrition.</p> <p>Quality of included studies as assessed by review authors: The authors used methods from the Cochrane handbook to assess the quality of studies. No overall scores were given. Issues identified included that authors in three studies were unclear about potential confounders and that blinding was inadequately reported in three studies. With regard to two school based educational studies, review authors note that clustering was not accounted for in analysis.</p> <p>Limitations identified by review authors: Lack of detail in original studies, lack of consideration of clustering.</p>	<p>Two studies that evaluated educational programs did not find any significant program effects on gambling behaviour.</p> <p>One study evaluating the impact of displaying warning messages during roulette found that was no difference between intervention and control participants on number of spins of the roulette wheel, but that those receiving the warning message finished the session with more dollars remaining.</p> <p>Three studies evaluated the impact a workbook and motivational interviewing on behaviour: results suggested that motivational interviewing can be effective for reducing gambling behaviour and money lost through gambling in the short term and on gambling behaviour at 6 months in comparison to workbook only or control conditions.</p> <p>Summary: “Six studies assessed the impacts of interventions on improving a range of gambling behaviours. Results were unable to be included in a meta-analysis due to the variability in measurement tools and lack of data reported. Narrative reviews of these studies suggested that educational programs improved gambling behaviours. Warning messages reduced the amount of money lost but not the number of games played. The use of work books and motivational interviews reduced the number of gambling days, lost money and money spent per gambling day”.</p>

Review details	Review search parameters	Included studies	Results
<p>Grimshaw (2006)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: "To evaluate the effectiveness of strategies that help young people to stop smoking tobacco".</p> <p>Funding source: NR</p>	<p>Years searched: Earliest-2009</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - Regular tobacco smokers under 20 years where the majority of people in a study were <20. I - Tobacco cessation. C - No interventions, delayed intervention, brief intervention, general tobacco education. O - Change in smoking behaviour. S - RCT, cluster RCT, control trials.</p> <p>Exclusion criteria: Intervention: primary prevention, relapse prevention</p>	<p>Number of included studies (total): 24 Study designs: Cluster RCT n=22; controlled studies n=2. Country: USA n=22, UK n=1, Australia n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: In total, over 5,000 people participated in the included studies. In the pooled sample of motivational enhancement studies, participants totalled 1,503. Power within the Not on Tobacco studies was noted to be small. Follow ups varied greatly between studies and included short- to long-term follow up periods. Reporting of sample sizes of intervention and control groups within studies was poor. Attrition was not summarised, but was typically 20-30%, with some studies reporting lower attrition and some studies reporting attrition rates of over 50%.</p> <p>Quality of included studies as assessed by review authors: Studies were assessed for quality using Cochrane methods. Studies were assessed for bias and scored from one (low risk) to three (high risk): seven studies were classed as high risk, four moderate risk, 13 high risk.</p> <p>Limitations identified by review authors: Definitions of quitting in papers varied.</p>	<p>Four studies based upon the transtheoretical model, two of which could be pooled. The pooled findings demonstrate that intervention is effective at one year (OR 1.70, CI 1.25-2.33) and is maintained at 2 years (OR 1.38, CI 0.99-19.2), although the number needed to treat doubles over that time.</p> <p>Eleven studies evaluated some form of motivational enhancement and the pooled OR for these studies was 1.70, (CI 1.21-2.20, n=1503).</p> <p>Five studies that used motivational interviewing as one intervention component produced a pooled significant intervention effect, although other intervention components in these studies were considered to be different.</p> <p>Six trials which included cognitive behavioural therapy did not individually achieve statistically significant results.</p> <p>None of the four trials of the Not on Tobacco intervention demonstrated a significant effect on smoking status on their own, although pooled data suggested the intervention may have had a significant effect (OR 1.77, CI 1.00-3.11).</p> <p>Three studies of pharmacological interventions suggested that these were not be effective for smoking cessation in young people.</p>

Review details	Review search parameters	Included studies	Results
<p>Hettema (2010)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: Meta-analysis of motivational interviewing for smoking cessation.</p> <p>Funding source: NR; "Jennifer E. Hettema developed and receives revenue from the sale of a motivational interviewing training video".</p>	<p>Years searched: Studies published or available electronically before June 2008.</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - NR [no restrictions]. I - Motivational interviewing (MI). C - At least one comparison condition that did not include the administration of MI. O - Abstinence-related outcome. S - "Indicate use of a procedure to ensure the equivalence of groups".</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 31</p> <p>Study designs: All trials had comparison condition but not clear if all were randomised.</p> <p>Country: Mostly USA, 3 Australia, 1 Northern Ireland, 1 Sweden, 1 Spain.</p> <p>Included studies relevant to our review: 7 studies of adolescent samples</p> <p>Study designs: NR</p> <p>Country: NR</p> <p>Sample sizes and follow-up: Sample size ranged from 40 - 2,526. Two studies around 80 participants, two studies 100-200 participants, one study around 400 participants. No details provided regarding intervention/control groups. Follow-up periods of 12 months or more in 4/7 studies. Attrition NR.</p> <p>Quality of included studies as assessed by review authors: QA only available for all included studies, not reported separately for relevant studies. "The average methodological quality score for included studies was 10.56 (range = 5-14, SD = 2.60) out of a possible score of 16. This level is similar to levels of methodological quality that have been observed in other large reviews of addiction treatment. This suggests that most of the studies were of medium to high methodological quality and did not represent a significant probability of bias".</p> <p>Limitations identified by review authors: Level of treatment fidelity unclear, comparison conditions and multiple treatment conditions make it difficult to isolate effects of MI, possible that comparison conditions using brief advice used components of MI, different ways of conducting MI, difficulties with measuring motivation to quit.</p>	<p>Studies with adolescent samples (under 18 years old) had significant combined effect sizes at both follow-up points (dc = .15 [0.06, 0.24], p < .01, and dc = .11 [0.03, 0.20], p < .01). Six studies reported short term outcomes and six studies reported long term outcomes.</p> <p>General findings: "The current investigation demonstrates that MI generally outperforms or does as well as comparison conditions for the treatment of tobacco dependence among non-pregnant samples. Effects were smaller among pregnant samples. Overall, the magnitude of MI's effect was modest, particularly when compared to the observed effects of MI for other conditions (Hettema et al., 2005; alcohol dc = .26, drugs dc = .26). Estimates of the magnitude of effect of MI on smoking are consistent with previous meta-analyses of MI. Subgroup analyses revealed that MI may show particular promise as follows: for individuals living outside the United States, adolescents, and those with medical co-morbidities; for individuals with low tobacco dependence and motivation to quit; and when it is applied for a total of less than 1 hour and when the MI protocol includes training or fidelity practices".</p>

Review details	Review search parameters	Included studies	Results
<p>Hutton (2011)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To evaluate the efficacy of Web-based interventions in adults, college students, and adolescents”.</p> <p>Funding source: International Union Against Tuberculosis and Lung Disease.</p>	<p>Years searched: 1990- Dec 2009/Feb 2010</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Adolescents, college students, and adults of either gender from any setting or country. I - Web-delivered smoking cessation program. C – NR. O - Self-reported smoking cessation at the longest point of follow-up. S - RCTs with minimum of 1-month follow-up after intervention.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 21 (15 among adults) Study designs: Only RCTs Country: United States (n = 13).</p> <p>Included studies relevant to our review: 6 (one among college students and 5 among adolescents) Study designs: RCTs Country: 4 USA, 1 Canada, 1 USA/Australia</p> <p>Sample sizes and follow-up: Sample sizes ranged from 136 to 2514 participants. The two larger studies (> 1,000 participants) were not limited to smokers. No separate details were provided regarding intervention/control group. College students trial: 30-week follow-up, loss to follow-up was less than 10%. Adolescents trials: Study follow-up ranged from 3 to 12 months. Losses to follow-up ranged from 13% to 47%.</p> <p>Quality of included studies as assessed by review authors: Based on Jadad criteria. College students - The study quality of the identified trial was considered good “using concealed allocation, biochemical validation of smoking status, and ITT analyses. In addition, loss to follow-up was less than 10%.” Adolescents trials - The overall study quality was fair, but none described concealed allocation.</p> <p>Limitations identified by review authors: College students - Conclusions limited by small number of studies; Adolescents - Studies with widely varying intervention and control conditions; different types of internet interventions, not delivered in isolation (not possible to isolate effects), participants may have used other cessation methods concurrently (e.g. pharmacological therapy), indications that participants might have not accessed website, lack of information regarding drop out.</p>	<p>College students trial “Thirty-day abstinence at 30-week follow-up was 40.5% in the multicomponent intervention group and 23% in the comparison group (p < .05). Biochemically validated abstinence rates were lower (33% Internet group and 17% control group; p < .05).” “This single study suggests that Web-based interventions may be effective in promoting smoking cessation in college students, with the intervention effects favouring the treatment groups compared with the control condition. We graded the evidence in college students as insufficient because the one study was a multicomponent intervention. With Web and non-Web-based elements, the effect of the Web-based element cannot be isolated”.</p> <p>Adolescents Buller (2008): “Among Australian smokers (184), the intervention was associated with a lower 30-day prevalence of smoking a whole cigarette compared with control (intervention/control difference = -0.045, p = .02). Five percent of smokers in the intervention condition stopped smoking compared with 3% in the control (p > .05). In contrast, there was no significant change in 30-day smoking prevalence among U.S. smokers (n = 45)”. Norman (2008): “At 24 weeks, there was no change in smoking rates among smokers in either group”. Woodruff (2007): “Immediately post intervention, the intervention group (N = 77) had higher rates of 7-day abstinence than the control condition (N = 59; 35% vs. 22%; p < .01); however, at 12 months, there was no difference between the two groups (39% vs. 38%; p > .05).” Mermelstein et al. (2006): “At 3-month follow-up, the intervention condition was associated with increased cessation compared with the control (20.4% vs. 10.6%). Lighter smokers, younger age, female, and non-White participants were more likely to be abstinent”. Patten (2006): “At 36 weeks, the abstinence rate was 13% in the BOV [brief office visits] group and 6% in the SOS [web-based intervention] group (p > .05)”.</p> <p>Summary: “While the Internet based virtual reality world appeared promising, immediately post-intervention, these effects were not sustained. When group therapy was combined with telephone counselling and a Web based adjunct, there was an effect at 3 months, but there were no results reported at 6 or 12 months, making it unclear if there was a sustained effect. It is difficult to determine whether proactive telephone calls, the Web, or a combination of the two accounted for increased cessation rates. In two school based studies that combined smoking prevention and cessation, only a small proportion of the sample smoked, making it unclear if the lack of effect was</p>

Review details	Review search parameters	Included studies	Results
			<p>secondary to lack of statistical power or if the intervention itself had little effect. In the final study, face-to-face counselling was superior to a computerized intervention, though only a third of individuals randomized to the Web-based intervention logged on to the Web site. Based on these results, the evidence on the efficacy of Web-based interventions for adolescents is insufficient”.</p>

Review details	Review search parameters	Included studies	Results
<p>Jackson (2012)</p> <p>Study design: Systematic review</p> <p>Author objectives: To identify and assess the effectiveness of experimental studies of interventions that report on multiple risk behaviour outcomes in young people.</p> <p>Funding source: The Medical Research Council and the Scottish Government Chief Scientist Office.</p>	<p>Years searched: Earliest-2010</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Aged 11-25 years. I - Universal substance misuse prevention. C - NR O - Reported alcohol, tobacco or drug use at minimum 6 months follow-up. S - Experimental or quasi experimental studies that were not weak quality.</p> <p>Exclusion criteria: Targeted interventions with high risk groups, secondary prevention, and clinical intervention.</p>	<p>Number of included studies (total): 18 (15 included in synthesis) Study designs: RCT (n=15), controlled trials (n=3) Country: 11 USA, others from Canada, England, South Africa, Namibia, Australia</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Great variety in included studies on all aspects. Not summarised in the review.</p> <p>Quality of included studies as assessed by review authors: One study was rated strong, 12 moderate and 5 weak using the 'quality assessment tool for quantitative studies'. Results for the 5 weak studies were presented separately (online) and did not report any significant intervention effects.</p> <p>Limitations identified by review authors: Potential reporting bias.</p>	<p>Across all study types, intervention effects on all behavioural outcome were either not significant or significance varied between studies and by gender, follow-up length and behaviour. Generally, significant findings were most likely for smoking outcomes and least likely to be found for alcohol outcomes.</p>

Review details	Review search parameters	Included studies	Results
<p>Johnston (2012)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: To determine what incentives prevent children and adolescents from starting to smoke.</p> <p>Funding source: NR</p>	<p>Years searched: Earliest-2012</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Aged 5-18, non-smokers at baseline. I - "any tangible benefit externally provided with the explicit intention of preventing smoking". C - NR O - Primary outcomes were smoking status at longest follow up including verified and self-reported status. S - Controlled randomised and non-randomised.</p> <p>Exclusion criteria: Studies in pregnant women.</p>	<p>Number of included studies (total): 7 (n=19 articles) Study designs: RCT (n=3), NRCT (n=4) Country: Germany (n=3); USA, Canada, Finland, Netherlands (n=1)</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Meta-analysis conducted for 5 studies: included 3466 non-smokers at baseline in intervention groups and 2896 controls. Follow up in all studies was at least 6 months from baseline, the shortest follow-up was 10-18 months and the longest 24 months.</p> <p>Quality of included studies as assessed by review authors: Risk of bias assessed using Cochrane methods. Authors stated that studies "were of variable quality". The one study to report LT intervention effects was reported to be at high risk of selection bias. Attrition was a significant issue in 6 studies, and there were baseline differences between groups in 4 studies. Only 3 studies adjusted analysis to account for clustering.</p> <p>Limitations identified by review authors: Variability in the reported detail of interventions, small incentives that may not provide sufficient motivation.</p>	<p>Smoking status amongst non-smokers at baseline (n=5): findings from meta-analysis of RCTs (n=3) suggest "no statistically significant effect of incentives to prevent smoking initiation among children and adolescents in the long term (RR 1.00, CI 0.84-0.19)". No significant effect was detected from combining findings from NRCTs (n=2), (RR 0.81, CI 0.61-1.08). One of these 2 NRCTs reported an intervention effect at longest follow up (17% smoking prevalence in intervention classes compared to 21.3% in control classes, OR 1.36, CI 1.04-1.76) but was at high risk of selection bias and when the review authors re-ran analysis effects were NS.</p> <p>Two studies that did not report smoking status amongst non-smokers at baseline: one study reported a short-term effect of the intervention with "lower smoking daily prevalence" in intervention (11.1%) compared to control groups (16.4%), not sustained at long term follow-up. In one study using validated measures, non-significant higher mean levels of salivary TCN were reported in intervention versus control participants.</p>

Review details	Review search parameters	Included studies	Results
<p>Khadjesari (2011)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: "To determine the effects of computer-based interventions aimed at reducing alcohol consumption in adult populations".</p> <p>Funding source: None stated.</p>	<p>Years searched: Inception - Dec 2008</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - All adult populations (aged 18 years and over) with any level of alcohol consumption. I - Stand-alone (non-guided) computer-based behavioural interventions, aimed at bringing about positive behaviour change. C - A minimally active (e.g. assessment-only, usual care, generic non-tailored information or educational materials) or an active comparator group (e.g. brief intervention). O - Alcohol consumption [total alcohol consumption and number of binge drinking episodes included in meta-analyses]. S - Randomized controlled trials.</p> <p>Exclusion criteria: NR.</p>	<p>Number of included studies (total): 24 (19 combined in meta-analysis)</p> <p>Study designs: RCTs</p> <p>Country: United States (n = 18).</p> <p>Included studies relevant to our review: 18 studies in students</p> <p>Study designs: RCTs</p> <p>Country: 14x USA, 3x New Zealand, UK</p> <p>Sample sizes and follow-up: 6 studies had ~ 100 participants or less. Sample sizes ranged from 40 (20 I / 20 C) to > 600 (310 I - 312 C) participants. Follow-up periods were generally short. Only 4/18 studies had follow-up times of 6 months or more (maximum was 12 months in two studies). 6/18 studies had follow-up time of 1 month or less. Retention at follow-up was under 80% in 5 studies (+ 1 study NR).</p> <p>Quality of included studies as assessed by review authors: "Three studies made explicit reference to randomization sequence generation and the procedure for allocating participants to groups. These studies were classified as having low risk of bias associated with allocation concealment. The remainder of studies were assessed as having unclear risk of bias, meaning that there was insufficient information in the publication to judge this aspect of trial quality". "The current literature is also limited by small sample sizes, short-term follow-up, insufficient information to judge potential sources of bias, few studies in non-student adult populations and few comparisons with active comparator groups".</p> <p>Limitations identified by review authors: Main limitation is skewed data - few studies presented appropriate measures of central tendency.</p>	<p>Findings suggest that computer-based interventions are not more effective than active comparators to reduce alcohol consumption of binge frequency per week. In comparison to minimally active comparator, the findings depended on whether studies presented appropriate measures of central tendency or not (including all studies suggested effect on total alcohol consumption, using sub-set of higher quality studies suggested no effect). Findings also suggest potential reduction in frequency of binge drinking.</p> <p>Details: The review authors compared computer-based intervention versus minimally active comparator for changes in total alcohol consumption (g/week). Student trials were compared with non-student trials (including one YP trial). "The two groups were found to differ significantly from each other (P < 0.001), suggesting a more pronounced effect in the non-student adult population." Meta-analysis Mean Difference in student trials: -19.42 [-29.83, -9.00]. A sensitivity analysis was carried out with a subset of 5 studies presenting appropriate measures of central tendency. "These five studies in student populations (994 participants) found no significant difference between computer-based interventions and minimally active comparator groups in alcohol consumed per week".</p> <p>With regard to binge frequency/week, the analysis included 5 trials with a total of 848 student participants. "Participants receiving a computer-based intervention appeared to reduce their frequency of binge drinking compared with those receiving a minimally active comparator (mean difference = -0.23 days per week; 95% CI: -0.47, 0.00; P = 0.05)".</p> <p>A further analysis compared computer-based intervention versus active comparator (3 studies). "There was no significant difference between participants receiving a computer-based intervention and an active comparator group in alcohol consumed per week. [...] However, the analysis was heavily weighted by one particular study".</p> <p>Two studies measured binge frequency/week for this comparison. "Both studies reported no significant difference in binge frequency between the intervention and an active comparator group".</p>

Review details	Review search parameters	Included studies	Results
<p>Kim (2011)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “The effectiveness of pharmacological therapy for smoking cessation in adolescent smokers was evaluated”.</p> <p>Funding source: NR</p>	<p>Years searched: NR</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Adolescent smokers. I - Pharmacological therapy. C - Did not receive pharmacological therapy. O - Smoking cessation status. S - RCTs only.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 6 (7 trials reported in the 6 studies)</p> <p>Study designs: RCT (n=6)</p> <p>Country: USA (n=5), UK (n=1)</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Included a total of 816 participants including 409 intervention participants and 407 controls. The range of the longest follow-up periods was 8–26 weeks.</p> <p>Quality of included studies as assessed by review authors: Assessed using the Jadad scale. All studies except one had a score of 4 or greater (out of a maximum of 5 points).</p> <p>Limitations identified by review authors: Small number of trials and overall sample size, lack of long-term follow ups.</p>	<p>No significant effect in abstinence rates detected for pharmacological therapy (RR 1.38, CI 0.92-2.07) at longest follow up. No significant effects were reported at short- or medium-term follow ups. No effects were reported by type of therapy or type of analysis. Two trials were associated with an adverse effect, but these were not associated with the therapy.</p>

Review details	Review search parameters	Included studies	Results
<p>Konghom (2010)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To search and determine risks, benefits and costs of a variety of treatments for inhalant dependence or abuse”.</p> <p>Funding source: Department of Medical Services, Ministry of Public Health, Thailand.</p>	<p>Years searched: Inception to February 2010</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Adults and adolescents (aged 13 years or more) with inhalant dependence or abuse diagnosed by any set of criteria. I - Treatment of inhalant use disorders, any kind of pharmacological or psychosocial treatment, or a combination C - 1. Placebo, 2. No intervention (e.g., those are on wait-list), 3. Treatment as usual. O - Inhalant use, self-report - Primary: 1. Number or percentage of people who return to inhalant use, 2. Number or percentage of inhalant-use days, 3. Overall discontinuation rate, 4. Discontinuation rate due to adverse events; Secondary outcomes 1. Death 2. Time to the recommencement of inhalant abuse or use 3. Craving as measured by validated scales 4. Severity of dependence, abuse, or addiction as measured by validated scales, 5. Functioning, and Health status or health-related quality of life. S - Randomised-controlled trials and controlled clinical trials (CCTs).</p> <p>Exclusion criteria: “Interventions for the prevention of inhalant use disorders, e.g., educational program, community interventions, were excluded”.</p>	<p>Number of included studies (total): 0 Study designs: NA Country: NA</p> <p>Included studies relevant to our review: NA Study designs: NA Country: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: “Due to the lack of studies meeting the inclusion criteria, no conclusion can be drawn for clinical practice. A review of cohort studies or case series may be helpful in identifying lower levels of evidence to guide the treatment of inhalant dependence and abuse”.</p>	<p>NA</p>

