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GOOD POLICY AND PRACTICE IN HEALTH EDUCATION

BOOKLET 10

Education sector responses to the use of alcohol, tobacco and drugs

UNODC
United Nations Office on Drugs and Crime

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GOOD POLICY AND PRACTICE IN HEALTH EDUCATION

Booklet 10

EDUCATION SECTOR RESPONSES TO THE USE OF ALCOHOL, TOBACCO AND DRUGS

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FOREWORD

Use of alcohol, tobacco and drugs – referred to as 'substance use' in this booklet – commonly begins in adolescence. It is associated with a wide range of negative impacts on young people's mental and physical health as well as on their well-being over the short and long term. Substance use has also proven to be linked with a number of negative education-related consequences, including poor school engagement and performance, and school drop-out. This has an impact on education sector efforts to ensure inclusive and equitable quality education for all and accomplish the new global 2030 Agenda for Sustainable Development.

There is a wide range of factors that put children and young people at risk of substance use and its consequences, including their individual attributes and the environment in which they live. Education is a platform that engages children and young people at a crucial stage in their development, and helps them assess and counter such risks and pressures.

The education sector therefore has a fundamental responsibility to protect children and young people from substance use. This means taking steps such as: working to ensure that schools are 100% free of tobacco, alcohol and other drugs; ensuring the core curriculum includes learning about the risks associated with substance use and facilitates the development of students' personal and social skills relevant to health-seeking behaviours; and building the knowledge and skills of educators, parents, caregivers and communities to empower and support children and young people to prevent and address substance use. All of these steps require the education sector to adopt a comprehensive approach to mobilize the whole system in collaboration with other sectors, in particular the health sector and drug control authorities.

This booklet has been developed through an international consultation process led by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in partnership with the United Nations Office on Drugs and Crime (UNODC) and the World Health Organization (WHO). Building on the synergies of the respective mandates and competencies of the three UN agencies, which are members of the UN Interagency Task Force on the Prevention and control of Noncommunicable diseases, it exemplifies a collaborative inter-sectoral effort to support our Member States in strengthening and accelerating their education sector responses to substance use.

Within the framework set by the *International Standards on Drug Use Prevention* (UNODC, 2013) and *Health for the World's Adolescents* (WHO, 2014), this joint publication provides the context and rationale for improved education sector responses to substance use. It presents evidence-based and promising policies and practice, including practical examples from different regions that have been shown to be effective by scientific research. It also suggests issues to consider in sustaining and scaling up effective approaches and programmes in education sector responses to substance use.

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ACRONYMS

ATS	Amphetamine-type stimulants
AIDS	Acquired Immune Deficiency Syndrome
CICAD	Inter-American Drug Abuse Control Commission
CND	Commission on Narcotic Drugs
DALY	Disability Adjusted Life Year
EMCDDA	European Monitoring Centre on Drugs and Drug Abuse
ESPAD	European School Survey on Alcohol and Other Drugs
EU	European Union
FRESH	Focusing Resources on Effective School Health
GBG	Good Behaviour Game
GDP	Gross domestic product
GHO	Global Health Observatory
GSHS	Global School-based Student Health Survey
GYTS	Global Youth Tobacco Survey
HBSC	Health Behaviour in School-Aged Children Survey
HIV	Human Immunodeficiency Virus
IDU	Injection drug use
INL	US Department of State's Bureau on Law Enforcement and Narcotics Affairs
ISSUP	International Society of Substance Use Prevention and Treatment Professionals
NGO	Non-governmental organization
NPS	New psychoactive substances
PWID	People who inject drugs
RCT	Randomized control trial
SBHS	School-based health services
SES	Socio-economic status
SFP	Strengthening Families Programme
SHS	School health services
STI	Sexually transmitted infection
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
UPC	Universal Prevention Curriculum
WHO	World Health Organization

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The development of this booklet was part of an international consultation process on education sector responses to the use of alcohol, tobacco and drugs. The process was led by the United Nations Educational, Scientific and Cultural Organization (UNESCO), in partnership with the United Nations Office on Drugs and Crime (UNODC) and the World Health Organization (WHO) building on the synergies of their respective mandates and competences. The consultation process included the following three components:

- A desk-based literature review and data collection exercise commissioned by UNESCO and summarised in a technical background paper. The research and writing of the background paper was undertaken principally by the University College of London (UCL) consultants team of Daniel Hale, Chris Bonell and Russell Viner, with contributions from Arrash Yassaee, Kirsten MacGregor and Leonardo Bevilacqua.
- Regional and country-based literature reviews were commissioned by UNESCO Offices in Eastern Europe and Central Asia, East and Southern Africa and Latin America and the Caribbean, and provided input to the technical background paper.
- An international expert meeting was organized by UNESCO in partnership with UNODC and WHO and with support from the Turkish Government (29 September–2 October 2015, Istanbul, Turkey), where the technical background paper was presented to, and benefited from additional input from, experts in the field.

The process was coordinated by a team led by Christophe Cornu, Senior Programme Specialist at UNESCO under the supervision of Christopher Castle, Chief of UNESCO's Section of Health and Education, and with the overall guidance of Soo Hyang Choi, Director of the Division for Inclusion, Peace and Sustainable Development at UNESCO.

Gary Roberts drafted the booklet based on the outputs of the above-mentioned process. UNESCO, UNODC and WHO offered support and advice throughout the process – with particular thanks to Yongfeng Liu from UNESCO's Section of Health and Education; Giovanna Campello and Hanna Heikkilä from UNODC's Prevention, Treatment and Rehabilitation Section in the Drug Prevention and Health Branch; and Maria Renstrom, Vladimir B. Poznyak, Elise Gehring and Regina Guthold from WHO's Department of Mental Health and Substance Abuse, Valentina Baltag from WHO's Department of Maternal, Newborn, Child and Adolescent Health, and Yuka Makino from WHO's Department for Prevention of Noncommunicable Diseases.

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GLOSSARY

Alcoholic beverage

An alcoholic beverage is a liquid that contains ethanol and is intended for drinking. In most countries with a legal definition of 'alcoholic beverage' a threshold for content of ethanol by volume in a beverage is set at around 0.5%. The predominant categories of alcoholic beverages are beers, wines and spirits.

Dependence

Dependence or dependence syndrome is a cluster of physiological, behavioural and cognitive phenomena in which the use of a substance or a class of substances, takes on a much higher priority for a given individual than other behaviours that once had a greater value. This would cover the use of any **psychoactive substance** including **tobacco**, **alcohol** and **drugs**. Dependence is one of the **substance use disorders** that can occur due to the use of one or many **psychoactive substances**.

Disability Adjusted Life Years (DALYs)

One **DALY** can be thought of as one lost year of 'healthy' life. DALYs for a disease or health condition are calculated as the sum of the years of life lost due to premature mortality in the population and the years lost due to disability for people living with the health condition or its consequences.

Disorders due to substance use

Mental and behavioural disorders due to the use of one or more **psychoactive substances**. They include a wide variety of disorders of different severity and clinical forms, such as **intoxication**, **harmful use**, **dependence** syndrome, withdrawal syndrome, psychotic disorder, etc. Substance use disorders include harmful use and substance dependence.

Drugs

In this document, the term 'drugs' is used to refer to substances that belong to one of the following three groups:

- Psychoactive substances (see **Psychoactive substances**)
- New psychoactive substances (see **New psychoactive substances**)
- Volatile substances (see **Volatile substances**)

Drug use

In this booklet the term 'drug use' is used to refer to the use for non-medical or non-scientific purposes of the three groups of substances mentioned above (see **drugs**).

Education sector

In this booklet the 'education sector' is operationally defined to refer to all the activities with the primary purpose of providing education in educational institutions, and the people, institutions, resources and processes – arranged together in accordance with established policies – to support the provision of education in educational institutions at all levels of the system. At national level, the education sector/system is usually coordinated by one or several ministries of education.

Evidence-based practice

'Evidence-based practices' refer to practices – or their rigorously tested adaptations to new cultural contexts or settings – that are shown to be effective in preventing substance use (or impacting known protective or risk factors for substance use when targeting children). This must be shown in at least two studies using experimental study designs (randomized controlled trials, or equivalent study designs applicable for population-wide prevention approaches) that are of good or acceptable quality.

Harmful use	Harmful use refers to a pattern of **substance** use that causes damage to health (physical or mental). This includes the use of **tobacco** and **drug use**, as well as harmful use of alcoholic beverages (drinking patterns involving typically high frequency and/or high volumes of drinking, as well as drinking at an early age).
Indicated prevention	**Substance use prevention** strategies that target individuals who are identified as being at particular risk for substance use or for substance use disorders.
Intoxication	Intoxication is one of the **disorders due to substance use** that can occur as an immediate result of the use of one or many **psychoactive substances**. It is manifested by disturbances in the level of consciousness, cognition, perception, judgement or behaviour.
New psychoactive substances	A **psychoactive substance**, in pure form or in preparation, that is not controlled by the UN drug conventions, but may pose a public health threat comparable to that posed by substances listed in these conventions. These new psychoactive substances (NPS) have been known in the market by terms such as 'designer drugs', 'legal highs', 'herbal highs', 'bath salts', 'research chemicals' or 'laboratory reagents'. In some countries they are controlled by national legislation.
Poly-drug use	Broadly defined in the WHO lexicon as the use of more than one **psychoactive substance** by an individual – consumed at the same time or sequentially. In common language poly-drug use also implies frequent or heavy use of more than one substance.
Prevention of the health and social consequences of substance use	This expression includes all the policies and programmes focusing directly on the reduction of the health and social consequences resulting from the use of substances. Examples include: needle/syringe exchange programmes to prevent needle sharing among people who inject drugs (PWID) and, therefore, the spread of blood-borne infections such as HIV and Hepatitis C and programmes to prevent people from driving while impaired by alcohol and drugs.
Promising practice	Practices that show attributes associated with effective programmes but have not been sufficiently evaluated, or the evidence is not strong enough for the practice to be defined as **evidence-based**.
Psychoactive substances	Psychoactive substances, such as cannabis, amphetamines, ecstasy, cocaine and heroin, as well as alcohol or nicotine, are substances that, when taken, have the ability to change an individual's consciousness, mood or thinking processes. Many of them are controlled under the three main international drug control conventions: the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol; the Convention on Psychotropic Substances of 1971; and the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988.
Randomized controlled trial	A randomized controlled trial (RCT) is a type of scientific study in which a number of people, usually with a target health condition, are randomly assigned to two (or more) groups to test a specific intervention. One group (the experimental group) has the intervention being tested, the other (the comparison or control group) has an alternative intervention, a dummy intervention (placebo) or no intervention at all. The groups are followed up to see how effective the experimental intervention was. Outcomes are measured at specific times and any difference in response between the groups is assessed statistically.

Quasi-experimental study

A quasi-experimental study design compares the differences between the experimental group and other groups without randomly assigning people to these groups, or sometimes measures the intervention group only before and after the intervention without comparing with other groups. RCTs are often considered to be the 'gold standard' for outcome evaluation while quasi-experimental studies produce less rigorous findings at lower costs and are therefore more feasible to conduct.

School health

A school health programme can be defined as the strategies, activities and services offered by, in, or in association with schools (and other educational institutions) that are designed to promote students' physical, emotional and social development.

School health services refer to health services provided to enrolled students by health care and/or allied professional(s), irrespective of the site of service provision (in the school setting or outside the school setting). The health services should be mandated by a formal arrangement between the educational institution and the organization providing the health services.

Selective prevention

Substance use prevention strategies that target subsets of the population that are at increased risk of substance use.

Substance use

The consumption of any **psychoactive substance**. In this booklet this term is used to include:

- the use of **alcoholic beverages** (see **Alcoholic beverage** for more details)
- all forms of **tobacco** use (including smoking and chewing) (see **Tobacco** for more details)
- **drug use** (see **Drugs** and **Drug use** for more details).

Substance use prevention

Programmes and policies aimed at preventing or delaying the initiation of substance use and the transition to substance use disorders, thus ultimately reducing substance use, as well as its health and social consequences.

Tobacco

Tobacco is a **psychoactive substance** that contains nicotine. It can be consumed as smoked products (e.g. cigarettes, cigars, water pipes), smokeless products (e.g. snuff, chewed) or vaporized products (e.g. e-cigarettes - a handheld electronic device that vaporizes a flavoured liquid, which the user inhales.)

Typical age of first use

This term is used in this document to present the typical age of the first time a substance is used in a country, region or globally. It is often around the age children enter secondary school (i.e. around 13 years old). However, it may occur during the latter years of primary school (e.g. at 10–12 years of age) in some locations and for some substances (e.g. tobacco).

The typical age of first use is an important benchmark for substance use prevention, because approaches differ before and after first use. This is an estimate that needs to be made in each jurisdiction based on the best available data. The typical age will vary according to country or region, substance (e.g. alcohol vs. methamphetamine) and by subpopulation. Other terms with the same meaning include: age of onset, age of initiation.

Universal prevention

Substance use prevention strategies that target the entire population, without regard to individual or group risk factors.

Volatile substance

Volatile substances include the organic solvents that are present in many commonly available domestic and industrial products such as glue, aerosol paints, industrial solvents etc. These are inhaled for psychoactive effects.

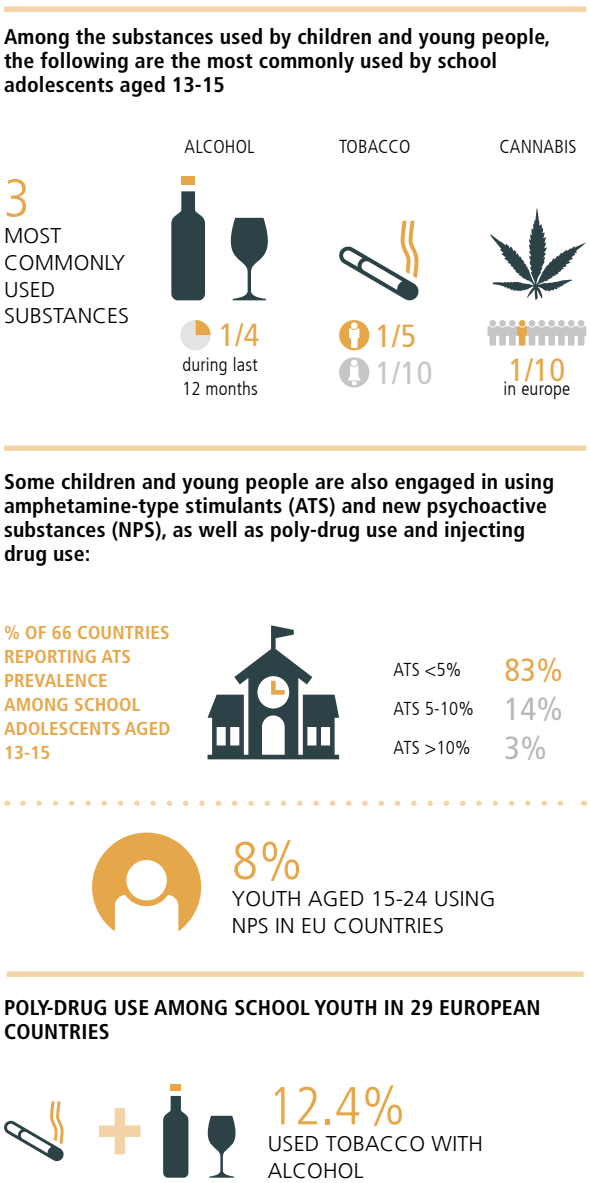
EXECUTIVE SUMMARY

This booklet provides the context and rationale for improved education sector responses to the use of alcohol, tobacco and drugs among children and young people, with a focus on primary and secondary education sectors. It presents evidence-based and promising policies and practice, including practical examples from different regions that have been shown to be effective by scientific research. It also suggests issues for the education sector to consider in sustaining and scaling up effective approaches and programmes to tackle substance use.

Context and rationale

Substance use most commonly begins in adolescence, with alcohol, tobacco and cannabis being the substances most commonly used by children and young people. Country-level data available from school-based surveys show that: one in four 13 to 15 year olds used alcohol during the last 12 months; and one in every ten girls and one in every five boys used tobacco, with lower rates for cannabis. Tobacco is often the first substance used by children and young people. There is an increase in the use of amphetamine-type stimulants and new psychoactive substances, although the prevalence remains relatively low. New psychoactive substances present a particular threat because some young people perceive these substances as being safer than other drugs because they are or have been legal. They are also easily accessible and often come in branded packaging. In addition, as many as 70–90% of people who inject drugs (PWID) in some countries start doing so before the age of 25.

Figure: Overview of the status of substance use by children and young people in the world and selected regions



Among children and young people, early onset of use and regular use of alcohol, tobacco and drugs is associated with the increased risk of developing dependence or harmful use later in life, as well as being associated with physical and mental health problems throughout life.

Available evidence indicates that substance use among children and young people has been linked to a number of negative education-related consequences globally, including poor educational performance, school drop-out and incompletion of secondary and post-secondary education in a diverse array of developed and developing regions and countries.

A wide range of factors – individual, family, school, community and societal – can contribute to or prevent substance use by young people. The education sector, if viewed as an ecosystem composed of a wide range of actors and elements, can be mobilized to adopt a holistic approach (as outlined below) to help address these factors.

Good policy and practice

Effective education sector responses to substance use require basing all approaches and actions on the best available scientific evidence. This includes setting preventive and responsive goals relevant to the prevalence and patterns of substance use in the country in question. Prevention should start early. It should cover all age groups, and target especially the critical transition periods in the development of children and young people. A comprehensive education sector response to substance use comprises the following key elements:

- **EDUCATION SECTOR POLICY AND STRATEGY FRAMEWORKS** that can take a number of forms, such as: mandatory school substance policies; statutory health and substance use education; provision of school health services; and national quality standards for school-based prevention efforts. All these policies and strategy frameworks need to be based on the best available evidence, as well as being grounded in broader societal priorities guided with relevant international frameworks.
- **NATIONAL AND SUBNATIONAL CURRICULA** that are usually and most appropriately accommodated in a health-related subject area, ensuring:

  1) age-appropriate contents and concepts focusing on personal and social skills, particularly for children and young people before and during the typical age of first use; and, in addition to personal and social skills, specific knowledge about and attitudes towards substance use for young people who may have already started substance use;

  2) interactive teaching methods conducted by trained educators;

  3) a series of structured sessions spanning several years, supported with booster sessions to reaffirm the curriculum contents and contribute to longer-term effects. Information-giving alone, particularly information that is designed to provoke fear, and drawing on ex-drug users to offer testimonials,

is associated with no or negative prevention outcomes.

- **Training and support for educational personnel** to ensure their capacity to deliver and support high-quality prevention responses to substance use in schools. General teacher training can be provided as part of postgraduate teacher training, in-service training or within individual schools. Training is likely to be effective when it is viewed as engaging and collaborative, and includes demonstrations of – and opportunities to practice or role-play – key skills, in addition to relevant knowledge and teaching practices.
- **EVIDENCE-BASED RESPONSES AT SCHOOL LEVEL** that include:

  1) universal prevention approaches aimed at securing a safe and supportive environment for children and young people in and through education, including the delivery of responses related to curricula and other activities in the context of educational institutions; and

  2) selective and indicated prevention that targets individuals or groups deemed at particular risk of initiating, or who are already involved in, substance use behaviours.

A whole-school approach is recommended in order to involve all aspects of the school community that can impact upon students' learning, health and well-being, to ensure:

1) substance-free school premises and school functions and activities by both students and staff;

2) responding in a non-punitive manner to students found using substances, transforming incidents into an educational and health-promoting opportunity by using counselling, referral, cessation support and other support mechanisms; and

3) the school environment that enhances student participation, positive bonding and commitment to school. There is no evidence that random drug-testing at schools has any preventive effects.

- **APPROPRIATE SCHOOL HEALTH SERVICES**, which are found commonly in both high- and low-income countries, can play an important role in prevention, early detection and referral for substance use and substance use disorders (see Glossary), as well as in the delivery of brief interventions for student substance use. Services that are provided within school premises (school-based services) are found to be effective, particularly for hard-to-reach children and young people, as they are more accessible than community based health services.
- **EFFECTIVE MANAGEMENT OF THE EDUCATION SECTOR RESPONSE** that ensures the establishment of adequate resources and infrastructure for the planning, coordination (both between the education sector and other sectors and within the education sector), monitoring and evaluation of the education sector responses to substance use over the long term.

Sustaining and scaling up effective education sector responses

Programmes and responses proven to be ineffective or in some way harmful in their current forms should be stopped and reviewed. The choice to sustain or expand a response comes only when it promises or shows positive effects based on scientific evaluation. Preparation and implementation of a credible scaling-up plan for an education sector response to substance use requires, *inter alia*: strong governance, leadership and champions; engagement of a wide range of stakeholders from the start; understanding of responsible authorities about the implications of the scaling-up; capacity and resources of the sector to implement the response; and ongoing monitoring, quality improvement and evaluation.

1. INTRODUCTION

Use of alcohol, tobacco and drugs – referred to as 'substance use' in this document – is associated with a wide range of negative health consequences. This ranges from injuries, accidents and violence to chronic health problems, such as dependence, cardiovascular diseases, HIV, Hepatitis C and various cancers. Beyond these physical and psychosocial consequences and resulting health-care costs, there are significant social, educational, criminal justice and lost-productivity costs, all of which take a very significant economic toll on communities and societies.

The education sector cannot sidestep its role in addressing this issue. It needs to engage for two main reasons:

1) to support societal efforts to reduce the social and economic costs of substance use; and
2) because substance use among children and young people,[1] as well as the causes behind it, too often stand in the way of the education sector's mission.

Substance use, especially harmful use, can affect a young person's well-being, and is clearly linked to academic underachievement (e.g. cognitive functioning, disengaging from school,[2] truancy and early school leaving) (Arthur et al., 2015).

1 According to UN definitions, an 'adolescent' is regarded as a person between the age of 10–19 years; a 'child' as a person below the age of 18 years, unless under the law applicable to the child, majority is attained earlier; 'young people' are those between the ages of 10 and 24; and 'youth' are those between the ages of 15 and 24 years.

