

Chapter 6.  
**YOUTH** and

**DRUGS**



***An evidence-based overview of substance use by young people is provided in the beginning of the chapter, drawing on statistical data whenever available and key informants otherwise. The present situation and trends are elaborated and comparative international aspects highlighted, followed by a description of current and best practices in demand reduction programmes and youth participation in those programmes.***

## **REASONS FOR SUBSTANCE USE AND ASSOCIATED PROBLEMS AMONG SOME YOUTH**

When the subject of drug use comes up, it is often in relation to young people. This makes some sense, for while there are significant drug issues among other populations, it is during the younger years that most substance use begins. If a person in today's world has not begun to use alcohol, tobacco or an illicit substance during this period, it is unlikely he or she ever will. Young people in almost all countries tend to use these substances to a greater extent and in riskier ways than do older people, and this behaviour can result in significant problems in the short and long terms.

People use substances to satisfy a need or to serve a function. A drug may meet certain needs or desires through its effects (including pain relief and pleasurable feelings) or through the symbolism associated with its use (a sense of rebellion or feeling of belonging, for example). All substance-use decisions involve a weighing of benefits against risks as perceived by the individual. Young people use substances for many of the same reasons adults do (to relieve stress or heighten enjoyment); however, there are some reasons for use that arise from needs specifically related to adolescent development. Sources of motivation include the desire to take risks, demonstrate autonomy and independence, develop values distinct from parental and societal authority, signal entry into a peer group, seek novel and exciting experiences, and satisfy curiosity.<sup>1</sup>

More and more young people worldwide are growing up in an environment increasingly tolerant of various forms of substance use, both medical and non-medical. The pharmaceutical and alternative medicine industries continue to grow and to promote a climate of "solution by ingestion". An unprecedented level of access to media by youth worldwide has meant that more young people than ever are "consuming" a globalized, Western-dominated pop culture that tends to tolerate substance use. The tobacco and alcohol industries have added to this environment by utilizing their powerful marketing capacities to influence young people.

Beyond these broad influences there are always local and personal factors involved in a young person's decisions regarding substance use. Youth may be influenced strongly by their perception of how common or "normative" substance use is. For example, if a young person's friends smoke, drink or use other substances, or if there is a sense that others in the same networks do, that young person is more likely to make the same choices. Decisions on substance use are also linked to perceptions of risk associated with a particular drug.<sup>2</sup> As the perceived risk associated with the use of a drug increases, rates of use decline.<sup>3</sup> The reverse is also true, whereby an emerging drug may experience a "honeymoon period" during which there is little infor-

mation available about risks or harm.<sup>4</sup> Some young people may use substances as consumer items, along with clothes and music, to establish an identity or image for themselves.<sup>5</sup> Some youth do not choose substance use per se, but rather opt for a lifestyle within which substance use goes hand in hand with alienation, rebellion and the search for freedom and friendship.<sup>6</sup>

Adolescent attitudes and beliefs about substance use and risk tend to change rapidly, with tolerance levels rising as adolescence progresses. Youth, to a greater extent than adults, tend to minimize the risks linked to their own substance use, with the tendency more pronounced among young men than among young women.<sup>7</sup> It has long been acknowledged that young people typically give less attention to the long-term risks associated with substance use than they do to the more immediate consequences.<sup>8</sup>

In recent years, observers of substance use patterns have begun to distinguish between youth living in difficult circumstances and “mainstream” youth, who generally have more opportunities, options, and support. The former group includes many youth living in developing countries, but also youth living out of the mainstream in the developed world. For many mainstream youth, substance use is increasingly woven into a leisure culture in which intoxication is viewed as a “time out” from the normal rules.<sup>9</sup> Use of substances by youth living outside the mainstream—a group often termed “especially vulnerable”—tends to be aimed more at relieving the pressures deriving from difficult circumstances, which may include physical or emotional pain or longer work hours, unemployment, neglect, violence, homelessness, sexual abuse or war. While the lines between these two worlds are blurred at times, the associated issues and challenges are quite different.

Given the increasing acceptance of substance use in many regions, the easy availability of intoxicants and the various challenges associated with adolescent development, all young people need to be viewed as being vulnerable to some extent to substance use problems.<sup>10</sup> Any substance use obviously poses risks or the potential for risk. Even a single drug-using experience or a pattern of so-called experimental use can result in serious problems such as an overdose, an accident or, in the case of illicit drugs, criminal prosecution. However, most youth who experiment with substances do not suffer harm as a result and do not move on to other drugs or more problematic use.

Ongoing heavy use of one or more substances increases the likelihood that associated harm will occur. The broad range of problems reported by young people includes deteriorating family relations, poorer performance in school, unwanted and unprotected sexual activity, accidents, violence, trouble with authorities and the increased risk of HIV. Some youth engaging in heavy substance use will continue to do so into adulthood and will experience various longer-term health and social problems.