Review details	Review search parameters	Included studies	Results
<p>Lui (2008)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To evaluate the effectiveness of psychosocial interventions in pregnant women enrolled in alcohol treatment programs for improving birth and neonatal outcomes, maternal abstinence and treatment retention”.</p> <p>Funding source: Alcohol Education Research Council, UK.</p>	<p>Years searched: Earliest - 2007</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Pregnant or postpartum women in alcohol treatment programs. I - Psychosocial interventions for alcohol treatment. C - Other psychosocial or pharmacological treatment, placebo, no-intervention. O - Birth weight, gestational age at birth, placental abruption, FAS, admission to and time spent in hospital, abstinence and retention outcomes. S - RCT or quasi allocation methods.</p> <p>Exclusion criteria: Population: illegal drug users; Outcomes: no alcohol use reported.</p>	<p>Number of included studies (total): 0 Study designs: NA Country: NA</p> <p>Included studies relevant to our review: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: NA</p>	<p>NA</p>

Review details	Review search parameters	Included studies	Results
<p>Lumley (2009)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To assess the effects of smoking cessation interventions during pregnancy on smoking behaviour and perinatal health outcomes”.</p> <p>Funding source: Australian Commonwealth Department of Health and Ageing, 3centres Collaboration (supported by the Victorian Department of Human Services). NHS Central R & D Programme, Department of Health 1995-1996, UK. Department of Health, UK funding for EPI-Centre, London University, UK. Public Health Branch Victorian Department of Human Services, Australia. Mother and Child Health Research (LaTrobe University) formerly Centre for the Study of Mothers’ and Children’s Health (Judith Lumley) receives a funding contribution from the Victorian Health Promotion Foundation, which has a statutory responsibility for reducing tobacco use in the State of Victoria.</p>	<p>Years searched: January 2003 to June 2008 (this is an update of previously published reviews and includes also trial register searches).</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Women who are pregnant, in any care setting; Women seeking a pre-pregnancy consultation; Health professionals in trials of strategies to change knowledge, attitudes and behaviour with respect to smoking cessation. I - range of smoking cessation interventions: 1. Cognitive behaviour therapy, educational and motivational interviewing strategies (using a range of media). 2. Interventions based on stages of change (using a range of media). 3. Feedback of foetal health status or measurement of by-products of tobacco smoking to the mother. 4. Provision of rewards and incentives for smoking cessation. 5. Provision of pharmacotherapies (nicotine replacement therapy, bupropion or other pharmacological agents). 6. Other strategies, including hypnosis. C - NR. O - Smoking behaviour and perinatal health outcomes: 1. Smoking cessation (continued smoking in late pregnancy, self-reported and validated). 2. Smoking reduction from the first antenatal visit to late pregnancy self-reported and validated. 3. Smoking cessation in the puerperium, self-reported and validated. 4. Birth weight (mean birth weight, proportion less than 2500 g, less than 1500 g). 5. Gestation at birth (proportion less than 37 weeks, less than 32 weeks, less than 30 weeks). 6. Perinatal mortality (stillbirths, neonatal deaths, all perinatal deaths). 7. Mode of birth. 8. Proportion of women initiating breastfeeding; breastfeeding at three and six months after birth. 9. Measures of anxiety, depression and maternal health status in late pregnancy and after birth. 10. Participants’ views of the interventions, both women and intervention providers. 11. Measures of family functioning in late pregnancy and postpartum. 12. Measures of knowledge, attitudes and behaviour of health professionals (obstetricians, midwives and family physicians) with respect to facilitating smoking cessation in pregnancy. S - Randomised and quasi-randomised controlled trials</p> <p>Exclusion criteria: “Trials which combine strategies for smoking cessation with other interventions in pregnancy were considered for the review for smoking cessation and reduction outcomes but not for outcome measures such as birth weight, preterm birth, breastfeeding and perinatal mortality which might be attributable to other components of an intervention package”.</p>	<p>Number of included studies (total): 72 Study designs: RCTs, including cluster randomised RCTs Country: USA (39), United Kingdom (14), Netherlands (7), Australia (6), New Zealand (2), Canada (2), Latin American countries (Argentina, Brazil, Cuba and Mexico) (1), Poland (1)</p> <p>Included studies relevant to our review: 21 Study designs: NR Country: NR</p> <p>Sample sizes and follow-up: In relation to all included trials (not reported separately for relevant ones) - “Withdrawals from the trials were common. When women were recruited at their first antenatal visit some participants had a miscarriage or a termination of pregnancy before the time when smoking behaviour was reassessed. Others moved out of the area or changed to another provider of care. The latter was a common cause of attrition in those trials carried out among populations characterised by severe poverty and the receipt of special needs benefits such as Medicaid, or WIC (food program for women, infants and children) clinics. In studies where there was longer-term follow up, attrition was sometimes high; approximately half of the included studies had high levels of missing data (> 20%) for some outcomes”.</p> <p>Quality of included studies as assessed by review authors: In relation to all included trials (not only relevant trials) - “The studies included in the review were of mixed quality. For educational and counselling interventions blinding of participants, clinical staff and outcome assessors was frequently not feasible and rarely attempted. [...] Levels of attrition were generally high, particularly for outcomes where information was collected by postal questionnaire months after the initial intervention” “The method of randomisation was rarely described in sufficient detail to permit assessment of whether the allocation was concealed at the time of trial entry”. “It was not clear in many trials the extent of outcome data which were collected and therefore, difficult to assess whether the outcomes have been selectively reported.” Particularly the earlier trials relied on self-report data which was considered less reliable if collected in healthcare settings.</p> <p>Limitations identified by review authors: Major limitation was potential misclassification of smoking by self-report, lack of biochemical validation, very high level of heterogeneity amongst the trial results.</p>	<p>“The 21 trials with information on perinatal outcomes revealed a reduction in low birth weight (RR 0.83, 95% CI 0.73 to 0.95), a reduction in preterm birth (RR 0.86, 95% CI 0.74 to 0.98), and an increase in mean birth weight of 39.26 g (95% CI 15.77 g to 62.74 g) in the treatment group. There was adequate power to detect differences for these outcomes (n = > 10 000). Trials using CBT and incentives as the main intervention strategy demonstrated statistically significant improvements in mean birth weight.”</p> <p>“There were no statistically significant differences in neonatal intensive care unit admissions; very low birth weight, stillbirths, perinatal or neonatal mortality but these analyses had very limited power”.</p> <p>“A follow up of MacArthur’s trial [...] assessed subsequent child growth and development at nine to 10 years. Neither height nor weight, nor intelligence quotient (IQ) or a screening test for ‘soft’ neurological signs identified any differences between the intervention and control groups. Two trials measured mode of delivery (Tappin 2005; Thornton 1997) and showed no significant difference in outcome by intervention group. Two trials measured breastfeeding initiation (McLeod 2004; Panjari 1999) and showed no significant difference in initiation or duration of breastfeeding in control or intervention arms.” “Heil (2008) reported significant increases in fetal growth measures including birth weight, fetal femur length and fetal abdominal circumference, but no significant difference in lean thigh area, head circumference or biparietal diameter. MacArthur (1987) reported a small difference in mean infant length at birth, but no difference in head circumference”.</p> <p>“NRT in this review does not appear to have a significant advantage over other types of interventions in terms of smoking cessation in subgroup analysis, but there has been no direct comparison of NRT outcomes with any other strategy.” “The safety of NRT in terms of effect on fetal development and birth outcomes remains unclear in pooled data from this review.” Some studies indicated potential adverse effects.</p>

Review details	Review search parameters	Included studies	Results
<p>Maziak (2007)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To evaluate the effectiveness of tobacco cessation interventions for waterpipe users”.</p> <p>Funding source: US Public Health Service Grants TW05962, TW07233 USA; Initiative for Cardiovascular Health Research in the Developing Countries (IC-Health), India.</p>	<p>Years searched: start date NR - February 2011</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Current (past month) users of waterpipes for tobacco smoking, at any age and of either gender. I - Waterpipe smoking cessation interventions. Interventions can be pharmacological (including, for example, nicotine replacement therapy (NRT) or bupropion) or behavioural, or both, and can be directed at individual waterpipe users or at groups of users. C - NR. O - Abstinence from tobacco use, preferably sustained and biochemically verified, for at least six months from the start of the intervention. S - Randomized, quasi-randomized or cluster-randomized controlled trials.</p> <p>Exclusion criteria: “We only include tobacco cessation interventions, and have not considered trials of prevention of uptake”.</p>	<p>Number of included studies (total): 0 Study designs: NA Country: NA</p> <p>Included studies relevant to our review: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: NA</p>	<p>NA</p>

Review details	Review search parameters	Included studies	Results
<p>McGuire (2001)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: To determine the effect of naloxone on the need for or duration of ventilatory support or neonatal unit admission in newborn infants who have been exposed in-utero to narcotics.</p> <p>Funding source: Tayside Institute of Child Health, Ninewells Hospital and Medical School, Dundee, UK. Tayside University Hospitals Trust, Dundee, UK. No external support.</p>	<p>Years searched: Inception to February 2007</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Newborn infants cared for in a hospital setting, with suspected or confirmed exposure to opiates, either 1. As maternal pain relief prior to delivery 2. As a result of use during pregnancy. I - Administration of naloxone. C - Placebo or no drug or more than one dose of naloxone. O - Primary outcomes: 1. Need for assisted ventilation (any form of mechanical ventilation including continuous positive airway pressure) in the neonatal period 2. Duration of assisted ventilation (days) 3. Admission to neonatal intensive care unit or special care baby unit in the neonatal period 4. Duration of neonatal intensive care unit or special care baby unit admission (days) Secondary outcomes: 1. Time, from birth, to establish full oral feeds, independently of parenteral fluids or nutrition or of enteral tube feeding 2. Features of opiate withdrawal, using validated behavioral assessment measures in the neonatal period 3. Seizures in the neonatal period 4. Neurodevelopmental outcomes during infancy and beyond using validated assessment tools 5. Measures reflecting respiratory function, such as Apgar score, or arterial blood pH or arterial or alveolar carbon dioxide tension measured within the first six hours after birth S - Controlled trials utilizing either random or quasi-random patient allocation.</p> <p>Exclusion criteria: NR.</p>	<p>Number of included studies (total): 9 Study designs: All RCTs Country: NR.</p> <p>Included studies relevant to our review: 0 Study designs: NA Country: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: In relation to all included trials (no relevant trials)- "All of the trials were small and none presented a power or sample size calculation. Most reports did not provide any details of measures to ensure allocation concealment. Therefore, it is unclear if the assignment of infants to naloxone or no drug could be predicted. In most trials the intervention was not blind to the caregivers or assessors. All of the trials appear to have achieved complete or near-complete follow-up of infants recruited, although none of the trials undertook follow up beyond the first three days after birth".</p> <p>Limitations identified by review authors: NR.</p>	<p>"No trials that examined the effects of naloxone in infants of mothers who had used a prescribed or non-prescribed narcotic during pregnancy were identified".</p> <p>In relation to trials where women used opiate-based pain relief in labour - "This review did not find any evidence that naloxone reduces the need for assisted breathing or admission to neonatal care units for babies born after women used opiate-based pain relief in labour [...] There was some evidence that infants who received naloxone had increased alveolar ventilation, higher expired carbon dioxide levels and lower alveolar carbon dioxide tensions than control infants. However, the clinical significance of these findings is unclear. Similarly, although there is some evidence from one study that naloxone results in a shorter time to habituate to auditory stimuli (Wiener 1977b), the clinical relevance of this finding is unknown. No data were reported on clinically important neurological or behavioral outcomes in the neonatal period or on any longer term outcomes".</p>

Review details	Review search parameters	Included studies	Results
<p>Minozzi (2008)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To assess the effectiveness of any maintenance treatment alone or in combination with psychosocial intervention compared to no intervention, other pharmacological intervention or psychosocial interventions on child health status, neonatal mortality, retaining pregnant women in treatment, and reducing use of substances”.</p> <p>Funding source: No external funding. Internal source: Department of Epidemiology, ASL RM E, Italy</p>	<p>Years searched: Inception - 2007, no restrictions for publication year</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Opiate dependent pregnant women of any age irrespective of duration of pregnancy. No restriction for women with physical or psychological illness. I - Any maintenance treatment alone or in combination with psychosocial intervention. C - No intervention, other pharmacological intervention or psychosocial interventions alone. O - Child health status, neonatal mortality, retaining pregnant women in treatment, and reducing use of substances - Primary outcomes For the woman (1) drop out from treatment as measured by: number of women dropped out at the end of the intervention, (2) use of primary substance as measured by: number of women using heroin at the end of treatment confirmed by urine analysis, (3) results at follow up as measured by: number of women using heroin at the end of follow up (after the childbirth), drop out from treatment at the end of follow up (after the childbirth); For the child (4) health status measured as: birth weight, APGAR score (Activity, Pulse, Grimace, Appearance, and Respiration score), Neonatal Abstinence Syndrome (NAS), prenatal and neonatal mortality. S - Randomised controlled trials and quasi randomised controlled trials.</p> <p>Exclusion criteria: “Studies started after the delivery will be excluded”.</p>	<p>Number of included studies (total): 3 Study designs: RCTs Country: 2 Austria, 1 USA</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Three studies with 96 participants, although sample sizes for comparisons in meta-analyses varied (due to differences in outcomes measured). Sample sizes very small at 18, 30 and 48 participants total. Follow up mean: 15-18 weeks. Dropout rate was one of the primary outcomes (reported in results section).</p> <p>Quality of included studies as assessed by review authors: “The methodological quality of included studies is good for the two studies comparing methadone with buprenorphine whereas the study which compares methadone with morphine has some methodological flow [sic]. The sample size is very small in all studies, so we cannot exclude the possibility that the non significant results could be done to second type error”. “All the studies were randomised controlled trials. The allocation concealment was adequate in two studies (Fischer 2006, Jones 2005) and unclear in the third study (Fischer 1999). Two studies were double blind (Fischer 2006, Jones 2005) and one was unblinded (Fischer 1999). The outcome assessor was blind in two studies (Fischer 2006, Jones 2005) and unblinded in the third study (Fischer 1999). Sensitivity analysis excluding studies with inadequate allocation concealment was not performed because none of the included studies had inadequate allocation concealment”.</p> <p>Limitations identified by review authors: The level of nicotine exposure during pregnancy does affect birth weight and could affect NAS but cigarette consumption was only considered in one study, small sample sizes, small number of trials, short follow up.</p>	<p>“We found few differences in neonatal or maternal outcome in women who received methadone compared to either buprenorphine or oral slow morphine.”</p> <p>“For the women there was no difference in dropout rate RR 1.00 (95% CI 0.41 to 2.44) and use of primary substance RR 2.50 (95% CI 0.11 to 54.87) between methadone and buprenorphine, whereas oral slow morphine seemed superior to methadone in abstaining women from the use of heroin RR 2.40 (95% CI 1.00 to 5.77).” “Only one study reported on the number of cigarettes the women smoked, a mean of 29 cigarettes per day at enrolment and 14 cigarettes per day at delivery”.</p> <p>“For the newborns in one trial buprenorphine seemed better than methadone for birth weight [WMD -530 gr (95% CI -662 to -397 gr)], but this result is not confirmed in the other trial. For the APGAR score both studies which compared methadone with buprenorphine didn’t find significant difference. For NAS none of measures used by studies found a statistically significant difference between the two treatments. The study which compares methadone with oral slow morphine didn’t find any statistically significant difference for birth weight and mean duration of NAS. The APGAR score wasn’t considered by the study.” “Length of hospital stay: one study (Jones 2005), 21 participants, WMD 1.30 (95% CI 0.60 to 2.00); the result is in favour of buprenorphine”.</p>

Review details	Review search parameters	Included studies	Results
<p>Minozzi (2009)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: To assess the effectiveness of any maintenance treatment alone or in combination with psychosocial intervention compared to no intervention, other pharmacological intervention or psychosocial interventions on retaining adolescents in treatment, reducing the use of substances and reducing health and social status.</p> <p>Funding source: Internal: Department of Epidemiology ASL RM E, Italy. No external sources of support.</p>	<p>Years searched: Inception - August 2008</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Opiate dependent adolescents (up to 18 years old). No restriction for subjects with physical or psychological illness. I - Any opioid agonist treatment (methadone, buprenorphine, LAAM, heroin) alone or associated with psychosocial intervention for maintenance treatment. C - No intervention or Different opioid agonist treatments or Other pharmacological interventions or Any Detoxification intervention or Psychosocial interventions alone. O - Primary outcomes 1. Dropouts measured as number of subjects that did not complete the maintenance treatment 2. Use of primary substance measured as number of subjects with opiate positive urinalysis during and at the end of treatment or/and self reported data 3. Results at follow up measured as number of subjects relapsed at the end of follow up Secondary outcomes 1. Use of other substances of abuse 2. Side effects 3. Mortality any cause 4. Nonfatal overdose 5. Criminal activity 6. Social functioning (integration at school or at work, family relationship). S - Randomised controlled trials (RCTs) and clinical controlled trials (CCTs).</p> <p>Exclusion criteria: NR.</p>	<p>Number of included studies (total): 2 Study designs: 1 multi centre randomised controlled trial, 1 controlled trial (unclear if randomised or not) Country: USA</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample size 35 in one and 154 (152 randomised) in other trial. Drop out NR. In one study, "patients were contacted at all assessment point regardless of whether they remained in treatment".</p> <p>Quality of included studies as assessed by review authors: "One study (Lehmann 1973) is very old (published in 1973) and of very low quality: it is not specified if it is a randomised study also if it is declared that it was double blind, the study does not report any information about sequence generation and allocation concealment, does not report data about drop out and does not report figures about the outcomes which are assessed but only narrative description. The other study (Woody 2008) has been judged to be a low risk of bias for all domains but allocation concealment which appears to be inadequate".</p> <p>Limitations identified by review authors: NR.</p>	<p>Comparison 1: any pharmacological maintenance treatment versus other pharmacological treatment: LAAM vs. methadone - Substance use: "the authors reported that there were no urine positives for non prescribed drugs in both groups"; no follow-up data reported. - Side effects: "the authors reported that no side effects such as nausea, vomiting, constipation, weakness or fatigue were reported". - Social functioning (integration at school or at work, family relationship): "authors reported that there were no difference between groups in performances of job functions which improved during the fourth week of treatment, athletic involvement, high school and education involvement which started only after the eighth week of treatment, community and home improvement which improved after the fourth week of treatment".</p> <p>Comparison 2: maintenance treatment vs. detoxification treatment: buprenorphine-naloxone maintenance for 9 weeks then tapered to 12 week vs. buprenorphine detoxification 14 days. - Use of substance of abuse: no significant difference at the end of treatment. Results at follow up: "RR 0.73 (95%CI 0.57, 0.95) in favour of maintenance treatment". - Use of other substances of abuse: "no significant difference for alcohol and marijuana; RR 0.12 (95%CI 0.02, 0.90) in favour of maintenance treatment". - Side effects: "the authors reported that no serious side effects attributable to buprenorphine - naloxone were reported and no patients were removed from the study for side effect. The most common side effect was headache, which was reported by 16% - 21% of patients in both groups". - Mortality any cause: "one death for methadone overdose (as reported by the medical examiner report) occurred in the maintenance group in a patients who dropped out after 3 doses and was not located until her obituary appeared in a newspaper three months later. No further information is reported in the study". - Drop out of treatment: "RR 0.37 (95% CI 0.26 - 0.54) in favour of maintenance treatment".</p> <p>Summary: "Maintenance treatment seems more efficacious in retaining patients in treatment but not in reducing patients with positive urine at the end of the study. Self reported opioid use at 1 year follow up was significantly lower in the maintenance group even if both group reported high level of opioid use and more patients in the maintenance group were enrolled in other addiction treatment at 12-month follow up."</p>

