UNODC
United Nations Office on Drugs and Crime

World Health Organization

International Standards on Drug Use Prevention

Second updated edition

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PRE-EDITING and PRE-PUBLICATION VERSION

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Introduction

The first edition of these Standards was published in 2013, summarizing the evidence of drug use prevention at the global level with a view to identify effective strategies, ensuring that children and youth, especially the most marginalized and poor, grow and stay healthy and safe into adulthood and old age.

Member States and other national and international stakeholders recognised the value of this tool, with the Standards acknowledged multiple times as useful basis to improve the coverage and quality of evidence-based prevention.[1] In addition, in 2015, the Member States of the United Nations made a series of wide-ranging commitments in the Sustainable Development Goals to be achieved by 2030 and Target 3.5 pledges to strengthen the prevention and treatment of substance abuse. In April 2016, the Special Session of the United Nations General Assembly on the world drug problem heralded a new era for addressing drug use and drug use disorders through a balanced and health-centred system approach.

In the context of this renewed emphasis on the health and wellbeing of people, UNODC and WHO are pleased to join forces and present this updated second edition. As in the case of the first edition, the Standards summarize the currently available scientific evidence on the basis of overview of recent systematic reviews, and describe interventions and policies that have been found to improve drug use prevention outcomes. In addition, the Standards identify the major components and features of an effective national prevention system. This work builds on, recognizes and is complementary to the work of many other organizations (e.g. EMCDDA, CCSA, CICAD, CP, NIDA [2]) which have

[1] The Joint Ministerial Statement on the mid-term review of the implementation by Member States of the Political Declaration and Plan of Action; CND Resolution 57/3 - Promoting prevention of drug abuse based on scientific evidence as an investment in the well-being of children, adolescents, youth, families and communities; CND Resolution 58/3 - Promoting the protection of children and young people, with particular reference to the illicit sale and purchase of internationally or nationally controlled substances and of new psychoactive substances via the Internet; CND Resolution 58/7 - Strengthening cooperation with the scientific community, including academia, and promoting scientific research in drug demand and supply reduction policies in order to find effective solutions to various aspects of the world drug problem; CND Resolution 59/6 - Promoting prevention strategies and policies; Outcome Document of UNGASS 2016 on the World Drug Problem.

[2] European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), www.emcdda.europa.eu; Canadian Centre on Substance use (CCSA), www.ccsa.ca/Eng/; Inter-American Drug Abuse Control Commission (CICAD) at the Organization of the American States, http://cicad.oas.org/main/default_eng.asp; the Colombo Plan for Cooperative Economic and Social Development in Asia and the Pacific http://www.colombo-plan.org/; National Institute on Drug Abuse (NIDA), www.drugabuse.gov/.

developed other standards and guidelines on various aspects of drug use prevention.

It is our hope that the Standards will continue to guide policy makers and other national stakeholders worldwide to develop programmes, policies and systems that are a truly effective investment in the future of children, youth, families and communities.

1. Prevention is about the healthy and safe development of children

Whilst the primary focus of the Standards is prevention of drug use, the approach of the document is holistic, taking into account the use of other psychoactive substances. With regard to the terminology as utilised in the Standards, the reader should consider that 'drug use' is used to refer to the use of psychoactive substances outside the framework of legitimate use for medical or scientific purposes in line with the three International Conventions [3]. 'Substance use' is used to refer to the use of psychoactive substances regardless of their controlled status, including hazardous and harmful use of psychoactive substances. In addition to drug use, this includes the use of tobacco, alcohol, inhalants and new psychoactive substances (so-called 'legal highs' or 'smart drugs'.

For the purposes of this document, we considered the following primary objective of the prevention of the use of psychoactive substances: to help people, particularly but not exclusively of younger age, to avoid or delay the initiation of the use of psychoactive substances, or, if they have started already, to avert the development of substance use disorders (harmful substance use or dependence).

The general aim of substance use prevention, however, is much broader than this: it is the healthy and safe development of children and youth to realize their talents and potential and becoming contributing members of their community and society. Effective prevention contributes significantly to the positive engagement of children, youth and adults with their families, schools, workplace and community.

[3] Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol; Convention on Psychotropic Substances of 1971; and United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988.

Prevention science in the last 20 years has made enormous advances. As a result, practitioners in the field and policy makers have a more complete understanding about what makes individuals vulnerable to initiating the use of substances at both the individual and environmental level. The progression to disorders is also better understood.

Lack of knowledge about substances and consequences of their use are among main factors increasing individuals' vulnerability. Among other most powerful vulnerability factors are the following: genetic predisposition, personality traits (e.g. impulsivity, sensation seeking), the presence of mental and behavioural disorders, family neglect and abuse, poor attachment to school and the community, social norms and environments conducive to substance use (including the influence of media), and, growing up in marginalized and deprived communities. Conversely, psychological and emotional well-being, personal and social competence, a strong attachment to caring and effective parents, attachment to schools and communities that are well resourced and organized are all factors that contribute to individuals' being less vulnerable to substance use and other risky behaviours.

Some of the factors that make people vulnerable (or, conversely, resilient) to initiation of substance use differ according to age. Parenting and attachment to school are those vulnerability and resilience factors that have been identified during infancy, childhood and early adolescence. At later stages of the age continuum, schools, workplaces, entertainment venues, media are all settings that may contribute to making individuals more or less vulnerable to drug use and other risky behaviours.

Needless to say, marginalized youth in poor communities with little or no family support and limited access to education in school, are especially at risk. So are children, individuals and communities torn by war or natural disasters.

It is important to emphasize that the vulnerability factors referenced above are largely out of the control of the individual (nobody chooses to be neglected by his/her parents!) and are linked to many risky behaviours and related health conditions, such as dropping-out of school, aggressiveness, delinquency, violence, risky sexual behaviour, depression and suicide. It should not, therefore, come as a surprise that many drug prevention interventions and policies also prevent other risky behaviours.

2. Prevention of psychoactive substance use

In the case of controlled drugs, prevention is one of the main components of a health-centred system to address the non-medical use of these substances, as mandated by the existing three international Conventions. This document

focuses on prevention of the initiation of drug use and the prevention of transition to drug use disorders. These Standards do not address secondary and tertiary prevention interventions, including treatment of drug use disorders and the prevention of health and social consequences of drug use and drug use disorders, and the Standards do not address law enforcement efforts in drug control.

It should be stressed that no effective prevention intervention, policy or system can be developed or implemented on its own, or in isolation. An effective local or national prevention system is embedded and integrated in the context of a larger health-centred and balanced system responding to drugs including law enforcement and supply reduction, treatment of drug use disorders, and reduction of risk associated with drug use (e.g. aimed at prevention of HIV, overdose, etc.). The overarching and main objective of such health-centred and balanced system would be to ensure the availability of controlled drugs for medical and scientific purposes whilst preventing diversion and non-medical use.

Whilst the main focus of the Standards is the prevention of the use of drugs controlled in the three International Conventions (including also the non-medical use of prescription drugs), the document draws upon the evidence and lessons accumulated in the field of prevention of other psychoactive substances, such as tobacco, alcohol and inhalants. Besides, the use of non-controlled psychoactive substances has a significant negative impact on population's health. In fact, tobacco and alcohol use result in a higher burden of disease than disease burden attributable to the use of controlled drugs. Inhalants are extremely toxic with devastating consequences for psychosocial development and functioning, driving the urgent need for prevention efforts to address initiation of use. Moreover, in the case of children and adolescents, the brain is still developing and the earlier they start to use any psychoactive substance, the more likely they are to develop substance use disorders later in life. Last, but not the least, nicotine dependence and alcohol use disorders are very often associated with drug use and drug use disorders.

3. Prevention science

Thanks to prevention science, we also know a lot about what is effective in preventing substance use and what is not. The purpose of this document is to organize the findings from these years of research in a format that enhances the ability of policy makers to base their decisions on evidence and science. It is important to note that many of the limitations in the science that were identified during the first edition of the Standards are unfortunately still valid.

Most of the science originates from a handful of high-income countries in North America, Europe and Oceania. There are few studies from other cultural settings or in low- and middle-income countries. Moreover, most studies are 'efficacy' studies that examine the impact of interventions in well-resourced, small, controlled settings. There are very few studies that have investigated the effectiveness of interventions in a 'real life' settings. Additionally, there are limited number of studies that have calculated whether interventions and prevention policy options are cost-beneficial or cost-effective (rather than just efficacious or effective). Finally, few studies report data disaggregated by sex.

Another challenge suggests that often studies are too few to be able to conclusively identify 'active ingredients', i.e. the component or components that are really necessary for the intervention or policy to be efficacious or effective, also with regard to delivery of the strategies and interventions (who delivers them best? what qualities and training are necessary? what methods need to be employed? etc.).

Finally, as in all medical, social and behavioural sciences, publication bias is a problem in prevention research. Studies which report new positive findings are more likely to be published than studies that report negative findings. This means that our analysis risks overestimating the efficacy and the effectiveness of substance use prevention interventions and policies.

There is a strong and urgent need for research to be nurtured and supported in the field of substance use prevention globally. It is critical to support prevention research efforts in low- and middle-income countries, but national prevention systems in all countries should invest significantly in rigorous evaluation of their programmes and policies to contribute to the global knowledge base.

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 other psychoactive substance use, 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. A prevention approach that has been demonstrated to work in one area of the world is probably a better candidate for success than one that is created locally only on the basis of good will and guesswork. This is particularly the case for interventions and policies that address vulnerabilities that are significant across cultures (e.g. parental neglect). Moreover, approaches that have failed or even resulted in adverse effects in some countries are prime candidates for failure elsewhere. Prevention practitioners, policy makers and community members involved in drug prevention have a responsibility to take such lessons into consideration.

What we have is an indication of where the right way lies. By using this knowledge and building on it with more evaluation and research, we can foster the development of national prevention systems that are based on scientific evidence and that will support children, youth and adults in different settings to lead positive, healthy and safe lifestyles.

4. The International Standards

This document describes the interventions and policies that have been found to be efficacious or effective by the scientific evidence in preventing substance use and could serve as the foundation of an effective health-centred national substance use prevention system.

Throughout the document and for sake of simplicity, drug prevention endeavors are referred to as either 'interventions' or 'policies'. An intervention refers to a group of activities of a specific kind. This could be a programme that is delivered in a specific setting in addition to the normal activities delivered in that setting (e.g. drug prevention education sessions in schools). However, the same activities could also be delivered as part of the normal functioning of the school (e.g. drug prevention education sessions as part of the normal health promotion curriculum). Normally, the evidence about most interventions has been derived from the evaluation of specific 'programmes', of which there can be many per intervention. For example, there are many programmes aiming at preventing drug use through the improvement of parenting skills (e.g. 'Strengthening Families Program', 'Triple-P', 'Incredible Years', etc.). These are different programmes delivering the same intervention (parenting skills/ family skills training). A policy refers to a regulatory approach either in a setting or in the general population. Examples include policies about substance use in schools or in the workplace or comprehensive restrictions or bans on the advertising of tobacco or alcohol. Finally, in the interest of brevity and of variation, sometimes the Standards use the term 'strategies' to refer to both interventions and policies together (i.e. a strategy can be either an intervention or a policy).

The Standards also provide an indication as to how each strategy should be implemented, with common characteristics that have been found to be linked to efficacy and/or effectiveness. Finally, the document discusses how interventions and policies should exist in the context of national prevention systems supporting and sustaining their development, implementation, monitoring and evaluation on the basis of data and evidence.