2 The term 'schools' is often used in this document as a synonym for 'educational institutions'. Wherever schools refer to a specific level of education (e.g. pre-primary, primary, secondary or tertiary/higher education), this is clearly stated.

On the other hand, the education sector can play an important role in preventing and addressing substance use. An overview of systematic reviews of existing evidence (J.K. Das *et al,* 2016) concludes that,

- for tobacco use, school-based prevention programmes are effective in reducing smoking;
- for alcohol use, school-based prevention programmes are found associated with reduced frequency of drinking; and
- for drug use, school-based interventions based on a combination of social competence and social influence approaches have shown protective effects against drugs, including cannabis use.

There is also a strong understanding of how the education sector can respond effectively to help tackle substance use. The science of prevention has evolved over the past three decades, providing clear evidence about which education sector approaches are effective in preventing substance use and its health and social consequences and which have been shown to have no effect or even negative outcomes. Importantly, evidence-based prevention programmes have been consistently found to be cost effective (Lemon et al., 2014).

Unfortunately, indications are that the quality and coverage of the response from education sectors is often weak. For example:

- In a number of countries, the ministry of education and other education authorities are not meaningfully involved in the national response to substance use, and there is often a lack of coordination between the education sector and other stakeholders.
- The education sector in many countries uses approaches that are not based on scientific evidence, wasting precious resources, and in some cases, having unintended consequences that may end up harming young people (UNODC, 2013).
- Some countries have pockets of evidence-based activity, but find it challenging to sustain them and scale them up on a national scale.

Therefore, there is an urgent need to implement and scale up evidenced-based substance use prevention policies and programmes. This booklet aims to help education sector actors to strengthen their response to substance use by identifying evidence-based approaches, providing examples from various regions, and discussing strategies to scale up small-scale approaches.

Recognizing that the structure of the education sector and division of roles within the sector can vary greatly between countries, the booklet is aimed at officials who are in the best position to lead and support these efforts, including:

- At both the national and subnational levels: policy-makers and planners, curriculum developers, teacher trainers, personnel in charge of school health policy, school health personnel and health policy-makers, including those in charge of professional development of school health personnel;
- Public health, social and development partners, and other stakeholders.

About this booklet

This booklet is part of a series on good policy and practice in health education presented by the United Nations Education, Scientific and Cultural Organization (UNESCO). For this publication, UNESCO is joined by the United Nations Office on Drugs and Crime (UNODC) and the World Health Organization (WHO), which both share an interest in education sector responses to substance use prevention, and bring their particular mandates and expertise to the issue. UNODC's *International Standards on Drug Use Prevention* (2013) and the WHO's *Health for the World's Adolescents* (2014) set a context for this volume.

A technical background paper was prepared for this initiative, and served as a primary resource. The report presented the best available data on the nature and extent of substance use among children and young people in schools, and education sector responses, paying particular attention to gathering information on the situation in low- and middle-income countries. To present as complete a picture as possible for low- and middle-income regions, UNESCO commissioned the collection of additional data on:

- The nature and extent of substance use by children and young people in Eastern Europe, Central Asia, East and Southern Africa, and Latin America and the Caribbean; and
- Education sector responses in Eastern Europe, Central Asia and East and Southern Africa.

Finally, experts and officials from the education and public health sectors in a selection of these countries were brought together to fill remaining gaps in knowledge.

The rest of the publication is organized as follows:

- **Chapter 2** explains in detail why it is vitally important for the education sector to respond to substance use among young people, describing the nature and extent of youth substance use, consequences of use, why some students are particularly vulnerable to substance use, and how best the sector can generally position itself to respond to this issue.
- **Chapter 3** identifies strategies and interventions shown by scientific research to be effective (and those that are not), and presents examples of efforts in various countries that apply this evidence. The examples are

identified as either 'evidence-based' or 'promising' (see Glossary for definitions of these terms).

- Chapter 4 provides concluding points for consideration in terms of sustaining and scaling up effective education sector responses to substance use.

This volume focuses on primary and secondary education sectors. Substance use by students in tertiary education is also a significant concern, but because it is a different setting and calls for different strategies involving other groups of stakeholders, the tertiary education sector is not discussed in this booklet.

2. CONTEXT AND RATIONALE

2.1. Prevalence of substance use by adolescents in schools

The traditional gender gap of prevalence being higher among boys than among girls appears to still largely exist. However, substance use prevalence for girls has been increasing in the past two decades in some high-income countries, particularly with regard to the non-medical use of prescription drugs.

(UNODC, 2016)

In adult populations around the world, alcohol, tobacco and cannabis are the most commonly used psychoactive substances – this is also the case among young people. International surveys conducted in most countries present rates of use for several substances, along with several indicators for harmful use, among adolescents in schools. These surveys are not a substitute for local data, but they do provide a context and rationale for planning education sector responses to tackling substance use.

In this section, the information is mainly based on data from:

- The **Global School-based Student Health Survey (GSHS)** – a WHO global collaborative surveillance project designed to help countries measure and assess the behavioural risk factors and protective factors;
- The **Global Youth Tobacco Survey (GYTS)** – a WHO school-based survey designed to enhance the capacity of countries to monitor tobacco use among youth and to guide the implementation and evaluation of tobacco prevention and control programmes;
- The **WHO Health Behaviour in School-aged Children (HBSC)**, which includes 44 countries and regions across Europe and North America; and
- The **European School Survey Project on Alcohol and Other Drugs (ESPAD)**, which includes data from approximately 40 European countries.

Alcohol

Countries generally have laws and regulations targeting under-age drinking. For example, most countries prohibit the use of alcoholic beverages by adolescents, or sales/serving of alcoholic beverages to adolescents, through the introduction and enforcement of legal age limits (this can vary between countries from ages 16 to 21).

Figure 1: Prevalence of alcohol use among school adolescents aged 13-15

1 IN 4
SCHOOL ADOLESCENTS AGED 13-15 USED ALCOHOL DURING THE LAST 12 MONTHS

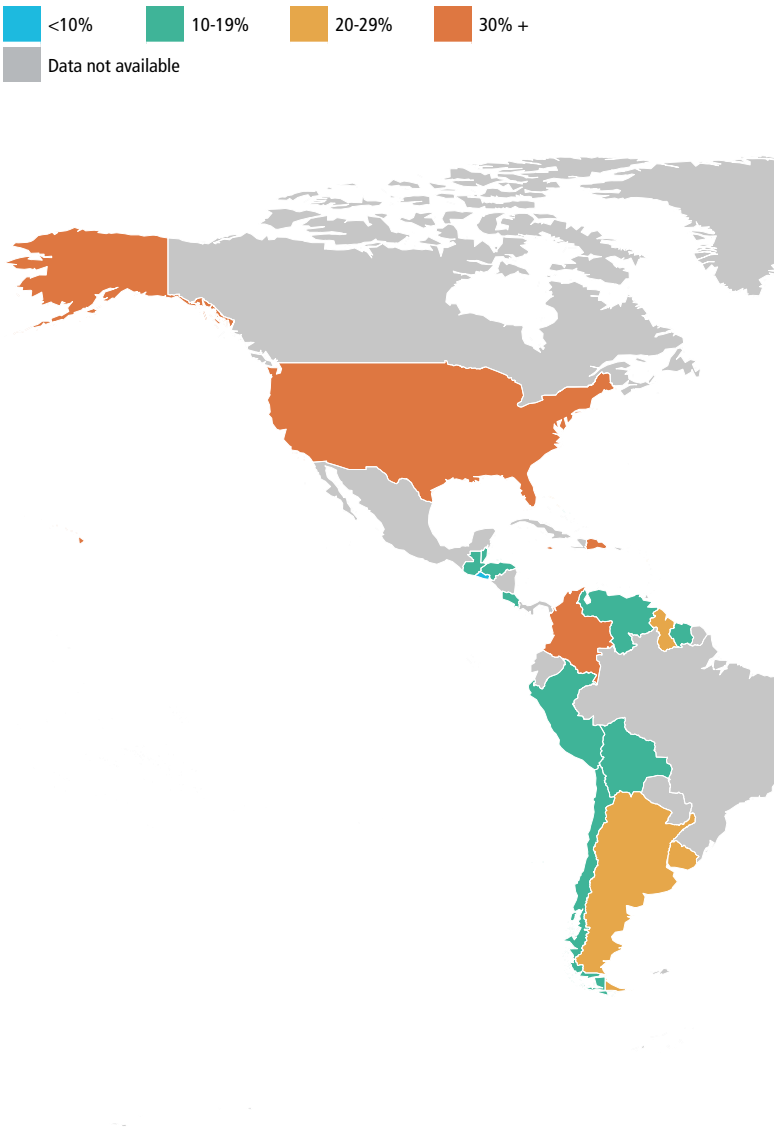
To summarize:

- Alcohol is the most commonly used substance by students globally. It is contained in an array of beverages including beer, wine, spirits, cider, coolers or 'alcopops'.
- Globally, on average, about one in four 13–15 year olds report having used alcohol during the last 12 months – twice as many as used tobacco.
- The level and pattern of alcohol use differs between countries and regions and sometimes also between communities and schools. This highlights the need for local surveys to complement national surveys.
- Harmful drinking patterns are a relatively common behaviour among adolescents aged 13–19 around the world, although they are known to be more prevalent in Europe and the Americas and less so in Africa and Asia.

Boys are more likely to report that they have ever been drunk in most countries, but sometimes only marginally. In other countries (e.g. Uruguay and France), girls are as likely as boys to report having been drunk.

There is a lack of data on the frequency of alcohol use from low- and middle-income countries. One of the regions that collect data on frequent use of alcohol[3] is in Europe: frequent use among students aged 15–16 is most common in the Czech Republic, Denmark, Latvia and Germany (more than one in three students in these countries); it is least common in Iceland, Norway and Sweden with under 10% students aged 15-16 reporting frequent drinking.

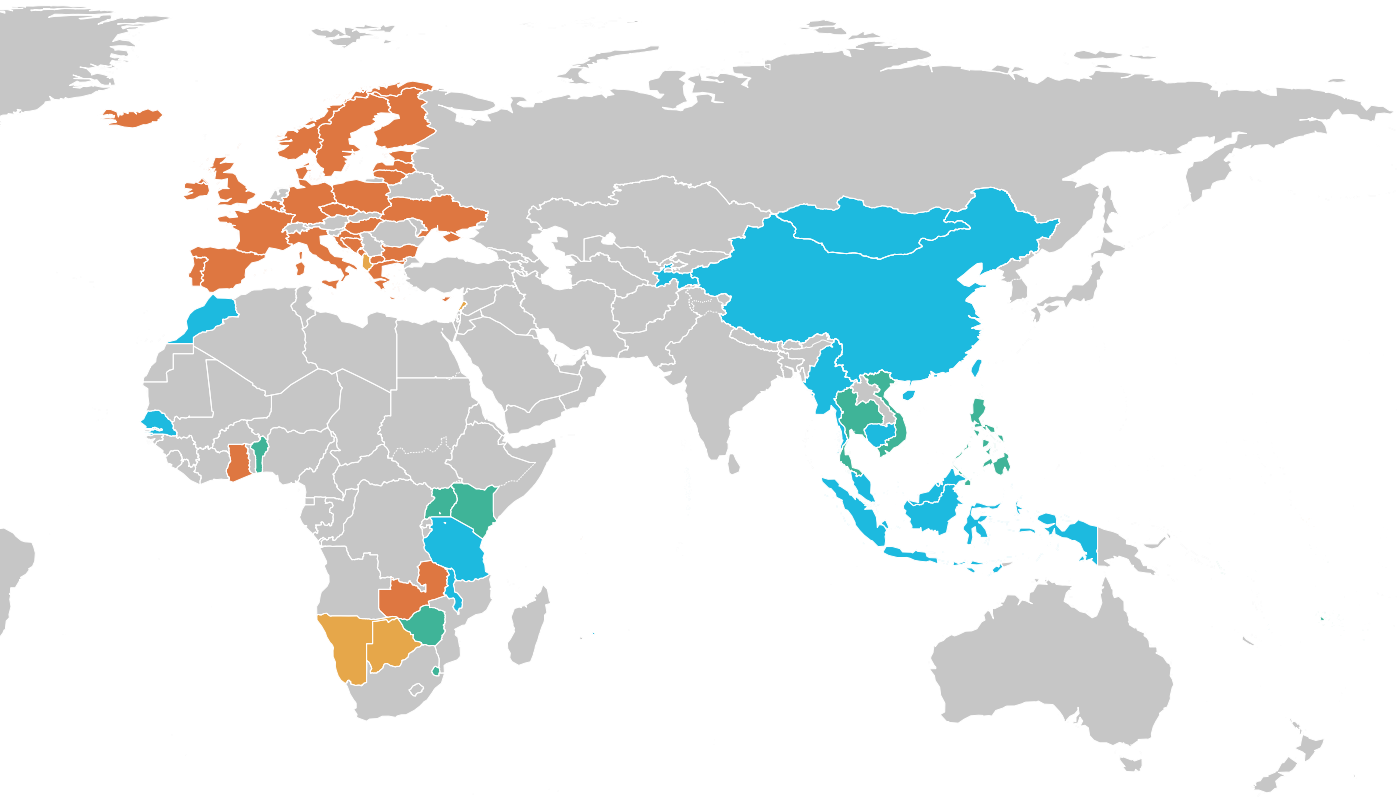
Figure 2. Percentage of students aged 15–16 in Europe and aged 13–15 in other regions who have ever been drunk



Source: ESPAD (for Europe) and GSHS (for other regions).[4]

3 'Frequent use' is defined here as having drunk alcohol 40 or more times in their lives.

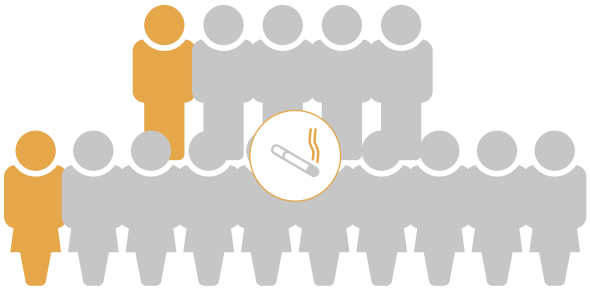
4 The GSHS includes young people 13–15 years old while ESPAD includes 15–16 year olds. Because rates of substance use usually increase dramatically between the ages of 13 to 16, GSHS results should not be compared with ESPAD rates.



Tobacco

Many countries have laws regulating the sale, use or purchase of cigarettes and other tobacco products in relation to young people. However, these laws vary and are changing to account for new products, such as e-cigarettes. Tobacco use among children and young people is a significant concern because it often sets a pattern of lifelong use, and resulting ill health throughout life. Furthermore, in many countries, more than ever before, the intensive, targeted and manipulative tactics of the industry are marketing tobacco directly to children and adolescents.

Figure 3: Prevalence of tobacco use among school adolescents aged 13-15

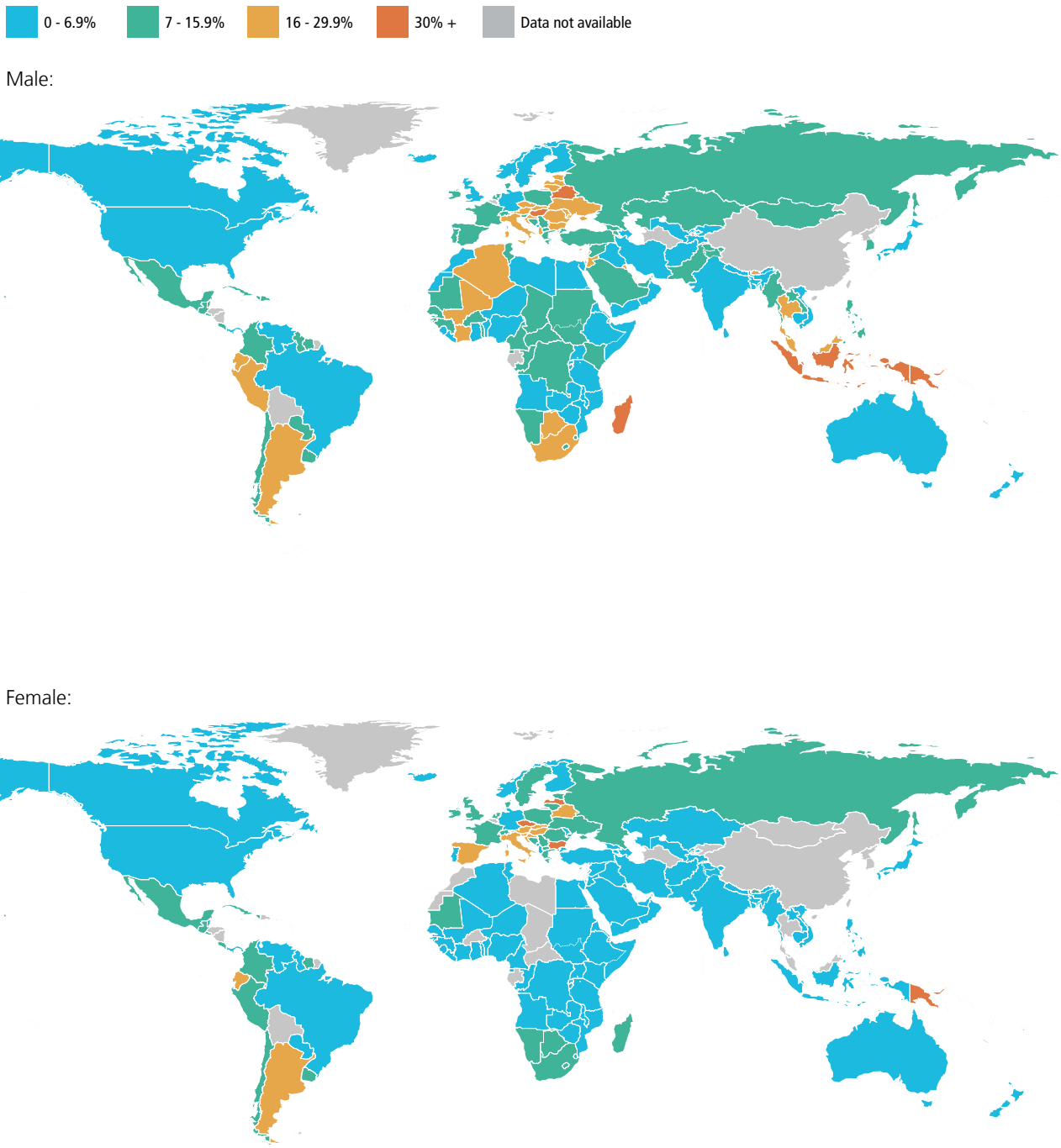


1/10 GIRLS & 1/5 BOYS
SCHOOL ADOLESCENTS AGED 13-15 USED
TOBACCO DURING THE LAST 12 MONTHS

To summarize:

- Tobacco is often the first substance used by young people, with one in four 13–15-year-old students who have ever smoked cigarettes reporting that they first did so before the age of ten. Boys are more likely to be users of tobacco than girls, except in Europe and the Americas, where rates of use are similar for both boys and girls.
- Tobacco use is common among adolescents in most parts of the world. Globally, one in every ten girls aged 13–15 and one in every five boys aged 13–15 years uses tobacco.
- Rates of use are highest in Europe and lowest in Asia and Africa. But this is changing as the prevalence of tobacco use is declining in most European countries.
- Rates of tobacco use are also higher in low-income groups than high-income groups contributing to health inequalities.
- There can be substantial differences in rates of tobacco use between countries in some regions. For example, the percentage of young people aged 13–15 who reported using tobacco in the last 30 days in the Middle East varies from 3.3% in Oman to 60% in Lebanon.

Figure 4. Percentage of students aged 13–15 who use any tobacco products, 2011 or latest available data



Source: WHO, 2013.

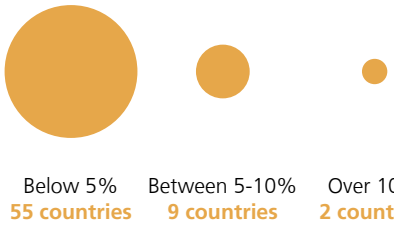
Cannabis

Cannabis is one of the drugs controlled in the United Nations Drug Treaties. This means that the use is allowed only for medical and scientific purposes.

The most common cannabis preparations are marijuana, hashish and hash oil.

Marijuana is an herbal form of cannabis prepared from the dried flowering tops and leaves of the plant. Tetrahydrocannabinol (THC) is the main psychoactive compound that is primarily responsible for the psychoactive effects sought by cannabis users. Cannabis is typically smoked as marijuana in a hand-rolled cigarette or 'joint', which may include tobacco.