Review details	Review search parameters	Included studies	Results
<p>Moreira (2009)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “To determine whether social norms feedback reduces alcohol misuse in university or college students”.</p> <p>Funding source: Internal: Oxford Brookes University-School of Health and Social Care, UK. External sources: FCT-Fundação ciência e tecnologia, Portugal. AERC - Alcohol Education and Research Council, UK. ERAB -European Research Advisory Board, Belgium.</p>	<p>Years searched: Inception - March 2008</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Students from university or college settings. I - Social norms intervention: Universal personalised normative feedback to individuals, where all students are asked to participate regardless of drinker status or risk level; Targeted interventions focusing on members of a particular group, such as first-year students, fraternity and sorority members, athletes, members of an academic class, or individuals who are deemed to be at higher risk of alcohol problems; Social Norms Marketing Campaigns, e.g. community-wide electronic and/or print media campaigns that refer to normative drinking patterns. C - No social norms intervention - assessment only, questionnaire used to measure alcohol consumption or alternative educational or psychosocial intervention O - Primary outcomes 1. Alcohol use and misuse as measured by self-reported measures of consumption (e.g. self reported daily drinking questionnaire), including quantity-frequency measures (e.g. quantity frequency scale), binge drinking (e.g. 4 or more drinks for women or 5 of more drinks for men), calculated blood alcohol content (BAC), calculated Peak BAC and drinking norms (e.g. drinking norms rating form). Secondary outcomes: Measures of alcohol related problems (e.g. Rutgers Alcohol Problems Index) that include questions regarding: 1. Adverse legal events as a consequence of alcohol i.e. violence, driving offences 2. Inappropriate risky behaviours (e.g. sex without use of condom) 3. Alcohol related injuries 4. Illicit drugs consumption (e.g. marijuana, cocaine). S - Randomised control trials with individual or cluster designs.</p> <p>Exclusion criteria: NR.</p>	<p>Number of included studies (total): 22 Study designs: RCT Country: All of the studies were conducted in the USA, with the exception of three studies conducted in New Zealand.</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample sizes ranged from 37 to 2,936 participants. Majority of studies involved > 100 participants. Several studies reported outcomes for more than one follow-up period. The follow-up periods of included studies varied from the immediate post-intervention period (1 study) to 12 months (4 studies) and longer: one study followed up participants for more than a year; two studies had a follow-up of three years; and one followed-up their students for four years. Majority of studies had attrition rates between 10 and 20 %. A few studies reported attrition of up to 35%. “Twelve of the studies did not perform an intention-to treat analysis, and had moderate to high levels of attrition, so we therefore regarded them as at high risk of bias”.</p> <p>Quality of included studies as assessed by review authors: “Several sources of potential bias in the individual studies were detected: e.g. lack of blinding of students or researchers, use of self reported outcome measures. Only a few studies reported how important aspects of study design were conducted, such as concealment of treatment allocation and handling of missing data, making it difficult to assess the risk of bias. Lack of adequate allocation concealment, blinding and analysis is associated with overestimation of intervention effects, and therefore we cannot rule out the possibility that the effects observed in this review may be exaggerated due to methodological limitations.”</p> <p>Limitations identified by review authors: Small number of studies available, particularly for longer term follow-up, substantial heterogeneity, limited generalizability due to the nature of the samples recruited into the trials (majority of studies recruited from psychology courses or included high risk students only), not able to isolate effect of social norms feedback within individual face-to-face feedback as this typically involved social norms feedback as one aspect of a broader motivational interviewing intervention; it is not possible to infer which delivery mode is most effective, via web/computer or individual face-to-face sessions, as no studies directly compared these two options.</p>	<p>Immediate short-term outcomes (Up to 3 months follow-up) Alcohol related problems: Significant reduction with Web/computer feedback (WF) (SMD-0.31 95%CI -0.59 to -0.02), three studies, 278 participants. No significant effect of mailed feedback (MF), individual face-to-face feedback (IFF) or group face-to-face feedback (GFF).</p> <p>Peak Blood Alcohol Content (BAC): Significant reduction with WF (SMD-0.77 95%CI -1.25 to -0.28), two studies, 198 participants. No significant effect of MF or IFF.</p> <p>Drinking Frequency: Significant reduction with WF (SMD -0.38 95%CI -0.63 to -0.13), two studies, 243 participants and IFF (SMD -0.39 95% CI -0.66 to -0.12), two studies, 217 participants. No significant effect of MF.</p> <p>Drinking Quantity: Significant reduction with WF (SMD -0.35 95% CI -0.51 to -0.18), five studies, 556 participants and GFF (SMD -0.32 95% CI -0.63 to -0.02) three studies, 173 participants. No significant effect of MF or IF.</p> <p>Binge drinking: Significant reduction with WF (SMD -0.47 95% CI -0.92 to -0.03) one study, 80 participants, IFF (SMD -0.25 95% CI -0.49 to -0.02) three studies, 278 participants and GFF (SMD -0.38 95% CI -0.62 to -0.14) four studies, 264 participants. No significant effect for MF.</p> <p>BAC: No significant effect of MF and IFF</p> <p>Drinking norms: Significant reduction with WF (SMD -0.75 95% CI -0.98 to -0.52) three studies, 312 participants</p> <p>“Significant effects were more apparent for short term outcomes (up to three months). However, there was some evidence of effect continuing through to medium-term follow-up from four to sixteen months, particularly for web/computer feedback”.</p> <p>“For social norms interventions which were designed specifically for women or men separately, there was no evidence that the gender-specific interventions were more efficient than a general social norms intervention. However, there was limited evidence from only two small studies reporting results for few outcomes”.</p>

Review details	Review search parameters	Included studies	Results
<p>Müller-Riemenschneider (2008)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: To evaluate the long-term effectiveness of recent behavioural interventions in the prevention of cigarette use among children and youth and to compare the effectiveness of different school-based, community based and multisectorial intervention strategies.</p> <p>Funding source: German Institute of Medical Documentation and Information (DIMDI).</p>	<p>Years searched: August 2001-August 2006</p> <p>Language restrictions: Several languages included</p> <p>Inclusion criteria (according to PICOS): P - Youths up to 18 years of age. I - NR (behavioural interventions to prevent smoking). C – NR. O - Suitable outcome measure smoking behaviour. S - Randomised controlled trials if they were of a duration of at least 12 months. Published in English or German between August 2001 and August 2006.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 35 Study designs: RCTs, mostly cluster randomised Country: 20 USA, 3 UK, 3 Australia, 2 Canada, 2 Netherlands, 1 each from India, China, Germany, Ireland and Europe (not further specified) - most variety in relation to school based programmes; studies of community and multisectorial programmes mostly from USA.</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample sizes were rather large, as all studies involved at least 500 participants. Sample sizes ranged from 514 to 20,166 participants. For school based interventions, all good/high quality studies had over 1,000 participants. The follow-up duration ranged from 12 months to 120 months. A number of studies had retention rates < 50 % but these were classed as fair quality. High quality studies mostly had retention rates > 80 %.</p> <p>Quality of included studies as assessed by review authors: Used standardised quality checklists employed by DIMDI (German Institute of Medical Documentation and Information). Synthesis included only studies judged to be of small to moderate risk of bias. In sensitivity analysis also fair-quality studies. "More than half of [included studies were rated] as being of good or high methodological quality. Reasons for limited methodological quality included inadequate descriptions of allocation methods; missing descriptions of baseline characteristics or of statistical analysis; and low follow-up rates. In addition, only a limited number of studies blinded participants or investigators to the intervention, validated outcome measures, or performed an intention-to-treat analysis". 14 classified as school-based of which 8 high/good quality, 10 classified as community based of which 7 high/good quality, 11 classed as multisectorial of which 6 judged as high/good quality.</p> <p>Limitations identified by review authors: Heterogeneity between studies could explain varying degree of intervention effectiveness, control groups described as 'no intervention' but likely to have received standard drug education, publication bias was shown to exist - likely to overestimate effects, classification into school-based, community based, or multisectorial can mask that these three categories include a very diverse set of interventions, study selection criteria and the classification of intervention strategies differed from those used in other reviews which may explain differences between this and other reviews, intervention strategies were seldomly tested against each other.</p>	<p>Meta-analysis of school-based interventions (excluding fair quality studies) - outcomes at 12 months or more Lifetime smoking NS at OR 0.94 (CI 0.78, 1.13), 5 studies, heterogeneity I²>50%. 30-day smoking NS at OR 0.87 (CI 0.69, 1.11), 4 studies, heterogeneity I²>50%. Regular smoking NS at OR 0.88 (CI 0.74, 1.06), 4 studies, heterogeneity I²>50%.</p> <p>Meta-analysis of community-based interventions (excluding fair quality studies) - outcomes at 12 months or more Lifetime smoking NS at OR 0.77 (0.53, 1.11), 5 studies, heterogeneity I²>50%. 30-day smoking effective at OR 0.85 (0.72 to 0.99), 3 studies, no heterogeneity detected. Regular smoking NR.</p> <p>Meta-analysis of multi-sectorial interventions (excluding fair quality studies) - outcomes at 12 months or more. Lifetime smoking effective at OR 0.73 (CI 0.64, 0.82), 3 studies, no heterogeneity detected. 30-day smoking NS at OR 0.79 (CI 0.61 to 1.02), 1 study, no heterogeneity detected. Regular smoking effective at OR 0.59 (0.42 to 0.83), 1 study, no heterogeneity detected.</p> <p>"The intervention effects reported for community-based and multisectorial strategies were not only more consistent than those observed for school-based strategies they also resulted in a larger reduction in smoking rates. Indeed; whereas the greatest reduction in smoking rates among school-based strategies was only 3.6%, community-based and multi-sectorial interventions reported reductions of up to 10%".</p> <p>"Specific intervention components were investigated only infrequently. However, family-based interventions were used in many community-based and multisectorial intervention strategies. Although it was difficult to identify their specific impact, there seems to be some evidence for the additional effectiveness of this approach. In order to achieve reductions in smoking rates, however, it appears that providing smoking related information to parents was not sufficient on its own, but rather that the family members needed to be actively involved. Activities targeted at parents who smoke were found to be especially effective". "Few studies specifically tested different intervention strategies against each other. Spoth et al observed a greater reduction in smoking rates when school-based life skills training and an additional family-strengthening intervention were used. This difference did not reach statistical significance,</p>

Review details	Review search parameters	Included studies	Results
			<p>however. Similarly, Perry et al observed substantial intervention effects associated with the DARE-Plus intervention compared to the DARE intervention, although only among boys. Conversely, Furr-Holden et al demonstrated that, compared to control, a classroom-centred intervention had greater intervention effects than did a family-school partnership; however, these two interventions were not formally tested against one another”.</p> <p>“Two methodologically reliable studies targeted children between 5 and 10 years. These studies found strong evidence of intervention effectiveness.”</p>

Review details	Review search parameters	Included studies	Results
<p>Myung (2009)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “Examined the effects of Web- and computer-based smoking cessation programs in RCTs”.</p> <p>Funding source: Centers for Disease Control and Prevention through Cooperative Agreement U48/DP000033.</p>	<p>Years searched: Inception - August 2008</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Current smokers. I - Web- or computer-based smoking cessation program. C - NR. O - “The principal outcome measures included point-prevalence abstinence, sustained abstinence, prolonged abstinence, and continuous abstinence. Biochemical validation was not required in the current study”. S - RCTs with at least 3 months of follow-up data.</p> <p>Exclusion criteria: “Trials involving smokeless tobacco (ST) users and quasi-experimental trials were excluded from this study.”</p>	<p>Number of included studies (total): 22 Study designs: RCTs Country: United States (n=13), United Kingdom (n=4; 1 trial involved the Republic of Ireland), Australia (n=2), Germany (n=1), Norway (n=1), and Switzerland (n=1).</p> <p>Included studies relevant to our review: 3 Study designs: RCTs Country: NR</p> <p>Sample sizes and follow-up: Sample sizes in relevant trials were 139 (70 intervention / 69 control), 351 (181 i / 170 c), and 1090 participants (547 i / 543 c). Follow-up periods 3 months, 36 weeks, and 12 months. Attrition rates: ~11%, 33.9%, 47/58%. In one study there appeared to be greater attrition in the control group.</p> <p>Quality of included studies as assessed by review authors: Jadad 5-point scale. Overall, there were 10 trials considered to be of high quality, and 12 trials considered to be of low quality. No details provided for individual studies. Results did not differ by methodological quality.</p> <p>Limitations identified by review authors: Small number of trials, small sample sizes.</p>	<p>Web- or computer-based smoking cessation programs did not significantly increase the abstinence rate in adolescent populations: “Regarding age group, the Web- or computer-based smoking cessation programs obtained a significantly greater abstinence rate for adults (RR, 1.49; 95% CI, 1.31-1.70; I2=58.2%; n=19) but not for adolescents (RR, 1.08; 95%CI, 0.59-1.98; I2=65.3%; n=3)”.</p> <p>Taking all trials into account (not limited to studies in young people) - “The effect of the Web- or computer-based intervention was statistically significant in both the high-quality (RR, 1.48; 95% CI, 1.18-1.85; I2=67.9%; n=10) and low-quality trials (RR, 1.42; 95% CI, 1.20-1.68; I2=57.0%; n=12)”.</p>

Review details	Review search parameters	Included studies	Results
<p>Osborn (2010a)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: To assess the effectiveness and safety of using a sedative compared to a non-opiate control for NAS due to withdrawal from opiates, and to determine which type of sedative is most effective and safe.</p> <p>Funding source: Internal: RPA Newborn Care, Royal Prince Alfred Hospital, Sydney, Australia. External: Australian Satellite of the Cochrane Neonatal Group, Australia.</p>	<p>Years searched: Inception - September 2010</p> <p>Language restrictions: unclear</p> <p>Inclusion criteria (according to PICOS): P - infants in the neonatal period with Neonatal abstinence syndrome (NAS) born to mothers with an opiate dependence I - sedative (e.g. clonidine, a benzodiazepine, barbiturate or neuroleptic agent) C - another sedative or non-opiate control (either placebo, usual management of the newborn infant or non-pharmacological treatment designed to settle infant and mother, establish feeding and facilitate mother-infant interaction). O - Primary outcomes 1. Treatment failure: including failure to achieve control defined as a failure to reduce a standardised score of NAS from a clinically significant level to a clinically 'safe' level defined by author of trial, or the use of additional pharmacological treatments for control of NAS in the neonatal period; 2. Seizures; 3. Neonatal and infant mortality; 4. Neurodevelopmental outcome. Secondary outcomes 1. Time to control of NAS (control of symptoms or reduction of NAS score to a clinically 'safe' level); 2. Duration of admission to newborn nursery; 3. Duration of hospitalisation (days); 4. Time to establishment of full sucking feeds; 5. Success of breast feeding (e.g. absence of complementary formula feeds, adequate weight gain whilst breast feeding); 6. Rate of weight gain; 7. Side effects occurring after commencement of therapy: a) apnoea, b) need for resuscitation, c) need for mechanical ventilation d) any other; 8. Duration of treatment of NAS (days); 9. Disruption to the mother infant relationship (e.g. separation of mother and infant, admission to a newborn nursery, failure to successfully breast feed, maternal depression, or parental dissatisfaction). S - Trials using random or quasi-random patient allocation with > 80% follow-up</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 7 Study designs: 3 Randomised or 3 quasi-randomised trials (quasi-random, e.g. allocated according to first letter of surname), 1 study mixed approach Country: NR</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample sizes ranged from 20 to 107, mostly small studies. Overall 385 infants across the 7 trials. Attrition NR. Authors state, "Few losses to follow up were reported by the individual studies, although in some cases this could have been by omission".</p> <p>Quality of included studies as assessed by review authors: "There were substantial methodological concerns for most studies including the use of quasi-random allocation methods and sizeable, largely unexplained differences in reported numbers allocated to each group." "Agthe (2009) reported infants in Clonidine + DTO group had significantly lower mean birth weight. Two studies (Finnegan 1984; Kaltenbach 1986) reported stopping enrolment in the diazepam arm early due to an interim analysis demonstrating the possibility of adverse effects. None of the other studies provided sufficient detail of reporting to be clear about balance of groups after randomisation or other potential biases". "Agthe (2009) met criteria for studies of good methodology with adequate randomisation and allocation concealment, blinding of intervention and no losses to follow up".</p> <p>Limitations identified by review authors: Lack of information concerning long term neurodevelopmental outcomes, further trials regarding drug safety needed, small sample size (overall 385 infants enrolled in reviewed trials). It is unclear whether the effect on duration of hospital stay was due to a policy of keeping the infants in hospital whilst receiving pharmacological therapy.</p>	<p>"One study reported phenobarbitone compared to supportive care alone did not reduce treatment failure or time to regain birth weight, but resulted in a significant reduction in duration of supportive care (MD -162.1 min/day, 95% CI -249.2, -75.1). Comparing phenobarbitone to diazepam, meta-analysis of two studies found phenobarbitone resulted in a significant reduction in treatment failure (typical RR 0.39, 95% CI 0.24, 0.62). Comparing phenobarbitone with chlorpromazine, one study reported no significant difference in treatment failure. In infants treated with an opiate, one study reported addition of clonidine resulted in no significant difference in treatment failure, seizures or mortality. In infants treated with an opiate, one study reported addition of phenobarbitone significantly reduced the proportion of time infants had a high abstinence severity score, duration of hospitalisation and maximal daily dose of opiate". "Of concern was the occurrence of adverse events in the clonidine group (one infant with a seizure, one an arrhythmia and three with post-discharge death), although none of these events were ascribed to the use of clonidine".</p>

Review details	Review search parameters	Included studies	Results
<p>Osborn (2010b)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: To assess the effectiveness and safety of using an opiate compared to a sedative or non-pharmacological treatment for treatment of NAS due to withdrawal from opiates.</p> <p>Funding source: Internal: RPA Newborn Care, Royal Prince Alfred Hospital, Sydney, Australia. No external sources.</p>	<p>Years searched: Inception - October 2010</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - Infants with neonatal abstinence syndrome (NAS) in the neonatal period born to mothers with opiate dependence I - Opiate treatment (such as tincture of opium, paregoric, morphine or methadone). C - Placebo or no treatment or other opiate or sedative (e.g. clonidine, a benzodiazepine, barbiturate or neuroleptic agent) or non-pharmacological treatments (e.g. swaddling, settling, massage, relaxation baths, pacifiers or waterbeds). O - Primary outcomes 1. Treatment failure: including failure to achieve control defined as a failure to reduce a standardised score of NAS from a clinically significant level to a clinically 'safe' level defined by author of trial, or the use of additional pharmacological treatments for control of NAS in the neonatal period. 2. Seizures. 3. Neonatal and infant mortality. 4. Neurodevelopmental outcome. Secondary outcomes 1. Time to control of NAS (control of symptoms or reduction of NAS score to a clinically 'safe' level). 2. Duration of admission to a newborn nursery. 3. Duration of hospitalisation (days). 4. Time to establishment of full sucking feeds. 5. Success of breast feeding (e.g. absence of complementary formula feeds, adequate weight gain whilst breast feeding). 6. Rate of weight gain. 7. Side effects occurring after commencement of therapy - a) apnoea, b) need for resuscitation, c) need for mechanical ventilation. 8. Duration of treatment of NAS (days). 9. Disruption to the mother infant relationship (e.g. separation of mother and infant, admission to a newborn nursery, failure to successfully breast feed, maternal depression, or parental dissatisfaction). S - Randomized or quasi-randomized controlled trials</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 9 Study designs: 3 RCTs using random numbers, 3 quasi-RCTs, 3 RCTs where randomisation methods not described Country: NR although funding sources suggest USA and Germany for some studies</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample sizes ranged from 26 to 139. Overall 645 across all included trials. No details on attrition. "Few losses to follow up were reported by the individual studies, although this could have been by omission".</p> <p>Quality of included studies as assessed by review authors: "There were substantial methodological concerns in all studies comparing an opiate with a sedative. Two small studies comparing different opiates were of good methodology".</p> <p>Limitations identified by review authors: Concerning one study: "It is unclear whether the effect on duration of hospital stay was due to a policy of keeping the infants in hospital whilst receiving pharmacological therapy".</p>	<p>Opiate (morphine) versus supportive care (one study): A reduction in time to regain birth weight (MD -2.8 days, 95%CI -5.3, -0.3) and duration of supportive care (MD -197.2 min/day, 95% CI -274.2, -120.3) and a significant increase in hospital stay (MD 15.0 days, 95% CI 8.9, 21.1) was noted. No significant difference in treatment failure (80 infants, RR 1.29, 95% CI 0.41, 4.07).</p> <p>"This review finds limited evidence from one quasi-random study that morphine and supportive care compared to supportive care alone does not affect treatment failure rate, but results in a significant reduction in time to regain birth weight and duration of supportive care at the cost of increased hospital stay".</p> <p>Opiate versus phenobarbitone (four studies): Meta-analysis found no significant difference in treatment failure (302 infants, typical RR 0.76, 95% CI 0.51, 1.11). One study reported opiate treatment resulted in a significant reduction in treatment failure in infants of mothers using only opiates. One study reported a significant reduction in days treatment and admission to the nursery for infants receiving morphine. One study reported a reduction in seizures, of borderline statistical significance, with the use of opiate. "There is conflicting evidence whether use of an opiate results in a reduction of treatment failure for infants with opiate withdrawal".</p> <p>Opiate versus diazepam (two studies): Meta-analysis found a significant reduction in treatment failure with the use of opiate (86 infants, RR 0.43, 95% CI 0.23, 0.80).</p> <p>Different opiates (six studies): there is insufficient data to determine safety or efficacy of any specific opiate compared to another opiate.</p>