The problems that young people experience in relation to their use of substances are generally seen to arise from a combination of individual, family, school, community and societal factors or vulnerabilities, which at least at the basic level are well documented.<sup>11</sup> A major challenge in child and adolescent development is identity formation.<sup>12</sup> Adolescents that do not achieve satisfactory development are particularly at risk of experiencing the harmful effects of substance use. This is not

to suggest that substance-use problems cannot arise in the context of “normal” adolescent development. Indeed, the normal incidents of impulsive, reckless behaviour in early adolescence, or a temporary state of identity confusion at any phase of psychosocial development, could represent a time of vulnerability for substance use. However, heavy continued use of substances through adolescence can have the effect of stalling psychosocial development.<sup>13</sup>

Not surprisingly, the quality of family life has been shown to play a very important role in determining the likelihood of substance use.<sup>14</sup> Parents everywhere experience pressure to attend to family needs while generating sufficient income. A key informant in Thailand observed that “parents have to fight for income and the family system is weak, with members leaning less on each other”.<sup>15</sup> In the United States, students who perceive their parents to be effective (being good listeners, establishing rules, setting expectations, and keeping on top of their teens’ activities) also report significantly lower use of alcohol, tobacco and illicit drugs.<sup>16</sup> Parental alcohol or other substance dependence increases the risk of a young person developing substance use problems, with the extent of susceptibility determined by a complex mix of genetic and environmental factors. Transitions or significant changes in one’s environment, such as moving to a new neighbourhood or school, the loss of a close family member, or parental separation, can create a strong sense of vulnerability in a young person.<sup>17</sup> Evidence shows that school dropouts and those with poor marks or little attachment to school are at higher risk or are already regular or heavy substance users.<sup>18</sup>

Youth designated especially vulnerable often have difficult family backgrounds and mental health issues. Street youth who inject drugs tend to present this kind of picture. They are more likely than street youth who do not inject drugs to report backgrounds that include parental substance use, forced institutionalization, and a history of “survival sex”.<sup>19</sup> There is some indication that high-risk youth who progress into injecting drug use from other forms of drug use are more likely to experience early and sustained sex trading, to demonstrate a low level of commitment to school, and to be a victim of violence at the time of onset.<sup>20</sup>

A body of international research is showing that the general health status of a society is heavily influenced by the social, educational and economic circumstances of its people, with general educational and income levels and income disparities constituting the primary indicators in this regard.<sup>21</sup> Although the relationship between these determinants of health and substance use problems requires more investigation, there may well be a link between the factors listed and the use of substances by young people.

Especially vulnerable young people in a variety of situations have voiced opinions that seem to support this premise. Given the opportunity to generate and explain their own solutions, youth in a poor neighbourhood in the United States judged the best preventive mechanism to be “more jobs, more education and more scholarships for teenagers” rather than more prevention programmes focusing on risk behaviours.<sup>22</sup> In a similar vein, youth in developing countries often include income-generating programmes in their prevention work.<sup>23</sup> Street youth indicate that basic needs such as food and stable housing are their priorities, while job training, educational upgrading

and personal counselling are also important.<sup>24</sup> These observations by young people underscore the wisdom of building on “protective” factors rather than focusing only on reducing risk factors in prevention work.

When young people use substances to cope with the lack of basic rights and necessities such as food, clothing, shelter and education, the result may be further infringements by authorities.<sup>25</sup> Penalties associated with the use of illicit substances can be harsh, and users often become more marginalized in their communities.<sup>26</sup> In places where public order and stability are an issue, there may be general public support for repressive approaches that do not follow due legal processes, and that violate the rights of children and youth on the street.<sup>27</sup> The general stigma surrounding street youth and illicit drug use represents a significant barrier to reaching and helping these young people and may very well contribute to more problematic use.

## TRENDS AND PATTERNS OF SUBSTANCE USE BY YOUNG PEOPLE

### Availability of data

An accurate understanding of the nature and extent of substance use by young people is critical to the development of evidence-based responses. The level of understanding of youth substance use worldwide is better than ever, but many gaps still remain. A few countries are conducting broad-based school surveys using methodology that allows comparison; however, a much greater number are using methods and measures that make comparison difficult. Some countries carry out broad population drug-use surveys of persons aged 15 years and above, and this allows analysis of use among at least a portion of youth. These broad surveys require substantial resources, so many countries (including some G-8 members)<sup>28</sup> do not conduct national school or population studies on a regular basis. Substance use by youth not attending school or living at home will not be accounted for in these surveys. Substance use tends to be higher among youth living out of the mainstream; however, because of the difficulties in reaching them, studies of these young people tend to include small, non-random samples, and findings cannot be applied to other populations.

In some regions, the only information on drug use among youth may be from key informants. These officials may be sufficiently in touch with the community to provide an accurate picture, but there have been instances in which young people who were studying the issue questioned the observations of adult informants.<sup>29</sup> In some areas, key informants may have only rough indicators such as drug supply seizures and other drug-related criminal charges as a reference.

### Overall situation

National student drug-use data that are recent and reasonably comparable are available only from Australia, Europe and the United States. In other countries and regions, information is sketchy. The collection of data on legally available substances is at times undertaken separately from data collection relating to illicit substances. Underreporting of personal drug use by youth in household and school surveys, or even during interviews, is likely to be an issue in regions with strong taboos or penalties against substance use, or where there exists a general mistrust of authorities. Consequently, caution is required in making comparisons.