Figure 5: Prevalence of cannabis use by adolescents aged 13-15 in 66 countries



Below 5% **55 countries**
Between 5-10% **9 countries**
Over 10% **2 countries**

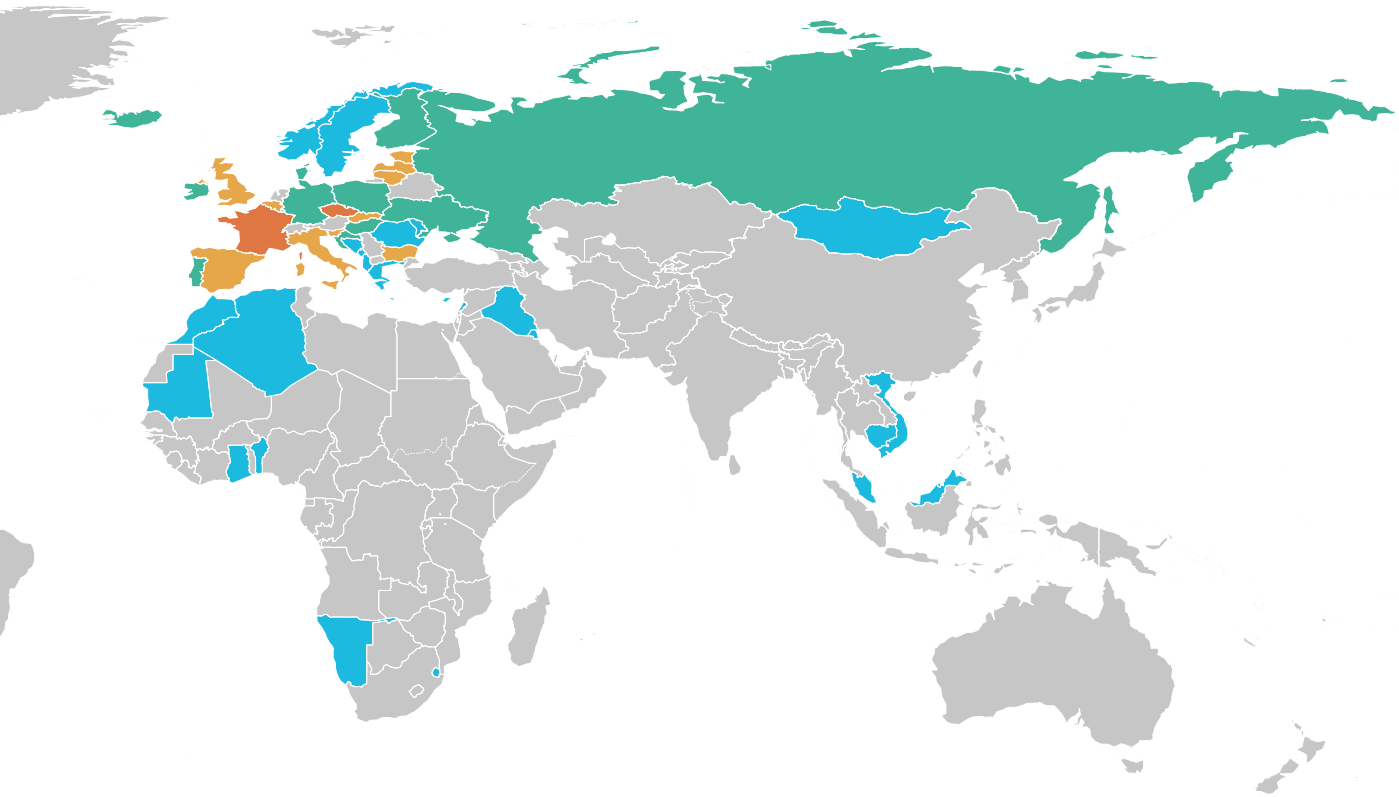
To summarize:

- Cannabis is the most used substance other than alcohol and tobacco among youth (and the general population) in all regions in the world; the prevalence of use is the highest in Western Central Africa, North America and Oceania. However, rates of use vary greatly between and within regions (UNODC, 2015).
- Data on current use of cannabis are available from fewer countries, but it is less common than alcohol and tobacco use overall.
- In the European countries where student cannabis use is most common (i.e. Czech Republic, France and Monaco), about one in ten students had used cannabis at least weekly on average in the recent past.

Figure 6. Percentage of students aged 15–16 in Europe and aged 13–15 in other regions who have ever used cannabis

Source: ESPAD (for Europe) and GSHS (for other regions).[5]

5 See Footnote 3.



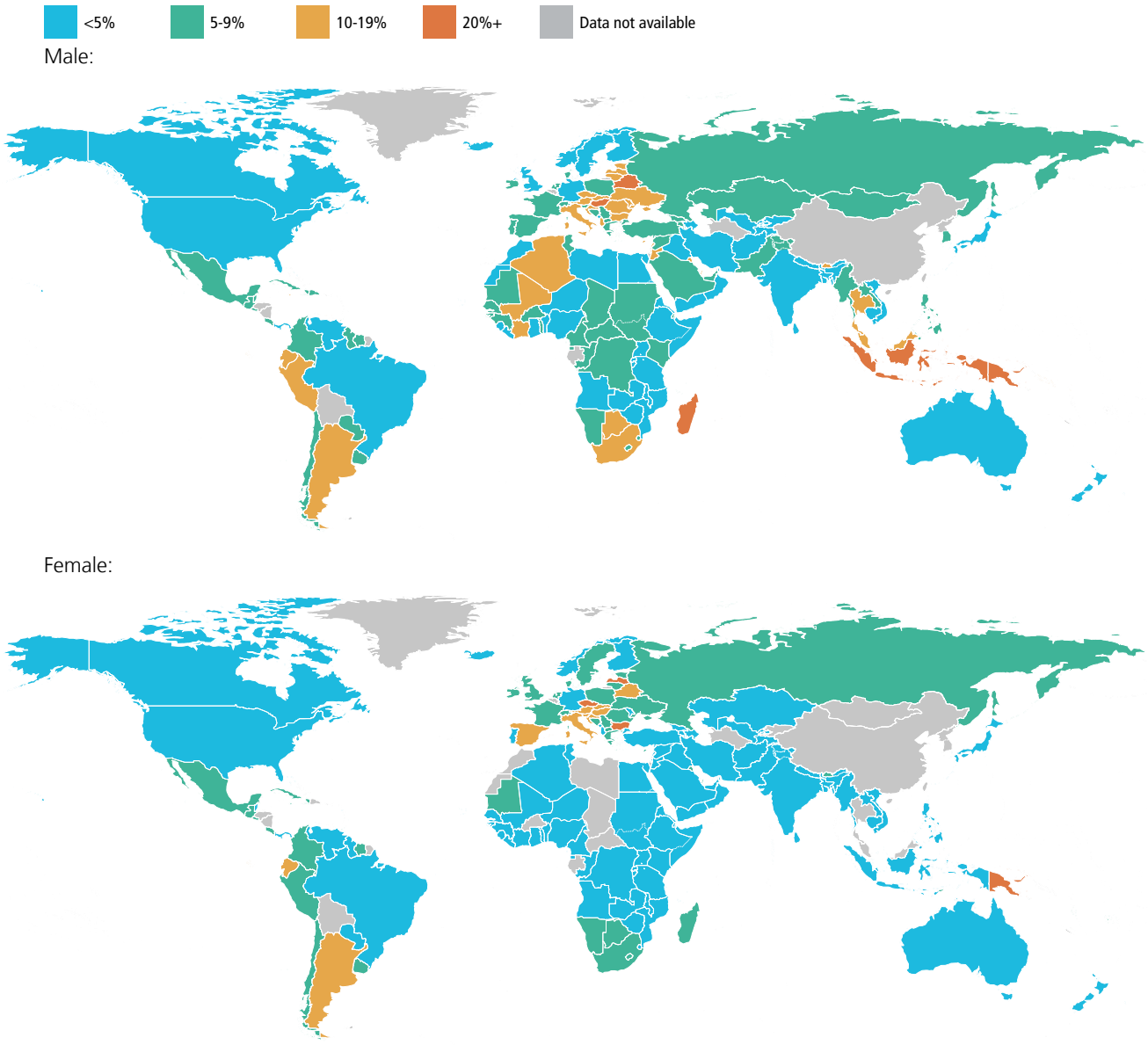
Amphetamine-type stimulants (ATS)

ATS are a group of substances composed of synthetic stimulants (e.g. amphetamine, methamphetamine, MDMA or 'ecstasy'). Like cannabis, they are placed under international control (in the Convention on Psychotropic Substances of 1971). Of particular concern is ATS use by smoking or injection, which can quickly lead to dependence, and an increased risk of contracting HIV and other blood-borne viruses.

To summarize:

- Globally, current use of amphetamine-type substances (e.g. methamphetamine, 'ecstasy') is very low among young people (mostly below 1%).
- There are large differences in rates of use reported between regions, and data on the use of these substances by adolescents around the world are not well developed. However, among the 66 countries reporting on life-time (i.e. 'ever used') use of amphetamines in the age group 13–15 year olds:
  - Most show fewer than one in 20 students ever using ATS;
  - Nine countries show between 5% and 10% ever having used ATS;
  - Two Pacific region countries (Samoa and Solomon Islands) report rates higher than 10%.

Figure 7. Percentage of students aged 15–16 in Europe and aged 13–15 in other regions who have ever used ATS



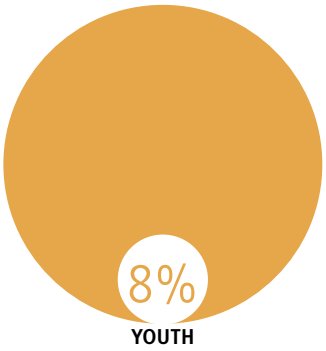
Source: ESPAD (for Europe) and GSHS (for other regions).[6]

6 Ibid.

New Psychoactive Substances (NPS)

The recent years have seen a rapid growth in the consumption of new psychoactive substances (NPS) or so-called 'legal highs', by young people in many parts of the world. There are more than 500 substances currently identified around the world, including 100 new substances reported for the first time to the European Union (EU) Early Warning System during 2015.

Figure 8. Prevalence of NPS use by youth aged 15-24 in EU countries



Estimating the prevalence of use of NPS is often a challenge, especially through general population surveys. One insight is provided by the 2014 Flash Eurobarometer, a survey of just over 13,000 youth aged 15–24 in the EU Member States that asked about NPS use. It found that 8% of respondents had used an NPS at least once, with 3% using them in the last year. The highest levels of use in the last year were in: Ireland (9%); Spain and France (both 8%); and Slovenia (7%); the lowest levels of NPS use were reported by Malta and Cyprus (0%) (EMCDDA, 2015).

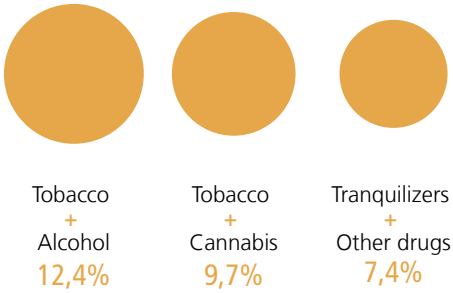
NPS present a danger because they are, or have been, easily accessible, may not necessarily hold the same perceived threat to health and well-being as other more 'traditional' illegal drugs, and, in addition, the health care services may have difficulties in responding to the health consequences and emergencies arising from their use. Some young people incorrectly think NPS are safer because of the perception that they used to be legal or that they come in branded packaging. This exposes young people to risk and participation in risky behaviours.

Poly-drug use

Poly-drug use represents more than one psychoactive substance use, often at the same time or sequentially. The best current international information on poly-drug use is across the 29 countries reporting from Europe, which gives an average for boys and girls:

- The most common poly-drug pattern is tobacco use (more than five cigarettes per day in the past 30 days) and alcohol use (more than ten occasions in the past 30 days), with 12.4% of students surveyed reporting this behaviour.
- The next most common pattern of poly-drug use reported by students is tobacco and cannabis (any lifetime use) at 9.7%.
- This is followed by any use ever of tranquilizers and an illicit drug other than cannabis, at 7.4%.
- France, Monaco and the Czech Republic are the countries with the highest prevalence of students reporting use of two or more substances at 20%, 18% and 16% respectively.
- Lowest rates of use of two or more substances are reported in Iceland, Montenegro and Ukraine at 4%, 4% and 5% respectively.

Figure 9. Patterns and prevalence of poly-drug use among students in 29 European countries



Injection drug use (IDU)

Although injection drug use (IDU) is very uncommon among school students, this section gives attention to the issue, since dropping out of school increases the risks associated with this behaviour.

To summarize:

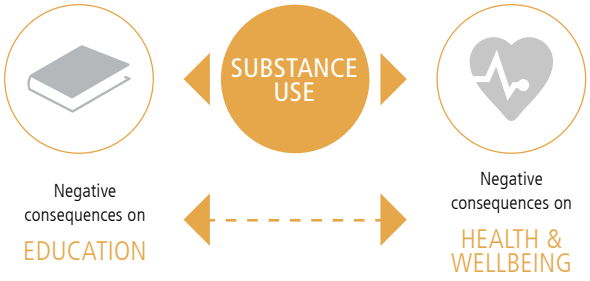
- In general, IDU is most frequent among children and young people living on the street. These young people usually have complex personal and social needs (e.g. mental health issues, lack of housing) that stem from earlier adverse life experiences.
- The majority of young people injecting drugs live in low- and middle-income countries.
- Among the estimated 12.7 million people who inject drugs (PWID) globally, the percentage of PWID aged under 25 years is not known (WHO, 2014). School-based surveys on drug use in Western countries typically find around 1% of students reporting having ever injected drugs.
- The age of first injection varies across regions and countries, with some (e.g. Eastern Europe) reporting a younger age. For example, in Ukraine, 45% of a sample of young injecting drug users (aged 10–19 years) living or working on the street said that they began doing so before they were 15 years old.

2.2. Consequences of substance use by young people

Many young people try a substance once out of curiosity, or use a substance occasionally, and experience no apparent short-term negative consequences. However, their use may result in less apparent long-term consequences, and also many young people engage in patterns of use (such as use at an early age, frequent use, use of large amounts, poly-drug use and using substances in association with driving, sexual activity or other activities) that are associated with negative short-term consequences. This may set a pattern of use into adulthood that leads to longer-term negative consequences (Gore et al., 2011).

Although the causal directions are often complex and have not always been clarified as one-way linear between all substance uses and outcomes, there is strong evidence of causation at least from frequent alcohol and drug use to health, social and educational outcomes.

Figure 10. Consequences of substance use by young people



Health-related consequences

There is strong evidence that children and young people's substance use is linked with poor physical and mental health. For example:

- **Tobacco use** in children and young people is clearly linked to breathing difficulties (Kandel et al., 1986), asthma and rhinitis (Gómez, 2009) as well as adult cancers.
- Frequent **cannabis use** has been linked to a number of physical health conditions such as respiratory conditions, cardiovascular disease and chronic bronchitis symptoms (Hall, 2015). Cannabis use in adolescence is also associated with considerably higher rates of receiving disability pension up to age 59 (Danielsson, 2014). Acute health effects of cannabis use include increased anxiety, panic reactions and psychotic symptoms, as well as increased risk of mortality due primarily to car accidents (Hall, 2015).
- Children and young people's harmful **alcohol use** is associated with poor adult physical health conditions including gastrointestinal conditions, cardiovascular diseases, cancer, increased risk of infectious diseases due to a weakened immune system and unintentional injuries (WHO, 2014). Furthermore, harmful use of alcohol in children and young people is linked with neurocognitive effects and reduced brain functioning (Squeglia et al., 2009; Zeigler et al., 2005).
- **People who inject drugs (PWID)** involved in sharing needles and injecting equipment are at greater risk of contracting HIV and other blood-borne viruses, such as Hepatitis B and C. Young people who are new to injecting may be less aware of these risks and may be less likely to know how to access support. Hence the risk of acquiring HIV and related diseases is greatest early in a person's injection experience (Hadland et al., 2011; Barrett et al., 2013).

Likewise, similar mental health consequences and health risk behaviours including sexual risks, as well as delinquency and violence, were linked to use of alcohol and drugs in children and young people in low- and middle-income countries including Chile, China, Namibia and the Philippines (Kandel, 1986; Page et al., 2010; WHO, 2005).

Alcohol and drug use disorders are responsible for considerable loss of healthy life years (disability-adjusted life years or DALYs) among children and young people worldwide – e.g., **3 days for every boy** - as shown by 2012 WHO data in Table 1.

Table 1. Loss of disability-adjusted life years in 2012 (per 100,000)

	Age group 5–14		Age group 15–29	
	Male	Female	Male	Female
Due to alcohol use disorders	51.9	13.9	929.2	161.1
Due to drug use disorders	26.7	21.9	554.1	269.5

Educational consequences

As mentioned in the previous section, the use of tobacco, alcohol and drugs is often entwined with mental health issues. These may affect school engagement, and substance use has thus been linked with a number of negative education-related outcomes globally, including poor educational performance, school drop-out, incompletion of secondary school and post-secondary education in a diverse array of developed and developing regions and countries (De Micheli and Formigoni, 2004; Munne, 2005; Rizk, 2005; UNODC, 2009b).

The earlier substance use begins, the more likely that negative immediate consequences and long-term impact will occur. For example:

- Early **tobacco use** by adolescents is closely associated with a decline in academic performance (e.g. school

grades and dropping out) (Dhavan et al., 2010; Stiby et al., 2015).

- A pattern of **getting drunk and drinking frequently** from an early age is particularly harmful, and increases the likelihood of an immediate and ongoing impact on the brain, social problems, school engagement (e.g. suspension and truancy) and future educational prospects (Hemphill et al., 2014; Kuntsche et al., 2013).
- Early adolescent **cannabis use** has also been consistently found to be associated with poor school performance and early school leaving – the heavier the use, the lower the attainment (Silins et al., 2014; Stiby et al., 2015).

Figure 11. Educational consequences of substance use by young people

Another aspect of educational disruption arising from substance use is the harmful consequences for non-substance users arising from their using peers. These include disruptions to their study time, insults or humiliation and property damage (US Department of Justice, 2012). Within schools, substance use/users can disrupt class time and pull school resources from academic pursuits. Overall, the UK's Department of Education estimates that low attainment arising from children and young people's substance use costs the economy £80,700 per substance misuser (Department of Education, 2011).

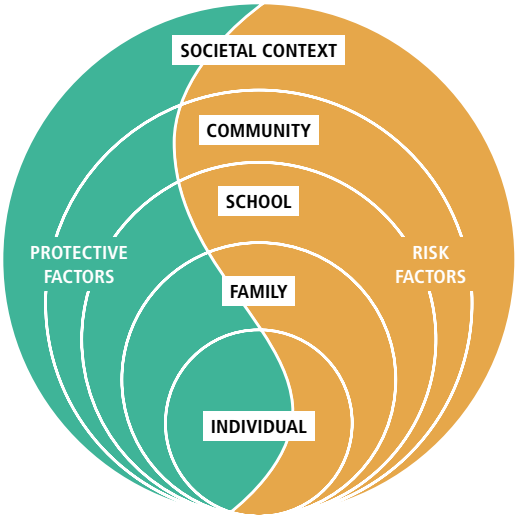
The relationship between school engagement, substance use and other factors such as mood problems is complex. These various issues share many of the same root factors (Kipping et al., 2012). Evidence-based substance use prevention is directed towards these factors and is consequently likely to be effective in not only preventing or delaying substance use but also in leading to better school performance and social functioning in a number of ways.

2.3. Reasons why some young people use substances and others do not

Some children and young people are more likely to engage in substance use due to their individual attributes and the environment in which they live.

These attributes and aspects of the environment are termed 'risk' or 'protective' factors, depending on whether they serve to increase or decrease the likelihood of a young person engaging in substance use. Everyone experiences a mix of risk and protective factors, and their interplay in a young person's life (e.g. their relative number, strength, timing and duration) predicts whether substance use is likely to occur.

Figure 12. Categories of factors influencing the likelihood of a young person to engage in substance use



Risk and protective factors shape an individual's development throughout their life, from conception through childhood into adolescence and adulthood. One helpful way to view this interplay of factors is through an 'ecological' lens that sees the individual child or youth in the centre of ever-widening spheres representing the environments in which the person lives (i.e. family, school, community and societal) (Bronfenbrenner and Ceci, 1994).

The overall level of risk or protection in a child's life is a product of the interaction between the individual's personal characteristics and their experiences in the various life spheres. For example, weak child-parent attachment at infancy may contribute to early behaviour problems, which can in turn affect school performance and engagement with peers. On the other hand, evidence-based early school prevention programming can improve their ability to interact with teachers and peers, avoid further behavioural problems, and help improve relations with parents.

What happens in earlier periods of life influences the events and experiences that follow. In this way, early experiences can have the effect of setting a life-course trajectory for a child – either positive or negative (Webster-Stratton and Taylor, 2001). A child's life course can be affected by significant life events (e.g. moving into quality housing) or by major transitions (e.g. transferring from primary to secondary school), or by a prevention programme that counters risk factors and changes a negative trajectory started early in life.

Table 2. Factors associated with substance use by adolescents[7]

	Risk factors	Protective factors
INDIVIDUAL	• Genetic factors • Attention, mental health and conduct problems • Conduct or behavioural disorders • Delinquency and conduct problems • Mental health issues (e.g. sensation-seeking, anxiety) • Favourable attitudes toward substance use • Perception that substance use is common	• Pro-social behaviour (e.g. easy-going temperament) • Age-appropriate language and numeracy skills (cognitive skills) • Social and emotional competence (e.g. impulse control, well-formed identity) • Cautious temperament
FAMILY	• Maternal smoking • Favourable parental attitudes toward substance use • Parent–adolescent conflict • Parents or siblings use substances • Parents or siblings have mental health problems • Parental abuse and neglect • Poor family management • Material poverty • Unsettled home situation	• Attachment to family • Balanced parental communication, rules and monitoring • Parental harmony • Warm, responsive and supportive parenting – successful attachment and bonding • Spiritual engagement
COMMUNITY	• Lack of positive contact with adults • Availability of substances • Permissive social norms and acceptability of substance use	• Caring adults outside the family • Involvement in community affairs
SCHOOL	• No access to education • Absence, truancy and drop-out • Being a bully or being bullied • Early school failure • Lack of engagement with school • Poor school performance • Substance-using peers	• Access to and remaining in school • Completing secondary school • Expectations to do well at school • Policies that avoid suspension • Promoting bonds among teachers, parents and students
SOCIETAL CONTEXT	• Intensive, targeted and manipulative tactics of industry marketing tobacco, alcohol to children and adolescents. • Easy access to substances • Living in a conflict zone, as displaced persons, in political upheaval or natural disasters	• Laws prohibiting or restricting public advertising of alcohol and tobacco use • Laws prohibiting children from using alcohol and tobacco • Positive adult role models

The factors that place a young person at risk, or, on the other hand, serve to protect them from substance use, are largely the same as those linked to several other problematic behaviours (e.g. violence, criminal activity, risky sexual behaviour and poor school performance) (de la Haye et al., 2014; de Looze et al., 2014). This calls for a well-coordinated, comprehensive and rights-based approach that will empower children and young people to harness the protective factors and address and tackle the risk factors.

7 For more information on risk and protective factors for youth substance use, see: Cleveland et al., (2008); Hawkins et al., (1992); and UNODC, 2013 (Appendix II, Annex I).