Review details	Review search parameters	Included studies	Results
<p>Peadon (2009)</p> <p>Study design: Systematic review</p> <p>Author objectives: A systematic review of the literature to identify and evaluate the evidence for pharmacological and non-pharmacological interventions for children with FASD.</p> <p>Funding source: Drug and Alcohol Services, South Australia</p>	<p>Years searched: Inception - January 2009</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Children with FASD aged under 18 years. I - Pharmacological or non-pharmacological (behavioural, speech therapy, occupational therapy, physiotherapy, psychosocial and educational interventions and early intervention programs). C - No treatment, waiting list, usual therapy or placebo. O - Measures of physical and mental health, developmental status, cognitive status, quality of life, educational attainment, employment, contact with the law and substance abuse. S - Randomized controlled trials (RCT), quasi RCT, controlled trials and pre- and post-intervention studies.</p> <p>Exclusion criteria: NR.</p>	<p>Number of included studies (total): 12 Study designs: six RCT; one quasi-RCT; one controlled trial; four pre- and post- intervention studies Country: 7 USA, 3 Canada, 2 South Africa</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: By category: pharmacological interventions (2 studies - total n participants = 16), educational and learning strategies (7 studies - total n = 167), social skills and communication (2 studies - total n = 101), behavioural intervention (1 study - n = 20). By study: sample sizes ranged from 1 to 100. Three largest studies were 61, 65 and 100 participants; remainder had 32 participants or fewer. Follow-up length very short; appears to have been immediate post-intervention in most cases or a few weeks post-intervention. Follow-up rates were consequently good, over 90% in all applicable cases, including larger studies.</p> <p>Quality of included studies as assessed by review authors: “Methodological weaknesses were common, including small sample sizes; inadequate study design and short term follow up”. “Pre- and post-assessments and retrospective reviews are frequently used rather than RCT and in the RCT we identified, the method of randomization, allocation concealment, and blinding are rarely described”. “Significant methodological problems limit the extent to which conclusions can be drawn”.</p> <p>Limitations identified by review authors: Poor methodological quality, inadequate study designs (not RCTs), very small sample sizes, inconsistency in how FASD is diagnosed, short follow up times.</p>	<p>Pharmacological interventions (2 studies, both RCT): “stimulant medication may decrease hyperactivity and impulsivity but not does improve attention”.</p> <p>Educational and learning strategies (7 studies, of which 3 RCT): “Some evidence to suggest that virtual reality training, cognitive control therapy, language and literacy therapy, mathematics intervention and rehearsal training for memory may be beneficial strategies [e.g. to facilitate learning]”.</p> <p>Social skills and communication (2 studies, of which 1 RCT): social skills training may improve social skills and behaviour at home but not at school.</p> <p>Behavioural intervention (1 study, RCT, n = 20): Attention Process Training may improve attention and non-verbal reasoning.</p>

Review details	Review search parameters	Included studies	Results
<p>Petrie (2007)</p> <p>Study design: Systematic review</p> <p>Author objectives: A systematic review of controlled studies of parenting programmes to prevent tobacco, alcohol or drug abuse in children <18.</p> <p>Funding source: The Hertfordshire Workforce Development Confederation</p>	<p>Years searched: Inception - October 2003</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Parents with children <18 years of age. I - Any parenting programme that aimed to prevent or reduce substance use among young people. For the purpose of the review, we defined 'parenting programmes' as any intervention involving parents which was designed to develop parenting skills, improve parent/child communication or enhance the effects of other interventions, e.g. classroom-based programmes. We included all types of learning medium, e.g. group discussion, distance learning by internet or post, video programme, individual coaching, etc. and any source of delivery, e.g. programmes provided by health visitors or school nurses, programmes run by charities or voluntary organizations, etc. C - No programme or other type of intervention such as school- or community-based programme. O - Objective or self-reported measure of at least one of the following: (i) smoking, drinking or drug use by child; (ii) intention of child to participate in smoking, drinking or using drugs; (iii) alcohol and drug-related risk behaviours in child such as criminal offending, anti-social behaviour, risky sexual behaviour and (iv) antecedent behaviours such as truancy, conduct disorders or poor academic performance. S - Randomized controlled trials (RCTs), controlled trials and controlled before/after (CBA) studies.</p> <p>Exclusion criteria: "Studies were excluded if they were designed to manage children with established drug, alcohol or smoking habits or focused on parents who were receiving treatment for their own addictions to alcohol or drugs". "Interventions where there was minimal contact with parents (e.g. leaflets only) were not considered to constitute a 'programme' and were therefore excluded".</p>	<p>Number of included studies (total): 20 Study designs: 16 RCTs, 3 CBAs, and 1 controlled trial. Country: Mostly United States, 1 Russia, 1 Australia, 1 Norway.</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample sizes ranged from 245 to 6,728 participants. Only 4 studies < 400 participants, half of studies had over 1,000 participants. Length of follow-up varied widely, ranging from 1 to 12 years. Follow-up over 80% in 9/16 RCTs (no study under 60%). Adequate follow-up in 3/4 non-RCTs.</p> <p>Quality of included studies as assessed by review authors: "The quality of the studies and nature of the interventions varied considerably, making assessment of the empirical literature difficult. In general, methodological quality of included studies was fair. However, only three reported adequate allocation concealment, in the rest it was unclear. Although poorly concealed trials may introduce selection bias and inflate treatment effect, all three trials with good allocation concealment showed significant positive effects. Other methodological problems included, inappropriate analysis for the unit of allocation which may overestimate significance of differences, high losses to follow-up, poor reporting of results and contamination." 7/20 studies fulfilled fewer than half of specified quality criteria (i.e., scores of 3/7 or below for RCT or 2/5 or below for non-RCT).</p> <p>Limitations identified by review authors: Heterogeneity of studies makes comparison difficult, mostly complex interventions not limited to parenting component so difficult to isolate effects, self-report rather than objective measures, and lack of generalisability due to US focus of studies.</p>	<p>"Five studies focused on alcohol, five on tobacco and the remainder on a combination of substance misuse behaviours". "Statistically significant self-reported reductions of alcohol use were found in six of 14 studies, of drugs in five of nine studies and tobacco in nine out of 13 studies. Three interventions reported increases of tobacco, drug and alcohol use".</p> <p>"The strongest evidence found in the review was based on work that had been undertaken with preteen and early adolescent children. Seven of the studies that were of good or fair quality, being well-designed and conducted RCTs, had focussed on this group. Each of these studies reports that the parenting programme evaluated led to a significant reduction in one or more of the outcome variables measured, in particular the use of alcohol, drugs or tobacco compared with controls".</p> <p>"The most effective appeared to be those that shared an emphasis on active parental involvement and on developing skills in social competence, self-regulation and parenting. However, more work is needed to investigate further the change processes involved in such interventions and their long-term effectiveness"</p>

Review details	Review search parameters	Included studies	Results
<p>Premji (2006)</p> <p>Study design: Systematic review</p> <p>Author objectives: A systematic review to identify research-based interventions for children and youth with a Fetal Alcohol Spectrum Disorder and areas for future study.</p> <p>Funding source: Alberta Centre for Child, Family and Community Research</p>	<p>Years searched: 1973-2007</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Up to 18 years, diagnosis or evidence of FASD or FAS. I - Target individual with FASD or caregiver/family. C - NR O - NR S - NR</p> <p>Exclusion criteria: Population: adults or prenatal; Intervention: No evidence of FAS, FASD or equivalent; no programme discussed.</p>	<p>Number of included studies (total): 3 Study designs: RCT n=2, quasi-experimental n=1 Country: USA, Canada, South Africa n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: n=26 children across 3 studies, 1 child excluded during the studies. "The sample size varied from 4 (Oosterheld et al. 1998) to 12 (Snyder et al. 1997)".</p> <p>Quality of included studies as assessed by review authors: "The study designs varied across studies and included pretest–posttest controlled intervention (Riley et al. 2003), randomized double-blind cross-over (Oosterheld et al. 1998), and modified, placebo-controlled, cross-over design (Snyder et al. 1997). All studies were described as randomized, although the method to generate the sequence of randomization was not described. [...] Although all studies were described as double-blind, only Snyder (Snyder et al. 1997) adequately described the concealment of treatment allocation for their double-blind study." "All studies reported only short-term outcomes".</p> <p>Limitations identified by review authors: Lack of evidence and of scientific rigour in studies.</p>	<p>"No significant differences were reported in Adnams and colleagues as cited in Riley et al. (2003), on neuropsychological tests or intelligence tests after implementation of a Cognitive Control Therapy programme. However, teachers anecdotally reported behavioural improvements following the intervention. Qualitative improvements with a trend towards functionality for children in the intervention group were noted in the therapists, teachers and school reports (Riley et al. 2003)".</p> <p>"In the study of Oosterheld and colleagues (1998), significant reductions in hyperactivity, as measured by behavioural checklists, Conners Parent Rating Scale-48 and Conners Teacher Rating Scale-39, were seen when children were administered methylphenidate versus either placebo or vitamin C. No significant differences were found on measures of attention. Snyder et al . (1997) also reported significant reductions in hyperactivity when the child was taking psychostimulant medication versus placebo. The Abbreviated Symptom Questionnaire-Parents was used to measure hyperactivity. There was no significant effect of medication on measures of attention (i.e. Vigilance Task) or impulsivity (i.e. short form of the Underlining Test)".</p>

Review details	Review search parameters	Included studies	Results
<p>Priest (2008a)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To determine the effectiveness of interventions aiming to reduce exposure of children to ETS”.</p> <p>Funding source: National Health & Medical Research Council, Australia. Murdoch Children’s Research Institute, Australia. VicHealth (Victorian Health Promotion Foundation), Australia.</p>	<p>Years searched: start date NR - 2007; update of a 2001 review</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - People (parents and other family members, child care workers and teachers) involved with care and education of infants and young children (aged 0-12 years). I - All mechanisms for reduction of children’s ETS exposure, and smoking prevention, cessation, and any other tobacco control programmes targeting the participants described above. These included smoke-free policies and legislation, health promotion, social-behavioural therapy, technology, and educational and clinical interventions. We included studies where the primary aim was to reduce children’s exposure to ETS (thereby preventing adverse health outcomes), but where secondary outcomes included reduction or cessation of familial/parental/ carer smoking, or changes in infant and child health measures. We also included studies where the primary outcome was reduction or cessation of familial/ parental/ carer smoking resulting in reduced exposure for children. C - NR O - The primary outcome measures were children’s exposure to tobacco smoke, child illness and health service utilisation, and the smoking behaviours of children’s parents and carers. We included studies where the outcome was only parental or carer’s smoking status. S - Controlled trials with or without random allocation.</p> <p>Exclusion criteria: “In this updated review we have not evaluated the effects and impacts of recent legislative changes on smoking and ETS exposure, as this will be addressed in a forthcoming review (Callinan 2006 [protocol])”. “We excluded studies of uptake of smoking by minors”.</p>	<p>Number of included studies (total): 36 Study designs: 30 studies classed as RCTs; 1 cluster-randomized controlled trial; 2 studies compared an intervention community with a control community; 1 study alternated intervention by birth month of the infant, and another alternated intervention by week of clinic attendance. 1 study alternated intervention by day of admission to postpartum ward. Country: 17 x USA, 2x Canada, 3x Australia, 2x UK, 1x Finland, 1x Japan, 1x Sweden, 1x German, 1x Netherlands, 1x Italy, 1x Norway, 4x China, 1x Turkey</p> <p>Included studies relevant to our review: 9 - Eight studies explicitly aimed to improve child health outcomes (Hughes 1991; Greenberg 1994; Armstrong 2000; Wilson 2001; Kimata 2004; Krieger 2005; Schonberger 2005; Wiggins 2005) and a ninth (Wahlgren 1997) measured child health outcomes although they were not a primary outcome variable. Study designs: 9 RCTs Country: 4x USA, 1x Canada, 1x Australia, 1x UK, 1x Netherlands, 1x Japan</p> <p>Sample sizes and follow-up: Sample sizes ranged from 87 to 933 participants, 3 studies had sample size < 100 participants, 1 study NR. 6 studies conducted a power calculation in the design of their studies, and one study explicitly reported that the statistical power of their study was limited due to small sample size. Follow-up 12 months or more post-intervention in 4 studies; 6-12 months post-intervention in 3 studies, and less than six months post-intervention in 2 studies. Retention rates not reported for all studies, reported for 6/9 studies. Over 80% retained in 3 studies, lowest reported retention rate 59% in one study.</p> <p>Quality of included studies as assessed by review authors: In four of the relevant studies, there appeared to be adequate concealment of group allocation. In the remainder, allocation concealment was either unclear or inadequate.</p> <p>Limitations identified by review authors: Reliability of parental self-report data, reductions in both groups regardless of whether allocated to intervention or control (possible reasons: effect of measurement, control condition greater effect than expected, external influences such as peer pressure to quit as a parent or introduction of bans), lack of ‘no treatment’ control groups.</p>	<p>“There is insufficient evidence of the effects on child health indicators of efforts to change child exposure to ETS.” Four of the relevant studies are reported to have a significant intervention effect. However, the evidence with regard to child health outcomes is difficult to interpret, with positive effects found for some indicators but no significant differences found for other indicators. In several instances, positive effects in children were found even though their exposure to ETS (parental smoking) had not been affected. The review authors suggest that these improvements were due to other elements of the intervention (e.g. asthma education) rather than the smoking behaviour programme.</p>

Review details	Review search parameters	Included studies	Results
<p>Priest (2008b)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To update a review of all controlled studies evaluating policy interventions organised through sporting settings to increase healthy behaviour (related to smoking, alcohol, healthy eating, sun protection, discrimination, safety and access)”.</p> <p>Funding source: Victorian Health Promotion Foundation (VicHealth), Australia</p>	<p>Years searched: No date restrictions; searches for updated review 2004-2007, for previous review inception - 2004</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - People of all ages. I - Any policy intervention implemented through sporting organisations to instigate and/ or sustain healthy behaviour change, intention to change behaviour, or changes in attitudes, knowledge or awareness of healthy behaviour. Policies must address any of the following: smoking, alcohol, healthy eating, sun protection, access for disadvantaged groups, physical safety (not including injuries), and social and emotional health (e.g. anti-vilification, anti-discrimination, anti-gambling). C - NR O - Behaviour change; Intention to change behaviour; Change in attitudes, knowledge or awareness of healthy behaviour; and Changes in policies or policy presence. S - Randomised controlled trials (RCTs)/cluster RCTs, ‘Quasi-randomised’ trials, Controlled before and after studies Note, uncontrolled studies which met the other inclusion criteria were to be described and presented in an annex to the review.</p> <p>Exclusion criteria: Policies and practices surrounding sports injury prevention (such as padding for goal posts); and policies relating to the reduction of sports performance enhancement drugs and recreational drug use.</p>	<p>Number of included studies (total): 0 Study designs: NA Country: NA</p> <p>Included studies relevant to our review: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: NA</p>	<p>“The updated search identified no controlled studies that met the inclusion criteria. No uncontrolled studies, with pre- and post-test data, were identified in order to be included in an annex to this review.”</p>

Review details	Review search parameters	Included studies	Results
<p>Rammohan (2011)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: To assess the effectiveness of dram shop liability and the enhanced enforcement of overservice laws for preventing excessive alcohol consumption and related harms.</p> <p>Funding source: Centers for Disease Control and Prevention (CDC), USA</p>	<p>Years searched: Inception - Oct 2007</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Conducted in a country with a high-income economy. I - Dram shop liability or initiatives for enhanced enforcement of overservice regulations that could and did apply legal or administrative sanctions. C - No intervention in case of controlled trials. O - Outcomes related to excessive alcohol consumption or related harms, such as alcohol-impaired driving or alcohol-related motor vehicle crashes. S - Compare attributes of participants before and after the implementation of the intervention or compare a group receiving the intervention with a group not receiving it.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 11</p> <p>Study designs: All studies but one were panel studies of U.S. States using econometric models to assess the effects of dram shop liability and other interventions on diverse outcomes.</p> <p>Country: USA</p> <p>Included studies relevant to our review: 4</p> <p>Study designs: As above</p> <p>Country: USA</p> <p>Sample sizes and follow-up: NR.</p> <p>Quality of included studies as assessed by review authors: Of relevant studies, three were judged to have greatest design suitability. Two had good quality of execution, and one had fair quality of execution. Quality for one study NR. Note, studies with limited quality of execution were excluded.</p> <p>Limitations identified by review authors: Overlapping time periods and geographies (States of the USA).</p>	<p>In relation to young people: "Those that reported all-cause motor vehicle fatalities among underage drinkers all found reductions of between 2.2% and 13.0%".</p> <p>In relation to all included studies: "Eleven studies assessed the association of state dram shop liability with various outcomes, including all-cause motor vehicle crash deaths, alcohol-related motor vehicle crash deaths (the most common outcome assessed in the studies reviewed), alcohol consumption, and other alcohol-related harms. There was a median reduction of 6.4% (range of values 3.7% to 11.3% reduction) in alcohol-related motor vehicle fatalities associated with the presence of dram shop liability in jurisdictions where premises are licensed. Other alcohol-related outcomes also showed a reduction".</p>