In jurisdictions in which drug use among youth has been tracked over the long term (Ontario, Canada, and the United States), the late 1970s and early 1980s represent historic high points for the use of most substances. Rates generally declined from that period into the early 1990s, after which they began to rise again. Similar results have been obtained in jurisdictions that began monitoring trends more recently (including Australia and Europe). Use rates appear to have peaked in the late 1990s at levels approaching the historic highs of previous decades.<sup>30</sup>

Throughout this period, alcohol, tobacco and cannabis have remained the substances most commonly used by youth around the world. The first substances used are generally tobacco, alcohol and, in some communities, inhalants; the age of first use is usually lower in developed countries. The use of substances (with the exception of inhalants in some regions) almost always increases with age, so among students the highest rate of use is generally recorded in the last two years of secondary school, continuing into early adulthood in most countries.<sup>31</sup> In almost all regions boys are more likely than girls to use all substances (exceptions are the non-medical use of medications in a number of countries and alcohol and tobacco use in several European countries) and are more likely to use them in risky ways. Rates of alcohol and tobacco use by students in Europe appear to be the highest in the world, and figures indicate that illicit drug use rates are highest among students in Australia and North America (Canada and the United States). Although data are not readily available, the lowest rates of use for all substances appear to be in countries strongly influenced by Islam, where prohibitions are more likely to be clear and strictly enforced.

Beverage alcohol is the substance most widely consumed by young people worldwide. Alcohol use is interwoven into many cultures and, in some, the first drinking experience occurs in the context of family events. However, alcohol represents the greatest public health burden, in large part owing to acute alcohol-related health issues arising from violence and accidents among adolescents and young adults.<sup>32</sup> In 30 European countries, 61 per cent of grade 10 students reported having used alcohol in the past 30 days, compared with 40 per cent in the United States. In Europe, past-month rates among grade 10 students varied widely, ranging from 36 per cent in the former Yugoslav Republic of Macedonia to 85 per cent in Denmark. According to separate studies published in 2001, approximately 65 per cent of adolescents in Australia (14- to 19-year-olds) and Ontario, Canada (grade 7-13 students), reported past-year alcohol use.<sup>33</sup> Reports covering the past decade indicate that current alcohol consumption (either past-year or past-month use) in Central and South America ranges from 37.8 per cent (among 15- to 19-year-olds in the Dominican Republic) to 43.8 per cent (among urban secondary school students in Sao Paulo, Brazil). In Africa, even though alcohol consumption is said to be by far the most troubling substance-related issue affecting the general population, rates of use by youth appear to be significantly lower than in Western countries.<sup>34</sup> Several studies in various African countries during the past decade have found that among students, between 8.8 per cent (10- to 14-year-olds in Lesotho) and 42 per cent (those attending secondary school in Kenya) were current users. Current-use figures from the past decade are largely unavailable for South-East Asia; however, a study of children and youth aged 10-17 years in Nepal found that 17 per cent had used alcohol in the past year and 9.2 per cent in the past



month.<sup>35</sup> In a study of vocational students in Thailand, alcohol use in the past three months was reported by 92.5 per cent of males and 80.5 per cent of females.<sup>36</sup> Survey reports indicate that 70 per cent of senior high school students (roughly equivalent to grade 10) in Japan and 80 per cent in China had used alcohol at least once. In all regions, use increases with age. In developed countries, females are about as likely as males to be current users, while in developing countries males are more likely to be current users. In virtually all countries, males are more likely to use in problematic ways; however, there are indications of a shift in this pattern (further details are provided later in the chapter).

Tobacco use is one of the chief preventable causes of death in the world. Tobacco is often the first substance used by children and youth, with an estimated 20 per cent of young smokers worldwide beginning before the age of 10.<sup>37</sup> A report prepared by a Swedish organization in 2000 indicated that an average of 37 per cent of grade 10 students in 30 European countries had smoked at least one cigarette in the past 30 days.<sup>38</sup> The average incorporated widely disparate national rates ranging from 16 per cent in Cyprus to 67 per cent in Greenland. Two recent studies revealed that among grade 10 students in North America, rates of past-30-day use were 26 per cent in the United States and 29.9 per cent in Ontario, Canada.<sup>39</sup> Past-30-day use rates are reportedly close 20 per cent in Costa Rica, Jordan and South Africa, and 10 per cent or less in Barbados, China, Sri Lanka, Venezuela and Zimbabwe. In most countries boys are more likely than girls to smoke, though the reverse is true in a number of countries in Europe including Denmark, France, Greenland, Ireland, Norway and the United Kingdom.<sup>40</sup> A small proportion (less than 5 per cent) of students in North America have reported the use of "bidis", a flavoured, unfiltered cigarette.<sup>41</sup>