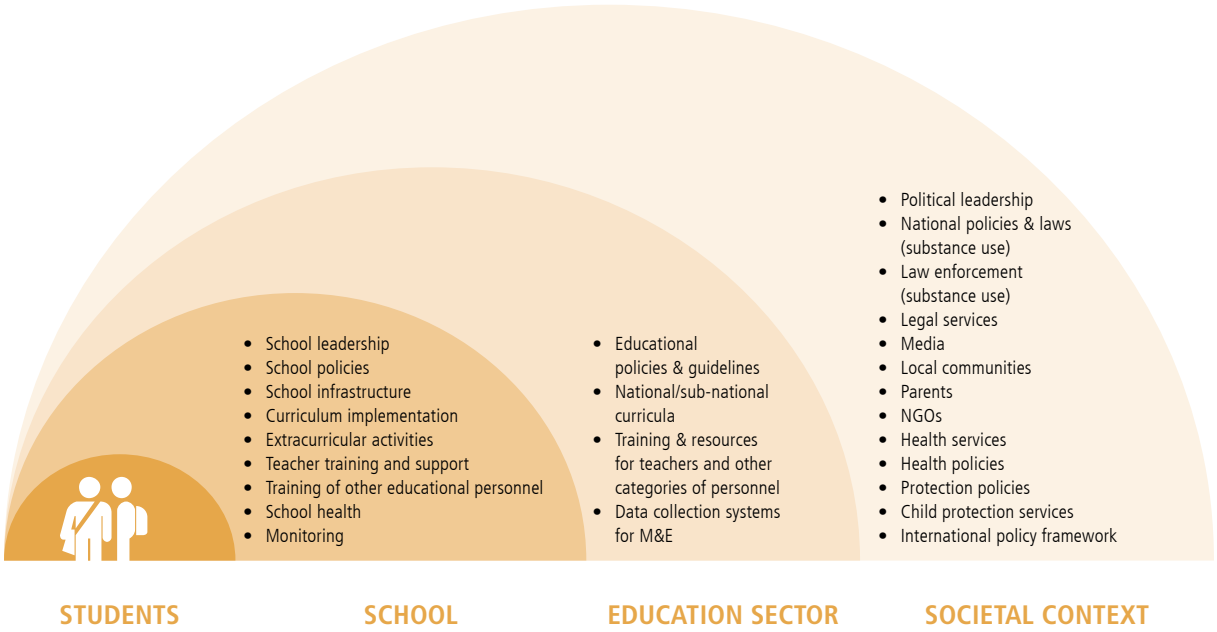
2.4. The role of the education sector

As noted in the Section 2.3, a range of factors can contribute to or prevent substance use by young people – individual, family, school, community and societal. Given this picture, the ideal is when every sector serving or involving young people (e.g. families, schools, media, youth agencies, religious groups, workplaces and recreational establishments, etc.) incorporates health promotion and substance use prevention into their policies and practices to address the protective and risk factors within their purview.

At the national level, education sector involvement is most effective in the context of a long-term integrated substance use prevention and control system or strategy that targets various ages and levels of vulnerability through a full range of sectors.

Within the education sector, there is a diversity of actors and systems that constitute a rich education sector response 'ecosystem' (see Figure 13).

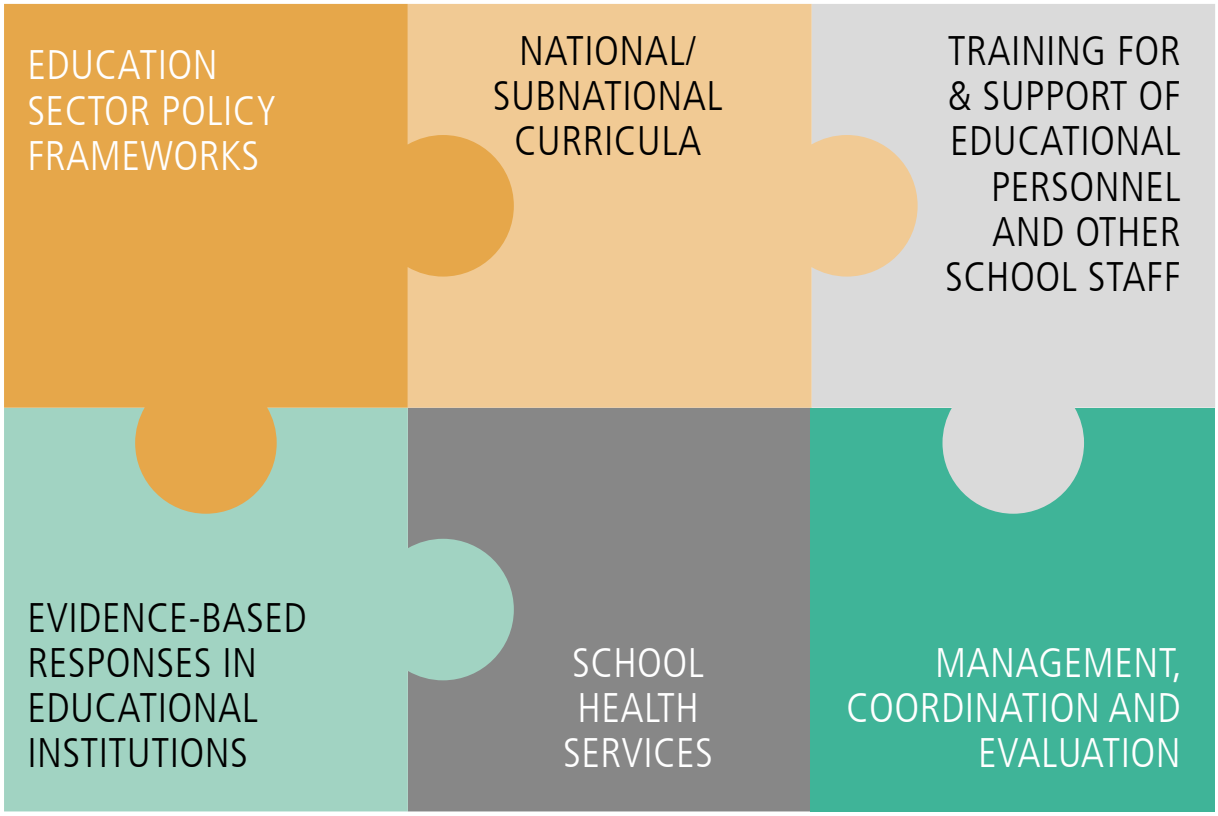
Figure 13. The national education sector response ecosystem



The ecosystem can be best viewed as the range of protective opportunities that can be organized by the education sector to address substance use. These opportunities represent elements of an effective education sector response, which – recognizing different structures at the national and subnational level between countries – comprise:

- A policy framework to prevent and address substance use among children and young people;
- National and/or subnational curricula (contents and methods for the delivery of those contents) including skills-based prevention education;
- Training and support for teachers, school health practitioners and other school staff to plan, develop and implement a comprehensive school-based intervention strategy;
- Evidence-based interventions related to curricula implemented in educational institutions;
- Evidence-based interventions related to the school environment implemented in educational institutions, including substance use policies in schools, as well as other evidence-based prevention interventions delivered in the context of educational institutions;
- School health services, providing both prevention and care and support for young people who use substances;
- Management, coordination and evaluation of the response in the education sector, including monitoring of prevalence of substance use among children and young people.

Figure 14. The elements of a comprehensive education sector response to substance use



If they are undertaken together, these elements are most likely to produce positive results on substance use during adolescence and beyond, protecting students from substance use and other risky behaviours through adulthood.

3. GOOD POLICY AND PRACTICE IN EDUCATION SECTOR RESPONSES TO SUBSTANCE USE

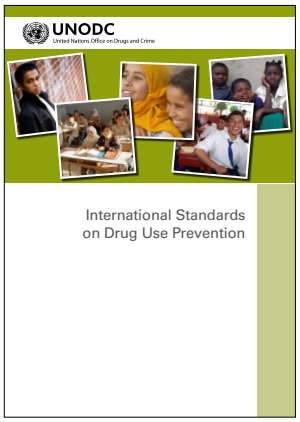
A comprehensive education sector response to substance use does not always require more resources. Sometimes re-allocating existing resources and using them more effectively by doing things differently can be just as effective. In other cases, effective actions may require some investment of new resources. Decision-makers need to weigh any new costs against the costs of doing nothing, or doing something poorly.

3.1. Key principles for education sector responses to substance use

Base all responses on scientific evidence

In order to be safe and effective, all components of a comprehensive education sector response to substance use need to be based on evidence, and their implementation should be monitored and evaluated. Some school-based programmes show very good outcomes. However, many programmes, even when they seemingly follow evidence at some level, show no effectiveness, highlighting the importance of using evidence-based approaches. UNODC's **International Standards of Drug Use Prevention** is a useful resource for planning a comprehensive response within the education sector, describing the prevention approaches that have been shown to be effective, as well as their characteristics (UNODC, 2013). Once the types of prevention approaches that would be most useful for the given situation are identified, registries of evidence-based prevention programmes (such as those maintained by the Substance Abuse and Mental Health Services Administration (SAMHSA) or Blueprints for Healthy Youth Development) can serve as a useful reference point.

Figure 15: The International Standards on Drug Use Prevention

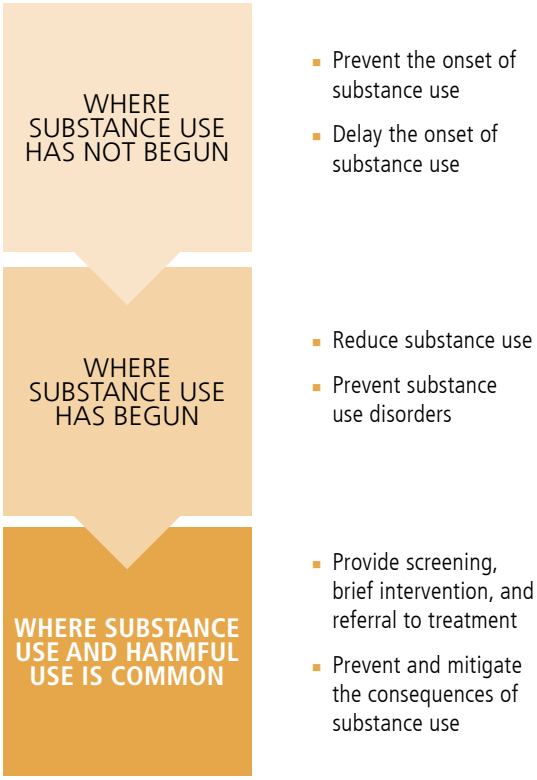


Use of approaches that are not supported by evidence represents wasted opportunities, or worse. Drawing on similar resources and efforts, positive outcomes on substance use by youth could be achieved. Worse still is that some programmes have been shown to actually result in an increase in substance use by, for instance, by arousing curiosity, or unintentionally supporting deviance among some young people (Rorie et al., 2011; UNODC, 2013).

Set goals relevant to the prevalence and patterns of substance use

The education sector should set its goals based on the evidence related to the prevalence and patterns of substance use, which generally vary according to the age of students. For example, if most students have not used alcohol, an appropriate goal would be to prevent or delay their first use of alcohol; on the other hand, if many students have tried alcohol, an appropriate goal would be to prevent the use among those who have not started or to delay their initiation, as well as prevent or reduce harmful use, harmful patterns of use and its health and social consequences (e.g. frequent drinking, intoxication and impaired driving) among those already experimenting with or using alcohol.

Figure 16. Set goals relevant to the prevalence and patterns of substance use among children and young people



As such, an appropriate goal for prevention education across ages is to prevent or delay the onset of substance use. In addition, sometimes other goals may also be appropriate:

- Prevent the progression to disorders when substance use has already begun, as well as the incidence of particularly high-risk (e.g. frequent use and/or heavy drinking patterns, poly-drug use, use in combination with driving or sexual activity).

- Preventing short-term consequences that arise from substance use (e.g. car crashes, sexually transmitted diseases, pregnancies, injuries, overdoses) in locales or for ages where substance use and particularly harmful patterns of use is common (McBride and Farrington, 2004). An example would be learning how to respond to a young person who has passed out at a party or what to do when someone intends to drive. Also for such target groups it is important to provide comprehensive support including screening and referral to treatment and other support services as needed.

Other goals beyond prevention of substance use that are relevant and prioritized in the given context, and that can be achieved while preventing substance use, may facilitate prevention planning. Such goals may include, for example, preventing truancy and violence including bullying.

Start early and cover all age groups

Available evidence indicates that prevention is most effective when:

- it starts early
- covers all the age-groups, and
- targets especially the critical transition periods (e.g. primary to secondary school).

In addition to universal prevention activities for the whole population, a comprehensive response targets different subpopulations, including those at heightened risk. It is important to ensure that the activities are always appropriate and relevant to the age and level of risk of the targeted population.

Given critical developmental changes occurring through the **pre-school years**, substance use is one of the issues found to be impacted by early childhood (i.e. for children aged two to five years old) programme. These are proven to have a positive effect on some measures of later substance use (i.e. tobacco, cannabis use and prescribed medications) (D'Onise et al., 2010; UNODC, 2013).

In the **primary school years**, direct exposure to various substances will be limited for most children (with the exception being medicines). However, evidence-based substance use prevention through these years can serve to build protection and prevent later use as children proceed through their secondary school years.

During the **secondary school years**, students in many areas are likely to be exposed to opportunities to try alcohol, tobacco and drugs, while also experiencing multiple stressors putting them at increased risk of substance use. They can therefore benefit from ongoing evidence-based curriculum on the topic.

The broad range of benefits from programmes implemented during pre-school years is due to their ability to address root risk factors such as weak family management, parental stress caused by a range of socio-economic issues, child conduct problems or poor school readiness. If left unchecked, these factors can lead to a range of academic and social problems in adolescence and adulthood, including substance use problems.

Many of the existing early childhood programmes serve children from deprived communities; this makes sense because these children have the most to gain from such programmes. These are intensive and relatively costly interventions. However, they need to be viewed as important societal investments that will return broad benefits, including substance use-related benefits.

For example, the Perry Preschool Programme, a well-known long-term randomized study of a programme that followed children to age 40 years, found that those receiving a daily high-quality 2.5-hour class in addition to weekly family visits for two years obtained positive life-long benefits in a range of life areas, including academic achievement, income, criminal activity and substance use. An economic analysis found the programme saved $7.16 for every $1 spent (Schweinhart, 2004).

3.2. Components of comprehensive education sector responses to substance use

3.2.1. Education sector policy and strategic frameworks

i. National education sector policies on substance use prevention

A majority of countries have national policies or strategies/action plans concerned with tobacco and the reduction of supply and demand of drugs, and many have a separate alcohol policy or strategy. However, the trend is toward comprehensive and balanced policies or strategies that integrate the various substances.

Current substance use control strategies increasingly understand substance use to be first and foremost a health issue[8] that is best addressed through a range of demand reduction measures including: early intervention; treatment; rehabilitation; recovery and social reintegration measures; and measures to minimize the public health and social consequences of substance abuse (CND, 2014). All of these functions, including prevention, can fall within the purview of a public health system. Consequently, if

8 This is based on the understanding that substance dependence is the result of a complex interaction of genetic, biological and psychological vulnerabilities with the environment, which responds best to treatment rather than punishment.

this system does not lead the drug strategy, it needs to be closely linked to it.

The prevention component of a drug control strategy can find further policy links with youth, family and community development strategies or systems found in many countries, which often give priority to the most vulnerable, promoting protective factors and resilience in these populations.

CASE STUDY 1: An evidence-based approach – The value of research and policy advocacy in preventing youth tobacco use in India

Tobacco use among youth in India has been a large public health issue, with rates increasing, especially in urban areas, and the typical age of first use declining. National NGOs and university-based researchers responded a few years ago with a concerted long-term effort that emphasized scientific evidence and policy advocacy.

To begin with, rigorous formative research was conducted to understand the interests, attributes and needs of the targeted youth population. Various tobacco use risk and protective factors concerning children and youth in India were analysed and documented in a number of research papers.

Models that were successful in the West were translated for use in India. Pilot testing of all materials ensured the cultural and contextual appropriateness of the programming. To address multiple risk factors, two school-based programmes, HRIDAY-CATCH and Project MYTRI (each with several components such as: classroom curricula; school posters; parent postcards; and peer-led health activism) were delivered and evaluated. Both were evaluated using rigorous randomized control study design and showed a positive effect on measures of current use of tobacco and intention to use in the future.

These results became the basis of a concerted advocacy effort to increase anti-tobacco programming in India's schools. Advocacy efforts were pursued through multiple channels, including advocacy with policy-makers and through the media, public campaigns and community engagement. For example, the results of the evaluations were shared with the Ministry of Health and Family Welfare, Government of India and other stakeholders in various meetings. Another powerful strategy was to engage youth health activists, allowing them to assume ownership of the youth health issue while demonstrating their advocacy skills.

These efforts paid off. The government of India was persuaded to scale up school health programming to the national level by making tobacco programming a key component of the National Tobacco Control Programme. The government asked public health advocates to assist in developing evidence-based guidelines for school health programmes. Tobacco prevention curriculum became available to all schools across India through the Central Board of Secondary Education.

More information: https://www.phfi.org/our-activities/health-promotion

Given this mix of governmental mandates, prevention of substance use as well as its health and social consequences benefits from not only the strong involvement of the health ministry, but also close linkages among all relevant ministries and agencies. These typically include the ministry of education, and those ministries concerned with law enforcement, drug control, and youth, family, social and community affairs. To mobilize a strategy, these ministries need to gain active participation from non-governmental organizations (NGOs), which have an instrumental role to play in mobilizing a strategy due to their delivery systems and relationships with young people.

The national education sector derives a clear mandate to respond to substance use through policy language that typically calls the sector to take responsibility for promoting 'health and safety', 'healthy lifestyles' or 'life-skills' among students. For example, within the Eastern European and Central Asian region, most countries address the primary goal of substance use prevention by establishing education laws that oblige schools to build skills and foster a culture of healthy lifestyles and safe behaviour among children and young people (UNESCO, 2015b).

Within this context, national education sector substance use prevention policy has taken a number of forms, and can be categorized as follows:

- **Mandatory school substance policies:** National substance policies may mandate school policies to prevent substance use and its health and social consequences within schools. This typically includes bans on substances (use, selling and advertising) on school premises or surrounding properties. School rules relating to substance use often include the behaviours of teachers and other adults, and policies regarding dealing with substance use-related incidents.
- **Statutory health and substance use education:** National education policies may enshrine the duty of schools to provide health and/or substance use-related education and training. Such training is often incorporated within other subject headings such as science or physical education, or in free-standing health or personal skills curricula. This often implies that prevention methodologies and contents are part of the mandatory teacher training.
- **Provision of school health services:** National policies may mandate the implementation of school health services. These services allow for the provision of an accessible range of health services including preventive, routine and acute health services for students. They may include a range of personnel, including school nurses, advisors and counsellors and mental health professionals. The services provided often contribute to preventive education, the development of school health and substance use policies, early identification and interventions and connections with the social and health sectors.
- **National quality standards for school-based prevention efforts:** School substance use prevention can be encouraged and guided by quality standards.

They are increasingly available (e.g. European drug prevention quality standards;[9] Canadian Standards for School-based Youth Substance Abuse Prevention[10]), and typically advocate for evidence-based programming, sound planning and design, comprehensive activity, monitoring, evaluation, professional development and sustainability. Quality standards help to support national policy initiatives and guide schools in meeting their mandate to promote health and prevent substance use.

- **Monitoring of substance use among children and young people:** Some countries participate in global or regional monitoring or conduct national-level monitoring of substance use prevalence among children and adolescents. This is not an education sector activity *per se* but it does indicate that the issue is a priority, providing a measure of endorsement and most importantly, guidance, for school prevention activity.

ii. International frameworks that guide an education sector response

A national education sector response to substance use will be most credible, and more likely to be supported, when grounded in broader societal priorities. A number of international statutes stipulate, either explicitly or otherwise, the responsibility of various sectors, including the education sector, to prevent and minimize harm from substance use among children and young people. Most relevant are the following:

- International policy initiatives that enshrine the right of children and young people to health and safety:
  - International Covenant on Civil and Political Rights (1966);
  - UN Convention on the Rights of the Child (1989);
  - Dakar Framework for Action – Education for All (2000), and Incheon Declaration – Education 2030: Towards inclusive and equitable quality education and lifelong learning for all (2015);
  - Declaration and Plan of Action 'A World Fit for Children' (2002);
  - UN Global Monitoring Framework (2013).
- Recent policy conventions focusing on the management of psychoactive substances and substance use call for broad action:
  - WHO Framework Convention on Tobacco Control (2005);
  - Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem (2009);
  - WHO Global Strategy to Reduce the Harmful Use of Alcohol (2010).
- UN International Drug Control Conventions that provide a framework for efforts to control the supply and demand for illicit drugs:
  - Single Convention on Narcotic Drugs (1961);
  - The Convention on Psychotropic Substances (1971);
  - Convention against the Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988).
- Examples of more recent initiatives that may inform and mandate an education sector response are:
  - In the 2030 Development Agenda adopted in 2015, the UN Member States commit to strengthen prevention and treatment of substance abuse by 2030, in the sub goal 3.5.
  - The Commission on Narcotic Drugs (CND) calls on 'Member States to formulate and implement, where appropriate, a broad system of primary prevention and early intervention based on scientific evidence, such as the International Standards on Drug Use Prevention and other measures, including educational activities and interactive campaigns' (CND, 2014).
  - The Outcome Document of the UN General Assembly Special Session (UNGASS) on drugs, organized in 2016, highlights a balanced health- and human rights-based approach to addressing the world drug problem, giving an additional mandate to drug prevention and treatment.
- These global policy initiatives have informed and/or are bolstered by regional health and substance use policy instruments covering a number of countries or continents. For example:
  - In the Americas, the Inter-American Drug Abuse Control Commission (CICAD) provides leadership and guidance to Member States through the Hemispheric Drug Strategy (2010) and ongoing plans of action.
  - In Europe, policy instruments relevant to school substance use prevention include the European Social Charter; the EU Drugs Action Plan; the EU Drugs Strategy and the EU Tobacco Directive. On its Best Practice Portal, the European Centre on Drugs and Drug Abuse (EMCDDA) provides policy-makers and practitioners with examples and reviews of evidence, including interventions in the education sector.[11] The European Drug Prevention Quality Standards (EDPQS), developed by the European Prevention Standards Partnership from a research project co-funded by the EU, provide a set of principles to help develop and assess the quality of drug prevention, and offer a comprehensive resource outlining all the elements of drug prevention activities.[12]

9 See http://www.emcdda.europa.eu/publications/manuals/prevention-standards

10 See http://www.ccsa.ca/Eng/topics/Children-and-Youth/Drug-Prevention-Standards/Pages/default.aspx

11 See http://www.emcdda.europa.eu/best-practice#view-answer2

12 See http://prevention-standards.eu/standards/

CASE STUDY 2: Promising practice – School-based substance prevention curricula in Ukraine

In Ukraine, the State Standard for the Basic and Complete General Secondary Education stipulates that schools should deliver substance use prevention and healthy lifestyle programmes through the mandatory subjects of Biology and Basics of Health.