The process of updating of the International Standards

The document has been created and published by UNODC and WHO with the assistance of a globally representative group of 143 researchers, policy makers, practitioners, representatives of non-governmental and international organizations from 47 countries. Most members of this "Group of Experts" were nominated by Member States, as they had all been invited to join the process. In addition, some were in part identified by UNODC because of their research and activities in the field of drug prevention.

All members of the Group were requested to provide input both with regard to the methodology of updating the Standards, as well as on studies that might be of interest, in any language. In addition, a selection of the members of the Group

that had been most active met in June 2017 in Vienna, Austria to agree on the methodology for revision of the Standards. The methodology was subsequently finalised jointly by UNODC and WHO and is attached as “Appendix II Protocol for the overview of systematic reviews on interventions to prevent drug use for the second updated edition of the International Standards on Drug Use Prevention”.

The evidence that forms the core of this update was identified through an overview of systematic reviews published between June 2012 and January 2018 focusing on the primary outcomes of substance use prevention. Primary outcomes of prevention were defined as “initiation of substance use”, “continuation of substance use” and “progression to substance use disorders”.

Aim of the search was to identify systematic reviews of the evidence studying the efficacy or effectiveness of interventions and/or policies with regard to preventing substance use (primary outcomes of prevention).

Secondary outcomes of prevention (mediating factors or intermediate outcomes) were not included into the initial search strategy but were considered while consulting with experts, performing manual search and extraction of data from identified literature. Other references to the literature related to the secondary prevention outcomes had been identified during the development of the first edition of the Standards by expert advice.

The search identified more than 28,800 items that were screened and reduced in number on the basis of the title first and then of the abstract.

This was integrated with the studies identified by the members of the Group of Experts, as well as by manual searches of the Cochrane and Campbell databases. Such manual searches considered both the primary outcomes of substance use prevention and, in the case of strategies targeting children (10 years of age and below) also secondary outcomes, i.e. mediating factors or intermediate outcomes of substance use prevention.

To be included into the data extraction process studies had to be systematic reviews of primary studies (with or without meta-analysis) with a focus on substance use intervention(s) or policy(ies) that aim(s) at achieving outcomes in terms of prevention of substance use, or, if targeting children aged 10 or below, that aim(s) at achieving outcomes in terms of mediating factors related to substance use.

Therefore, the following papers were excluded: epidemiological studies discussing prevalence, incidence, vulnerabilities and resilience linked to substance use; studies regarding treatment strategies or focusing only on the prevention of the health and social consequences of drug use and drug use disorders; primary studies; reviews of reviews; studies on the general delivery of prevention and/or prevention systems.

Following a first screening based on both abstracts and full text, three hundred and ninety-two studies (392) were further reviewed for eligibility. The full list of 392 papers is provided in Appendix I. Two hundred and two studies were found

to be eligible and were assessed for the risk of bias using the Risk of Bias in Systematic Reviews (ROBIS) tool[4]. Data was extracted only from reviews reporting low risk of bias (71 reviews). Appendix I provides a separate list of these reviews and the flow diagram of the review process is presented in Appendix III.

In addition, these 71 reviews were integrated with the reviews from the first edition of the Standards, *provided* there was no more recent equivalent study identified through the current search. The data extraction table ("Appendix IV Summary of Results") reported all the conclusions included in the studies and served as the basis for the update of the summary of the evidence under each strategy.

The process was further enriched by the utilization of existing WHO guidance providing recommendations on the use of various interventions and policies to prevent substance use, but also other risky behaviours (e.g. violence) or to promote the healthy development of children and youth. Existing WHO guidance, when available, is summarised under each strategy following the summary of the evidence based on the data extraction.

Under each strategy the Standards also list, to the extent possible, the characteristics of the strategies that are associated with efficacy and/or effectiveness, or lack thereof. These characteristics were largely identified through expert advice during the development of the first edition of the Standards and have been only marginally edited, following comments by the Group of Experts to the first draft of this second updated edition. The final chapter on national prevention systems had also been drafted on the basis of expert advice and has been updated on the basis of comments from the Group of Experts.

Limitations

There is a number of limitations that need to be acknowledged while using this document. First, the overall searching strategy aimed to capture evidence related to as many potential interventions as possible, instead of being focused on details of each specific intervention. Therefore, it is expected that the search strategy could miss literature sources and important details related to particular interventions as it would require more detailed and narrow search strategy.

Secondly, the literature search was focused on primary outcomes only (substance use) and did not systematically review evidence on secondary outcomes (i.e. mediating factors of prevention). Therefore, the Standards do

[4] Whiting, P., et al., ROBIS: A new tool to assess risk of bias in systematic reviews was developed. J Clin Epidemiol, 2015.

not address comprehensively the issue of mediating factors of substance use prevention.

Finally, although the risk of bias of research was evaluated using ROBIS, the grading of the evidence was not undertaken. Similarly, the analysis of interventions from other perspectives beyond effectiveness (e.g. analysis of harms and benefits, cost-effectiveness, values and preferences, equity, gender balance, human rights etc.) was also not undertaken. Therefore, due to above-listed limitations the Standards do not include formal recommendations. The Standards present a summary of the results identified through the overview of systematic reviews and, where possible, it was strengthened by extractions from available international guidelines to cover additional issues and present more details.

The document

The document is comprised of three chapters. Chapter I describes the interventions and policies that have been found to be efficacious and/or effective in preventing drug use and other psychoactive substance use.

Interventions and policies are grouped by the age of the target group, representing a major developmental stage in the life of an individual: pregnancy, infancy and early childhood; middle childhood; early adolescence; adolescence and adulthood.

Every child is unique and his or her development will be also influenced by a range of socio-, economic and cultural factors. That is why, the ranges referred to by the different ages have not been defined numerically. However, as a general guide, and for the purposes of this document, the following could be considered: infancy and early childhood refer to pre-school children, mostly 0-5 years of age; middle childhood refers to primary school children, approximately 6-10 years of age; early adolescence refers to middle school or junior high school years, 11-14; adolescence refers to senior high school, late teen years: 15 to 18/19 years of age; adulthood refers to subsequent years. Although the range has not been used in the Standards for reasons of expediency, young adulthood (college or university years, 20-25 years of age) is also sometimes referred to, as it is used in many studies.

Some interventions and policies are relevant for more than one age group. In this case, the description is not repeated. They are included under the age for which they are most relevant with a reference to the other developmental stages for which there is also available evidence.

The section on each strategy includes, to the extent possible, the following details: a brief description; the available evidence; and, the characteristics that appear to be linked to with efficacy and/or effectiveness, or lack thereof.

Brief description: This sub-section briefly describes the intervention or the policy, its main activities and theoretical basis. Moreover, it includes an indication of

whether the strategy is appropriate for the population at large (universal prevention), or for population groups with the risk significantly above the average (selective prevention), or for individuals that are particularly at risk (indicated prevention, which also includes individuals that might have started experimenting and are therefore at particular risk of progressing to disorders). In addition, the Standards illustrate whether the strategy includes environmental and/or development and/or information components.

Available evidence: This is the core of Standards. The text describes what the available evidence is and the findings reported in it. Effects on primary outcomes (substance use) are reported first, with effects on secondary outcomes of prevention (i.e. mediating factors/ intermediate outcomes of prevention) reported subsequently and separately. Wherever available, effect sizes are included, as provided in the original studies, as well as different effects with regard to different target groups and the sustainability of the effects. The geographical source of the evidence is indicated to offer policy makers and prevention program managers an indication of whether it is already known that a strategy is effective in different geographical settings. Finally, if there is an indication of cost-effectiveness, this is also included in these paragraphs. This part of the text is based on the studies included in data extraction or taken from previous edition, as mentioned above. A second box provides, wherever available, WHO guidance on the effectiveness of the strategies with regard to substance use or other health outcomes as presented in the published WHO guiding documents.

Characteristics linked to with efficacy and/or effectiveness, or lack thereof: The document also provides an indication of characteristics that have been found by the Group of Experts to be linked to efficacy and/or effectiveness, or where available, to ineffectiveness or even adverse effects. These indications should not be taken to imply a relation of cause and effect. As noted above, there is not enough evidence to allow for this kind of analysis. Rather, the intention is to suggest the direction that is likely to bring more chances of success according to the collective research and practical experience of the Group of Experts. All strategies should be undertaken in a research environment, applying protocols found to be effective in preventing drug use and addressing vulnerability and resilience factors.

Chapter II briefly describes prevention issues where further research is particularly required. This includes interventions and policies for which no evidence was found, but also emerging substance use problems, as well as particularly vulnerable groups. Wherever possible, a brief discussion of potential strategies is provided.

The third and final Chapter describes the possible components for an effective national prevention system building on evidence-based interventions and policies and aiming at the healthy and safe development of children and youth. This is another area where further research is urgently needed, as investigations have traditionally focused more on the effectiveness of single interventions and policies. As mentioned above, the drafting of this Section benefited from the expertise and the consensus of the Group of Experts.

I. Drug prevention interventions and policies

1. Infancy and early childhood

Children's earliest interactions occur in the family before they reach school. They may develop vulnerabilities when they experience interaction with parents or caregivers who fail to nurture and/or lack parenting skills and/or suffer from other difficulties associated with poor health, financial or other hardships (especially in a socio-economically marginalised environment or a dysfunctional family setting). Among other factors, the intake of alcohol, nicotine, and drugs during pregnancy negatively affect developing embryos and foetuses.

Such circumstances may impede reaching significant developmental competencies and make a child vulnerable and at risk for behavioural disorders later on. The key developmental goals for early childhood are the development of safe attachment to the caregivers, age-appropriate language skills, and executive cognitive functions such as self-regulation and pro-social attitudes and skills. The acquisition of these is best supported within the context of a supportive family and community.

Prenatal and infancy visitation

Brief description

In these programmes, a trained nurse or social worker visits mothers-to-be and new mothers to provide them with parenting skills and support in addressing a range of issues (health, housing, employment, legal, etc.). Normally, these programmes do not target all women, but only some specific groups living in difficult circumstances compared to the general population (selective strategy with a developmental aim).

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, one review and one randomized control trial had reported findings with regard to this intervention[5].

With regard to primary outcomes, according to the randomized controlled trial, these programmes can prevent substance use later in life and they can also be cost-effective in terms of saving future social welfare and medical costs.

In addition, a review reported findings with regard to some secondary outcomes, with children within the programme less likely to report having internalizing disorders, as well as scoring higher on the achievement tests in reading and math. Mothers taking part in the programme also reported less role impairment owing to alcohol and other drug use. The evidence originates from the USA.

Prenatal and infancy visitation programmes are also recommended by WHO to prevent child maltreatment[6].

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Delivered by trained health workers;
- ✓ Regular visits up to two years of age of the baby, at first every two weeks, then every month and less towards the end;
- ✓ Provision of basic parenting skills;
- ✓ Supporting mothers to address a range of socio-economic issues (health, housing, employment, legal, etc.).

Interventions targeting pregnant women

Brief Description

Pregnancy and motherhood are periods of major and sometimes stressful changes that may make women receptive to address their substance use and substance use disorders.

[5] Turnbull (2012), with Kitzman (2010) and Olds (2010) reporting on the same trial.

[6] WHO (2016), INSPIRE: seven strategies for ending violence against children.