Cannabis is the illicit substance most commonly used by youth in every region. Worldwide, the use of this substance accounts for the vast majority of illicit drug use by young people, representing about 90 per cent of all illicit drug use among students in Australia and the United States and almost 95 per cent in Europe, for example.<sup>42</sup> In several countries, including Australia, Canada, France, Ireland, the United Kingdom and the United States, it might be said that cannabis use is normalized, with more than 25 per cent of all secondary school students reporting past-year use. In Europe, past-year rates for grade 10 students range from 1 per cent in Romania to 31 per cent in France. In sub-Saharan Africa, cannabis is considered the main illicit drug of concern, with increasing use by young people being cited in several countries.<sup>43</sup> Data on cannabis use in Asia are scarce, but two studies of youth populations showed lifetime prevalence rates (the proportions of those surveyed who have ever used the substance) of 4.5 and 6 cent.<sup>44</sup>

Much smaller numbers of young people use illicit substances other than cannabis. However, the use of other substances is much more likely in North America than in Europe (23 per cent versus 6 per cent of grade 10 students in the respective regions have ever used another substance). Amphetamine-type stimulants (ATS), including drugs such as Ecstasy and methamphetamine, are the most commonly used illicit substances after cannabis among high school students everywhere data are available; however, nowhere is lifetime prevalence higher than 10 per cent. A major worldwide concern with these substances is the likelihood of unknown adulterants being

added, with possibly fatal consequences.<sup>45</sup> Methamphetamine is currently the leading substance of concern in South-East Asia, partly owing to its easy and inexpensive production. A study in Thailand found that 29 per cent of vocational students (39 per cent of males and 18 per cent of females) had used methamphetamine.<sup>46</sup> Methamphetamine has a higher abuse potential than Ecstasy; however, there are indications that Ecstasy may cause long-term damage as well. While most do not continue to use Ecstasy beyond early adulthood, a small proportion are heavy continuous users who are also more likely to use other substances.<sup>47</sup>

Inhalants such as glue, nail polish, cigarette lighter fluid, hairspray, paint thinner, gasoline/petrol, correction fluid and amyl nitrite (sometimes called poppers) are inexpensive and easy to purchase in all regions and therefore collectively constitute the drug of choice for especially vulnerable young children worldwide. The “high” occurs very quickly, with effects similar to alcohol-related drunkenness, but there are those who experience something like hallucinations. Street youth often sniff glue or other inhalants to mask hunger and cold. Sniffing can also be a social activity that allows users to pool their money and, in some cases, to present an anti-establishment image.<sup>48</sup> Inhalant use is an issue that spans the globe, though rates vary widely. Among 40 countries supplying lifetime prevalence data during the 1990s, 16 reported rates of lower than 5 per cent, 15 reported rates of between 5 and 10 per cent, and 10 reported rates of 10 to 20 per cent.<sup>49</sup> Rates in poorer communities and among indigenous peoples can be much higher. For example, in Sao Paulo, Brazil, nearly 24 per cent of 9- to 18-year-olds living in poverty had tried inhalants. More than 60 per cent of youth have reported use of inhalants in several Native communities in Canada and the United States. In Africa, inhalants and cannabis appear to be the illicit substances most commonly used by youth (falling short of the number using alcohol and tobacco).<sup>50</sup>

Currently, the highest reported rate of cocaine use is among grade 11 students in Ontario, Canada, where 7 per cent claim past-year use (in the United States, where the year of peak use is grade 12, fewer than 5 per cent of students report past-year use). The use of heroin by injection is generally a behaviour of marginalized persons in urban areas;<sup>51</sup> rates among school-age youth tend to be relatively low (less than 2 per cent, though 4.3 per cent of Australian students aged 15-16 years recently reported using opiates). Rates of heroin smoking are usually higher, however. In Europe, for example, Latvia, Poland, and Romania have reported rates of 5 to 8 per cent—the highest in the region for grade 10 students. Though not used for psychoactive effects, steroids are illegal and can have serious consequences. A relatively small percentage of youth (less than 3 per cent in Australia and the United States, predominantly males) use steroids to enhance body image and/or athletic performance.

Over the years, medicines have been diverted and used for non-prescribed, non-medical purposes. Past-year non-medical amphetamine use by grade 10 students ranges from 6 per cent in Australia and 7.8 per cent in Ontario, Canada, to 12 per cent in the United States. A stimulant medication that has been diverted and used non-medically by youth in several cities in the United States during the past decade is Ritalin.<sup>52</sup> Ritalin is prescribed for people with attention deficit hyperactivity disorder (ADHD), for

whom it has a calming effect; when snorted or injected, it rapidly reaches the brain, producing an effect similar to that of cocaine.<sup>53</sup> Rates of past-year non-medical use of tranquillizers by grade 10 students range from less than 6 per cent in North America to 12 per cent in Australia. Tranquillizer use is reportedly prevalent in Côte d'Ivoire, with some indication of use among street children.<sup>54</sup> Media reports from Bangladesh suggest that young people are among those using phensidyl cough syrup. The syrup reportedly contains alcohol, codeine (an opiate) and ephedrine (a stimulant) and is cheap and readily available in comparison with other alcoholic drugs.<sup>55</sup> In a significant proportion of countries providing data, rates of non-medical prescription drug use are higher among females.

Overall substance-use trends are summarized in table 6.1.