Introduced in 2000, the Basics of Health is a compulsory subject for Grades 1–9 (one hour per week). It integrates topics related to healthy lifestyles and safe living, promotes responsible attitudes towards life and health, and develops essential social and psychological skills. In Grade 2, children first learn about the harms of alcohol; in Grade 3, they learn about the consequences of smoking; and in Grade 4, they learn about the negative effects of drug use. Students in secondary school are given more information about substance use and its influence on human bodies. They also learn about health risks and the consequences of substance use for their health and well-being, and how to abstain from smoking and using alcohol and drugs. The course takes a positive approach, without intimidating students or spreading fear-based messages. Lessons to develop the skills for a healthy lifestyle are based on interactive learning techniques, and include exercises that model actual behaviours in various situations.

The harmful effects of psychoactive substances on human bodies and future lives are also highlighted in the Biology course in Grade 9. Special guidance materials have been developed for teachers and textbooks for students (for each Grade from 1 to 9) to facilitate the delivery of the Basics of Health course. All materials are regularly updated and re-issued.

Substance use prevention is also delivered in general and vocational schools as part of the optional component of the curriculum. Such optional prevention programmes include Young People for Healthy Lifestyle for Grades 5–11; Preventing Bad Habits for Grades 6–9; and Basics of Healthy Lifestyle for Grades 8–9.

Research in 2004 and 2007 to assess the impact of school-based prevention on the rates of substance use demonstrated statistically valid changes in the behaviour and practices of young people. In particular, compared to 2004, in 2007 the proportion of 15–16-year-olds who had been drunk at least once in the previous month decreased by 26%, the proportion of boys aged 15–16 who smoked fell by 10%, and the proportion of girls aged 15–16 who smoked fell by 2%.

The HBSC survey held in 2014 among students in Grades 5–11 found a reduction in the prevalence of daily smoking in 2014 as compared to 2010: from 16% to 10% among boys and from 7% to 5% among girls; and the proportion of non-smokers increased from 80% to 87.6%.

According to the ESPAD studies in different years, alcohol use among 15–16-year-old students has been steadily decreasing since 2003.

More information: http://iite.unesco.org/pics/publications/en/files/3214742.pdf

- The US Department of State's Bureau on Law Enforcement and Narcotics Affairs (INL) is supporting an international effort to improve substance use services by providing education and training on evidence-based prevention and treatment interventions and policies via the Universal Prevention Curriculum (UPC).

3.2.2. National and subnational curricula

Generally speaking, a curriculum defines the contents that students should learn (what) and educational foundations (why); the sequencing of the contents in relation to the amount of time available for the learning experiences (when); the characteristics of the educational institutions (where); the characteristics of the learning experiences, in particular from the point of view of methods to be used, the resources for learning and teaching – e.g. textbooks (how); and evaluation and teachers' profiles (who). A well-implemented, evidence-based curriculum can build important protective factors in the form of life-skills, attitudes and intentions, thereby making an important contribution to the prevention of substance use, its negative consequences, as well as other risky behaviours.

i. Position of substance use prevention in the curriculum

Substance use is one of several important social and health issues that society calls on the education sector to address through the curriculum, along with other behavioural prevention areas, for example, mental health, sexual health, nutrition and bullying.

In a curriculum, substance use prevention education is usually and most appropriately accommodated in a health-related subject area (variously termed healthy active living, health and family living, health and physical education, personal and social skills education, health and career education, life-skills education, etc.).

Many schools choose also to supplement or replace the standard life-skills or other health-related curriculum with a manualized programme, i.e., a programme standardized through the creation of manuals and protocols for those who implement it. This has been shown by research to be effective in preventing substance use later in life and/or supporting resilient mental health or acquiring life or academic skills (UNODC, 2013).

There are many prevention programmes available. However, few of them have been shown to be effective through scientific research. Although many programmes share common elements, it is important to identify a programme that has actually been shown by research to be effective, and that fits the specific needs of the given situation (for example, age of and risk level in the targeted group). One possibility for identifying such programmes is to refer to one of the registries of evidence-based substance use prevention programmes.[13]

Some of the evidence-based programmes are available in the open domain, while others are available at a cost. They generally comprise a number of structured, interactive sessions that are to be delivered typically once a week. It may be necessary to adapt a specialized programme to particular cultures and circumstances, but this needs to be done thoughtfully, without eliminating core components (UNODC, 2013).

ii. Contents and concepts

The curricular contents and concepts usually fall into the following two categories:

- Those targeting **personal and social skills** that are connected to the initiation and continued use of substances, particularly before the typical age of first use. This includes responsible decision-making and goal setting, self-management, emotion-management and social awareness and relationship skills (Jackson et al., 2011).
- Those targeting **specific knowledge and attitudes** about substance use – including the effects, consequences and harms arising from substance use – to increase substance-specific knowledge or change attitudes during or after the typical age of first use.

The choices and focus of the contents for the curriculum should support the curricular goals based on the prevalence and patterns of substance use, which generally vary with the age of students.

Before the typical age of first use

Programmes targeting students below the age of initiation of substance use should focus on supporting the growth of general personal, social and emotional skills, but not include any substance-specific contents (as these might yield negative or iatrogenic outcomes).

Curriculum aiming to prevent substance use before the typical age of first use within the school system is directed at children who are around 6–12 years old. The typical age of first use of any substance will vary according to the national or local situation.

Prevention education curriculum during this period is centred on what is referred to as 'skills-based health education' (UNODC, 2013; WHO, 2003). It aims to develop key personal and social skills such as those that support healthy emotional and social development during this period, and protect against later substance use.

In addition to protecting against later substance use, skills-based education has also been shown to have a positive effect on general problem behaviours, commitment to school, academic performance, self-esteem, mental well-being, self-management and other social skills (besides Australia, Canada, Europe and the United States, the evidence also originates from Africa, Latin America and India) (Durlak et al., 2011; Foxcroft and Tsertsvadze, 2011b; UNODC, 2013).

The curriculum should provide opportunities to learn skills for coping with difficult situations in daily life in a safe and healthy way. Through most of this period, skills-based prevention education does not need to include discussion of substance use issues. To the extent that substance use is not part of daily reality for children of this age, it may in fact be harmful to introduce substance-specific education because it could increase perceptions of peer use, and stimulate curiosity (Elek et al., 2010). An important exception can occur in communities in which primary school students have begun to engage in substance use, for example, the use of volatile substances (such as glue, gasoline or lighter fluid). This can be a serious issue demanding substance-specific education for all students, or an approach targeting particularly vulnerable students.

Concepts should progress from simple to complex, with later lessons reinforcing and building on earlier learning. The programme should link seamlessly with a planned and sequenced curriculum in secondary school.

13 For example, EMCDDA Best Practice Portal (http://www.emcdda.europa.eu/best-practice); US National Registry of Evidence-based Programs and Practices (NREPP) (http://www.samhsa.gov/data/evidence-based-programs-nrepp); US Registry of Evidence-based Youth Development Programmes by Blueprints for Healthy Youth Development (http://wwwblueprintsprogramscom).

Characteristics of primary school skills-based education approaches that are associated with positive, or no or negative prevention outcomes (UNODC, 2013; WHO, 2003)

- Emphasis on improving a range of personal and social skills
- Delivered through a series of structured sessions, totalling at least ten hours per year
- Delivered by trained teachers or facilitators
- Sessions are primarily interactive

- Use non-interactive methods, such as lecturing, as main delivery method
- Provide information on specific substances, using scare tactics
- Focus only on the building of self-esteem and on emotional education rather than skill-building
- Learn skills without being able to apply them to contexts that are relevant to the lives of the pupils
- Use untrained teachers; they are generally not comfortable in conducting interactive skills-based sessions, and are likely to omit key elements

During or after the typical age of first use

In many countries, secondary school is a period when substance use rates rise dramatically. It is also a time when adolescents typically experience many other changes and social and biological stressors, and, furthermore, when the 'plasticity' or malleability of the brain suggest that interventions can reinforce or alter earlier experiences, making adolescents potentially particularly receptive for prevention interventions. For this reason, many school systems choose to supplement or replace the standard curriculum with a specialized programme such as Unplugged (see Case study 3), which has been shown by research to be effective. It typically calls for delivery of a series of ten or more structured sessions once a week (UNODC, 2013).

These programmes are also based on interactive skills-based education, calling for an interactive method (emphasizing student–student interactivity over teacher–student interaction). While keeping in mind that information alone is not sufficient to change behaviour, it is important to ensure students have access to accurate, balanced substance-specific information to counteract myths and misinformation.

CASE STUDY 3: An evidence-based approach – Adapting and testing a prevention programme in Nigeria

'Unplugged' is a universal (i.e. for all children in a class) evidence-based programme to prevent the use of tobacco, alcohol and other drugs among children aged 12–14 years old. The programme is being adapted for Nigeria and tested through a randomized control trial (RCT) in that country.

Unplugged consists of 12 one-hour interactive sessions delivered by teachers, and is based on the social influence model, addressing social and personal skills, knowledge and normative beliefs. Objectives are to:

- Reduce positive attitudes towards drugs;
- Decrease the perception that many peers smoke, drink or use cannabis;
- Increase refusal skills.

The programme was initially developed and evaluated through a large RCT (2003–2005) involving 7,079 pupils in seven European countries. The evaluation found that participating in the programme resulted in a 23% reduced risk of using cannabis, 28% reduction of risk of weekly alcohol intoxication and 30% reduced risk of daily smoking. Positive effects have been found to last at least 18 months after completion of the programme, which represents an important delay during a critical period of adolescence.

Based on these positive results, the programme has been adapted and implemented in 30 countries worldwide in several other parts of the world outside the EU, including in Arabic speaking countries, Latin America, South East Asia, Kyrgyzstan and Russia.

In 2014, as part of efforts to cut drug production, trafficking and use, and curb related organized crime in Nigeria, a workshop involving key government and non-government players used UNODC's *International Standards on Drug Use Prevention* (UNODC, 2013) as a basis for analysing current efforts, distinguishing between programmes based on scientific evidence, and those that are not. It was concluded that there was no evidence-based programming for schoolchildren in Nigeria, and it was agreed that Unplugged, available in the public domain, would be tested.

The pilot was organized into two phases. In Phase I, the programme was tested in five schools to determine how best to redesign and adapt it to the local context. Phase II, currently in progress, is an RCT of the adapted programme, involving 32 schools (16 control and 16 intervention). Plans for scaling up the programme will be determined following results of the trial.

The leadership of the Federal Ministry of Education and active involvement of UNODC have been critical to this initiative.

More information: www.eudap.net

CASE STUDY 4: A promising programme – Rigorously testing a universal prevention programme for mid- to older adolescents

REBOUND is a universal skills-based substance use prevention and health promotion programme for older adolescents and young adults. Developed at the University of Heidelberg, Germany, and carried out by FINDER Akademie, the programme targets young people aged from 14–25 years in high school or vocational school. Ironically, at an age when substance use is very much part of daily reality for young people, there are few universal programmes targeting this population.

The programme operates from a strong theory base to work with both users and non-users of substances to increase their ability to:

- Practice awareness of strengths and reinforce these strengths;
- Cope with alcohol and other drugs in a smart, independent and healthy manner (individual risk competence);
- Practice risk competence in peer groups.

The intervention comprises four pillars: classroom-based sessions delivered primarily by teachers (taught in weekly sessions of 90 minutes), online modules, optional mentoring and a whole-school element. Key programme features include:

- Delivery of short film-based methods in 12 to 16 lessons within half a year;
- Training of teachers through a four-day workshop;
- Environmental intervention, establishing a school drug policy;
- Explorative film work, through which short films are investigated together.

The programme has been subjected to a controlled pilot study with 46 classes and 800 students. In 2015 about 3,000 students were reached, and plans for an RCT are underway. Among the early lessons learned from the pilot are the need to build flexibility into both the course structure and school delivery for this age group, as well as selecting teachers for their skills and attitudes as far as possible.

More information: http://my-rebound.de/ ; https://finder-academie.de/

A balanced approach lays the groundwork for students to explore various aspects of the issue, and addresses, for example:

- Beliefs on how common substance use is;[14]
- Perceptions of risk versus benefit;
- Expectations linked to substance use;
- Social influences on substance use (e.g. family, media and peers), and development of skills to analyse and minimize their impact;
- While providing opportunities to continue practising a wide array of other personal and coping skills, also in relation to substance use (UNODC, 2013).

Characteristics of secondary school skills-based education approaches that are associated with positive, or no or negative prevention outcomes (UNODC, 2013)

- ↑ Use interactive methods
- ↑ Delivered through a series of structured sessions (typically 10–15) once a week, often providing extra sessions ('boosters') over multiple years
- ↑ Delivered by trained facilitator (including also trained peers)
- ↑ Provide an opportunity to practise and learn a wide array of personal and social skills, including particularly coping, decision-making and resistance skills
- ↑ Impact perceptions of risks associated with substance use, emphasizing immediate consequences
- ↑ Dispel misconceptions regarding expectations linked to substance use, and how common substance use is
- ↓ Information-giving alone, particularly using fear arousal approach
- ↓ Use non-interactive methods, such as lecturing, as a primary delivery strategy
- ↓ Based on unstructured dialogue sessions
- ↓ Focus only on the building of self-esteem and emotional education
- ↓ Address only ethical/moral decision-making or values
- ↓ Draw on ex-drug users to provide testimonials
- ↓ Use police officers to deliver the programme

iii. Delivery methods

Throughout the school years, substance use prevention is based on a 'skills-based health education' approach, using interactive teaching methods delivered by trained instructors. Skills-based education does often include knowledge and attitude components, but the emphasis is on behavioural change that can only occur with methodical attention to skills (i.e. seeing skills being demonstrated and having the opportunity to practise them in a safe setting). Brief lectures and other didactic methods are generally only used in support of the core participatory element of a session (for example, to introduce and bring closure to a session).

The ability to deliver skills-based education and promote interactivity has been associated with the following facilitator behaviours (WHO, 2003):

- Ability to play different roles – to support, focus or direct the group as required;
- Ability to act as a guide as opposed to dominating the group;
- Respect for the adolescent and his or her freedom of choice and individual self-determination;

14 Young people tend to overestimate rates of use among their peers.

- Warmth, supportiveness and enthusiasm;
- Ability to deal with sensitive issues.

There is no evidence to support a primarily knowledge-based approach to substance use prevention (Faggiano et al., 2008; Lemstra et al., 2010).

iv. Minimum number of sessions/hours

The availability of time in the curriculum to address various health issues is often a concern. Skills-based education is effective for addressing various health issues (e.g. sexual health, bullying), but in order to be effective in each case the skills need to be practised in the context of the particular issue. One solution to time constraints in the curriculum is to use an integrated approach in which two or more issues are addressed together (for example, situations involving substance use and sexual risk behaviour) (Jackson et al., 2011; Peters et al., 2009).

Reviews of existing substance use education curricula note a wide range in length varying from a single, one-hour session, to several years (up to 11 years. Several reviews suggest that longer, more intensive programmes are more effective (Flay, 2009; Lemstra et al., 2010; Soole et al., 2008). UNODC indicates programmes with ten or more sessions are most effective and recommends lessons at least once a week spanning several years (UNODC, 2013).

There is also evidence that booster sessions are important in re-affirming programme content, contributing to longer-term effects (Champion et al., 2013; UNODC, 2013).

v. Appropriate educators to deliver skills-based prevention education

Overall, given their ongoing presence in the school, teachers are often in the best position to deliver skills-based prevention education. However, research has shown that teachers often omit the most critical elements of a skills-based curriculum – the interactive elements (Sobeck et al., 2006). Consequently, it is very important that whoever delivers the curriculum receives training and support on instructional methods and on addressing sensitive topics (see Section 3.2.3 to learn more about educator training).

Research has found that various professionals (e.g. guidance counsellors, mental health and social professionals) and student peers can also be effective in delivering a programme (Porath-Waller et al., 2010; Tobler et al., 2000). In these cases as well, it is important that the instructor delivers sessions as they were intended and keeps adaptations to a minimum. Guest resource persons need to be able to assure school staff that they know the curriculum and can contribute to curriculum objectives (as found in the curriculum guide or resource), and use the required methods (Buckley et al., 2007).

For some schools, computer- and internet-based programmes may be an option. Recent research has shown them to be reasonably effective, and they are more likely to be delivered as intended (Champion et al., 2013).

3.2.3. Training and supporting educators and other personnel

In order for the benefits of evidence-based prevention to be realized, the content and method need to be implemented as intended (known as fidelity of implementation). However, various studies show that educators often do not deliver content as intended (Ennett et al., 2011; Miller-Day et al., 2013; Van der kreeft et al., 2009).

There are a range of other factors, such as policy support and resources, that may affect implementation, but training and support is critically important in determining the quality of implementation of an education sector response to substance use (Ringwalt et al., 2003).

Research has found that training increases the likelihood that a teacher will actually deliver skills-based prevention content, and do it in the way it was intended. Training can help teachers adapt programme methods to their own teaching styles and aptitudes, while retaining the core components of the programme (Miller-Day et al., 2013).

Educator training should offer a clear rationale for skills-based methods, provide demonstration of interactive teaching techniques, and give ample opportunity to practise these skills (WHO, 2003). As well as training on specific manualized programmes, at the secondary school level – when sensitive topics such as students drinking to intoxication are likely to arise – general training on addressing substance use related topics can help a teacher to address these topics as they arise. As an alternative, a resource person can cover specific topics within the context of curriculum requirements, or to deliver manualized skills-based prevention programmes.

Everyone who is engaged in the delivery of skills-based education (e.g. alcohol, tobacco and drug professionals, mental health counsellors, school nurses, or peers) must receive training on their role and how it contributes to curriculum aims. If these resource personnel are to be involved in the delivery of skills-based content, their competence in this area should be verified, and they should receive training if necessary (Buckley et al., 2007).

CASE STUDY 5: A promising initiative – Training and certification in Kenya

The Kenyan National Authority for the Campaign against Alcohol and Drug Abuse (NACADA) was established by an Act of Parliament on 24 July 2012. A priority of NACADA is the training and certification of prevention and treatment professionals.

To address this priority NACADA collaborated with the US Bureau for International Narcotics and Law Enforcement (INL) and the International Society of Substance Use Prevention and Treatment Professionals (ISSUP). ISSUP supplied the curriculum and INL covered the cost of training manuals and training for the first local facilitators.

ISSUP has recently developed a comprehensive training package referred to as the Universal Prevention Curriculum (UPC), for Prevention Workers and Prevention Coordinators. UPC was developed by top prevention researchers, and draws from the evidence base presented in UNODC's *International Standards on Drug Use Prevention* (UNODC, 2013). UPC became the basis for the Kenyan training and certification initiative.

NACADA's aim is to develop Substance Use Prevention (and Treatment) as an independent and multidisciplinary field through the professionalization and development of its workforce.

To achieve this aim, the Authority organized certification training for addiction professionals in five different regions of the country. Educators in secondary schools, tertiary colleges and universities are among the target professionals, with more than 1,000 trained to date. Training and certification activities are ongoing.

More information: http://www.nacada.go.ke and https://www.issup.net/training/universal-prevention-curriculum

Education of teachers delivering skills-based education may take the form of pre-service, in-service and web-based options:

- **Pre-service education** (i.e. through teacher training institutions) on skills-based health education, school health promotion and prevention science is widely recommended by school health promotion and prevention advocates (Thapa et al., 2013; UNESCO, 2014b; Bundy, 2015). Such training may focus broadly on student health and well-being, on wider prevention efforts regarding conduct and risk behaviours, and/or may specifically focus on student substance use. The availability of pre-service education on this topic unfortunately appears to be limited in both developed and developing regions (Hale et al., 2011; UNESCO East and Southern Africa, unpublished report).
- **In-service training and support** is of critical importance due to the general lack of pre-service training. In-service training should be ongoing due to staff turnover, and the need to occasionally refresh skills. Research on how best to train and support those delivering skills-based prevention suggests that in-person training tends to be better accepted and appears more effective than self-guided manuals or instructional videos (Hanley et al., 2009), but a mix of options, including technology-based methods, are likely to be more effective than a single strategy. The evidence to date is mixed on whether coaching (i.e. in-class performance feedback, where the coach assesses a teachers' fidelity, timing, sequence, mechanics and organization of the lessons, etc.) is effective (Dusenbury et al., 2010; Ringwalt et al., 2009). Many evidence-based prevention programmes have tools to monitor and guide faithful delivery of content.
- **Web-based knowledge portals** can provide important ongoing support to school prevention and health promotion staff. An example is *Alcohol and Drug Education and Prevention Information Service (ADEPIS)* by Mentor UK. This site translates the latest research findings into practical strategies for the range of frontline workers on this topic (see Case study 6), or *Prevention HUB* by UNODC which is a portal offering a separate section on resources targeted to school teachers and other personnel (http://preventionhub.org/en).