Review details	Review search parameters	Included studies	Results
<p>Ranney (2006)</p> <p>Study design: Systematic review (including review of reviews)</p> <p>Author objectives: “Reviewed the evidence on (a) the effectiveness of community- and population-based interventions to prevent tobacco use and to increase consumer demand for and implementation of effective cessation interventions; (b) the impacts of smokeless tobacco marketing on smoking, use of those products, and population harm; and (c) the directions for future research”.</p> <p>Funding source: Agency for Healthcare Research and Quality (AHRQ), Rockville, MD</p>	<p>Years searched: depended on research question - KQ 1: prevention 2000-2005; tobacco product restrictions 1980-2005; KQ 2 and KQ 3: 1999- 2005; KQ 4 and KQ 5: 1980-2005</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - KQ 1: Adolescents (13-18 years of age), young adults (18-24 years of age), and diverse populations KQ 2: Adolescents, young adults, adults (18 years of age and older), and diverse populations KQ 3: Adults and diverse populations KQ 4: Adolescents, young adults, and adults KQ 5: Adolescents, young adults, and adults with comorbidities and risk behaviors I - Not specified - interested in broad range of prevention and cessation strategies. C - NR. O - KQ 1: Reduced initiation of tobacco use KQ 2: Increased quit rates; greater numbers of smoking cessation participants (i.e., increased participation) KQ 3: Increased quit rates; change in provider behaviors concerning smoking cessation KQ 4: Increased use; increased substitution of smokeless tobacco for smoking; harm reduction KQ 5: Reduced initiation of tobacco use; increased quit rates S - Randomized controlled trials (RCTs); Nonrandomized controlled trials; and Observational studies: prospective and retrospective cohort studies, case-control studies, and cross-sectional studies. Original research studies that provide sufficient detail regarding methods and results to enable use and adjustment of the data and results; relevant outcomes must be able to be abstracted from data presented in the papers. Sample sizes must be appropriate for the study question addressed in the paper. RCTs: 30 or more participants, Observational studies and nonrandomized controlled trials: 100 or more participants. Study duration of more than 6 months. Study geography limited to Developed countries: United States, Canada, United Kingdom, Western Europe, Australia, and New Zealand.</p> <p>Primary studies were included to update existing systematic reviews.</p> <p>Exclusion criteria: Single case reports or small case series are excluded. We excluded articles that did not report outcomes related to our KQs or provide sufficient information to be abstracted. We also excluded all editorials, letters, and commentaries.</p>	<p>Number of included studies (total): 102 primary studies and reviews</p> <p>Study designs: Not reported in total</p> <p>Country: Not reported in total but according to inclusion criteria only developed countries.</p> <p>Included studies relevant to our review: 13 for KQ1; 3 for KQ2; 1 for KQ5; KQ 3 and KQ 4 not relevant to our review</p> <p>Study designs: KQ1: 12 RCT, 1 cross-sectional; KQ2 and KQ5 RCTs</p> <p>Country: All USA except for school based prevention, which included studies from the USA, Netherlands, Australia, Canada, Norway, and the United Kingdom</p> <p>Sample sizes and follow-up: 13 studies total for KQ1; Access restrictions (supply restrictions, minimum age, advertising) - 1 study - 3,831 youth in cross-sectional survey. Family based prevention - 1 study - 1,316 adolescent-parent pairs sampled from 48 contiguous US states - last follow up 12 months. School based prevention - 10 studies - Sample sizes ranged from 22 to 99 schools and 103 to 8,352 participants. In the within-year trials, follow-up assessments ranged from 6 months to 24 months. In the multiple-year trials, investigators collected follow-up measures at the end of the interventions in four trials and up to 6 months post-intervention in one trial. Targeted prevention /psychosocial treatment - 1 study - 103 cancer survivors. Baseline measures were similar across the two groups. Followed up at 6 and 12 months.</p> <p>3 studies total for KQ2 (cessation) counselling support - 2 studies - in one study 402 adolescents followed up to 8 months post-baseline. In the other study 3,522 young adults and adults, followed up to 6 months. Family-directed cessation program - 1 study - 85 parent-adolescent pairs. Follow-up up to 12 months post intervention or drop out.</p> <p>1 study KQ 5(prevention/cessation for Populations with Co-occurring Morbidities and Risk Behaviors) - motivational interviewing vs. brief advice - 1 study - The MI arm had 116 participants and the BA arm had 75 participants. Follow up at 1, 3, 6, 9, and 12 months.</p> <p>Quality of included studies as assessed by review authors: Assessed the internal validity of trials based on predefined criteria developed by the US Preventive Services Task Force (ratings are good, fair, or poor) and the National Health Service Centre for Reviews and Dissemination. Poor studies were excluded.</p> <p>13 studies total for KQ1</p>	<p>KQ 1: Prevention</p> <p>- Access restrictions (supply restrictions, minimum age, advertising) - 1 study - no correlation with smoking behaviour “In the fully adjusted model, only two provisions were statistically significant and only one in the expected direction. Youth living in towns that ban free-standing displays were less likely to perceive tobacco as easy to purchase (adjusted odds ratio [AOR], 0.6; 95% confidence interval [CI], 0.5-0.9; P = 0.007). Counterintuitively, youth reported easy access in towns that required tobacco vendors to have a license (odds ratio [OR], 1.3; 95% CI, 1.1-1.5; P = 0.009). Overall, 37 percent believed that it was easy to buy cigarettes in their town. No associations were found between youth access ordinances and attempts to purchase or between ordinances and tobacco use. Individual factors associated with increased attempts to purchase were associated with being older (P < 0.01) and male (P = 0.004). Individual factors associated with tobacco use were being older, living with a smoker, and having a close friend who smokes (P < 0.0001)”.</p> <p>- Family based prevention - 1 study - no significant effects at long term follow up. “Baseline data showed fewer non-Hispanic whites students in the Family Matters intervention than in controls. The effects of the intervention were present only among non-Hispanic white adolescents—a subset of the population (n = 791). Adolescents in the control group were more than 1.5 times as likely to smoke at the 3-month follow-up assessment than adolescents in the Family Matters intervention (OR, 1.59; P = 0.008, lower bound CI = 1.19 for a one-way test of significance). No significant effects were evident at the 12-month follow-up. The conceptual model underlying the Family Matters program was validated for non-Hispanic whites only.” These two studies described by review authors as having “some success in reducing tobacco initiation among adolescents and young adults. Alone, they provided little conclusive evidence about such programs”.</p> <p>- School based prevention - 10 studies - mixed evidence, lack of effects in the longer term - “Sufficient evidence was found for short-term effects (less than 2 years) of school-based prevention programs. Interventions implemented in a single school year or conducted over multiple school years produced mixed results in 10 school-based studies. Consistent with prior reviews, we found sufficient evidence to demonstrate that prevention measures conducted in schools have positive short-term effects but insufficient evidence for long-term effects”.</p> <p>- Targeted prevention /psychosocial treatment - 1 study - no</p>

Review details	Review search parameters	Included studies	Results
		<p>- Access restrictions (supply restrictions, minimum age, advertising) - 1 study - "Fair"</p> <p>- Family based prevention - 1 study - "Fair"</p> <p>- School based prevention - 10 studies - 1 "Good", 9 "Fair"</p> <p>- Targeted prevention /psychosocial treatment - 1 study - "Fair"</p> <p>3 studies total for KQ2 (cessation)</p> <p>- counselling support - 2 studies - both "Fair"</p> <p>- family-directed cessation program - 1 study - "Fair"</p> <p>1 study KQ 5 (prevention/cessation for Populations with Co-occurring Morbidities and Risk Behaviors)</p> <p>- motivational interviewing vs. brief advice - 1 study - "fair"</p> <p>Limitations identified by review authors: inadequate randomization and concealment allocation, deficient study designs, refusal and attrition rates, construct validity problems, inconsistent terminology</p>	<p>effect on behaviours. "Intervention group had higher mean knowledge and perceived vulnerability scores and lower intention-to-use tobacco scores". "At 12 months, multivariate comparison of difference scores for patient smoking status (12-month scores minus baseline scores) found no differences (all were $P > 0.10$), indicating the intervention had no effect on smoking initiation."</p> <p>KQ2: Cessation</p> <p>- Counselling support - 2 studies - one study found no differences in abstinence between intervention and control although suggested dose-response relationship in that participants completing more counselling calls were more likely to report cessation (8-month OR = 1.54, 95% CI 1.15, 2.07, $P < 0.007$); the other study suggested higher 48 hours abstinence in two age categories (younger than 18 years of age and 18 to 25 years of age). "Three-month quit rates were 19.6 percent for persons 18 to 25 years of age who received telephone counselling and 9.3 percent for those who received self-help booklets only ($P < 0.005$)"; among older smokers the figures were 15.1 percent vs. 9.6 percent.</p> <p>- Family-directed cessation program - 1 study - "No statistically significant difference in tobacco use between control and treatment for baseline cigarette users".</p> <p>KQ 5: Prevention/cessation for Populations with Co-occurring Morbidities and Risk Behaviors</p> <p>- Motivational interviewing vs. brief advice - 1 study - no difference between two interventions arms. "The findings did not show higher quit attempts for those receiving MI than those receiving BA (mean quit attempts = 1.1 vs. 1.3, $P =$ not significant [NS]). Seven-day point prevalence abstinence at 1, 6, and 12 months was not significantly different between the groups. The mean number of days for the longest quit attempt was 48.2 days for the MI group and 60.9 days for the BA group; however, this difference was not significant. Two findings were associated with significantly less smoking among adolescent psychiatric patients. Examination of covariates revealed that having an anxiety disorder increased the odds for quit attempts (AOR, 1.99; 95% CI, 1.08-3.71); in the hierarchical linear model, higher discharge self-efficacy scores were associated with less smoking during follow-up ($b_1 = -0.02$, standard error = 0.007; $P = 0.007$). MI and BA were equally ineffective smoking cessation interventions for this population".</p>

Review details	Review search parameters	Included studies	Results
<p>Rice (2009)</p> <p>Study design: Systematic review</p> <p>Author objectives: The primary aim of this review was to examine the impact of price on cigarette smoking in young people aged 25 years or under.</p> <p>Funding source: Department of Health, UK</p>	<p>Years searched: Inception-2007</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - "Young people aged 25 or under were eligible. Studies involving participants of any age where results were presented separately for young people were also included". I - "Change in cigarette price and/or tax on cigarettes. Studies including interventions other than price and/or tax but where information on prices and/or tax was separately available were also included". C - NR O - "Any measure of behaviour related to cigarette smoking was of interest, including smoking initiation, participation and prevalence, cigarette consumption or demand (quantity smoked), and quitting". S - "All types of study design were eligible for inclusion".</p> <p>Exclusion criteria: Simulation studies, where the smoking responses to changes in price are not based on observed data</p>	<p>Number of included studies (total): 45 Study designs: Econometric analyses of observational survey data; forty-four studies utilised survey data and one used administrative data; most studies used cross sectional designs, some were repeated cross sectional and a few longitudinal Country: USA n=38; Canada n=3; USA + Canada n=1; Australia n=1; Sweden n=1; UK n=1</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Most studies used survey data with > 10,000 participants; in some cases > 100,000 participants although reported sample sizes were not always limited to young people; only few studies < 1,000 participants. Sample size NR in some cases as referred to nr of states (not individuals). Follow up/ attrition NA in case of cross sectional studies and not summarised for remaining studies.</p> <p>Quality of included studies as assessed by review authors: The use of cross sectional survey designs using observational data limits the ability to attribute differences in smoking outcomes to price. "The evidence base is derived almost exclusively from the secondary analysis of observational data. In the absence of experimental evidence, the attribution of outcomes to policy instruments is sensitive both to the quality and reliability of the survey data and the empirical approach to modelling" "All studies included one or more of a standard set of controls (for example, gender, age, income, ethnicity), with the exception of one study that simply regressed outcome on price. Sixteen studies specified either individual policy variables or an index indicating clean indoor air regulations; twelve studies used individual variables or an index for restrictions on youth access to cigarettes, and ten studies had variables or an index representing other policies aimed at controlling cigarette consumption. Six studies conditioned on state level fixed effects in an effort to control for state level attitudes and policies towards cigarette use and two studies used a variable to indicate whether a state was a tobacco producing state".</p> <p>Limitations identified by review authors: Wide variation in sources of data and techniques used in analyses; lack of detail regarding surveys, price or tax data; representativeness of surveys; price data used weighted average price across all sales of cigarettes but this may not be the most relevant price to apply to studies of young people who tend to be more brand-conscious than older smokers; different definitions of smoking initiation; little consensus on what controls for covariates should be used; reliance on self-report data; lack of information regarding differential effects on different sub groups of young</p>	<p>PRICE ELASTICITIES:</p> <p>Smoking participation: "While there is fairly consistent evidence across studies of a negative effect of price on smoking participation, the magnitude of this effect is less clear. Better quality evidence from the two studies using longitudinal data suggest an elasticity of around -0.18 (range: -0.240 to -0.112), implying a 10% increase in price is associated with between a 1.1% and 2.4% decrease in smoking participation. Evidence from the eight studies using repeated cross-sectional data suggest a more elastic response of around -0.49 (range -0.77 to -0.126) implying a decrease of between 1.3% and 7.7% for a 10% increase in price. Across all studies reporting participation results, the mean is -0.548. The mean, however, masks large variability in estimates with a range of -1.43 to 0.082".</p> <p>Smoking prevalence: "Limited evidence was found on the price elasticity of smoking prevalence. The three available studies suggest that price had a negative impact on smoking with elasticity estimates ranging from -4.74 to -0.131. Evidence from the strongest study however, suggests a modest response to price (-0.131 using the local level dataset and -0.243 using the state level dataset) for school-aged children, implying a 10% increase in price is associated with between a 1.3% and 2.4% decrease in smoking prevalence".</p> <p>Quantity smoked: Level of smoking for smokers - "There is consistent evidence of a negative effect of price on the quantity of cigarettes smoked by smokers. The evidence however, is less consistent on the magnitude of this effect. The single study using longitudinal data suggests an elasticity of -0.731, implying a 10% increase in price is associated with a 7.3% decrease in the quantity of cigarettes smoked. Evidence from the five studies using repeated cross-sectional data suggests a more inelastic effect of around -0.327 (range -0.567 to -0.022), implying between a 0 and 6% decrease in quantity smoked for a 10% increase in price. The mean response across all studies is similar at -0.337; however this mean masks greater variability in estimates with a range between -0.87 and 0.02".</p> <p>Quantity smoked: Total level of smoking - "Price was found to be negatively related to the total quantity of cigarettes smoked. The single study using longitudinal data suggests an elasticity of -0.844, implying a 10% increase in price is associated with an 8.4% decrease in the total quantity of cigarettes smoked. Evidence from the five studies using repeated cross-sectional data suggests a more inelastic effect of around -0.511 (range -0.652 to -0.331), implying between a 3.3 and 6.5% decrease in quantity smoked for a 10% increase in price. The mean response</p>

Review details	Review search parameters	Included studies	Results
		people.	<p>across all studies is similar at -0.671. This mean, however, masks greater variability in estimates with a range between -1.7 and 0.86”.</p> <p>Smoking initiation: “Evidence from studies using longitudinal data suggests that price is effective in deterring young people from starting to smoke. Three of the four studies find an elastic response to price (range: -0.91 to -0.65) implying a 10% increase in price is associated with between a 6.5 and 9% decrease in smoking initiation. A single study which included dummy variables for each state to control for state level anti-smoking sentiment and other policies related to attitudes towards smoking, found a lower response to price, suggesting a reduction of 1% in smoking initiation for a 10% price increase. The results suggest that appropriate controls for state-level anti-smoking sentiment are crucial in determining price effects”.</p> <p>Smoking cessation: “Based on the two available studies using longitudinal data price appears to be effective in encouraging young people to quit smoking. Evidence from one study on the price elasticity for a single quit suggests a 10% increase in price is associated with a near 12% increase in the probability of a quit. A second study, recognising that young people who stop may return to smoking and make subsequent quits, modelled multiple quit attempts. The findings suggest that quitting is less responsive to price with the corresponding elasticity implying a 3.7% increase in the probability of quitting for a 10% increase in price. Across the two studies, while price appears effective in encouraging quit attempts it is less effective in sustaining quits among young people”.</p> <p>Differential effects for sub groups of young people: “Results based on sub-group analysis should be treated with some caution. The findings relating to gender are the most consistent, followed by those for age, but the number of studies reporting results for sub-groups is small”.</p> <ul style="list-style-type: none"> - Smoking participation: “There was little evidence to suggest a difference in price response by age of young person, while results across gender suggest males are more responsive to price than females. Evidence from two studies suggests that black ethnic groups are more price responsive than whites”. - Prevalence: “A single study found evidence of a gradient across age groups with older females being more responsive to price than younger females. In the same study white females were found to be more responsive to price than black females” - Quantity smoked - Level of smoking for smokers: “Studies based on surveys of older rather than younger young people suggest a greater response to price for the former. Evidence from two studies suggests that price may have a greater impact

Review details	Review search parameters	Included studies	Results
			<p>on males than on females. Two studies provide evidence to suggest that white ethnic groups are responsive to price but black ethnic groups are not. There was some evidence to suggest that cross-border shopping reduced the price responsiveness of young people”.</p> <p>- Quantity smoked - total level of smoking: “There was some evidence to suggest that this price response is greater for older rather than younger young people and that males are more responsive than females. Conflicting evidence on the price responsiveness across ethnic group was found. Mixed evidence of the effect of cross-border purchasing of cigarettes on the price responsiveness of young people was found.”</p> <p>- Initiation - “There was limited evidence of a greater response to price for younger than for older young people, obtained from respondent recall of the age of starting to smoke and is likely to be subject to reporting bias. In relation to gender, evidence from two studies suggests that males are more responsive to price than females”.</p> <p>TAX ELASTICITIES:</p> <p>“Evidence from the three studies reporting tax elasticity estimates suggests mixed findings in relation to the impact of tax on smoking. Results based on a longitudinal survey suggest no tax effect on smoking participation (0.01 and 0.05 with other policy variables). This contrasts with evidence estimated from three cross-sectional surveys suggesting a negative impact of tax on participation, ranging from -0.07 to -0.22 implying a 10% increase in tax is associated with between a 0.7% and 2.2% decrease in smoking participation”.</p>

Review details	Review search parameters	Included studies	Results
<p>Russell (2011)</p> <p>Study design: Systematic review</p> <p>Author objectives: To examine the effectiveness of Graduated driver licensing (GDL) in reducing crash rates among young drivers.</p> <p>Funding source: Alberta Research Centre, Edmonton Alberta Dept of Public Health, Alberta Heritage Foundation for Medical Research, Population and Public Health Alberta</p>	<p>Years searched: 1970-2009</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Teenage drivers (under 20). I - Studies that evaluated GDL programs with a minimum of 3 stages that allow the driver to progress from lower to higher risk driving conditions. C - NR O - Crash rates, secondary outcomes included injury rates, fatalities, hospitalisation, alcohol crashes, night time crashes, and traffic offences. S - Studies were included in the review if: 1) they compared outcomes immediately pre and post-implementation of a GDL program; 2) comparisons were made between similar or adjacent jurisdictions with and without a GDL program; or 3) both.</p> <p>Exclusion criteria: programs that did not include an intermediate stage of unsupervised driving with conditions</p>	<p>Number of included studies (total): 34</p> <p>Study designs: "Six studies used both internal and external control groups to control for factors beyond the GDL program that may have affected outcomes. Two studies used only external control groups. Five studies had no control groups. The remaining studies used internal control groups only".</p> <p>Country: Unclear</p> <p>Included studies relevant to our review: 6 (Agent 2001, Boase 1998, Bouchard 2000, Frith 1992, Foss 2001, Shope 2001a)</p> <p>Study designs: All studies used an internal control group (e.g., general population), but none of these studies used an external control group (e.g., similar region without GDL).</p> <p>Country: Canada n=2, New Zealand N=1, USA n=3</p> <p>Sample sizes and follow-up: Across the six relevant studies, the first measurement took place 1-6 years pre-intervention (i.e., before implementation of the program) and the final measurement 1-4 years post-intervention.</p> <p>Quality of included studies as assessed by review authors: All studies were ecological studies and used data obtained from routinely collected sources.</p> <p>Limitations identified by review authors: Studies were unable to control for confounding factors; relatively short periods of follow up.</p>	<p>Alcohol related crashes: four studies reported between 16 and 39% reduction in alcohol related crashes in the first year post GDL with similar outcomes for two and three years post GDL. One study reported a 15% increase in the first year, with 0% and 4% decrease by the 3rd year. One study reported a 12% reduction in injuries/fatalities relating to alcohol crashes 2 years post-GDL.</p>

Review details	Review search parameters	Included studies	Results
<p>Shoptaw (2009b)</p> <p>Study design: Systematic review</p> <p>Author objectives: To evaluate risks, benefits, costs of treatments for amphetamine psychosis.</p> <p>Funding source: Department of Mental Health and Substance Dependence, World Health Organization, Switzerland</p>	<p>Years searched: 1966-2007</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - People with amphetamine psychosis diagnosed by any set of criteria. If other substance abusing participants included, studies could only be included if data for amphetamine psychosis patients is reported separately and more than half of patients were amphetamine users. I - Placebo, any pharmacological treatment, any psychosocial treatment, any combined pharmacological and psychosocial treatment. C - NR O - Response to treatment, side effects, incidence of antiparkinson drugs, discontinuation rate, death, global status, psychotic symptoms, adherence to treatment, health status, functioning, patient satisfaction, economic outcomes. S - RCT and CCT.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 1 Study designs: 1 RCT Country: NR, likely to be Thailand</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample n=58. n=12 patients did not complete the study due to being lost at follow up or treatment side effects.</p> <p>Quality of included studies as assessed by review authors: “The study was double-blinded and reported using a simple randomisation but did not specify its allocation concealment approach. The methodological quality was not used as a criterion for inclusion”.</p> <p>Limitations identified by review authors: Only one trial eligible for inclusion.</p>	<p>“The results show that both olanzapine and haloperidol at clinically relevant doses were efficacious in resolving psychotic symptoms, with the olanzapine condition showing significantly greater safety and tolerability than the haloperidol control as measured by frequency and severity of extrapyramidal symptoms”.</p> <p>“Leelahanj (2005) reported that olanzapine and haloperidol delivered at clinically relevant doses both showed similar efficacy in resolving psychotic symptoms (93% and 79%, respectively), with olanzapine showing significantly greater safety and tolerability than haloperidol as measured by frequency and severity of extrapyramidal symptoms”.</p> <p>“Overall, olanzapine was significantly favoured over haloperidol as measured using changes in extrapyramidal symptoms”.</p>