**Table 6.1**  
**Lifetime use of alcohol, tobacco and other drugs among 15- to 16-year-old (Grade 10) students in various industrialized country jurisdictions, 1999 (percentages)**

Substance	Europe:low	Europe:high	United States	Australia	Ontario, Canada
Alcohol	68	98	70.6	92.0	80.9
Tobacco	50	50	50	57.6	46.8
Cannabis	1	35	40.9	42.8	42.7
Inhalants	1	22	17.0	21.3	7.7
Ecstasy	—	6	6.0	5.0	4.5
Heroin/opiates	—	8	2.3	4.3	2.7
Cocaine	—	3	7.7	4.0	4.8
LSD*	—	5	8.5	9.3	13.2
Amphetamines	—	8	15.7	9.3	10.9
Tranquillizers/ sedatives (non-medical)	2	18	7.9	21.5	8.7

Sources: Europe: Swedish Council for Information on Alcohol and Other Drugs, *1999 ESPAD Report* (2000); United States: National Institute on Drug Abuse, *Monitoring the Future*; Australia: Department of Health and Aged Care, "Australian secondary students' use of alcohol in 1999"; and Australian Institute of Health and Welfare (for information on other drugs); and Canada: Centre for Addiction and Mental Health, *Ontario Student Drug Use Survey* (1999).

\*Lysergic acid diethylamide.

## Notable recent trends

In Europe and North America, alcohol-use patterns among youth appear to be converging with respect to beverages of choice (beer and other low-alcohol drinks) and the growing tendency to drink to intoxication. In the United Kingdom in 2000, for example, just under two-thirds of young men aged 20-24 years drank hazardously, and just under one-third of young women aged 16-19 years did so.<sup>56</sup> These drinking patterns are even being observed in Southern European countries that have traditionally used alcohol quite differently. Aggressive marketing by the alcohol industry interna-

tionally is being cited as a possible factor.<sup>57</sup> For example, the industry recently began to market alcoholic versions of “energy drinks” to youth involved in the dance club scene (more is written on energy drinks below). Other products with clear youth appeal include “alcopops”, low-alcohol beverages introduced in various regions including Europe and South-East Asia in the mid-1990s, and “Zippers”, gelatin shots containing 12 per cent alcohol in a variety of flavours, introduced more recently in North America.<sup>58</sup> In addition, Internet sites sponsored by alcohol producers appear to be aimed at the youth market.<sup>59</sup>

Tobacco use in North America, already lower than in Europe, has continued to decline significantly since the mid-1990s. In Ontario, Canada, the rate of past-year tobacco use by secondary school students fell from 29.2 to 23.6 per cent between 1999 and 2001, and past-month use among grade 10 students in the United States fell by 30 per cent between 1997 and 2001. This represents a very positive trend, since tobacco is a major contributor to poor health. In contrast, little change has occurred overall in Europe since the mid-1990s.<sup>60</sup>

The use of cannabis and other illicit substances in regions with higher prevalence rates, including Australia, Canada, the United States and certain countries in Western Europe, has stabilized and in some cases declined after rising through the mid- to late-1990s. At the same time, use rates in lower-prevalence European countries, in particular Central and Eastern Europe, have continued to increase, creating a convergence effect. Heroin use in Central and Eastern Europe has risen dramatically and now exceeds Western European levels, and while cannabis use has increased among lower-prevalence countries such as Finland and Norway, it has decreased in higher-prevalence countries such as Ireland and the United Kingdom. The net effect is that lifetime substance use among 15- to 16-year-olds has risen by more than 40 per cent in Europe since the mid-1990s, a higher growth rate than that reported in North America.

Over the past decade, use rates have increased more for Ecstasy and other ATS than for any other drug worldwide. Patterns of Ecstasy use also appear to be converging. Early rates of relatively high prevalence in several Western European countries in the mid-1990s have stabilized, whereas rates in Canada, Eastern Europe and the United States have increased in recent years and in some cases have surpassed Western European rates. Methamphetamine has replaced heroin as the drug of primary concern in South-East Asia. While prevalence rates for Ecstasy and other ATS are low in other regions, the number of references to these substances in country and media reports is increasing.

Though trend data are not available, several products using the stimulants ephedrine and/or caffeine appear to be increasingly popular with young people. In some cases, these products are promoted as “energy drinks” and, as mentioned above, are found in the bar and dance scene in Europe and the United States, sometimes premixed with alcoholic beverages.<sup>61</sup> In other cases, products containing ephedrine are sold as dietary or sports supplements to enhance athletic performance. Products containing ephedrine are generally less regulated, even though adverse effects can include stroke, heart attack, heart rate irregularities, seizures, psychosis and death.<sup>62</sup>

## Patterns of hazardous substance use

A significant minority of young people around the world place themselves in serious danger by, for example, using to the point of intoxication, using while engaged in other activities, combining different kinds of drugs, and injecting substances.