Training or briefing of other educational personnel

A coordinated response calls for training or briefing of a number of others, with essential topics listed in the figure below:

Figure 17. Training or briefing of other educational personnel

PARENTS AND COMMUNITY:
Availability of school-linked services and partnerships

WHOLE SCHOOL STAFF:
School substance use policy; Whole-school approach to substance use

SPECIALIST SCHOOL STAFF DELIVERING PREVENTION PROGRAMMES:
School guidelines on early identification and intervention; Administration & interpretation of validated screening instruments and the methodology of the intervention

SOCIAL SCIENTISTS & SCHOOL HEALTH ADVOCATES:
Strategies for entering and working effectively with the education sector

DISTRICT OR SCHOOL MANAGEMENT:
Academic benefits of a comprehensive education sector response to substance use

POLICY-MAKERS:
How education sector responses help achieve their specific policy mandate and fit with a national or international strategy on substance use; Cost-effectiveness of various prevention programmes

CASE STUDY 6: A promising initiative – The development of national teacher guidance and resources, training and quality standards: Alcohol and Drug Education and Prevention Information Service (ADEPIS), UK

This online service provides information and advice to schools and practitioners on good practice in substance education and prevention. It is funded by the Public Health England and the Home Office and run by a drug prevention charity, Mentor UK, with partners. The ADEPIS team has developed a set of standards that are informed by the European Drug Prevention Quality Standards but are specifically designed for both schools and organizations working within schools to provide substance education to students. The standards draw on international evidence, as well as local guidance and statutory curriculum guidelines on educational delivery, to ensure that all advice is evidence-based and is readily and sustainably implementable in the local context.

Published standards cover a range of topics relevant to hosting good quality substance education. The resources include staff policies; classroom content for effective drug and alcohol education; as well as recommendations for delivering good quality drug and alcohol education in the classroom. The ADEPIS website offers schools an online toolkit to review their drug and alcohol policy to help facilitate frequent evaluation and quality improvement. The website also offers schools practical advice on how to consult with relevant stakeholders, including teachers, pupils and parents.

This initiative is a promising practice because it follows relevant evidence-based standards, applies them to a local context (with due consideration of educational, cultural and logistical factors), is a prime example of collaboration between governmental and third sector organizations, and facilitates professional development and the sharing of best practice.

More information: http://mentor-adepis.org

3.2.4. Evidence-based responses at school level

At the school level, approaches to responding to substance use can be broken down into two categories:

- **Universal prevention** that aims to prevent substance use in the school population at large. This approach aims to reduce risks across the school or target age/year group by providing knowledge and skills that are protective towards substance use, or by changing school policies and environment in ways that prevent and reduce substance use among all students.
- **Selective and indicated prevention** that targets individuals or groups deemed at particular risk of initiating substance use or who are already involved in substance use behaviours. These approaches involve identifying at-risk individuals or groups and targeting prevention efforts towards them, or identifying those who are showing early signs of substance use and then intervening.

Figure 18. A comprehensive response comprises both universal and selected/indicated prevention

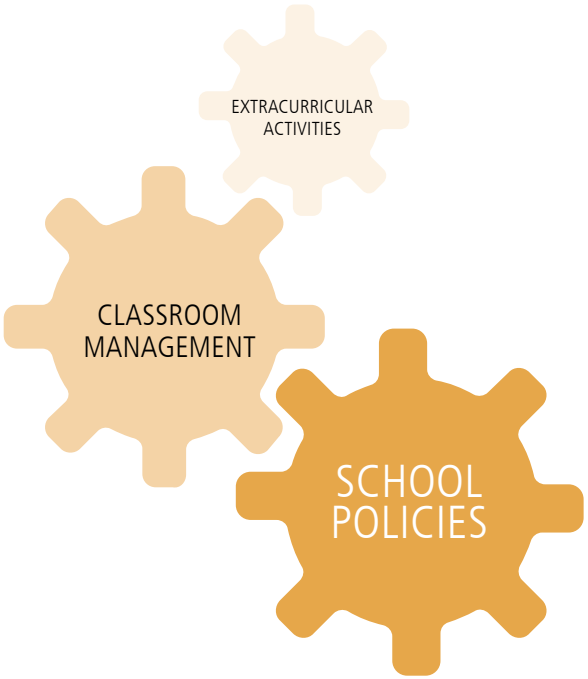
Schools have the responsibility to adequately serve all members of the student population, including supporting groups (selective prevention) and individuals (indicated prevention) that are particularly at risk.

i. Universal prevention: safe and supportive school environment

The environment existing in a school is the net effect of many factors, notably school values, goals, organizational structures as well as management practices (Bissett et al., 2007). As such, a whole-school approach is recommended to involve all aspects of the school community that can impact upon students' learning, health and well-being, and, besides curricula based approaches, to give attention to:

- Helping students feel safe (both physically and social-emotionally);
- Relationships (e.g. student–student and student–staff; respect for diversity);
- Enhancing regular classroom strategies to enable learning (i.e. for disengaged students and those with learning and behaviour problems);
- Promoting a sense of 'community';
- Making improvements to the school grounds and facilities; and
- Creating links between the school and its local community, e.g., community service activities, participation in local affairs (Markham et al., 2008; Thapa et al., 2013; Tobler et al., 2011).

Figure 19. Essential elements for a safe and supportive school environment



Ideally, a coordinating team is set up to ensure a systematic approach to shifting the school environment by engaging all members of the school community in the process.

Overall, the whole-school approach has shown promise in positively affecting academic outcomes (lower absenteeism, lower rates of student suspension), rates of substance use (particularly tobacco use), and in reducing the impact of difficult family circumstances (Fletcher et al., 2008; Langford et al., 2014; Thapa et al., 2013).

CASE STUDY 7: An evidence-based programme – A simple programme to shift the school environment in relation to smoking

Be Smart – Don't Start (SFC) is a low-cost programme that requires little time and has the potential to shift the school environment in relation to smoking. Rather than using fear tactics to motivate students not to smoke, this initiative uses positive reinforcement. Pupils aged 11–14 commit themselves by signing contracts to stay smoke-free for up to six months. Students in these classes report regularly on whether or not they have smoked. At the end of the competition period successful classes can win attractive prizes in a lottery.

Through this process, social norms around smoking shift – non-smoking is found to be rewarding and becomes more common in classes than smoking. Participating teachers receive the necessary materials for the implementation of the programme including a teacher guide, a class contract with stickers and a template for a student agreement. Parents of registered pupils receive a leaflet that explains the competition and offers advice on how to support their children. Though little time is required to implement SFC, it can serve as an excellent platform for more attention through the curriculum.

The programme was co-funded by the European Commission from 1997 and has been widely disseminated in Europe. Evaluation studies show that the competition is safe (i.e. does no harm), well accepted, likely to delay the onset of regular smoking and cost-effective (Isensee and Hanewinkel, 2012).

More information: http://www.smokefreeclass.info

Within the framework of a whole-school approach, responses that aim to secure a safe and supportive environment for children and young people in and through education can fit into the following categories:

- **Ensuring a safe and supportive school environment**, through supportive school policies and culture to address individual psychological vulnerabilities; improve classroom environment, students' participation and connectedness; and thus ensure access to quality education;
- **Engaging with families and with the wider community** for a safe and supportive environment beyond school premises.

Design and implementation of school substance policy

Substance policy – including tobacco, alcohol and drugs – is a statement of how a school's response to substance use contributes to its academic goals. The policy should link to and support broader policies (e.g. national tobacco, alcohol and drug policies or prevention strategy). It may be comfortably situated in or alongside a school's health-related policies, which generally aim to ensure a safe, secure and healthy physical and psychosocial environment (addressing other issues such as bullying, sexual harassment, school violence, nutrition and diet, and mental health) (WHO, 2003).

A local substance policy is the correct entry point into a school-based response to student substance use. The process of developing a policy allows a school, and other relevant local actors, to bring together its thinking – its values, goals and actions – in relation to student substance use, and how it intends to respond to it.

Traditionally, substance policies were most concerned with clarifying how a school would respond to incidents of student substance use. This is important – without this policy, school personnel are left to deal with each substance-related incident as it arises, which is an inefficient use of resources, and commonly leads to inconsistent and unjust decisions by school authorities.

Bringing all substance-related actions, including prevention activities, into a single policy instrument leads to more coherence, and a stronger understanding of the commitments being made to the issue. A broader 'response to substance use' policy ensures that school resources – however scarce they may be – are allocated to create the greatest impact.

Should a primary school implement a substance policy?

Some of the most potent opportunities for substance use prevention are found in the primary school period (e.g. classroom management approaches). Appropriate substance policy for early school years is best couched within broader policy ensuring all students fare well in school, including those who are not engaged or who are disruptive.

Indeed, at this level, school attendance, attachment to school and the achievement of age-appropriate language and numeracy skills may be the most important preventive action that can be taken for children of this age. Evidence from low- and middle-income countries suggests that policy measures to support school attendance and engagement at this age can be effective in preventing later substance use. Furthermore, many evidence-based prevention programmes, such as those supporting life-skills as well as positive classroom behaviour, target students in primary schools and show very positive outcomes in preventing substance use and other risky behaviour, also over the long term (UNODC, 2013).

There may be no need for specific substance policy, but it makes sense for a primary school to add language to any broader academic and health policies, noting that the prevention of later substance use is an expected outcome, and that this should be part of an evaluation of these policies.

In addition, active participation and social connectedness of students to school life is an important protective factor associated with lower levels of substance use and other risky behaviours. Thus school policies supporting active student involvement and positive school culture are also recommended as part of a comprehensive school response.

The policy also needs to bring together and clarify the school's programme commitments, rules, procedures and

actions in relation to substance use and its prevention. This should include the following elements:

1. Requirements for comprehensive prevention programming (e.g. skills-based prevention curriculum as well as whole-school prevention).
2. Protocol for intervening with substance use incidents as well as students having substance use problems (e.g. intoxication, negative consequences arising from use) providing both disciplinary and support measures.
3. Position regarding possession, use, or distribution of alcohol, tobacco and drugs that should be clearly prohibited by all members of the school community.

The content of policies is important, but the way they are developed, communicated and enforced is equally vital. Acknowledging that many schools operate under district-level policy that they cannot change, a participatory approach to these processes is preferable. This type of approach is likely to result in stronger, more relevant and better supported policy (Fletcher et al., 2008; Toumbourou et al., 2004).

Evidence indicates that the most effective approach to substance use-related incidents is to seek an instructive and health-promoting resolution, minimizing out-of-school suspensions. Alternatives to out-of-school suspensions include: in-school suspensions (student sits outside the principal's office or in the office area with work to complete); time out in off-site 'teaching units' for periods of time; withdrawal of privileges (e.g. school excursions); and developing a contract with students stating the terms under which they can remain at school (e.g. attend counselling, anger management training) (Hemphill et al., 2012a).

In addition to, or as an alternative to disciplinary measures, it is important to react to incidents of possession or use with support aiming to turn the event into a health-promoting opportunity. This can be achieved by responding to incidents with assessment and referral to support including brief interventions, counselling, tobacco cessation programmes, referral to other health and social services outside of the school, and support provided to the entire family.

Evidence in support of drug testing students in school is very limited, with most studies showing no preventative effect. Weighed against the many concerns (e.g. expense, alcohol and tobacco is not tested, significant ethical considerations concerning student privacy, and the possibility of harm due to punitive actions that reduce school engagement), this measure is not recommended (Shek, 2010; Sznitman & Romer, 2014; UNODC, 2013).

An overly punitive response to incidents that relies on school suspensions often leads to increased antisocial behaviour. For example, in one international study, school suspensions in Grade 7 led to increased tobacco use (Hemphill et al., 2012b). On the other hand, lax or no enforcement of school substance use policies may also lead to greater substance use (Evans-Whipp et al., 2013).

Consequently, a balanced approach to prevention and enforcement appears to be the most effective approach – cultivating an overall positive school climate, ensuring all students understand what is not permissible in terms of substance-related behaviour, but also supporting high-risk youth in maintaining links with school whenever possible (Hemphill et al., 2006; Sznitman and Romer, 2014).

Finally, the scope of a policy appears to be important. A policy that encompasses staff and visitors (e.g. smoking on premises) is likely to be better supported by students. An Iranian study found that student knowledge of teacher smoking was associated with student smoking (Roohafza et al., 2014). Teachers function as role models in school, and when their behaviour is brought into school policies they can influence norms against smoking for everyone. That is why it is important that a policy clearly mandates that substances should not be used on school premises or during school functions by both students and staff.

Characteristics of school policy associated with positive prevention outcomes (UNODC, 2013):

- Addresses all substance use-related activities and concerns in the school
- Supports normal school functioning, not disruption
- Develops policies with the involvement of all stakeholders (students, teachers, other staff, parents)
- Policies mandate that substances should not be used on school premises or during school functions by both students and staff, to reduce or eliminate access to and availability of tobacco, alcohol or drugs
- Policies clearly specify the substances that are targeted, as well as the locations (school premises) and/or occasions (school functions) the policy applies to
- Rules are applied to everyone in the school (students, teachers, other staff, visitors, etc.)
- Infractions of policies are addressed with positive sanctions by providing or referring to counselling, treatment and other health-care and psycho-social services, rather than punishment
- Enforcing consistently and promptly, including positive reinforcement for policy compliance

Classroom management programmes for children entering the school system

Strong effects have been found in early primary school classroom management programmes for prevention of substance use and other risky behaviours.

Disruptive behaviour in schools (e.g. non-compliance, verbal disruption, teasing others, being out of one's seat, taking others' property, etc.) is a source of concern for

schools. It can have a significant impact on the learning environment and the achievement of intended academic outcomes.

Moreover, research has shown that children who display disruptive behaviour early in their school years are quite vulnerable to a number of later social, academic and health problems, including problematic substance use, conduct disorder, criminal behaviour and school failure (Castellanos-Ryan et al., 2013). Consequently, programmes that help teachers to manage the classroom environment have been developed and researched for a number of years.

These programmes aim to strengthen the classroom management abilities of teachers, and motivate children to become better students, while reducing early aggressive and disruptive behaviour. They support teachers in implementing a collection of non-instructional classroom procedures in day-to-day practices with all students in order to teach and encourage positive behaviour and prevent and reduce inappropriate behaviour. They target the whole class (i.e. universal prevention), but more vulnerable children seem to particularly benefit. The effect is particularly strong among boys showing signs of early aggressive behaviour (Kellam et al., 2014).

Since these strategies are an approach to managing a classroom rather than a curriculum, they do not compete for instructional time. Being universal (i.e. for whole classes), they avoid the labelling and stigma that children can experience by being removed from the classroom for targeted interventions.

Researchers have followed students in these types of programmes into their adolescent and adult years and have found generally positive results on later substance use. One programme that found positive results on later substance use problems and on other risky behaviours (e.g. violent behaviour and antisocial personality disorder) up to age 21 is the Good Behaviour Game (GBG) (Kellam et al., 2008).

GBG is for whole Grade 1 and 2 classrooms and aims to create a classroom environment conducive to learning for all students (see Case study 8).

With GBG, the behaviour of each child on the team becomes a matter of concern to all children on that team because the team reward depends on all team members' behaviour. The strategy encourages students to manage their own behaviour through group reinforcement and mutual self-interest.

CASE STUDY 8: An evidence-based programme – How the Good Behaviour Game (GBG) works

All students in each classroom are assigned to one of three teams that are similar in behaviour and learning, with equal membership by sex. The teacher posts basic classroom rules of student behaviour and teams are rewarded if the team members commit four or fewer infractions of these classroom rules.

The GBG is played during those periods of the day when the classroom environment is less structured, such as when the teacher is working with one student or a small group while the rest of the class is instructed to work on assigned tasks independently. At random times, the teacher announces 'We are playing the Good Behaviour Game'.

At the beginning of the year, the game is played three times a week for ten minutes each time. Over the course of the year, the amount of time GBG is played increases. Over time, the teacher initiates the game periods without announcing it and the rewards are delayed until the end of the school day or the end of the week.

By the end of the year, the game is played at different times throughout the day, during different activities, and in a variety of places. The rewards change over the course of the year from being tangible (such as stickers or erasers) to being more intrinsically related to the classroom setting, such as extra quiet time to read during the school day. So, the GBG evolves from a procedure that is highly predictable and visible, with a number of immediate rewards, to a procedure with an unpredictable occurrence and location, and deferred rewards (Kellam et al., 2008). It has been shown to be effective in preventing substance use up to age 21, and has successfully been implemented in different regions of the world.

More information: http://goodbehaviorgame.org/

Characteristics of classroom management approaches associated with positive prevention outcomes (UNODC, 2013):

- 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
- Teacher training and ongoing supportive mentoring is important.

School-linked extra-curricular activities and involvement of families, NGOs and other community stakeholders

Schools can be excellent focal points and coordinators of community programmes, as they are viewed as credible in their communities and can access a broad portion of the population. Extra-curricular and school-linked programmes are those in which schools are involved but which fall outside the formal curriculum. They generally involve a community partner to prevent and address student substance use and promote their health.

Extra-curricular and school-linked programmes can have any number of interests (from youth development to early intervention), take many forms and involve a range of partners, including NGOs and others in the community. The predominant school-linked programmes with a prevention or health promotion aim can be categorized as peer, mentorship, sport and recreation, youth development, family strengthening and multi-component initiatives.

CASE STUDY 9: A promising programme – KELY Peer Support Group, Hong Kong

KELY is a non-government-funded bilingual organization that provides empathetic, non-judgemental, confidential and inclusive support to youth between the ages of 14 to 24 in Hong Kong. Established in 1991, from an early effort to help a friend recover from a substance use problem, it organically grew into a well-known community organization that young people and concerned parents go to because it is youth-friendly, and provides accurate information and non-judgemental peer support. In the early 1990s, there was little or no support for substance prevention education in Hong Kong. Drug use and misuse was considered taboo and associated with groups with negative reputations (e.g. triads).

KELY programmes are delivered by a team of seven full-time programme workers, 10 to 12 part-time programme workers, and around 50 volunteers (including professionals from public health, education, social work and clinical psychology). They provide direct assistance and support to youth, through the following programme components:

- prevention
- long-term capacity building/training
- school-based education workshops
- outreach for addressing the consequences of substance use
- intervention

KELY covers around 15% of the more than 450 secondary schools in Hong Kong. The organization believes that KELY has increased the level of awareness of addressing the consequences of substance use and resources for help. This is evidenced by an increased number of young people and parents reaching out for assistance and referrals.

More information: www.kely.org

Peer and extra-curricular programmes: A wide variety of peer programmes exist. Some involve the use of student peers in delivering formal classroom-based prevention education in support of the teacher. While the use of peers in this way is well established and may be effective when the peer facilitators receive adequate training and support and use evidence-based approaches (e.g. Tobler et al., 2000), extra-curricular use of peers also shows some promise (Campbell et al., 2008). A systematic review and meta-analysis concluded that peer interventions may be effective in preventing tobacco, alcohol and possibly cannabis use among adolescents, although the evidence base is limited overall, and is characterized mainly by small studies of low quality (MacArthur et al., 2015).

Programmes of this sort do not require time from the formal curriculum, operating instead within the informal culture of the school, using natural peer leaders. Because they are not mandatory, they may be challenged in reaching targeted youth. However, they have shown promise in reducing uptake of smoking and drinking among early adolescents. These programmes tend to be complex, requiring careful recruitment, selection, training and ongoing support of peer leaders by trained staff (D'Amico et al., 2012).

Mentorship programmes: These are programmes involving a one-to-one relationship between an adult 'mentor' and a youth 'mentee'. By their nature they operate beyond the formal curriculum. Mentors may be teachers, coaches, counsellors, nurses or potentially others in the school (e.g. custodians, cafeteria staff) or members of the community. Mentorships may be formally arranged or arise informally between the adult and youth, and may take many forms. For this reason, it is not possible to be conclusive about the value of mentoring to prevent substance use or promote academic achievement. However, there are indications of modest effectiveness on these as well as a range of other youth development outcomes, when the programmes are implemented in a structured manner and the mentors receive adequate support and training. Mentorships combining elements of friendship, emotional support, advocacy and guidance have shown potential with more vulnerable youth (selective and indicated prevention) (Keller et al., 2012; Thomas et al., 2011; Tolan et al., 2013).

Recreation and sport programmes: A wide variety of recreation and sport programming may be offered after school (e.g. various individual and team sports, performance and fine-arts clubs as well as academic clubs). The only research found for this study that pertained to the effectiveness of leisure or recreation options to prevent substance use concerned sport. While sport is often viewed as a health-promoting option for youth, there is no current evidence to support its use to prevent substance use. In fact, the only consistent finding to date is that participation in sport is associated with greater alcohol use. Sport participation, however, appears to be related to reduced illicit drug use, especially use of non-cannabis related drugs. (Kwan et al., 2014; UNODC, 2013).

Consequently, schools and communities need to be very cautious about establishing after-school sport programmes for the purpose of preventing substance use. Even if sports are not effective for preventing substance use as such, it is very possible that sport or recreational programmes might serve as a good *setting* for evidence-based prevention programming (that is,

incorporating personal and social skills development, or other evidence-based component, along with clear policies and programme messages against alcohol and other drug use, and evaluate outcomes) (Kwan et al., 2014; UNODC, 2013).

Family and parenting programmes: Families are one of the single most important influences in the life of children and youth. Consequently, much attention has been paid to developing and evaluating family-based prevention programmes (UNODC, 2013).

Schools and communities have a wide array of these programmes to choose from. More so than low-intensity programmes and those that work with parents only, programmes that work with families (that is, both parents and children) with an intensive, structured programme have shown long-term effectiveness, as well as cost effectiveness (Foxcroft and Tsertsvadze, 2011; Munton et al., 2014; Spoth et al., 2002).

Effective family-based programmes focus on skill development rather than on simple education about appropriate parenting practices. They are interactive and provide opportunities to practice skills in a safe context through role-playing, learning games and family projects. They may or may not address substance use directly when targeting families with children above the typical initiation age. Programmes targeting younger children do not address substance use. These programmes can be successfully implemented in various settings, including schools, and can be directed to either universal or selected populations of families. Consequently, the programmes implemented within schools have shown to positively impact parents' involvement in school life.