Review details	Review search parameters	Included studies	Results
<p>Smith (2009)</p> <p>Study design: Systematic review</p> <p>Author objectives: To evaluate the effectiveness of pharmacologic interventions in pregnant women enrolled in alcohol treatment programs for improving birth and neonatal outcomes, maternal abstinence and treatment retention.</p> <p>Funding source: NR</p>	<p>Years searched: 1806-2008</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Pregnant or post-partum women receiving alcohol treatment; I - Pharmacological treatments for alcohol dependence C - Other pharmacological treatment alone or with psychosocial treatment, placebo, no intervention, psychosocial intervention alone. O - Primary outcomes - Birth outcomes: 1. birth weight. 2. gestational age at birth. 3. placental abruption. 4. foetal alcohol syndrome (FAS). 5. admission to and length of time spent in hospital (i.e. neonatal intensive care unit [NICU]). Secondary outcomes - Abstinence outcomes: 1. alcohol abuse measured by: maternal toxicology, maternal self-report, newborn toxicology and any biological markers provided in the original studies. Retention outcomes 1. treatment attendance as measured by the proportion or count of treatment visits attended. 2. treatment attendance as measured by the proportion or count of individuals who complete treatment. 3. prenatal care attendance as measured by the proportion or count of prenatal visit attended. S - RCT or quasi-random design.</p> <p>Exclusion criteria: studies that did not report alcohol use levels, participants who were illicit drug users and received treatment for this drug use</p>	<p>Number of included studies (total): 0 Study designs: NA Country: NA</p> <p>Included studies relevant to our review: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: Study design most common reason for exclusion.</p>	<p>NA</p>

Review details	Review search parameters	Included studies	Results
<p>Soole (2008)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: (1) Do school-based drug prevention programs reduce rates of illicit drug use? (2) What features are characteristic of effective programmes? and (3) do these effective program characteristics differ from those identified as effective in reviews of school-based drug prevention of licit substance use (such as alcohol and tobacco)?</p> <p>Funding source: NR</p>	<p>Years searched: 1990-2008</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - NR I - Any drug prevention intervention with a school-based component. C - NR O - At least one illegal drug use outcome measure. S - Pre-test-post-test controlled design.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 58 of which 12 included in meta-analysis Study designs: NR Country: NR</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Attrition was higher amongst males, racial minorities and those reporting higher baseline drug use. 12 studies in the meta-analyses included short-term impact on cannabis use (n=2430), long-term impact on cannabis use (n=8992), short-term impact on all drugs (n=2438), long-term impact on all drugs (n=8875), other illicit drugs short and long term (n=NR). Sample size, follow up and attrition details NR.</p> <p>Quality of included studies as assessed by review authors: Quality assessed through a methodological rigour scale from 1-5 with 5 being the most methodologically sound. 23 studies were given 5.0 points, 16 were rated between 3.0 and 4.5 and 22 were rated between 0.5 and 2.0.</p> <p>Limitations identified by review authors: Studies examined drug use at a time when few use drugs; the review only examined use, not other outcomes.</p>	<p>Findings from the narrative review:</p> <ul style="list-style-type: none"> - One study evaluating an affective education program reported no significant impact on drug use. - Results from six studies evaluating resistance skills programs suggest that these interventions can be effective at reducing cannabis initiation among non-users, and this approach is more effective with girls than boys. - Out of eight studies evaluating generic skills training, two studies reported significant reductions in drug use and one study found significant reductions in cannabis use and there were no significant findings in the other five studies. Results suggest that impacts may be greater amongst low-risk young people. - Eleven studies evaluated social influence programs with around half reporting significant program impacts on cannabis use including initiation and overall use. Evidence suggested that programs were only effective in the short-term and amongst young people at lower risk. - 25 studies evaluated competency enhancement interventions with mixed results on drug use. Results suggested that peer delivered competency enhancement interventions may be more effective at reducing cannabis use compared to teacher-led interventions. - Five studies involved system wide change programs and reported mixed results. These interventions may be more effective amongst lower-risk young people. - Two studies of interventions that included recreational activities and theatre and drama based education reported negative effects on cannabis use. <p>Findings from the meta analysis: impact of programs on cannabis use provided significant short- and long-term results in a positive direction (short term d. = .136, 95% CI = .035–.237, p<.01; long term d. = .219, 95% CI = .071–.367, p < .01). Higher quality studies provided higher effect sizes at long-term follow up, but not at short-term follow up. Impact of programs on all drug use provided significant short- and long-term results in a positive direction also (short term d=.141, 95% CI = .042–.24,p=< .01; long-term d=.208, 95% CI = .087–.329,p=< .001). Higher quality studies provided higher effect sizes at short- and long-term follow up than lower quality studies. For other illicit drugs including cocaine and amphetamine, meta analysis did not indicate any significant program impact at short- or long-term follow up.</p>

Review details	Review search parameters	Included studies	Results
<p>Stade (2009)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To determine the effectiveness of psychological and educational interventions to reduce alcohol consumption during pregnancy in pregnant women or women planning pregnancy”.</p> <p>Funding source: National Institute for Health Research, UK. Department of Pediatrics, St Michael’s Hospital, Toronto, Canada.</p>	<p>Years searched: Inception - November 2007</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Pregnant women or women planning pregnancy who consume alcohol. Alcohol consumption would be demonstrated by women’s self-report or by urine or blood screening for alcohol. I - Psychological and/or educational interventions during pregnancy or 12 months before conception for women planning pregnancy. Psychological interventions include cognitive-behavioural therapy, brief psychodynamic psychotherapy, interpersonal psychotherapy and supportive counselling/therapy. Educational interventions include brief educational counselling sessions, structured long-term educational programs with motivational enhancement interventions (greater than five sessions), individual-focused educational strategies, family-focused programs, professional group education interventions and self-help group educational interventions. C - No intervention; ‘routine care’; or compared to different educational and/or psychological interventions O - Primary outcomes 1. Abstinence from alcohol during pregnancy; 2. Reduction of alcohol consumption during pregnancy to less than seven standard drinks a week. Secondary outcomes: Maternal 1. Duration of abstinence or reduced intake during pregnancy, and postnatally; 2. Adverse effects in the mother such as delirium tremors, depression, anxiety, withdrawal from prenatal care; 3. Benefits to the mother such as reduction in psychological distress, depression, anxiety, improvement in quality of life. Neonatal: 1. Diagnosis of fetal alcohol syndrome, partial fetal alcohol syndrome, alcohol-related neurodevelopmental disorder (ARND); 2. Admission to neonatal intensive care unit/special care nurseries, paediatric hospital unit; 3. Weight, length (height) and head circumference; 4. Signs of neurological sequelae such as poor suck, irritability, increased muscle tone; 5. Birth defects associated with prenatal exposure to alcohol with or without a diagnosis of fetal alcohol syndrome such as cardiac anomalies, urogenital defects, skeletal abnormalities, absence or partial absence of the corpus callosum; 6. Placement in foster or adoptive care. S - Randomized controlled trials.</p> <p>Exclusion criteria: “This review does not focus on pregnant women participating in treatment programmes for alcohol abuse or dependence; this group is included in a related Cochrane Review (Lui 2008)”.</p>	<p>Number of included studies (total): 4 Study designs: RCTs Country: All USA</p> <p>Included studies relevant to our review: 2 Study designs: RCTs - one individually randomised, one cluster-randomised (by clinic) Country: USA</p> <p>Sample sizes and follow-up: Sample sizes were 250 and 345. In the larger study, 245 women were followed to third trimester (71%). In the smaller study, few women lost to follow up (participants were paid to complete assessments). In the largest study, attrition 24.6% in the control group and 27.8% in the experimental group. Those lost to follow up were different in terms of race and education compared to those remaining part of the sample.</p> <p>Quality of included studies as assessed by review authors: Sequence generation was adequate in one study, the remaining studies did not provide information on this. It was not clear in any of the studies how randomization was achieved and whether there was adequate allocation concealment. Blinding participants and care providers to group allocation for educational and psychological interventions is generally not feasible. One study reports that outcome assessors were not aware of group allocation. Levels of attrition were low (less than 10%) in one study but high in the other (26% attrition, and those lost to follow up were reported as being different in several respects from those remaining in the study). A problem with all of the included studies was that the description of the intervention and comparison conditions and the methods of assessment were not sufficient to allow for study replication. For both studies, review authors commented that results were difficult to interpret and so risk of bias was unclear on several dimensions.</p> <p>Limitations identified by review authors: Reliance on self-report data, alcohol consumption decreased in intervention and control groups likely due to external factors (e.g. life style changes as part of pregnancy independently of intervention), control condition (assessment) may have already produced reduction.</p>	<p>“Only limited information was provided on the effects of the interventions on the health and wellbeing of mothers and babies”.</p> <p>“O’Connor (2007) reported that, after adjustment, the intervention was associated with slightly higher birth weights for babies, whose mothers were heavier consumers of alcohol at the initial assessment, but this pattern was reversed for women who initially consumed low amounts of alcohol; for low initial alcohol consumers, babies in the control group were slightly heavier at birth. There was a similar pattern of results for birth length. This study also reported on miscarriages and stillbirth rates in the two groups; there was one miscarriage in the intervention group and two miscarriages and two stillbirths in the control group (these results relate only to those women available at follow up in a study with high rates of attrition)”.</p> <p>“Chang (1999) reported that there were no significant differences between groups in terms of birth weights or one- and five-minute Apgar scores”.</p>

Review details	Review search parameters	Included studies	Results
<p>Stead (2006)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “The objective of this review was to assess the effects of Nicobrevin on long term smoking cessation”.</p> <p>Funding source: External: NHS Research and Development Programme, UK. Internal: Department of Primary Health Care, Oxford University, UK. National School for Health Research School for Primary Care Research, UK.</p>	<p>Years searched: start year NR – January 2009</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - Smokers wishing to quit. I - Treatment with Nicobrevin (a 28-day course of tablets). C - Placebo or an alternative therapeutic control. O - Smoking cessation with at least six months follow up. S - Randomized trials.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 0</p> <p>Study designs: NA</p> <p>Country: NA</p> <p>Included studies relevant to our review: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: NA</p>	<p>“We identified no trials meeting the full inclusion criteria including long-term follow up. [...] Only two trials of Nicobrevin have been published and neither had long term follow up”.</p>

Review details	Review search parameters	Included studies	Results
<p>Stead (2012)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: “The objective of this review was to assess the effects of lobeline on long term smoking cessation”.</p> <p>Funding source: External: NHS National Institute for Health Research, NIHR Evaluation Trials and Studies Coordinating Centre, UK. Internal: Department of Primary Health Care, University of Oxford, UK. National School for Health Research School for Primary Care Research, UK.</p>	<p>Years searched: start year NR - December 2011</p> <p>Language restrictions: unclear</p> <p>Inclusion criteria (according to PICOS): P - Any smokers. I - Treatment with any form of lobeline. C - Placebo or an alternative therapeutic control. O - Smoking cessation, assessed at follow-up at least 6 months from start of treatment. S - Randomized studies.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 0</p> <p>Study designs: NA</p> <p>Country: NA</p> <p>Included studies relevant to our review: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: In relation to identified trials - “Lack of long term follow-up was a reason for exclusion in all cases. A large number of the studies were not controlled. Where comparison was made with a placebo control or alternative treatment it was rarely clear that an appropriate method of randomization had been used”.</p> <p>Limitations identified by review authors: NA</p>	<p>“We identified no trials meeting the full inclusion criteria including long term follow-up. One large trial failed to detect any effect on short-term abstinence”; participants’ age for this trial unclear.</p>

Review details	Review search parameters	Included studies	Results
<p>Terplan (2007)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To evaluate the effectiveness of psychosocial interventions in pregnant women enrolled in illicit drug treatment programs on birth and neonatal outcomes, on attendance and retention in treatment, as well as on maternal and neonatal drug abstinence. In short, do psychosocial interventions translate into less illicit drug use, greater abstinence, better birth outcomes, or greater clinic attendance?”.</p> <p>Funding source: NR</p>	<p>Years searched: 1982/1996 – 2006 (varied by database)</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Pregnant women enrolled in illicit drug treatment programs. Women on methadone are also included. I - Psychosocial interventions. C - Pharmacological interventions or placebo or non-intervention or another psychosocial intervention for treating illicit drug use in pregnancy. O - Birth and neonatal outcomes, attendance and retention in treatment, maternal and neonatal drug abstinence. Primary outcomes: (1) Obstetrical outcomes: -birth weight -gestational age at birth -placental abruption (2) Neonatal outcomes: - neonatal abstinence syndrome (NAS) -admission to and length of time spent in neonatal intensive care unit (NICU) (3) Use of primary substance abuse measured by: -maternal toxicology - maternal self-report -newborn toxicology -any biological marker eventually provided in original studies Secondary outcomes: (4) Retention in treatment measured as number of subjects retained at the end of the study, or (5) Retention in treatment measured as number of subjects retained at the end of one month or greater (6) Treatment attendance (7) Prenatal care attendance S - Randomised controlled trials.</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 9 Study designs: RCTs Country: 8x USA, 1 x Australia</p> <p>Included studies relevant to our review: 2 Study designs: RCTs Country: USA</p> <p>Sample sizes and follow-up: Sample sizes were very small – 12 and 14 women. In one study, “unable to measure retention as not reported, however, 20 patients randomised and only 14 analysed. 6 dropouts (unclear from which randomised groups) -- one for delivery, one for sedative detox, and 4 for noncompliance with group therapy”. No details for other study.</p> <p>Quality of included studies as assessed by review authors: Randomisation: method not reported. None of the trials adequately described any methods of allocation concealment. Blindness: not possible. Demographic data between groups similar.</p> <p>Limitations identified by review authors: Obstetrical and neonatal outcomes NR, small number of studies, small sample sizes.</p>	<p>(1) Obstetrical outcomes – “Only two studies reported obstetrical outcomes (Carroll 1995, Elk 1998). Given the difference in both the outcome reported as well as method of reporting, statistical comparison of the results between the two studies was impossible. Carroll (1995) compared median gestational age at delivery as well as median birth weight between the control and intervention groups. Women in the intervention group had slightly longer gestations (40 versus 38 weeks) as well as heavier infants (3,348 gm versus 2,951 gm). Null hypothesis testing was not provided. Elk (1998) described adverse events between the intervention and the control group. None of the individuals in the intervention group had an adverse event, whereas 80% of the control group did: two had preterm labor and two delivered pre-term (prior to 37 weeks). This difference, however, was not statistically significant (p=0.22). Neither study had performed an a priori power calculation and, given the small sample sizes, it is unlikely that either were powered to detect differences in obstetrical or neonatal outcomes between the groups”.</p> <p>(2) Neonatal outcomes – “Only one study reported neonatal outcomes. Elk (1998) stated that there was no difference in length of hospital detoxification for the newborns between the intervention and control groups, although mean days or any other summary statistic were not reported”.</p> <p>“Birth outcomes were reported in only two studies (Carroll 1995; Elk 1998). Both studies showed a benefit with contingency management treatment; however neither performed a power calculation. Given that these two studies had a combined total of 26 participants, one can safely surmise that neither was powered to detect any difference in obstetrical outcomes. There is also inconsistency between the studies in regards to which obstetrical outcomes were measured. Carroll (1995) measured both mean gestational age and mean birth weight. Elk (1998), on the other hand, counted ‘adverse perinatal events’, a category that included both preterm delivery, a serious obstetrical event, as well as preterm labor, a clinical event of far less significance”.</p>

Review details	Review search parameters	Included studies	Results
<p>Thomas (2007)</p> <p>Study design: Systematic review</p> <p>Author objectives: To assess the effectiveness of interventions to help family members to strengthen non-smoking attitudes and promote non-smoking by children and other family members.</p> <p>Funding source: None</p>	<p>Years searched: Searched up to 2007</p> <p>Language restrictions: Unclear</p> <p>Inclusion criteria (according to PICOS): P - Young people aged 5-18 and family members. The search strategy chosen also located studies that follow these participants beyond age 18. I - All types of family-based interventions with children and family members intended to deter the use of tobacco. C - Varied, including non-family based classroom intervention, no intervention. O - Primary outcome was smoking status in baseline abstainers. Secondary outcomes were smoking in parents and other family members, and child smoking attitudes. S - RCT; Country: USA, Norway, Australia, Finland, India, UK.</p> <p>Exclusion criteria: Outcomes: do not assess baseline smoking status in the pre-test survey; measure attitudes and intentions to smoke, and do not measure smoking behaviour; Intervention: do not allow separation of the effects of the family intervention from those of other co-interventions; the primary focus is cessation rather than prevention; Study design: do not follow up participants for at least six months from the start of the intervention.</p>	<p>Number of included studies (total): 22 Study designs: 22 RCT Country: 16 USA, 2 Norway, and one each in Australia, Finland, India and the UK.</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Follow up varied: one year (eight trials), twenty months (one trial); two years (two trials); three years (six trials); and one trial each at 6, 7, 15, and 27 to 29 years.</p> <p>Quality of included studies as assessed by review authors: 6 trials were rated as having minimal bias; 10 trials low risk of bias; 6 trials as having multiple biases.</p> <p>Limitations identified by review authors: None</p>	<p>Comparison 1: Are family interventions better than no intervention or 'usual care'? For the high quality studies, four RCTs found more baseline non-smokers remained non-smokers with a family intervention compared to no intervention control. Meta analysis was not conducted but for individual studies: i) OR = 2.16; 95% confidence interval (CI) 1.39 to 3.37; P < 0.001; ii) OR 0.48; 95% CI 0.39 to 0.59; iii) no OR reported; iv) 0.55; 95% CI 0.34 to 0.88; P = 0.013). Four RCTs found no difference.</p> <p>Comparison 2: Are family interventions better than school interventions? One high quality RCT found a significant effect of family vs. school. Strengthening Families average age to initiation was 55 months, compared to 31.8 months in preparing for drug free years, and 31.0 months in no intervention control (p < 0.05). Secondary analysis suggested that Strengthening Families delayed initiation longer than the school programme. 4 RCTs found no differences for this comparison.</p> <p>Comparison 3: Are combined family plus school interventions better than school interventions? Seven RCTs found no incremental effects of family + schools on smoking initiation.</p> <p>Comparison 4: Are family interventions which target tobacco better than family interventions which do not target tobacco? One RCT found that a specialist family tobacco intervention did not produce significant effects vs. a family intervention targeting gun, bicycle helmet and seat belt safety (OR 0.97; 95% CI 0.79 to 1.20; P = 0.78).</p> <p>Comparison 5: Are family plus peer interventions to reduce risks better than peer interventions to reduce risks? 2 RCTs suggested that family interventions were more effective than peer based approaches (p < 0.001; p < 0.01).</p>

Review details	Review search parameters	Included studies	Results
<p>Thomas (2008)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To assess the effects of population tobacco control interventions on social inequalities in smoking”.</p> <p>Funding source: Department of Health Policy Research Programme (PRP)</p>	<p>Years searched: Inception - January 2006.</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Smokers, people at risk of taking up smoking, people at risk of exposure to environmental tobacco smoke (ETS), or the general population were included. Studies needed to report socio-demographic or socio-economic data about the participants to be eligible. I - Any population-level tobacco control intervention. C - NR. O - Changes in smoking behaviour (such as prevalence or consumption), indirect measures of tobacco consumption (such as illegal sales to minors or quantity of smuggled cigarettes), exposure to ETS, intermediate outcomes (such as changes in knowledge or attitudes), process measures (such as participation rates), implementation measures (such as enforcement of policy changes) and any health outcomes (such as mental health or wellbeing), as well as adverse or unintended effects. S - Primary studies of any study design.</p> <p>Exclusion criteria: “We excluded studies of interventions conducted exclusively within closed settings (such as psychiatric or addiction treatment facilities, detention centres or prisons) because this review was concerned with effects in the wider population. We also excluded studies that assessed the effects of restrictions on sales to minors (youths) by only reporting test purchases as outcomes.” “We did not include interventions whose main aim was to strengthen the capacity of individuals to stop smoking or to resist taking up smoking, even if these interventions were applied to whole groups or populations (for example, mass media health education campaigns)”.</p>	<p>Number of included studies (total): 84</p> <p>Study designs: Dominated by econometric analyses (half of the included studies) modelling the effects of the prices of tobacco products. “Stronger designs tended to have been used for studies of the effects of restrictions on smoking in workplaces, public places and schools and restrictions on sales to minors, of which three were cluster randomised controlled trials [...] studies of other types of intervention were predominantly cross-sectional or retrospective”.</p> <p>Country: “Over half of the studies having been conducted in the United States and just six in the United Kingdom”.</p> <p>Included studies relevant to our review: 20</p> <p>Study designs: Econometric models</p> <p>Country: All USA</p> <p>Sample sizes and follow-up: NR</p> <p>Quality of included studies as assessed by review authors: Used bespoke quality checklist adapted from existing tools. Quality assessment only in relation to all included studies (not reported separately for relevant ones). Studies of restrictions on sales to minors were the most likely to fulfil the criteria for quality of execution, with one study meeting all six criteria and two studies meeting five. Two studies of restrictions on smoking in schools met four criteria. The remaining studies in this review met between zero and three of the criteria.</p> <p>Limitations identified by review authors: Possibility of publication bias.</p>	<p>“All 20 studies restricted to adolescents or college students found that these groups were sensitive to price and concluded that increasing the price of tobacco products would reduce youth smoking. The only study comparing children within different age groups found that those aged 17 or 18-years-old were more sensitive to price increases than those aged between 13 and 16-years-old. Four studies found that boys aged 13–18 were more sensitive to price than girls. All three studies which examined effects by ethnicity found that black or Hispanic adolescents were more affected by price increases than their white counterparts. No studies provided evidence about possible differential effects by parental income, occupation or educational level”.</p>