Alcohol and drug use during pregnancy poses potential health risks to pregnant women themselves and to their babies, even in the absence of substance use disorders. All pregnant women should therefore be advised of the potential health risks to themselves and to their babies. As psychoactive substance use during pregnancy is dangerous for the mother and for the future child, management of substance use and treatment of pregnant women with substance use disorders can and should be offered as a priority and must follow rigorous clinical guidelines based on scientific evidence. This is an indicated strategy with a developmental aim.

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, two reviews had reported findings with regard to this intervention[7].

No reviews reported findings with regard to primary outcomes.

With regard to secondary outcomes, providing evidence-based integrated treatment to pregnant women can have a positive impact on child development, child emotional and behavioural functioning and parenting skills.

The time frame for the sustainability of these results and the origin of the evidence are not clear.

WHO guidelines include the following recommendations about substance use during pregnancy:

Tobacco use:
Health-care providers should ask all pregnant women about their tobacco use (past and present) and exposure to second-hand smoke as early as possible in the pregnancy and at every antenatal care visit[8].

Substance use:
Health-care providers should ask all pregnant women about their use of alcohol and other substances (past and present) as early as possible in the pregnancy and at every antenatal care visit.

[7] Niccols (2012a) and Niccols (2012b).

[8] WHO recommendations for the prevention and management of tobacco use and second-hand smoke exposure in pregnancy

Health-care providers should offer a brief intervention to all pregnant women using alcohol or drugs.

Health-care providers managing pregnant or postpartum women with alcohol or other substance use disorders should offer comprehensive assessment and individualized care.

Health-care providers should, at the earliest opportunity, advise pregnant women dependent on alcohol or drugs to cease their alcohol or drug use and offer, or refer to, detoxification services under medical supervision where necessary and applicable.

For more detailed recommendations on the management of particular clinical situations in pregnancy (e.g. opioid dependence, benzodiazepine dependence, etc.), the reader is referred to the WHO Guidelines for identification and management of substance use and substance use disorders in pregnancy[9].

Early childhood education

Short description

Early childhood education programmes supports the social and cognitive development of pre-school children (2 to 5 years of age) from deprived communities. It is therefore a selective level intervention with developmental content.

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, two reviews had reported findings with regard to this intervention[10].

According to these studies, offering early education services to the children growing in disadvantaged communities can reduce marijuana use at age 18 and can also decrease the use of tobacco and other drugs (primary outcomes).

[9] WHO (2014), WHO Guidelines for identification and management of substance use and substance use disorders in pregnancy.

[10] D'Onise, 2010 and Jones 2006.

With regard to secondary outcomes, early education can prevent other risky behaviours and support mental health, social inclusion and academic success.

All evidence originates from the USA.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Improving the cognitive, social and language skills of children;
- ✓ Daily sessions;
- ✓ Delivered by trained teachers;
- ✓ Provision of support to families on other socio-economic issues.

2. Middle childhood

During middle childhood, increasingly more time is spent away from the family, most often in school and with same age peers. Family still remains the key socialization agent. However, the role of day-care, school, and peer groups start to grow. In this respect, factors such as community norms, school culture and quality of education become increasingly important for safe and healthy emotional, cognitive, and social development. The role of social skills and prosocial attitudes grows in middle childhood and they become key protective factors, impacting also the extent to which the school-aged child will cope and bond with school and peers.

Among the main developmental goals in middle childhood are the continued development of age specific language and numeracy skills, and of impulse control and self-control. The development of goal directed behaviour, together with decision-making and problem-solving skills, starts. Mental disorders that have their onset during this time period (such as anxiety disorders, attention deficit hyperactivity disorder, conduct disorders) may also impede the development of healthy attachment to school, cooperative play with peers, adaptive learning, and self-regulation. Children of dysfunctional families often start to affiliate at this time with peers involved in potentially harmful behaviours, thus putting themselves at increased risk.

Parenting skills programmes

Short description

Parenting skills programmes support parents in being better parents, in very simple ways. A warm child-rearing style, where parents set rules for acceptable behaviours, closely monitor free time and friendship patterns, help to acquire personal and social skills, and are role models is one of the most powerful protective factors against substance use and other risky behaviours. These programmes can be delivered also for parents of early adolescents. As the reviews largely cover all ages together, and as principles are largely similar, the interventions are only discussed here. These interventions can be delivered both at the universal and at the selective level and are largely a developmental kind of intervention.

Available evidence

Five (5) reviews reported findings with regard to this intervention, of which four (4) are from the new overview of systematic reviews[11].

With regard to primary outcomes, these studies report that family-based universal programmes can prevent tobacco, alcohol, drug and substance use in young people, the effect size being generally persistent into the medium and long term (more than 12 months).

More intensive programmes delivered by a trained facilitator appear to be more consistently effective compared to single sessions or computer-based programmes. Also, particular gender-specific interventions targeting mothers and daughters reported effectiveness.

The evidence summarized above originates from studies on family-based prevention interventions implemented in Africa, Asia, Middle East, Europe, Australia and North America.

Parenting skills programme are also recommended by WHO to support positive development, prevent youth violence, manage behavioural disorders in children and adolescents[12], and prevent child maltreatment[13].

Parenting interventions promoting mother-infant interactions preferably delivered within ongoing mother and child health programmes for poorly nourished, frequently ill and other groups of at risk children are also recommended to improve child development outcomes[14].

Moreover, improving mothers' parenting skills is recommended to be offered in addition to effective treatment and psychosocial support to mothers with depression or with any other mental, neurological or substance use condition in order to improve child development outcomes[15].

[11] Mejia (2012), Thomas et al. (2016), Foxcroft and Tsertsvadze (2012), Allen et al. (2016), Kuntsche (2016).

[12] WHO (2017), Global Accelerated Action for the Health of Adolescents (AA-HA!), Guidance to Support Country Implementation

[13] WHO (2016), INSPIRE: seven strategies for ending violence against children.

[14] WHO (2012), Maternal mental health interventions to improve child development, Evidence profile.

[15] WHO (2012), Maternal mental health interventions to improve child development, Evidence profile.

Finally, caregiver skills training should be provided for management of children and adolescents with developmental disorders, including intellectual disabilities and pervasive developmental disorders (including autism)[16].

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Enhance family bonding, i.e. the attachment between parents and children;
- ✓ Support parents on how to take a more active role in their children's lives, e.g., monitoring their activities and friendships, and being involved in their learning and education;
- ✓ Support parents on how to provide positive and developmentally appropriate discipline;
- ✓ Support parents on how to be a role model for their children.
- ✓ Organised in a way to make it easy and appealing for parents to participate (e.g. out-of-office hours, meals, child care, transportation, small prize for completing the sessions, etc.);
- ✓ Typically include a series of sessions (often around 10 sessions, more in the case of work with parents from marginalised or deprived communities or in the context of a treatment programme where one or both parents suffer from substance use disorders);
- ✓ Typically include activities for the parents, the children and the whole family;
- ✓ Delivered by trained individuals, in many cases without any other formal qualification.

Characteristics deemed to be associated with lack of efficacy and/or effectiveness or with adverse effects based on expert consultation

- × Undermine parents' authority;
- × Only provide information to parents about drugs so that they can talk about it with their children;
- × Delivered by poorly trained staff.

[16] WHO (2012), Maternal mental health interventions to improve child development, Evidence profile.

Existing guidelines and tools for further information

- Universal Prevention Curriculum, Coordinator Series, Course 4: Family-based Prevention Interventions (2015)
- UNODC (2010), Compilation of Evidence-Based Family Skills Training Programmes, United Nations Office on Drugs and Crime, Vienna, Austria.
- CCSA (2011), Strengthening Our Skills: Canadian guidelines for youth substance use prevention family skills programs, Canadian Centre on Substance use, Ottawa, ON, Canada.
- UNODC (2009), Guide to implementing family skills training programmes for drug abuse prevention, United Nations Office on Drugs and Crime, Vienna, Austria.
- WHO Mental Health Gap Action Programme (mhGAP) Evidence-based recommendations for management of child and adolescent mental disorders in non-specialized health settings.

Personal and social skills education

Description

During these programmes, trained teachers engage children in interactive activities to give them the opportunity to learn and practice a range of personal and social skills. These programmes are typically delivered to all children via series of structured sessions (i.e. this is a universal level intervention). The programmes provide opportunities to learn skills to be able to cope with difficult situations in the daily life in a safe and healthy way. They support the development of general social competencies, including mental and emotional wellbeing. These programmes comprise mostly of developmental components, i.e. they do not typically include content with regard to specific substances, as in most communities children at this young age have not initiated use. This is not the case everywhere and programmes targeting children who have been exposed to substances (e.g. inhalants) at this very young age might want to refer to the substance specific guidance included for “Prevention education based on personal and social skills and social influence” under “Early adolescence”.

Available evidence

Seven (7) reviews reported findings with regard to this intervention, four (4) of which from the new overview[17].

With regard to primary outcomes, according to these studies, supporting the development of personal and social skills in a classroom setting can prevent tobacco, alcohol and drug use, particularly at a longer follow-up (more than one year). The effectiveness of strategies focusing only on resilience was limited to drug use.

Most of the evidence originates from North America, Europe and Australia, with some studies from Asia and Africa.

Non-specialized health care facilities should encourage and collaborate with school-based life skills education, if feasible, to promote mental health in children and adolescents[18].

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Improves a range of personal and social skills;
- ✓ Delivered through a series of structured sessions, often providing boosters sessions over multiple years;
- ✓ Delivered by trained teachers or facilitators;
- ✓ Sessions are primarily interactive.

Characteristics deemed to be associated with lack of efficacy and/or effectiveness or with adverse effects based on expert consultation

- × Using non-interactive methods, such as lecturing, as main delivery method;
- × Providing information on specific substances, including fear arousal.
- × Focus only on the building of self-esteem and on emotional education.

[17] Hodder et al. (2017), Salvo et al. (2012), McLellan & Perera (2013), McLellan & Perera (2015), Schröer-Günther (2011), Skara (2003).

[18] WHO (2012), WHO Mental Health Gap Action Programme (mhGAP) Behaviour change techniques for promoting mental health, Evidence profile

Existing guidelines and tools for further information

- UNESCO/ UNODC/ WHO (2016), Good Policy and Practice in Health Education: Education sector responses to the use of alcohol, tobacco and drugs
- Universal Prevention Curriculum, Coordinator Series, Course 5: School-based Prevention Interventions (2015)
- CICAD Hemispheric Guidelines on School Based Prevention
- Canadian Standards for School-based Youth Substance Use Prevention
- WHO Mental Health Gap Action Programme (mhGAP) Evidence-based recommendations for management of child and adolescent mental disorders in non-specialized health settings

Classroom environment improvement programmes

Brief description

These programmes strengthen the classroom management abilities of teachers, and support children to socialize in their role as a student, whilst reducing early aggressive and disruptive behaviours. Teachers are typically supported to implement a collection of non-instructional classroom procedures in the day-to-day practices with all students for the purposes of teaching prosocial behaviour as well as preventing and reducing inappropriate behaviour. These programmes facilitate both academic and socio-emotional learning. They are universal as they target the whole class with a developmental component.

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, one review had reported findings with regard to this intervention[19].

The review did not report findings with regard to the primary outcomes.

With regard to secondary outcomes, according to this study, teachers' classroom management practices significantly decrease problem behaviour in

[19] Oliver, 2011.

the classroom, including strong effects on disruptive and aggressive behaviour and strengthen the pro-social behaviour and the academic performance of the children. The time frame for the sustainability of these results is not clear.