Reports from various regions are indicating a growing trend towards alcohol use to the point of intoxication. A pattern of increased binge drinking by both males and females in Europe has raised concerns among authorities.<sup>63</sup> A report prepared in 2001 revealed that close to 40 per cent of regular cannabis users in Australia (12 per cent of the total sample) had engaged in past-week binge drinking.<sup>64</sup> In Ontario, Canada, the prevalence of binge drinking increased from 17.7 to 25.3 per cent among secondary school students between 1991 and 2001.<sup>65</sup>

As the use of substances such as alcohol and cannabis becomes normalized in some populations, the likelihood of it being combined with other activities increases. When young people using these substances engage in activities that call for motor coordination or intellectual functioning, as is the case with driving, school work or athletics, the situation becomes particularly hazardous. A recent study of a broad sample of youth in a North American jurisdiction found a strikingly high percentage reporting the use of intoxicants while attending school or playing games.<sup>66</sup>

The link between alcohol or other drug use and unwanted or unsafe sexual activity is a concern. In a recent United States study, 18 per cent of adolescents reported drinking at the time of first intercourse, while 25 per cent of sexually active grade 9-12 students reported using alcohol or other drugs during their most recent sexual encounter.<sup>67</sup> In a study of vocational school students in Thailand, researchers recently reported worrisome drug use and sexual behaviour. Only 15 per cent of males and 10 per cent of females reported consistent use of condoms with their most recent steady partner (the respective rates were 32 and 47 per cent with casual partners), and high rates of alcohol and methamphetamine use were reported as well.<sup>68</sup>

Heavy users often use two or more substances together, variously referred to as a “trail mix” or “cocktail” of whatever is available. Using two or more drugs at a time makes it difficult to predict the nature and intensity of their effects, particularly when the purity of the substances is uncertain. Depending on the properties of the drugs in question, the effect can be additive ( $1+1=2$ ), synergistic ( $1+1=3$ ) or antagonistic (in which case some but probably not all of the effects may cancel one another out). Alcohol is often used in combination with other substances, as is cannabis. Recent mentions of drug combinations include a mixture of heroin and cocaine (“speedballs”) in the United States and a mixture of crack cocaine and ketamine (“CK One”), reportedly smoked in Europe.<sup>69</sup>

## Populations at risk of hazardous substance use

Evidence from different regions suggests that young women are drinking in ways that are increasingly risky. Alcohol affects women differently than it does men, so researchers often define binge or heavy drinking for women to be four drinks per occasion rather than five. A significant concern is that a sexually active young woman who becomes pregnant runs the risk of exposing her unborn child to alcohol at any



point during the nine-month gestation period, but particularly during the earliest stage, before she is aware of her condition. Drinking during pregnancy can result in lifelong physical, behavioural and mental damage to a child. Binge drinking is known to be particularly risky for a foetus, and a safe level of drinking has not been determined. There are indications that 18- to 20-year-old women are less likely to quit drinking and using tobacco than are older women when they learn of their pregnancy.<sup>70</sup>

There are indications of the need to view gay, lesbian, bisexual and transgender (GLBT) youth as vulnerable to substance use problems, though caution is advised in generalizing findings over a broad cross-section of people estimated to represent 10 per cent of the population. Reasons cited for the increased risk among these young people relate to the added stresses of coping with their sexual identity and sharing their sexual orientation with family, friends, and classmates; general stigmatization; and the availability of drugs in the club scene.<sup>71</sup> Substance use is reported to be strongly associated with the gay nightclub, dance party and parade scene, a context in which drugs are often regarded as important in creating a sense of community.<sup>72</sup> In an Australian study, GLBT adults aged 20-29 years were more likely than the same age group in the general population to ever have used 10 of the 11 drugs listed. In a Seattle study, GLBT homeless youth were more likely than others in the same situation to report sexual abuse, more frequent use of substances, and a much higher incidence of mental health symptoms since becoming homeless.<sup>73</sup> One study, however, showed that GLBT students who did not face stigmatization (routine taunting) were at no greater risk of using drugs, attempting suicide or having unsafe sex than their heterosexual counterparts.<sup>74</sup>

Young people belonging to indigenous groups in Australia, New Zealand, North America and other countries and regions often experience high levels of community and cultural disorganization whether they live in urban or rural settings. Not much data are available, but it appears that substance use rates are high for many young people living in these circumstances. Inhalant use is a serious concern in many areas. In some remote indigenous communities, gasoline sniffing, primarily among young people, is said to have contributed to a systematic breakdown of community and family relationships—to the point of almost total disintegration in some cases.<sup>75</sup> Many indigenous young people are introduced to alcohol at an early age, and there are indications that tobacco and injecting drug use are also particular concerns.<sup>76</sup>

## Especially vulnerable populations

In most societies and cultures there are young people living in difficult circumstances who have been identified as especially vulnerable. Included in this category are working children, youth no longer attending school, refugees, disabled youth, incarcerated and institutionalized youth, children of dysfunctional families, and young people who have been sexually abused. These young people often live on the street and outside the reach of mainstream services. It is extremely difficult to determine the number of youth affected or their substance use patterns, and there is a shortage of relevant documentation from developing countries.