Review details	Review search parameters	Included studies	Results
<p>Thomas (2011)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: To assess the effectiveness of mentoring to prevent adolescent alcohol/drug use.</p> <p>Funding source: None</p>	<p>Years searched: 1806-2011</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Adolescents aged 13-18. I - All mentoring programmes whose goal was to deter alcohol and drug use, irrespective of theoretical intervention. C - No intervention, or standard health education, alcohol or drug education, individual counselling or support group. O - Abstinence; monthly use; reduction in use; alcohol related aggression. S - RCT or cluster RCT; Country: international.</p> <p>Exclusion criteria: Aged 19+</p>	<p>Number of included studies (total): 4 Study designs: 4 RCT Country: 4 USA</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Alcohol use at +18 month follow up ES calculation: treatment 583, control 533; alcohol use at +6 months: treatment 76, control 118; monthly alcohol use at +6 months: treatment 76, control 122; drug use initiation ES at +18 months: treatment 487, control 472; cannabis use +6 months: treatment 76, control 118; monthly cannabis use + 6 months: treatment 76, control 122; last year drug use + 12 months: treatment 96, control 61.</p> <p>Quality of included studies as assessed by review authors: Reviewers noted that most assessments of bias were unclear and it was not clear whether this was due to poor methodology or poor reporting.</p> <p>Limitations identified by review authors: None.</p>	<p>Alcohol use: relative risk for mentoring compared to no intervention was 0.71, $p = 0.005 > 12$ months follow up. 6 month follow up non significant compared to no intervention and a school curriculum.</p> <p>Drug use: inconsistent findings. 1 study out of 3 reported less use of drugs at follow up. No effects on cannabis use, and no additive effect of delivering mentoring + prevention curriculum.</p> <p>Substance use (including alcohol): no difference at 3 year follow up for use in the previous 2 months.</p>

Review details	Review search parameters	Included studies	Results
<p>Thomas (2013)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: To determine whether school smoking interventions prevent youth from starting smoking. The secondary objective was to determine which interventions were most effective.</p> <p>Funding source: NIHR (UK)</p>	<p>Years searched: 1966-2012</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Children (aged 5 to 12) and adolescents (aged 13 to 18) in school settings. I - School-based programmes that had as one of their goals; preventing tobacco use, irrespective of theoretical intervention. C - (Tobacco) education as normal, no intervention. O - Smoking initiation at a minimum of + 6 months. S - RCT</p> <p>Exclusion criteria: NR</p>	<p>Number of included studies (total): 134 Study designs: 1 RCT, 133 Cluster RCT Country: Prevention cohorts: 26 USA, 4 ND, 4 UK, 3 CA, 3 DE, 3 IT, 2 China, 2 ES, 1 AU, 1 AUS, 1 BE, 1 CR, 1 DE, 1 FI, 1 GR, 1 PT, 1 S Africa, 1 SW, 1 THAI; change in behaviour: 12 USA, 2 India, 1 CA; point prevalence cohorts: 12 USA, 2 AUS, 2 ND, 2 UK, 1 FR, 1 DE, 1 India, 1 Mexico, 1 NO, 1 RO, 1 SW</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: In total, 134 studies involving 428,293 participants. Prevention of initiation cohort included 49 studies (N = 142,447); Change in Smoking Behaviour over time included 15 studies (N = 45,555). Some studies provided data for more than 1 outcome.</p> <p>Quality of included studies as assessed by review authors: Low risk of reporting bias; unclear risk of selection and detection bias; low risk of attrition bias.</p> <p>Limitations identified by review authors: Bias could have been introduced due to the high variability of outcome measures; bias may also have been introduced by certain assumptions made by the study authors in data extraction and subsequent statistical analysis.</p>	<p>Prevention of initiation: Pooled results at follow-up at one year or less found no overall effect of intervention curricula versus control (odds ratio (OR) 0.94, 95%confidence interval (CI) 0.85 to 1.05). In a subgroup analysis, the combined social competence and social influences curricula (six RCTs) showed a statistically significant effect in preventing the onset of smoking (OR 0.49, 95% CI 0.28 to 0.87; seven arms); whereas significant effects were not detected in programmes involving information only (OR 0.12, 95% CI 0.00 to 14.87; one study), social influences only (OR 1.00, 95% CI 0.88 to 1.13; 25 studies), or multimodal interventions (OR 0.89, 95% CI 0.73 to 1.08; five studies). In contrast, pooled results at longest follow-up showed an overall significant effect favouring the intervention (OR 0.88, 95% CI 0.82 to 0.96). Subgroup analyses detected significant effects in programmes with social competence curricula (OR 0.52, 95% CI 0.30 to 0.88), and the combined social competence and social influences curricula (OR 0.50, 95% CI 0.28 to 0.87), but not in those programmes with information only, social influence only, and multimodal programmes.</p> <p>Change in smoking behaviour over time: At one year or less there was a small but statistically significant effect favouring controls (standardised mean difference (SMD) 0.04, 95%CI 0.02 to 0.06). For follow-up longer than one year there was a statistically non significant effect (SMD 0.02, 95% CI -0.00 to 0.02).</p> <p>Point prevalence of smoking: heterogeneity too high to warrant data pooling.</p>

Review details	Review search parameters	Included studies	Results
<p>Turnbull (2012)</p> <p>Study design: Systematic review with Meta-analysis</p> <p>Author objectives: “To determine the effects of home visits during pregnancy and/or after birth for women with a drug or alcohol problem”.</p> <p>Funding source: NR</p>	<p>Years searched: Inception - November 2011</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - Pregnant or postpartum women with a drug or alcohol problem. Trials enrolling high-risk women of whom more than 50% were reported to use drugs or alcohol were also eligible. I - Home visits. C - No home visits or a different type of home visiting intervention. O - Vast range of outcomes including Drug and alcohol related outcomes, Pregnancy and puerperium outcomes, Infant/child outcomes, and Psychosocial outcomes. Note - Neonatal abstinence syndrome listed under drug and alcohol related outcomes (not infant/child outcomes). S - Random or quasi methods of participant allocation, and where the unit of allocation was the individual or a group (cluster-randomised studies).</p> <p>Exclusion criteria: “Crossover trials were not eligible”.</p>	<p>Number of included studies (total): 7 Study designs: 6 RCT, 1 Quasi-randomised controlled trial Country: Not consistently reported. Appears to have been USA and Australia.</p> <p>Included studies relevant to our review: 6 (all except Dakof 2003 reported child related outcomes) Study designs: 5 RCT, 1 Quasi-randomised controlled trial Country: Not consistently reported. Appears to have been USA and Australia.</p> <p>Sample sizes and follow-up: All studies were relatively small. Sample sizes ranged from 60 to 227 woman-infant pairs. Attrition highlighted as major weakness by review authors. Two of relevant studies had less than 10% losses post randomisation. “Bartu (2006) reported 9.5% post-randomisation losses of survivors.” “Quinlivan (2000) reported only one (0.7%) mother-infant pair who withdrew from study post randomisation. A further 11 (8%) infants had adverse neonatal outcomes and did not contribute to knowledge outcomes. Reported post randomisation losses for other studies were: Black (1994) 28%, Butz (1998) 43% for self-reported drug and alcohol use data and 51% for behavioural outcomes, Grant (1996) 27%, and Schuler (2000) 25% at six months and 54% at 18 months”.</p> <p>Quality of included studies as assessed by review authors: Cochrane Risk of bias. One of the relevant studies (Quinlivan 2000) reported adequate allocation concealment and randomisation procedures and had less than 10% losses post-randomisation. The other studies had substantial methodological limitations, particularly with large losses to follow-up. Bartu (2006) did not number envelopes so allocation concealment was unclear, and there were baseline differences for risk factors between study groups. It was judged to be at high risk of bias. No study was able to be blinded due to the nature of the intervention.</p> <p>Limitations identified by review authors: Heterogeneity of interventions and outcomes, large losses to follow-up, no study providing a major antenatal intervention, low intensity of home visits.</p>	<p>“No study provided a major antenatal intervention so risk of adverse pregnancy/neonatal outcomes is not reported”.</p> <p>“Three studies (Black 1994; Grant 1996; Schuler 2000) used the Bayley Scales of Infant Development to assess infant development. Grant (1996) reported no significant difference in incidence of cognitive delay at three years using the Bayley MDI (RR 1.36, 95% CI 0.41 to 4.45), but an increase in incidence of psychomotor delay using the Bayley PDI of borderline statistical significance (RR 3.26, 95% CI 1.00, 10.59; risk difference (RD) 0.27, 95% CI 0.03 to 0.51). Meta-analysis of three studies (Black 1994; Grant 1996; Schuler 2000) found no significant differences in cognitive development (Bayley MDI: FE mean difference (MD) 2.89, 95%CI -1.17 to 6.95) or psychomotor development (Bayley PDI: FE MD 3.14, 95% CI -0.03 to 6.32). Limiting the meta-analysis to the two studies providing a developmental intervention as a component of the home visiting program (Black 1994; Schuler 2000) there was no significant difference in cognitive development (Bayley MDI: FE MD 3.13, 95% CI -1.46 to 7.72) but a significant improvement in psychomotor development (Bayley PDI: FE MD 4.14, 95% CI 0.79 to 7.50)”.</p> <p>“Three studies (Black 1994;Butz 1998; Schuler 2000) incorporated developmental interventions as part of the home visiting program, all using the Carolina Preschool Curriculum and Hawaii Early Learning Program. Effects on longer-term development were inconsistent, with Black (1994) reporting no difference in the Bayley MDI or PDI at 18 months and Schuler (2000) reporting significant improvements in the Bayley PDI for infants receiving intervention”.</p> <p>“Butz (1998) reported a reduction in behavioural problems of borderline statistical significance (RR 0.46, 95% CI 0.21 to 1.01; RD -0.17, 95% CI -0.33 to -0.01). Butz (1998) also reported no significant difference in the Child Behavioural Checklist total score at 18 months (MD -3.10, 95% CI -7.26 to 1.06). Meta-analysis of two studies (Bartu 2006; Quinlivan 2000) found no significant difference in infant death (FE RR 0.70, 95% CI 0.12 to 4.16). No study reported measures of school success including the need for special educational classes, retention in grade, competence in reading, writing, mathematics and general knowledge. No study reported self-esteem, career aspiration, truancy or school completion. Long-term outcomes including teenage pregnancy, unemployment, not married, criminal behaviour, welfare assistance and suicide were not reported”.</p>

Review details	Review search parameters	Included studies	Results
<p>Vaughn (2004)</p> <p>Study design: Meta-analysis</p> <p>Author objectives: Assessment of outcomes of controlled evaluations of adolescent substance abuse treatments.</p> <p>Funding source: NR</p>	<p>Years searched: 1989-2002</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Adolescent substance users. I - Psychosocial interventions. C - NR O - Substance use. S - 'Controlled evaluations'.</p> <p>Exclusion criteria: i) Interventions targeting adults were excluded unless studies of mixed groups of adults and adolescents could allow specific determinations as to the effectiveness of treatment outcomes for adolescent subjects. ii) Pharmacological therapies excluded if drugs were not administered as part of an integrated treatment protocol combining medications with one or more psycho-social interventions.</p>	<p>Number of included studies (total): 15 Study designs: 13 RCT; 2 quasi experimental Country: NR</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: Sample sizes ranged from 22 to 426 (M = 128.5, SD = 103.8). Adequate power with adequate sample size (12 studies). Follow-up less than 6 months (7 studies), follow-up 6 to 11 months (3 studies), follow-up 12 months or longer (5 studies).</p> <p>Quality of included studies as assessed by review authors: The reviewers noted that in general the quality of the studies was high, with a mean score of 12, SD1.9 (max. 16).</p> <p>Limitations identified by review authors: Modest number of evaluations reviewed, publication and search bias, some methodological critiques were not part of the authors' assessment tool, generalisability as several criminal justice populations.</p>	<p>Treatment gains occurring immediately following treatment were often not maintained at follow-up. Post-treatment effect sizes ranged from an increase in substance use of .51 (medium, non-beneficial effect) for coping skills training to a substantial reduction in substance use of -1.25 (large) for behavioural therapy. At follow-up, effect sizes ranged from .39 (medium, non-beneficial effect for cognitive behavioural treatment, to large reductions in substance use for both cognitive-behavioural group treatment and multidimensional family therapy of -.87 and -.86, respectively.</p>

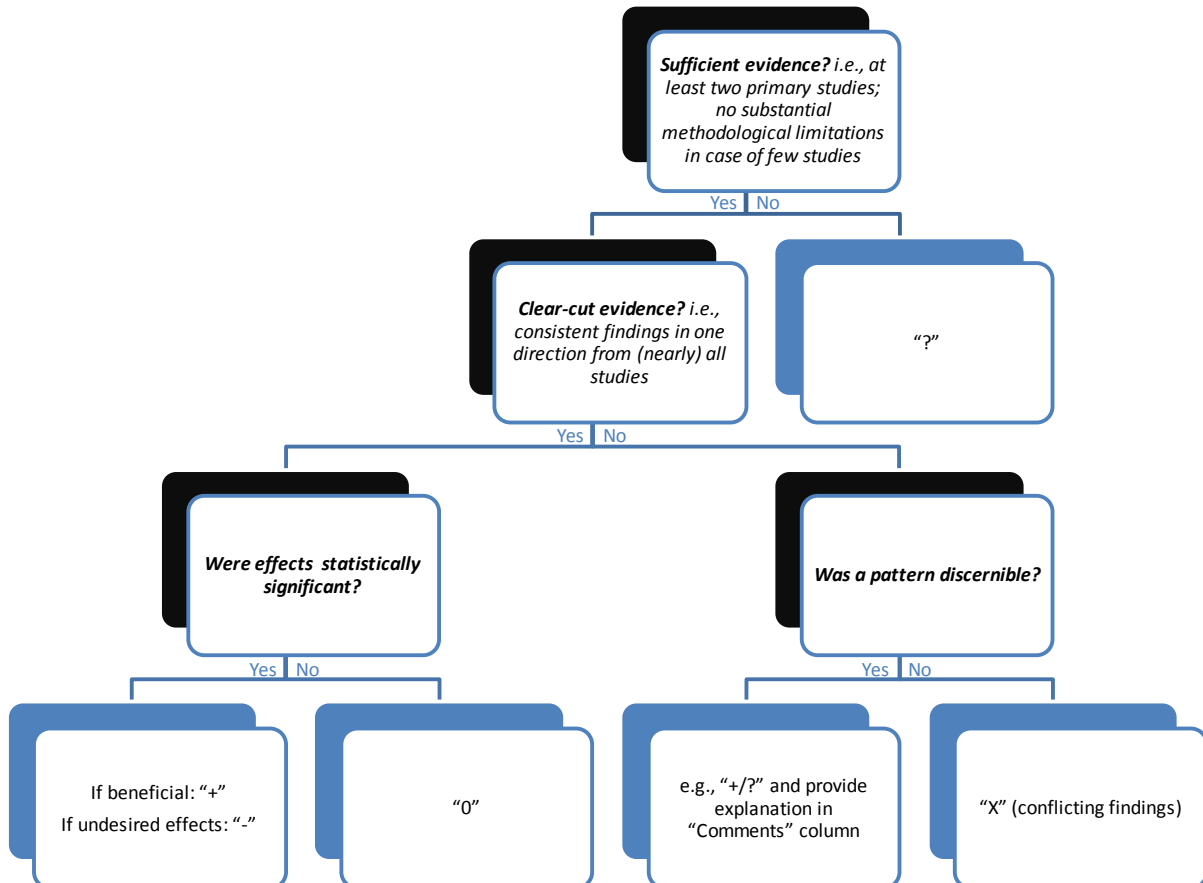
Review details	Review search parameters	Included studies	Results
<p>Villanti (2010)</p> <p>Study design: Systematic review</p> <p>Author objectives: Systematic review of smoking cessation interventions for young adults (18-24).</p> <p>Funding source: Maryland Cigarette Restitution Fund Research Grant to the Johns Hopkins Medical Institutions (FY 10).</p>	<p>Years searched: Database start date -2009</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Aged 18-24 living in USA. I - Behavioural or pharmacologic interventions delivered at the individual or small-group level and communication interventions delivered to larger groups. C - No intervention, waiting list control or treatment as usual O - Smoking cessation or abstinence with a minimum follow-up period of 1 month. S - Randomised and non-randomised studies; country: USA</p> <p>Exclusion criteria: Case studies and interventions conducted through high schools, targeting pregnant women, and primarily focused on the adult population were excluded from this review. Interventions focusing on smokeless tobacco cessation or smoking prevention rather than smoking cessation were excluded, unless they measured effects on smoking cessation separately.</p>	<p>Number of included studies (total): 14 Study designs: 12 RCT; 2 quasi experimental studies Country: USA</p> <p>Included studies relevant to our review: Same as above</p> <p>Sample sizes and follow-up: The initial sample sizes of these studies ranged from 42 to 33,215; and final sample size ranged from 33-25,000. Follow up ranged from 1-12 months. Retention ranged from 52% at 3 months to 99.5 at 1 month. The majority of studies reported retention rates > 75%. "Five studies retained more than 90% of participants, three reported 75% to 90% retention, and the remaining six reported 50% to 75% retention at last follow-up".</p> <p>Quality of included studies as assessed by review authors: All studies subject to some degree of bias such as incomplete detail on randomisation or treatment allocation bias. Randomised studies were free of selective outcome reporting, non-randomised studies were not. Funding sources reported for 10/14 studies. Most study populations were matched at baseline. Five studies used unbiased outcome assessment (e.g. cotinine).</p> <p>Limitations identified by review authors: Great variability in reviewed study quality; "all of the significant effects were observed for self-reported outcomes".</p>	<p>Randomised studies reporting period abstinence: Self report - 48hr abstinence OR = 2.39 (1.34, 4.25; at 1-3 months) to 3.25 (1.34, 7.85; at 4-6 months) both significant (1 study). 7 day abstinence OR = 0.75 (0.25,2.28; 1-3 months) to 2.79 (2.47, 3.16; 10-12 months). Biochemically verified: 7 day abstinence OR = 1.44 (0.75, 2.75; 10-12 months) to 1.92 (0.35, 10.52; 4-6 months) both non-significant. Self reported 30 day abstinence 0.99 (0.62-1.58; 1-3 months) to 2.27 (1.55, 3.32; 7-9 months), latter significant. Biochemically verified 30-day abstinence OR = 2.61 (0.97, 6.98; 1-3 months) non significant.</p> <p>Four studies had positive significant effects. "Only two interventions had effects beyond 6 months. One [additional] study showed promise for 30-day smoking abstinence in the short term and one improved 48-hour abstinence from smoking among young adults [...] The remaining ten interventions had no effect on smoking cessation in this group, although pooled results from two studies support young adult interventions based on social cognitive theory".</p> <p>"The most promising studies point to the need for proactive recruitment of young adult smokers and personalization of the intervention content to meet the specific interests of the participant. Three of the promising interventions identified in this review were brief with extended support via telephone quitline, telephone counselling, web resources, and e-mail".</p>