All evidence reported above originates from the USA and Europe.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Often delivered during the first school years;
- ✓ Include strategies to respond to inappropriate behaviour;
- ✓ Include strategies to acknowledge appropriate behaviour;
- ✓ Include feedback on expectations;
- ✓ Active engagement of students.

Policies to retain children in school

Brief description

School attendance, attachment to school, and the achievement of age-appropriate language and numeracy skills are important protective factors for substance use among children of this age. A variety of policies has been implemented in low- and middle-income countries to support the attendance of children and improve their educational outcomes.

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, two reviews[20] reported findings with regard to the following policies: building new schools, providing nutrition in schools and providing economic incentives of various natures to families.

The studies did not report findings with regard to the primary outcomes.

[20] Lucas (2008) and Petrosino (2012).

With regard to secondary outcomes, according to these studies, these policies increase the attendance of children in school, and improve their language and numeracy skills. Providing simple cash to families does not appear to result in significant outcomes, while conditional transfers do. The time frame for the sustainability of these results is not clear.

All this evidence originates from low- and middle-income countries.

Conditional financial incentives to keep children in schools are also recommended by WHO as a strategy to prevent youth violence[21].

Addressing mental health disorders

Brief description

Emotional disorders (e.g. anxiety, depression) and behavioural disorders (e.g. ADHD, conduct disorder) are associated with higher risk of substance use later in adolescence and in life. In both childhood and adolescence, supporting children, adolescents and parents to address emotional and behavioural disorders as early as possible is an important prevention strategy.

Available evidence

No studies were identified either in the new overview of systematic reviews or in the first edition of the Standards.

WHO recommends the following to support children and adolescents (as well as their carers) and to address such disorders as early as possible[22]:

Behavioural interventions for children and adolescents for the treatment of behavioural disorders.

[21] WHO (2017), Global Accelerated Action for the Health of Adolescents (AA-HA!) Guidance to Support Country Implementation.

[22] WHO (2016), mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings. Version 2.0. WHO, 2016.

Psychological interventions, such as cognitive behavioural therapy (CBT), interpersonal psychotherapy (IPT) for children and adolescents with emotional disorders, and caregiver skills training focused on their caregivers.

Initiating parent education/training before starting medication for a child who has been diagnosed as suffering from attention-deficit hyperactivity disorder (ADHD), with initial interventions including cognitive-behavioural therapy and social skills training if feasible.

Offering pharmacological interventions only in specialised settings.

Existing guidelines and tools for further information

- ✓ The WHO Mental Health Gap Action Programme (mhGAP) intervention guide and training manuals (WHO, 2016).

3. Early adolescence

Adolescence is a developmental period when youth are exposed to new ideas and behaviours through increased associations with people and organizations beyond those experienced in childhood. It is a time to “try out” adult roles and responsibilities. It is also a time when the “plasticity” and malleability of the adolescent brain suggests that, like infancy, this period of development is a time when interventions can reinforce or alter earlier experiences.

The desire to assume adult roles and more independence at a time when significant changes are occurring in the adolescent brain also creates a potentially opportune time for poorly thought out decisions and involvement in potentially harmful behaviours, such as risky sexual behaviours, smoking of tobacco, consumption of alcohol, risky driving behaviours, and drug use.

The substance use (or other potentially harmful behaviours) of peers, as well as rejection by peers, are important influences on behaviour, although the influence of parents still remains significant. Healthy attitudes and social normative beliefs related to psychoactive substance use are also important protective factors against drug use. Good social skills, and resilient mental and emotional health remain key protective factors throughout adolescence.

PLEASE NOTE. Parenting skills interventions can be implemented in middle childhood and early adolescence. The studies identified through the research do not disaggregate results by age. Therefore, rather than repeating the section on parenting skills here, under ‘Early adolescence’, the reader is referred to the previous section. The same applies to the section on ‘Addressing mental health disorders’. Similarly, many of the interventions and policies of relevance to older adolescents can prevent substance use in early adolescence. For reasons of expediency, they are discussed only in the next session. This applies to: alcohol and tobacco policies, media campaigns, brief intervention and community-based multi-component initiatives.

Prevention education based on social competence and influence

Brief description

During skills based prevention programs, trained teachers engage students in interactive activities to give them the opportunity to learn and practice a range of personal and social skills (social competence). These programs focus on fostering substance and peer refusal abilities that allow young people to counter social pressures to use substances and in general cope with challenging life situations in a healthy way.

In addition, they provide the opportunity to discuss in an age appropriate way, the different social norms, attitudes and positive and negative expectations associated with substance use, including the consequences of substance use. They also aim to change normative beliefs on substance use addressing the typical prevalence and social acceptability of substance use among the peers (social influence).

Available evidence

Twenty-two (22) reviews reported results for this kind of intervention[23], fifteen (15) of which from the new overview.

With regard to primary outcomes, according to these studies, certain programmes based on a combination of a social competence and social influence prevent tobacco use, alcohol use and drug use (preventive effects are small, but consistent across studies, also in the long term (+12 months)).

A review of school-based prevention of smoking specifically for girls concluded that there is no evidence that school-based smoking prevention programs have a significant effect on preventing adolescent girls from smoking, with some promising indication for gender-specific programmes and programmes delivered together with media campaigns.

Programmes targeting individual and environmental resilience-related protective factors in school settings were reported to be effective in preventing the use of drugs, but not of tobacco or alcohol. Programmes based on the provision of information only, as well as the programme "Drug Abuse Resistance Education (D.A.R.E.)", were reported not to be effective.

Peers were reported to be effective in delivering programmes for all substances, with the caveat that care should be taken for this not to happen amongst high risk groups, as there is a danger of adverse effects (e.g. increase of substance use). Computer based delivery methods generally reported small effect size for all substances.

In this context, there are indications that programs targeting early adolescents might better prevent substance use than programs targeting younger or older children. Most evidence is on universal programs, but there are indications that universal skills based education may be preventive also among high-risk groups, including youth with mental health disorders.

[23] Ashton et al. (2015), Champion (2013), de Kleijn et al. (2015), Espada et al. (2015), Faggiano et al. (2014), Foxcroft & Tsertsvadze (2012), Hale et al. (2014), Hodder et al. (2017), Jackson (2012), Jones (2006), Kezelman & Howe (2013), Lee et al. (2016), McArthur et al. (2015), McLellan & Perera (2013), McLellan & Perera (2015), Pan (2009), Roe (2005), Salvo et al. (2012), Schröer-Günther (2011), West (2004).

Whilst most of the evidence originates from North America, Europe and Australia, some studies originated from Asia and Africa.

Programmes including also a social and emotional learning component are also recommended by WHO to prevent youth violence[24].

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Use interactive methods;
- ✓ Delivered through a series of structured sessions (typically 10-15) once a week, often providing boosters sessions over multiple years;
- ✓ Delivered by trained facilitator (including also trained peers);
- ✓ Provide opportunity to practice and learn a wide array of personal and social skills, including particularly coping, decision making and resistance skills, and particularly in relation to substance use;
- ✓ Impact perceptions of risks associated with substance use, emphasizing immediate consequences;
- ✓ Dispel misconceptions regarding the normative nature and the expectations linked to substance use.

Characteristics deemed to be associated with lack of efficacy and/or effectiveness or with adverse effects based on expert consultation

- × Utilise non-interactive methods, such as lecturing, as a primary delivery strategy;
- × Information-giving alone, particularly fear arousal.
- × Based on unstructured dialogue sessions;
- × Focus only on the building of self-esteem and emotional education;
- × Address only ethical/ moral decision making or values;

[24] WHO (2017), Global Accelerated Action for the Health of Adolescents (AA-HA!) Guidance to Support Country Implementation.

- ✗ Use ex-drug users as testimonials.

Existing guidelines and tools for further information

- UNESCO/ UNODC/ WHO (2016), Good Policy and Practice in Health Education: Education sector responses to the use of alcohol, tobacco and drugs
- Universal Prevention Curriculum, Coordinator Series, Course 5: School-based Prevention Interventions (2015)
- CICAD Hemispheric Guidelines on School Based Prevention
- Canadian Standards for School-based Youth Substance Use Prevention

School policies on substance use

Brief description

School policies on substance use mandate that substances should not be used on school premises and during school functions and activities by both students and staff. Policies also create transparent and non-punitive mechanisms to address incidents of use transforming it into an educational and health promoting opportunity. These interventions and policies are universal, but may include also indicated components such as screening, brief interventions and referral. They are often implemented jointly with other prevention interventions, such as skills based education and/or school-wide policies to promote school attachment and/or supporting parenting skills and parental involvement.

Available evidence

Four reviews reported findings for these interventions[25], three of which from the new overview. Three of the reviews studied tobacco policies in schools, and one interventions in tertiary education settings (colleges and universities).

With regard to primary outcomes, the three reviews on tobacco policies, including one on school-based incentives for tobacco prevention, reported different results, with few studies reporting evidence of effectiveness and more than half reporting no evidence of effect. The studies providing findings did find

[25] Coppo et al. (2014), Galanti et al. (2014), Hefler et al. (2017), Reavley (2010).

a lower probability of tobacco smoking in schools with a smoking ban and a higher probability in schools with more liberal attitudes. There was some evidence that the formality of the policy (e.g. written policy) and its enforcement also had an additional impact on smoking behaviour.

In colleges and universities, some environmental interventions, social norms marketing campaigns, and cognitive–behavioural/ skill-based interventions might have benefits with regard to prevention of harmful use of alcohol, with the strongest evidence for brief motivational interventions and for personalized normative interventions (both computer and face-to-face).

Although most evidence originates from North America, Europe and Australia/ New Zealand, there is also evidence originating from Asia.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Support normal school functioning, not disruption;
- ✓ Policies developed with the involvement of all stakeholders (students, teachers, staff, parents);
- ✓ Policies clearly specify the substances that are targeted, as well as the locations (school-premises) and/or occasions (school functions) the policy applies to;
- ✓ Apply to all in the school (student, teachers, staff, visitors, etc.) and to all psychoactive substances (tobacco, alcohol, drugs);
- ✓ Address infractions of policies with positive sanctions by providing or referring to counselling, treatment and other health care and psycho-social services rather than punishing;
- ✓ Enforce consistently and promptly, including positive reinforcement for policy compliance.

Characteristics deemed to be associated with lack of efficacy and/or effectiveness or with adverse effects based on expert consultation

- × Inclusion of random drug testing.

Existing guidelines and tools for further information

- UNESCO/ UNODC/ WHO (2016), Good Policy and Practice in Health Education: Education sector responses to the use of alcohol, tobacco and drugs

- Universal Prevention Curriculum, Coordinator Series, Course 5: School-based Prevention Interventions (2015)
- CICAD Hemispheric Guidelines on School Based Prevention
- Canadian Standards for School-based Youth Substance Use Prevention

School-wide programmes to enhance school attachment

Brief description

School-wide programmes to enhance school attachment support student participation, positive bonding and commitment to school. These interventions and policies are universal. They are often implemented jointly with other prevention interventions, such as skills based education and/or school policies on substance use and/or supporting parenting skills and parental involvement.

Available evidence

Two reviews reported findings for this intervention[26], one of which from the new overview.