Substance use is one of many issues faced by these young people, who use drugs as a way of coping with negative experiences including the residual effects of past circumstances and the present challenges associated with life on the street. Once on the street, youth may use substances to alleviate problems ranging from physical discomfort resulting from inclement weather, noise and overcrowding to feelings of fear associated with dangerous jobs.<sup>77</sup> A study of drug abuse among working children commissioned by the ILO in a region of the Philippines found that most young labourers between the ages of 7 and 17 used rugby (glue) and shabu (methamphetamine).<sup>78</sup> Various studies and reports on street youth indicate high rates of substance use, including problematic use, and mental health problems.<sup>79</sup> Because these young people often lack personal as well as external resources, their use of substances is more likely to escalate and become a source of further problems.<sup>80</sup> Injecting drug use is much more common among street and incarcerated youth than among school-based youth (typically in the 1 to 3 per cent range), as indicated by the following study results:

- In seven major Canadian cities 21 per cent of indigenous street youth had injected drugs (2000);<sup>81</sup>
- In the United States 45 per cent of street youth had injected at least once in their past (1998);<sup>82</sup>
- In Canada 36 per cent of street youth had injected at least once in their past (1998);<sup>83</sup>
- In Australia 17 per cent of young incarcerated males and 38 per cent of females had injected in the previous month (1998);<sup>84</sup>
- A four-city study in the United States found that 15 to 30 per cent of street youth had injected at some time (1996).<sup>85</sup>

Young people are characterized by their relative inexperience, their lack of knowledge of risk factors and of consequences such as overdosing, and often their general lack of concern.<sup>86</sup> A 1998 Canadian study found that street youth did not see the first injecting experience as a major event, claiming that everyone was doing it or that it was just another way to take a drug. Similarly, it did not seem to matter which drug they took; whatever was available would have sufficed.<sup>87</sup> The first injecting experience “just happened” for one-third of a sample of youth in a study in Queensland, Australia, while there was some degree of planning or at least contemplation of injecting for the remainder.<sup>88</sup> A very high proportion of these youth were intoxicated at the time of first injection. The age of first injection varies with the community and country but, on average, occurs later in adolescence. In the Queensland sample, the average age of first injection was 18.9 years; in two studies of street youth in the United States the average age was 16.5 and 17 years; and in several Canadian cities the overall mean age was estimated to be 21 or 22 years.<sup>89</sup> There is some indication that young females in this population are more likely than young males to be injectors, and to be more harmfully involved<sup>90</sup>

Needle sharing is a major risk factor for infection with HIV and other blood-borne diseases, and the practice is prevalent among young injectors. Separate studies indicate the following:

- In Australia 22 per cent of incarcerated youth had used a needle before someone else (1998);<sup>91</sup>
- In the United States 44 per cent of street youth had used a shared needle the last time they used (1998);<sup>92</sup>
- In the United States 27 to 39 per cent of street youth had shared a needle during their last injection (1996).<sup>93</sup>

East and South-East Asian countries have recorded very high rates of HIV among injecting drug users (IDUs). The rapid spread within this population has been attributed to the use of self-made equipment, high levels of needle sharing, the lack of effective cleaning procedures, and the use of “professional” injectors who use the same equipment to service many customers.<sup>94</sup> Belarus and other parts of Eastern Europe have also seen an increase in HIV infection rates among young people as a result of needle sharing and unsafe sex practices.<sup>95</sup>

Heavy use of substances (including alcohol) contributes to risky sexual activity including unprotected sex, sex while intoxicated, multiple partners and working in the sex trade.<sup>96</sup> A recent longitudinal study found that, even among IDUs, sexual activity was a major contributor to HIV infection among both males and females.<sup>97</sup>

## Substance-use patterns during the transition into adulthood

Late adolescence signals a key transition point for mainstream youth. In countries and regions such as Australia, Canada, Europe and the United States, in which secondary school substance use is reasonably well documented, it is clear that most students in their last years of secondary school will have used alcohol, and a significant minority will have used cannabis and tobacco at least once in the past 12 months. Many of these youth attend post-secondary educational institutions after leaving school. Because a good number find themselves away from parental authority in an environment in which alcohol and other substance use is often the centre of activity, levels of use established in late secondary school tend to continue.<sup>98</sup>

Most university students in Canada and the United States engage in binge drinking during the school year.<sup>99</sup> A survey of post-secondary students in New South Wales, Australia, found that 49.2 per cent had binge drunk in the past two weeks. Reasons given are the desire to simply get drunk, to celebrate a special occasion, to forget their worries or to feel good. This pattern of drinking can result in various problems, however, including missed classes, criticism from others, fights or arguments, and actions later regretted.<sup>100</sup> In the United States, males are more likely to binge drink, though female bingeing is on the rise. The most notable trend in the use of other drugs among university students in the United States involves Ecstasy. Between 1997 and 1999, there was a 69 per cent increase (from 2.8 to 4.7 per cent) in past-year Ecstasy use within a large United States sample.<sup>101</sup>

Little is known about youth that enter the workforce immediately after leaving secondary school, though there are indications that many of these young people work in small enterprises. Because of the rate of substance use among young adults and

the tendency of smaller organizations to give less attention to employee health and safety issues, substance use in the workplace or that affects workplace performance has been raised as a possible issue with this population.<sup>102</sup>