Review details	Review search parameters	Included studies	Results
<p>Whitworth (2009)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To assess the effectiveness of routine pre-pregnancy health promotion for improving pregnancy outcomes when compared with no prepregnancy care or usual care”.</p> <p>Funding source: External: National Institute for Health Research, UK. Internal: The University of Liverpool, UK.</p>	<p>Years searched: start date NR - February 2009</p> <p>Language restrictions: Any language included</p> <p>Inclusion criteria (according to PICOS): P - All women of childbearing age rather than those in high-risk groups. We include interventions which target all women of childbearing age, but which happen to include women from high-risk groups. I - Health promotion interventions which aim to identify and modify risk factors before pregnancy. C - NR O - Primary outcomes: 1. Perinatal death. 2. Small-for-gestational age. 3. Extremely preterm birth (defined as birth < 28 weeks' gestation). 4. Maternal death. Secondary outcomes - Pregnancy outcomes 1. Reported maternal behavioural change: smoking, diet, alcohol or drug use. 2. Development of antenatal complications. 3. Preterm birth (defined as birth < 37 weeks' gestation). 4. Spontaneous miscarriage. 5. Therapeutic abortion. 6. Pregnancy within one year of intervention. 7. Mode of birth. Infant outcomes: 1. Parameters of birth asphyxia. 2. Neonatal intensive care unit admission. 3. Birth weight < 2500 g. 4. Respiratory distress syndrome. 5. Congenital anomaly. Measures of maternal satisfaction and anxiety 1. Woman not satisfied with care. 2. Women's preferences for care. 3. Maternal anxiety (measured on validated scales or visual analogue scales). Costs 1. Costs associated with pre-pregnancy health promotion versus standard care (including follow-up visits and tests). 2. Number of antenatal visits. 3. Number of antenatal admissions to hospital. S - Randomised trials and quasi-randomised trials.</p> <p>Exclusion criteria: “We have excluded trials where interventions are aimed specifically at women with established medical, obstetric or genetic risks or already receiving treatment as part of programmes for high-risk groups (e.g. women identified as having serious alcohol or substance abuse problems)”.</p>	<p>Number of included studies (total): 4 Study designs: RCT Country: 2 USA, 1 Australia, 1 NR (likely USA)</p> <p>Included studies relevant to our review: 1 (Lumley 2006) Study designs: RCT Country: Australia</p> <p>Sample sizes and follow-up: “1579 women randomised. 176 became ineligible before the start of the trial. Of the remaining 1403 women there was further attrition (44%). 364 (26%) women were lost to follow up and 253 (18%) did not become pregnant during the study period. For the 786 women included in analyses there were low levels of missing data”. “In the study by Lumley (2006), women who did not become pregnant in the follow-up period were not included in the analyses and there were further losses to follow up for other reasons (34.2% of the sample randomised were lost to follow up and we do not know how many of these women did or did not become pregnant; further, of those women available at follow up 18% did not become pregnant and were not eligible to experience pregnancy outcomes). Overall, half of the women randomised were not followed up. Although missing data were balanced across groups, this level of attrition makes interpretation of results very difficult”.</p> <p>Quality of included studies as assessed by review authors: Cochrane Risk of bias. “A source of bias in the Lumley (2006) trial was that data included in the analyses were for those women who became pregnant in the study period (786 women of 1579 randomised); it is possible that women who become pregnant are different in a number of respects from those that do not, and that the intervention may have had a different effect on those women that did or did not become pregnant.” “We carried out a sensitivity for the dichotomous pregnancy outcomes reported in the Lumley (2006) study. We included all women that were available to follow up in the study denominators so that both women that did and did not become pregnant were included. Findings were very similar to those in the analysis, which included only those women who became pregnant.”</p> <p>Limitations identified by review authors: Lack of data on outcomes of interest, questions concerning generalisability of results, losses to follow-up.</p>	<p>Only one of the included studies followed women through pregnancy and reported on pregnancy outcome (Lumley 2006).</p> <p>“Births where babies were small-for-gestational age (< 10th percentile) were not significantly different between groups (risk ratio (RR) 1.30, 95% confidence interval (CI) 0.83 to 2.04). There were four extremely preterm births (babies born at less than 28 weeks' gestation) in the intervention group compared with none in the control group, but the difference between groups was not statistically significance (RR 9.02, 95% CI 0.49 to 167.03). No data were available by randomisation group for the primary outcomes of perinatal or maternal death”.</p> <p>“The rate of preterm births (less than 37 weeks) was lower in the control than in the intervention group, but results were not significant (RR 1.42, 95% CI 0.77 to 2.59). There were no significant differences in rates of congenital anomalies or birth weight less than 2500 g. Babies in the intervention group were, on average, 97 g lighter than those in the control group and this difference was significant (mean difference -97.00, 95% CI -168.05 to -25.95), but may be partly explained by the non-significant increase in preterm births in the intervention group”. “This finding needs to be interpreted with caution as pregnancy outcome data were available for only half of the women randomised.”</p> <p>“It is not clear why the intervention seemed to be associated with negative outcomes in the Australian study (Lumley 2006). The authors propose a number of possible explanations: the intervention may have increased stress in mothers which led to increased preterm birth, or the intervention meant that more babies with anomalies or with poor placentation were sustained longer in utero, leading to fewer miscarriages but more very preterm births in the intervention arm (although data on spontaneous miscarriages before 20 weeks were not reported). On the other hand, it is possible that the differences in outcomes between groups relating to prematurity and birth weight (which are likely to be related) occurred by chance or were due to some other explanation not considered by the authors.”</p>

Review details	Review search parameters	Included studies	Results
<p>Williams (2007)</p> <p>Study design: Systematic review</p> <p>Author objectives: “To systematically review evidence of the effectiveness of counselling people of any age in primary care settings about occupant restraints or alcohol-related driving to prevent injuries”.</p> <p>Funding source: Agency for Healthcare Research and Quality (AHRQ)</p>	<p>Years searched: Several different searches - 2002 to September 2005 (database search conducted to update existing reviews); another search reported as 1966 - Sept 2005</p> <p>Language restrictions: English language only</p> <p>Inclusion criteria (according to PICOS): P - Patients of any age, conducted in the United States or other similarly developed countries (note - unselected primary care patients, see exclusion criteria). I - Behavioral counselling interventions targeting restraint use (including safety seats, booster seats, seat belts, correct use, and seat location) or alcohol-impaired driving or riding. Evaluated interventions needed to be feasible to conduct in primary care or referral from primary care. C - NR O - Correct use of age and weight appropriate restraints, driving or riding when driver is under the influence of alcohol, morbidity and/or mortality from motor vehicle occupant injuries, adverse effects. S - Randomized, controlled trials (RCTs); controlled clinical trials (CCTs); or comparative observational research studies</p> <p>Exclusion criteria: P - Selective population not normally seen in primary care (e.g., patients recruited from emergency department or other specialty setting who are injured or intoxicated and do not represent a general patient population). I - Study does not evaluate a behavioral counselling intervention targeting restraint use or alcohol-impaired driving or riding with alcohol-impaired drivers. Intervention not done in primary care, not feasible for primary care, or not widely available for primary care referral. C – NR O - Does not report designated outcomes S - Does not meet U.S. Preventive Services Task Force criteria for quality (i.e., studies rated as having poor quality were excluded). Editorials, letters, non-systematic reviews, non-comparative studies, case-control studies. Country: Study not conducted in a country with United Nations human development index similar to U.S. population</p>	<p>Number of included studies (total): 17 Study designs: 9 RCTs and 8 CCTs Country: NR</p> <p>Included studies relevant to our review: 0 Study designs: NA Country: NA</p> <p>Sample sizes and follow-up: NA</p> <p>Quality of included studies as assessed by review authors: NA</p> <p>Limitations identified by review authors: NR</p>	<p>“We found no research addressing the effect of behavioral counselling interventions delivered to unselected patients in primary care to reduce alcohol-related driving or riding with an impaired driver”.</p> <p>“Key question 1: Do primary care behavioral counselling interventions for children, adolescents, and adults to increase the correct use of age- and weight-appropriate restraints or reduce driving/riding with drivers under the influence of alcohol reduce morbidity and/or mortality from motor vehicle occupant injuries?” - “We found no study that reported health outcomes of counselling interventions targeting the use of booster seats or safety belts for older children, adolescents, or adults or of interventions targeting alcohol-related driving for any age group”.</p> <p>“Key question 2: Do primary care behavioral counselling interventions for children, adolescents, and adults lead to increased correct use of age- and weight-appropriate restraints?” - Question not relevant to this review.</p> <p>“Key question 3: Do primary care behavioral counselling interventions for children, adolescents, and adults reduce driving/riding with drivers under the influence of alcohol?” - “Our searches found no studies of primary care interventions evaluating behavioral counselling in general populations to reduce driving while under the influence of alcohol or riding with drivers who are under the influence of alcohol”.</p> <p>“Key question 4: What are the adverse effects of counselling children, adolescents, and adults to correctly use age- and weight-appropriate restraints and reduce driving/riding with drivers under the influence of alcohol?” - “Our searches found no studies of adverse effects of counselling to use age- and weight-appropriate restraints or reduced driving while under the influence of alcohol or riding with drivers who are under the influence of alcohol”.</p>

Evidence synthesis – Decision algorithm

The following algorithm was used to complete the ‘overview of findings’ table summarising the findings of the review.



Evidence synthesis – Overview of findings

Overview of review-level evidence on the effectiveness of policies and interventions addressing young people’s addictive behaviours

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
1. Control and regulation of supply						
Licensing of tobacco retailers	NR	?	NR	NR	1	Review identified only one cross sectional study.
Ban on sale of single cigarettes	NR	?	NR	NR	1	
Vending machine restrictions	NR	?	NR	NR	1	
Availability of low or non-alcoholic beverages	?	NR	NR	NR	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
2. Gambling/substance-free zones						
Indoor and/or outdoor, partial or total smoking bans	NR	?	NR	NR	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
3. Age limits						
Fines for merchants who sell tobacco products to minors	NR	?	NR	NR	1	Review identified only one cross sectional study.
Other measures	NR	NR	NR	NR	0	
4. Taxation and pricing						
Increases in cigarette price	NR	+	NR	NR	2	Few studies distinguished between social groups in determining effectiveness. The strongest available evidence suggested that males were more responsive to price than females.
Increases in cigarette tax	NR	?	NR	NR	1	
Other measures	NR	NR	NR	NR	0	
5. Control and regulation of advertising, marketing and sponsorship						
Ban on free-standing displays of tobacco products	NR	?	NR	NR	1	Review identified only one cross sectional study.
Ban on distribution of free tobacco samples	NR	?	NR	NR	1	
Other measures	NR	NR	NR	NR	0	
6. Warning labels						
Health warning labels	NR	NR	NR	NR	0	
Other types of labels	NR	NR	NR	NR	0	
7. Prevention programmes						
7.1 School based approaches to prevention						
‘Whole school’ approaches	X	+	X	NR	2	Iatrogenic effects on cannabis use reported in one study.
Universal (manualised) programmes (in general)	+	X	+/0	?	7	For alcohol, the outcomes most amenable to change were drunkenness and heavy episodic drinking, and evidence was derived from specific manualised programmes (e.g., Good Behavior Game; Life Skills Training; and Unplugged) rather than types of approaches. Conflicting findings with regard to tobacco; one review suggested that effectiveness may be greater in baseline non-smokers. With respect to illegal drugs, reviews highlighted that effectiveness depended on type of approach. No studies directly compared the effectiveness of the different types of approach

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
						(e.g., skills vs knowledge). One review suggested effectiveness for preventing cannabis use but not other substance use, and that effectiveness may be greater in 'low risk' youth.
Skills training	+	+	+/0	NR	4	One review suggested that studies of resistance skills training appeared to show greater effectiveness than those of generic skills training. The same review suggested greater effectiveness in 'low risk' youth.
Social influence programmes	NR	+/0	X	NR	3	Findings from two reviews suggested social influence programmes may be effective as part of multi component programmes but not in isolation.
Combined social influence + social competence programme	NR	+	NR	NR	1	
Knowledge/information provision	NR	0	0	NR	2	
Affective education	NR	NR	0	NR	1	
Theatre and drama based education	NR	NR	0	NR	1	
Incentives	NR	?	NR	NR	1	
School based component as part of multicomponent interventions	NR	X	NR	NR	3	Conflicting findings between reviews. Discrepancies likely due to consideration of different types of multicomponent programmes. However, multicomponent programmes with a school component were more likely to be effective
Interventions targeting special populations (indigenous youth)	NR	?	NR	NR	1	
Other measures	NR	NR	NR	NR	0	
7.2 Family based approaches to prevention						
Family or parenting programmes	X	X	?	NR	6	Conflicting findings between reviews. Effectiveness likely to depend on the specific type of intervention and child age. Difficult to draw firm conclusions as reviews included a variety of family based approaches, including manualised family based programmes and multicomponent programmes (i.e., school or community based programme with family component). Interventions appeared to be universal, not targeted. Two reviews suggested that 'active involvement' of parents was an effective ingredient. Evidence from two reviews suggested that effectiveness may be greater in younger children (i.e., pre-school to early adolescent).
7.3 Community based approaches to prevention						
Multicomponent or community-based programmes	+/0	X	X	NR	5	Most approaches reviewed were centred on school-based provision, with 'add-on' activities, rather than true community programmes. Conflicting findings between primary studies and reviews, likely due to heterogeneity of interventions and definitions. Some reviews suggested that multi component programmes were more effective (e.g., school based programme with community and family elements), whereas sub analysis conducted in one alcohol review suggested that multiple component programmes were not more effective than single component approaches.
7.4 Other prevention approaches						
Mentoring	0	NR	0	NR	1	
Social norms/ personalised feedback	+/0	NR	NR	NR	2	Computer and web based as well as individual face-to-face feedback probably

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
						effective, whereas mailed, group feedback, and social marketing based approaches more likely to be ineffective.
Mass media campaigns	NR	+/0	X/-	NR	3	Effectiveness depends on how media campaigns are designed and implemented. Well planned campaigns integrated in multi component programmes (e.g., school, community) appeared to be more effective than low intensity, stand alone media campaigns.
Motivational interviewing (MI) Brief interventions	NR	+	+/?	NR	2	For smoking prevention, MI appeared to be more effective when applied for a total of less than one hour and when the protocol includes training or fidelity practices. For illegal drug use, brief interventions appeared to be effective at the short term follow-up (up to 3 months), but there was insufficient evidence to judge long term effectiveness.
Computer and web based interventions	+	0/?	NR	NR	5	Beneficial effects appeared to be more likely in college students than in adolescents. Further high quality trials needed to judge effectiveness in adolescents.
Educational video + in-game warning messages	NR	NR	NR	?	1	
Other measures	NR	NR	NR	NR	0	
8. Treatment and social reintegration						
8.1 Psychosocial interventions						
Counselling	?	?	?	NR	2	
Educational approaches (e.g., in health care setting)	NR	?	NR	NR	1	
Cognitive behavioural therapy (CBT)	+/?	+/?	+/?	+/? (adults)	5	Alcohol and illegal drug use outcomes were not distinguished in these reviews. One review on alcohol and drugs suggested that group CBT may be more effective than individual CBT. Three reviews suggested that effectiveness may be increased if CBT is delivered in combination with other interventions. With regard to gambling, CBT appeared to be effective in the short term but there was no evidence regarding its long-term effectiveness.
Motivational interviewing (MI)	NR	+	NR	? (adults)	2	
Motivational enhancement	NR	+/?	NR	?	3	Motivational enhancement may be effective when delivered in combination with other approaches; insufficient evidence to judge effectiveness of motivational enhancement in isolation.
Family therapy	+/?	NR	+/?	NR	3	Alcohol and illegal drug use outcomes were not distinguished in these reviews. One review on alcohol and drugs suggested that multi-dimensional family therapy may be more effective than functional family therapy, family systems therapy, and family education.
Community reinforcement	?	NR	?	NR	1	Alcohol and illegal drug use outcomes were not distinguished in this review. May be effective but number/quality of trials was insufficient.
Computer and web based interventions	NR	0/?	NR	NR	3	Appeared to be ineffective to reduce adolescent smoking; findings from one trial in college students suggested beneficial effects but this evidence was insufficient to draw firm conclusions.
Interventions for waterpipe smoking cessation	NR	?	NR	NR	1	Review identified no trials eligible for inclusion.

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
Psychosocial interventions targeting inhalant dependence and abuse	NR	NR	?	NR	1	Review identified no trials eligible for inclusion.
Interventions targeting special populations (homeless and runaway youth)	?	NR	?	NR	1	
Other measures	NR	NR	NR	NR	0	
8.2 Pharmacological interventions						
Serotonin 3 receptor antagonist	?	NR	NR	NR	1	
Nicotine replacement therapy (NRT) (e.g., gum, patch)	NR	0	NR	NR	2	
Bupropion	NR	0	NR	NR	1	
Other pharmacological smoking cessation interventions (e.g., Lobeline, Nicobrevin)	NR	?	NR	NR	2	Reviews identified no trials eligible for inclusion.
Buprenorphine-naloxone maintenance vs buprenorphine detoxification	NR	NR	?	NR	1	
Levo- α -acetylmethadol (LAAM) vs methadone	NR	NR	+/?	NR	2	In participants with a mean age of 25-26 years, LAAM maintenance appeared to be more effective but there was insufficient evidence to draw any conclusions relating to its safety. Insufficient evidence to judge effectiveness in adolescents.
Pharmacological interventions targeting inhalant dependence and abuse	NR	NR	?	NR	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Perinatal/ neonatal outcomes	Cognitive and physical development	Skills and behavioural development	Child exposure to ETS and related harms		
9. Harm reduction						
9.1 Approaches addressing parental/familial participation in addictive behaviours						
Universal pre-pregnancy health promotion including substance use advice	?	NR	NR	NR	1	Review contained only one relevant study.
Non drug specific home visitation for post-partum women with a drug or alcohol problem	NR	X/0	NR	NR	1	Conflicting findings regarding effects on psychomotor development; no study found significant differences for cognitive development
Psychosocial/educational interventions to prevent or reduce maternal substance use during or following pregnancy	+/?	NR	NR	NR	4	Evidence from one review that smoking cessation interventions in pregnancy increased children's birth weight and reduced preterm. Insufficient evidence with regard to alcohol and illegal drugs.
Pharmacological interventions for maternal substance use cessation during or following pregnancy	?/X	NR	NR	NR	5	Insufficient evidence regarding alcohol. Conflicting evidence regarding the use of nicotine replacement therapy during pregnancy, with some indications of adverse effects. Insufficient evidence to judge effectiveness of methadone treatment during pregnancy. One review concluded that severity of neonatal abstinence syndrome did not appear to differ according to whether mothers were on high- or low-dose methadone maintenance therapy.

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Perinatal / neonatal outcomes	Cognitive and physical development	Skills and behavioural development	Child exposure to ETS and related harms		
Non-pharmacological interventions for children with foetal alcohol spectrum disorders (FASD)	NR	?	?	NR	2	
Pharmacological interventions for children with FASD	NR	?	NR	NR	2	
Measures to reduce children's exposure to environmental tobacco smoke (ETS)	NR	NR	NR	X	2	Beneficial effects found in some studies but not others.
Pharmacological interventions for opiate exposed newborns	?	NR	NR	NR	3	
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Substance use	Alcohol-related motor vehicle crashes	All-cause motor vehicle fatalities	Other harms		
9.2 Violence and injury prevention (including specific road safety measures)						
Graduated driver licensing (GDL)	NR	+	+	+/?	1	
Alcohol server liability ('dram shop liability')	NR	NR	+	NR	1	
Behavioural counselling interventions targeting alcohol-impaired driving or riding	?	?	?	?	1	Review identified no trials eligible for inclusion.
Drink driving awareness programs	?	?	?	?	1	Review identified no trials eligible for inclusion.
Alcohol server training	?	?	?	?	1	Review identified no trials eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Mortality (e.g., fatal overdose)	Physical health (e.g., infectious diseases)	Psychological /psychiatric conditions	Other outcomes		
9.3 Disease and overdose prevention and treatment						
Treatment for amphetamine psychosis	NR	NR	?	NR	1	Review identified only one trial eligible for inclusion.
Other measures	NR	NR	NR	NR	0	
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
10. General delivery structures and quality assurance measures						
Any measures falling under this heading	NR	NR	NR	NR	0	

Policies and interventions	Outcomes				Nr of included reviews	Comments
	Perinatal/ neonatal outcomes	Cognitive and physical development	Skills and behavioural development	Child exposure to ETS and related harms		
11. General approaches						
Home visitation	?/X	NR	NR	X	3	Insufficient evidence regarding pre-pregnancy health promotion. Conflicting findings regarding effects of post-partum home visits on psychomotor development; no study found significant differences for cognitive development. Conflicting findings regarding effectiveness in reducing child exposure to ETS. Heterogeneity in how interventions were implemented.
Policies and interventions	Outcomes				Nr of included reviews	Comments
	Alcohol use	Tobacco use	Illegal drug use	Gambling		
Early childhood education	X	+	+	NR	1	Some evidence of iatrogenic effects for binge drinking.
Other measures	NR	NR	NR	NR	0	

Key:

- + Evidence suggests policy/intervention has beneficial effect (i.e., reduced substance use, gambling, or related harms)
- Evidence suggests policy/intervention has undesired effect (i.e., increased substance use, gambling, or related harms)
- 0 Evidence suggests policy/intervention has no effect
- ? Insufficient evidence (e.g., small number of studies, methodological limitations)
- X Conflicting findings mean it is currently not possible to draw conclusions as to the effectiveness of this policy/intervention
- +/? Evidence suggests effects differ by specific policy/intervention type (e.g., content, how delivered), population group, outcome, follow-up time, etc.
- NR No high quality review-level evidence identified / outcome not considered in included review (in some cases may not be applicable)