With regard to the primary outcomes, one study reported that these strategies contribute to preventing use of all substances, with another study reporting results only for drug use and not significant results for tobacco and alcohol.

Although most evidence originates from North America, Europe and Australia/ New Zealand, there is also evidence originating from Asia.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Support positive school ethos and commitment to school;
- ✓ Support student participation.

[26] Fletcher (2008) and Hodder et al. (2017).

Existing guidelines and tools for further information

- UNESCO/ UNODC/ WHO (2016), Good Policy and Practice in Health Education: Education sector responses to the use of alcohol, tobacco and drugs
- Universal Prevention Curriculum, Coordinator Series, Course 5: School-based Prevention Interventions (2015)
- CICAD Hemispheric Guidelines on School Based Prevention
- Canadian Standards for School-based Youth Substance Use Prevention

Addressing individual psychological vulnerabilities

Brief description

Some personality traits such as sensation-seeking, impulsivity, anxiety sensitivity or hopelessness, are associated with increased risk of substance use. These indicated prevention programmes help these adolescents that are particularly at-risk deal constructively with emotions arising from their personalities, instead of using negative coping strategies including hazardous and harmful alcohol use. Therefore, they are mostly comprised of developmental components.

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, two randomized control trials had reported effect with regard to this intervention in early adolescence and adolescence[27] and one review had reported evidence with regard to this intervention in middle childhood[28].

With regard to primary outcomes, according to these studies, programmes addressing individual psychological vulnerabilities can lower the rates of drinking and binge-drinking at a two-year follow-up.

[27] Conrod (2008), Conrod (2010), Conrod (2011), Conrod (2013) and O'Leary-Barrett (2010) reporting on the same trial.

[28] Piquero (2010).

With regard to secondary outcomes, this type of intervention can impact individual mediating factors affecting substance use later in life, such as self-control.

The evidence originates all from Europe and North America.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Delivered by trained professionals (e.g. psychologist, teacher);
- ✓ Participants have been identified as possessing specific personality traits on the basis of validated instruments;
- ✓ Programmes are organised in such a way as to avoid any possible stigmatisation;
- ✓ Provide participants with skills on how to positively cope with the emotions arising from their personality;
- ✓ Short series of sessions (2-5).

Mentoring

Brief description

"Natural" mentoring refers to the relationships and interactions between children/adolescents and non-related adults such as teachers, coaches and community leaders and it has been found to be linked to reduced rates of substance use and violence. These programmes match youth, especially from marginalised circumstances (selective prevention), with adults who commit to arrange for activities and spend some of their free time with the youth on a regular basis.

Available evidence

One systematic review reported findings with regard to this intervention[29]

[29] Thomas et al. (2013)

With regard to primary outcomes, this study provided some evidence of the effect of mentoring in preventing alcohol and drug use among youth.

The evidence originated in the USA and Europe.

WHO recommends mentoring as one of the interventions identified as evidence-based interventions to prevent youth violence[30].

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Provide adequate training and support to mentors;
- ✓ Based on a very structured programme of activities.

[30] WHO (2017), Global Accelerated Action for the Health of Adolescents (AA-HA!) Guidance to Support Country Implementation.

4. Adolescence and adulthood

As adolescents grow, interventions delivered in settings other than the family and the school, such as the workplace, the health sector, entertainment venues and the community, become more relevant.

PLEASE NOTE. The evidence summarised for interventions and policies for early adolescents to be delivered in schools (i.e. preventive education, addressing individual vulnerabilities, school policies on substance use), as well as mentoring, report effectiveness also for older adolescents, without disaggregating the data by age groups. These interventions will not be discussed in this section again.

Brief intervention

Brief description

Brief intervention consists of one-to-one counselling sessions that can include follow up sessions or additional information to take home. They can be delivered by a variety of trained health and social workers to people who might be at risk because of their substance use, but who would not necessarily seek treatment. The sessions first identify whether there is a substance use problem and provide immediate appropriate basic counselling and/or referral for additional treatment. The sessions are structured, and last typically from 5 to 15 minutes.

Brief intervention is typically delivered in the primary health care system or in emergency rooms, but it also has been found to be effective when delivered as part of school-based and workplace programs, and when delivered online or via computers.

Brief intervention sessions typically employ motivational interviewing techniques, which is a psycho-social intervention where the substance use of a person is discussed and the patient is supported in making decisions and setting goals about his/her substance use. In this case, brief intervention is normally delivered over the course of up to 4 sessions that can be up to 1 hour long, but usually the sessions have shorter duration.

Available evidence

Forty-eight reviews reported findings for this intervention[31], thirty-eight of which from the new overview.

With regard to the primary outcomes, these studies show that brief intervention and motivational interviewing may significantly reduce substance use. This evidence of effect was found regarding different substances (tobacco, alcohol and drugs) and different age groups (adolescents and adults), with effect sizes reported to be small and not to persist beyond 6-12 months.

The reduction of excessive alcohol consumption among people with psychotic disorders was also reported. Indications of reduction in consumption of alcohol and/or harmful patterns of use were also reported both for youth out of college and in college.

Within the school-based setting, one study concluded that there is limited quality evidence that brief school-based interventions were more effective in reducing substance use (tobacco, alcohol, drugs) than the assessment-only condition, and were similar to information provision. Other studies reported some effectiveness with regard to cannabis use and similar results to tobacco and alcohol.

Computer- and internet-based delivery reported small effects that do not sustain in the long term (more than 12 months) for alcohol, with less evidence available with regard to tobacco and cannabis. One review reported effectiveness of interventions delivered through the telephone. Effect sizes were higher for delivery face-to-face.

Review studying delivery in emergency settings noted that the integration of results was hampered by the heterogeneity of included studies on both adolescents and adults, alcohol and drugs. Effectiveness was noted, including for females and for patients qualifying for treatment.

However, the interventions focusing on alcohol consumption primarily for adolescents and young adults may have limited evidence on tobacco use. The

[31] Ashton et al. (2015), Baker et al. (2012), Bertholet (2005), Carey et al. (2012), Carey et al. (2016), Carney (2012), Carney et al. (2014), Christakis (2003), Davis et al. (2017), Dedert et al. (2014), Dedert et al. (2015), Diestelkamp et al. (2016), Donoghue et al. (2014), Dotson et al. (2015), Dunn (2001), Elzerbi et al. (2015), Elzerbi et al. (2017), Foxcroft et al. (2015), Foxcroft et al. (2016), Gulliver et al. (2015), Hennessy & Tanner-Smith (2015), Hennessy et al. (2015), Jensen (2011), Jiang & Gao (2017), Kaner (2007), Kazemi et al. (2013), Landy et al. (2016), Leeman et al. (2015), McGinnes et al. (2016), Merz et al. (2015), Moreira (2009), Newton et al. (2013), Oosterveen et al. (2017), Park & Drake (2015), Peirson et al. (2016), Reavley (2010), Riper (2009), Riper et al. (2014), Scot-Sheldon et al. (2014), Scott-Sheldon et al. (2016), Smedslund (2011), Smedslund et al. (2017), Tait (2003), Tait et al. (2013), Vasilaki (2006), Watson et al. (2013), Wood et al. (2014), Young et al. (2014).

evidence for cannabis was reported to be scarce and inconclusive. Brief interventions and motivational interviewing benefit both adolescents and adults alike, however long-term impact on reducing alcohol use was less obvious. Moreover, the reduction of excessive alcohol consumption among people with psychotic disorders was also reported.

WHO recommends screening and brief interventions for hazardous and harmful alcohol use in non-specialist health care settings, except in areas of low prevalence of alcohol use, where the screening of all patients may not be cost-effective, but brief interventions can still be appropriate for identified drinkers. Screening for hazardous and harmful alcohol use should be conducted, using a validated instrument that can be easily incorporated into routine clinical practice (e.g. AUDIT, ASSIST). In settings in which screening is not feasible or affordable, practitioners should explore alcohol consumption in their patients when relevant. Patients with a hazardous and harmful alcohol use should receive a brief intervention. The brief intervention should comprise a single session of 5-30 minutes duration, incorporating individualised feedback and advice on reducing or ceasing alcohol consumption, and the offer of follow-up. Patients who on screening are identified as having alcohol dependence should be managed according to the existing WHO recommendations[32].

WHO recommends offering brief intervention to individuals using cannabis and psychostimulants, when they are detected in non-specialized health care settings (comprising a single session of 5-30 minutes duration, incorporating individualised feedback and advice on reducing or stopping cannabis / psychostimulant consumption, and the offer of follow-up). In addition, WHO recommends that people with ongoing problems related to their cannabis or psychostimulant drug use who does not respond to brief interventions should be considered for referral for specialist assessment[33].

WHO has developed the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) package to facilitate screening and brief interventions for all psychoactive substances including alcohol, tobacco and psychoactive drugs. The effectiveness of interventions was demonstrated in adults, and further work is required to establish effectiveness of ASSIST-based interventions among adolescents.

[32] WHO (2016), mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings. Version 2.0.

[33] WHO (2012), Brief psychosocial interventions, Evidence profile.

Existing guidelines and tools for further information

- AUDIT - The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care, Second Edition. WHO, 2001.
- Brief Intervention for Hazardous and Harmful Drinking: A Manual for Use in Primary Care. WHO, 2001.
- The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST): Manual for use in primary care. WHO, 2010.
- The ASSIST-linked brief intervention for hazardous and harmful substance use: Manual for use in primary care. WHO, 2010.
- mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings. Version 2.0. WHO, 2016.

Workplace prevention programmes

Brief description

The vast majority of substance use occurs among working adults. Substance use disorders expose employees to health risks and difficulties in their relationship with fellow employees, friends and family, as well as, more specifically to the workplace, to safety risks. Young adults are at particularly high risk, as job strain has been found to significantly increase the risk of developing substance use disorders among young adults using drugs. Employers also bear a significant cost of substance use. Employees with substance use problems have higher absenteeism rate and lower productivity, are more likely to cause accidents, and have higher health care costs and turnover rates. Moreover, employers have a duty to provide and maintain a safe and healthy workplace in accordance with the applicable law and regulations[34]. Prevention programmes in the workplace are typically multi-component, including prevention elements and policies, as well as counselling and referral to treatment.

[34] ILO (1996). Management of alcohol- and drug-related issues in the workplace. An ILO code of practice, Geneva, International Labour Office.

Available evidence

Four (4) reviews reported findings with regard to this kind of intervention[35], 2 of them from the new overview.

With regard to primary outcomes, according to these studies, workplace prevention can prevent alcohol use with possible variability of effect across gender as one study reported a positive effect on reducing alcohol consumption amongst women, but not men. One review found no effect on the prevention of tobacco use.

In addition, with regard to other health behaviours, another review indicated that workplace interventions may have a positive effect on physical fitness. The period for the sustainability of these results is not clear.

Most of the evidence is from North America and Europe, with some research emerging from Australia and Asia.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Developed with the involvement of all stakeholders (employers, management, employees);
- ✓ Guarantee confidentiality to employees;
- ✓ Include and are based on a policy on substance use in the workplace that has been developed by all stakeholders and is non-punitive;
- ✓ Provide brief intervention (including web-based), as well as counselling, referral to treatment and reintegration services to employees who need them;
- ✓ Include a clear communication component;
- ✓ Embedded in other health or wellness related programmes (e.g. for the prevention of cardiovascular diseases);
- ✓ Include stress management courses;
- ✓ Trains managers, employees and health workers in fulfilling their roles in the programme.