Family and parenting skills programmes are often delivered at universal level to all families without regard to the level of risk the families are experiencing. Universal-level parenting skills training programmes that have been found to be effective often have about four to eight sessions, while programmes found to be effective for higher risk populations generally have more sessions. They all aim to support parents in learning better parenting techniques, warm and safe attachment, communication, monitoring and age-appropriate discipline, while supporting children in learning basic life skills (UNODC, 2009).

CASE STUDY 10: An evidence-based approach – Adapting and implementing the Strengthening Families Programme for 10–14 year olds (SFP 10–14) in Serbia

The Strengthening Families Programme (SFP 10–14) is a universal evidence-based programme for families of children aged 10–14 years. It consists of seven two-hour sessions, in which youth and their parents are trained separately and together to help strengthen family communication skills, teach resistance skills and prevent youth substance use. The FSP 10–14 has been rigorously evaluated in controlled and real-world settings and has been found to be effective over the longer term.

This case provides a strong example of how good results can be achieved by thoughtfully adopting and adapting an evidence-based programme (as an alternative to developing a fully home-grown programme). In 2013, with the support of the UNODC Programme Office in Serbia and two municipalities, the Serbian Ministry of Education, Science and Technological Development led an initiative to test and scale up this family strengthening programme.

For supporting the scale-up, SFP 10–14 was added to the list of Ministry of Education nationally accredited programmes, and SFP training was included in the regular training of teachers to systematically build capacity for this programme and substance use prevention generally.

Before scaling up, the programme was piloted in more than 20 Belgrade elementary schools, for evaluating its feasibility and effectiveness via evaluation conducted in 2013 using qualitative and quantitative methods. The evaluation found that the programme had a positive effect on the parenting practices in the participating families. After the training, the parents reported using more constructive strategies for discipline (such as explaining the consequences of misbehaviour and reasons for family rules, or not addressing misbehaviour before 'cooling off'), as well as spending more positive time as a family. The children, on the other hand, reported having better coping skills after the training (for example, on goal setting and stress management). The pilot phase reached over 450 families, and included training of over 100 facilitators and 26 trainers of trainers, ensuring good potential for sustainability.

Final cultural adaptation of the material was performed at the end of the pilot phase, and will be further monitored and evaluated as part of the programme's scaling up over the next five years. Reflecting on the pilot, organizers were challenged with a general denial and lack of knowledge of substance use problems in schools and the community. Teachers were overburdened, yet the programme's success hinges on teachers' enthusiasm. Organizers concluded that good results are achieved through interactive programmes, a focus on children, connection with families, support by municipalities and linking families to schools.

More information: http://www.strengtheningfamiliesprogram.org/sp-10-14.html

CASE STUDY 11: A promising approach – Parental involvement in educational programmes in Russia

In 2010 the Russian NGO Humanitarian Project launched a special programme called '15' that involves parents in prevention activities. The programme comprises 15 three-hour thematic sessions for adolescents and their parents or guardians.

Participants are divided into four age- and gender-based groups, and each group participates in specific training sessions. In addition to the group work, joint sessions are organized with all four groups to discuss various topics. Training sessions and joint discussions aim to improve parent–child relations and strengthen participants' knowledge about substance use, HIV and other sexually transmitted infections (STIs).

The programme helps adolescents to understand themselves, find solutions for difficult situations, build trust-based relationships with family members, develop plans, set goals and achieve them, and be more confident. Parents have the opportunity to discuss child-rearing problems, share experiences, get to know their children better and master effective communication skills. The training sessions help them to learn more about HIV, drug use, reproductive health and the sexual behaviour of adolescents, so that they are able to discuss these issues with their children without being overbearing or moralizing.

According to the programme evaluation survey held in eight regions of Russia, over 90% of participants noted that '15' had brought positive changes to their lives. Some 55% of respondents had improved their relationships; 50% had started planning for the future; 31.7% had abstained from risky behaviours; 10% had been tested for HIV. Among adolescents who participated in the programme, the share of smokers decreased from 26.6% to 3.3%, and all respondents who had consumed alcohol previously reported that they had been abstaining from it. Similar results were achieved among the parents: the proportion of smokers fell from 50% to 30.3%, and the proportion of alcohol users fell from 16.6% to 3.3%.

More information: http://iite.unesco.org/pics/publications/en/files/3214742.pdf

Schools can also link to community services for the benefit of supporting access to health services (including substance use treatment). These initiatives are discussed further in Section 3.5.

Characteristics of extra-curricular and school-linked programmes associated with positive, no or negative prevention outcomes (UNODC, 2013)

Peer programmes

- ↑ Providing adequate training and active, ongoing support to peer leaders
- ↑ Based on a very structured programme of activities

Mentorship programmes

- ↑ Providing adequate training and support to mentors
- ↑ Based on a very structured programme of activities
- ↑ Family/parenting programmes
- ↑ Enhancing family bonding, i.e. the attachment between parents and children
- ↑ Supporting parents to take a more active role in their children's lives
- ↑ Supporting parents to provide positive and developmentally appropriate discipline
- ↑ Supporting parents to be a role model for their children

- ↓ Prevention within recreation and sport programmes
- ↓ Participation in sport per se can be linked to increased alcohol use, but decrease illicit drug use. This approach needs further research and to be exercised with caution
- ↓ Youth development programmes
- ↓ Bringing higher risk youth into programmes with poorly structured activities

Family and parenting programmes

- ↓ Undermining parents' authority
- ↓ Using only lecturing as a means of delivery
- ↓ Providing information to parents about drugs so that they can talk about it with their children
- ↓ Focusing exclusively on the child
- ↓ Delivered by poorly trained staff

ii. Addressing vulnerabilities through selective and indicated approaches

Universal approaches are often recommended, especially among children and youth, as they are often able to help both those experiencing average risk levels as well as those at heightened risk to cope better, without the risk of increasing stigmatisation of those at risk. However, approaches that target children and youth with specific vulnerabilities (e.g. children of parents with substance use problems), have the potential to target the specific risk factors they are experiencing and can sometimes be especially effective with that particular population, when implemented with care. These targeted approaches may work with youth in a group format (selective prevention) or individually (indicated prevention).

The selective and indicated early-school efforts can have a positive snowballing effect, providing benefits on an array of later issues, including academic performance and substance use (Toumbourou et al., 2007). Central to the effectiveness of these initiatives is fostering a

sense of school–parent partnership that leads to parents and teachers feeling mutually supported in their efforts (Castellanos-Ryan et al., 2013; Webster-Stratton and Taylor, 2001).

One effective approach is the parenting skills programmes described in the previous section. One such intervention found significant positive effects on substance use during adolescence by working with disruptive boys aged seven to nine years old on social and problem-solving skills, and helping their parents with effective parenting skills (Castellanos-Ryan et al., 2013).

A group known to be vulnerable are children of parents with substance use problems. Programmes for groups of these children show promise, especially when the programme's duration is longer than ten weeks and when it involves skills training for the children and parents separately and together (Bröning et al., 2012).

There are two cautions associated with selective and indicated approaches:

- **The possibility of labelling a student** through the selection process; labelling can usually be avoided by careful planning, strict adherence to confidentiality, and involving targeted students in designing the initiative.
- **The potential for antisocial behaviour to be reinforced** when higher-risk students are brought together into new groups (known as deviancy training) (Hennessy et al., 2015; Rorie et al., 2011); this may be avoided by building strong structure into a programme.

Brief interventions and motivational interviewing

One type of targeted intervention showing potential among adolescents is Brief Interventions (Carney, 2012; UNODC, 2013). These interventions may take as little as five minutes or may consist of as many as four sessions. Brief interventions have long been understood to be effective in various medical settings (e.g. emergency room, doctor's office) among adult populations, and recent research is showing some of these to be effective with secondary school populations. These interventions typically employ motivational techniques to bring a person from a position of not wishing to change their substance use to the point where they are ready to make changes. There is some indication that individual formats may be more effective than group formats (Hennessy et al., 2015).

WHO has developed the ASSIST package to facilitate screening and brief interventions for all psychoactive substances including alcohol, tobacco and illicit drugs. However, the effectiveness of interventions was demonstrated only in adults, and further work is required to establish effectiveness of ASSIST-based interventions among adolescents (see Box on page 51).

CASE STUDY 12: An evidence-based programme – Preventure programme, Montreal, Canada

Can a brief prevention programme show that it protects against the effects of alcohol and cannabis use on the brain, by reducing hazardous use? This is one of the aims of a current study of the Preventure programme in Montreal, Canada. The study is part of a long strand of rigorous research based on findings that four personality dimensions are linked to increased risk for hazardous alcohol and drug use among young people: anxiety-sensitivity, hopelessness, impulsivity and sensation seeking.

This line of research has demonstrated that a brief personality-based intervention (a total of 180 minutes over several sessions) tailored to a particular personality is effective in reducing alcohol and cannabis use in young adolescents. To date, Preventure has been evaluated in five different countries and multiple contexts (high schools, psychiatric settings, community based populations). It has demonstrated effectiveness in preventing and delaying the onset of alcohol use and misuse, cannabis use and other illicit substance use. Effects are moderate-to-large for substance use outcomes and are shown to last for up to three years following the intervention.

Schools in Montreal were motivated to explore evidence-based programming due in part to a provincial study that found 10% of students in their final year of secondary school (age 16–17 years) reporting clinically significant substance disorder symptoms.

As one educational authority put it, 'There was a desire to invest our limited resources in evidence-based programmes for youth substance use, but affordable community-based programmes and organisations were not offering programmes with a strong evidence-base. A programme that included an intervention programme (as opposed to simple screening, education or testimonials) was a major priority.'

Student sessions are led by school staff, who receive three days of training. The student sessions incorporate psycho-educational approaches, motivational enhancement therapy and cognitive-behavioural components. Manuals feature illustrative scenarios drawn from the real-life experiences of teens with the personality risk factors targeted by the intervention. Exercises include discussion of thoughts, emotions and behaviours in a framework specific to each personality dimension.

Recognizing recent concerns over the potential impact of alcohol and cannabis use on the adolescent developing brain, an aim of the research is to assess the extent to which the programme might protect cognitive development in five key areas: general IQ, episodic memory, working memory, response inhibition and reward sensitivity.

Features of the programme that appeal to school administrators include:

- Flexibility in terms of who can deliver the intervention;
- The brief and group-based nature of the intervention is not too burdensome;
- Strong research base to the programme made it easier to promote.

More information:
http://co-venture.ca/en/files/2012/06/PREVENTURE-PAMPHLET-09.06.2014.pdf
http://legacy.nreppadmin.net/ViewIntervention.aspx?id=264
http://guidebook.eif.org.uk/programmes-library/preventure

For a number of reasons, brief interventions are well suited to use with students in school:

- They can be an effective, positive alternative to typical responses (e.g. confrontation, lecturing or suspension) to a student whose substance use is viewed by school officials as problematic.
- They are appropriate for individuals who do not have a fully established substance use pattern, such as adolescents.
- They can be conducted during school or in after-school hours, making the intervention very accessible to students.
- Evidence is showing that some interventions can be delivered not only by health professionals, but by trained school staff (Conrod et al., 2013; O'Leary-Barrett et al., 2010).

The Preventure programme is an example of an effective programme focusing on brief interventions. Brief interventions often require a mental health or medical professional to administer them, but this intervention has also been delivered with positive results when delivered by trained school staff (Conrod et al., 2013).

The **WHO ASSIST package**[1] consists of a brief questionnaire, a guide for health professionals on how to use the questionnaire in detecting and responding to substance use and also a self-help manual for cutting down or stopping substance use. It is the result of more than ten years' work by WHO and an international group of researchers in the framework of the WHO ASSIST project. It is WHO's response to the growing demand for guidance on how to best manage problems of substance use in non-specialist health care settings. This approach, which is quick and easy to learn, is useful for all substances including alcohol and tobacco, but also cannabis, amphetamine-type stimulants, cocaine and opioids. With its effectiveness demonstrated in different cultural settings, it is set to become a keystone in the health care response to substance use.

WHO has also produced other tools for brief interventions, such as the AUDIT,[2] which targets primary health care settings.

Brief interventions can also be delivered online or via computer, and studies targeting secondary students have been found to yield positive results (Champion et al., 2013). They may be a viable option because they are more likely to be delivered as designed, and may also appeal to young people who are less likely to seek standard forms of help (White et al., 2010).

Characteristics of selected and indicated programmes associated with positive, no or negative prevention outcomes (UNODC, 2013)

Brief interventions

- ↑ One-to-one session to identify if there is a substance use problem
- ↑ Provide information or advice
- ↑ Immediate counselling to increase motivation to change behaviour
- ↑ Teach behaviour change skills
- ↑ Provide referral when needed
- ↑ Delivered by a trained professional

- ↓ Unintentionally labelling a student through the selection process for a selected or indicated programme
- ↓ Using poorly structured formats when bringing at higher-risk students together into a new group (Hennessy et al., 2015; Rorie et al., 2011).

3.2.5. Appropriate school health services

School health services are health services provided to enrolled students by health care and/or allied professional(s), either within school premises or elsewhere in the community; the services should be mandated by a formal arrangement between the educational institution and the provider health care organization (Baltag et al., 2015).

The mandate of school health services is to address the physical, mental and emotional health of students, and to provide a continuum of health promotion, prevention, and early detection and referral services. Their role is to support the school's mission by promoting the health of students, which includes preventing and reducing substance use and its health and social consequences.

Good practice calls for a package of information, counselling, diagnostic, treatment, and care services to address the range of needs of all adolescents (WHO, 2015). Given this broad base, school health services have strong potential to address student health needs and issues (including substance use issues) in an integrated way, and to support the school's academic mission.

School health services may provide their services on-site as school-based health services, as school-linked health services provided in the community, or through a combination of school-based and community based services. Regardless of the model, a key function is to provide a link between the school and health and social services in the community. As such, school health services need to be based on a formal arrangement between the educational institution and the health care provider, identifying which health services are to be provided in school, and which in a health facility, or elsewhere (WHO, 2015).

In a global review of school health services, the WHO found that services are usually provided within school premises (97 of 102 countries), and by dedicated school health staff (59 of 102) (Baltag et al., 2015). Providing services in school premises creates much greater access for young people.

While school enrolment in most developing countries is rarely universal, coverage is generally greater than that achieved by health systems. Students tend to have insufficient understanding of when, how and where to seek advice or help (i.e. lower health literacy); consequently, actively promoted services based in school are more likely to be used.

This is particularly the case with vulnerable children and young people who are less likely to access standard services (Robinson et al., 2003). For example, one study found that, compared to community based health services, students were 21 times more likely to use school-based health services for mental health-related issues, including support and counselling for substance use (Juszczak et al., 2003).

School health services are most commonly led by nurses, but doctors, psychologists, psychiatrists, dentists, social workers and counsellors may also be involved. By virtue of their professional training, nurses are very well positioned to provide a central role with school-based health services and with substance use prevention. Their professional role permits them to:

- Provide prevention education in school (e.g. concerning non-medical use of prescribed medicines by children and young people).
- Identify and safely manage a new situation in the community (e.g. an emerging substance use pattern).
- Help families and teachers recognize signs and symptoms of substance use, as well as risk factors related to use (such as anxiety, depression or attention deficit, for example) and help them also in supporting protective factors against substance use such as resilient mental health.
- Identify and meet substance use-related needs of individual students and help students or families locate resources, and assist them in finding a route to specialist services.
- When trained, deliver brief interventions to students, an effective response to substance use (see Section 3.2.4) (Pirskanen et al., 2006).
- Identify and manage emergency situations (e.g. overdose) until relieved by emergency medical service personnel, and follow up with the health care provider.
- Provide advocacy in the community on issues of concern to the health of children and youth.
- Lead and train other school professionals or other school staff to be part of the prevention project and to deliver evidence-based content related to substance use within the curriculum.

As an example of this range of roles, school nurses in the United States are called on to discourage the use and sale of e-cigarettes. As part of a comprehensive school health programme, school nurses can initiate the discussion about the dangers of e-cigarettes and ensure that e-cigarettes are included in the tobacco education curriculum and no smoking policies in schools, provide individual counselling and education to students, and identify resources for smoking cessation (US National Association of Nurses, 2015).

When some young people in the United Kingdom were asked, they felt it was very important for the school nurse to focus on 'both helping all young people keep healthy through public health programmes, and also providing specific early help and advice on teenage health issues so young people can get help, particularly around areas such as mental ill health and drug and alcohol abuse, before they reach a crisis point' (UK Department of Health, 2012).

School health nurses in England make a package of services available to schools that reflect a full continuum of services (UK Department of Health, 2012):

- **Community:** School nurses have an important public health leadership role in the school and wider community. For example, they contribute to health needs assessment, designing services to reach young people wherever they are, providing services in community environments and working with young people and school staff to promote health and well-being within the school setting. In particular school nurses will work with others to increase community awareness about the prevalence of substance use among school-age children, as well as participating in promoting and protecting health, thus building local capacity to prevent substance use and improve health outcomes.
- **Universal services:** School nurses will lead, coordinate and provide services to deliver the Healthy Child Programme (HCP) to 5–19 year olds. This includes health promotion about substance use (including alcohol, tobacco and illicit drug use) for all children and young people.
- **Universal plus:** School nurses are a key part of ensuring children, young people and families get extra help and support when they need it. They will offer 'early help' by identifying children who have initiated substance use and by providing brief intervention and/or by referral or signposting to other services.
- **Universal partnership plus:** School nurses will be part of teams providing ongoing additional services for vulnerable children, young people and families requiring longer-term support for a range of special needs, such as children whose parents have complex

needs that could be putting the child at risk (e.g. substance dependence, poor mental health and domestic violence in the household).

- School nursing services also form part of the high–intensity, multi-agency services for children, young people and families where there are child protection or safeguarding concerns.

A global review of school health services found some kind of services related to substance use in only 25 out of 102 countries (Baltag et al., 2015). It would therefore appear that there is much potential for school health services to play a larger role in a comprehensive education sector response to substance use in many countries.

Evidence and experience indicates that successful partnerships between schools and health services (Government of South Australia, 2006):

- are based on effective communication and strong interpersonal relationships;
- focus on the school's learning and academic mission;
- build on the links between health and learning and aim for sustainability;
- have common aims, objectives and goals;
- require health and education workers to understand and value each other's roles;
- are flexible and adaptable; and
- take time to develop.

3.2.6. Management of an education sector response to substance use

To be effective, national drug strategies or substance use prevention systems need to implement a range of integrated policies and interventions in multiple settings, targeting relevant ages and levels of risk, based on scientific evidence. The education sector has a vital role to play within this kind of system, alongside the health, social development, youth, justice and law enforcement sectors.

The impact of an education sector response to substance use will be a direct function of how well the response is managed at the local, subnational or national levels. Clearly, the potential for a broad, consistent, and long-term response within a country will be greatest – and impact accordingly strongest – in the presence of strong management at the national level.

Whether at the national or a subnational level, management of an education sector response needs to account for coordination of the response, training of education sector personnel, monitoring and evaluation of the response, and sustaining and scaling up the response.

Management of the education sector response also means establishing adequate resources and infrastructure for implementation over the long term. This may include (UNODC, 2013):

- A strategic document communicating the aim and nature of the response for partners and the general public;
- National standards for substance use and school substance use prevention interventions and policies;
- National professional standards for school substance use prevention practitioners;
- Endorsing a regional, centralized approval system for prevention programmes, whereby programmes are approved for use based on an evidence-based protocol (as with approval of medications based on safety and effectiveness) (Faggiano et al., 2014);
- A policy requiring schools to implement substance use prevention policies and programmes in the context of health or personal/social education and promotion;
- A plan for developing the relevant workforce that includes pre-service (i.e. university or college teacher preparation) and in-service training (received on the job) and addresses any organizational impediments to quality implementation (e.g. teacher workload, working conditions, local resources);
- Incentive programmes for teachers or other school personnel to encourage participation in prevention programmes;
- A national surveillance and monitoring data system to inform policy-makers, practitioners and researchers about the trends and patterns of substance use, and a monitoring and evaluation plan for the sector response.

i. Coordinating an education sector response

Coordination of an education sector response has two aspects:

1. Coordination of the response with other sectors engaged in a national drug strategy or substance use prevention system, particularly the health and social sector.
2. Coordination within the education sector response (i.e. between national, subnational and local actors, as well as among different subsectors/departments in the sector).

In the first instance, the education sector has a significant role to play within a national substance strategy or substance use prevention system. This needs to be pursued through a strategic partnership with the ministry of health. A joint agenda to promote young people's health and school success needs to be viewed as the greatest inter-departmental priority. Beyond this priority, the education sector response needs to also contribute to:

- The wider aims of a substance use strategy or system by ensuring quality implementation of interventions that address the substance use factors (protective and risk) that the education sector can effectively address;
- A national monitoring system aiming to clarify the nature and extent of youth substance use and the scale of responses;
- The larger strategic effort – the education sector will be viewed as a credible substance strategy partner by:
  - Lending endorsement to effective substance use prevention interventions that may be delivered in other sectors (e.g. alcohol and tobacco taxation); and
  - Having an understanding of the education sector's role in relation to the social determinants of health, the broad factors (e.g. quality jobs, adequate living conditions) that heavily influence the more direct factors affecting substance use and other health-risk behaviours (Solar and Irwin, 2010).

An effective partnership between the health and education sectors must be based on an understanding of respective mandates and ways of operating. For instance, programming cycles in the health sector tend to be much shorter than in the education sector, which only periodically go through the intensive process of updating curriculum (i.e. Research → Preparing policies related to contents → Curricula and lessons plans → Teaching materials → Training of trainers → In-service and pre-service training → Delivery in schools).
Health authorities have much expertise to offer, but they need to learn the circumstances – the strengths and constraints – of schools in their jurisdiction. Likewise, education authorities can avoid pursuing ineffective and sometimes costly initiatives when they tap into the expertise of health promotion and prevention workers.