[35] Kazemi et al. (2013), Chan and Perry (2012), Thomas (2008), Webb (2009).

- ✓ Include alcohol and drug testing only as part of a comprehensive programme with the characteristics described in the above bullet points.

Existing guidelines and tools for further information

- Universal Prevention Curriculum, Coordinators' Series, Course 6: Workplace-based Prevention Interventions (2015).
- ILO (2012), SOLVE training package: Integrating health promotion into workplace OSH policies, Programme on Safety and Health at Work and the Environment (SAFEWORK), International Labour Organisation, Geneva, Switzerland.
- CICAD (2009), CICAD Hemispheric Guidelines in Workplace Prevention.
- UNODC in cooperation with ILO (*forthcoming*), Guidelines on workplace prevention programmes.

Tobacco policies

Brief description

A series of policies to be delivered at the population level to reduce the availability and accessibility of tobacco and tobacco smoking.

Available evidence

Four (4) reviews reported findings about this kind of policies[36], one (1) of which from the new overview, further supporting the WHO guidance provided below, particularly with regard to policies in work settings.

The WHO Framework Convention on Tobacco Control stipulates clear evidence-based guidance with regard to strategies to reduce the demand of tobacco. These include price and tax measures, an effective and important means of reducing tobacco consumption by various segments of the population, in particular young persons. In addition, measures for the protection from exposure to tobacco smoke are also detailed, as scientific evidence has unequivocally established that exposure to tobacco smoke causes death,

[36] Frazer et al. (2016), Lovato (2011), Stead (2005), Thomas (2008).

disease and disability. Finally, additional regulation concerns the contents of tobacco products, the disclosures of tobacco product, the packaging and labelling of tobacco products, education, communication, training and public awareness, and, tobacco advertising, promotion and sponsorship. With regard to the latter, the Convention notes how a comprehensive ban on advertising, promotion and sponsorship would reduce the consumption of tobacco products.

Existing guidelines and tools for further information

- ✓ Reports and resources of the WHO Tobacco Free Initiative.

Alcohol policies

Brief description

A series of policies and interventions to reduce the harmful use of alcohol defined as the drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes.

Available evidence

No new reviews were identified in the new overview of systematic reviews.

The WHO Global Strategy to Reduce the Harmful Use of Alcohol[37] of 2010 summarizes clear evidence-based guidance with regard to interventions and policies in reducing the harmful use of alcohol, grouping them in 10 target areas. Besides leadership, awareness and commitment in protecting the population, responses are called for in the health sector, namely screening and brief intervention at primary health care and other settings, including for pregnant women and women of child bearing age. Another area of action concerns the mobilisation and empowering of communities in preventing the selling of alcohol to under-age drinkers and other at-risk groups and in developing alcohol-free environments and events. Drink-driving policies and countermeasures should be complemented by carefully planned, high-intensity, well-executed public awareness and information campaigns. Another crucial area of policy is the

[37] `WHO (2010), WHO Global Strategy to Reduce the Harmful Use of Alcohol

regulation of the availability of alcohol through measures such as a licensing system on retail sales, or public health oriented government monopolies, regulating the number and location of on-premise and off-premise alcohol outlets, regulating days and hours of retail sales, regulating modes of retail sales of alcohol, regulating retail sales in certain places or during special events, establishing an appropriate minimum age for purchase or consumption of alcoholic beverages, and, adopting policies to prevent sales to intoxicated persons and to reduce the impact of marketing. It is particularly important to protect young people from the content of alcohol marketing, especially in low- and middle-income countries where adolescents have currently a low prevalence of alcohol consumption and are being targeted as new markets. In addition, increasing the price of alcoholic beverages through an effective and efficient system for taxation matched by adequate tax collection and enforcement is one of the most effective interventions to reduce harmful use of alcohol. Complementary policies include reducing the harm from alcohol intoxication and drinking without necessarily affecting the underlying alcohol consumption, particularly with regard to driving and enacting management policies relating to responsible serving of beverage on premises and training staff in relevant sectors in how better to prevent, identify and manage intoxicated and aggressive drinkers. Final areas of action are with regard to reducing the public health impact of illicit alcohol and informally produced alcohol, and, monitoring and surveillance.

These policies are also recommended by WHO to prevent unintentional injury (road injury) amongst adolescents, youth violence and sexual and other forms of gender-based violence[38], and child maltreatment[39].

Existing guidelines and tools for further information

- Global Strategy to Reduce the Harmful Use of Alcohol. WHO, 2010.

Community-based multi-component initiatives

Brief description

At the community level, mobilization efforts to create partnerships, task forces, coalitions, action groups, etc. bring together different actors in a community to

[38] WHO (2017), Global Accelerated Action for the Health of Adolescents (AA-HA!) Guidance to Support Country Implementation.

[39] WHO (2016), INSPIRE: seven strategies for ending violence against children.

address substance use. Some community partnerships are spontaneous. However, the existence of community partnerships on a large scale is normally the product of a special programme providing financial and technical support to communities to deliver and sustain evidence based prevention interventions and policies over time. Community-based initiatives are normally multi-component, taking action in different settings (e.g. schools, families, media, enforcement etc.).

Available evidence

No new reviews were identified in the new overview of systematic reviews.

In the first edition, thirteen (13) reviews had reported findings with regard to this intervention[40].

With regard to primary outcomes, according to these studies, community-based multi-component initiatives can prevent the use of drugs, alcohol and tobacco.

Although most evidence reported above originates from the USA/Canada, Europe, Australia, some few studies on community-based multi-component initiatives, particularly with regard to tobacco, originate from Asia.

Mobilizing communities to prevent the selling of alcohol to, and consumption of alcohol by, under-age drinkers, and to develop and support alcohol-free environments, especially for youth and other at-risk groups is one of the areas of action identified as effective by the WHO Global Strategy to Reduce the Harmful Use of Alcohol.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Support the enforcement of tobacco and alcohol policies at the local level.
- ✓ Work in a range of community settings (families and schools, workplace, entertainment venues, etc.)
- ✓ Involve universities to support the implementation of evidence-based programmes and their monitoring and evaluation.

[40] Bühler (2008), Carson (2011), Carson (2012), Foxcroft (2011), Gates (2006), Jackson (2012), Jones (2006), Müller-Riemenschneider (2008), Roe (2005), Schröer-Günther (2011), Skara (2003), Spoth (2008a) and Spoth (2008b).

- ✓ Adequate training and resources are provided to the communities.
- ✓ Initiatives are sustained in the medium term (e.g. longer than a year).

Existing guidelines and tools for further information

- CCSA (2010), Community-Based Standards, *Canadian Standards for Youth Substance use Prevention*, Canadian Centre on Substance use, Ottawa, Canada.

Media campaigns

Brief description

Media campaigns are often the first and/or only intervention delivered by policy makers concerned with preventing the use of drugs in a population, as they are visible and have the potential to reach a large number of people relatively easily.

Available evidence

Six (6) reviews reported findings for this kind of intervention, 5 of them from the new overview[41].

With regard to primary outcomes, these studies reported contradictory findings on effect with regard to preventing tobacco, alcohol and drug use, with the exception of campaigns on tobacco in combination with other prevention components.

The evidence reported originates from North America, Australia/ New Zealand and Europe.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Precisely identify the target group of the campaign.
- ✓ Based on a solid theoretical basis.

[41] Allara et al. (2015), Carson et al. (2017), Ferri et al. (2013), Gould et al. (2013), Guillaumier et al. (2012), Hopkins (2001).

- ✓ Design messages on the basis of strong formative research.
- ✓ Strongly connect to other existing drug prevention programmes in the home, school, and community
- ✓ Achieve adequate exposure of the target group for a long period of time.
- ✓ Systematically evaluated.
- ✓ Target parents, as this appears to have an independent effect also on the children.
- ✓ Aim at changing cultural norms about substance use and/or educating about the consequences of substance use and/or suggesting strategies to resist substance use.

Characteristics deemed to be associated with lack of efficacy and/or effectiveness or with adverse effects based on expert consultation

- × Media campaigns that are badly designed or poorly resourced should be avoided as they can worsen the situation by making the target group resistant to or dismissive of other interventions and policies.

Entertainment venues

Brief description

Entertainment venues include bars, clubs, restaurants as well as outdoor or special settings where large-scale events may occur. These venues can have both positive and negative impact on the health and wellbeing of citizens, as they provide social meeting spaces and support the local economy, but at the same time, they are identified as high-risk settings for many risky behaviours, such as alcohol and drug use, drugged driving and aggression.

Most prevention programmes utilizing entertainment venues have multiple components including different combinations of training of staff and managers and management of intoxicated patrons; changes in laws and policies, e.g. with regard to serving alcohol to minors or to intoxicated persons, or with regard to driving under influence of alcohol and/or drugs; high visibility enforcement of existing laws and policies; communication to raise awareness and acceptance of the programme and to change attitudes and norms; and, offering treatment to managers and staff.

Available evidence

Three (3) reviews reported results with regard to this kind of interventions[42], one (1) of which is from the new overview.

With regard to primary outcomes, according to these studies, training of staff, policy interventions and enforcement reported some indication of effects on intoxication, risky alcohol consumption and alcohol-related harm, including in the context of sport events.

All evidence originates from North America, Europe and Australia.

Characteristics deemed to be associated with efficacy and/or effectiveness based on expert consultation

- ✓ Trains staff and management on responsible serving and handling of intoxicated clients;
- ✓ Provides counselling and treatment for staff and management who need it;
- ✓ Includes a strong communication component to raise the awareness and the acceptance of the programme;
- ✓ Includes the active participation of the law enforcement, health and social sectors;
- ✓ Enforces existing laws and policies on substance use in the venues and in the community.

Existing guidelines and tools for further information

- UNODC, ATS prevention guide for policy makers.
- CICAD report: Insights for a drugged driving policy.

[42] Bolier (2011), Brennan (2011), Kingsland et al. (2016)

II. Prevention issues requiring further research

After-school activities, sports and other structured leisure time activities

In many countries and communities, it is popular to organize sports and other drug- or substance-free leisure time activities as a way to give adolescents prosocial and healthy pursuits, preventing them from engaging in risky behaviours including drug use.

The overview undertaken for this second updated edition of the Standards found one review studying informal education activities for positive youth development and reporting no effect or inconclusive outcomes.

The review of literature undertaken for the first edition of the Standards had identified three reviews reporting practically no studies assessing the impact of organising sports on substance use or on mediating factors among children. The new overview did not identify new studies. In fact, it should be noted that participation in sports *per se* is not always associated with lower rates of substance use and that it has been linked to higher rates of smoking and binge drinking.

The review of evidence that informed the WHO guidelines on preventing youth violence found that after-school and other structured extracurricular leisure time activities that included social skills training have resulted in reduced delinquency, reduced alcohol and drug use and decreased school dropouts. There was some evidence generated in low- and middle-income countries, but most studies have insufficiently robust research designs[43]

It has been also reported that after-school programmes are frequently targeted at youths from poor socio-economic backgrounds or youths with behavioural problems, and several studies have noted that bringing together high-risk youths may have adverse effects. On the other hand, there exists examples of programmes where sport coaching is used as a setting to deliver personal and social skills education, one of which, Line Up Live Up, is being currently piloted by UNODC in Africa and Latin America.

[43] WHO (2015), Preventing youth violence; WHO (2017), Global Accelerated Action for the Health of Adolescents (AA-HA!) Guidance to Support Country Implementation.