In the second instance, coordination calls for leadership to ensure efforts between identified representatives of national, subnational and local levels – and of different subsectors, departments and units in the education sector – are well-linked. Those in a leadership position also need to absolutely commit to an evidence-based response – in other words, a response that:

- Clarifies and directly addresses child and youth vulnerabilities of relevance to their jurisdiction.
- Employs interventions that have been shown to be at least efficacious (i.e. having shown significant positive effects in controlled conditions), and ideally effective (i.e. shown to produce significant positive effects in real-world conditions).
- Is monitored and, at the very least, able to be evaluated (that is, for each level of the response, from strategic to local, there is a documented plan with clear, logical aims, objectives, and indicators for success that integrate with plans at other levels), and
- Budgets for an evaluation of the effectiveness of the response on a regular ongoing basis, analysing the extent to which it is impacting substance use behaviours or closely related factors positively.

Leaders of the education sector response need to also commit to engaging and coordinating the roles of relevant education sector stakeholders, including, for example, youth, teacher and school–parent associations, relevant NGOs, residents and community leaders, religious communities and leaders, the private sector and universities and other research institutions. A partnership with university health or social scientists can support an evidence-based response, allowing for efforts at each level – from strategic to local – to be rigorously monitored and evaluated. Roles and responsibilities for all stakeholders need to be defined to ensure a coordinated effort, making best use of available resources and minimizing duplication.

It is important to work through diverse perspectives when coordinating an education sector response. It is not uncommon for stakeholders to hold a range of opinions concerning youth substance use (e.g. from *laissez faire* to punitive) and to advocate for approaches based on ideology or past experience. The best response to various perspectives is an ongoing commitment to a strong evidence-based orientation, and the presentation of the most credible science-based information available on a question.

ii. Monitoring and evaluating an education sector response

The purpose of the monitoring and evaluation function is to help management and others learn about how well the main activities were implemented and what was achieved from them. Monitoring and evaluation also helps choose evidence-based interventions, adapt and test them carefully, and establish quality processes for ensuring fidelity in implementation, so as to increase the likelihood of positive impact on substance use and student well-being.

An education sector monitoring and evaluation function includes the following components:

Monitoring the nature and extent of substance use and contributing factors

To be fully evidence-based, an education sector response must work from an accurate understanding of the actual need or situation in that jurisdiction. Other ministries will benefit from this information as well, so this type of surveillance system will likely be situated in the home of a drug strategy or a statistical branch of government. Information of interest to the education sector and others includes:

- **Prevalence and use patterns:** What percentages of people (with a specific focus on youth by age, gender and other important characteristics) are using which substances? How often and how much? What are the health and social consequences? At what age do young people typically begin use of various substances?
- **Vulnerabilities (risk/protective factors):** What are the most important factors putting young people at risk of substance use and its health and social consequences in the particular context? Why are they initiating substance use (e.g. parenting issues, mental health problems, weak attachment to school, violence and abuse, etc.)? Why do some people who use substances transition to disorders?
- **Environmental factors:** Prices of legal substances; availability, such as store opening hours; proximity of stores to school environments; national age-limits and their enforcement, for example, via testing of under-age selling or serving of alcohol and selling of tobacco, etc.

According to 2010 Global Health Observatory data, just under half (49%) of all reporting countries conduct a national survey on children and adolescent alcohol use, and slightly fewer (42%) monitor child and adolescent drug use (with large differences between regions in both cases) (WHO, 2010).

To facilitate a better planning of education sector responses around the world there is a need for more countries to routinely gather surveillance data, disaggregated by age and gender. Global school health surveys (such as Health Behaviour in School-aged Children – www.hbsc.org; Global School-based Student Health Survey – www.who.int/chp/gshs/en; and the WHO's Tobacco Free Initiative – www.who.int/entity/tobacco/surveillance/), instrument banks (such as http://www.emcdda.europa.eu/eib), as well as the sample indicators collated within the FRESH framework all provide useful tools for planning an assessment of the need (UNESCO, 2014).

Monitoring all levels of the response (strategic to local) and evaluating the outcomes and impacts

Close monitoring of activities clarifies how resources are being used during implementation and allows for correction in mid-course. Good planning is essential for monitoring. Goals and indicators should be clear for everyone before the intervention takes place, in order to collect and record the most useful data.

For each level, both at national and local level, the kinds of data to be assembled include: inputs or resources used (including costs); activities conducted per identified need(s); and the deliverables or outputs produced.

Whether at the national strategic or local level, process monitoring is concerned with the extent to which planned outputs or activities were delivered as planned. It is also concerned with several other primary questions concerning the activities, such as:

- To what extent the planned activities reached the desired partners or target group; and
- To what extent the activities were delivered as designed.

An outcome evaluation is concerned with results, that is, what changes occurred in the targeted group as a result of the strategy or programme. Changes of interest are typically substance use behaviour, and key factors influencing substance use such as attitudes, intentions, social norms and skills, that have been targeted by the specific prevention programme under evaluation. As has been discussed earlier in this booklet, an effective substance use response can have an impact on other social and health issues (e.g. how often have you bullied or been bullied), as well as academic performance (e.g. how often have you skipped class).[15] Consequently, collection of data on these impacts is very appropriate in the context of an educator sector response to substance use, and is critical to establish whether the resources are being used in an ethical and effective manner, whether the programme is really contributing to prevention of substance use and how it could be further improved.

Considerable research expertise is required in order to be able to reliably establish whether a given programme is truly effective. That expertise is most likely to be found in academic and research institutions. Scientists often seek research agendas in the community; consequently, collaboration between academia and those leading an education sector substance use prevention response is often mutually beneficial.

Randomized controlled trials (RCTs) are the best methods to evaluate the effectiveness of a specific intervention, as they provide the highest degree of reliability. However, they require considerable expertise and resources, and thus more simple types of evaluation are sometimes preferred. For example, pre-post evaluations – where indicators of interest (e.g. tobacco use in the last month; disruptive behavior in the classroom) are collected before and after a programme – are more feasible to execute

15 See http://www.communitiesthatcare.net/userfiles/files/2014CTCYS.pdf

with smaller resources and also without professional researchers, and can provide useful indications on the effects of a given preventive approach.

It is strongly recommended to establish the effectiveness of a programme before scaling it up to national level via rigorous research (normally through multiple randomized trials). However, when a programme is still under a development, it can be advisable to test the effectiveness first with a lighter study before investing in a rigorous trial.[16] Many prevention programmes come with ready-made evaluation tools. Other good resources for finding possible indicators to be used in the evaluation are global school health surveys (such as those already mentioned above: www.hbsc.org; www.who.int/chp/gshs/en; www.who.int/entity/tobacco/surveillance/), and instrument banks (http://www.emcdda.europa.eu/eib), as well as the sample indicators collated within the FRESH framework, all provide useful tools for planning an assessment of the need (FRESH M&E Coordinating Group, 2014).

Available data suggest that only 5% of member countries report evaluating the impact of education-sector responses to substance use (UNODC, 2014). There is thus a clear need for guidance, training and support for monitoring and evaluating these activities.

Monitoring and evaluation provides critical information for those involved in delivering a strategy or programme, but it is also of great value to others. There is a real need for the evidence base on education sector responses to substance prevention to include more experiences from low-income countries (both effective and ineffective practices). Options for disseminating this information include scientific journals, knowledge networks and intervention knowledge centres such as that led by the European Drug Addiction Prevention Trial (http://www.eudap.net/Home.aspx).

Table 7 presents some sample indicators for the monitoring and evaluation of an education sector response to substance use at national or subnational level. The indicators are classified into process and outcome indicators. The process indicators are based on the FRESH pillars which delineate a comprehensive response.

16 Once a programme is operating at a national level, even if it is reaching a majority of the student population, it is typically challenging to attribute its effectiveness based on national-level data on prevalence of substance use. This is because at national level there are too many independent factors contributing to substance use, such as availability of substances, that might be impacting the national substance use trends besides the prevention programmes.

Table 7. Sample indicators for measuring education sector responses to substance use

Indicators	Data collection frequency	Data collection methods
PROCESS INDICATORS		
SCHOOL HEALTH POLICIES		
Percentage of schools that have a written substance use policy (or health policy with a strong substance abuse component) prohibiting use of drugs, alcohol and tobacco by students and by faculty and staff on all school premises and during all school-sponsored activities	Every 3 to 5 years	Global School Health Policies and Practices Study (G-SHPPS)
Percentage of schools that have a written policy on how to respond in a non-punitive manner when students are caught using alcohol, tobacco or drugs on school premises or during school- sponsored activities	Every 3 to 5 years	G-SHPPS
SAFE LEARNING ENVIRONMENT		
Percentage of schools where substance abuse policies are regularly enforced	Every 3 to 5 years	G-SHPPS
Percentage of students who were taught about tobacco use prevention	Every 3 to 5 years	G-SHPPS
SKILLS-BASED HEALTH EDUCATION		
National curriculum includes a given number of hours per grade for evidence and skills-based education	Every 2 to 3 years	Curriculum analysis (refers to the UNODC Standards for definition of evidence- based)
SCHOOL-BASED HEALTH SERVICES		
Percentage of school-based clinical/infirmary staff trained in substance abuse prevention and treatment	Every 2 years	School and teacher surveys
OUTCOME INDICATORS		
LEARNING ABOUT SUBSTANCE USE		
Percentage of students answering they would accept if one of their best friends offered a drink of alcohol	Every 2 years	School survey/GSHS
Percentage of students answering they have been taught resistance skills in relation to alcohol	Every 2 years	School survey
SUBSTANCE USE BEHAVIOUR		
Percentage of schools where staff members do not smoke during the day or smoke in designated areas	Every 2 years	School and teacher surveys
Percentage of schools where students do not smoke on school grounds	Every 2 years	School and teacher surveys
Percentage of students who had at least one alcoholic drink during the last 30 days	Every 3 to 5 years	GSHS
Percentage of students who have used marijuana during the past 30 days	Every 3 to 5 years	GSHS
Percentage of students who have used amphetamines or methamphetamines (also use country-specific slang terms) during their life	Every 3 to 5 years	GSHS
Percentage of students who smoked cigarettes during the past 30 days	Every 3 to 5 years	GSHS
Percentage of students aged 13–15 years who have ever tried cannabis	Every 3 to 5 years	School survey/GSHS or Health Behaviour in School-Aged Children (HBSC)
Percentage of students aged 13–15 years who have ever been drunk	Every 3 to 5 years	School survey/GSHS or HBSC

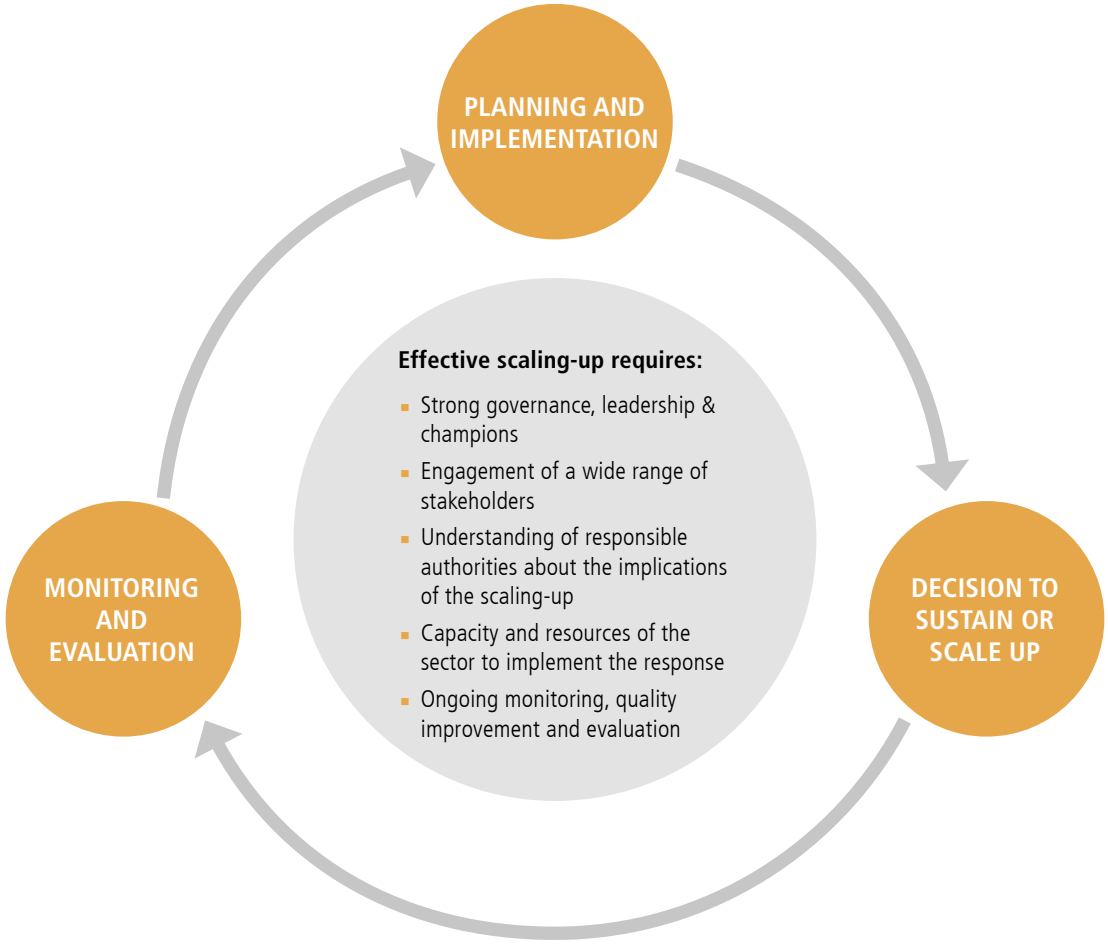
Adapted from: FRESH M&E Coordinating Group, 2014.

4. CONSIDERATIONS FOR SUSTAINING AND SCALING UP EFFECTIVE EDUCATION SECTOR RESPONSES TO SUBSTANCE USE

This booklet endorses a comprehensive sector response incorporating a number of elements to substance use, and has reviewed the evidence associated with these elements.

It is challenging to evaluate a fully comprehensive approach. Rather, it would be most feasible to evaluate individual programmes or approaches within an initiative. It will be in the context of an individual programme or approach (e.g. a practice, policy, curriculum, teacher training programme, etc.) that sustaining and scaling up an education sector response will be discussed.

Figure 20. Considerations for sustaining or scaling up education sector responses to substance use



At the national, subnational and local levels, management decisions on the future of a programme or approach would typically occur at the end of a substance use prevention programme cycle, or skills-based curriculum cycle. In either case, monitoring and evaluation data and results are critically important when it is time to make those decisions. During the initial development, or when adapting a programme already shown to be efficacious elsewhere, light evaluations of effectiveness (e.g. pre-post evaluation with no comparison or control group), ensuring the programme is working the way it is supposed to be working, are feasible and recommended.

Options are as follows:

- If an intervention or programme has been shown to be ineffective or in some way harmful in its current form, the options are to go back to the programme logic and process evaluation results to make revisions, or to draw the programme to a close. Even in the face of weak results, with sound documentation on the process, authorities can make a strong case for sustaining the programme in a revised form.
- If a programme is showing a positive effect based on evaluation, the choice is to sustain the effort or to expand it. If the programme was subjected to a light evaluation, a prudent next step would be to continue the work, but subject it to rigorous process and outcome evaluation (i.e. quasi-experimental or randomized control trial) while mindful that this may not be feasible in all contexts because of the cost). If results are positive and the quality of the evidence is strong, the programme needs to be considered for scaling up so that other populations can benefit.

CASE STUDY 13: An evidence-based approach – Scaling up a family skills programme in Uzbekistan

Authorities in Uzbekistan have shown that it is possible to adopt, adapt and scale up an evidence-based prevention programme and maintain programme effectiveness. Families and Schools Together (FAST) is an after-school family skills programme offered for eight weeks to all children in the same grade, and their families. FAST aims to support and strengthen family relationships as well as the life skills of children and parenting skills of parents. It also aims to support relationships among the families, as well as between the families and the community and the schools. The programme has been found to be effective in preventing youth substance use and other health-risk behaviours in numerous rigorous studies in different contexts.

In 2012, the Government of Uzbekistan, led by the Ministry of Public Education (MPOE) committed to an evidence-based approach to substance use prevention and chose to adopt FAST. With the support of UNODC, MPOE led a careful process that involved identifying pilot sites, culturally adapting and translating the programme (led by a national cultural adaptation group), training local personnel and evaluating the results of the pilot. The pilot programme was delivered to 150 families.

The local adaptation was tested via a pre- and post-study design. Parents answered questions about social relationships and support, involvement in their child's education, self-efficacy, family environment and the child's behaviour. Teachers completed a questionnaire about the child's behaviour and academic performance, and about the parent's involvement in the child's education.

The evaluation of the pilot showed statistically significant changes and positive outcomes for children and families in terms of:

- reduced smoking tobacco and drinking alcohol in family
- increased parent-to-parent reciprocity and trust, which strengthens the community
- enhanced parent involvement in school
- reduced family conflict
- improved parent–child bond.

In 2015, following the successful pilot, the initiative was scaled up to three regions in Uzbekistan, with 240 more families receiving the programme.

The role of MPOE in establishing and scaling up the programme has been key throughout – first of all in its willingness to commit to an evidence-based prevention programme. Beyond that, the ministry played an active role by recommending schools to participate, recruiting trainers, providing salaries for trainers, assigning schools and sponsoring a Family Skills Training Programme Resource Centre.

More information: https://www.familiesandschools.org/why-fast-works/evidence-based-lists/

For a variety of reasons, programmes or approaches are often undertaken as projects, without giving sufficient thought to longer-term implementation. Sustainability and scaling up questions are necessarily answered only upon completion of a programme cycle, but the groundwork for answering these questions needs to be laid at the very beginning by adopting a commitment to quality planning, delivery and documentation of the effort (WHO, 2011). This commitment would entail the following:

- A mechanism of review and adjustment of the sector response at regular intervals, feeding into other related strategies;
- 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 prevention strategies.

Sustaining a promising programme or approach

Success in sustaining or institutionalizing a programme or approach that is showing promise will depend on a number of factors, some of which will be out of the control of education sector managers (e.g. changes in the political environment). It is nevertheless important to understand the environment (e.g. political support, capacity of host organization(s)).

In many cases, programmes or approaches are undertaken as pilot projects without strong endorsement from managers of the host institution. In these instances, those managers must be persuaded to support the values behind the new approach, and become convinced of its merits. Advocating for a programme or approach is easier when documentation shows that a methodical approach to planning, implementation and evaluation has produced promising results.

An institutionalized local programme or approach would have features such as:

- Having policy statements to support programme efforts;
- Being a line item in a permanent departmental budget (education or health);
- Having a place in an organization chart;
- Having permanent staff assigned to specific programme roles;

- Having position descriptions that include prevention functions and level of effort;
- Having facilities and equipment for programme operations;
- Drawing internal resources from the education sector or health agency (e.g. training or monitoring and evaluation support);
- Developing an institutional memory for important agreements and understandings.

Scaling up an effective initiative or programme

When education and health authorities have been able to show, using a rigorous evaluation, that a strategy or programme has delivered positive results, scaling up to a subnational or national level is an important consideration because it will allow more young people – and society as a whole – to benefit.

Scaling up may be defined as the process by which implementation of an evidence-based programme is expanded in a locale, while retaining effectiveness (that is, attending to both coverage and quality) (Milat et al., 2015; WHO, 2011). Scaling up can be either horizontal (expansion or replication) or vertical in nature (institutionalizing through political, policy, budgetary changes, etc.), (UNESCO, 2014). Because scaling up occurs in complex education and health systems, there is no single approach that can be applied in all settings, and any approach will need to be tailored to the particular jurisdiction.

An early question is which education authorities/communities (if any) have the capacity to carry out the initiative or programme, in terms of training, delivery systems, technical resources, monitoring and evaluation capacity, and commitment to quality implementation. Those participating will need to prepare and work from a well-defined scale-up plan, with a budget. The plan should specify the features of the intervention that are essential for successful outcomes, the features of the context that are needed for successful uptake, and the method that will be used, considering the political, cultural and institutional context.

It is important to see scaling up as a dynamic process that may involve the need to minimize trade-offs between coverage and quality of implementation (UNESCO, 2014). Overall, the following considerations will guide the preparation and implementation of a credible scaling-up plan for an education sector response to student substance use (Fixsen et al., 2013; Gilson et al., 2010; UNESCO, 2014; WHO, 2009; WHO, 2010):

- Strong governance, leadership and champions need to be in place to support scaling-up activities;
- A wide range of stakeholders (including educators, students, community, etc.) need to be engaged from early on;
- Responsible authorities need to see scaling up as more than an exercise in technology transfer or dissemination of training and information, but rather as a social, political and institutional process that needs to account for the (quite likely diverse) perspectives, values and interests of various stakeholders;
- Readiness in the sector is key; relevant staff and officials in the sector should see the benefit of change, have sufficient time and resources to change, and have (or be supported to develop) the capacity to deliver the new programme, and to evaluate the process and outcomes;
- Scientific evidence needs to be systematically and routinely used, as ongoing monitoring, continuous quality improvement, and evaluation are integral to scaling up;
- Long-term sustainability needs to be planned from the outset.

One key consideration arising from the literature is that simple, easily implemented interventions are easier to take to scale than those that are more complex (e.g. Thaker et al., 2008). A fully comprehensive approach endorsed in this booklet is a complex undertaking. Although the overall strategy is complex, individual intervention components are easier to understand and adopt by key stakeholders. Hence, scaled-up implementation of a comprehensive response may be best undertaken in a staged, intervention-by-intervention manner, ensuring quality implementation at each stage.

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Education
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BOOKLET 10

Education sector responses to the use of alcohol, tobacco and drugs

GOOD POLICY AND PRACTICE IN HEALTH EDUCATION

This publication was developed through an international consultation process led by UNESCO in partnership with the United Nations Office on Drugs and Crime (UNODC) and the World Health Organization (WHO), members of the UN Interagency Task Force on the Prevention and Control of Noncommunicable Diseases. It provides the context and rationale for improved education sector responses to substance use, presents evidence-based and promising policies and practice, and suggests issues to consider in sustaining and scaling up effective responses.

The intended audience is education sector and school health policy-makers, planners and curriculum developers, as well as school health personnel.

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