In general, policy makers should exercise the utmost caution if choosing to implement this kind of intervention, including a strong research component to assess the impact.

Preventing the non-medical use of prescription drugs

The non-medical use of prescription drugs controlled under the Conventions is an increasing problem in many countries, so is the non-medical use of some medicines that are sold over-the-counter. In some countries, this challenge is second only to cannabis use. Although most notably visible in North America, there are reports of significant treatment demand in Europe, Africa, South Asia and Latin America. Depending on the country and the kind of substance, some more vulnerable groups (such as youth, women, older adults, health care professionals, but also street children and civilians and armed forces in post conflict situations) appear to be particularly at risk. Moreover, the health and social consequences of the non-medical use of prescription drugs can be as serious as for the use of other controlled drugs.

The overview undertaken for this second updated edition of the Standards did not identify any systematic review with regard to preventing the non-medical use of prescription drugs specifically. However, it should be noted that most of the strategies that have been found to be effective in preventing substance use have strong developmental components and, as such, their effects are not specific to any particular substance and indeed are able to impact various risky behaviours. As such, there is emerging evidence that universal evidence-based interventions in schools, with families and in communities are effective in preventing the non-medical use of prescription drugs as well[44].

Sourcing of prescription drugs occurs through double doctoring, fraud, theft, and the Internet, as well as via family and friends. Therefore, in addition to these interventions, it may seem reasonable to assume that all of these sources present opportunities for prevention. There are some indications that providing guidelines and authoritative advice to physicians, as well as restricting and monitoring prescriptions and creating registers will change their prescribing behaviour and will limit the access of these medications only to the patients that needs them. Given the great influence of parents on youth, and given that many individuals report sourcing the substances from family, targeting parents to raise their awareness of the need to use prescription drugs only under medical supervision, both for themselves and their children, might be a promising approach. Practical steps in the community to safely dispose of prescription drugs that are out-dated or no longer being used by the intended recipient might be promising. Finally, health-care professionals might need to be trained on an

[44] Spoth et al. (2017), Spoth et al. (2016), Spoth et al. (2013).

ongoing basis on how to prevent, recognize and manage the non-medical use of prescription drugs and related consequences[45].

Some additional indications on possible interventions and policies to prevent the non-medical use of prescription drugs can be found at UNODC (2011), The non-medical use of prescription drugs, policy direction issues, United Nations Office on Drugs and Crime, Vienna, Austria and CICAD (2012), Guide to preventing prescription drug abuse, Inter-American Drug Abuse Control Commission, Washington D.C., USA.

Interventions and policies targeting children and youth particularly at risk

The overview undertaken for this second updated edition of the Standards did not identify any systematic review with regard to preventing substance use among children and youth particularly at risk, in spite of evidence indicating that they are often exposed to drugs at a very young age. This group includes, for example, out-of-school children and youth, street children, current and ex-child soldiers, children and youth of displaced or post-conflict populations, children and youth in foster care, in orphanages and in the juvenile justice system.

Prevention of the use of new psychoactive substances not controlled under the Conventions

Many countries have witnessed the recent rise of the use of new psychoactive substances that are not controlled under the Conventions (the so called 'legal highs', or 'smart drugs')[46]. The overview undertaken for this second updated edition of the Standards did not identify any systematic review with regard to the prevention of such substances. However, it should be noted that, as in the case of the non-medical use of prescription drugs, most prevention strategies based on scientific evidence are not substance specific. This is particularly true of strategies that address vulnerabilities early in life or that strengthen positive coping skills to prevent the resort to negative coping skills, including substance use. Therefore, it appears to be reasonable to consider that such strategies might be also effective in preventing the use of these new psychoactive

[45] From the draft version of The Surgeon General's Call to Action to Prevent Prescription Drug Abuse Among Youth: The Dangers of Improper Use of Controlled Medications, 2014 (unpublished) and UNODC (2011), The non-medical use of prescription drugs, policy direction issues, United Nations Office on Drugs and Crime, Vienna, Austria.

[46] UNODC (2017*)*, World Drug Report, United Nations Office on Drugs and Crime, Vienna, Austria.

substances. However, this is another area were rigorous research would appear to be necessary.

The influence of media

Exposure to media exerts a profound influence on the psychosocial development of young people. In particular, popular culture (e.g. celebrities, film, music) can strongly influence the initiation of risky behaviours such as alcohol and tobacco use. Several potential mechanisms may explain this influence, including a desire to acquire the traits that make celebrities special or the spread of behaviours throughout social networks. Due to the unique neurodevelopmental context of young people, they are particularly susceptible to the influence of popular culture and their actions are not simply a result of health illiteracy. Although this topic is not covered in this document, further research to examine the issue more closely would be warranted. In addition, and with reference to the relevant section in the previous chapter, it should be noted that the evidence available on the effectiveness of mass media campaigns is extremely limited. In this context, more research on the effectiveness of mass media campaign is imperative.

III. Characteristics of an effective prevention system

An effective national drug prevention system delivers an integrated range of interventions and policies based on scientific evidence, in multiple settings, targeting relevant ages and levels of risk. This should come as no surprise given the complex interplay of factors that make children, youth and adults alike, vulnerable to substance use and other risky behaviours. It is not possible to address such vulnerabilities by simply implementing a single prevention intervention that is often isolated and limited in its timeframe and reach. The overarching goal here is to support the healthy and safe development of individuals. Arguably, an effective prevention system would comprise strategies with a mix of environmental and developmental components, with a minor component focusing on information.

To deliver an integrated range of interventions and policies, a system requires strong structural foundations, which are briefly described in this section and include:

- ✓ A supportive policy and legal framework;
- ✓ Scientific evidence and research
- ✓ Coordination of multiple sectors and levels (national, sub-national and municipal/ local) involved;
- ✓ Training of policy makers and practitioners; and,
- ✓ Commitment to provide adequate resources and to sustain the system in the long term.

1. Range of interventions and policies based on evidence

The previous section has provided a comprehensive review of the interventions and policies that have been found to be efficacious or effective in preventing substance use. Strategies differ in four main areas: the age of the target group, the level of risk of the target group, the setting in which the strategy is delivered, and the focus of action (environmental, developmental, information). An effective system delivers a range of evidence based interventions and policies in order to:

- ✓ Support children and youth throughout their development and particularly at critical transition periods where they are most vulnerable, e.g. infancy and early childhood, at the transition between childhood and adolescence.

- ✓ Target the population at large (universal prevention), but also support groups (selective prevention) and individuals (indicated prevention) that are particularly at risk.

- ✓ Address both individual and environmental factors of vulnerability and resilience.

- ✓ Reach the population through multiple settings (e.g. families, schools, communities, the workplace, etc.)

2. Supportive policy and regulatory framework

No programme, no policy can exist in a vacuum. As noted in the introduction, drug prevention is but one of the fundamental components of a health-centred system focused on ensuring that drugs are available for medical and research purposes whilst preventing diversion and drug use and that other psychoactive substances do not impact on the burden of health. In this respect, an effective national system would be:

- ✓ Embedded in comprehensive and health-centred system of drug control focused on ensuring the availability of drugs for medical and research purposes, whilst preventing diversion and drug use, thus including supply reduction, treatment, care and rehabilitation of drug dependence, and, prevention of the health and social consequences of drug use (e.g. HIV/AIDS, hepatitis C, drug overdose, driving under the influence, etc.).

- ✓ Based on the understanding of drug use disorders as health conditions developing as a result of a complex interaction of genetic, biological and psychological factors with the environment and they need to be treated and not punished.

- ✓ Linked to a public health national strategy for the healthy and safe development of children, youth and adults, including the prevention, treatment and care for substance use disorders, as well as the prevention of other unhealthy or risky behaviours.

In addition, there are important societal characteristics that have great impact on the implementation and effectiveness of evidence-based prevention, such as the degree of inequality, of social capital and of social norms with regard to the use of psychoactive substances.

Moreover, the delivery of programmes by both governmental and non-governmental agencies can be greatly enhanced if it is mandated and supported at the national level by appropriate regulation, including:

- ✓ National standards, including quality standards, for drug prevention interventions and policies; in addition to these Standards, the European Drug Prevention Quality Standards were developed by a consortium of research and practice institutions in Europe and have developed useful Toolkits, including: for the policy maker that wants to fund quality prevention strategies (Toolkit 1), for the practitioner that wants to undertake a self-assessment with a view to improvement (Toolkit 2) and for national groups who want to rigorously adapt the European Standards (Toolkit 4); training materials (Toolkit 3) are also available; the portfolio of Standards of the Canadian Centre on Substance Abuse are also an important example;

- ✓ It is suggested that, to the extent possible, national standards enforce a requirement of implementing evidence-based strategies only; one way of supporting this is to create a registry of evidence-based strategies or make reference to existing registries such as “Blueprints for Healthy Youth Development” and those developed in many European countries, with “Xchange”, a unified European registry being currently piloted and available by the EMCDDA.

- ✓ National professional standards for drug prevention policy makers and practitioners, possibly within an accreditation system; an accreditation system would also support the professionalization of the field and the creation of organisations of professionals, much as it happens already in the field of treatment of drug use disorders; a global pilot experience in this sense that can provide useful support is the International Society of Substance Use Professionals (ISSUP).

- ✓ A policy requiring schools to implement evidence-based substance use prevention programmes and policies in the context of health or personal/ social education and promotion, including standards on how to do so;

- ✓ A policy requiring employers to implement substance use workplace prevention policies or programmes, including standards on how to do so;

- ✓ A policy requiring health, social and education services to support families to nurture the physical, cognitive and emotional development of their children.

3. A strong basis on research and scientific evidence

An effective national drug prevention system should both be based on scientific evidence and support research efforts to contribute to the evidence base. There are two dimensions to this. On the one hand, interventions and policies should be chosen based on an accurate understanding of what the situation really is. This systemic approach will include identifying the population that is most vulnerable or starting to use psychoactive substances, possible reason for why they are initiating use, and which interventions and policies most closely respond to this situation. On the other hand, the effectiveness and, whenever possible, the cost effectiveness of delivered interventions and policies, needs to be rigorously evaluated. Results of this rigorous evaluation will allow decision-makers to know the impact on outcomes such as decrease in initiation of drug use and to inform and expand the base of knowledge related to prevention interventions. It is also important that this research and its findings be peer-reviewed, published, and discussed to the extent possible.

Evidence-based planning

With regard to the first dimension, an information system should be in place to provide the necessary understanding of the situation, as well as opportunities to use this knowledge to plan. To address this dimension, an effective national prevention system would include:

- ✓ An information system regularly collecting and monitoring information on:
  - Prevalence: What percentages of people (by age, gender, and other important characteristic) are using which substance(s)? How often and how much? What are the health and social consequences?
  - Initiation of drug use: at what age are people (especially young people) initiating to use drugs and/other substances?
  - Vulnerabilities: Why are people, especially young people, initiating to use drugs and/or of other substances? What is the situation among children with regard to factors that are known to be linked to substance use (e.g. poor parenting,, poor attachment to school, violence and abuse, etc.)?
- ✓ A formal mechanism to regularly feed the data generated by the information system into a systemic planning process that will in turn consider:
  - Strategies needed: which evidence-based interventions and policies have been effective to address the identified situation?

- Availability and coverage of existing strategies: Which of these interventions and policies are currently being implemented? What percentage of the population who need them are reached by these interventions and policies?

- Quality of existing strategies: Are ongoing interventions and policies based on scientific evidence (this refers to both the scientific understanding of the vulnerabilities addressed and/or the systematic adaptation of existing evidence-based programmes)?

- Effectiveness of existing strategies: Have the strategies been evaluated (see below) and, if so, what are the results? What do the data generated by the information system tell us with regard to the effectiveness of the prevention system as whole?

- Available infrastructures and resources that could be utilised as part of the national prevention system: which institutions do or should implement prevention? Is the funding centralised or decentralised? How is the funding allocated?

- What are the gaps between the strategies needed and the availability, coverage, quality and effectiveness of the existing systemic strategies, infrastructures and resources?

Research and planning

The second dimension pertains to the evaluation of specific prevention programmes and policies. As noted, evidence based strategies identified in the previous section are not necessarily appropriate to the target, to the level of resources, or to the cultural environment, although in many cases they will be. There may be other programmes or policies that more successfully address these issues. It is imperative that selected programmes and policies are:

✓ Based on a scientific understanding of the vulnerabilities addressed. In other words, and as an example, it is strongly desirable that programmes and policies are created to address a risk factor or situation that has been found to be linked to increased initiation (or earlier onset or higher prevalence of substance use) *by scientific research and a needs assessment*, not by the feelings of an individual, however well-intentioned and concerned.

✓ Include a scientific monitoring and evaluation component in order to assess whether these interventions result in the desired outcome. This implies strong collaboration with academic and research institutions (including, but not limited to, universities), as well as the use of experimental or quasi experimental design. In the field of medicine, no intervention would be normally used unless scientific research had found it to be effective and safe. The same should go for drug prevention interventions.

It should be noted that in the Standards, the intention was to provide an indication of the effectiveness, or at least the efficacy, of kinds of interventions and policies, without referring to specific evidence-based programmes. However, the evidence originates in the evaluation of specific programmes and this means that it can never be assumed that a strategy that is 'basically similar' to an evidence-based one will be as effective. For example, while there may be evidence for "prenatal and infancy visitation programmes" overall, some particular ones of that type are quite effective and other particular ones of that type have been shown to be ineffective, even though they may have some of the characteristics that have been deemed to be associated with efficacy and/or effectiveness. This is another reason why evaluation becomes so crucial.

The Canadian Centre on Substance Abuse has developed useful tools to support the monitoring and evaluation of prevention, and UNODC has developed a training for policy makers on supporting a culture of evaluation of prevention. Finally, Course 3 of the Coordinator Series of the Universal Prevention Curriculum is entirely dedicated to Monitoring and Evaluation.

Also in the case of the implementation of an evidence-based programme, monitoring and evaluation remain extremely important in the context of a careful adaptation of the programme. In this case, it is suggested that the process includes:

- ✓ A careful and systematic process of adaptation that does not touch the core components of the programme, while making it more acceptable to the new socio-economic/ cultural context. Ideally, this would take place with the support of the developers of the programme. In this context, the UNODC Guide on family skills training contains a chapter solely devoted to adaptation, whilst Toolkit 4 of the European Drug Prevention Quality Standards has developed a careful and detail process for national stakeholders that want to adapt and adopt the Standards and that would be extremely useful also in this respect;

- ✓ A scientific monitoring and evaluation component in order to assess whether the programme is actually effective in the new socio-economic/ cultural context. Whilst a control component would be preferable (and possibly randomised), particularly at the stage of piloting a pre- and post-collection of data comparing to the original study would already provide a good indication of whether the programme is working in the new context or not; an additional advantage of evidence-based programmes is that all the monitoring and evaluation instruments are already available.

4. Different sectors involved at different levels

National drug prevention systems are about ensuring children, youth and adults have the opportunity to lead healthy and safe lifestyles in multiple settings. Therefore, the national sectors to be involved in the delivery of systemic prevention interventions and policies are many and necessitate clear role definition and coordination.

A national drug prevention system would therefore involve relevant national sectors (e.g. education, health, social welfare, youth, labour, law enforcement, etc.) in the planning, delivery, monitoring and evaluation of its components:

- ✓ Integrated levels of consistent implementation: national (federal), sub-national (state/regional/district), and municipal, local).

- ✓ Full spectrum of key stakeholders. This could include, but is not limited to: national and sub-national administration, municipal or local, governmental service delivery agencies, non-governmental agencies, residents and community leaders, religious communities and leaders, universities and other research institutions, and the private sector, as appropriate.

- ✓ Structured and well-defined roles and responsibilities for all stakeholders: there is great value in a partnership and collaboration of various stakeholders working together and taking responsibility for different elements of policy development and implementation.

- ✓ A clear mechanism to provide decision-makers (whether centralised or decentralised) with strong technical assistance to guide them in implementing evidence-based policies and interventions.

- ✓ A strong lead and coordinating agency.

It should be noted that there is not one single way of organising the delivery of evidence-based prevention strategies. For example, they need not necessarily be carried out in the form of programmes, but can also be integrated into the everyday work of institutions and services such as the school, youth work and health and social services. In this case, strategies are planned, managed and coordinated centrally, while the implementation relies on local multi-professional co-ordination. Other possible examples of how different levels could interact would include:

- ✓ Policy makers at the national level coordinate the development of the national policies, set the quality standards and support the infrastructure for implementation through adequate funding for the delivery of strategies and for the training for relevant stakeholders.

- ✓ Policy makers and/or agencies at the local level deliver interventions and policies, feed data to the information system, and actively improve their knowledge and skills.

- ✓ NGOs, residents and community leaders (which could include religious communities and leaders) mobilize for changes in or acceptance of policies, influencing community norms, delivering evidence-based interventions and policies; it should be noted that community mobilization has been found to be an effective and participatory mechanism to realize evidence-based strategies.

- ✓ Universities and research institutions analysing data to feed a better understanding of the substance use situation and to monitor and evaluate the national policies, evaluating specific interventions and policies.

- ✓ Private sector actively supporting prevention in the workplace and contributing, as appropriate, to evidence-based and innovative interventions.

5. Strong infrastructure of the delivery system

To be delivered effectively, interventions and policies must be supported by adequate resources.

- ✓ Agencies delivering interventions and policies need to be adequately financed.

- ✓ Practitioners delivering intervention and policies need to be adequately trained on an ongoing basis; the Coordinator Series of the Universal Prevention Curriculum has been developed and piloted globally with an European adaptation, UPC-Adapt ongoing. It comprises nine courses providing a foundation and a complete overview of the evidence-based practice. A second series for Implementers is currently under development.

- ✓ Policy makers at different levels of planning and developing interventions and enforcing policies need to be adequately trained on an ongoing basis.

- ✓ Technical assistance should be provided on an on-going basis to support implementation and continuous quality improvements.

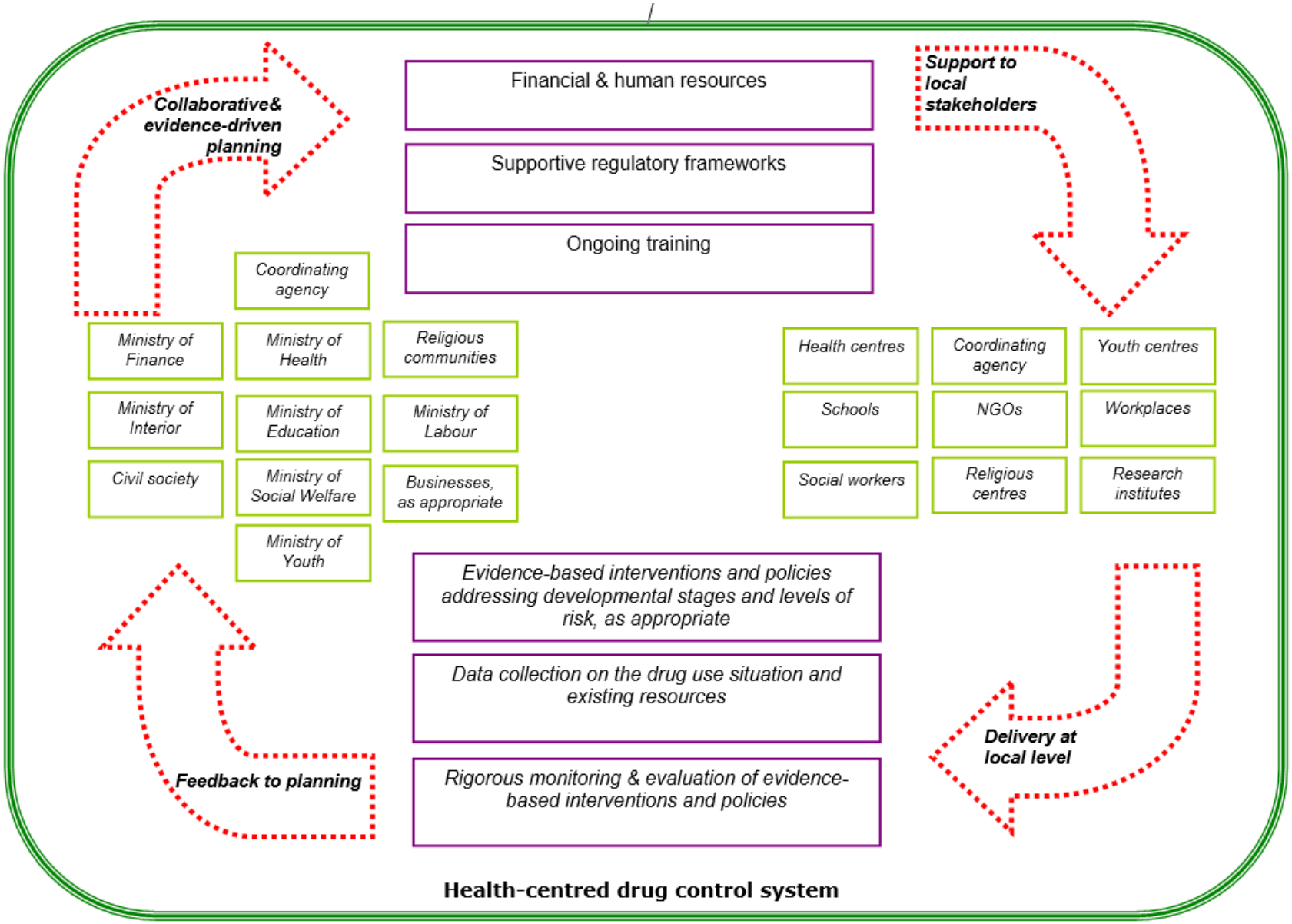
- ✓ Academic and research institutions need to be adequately financed by supporting scientific monitoring and evaluation as part of the implementation of prevention.

6. Sustainability

Drug prevention is effective and cost-effective, but, as with all policies, there needs to be a visible medium- to long-term investment to realize its potential. In this respect, the following are the ways in which the action of the components mentioned above should be sustained:

- ✓ A mechanism of review and adjustment of the national prevention system at regular intervals;
- ✓ Delivery of evidence-based interventions and policies planned and resourced to be active at least in the medium term;
- ✓ Regular collection of data through the information system, including feedback into the planning/ review process;
- ✓ Continuous support to research for the rigorous evaluation of interventions and policies;
- ✓ Continuous support to the training of practitioners and policy makers involved in the planning, delivery, monitoring and evaluation of drug prevention strategies.

Figure 1 – Schematic representation of a national drug prevention system



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