It is generally agreed that young people who complete school and settle into conventional adult life reduce their use of substances. However, they are making the transition into a world that is fast-paced and highly unpredictable (or as one commentator puts it, a “runaway world”).<sup>103</sup> A longitudinal study in the United Kingdom found that many youth and young adults responded with a work-hard/play-hard lifestyle in which substances were used not only to have fun, but also to unwind and cope with increasing pressures.<sup>104</sup> These young people were more likely to avoid complete intoxication than they were at age 18, but even when job concerns led them to adjust their patterns of use to reduce negative consequences, many still held to relatively high adolescent levels of use into their early twenties. A long-term study of students and young adults in the United States clearly indicates that getting married and beginning a family generally has a greater impact on substance use patterns than does entering the workforce.<sup>105</sup>

## **REDUCING THE DEMAND FOR SUBSTANCES BY YOUNG PEOPLE**

### **Establishing a balanced, integrated strategy**

As described in the foregoing, most regions of the world are experiencing levels of youth substance use and abuse that are at or near historic highs. Given the acute and long-term problems associated with some forms of substance use by young people, a common challenge for Governments and communities is determining the most effective way to reduce the demand for drugs among youth. If Governments are to establish targets for reducing youth substance use, what approaches are most likely to contribute to success? Every country and community requires its own unique demand reduction recipe or strategy that takes into account its particular circumstances and the resources available; however, it is also possible to implement a general evidence-based strategy.

The evidence presented here is of two types: a growing body of empirical research; and the opinions of young people and those who work with them, drawn from key-informant meetings. Caution is advised in interpreting this information because even the most studied interventions have not been replicated in more than one or two (typically Western) regions of the world. That said, there has never before been a greater quantity and quality of information available on which to base drug demand reduction strategies and programmes.

Such strategies should not overlook the evidence linking social and economic well-being with the health of a population. The influence of this relationship on substance-use patterns requires more investigation; however, any social policy that effectively promotes equitable human development (by making sound education, quality jobs and affordable housing more widely available, for example) is likely to have a positive effect on substance-use patterns. Some drug workers may feel that advancing this kind of policy exceeds their scope of work, while others see it as their most

important job. In the Philippines, for example, a number of programmes are involved in community organizing and advocacy with young people, and also provide a range of income-generating and social support services such as day care and early childhood education.<sup>106</sup>

At the broader governmental level, a demand reduction strategy must be balanced and integrated with efforts to reduce drug supply or availability, with each receiving similar resources and political support. Alcohol and tobacco control experience shows that young people are very sensitive to price changes, and manipulating prices through tax increases remains the most effective way to reduce the use of these substances.<sup>107</sup> While supply reduction efforts have proved ineffective in stemming the tide of illicit substances produced in or brought into most regions, successful interdiction may have the effect of ensuring prices do not decline. However, successes with one substance can result in problems with another, producing what is sometimes called the “balloon effect” or “unintended effects of prevention”.<sup>108</sup>

## Identifying the local situation

National or community demand reduction strategies are most effective if based on patterns of use in the area of concern, using the foregoing information on trends and patterns as a context. Each data source and method of data collection will have limitations, so bringing together data from several sources allows for cross-checking and ultimately increases confidence in the quality of the information.

UNDCP and WHO have developed a number of materials to guide information collection using what is called a “rapid” or “local-situation” assessment methodology.<sup>109</sup> This methodology has been adapted by the UNDCP/WHO Global Initiative on Primary Prevention of Substance Abuse to allow youth in more than 100 programmes (in eight countries within three regions) to carry out the assessment themselves.

Local-situation assessments need to include existing information that describes the situation in some way, such as drug-related hospital admissions records, a history of drug-related offences and data from government records. It is rare that all of the necessary information is available, so new information can be collected using pencil-and-paper surveys (household or school) or various ethnographical research methods such as key-informant interviews, focus-group discussion, observation, community immersion, and case studies. Strict protocols for surveys will help to minimize underreporting of use by ensuring the anonymity of respondents.

One aim of the Global Initiative is to have young people develop guidelines to help other youth groups conduct their own local drug-use assessments. Early indications from the project are that young people who feel comfortable and respected are often the best source of information on youth substance use. When facilitated by trained and knowledgeable staff, focus-group discussions are a particularly effective format for young people to obtain local drug-use information from other youth. These sessions permit two-way discussion that leads logically from identifying problems to exploring solutions. Generally, having a credible reputation in the community and involving young people whenever possible in the collection and interpretation of data also contribute to increased accuracy.<sup>110</sup>

More and more communities around the world are establishing standing epidemiology committees of local experts including physicians, police officers, street workers and treatment specialists to provide an ongoing profile of drug use in a community. This approach can provide quantitative and qualitative information that is both relevant to local needs and easily updated.<sup>111</sup>

The use of other innovative approaches for collecting information is also increasing. Prevention and health promotion workers are learning from indigenous peoples that structured narratives or story-telling can be used to gather information about what is occurring in a community and why.<sup>112</sup> Audio-computer-assisted self-interviewing has been used with a youth population in Thailand to provide accurate self-reports. With this method, respondents hear questions and possible answers through earphones, while simultaneously reading them from a computer screen, then clicking or typing their answers on the computer.<sup>113</sup>

Schools provide a convenient setting for information collection, and the methodology for conducting school surveys is well documented.<sup>114</sup> In various regions of the world, drug testing by urinalysis is being used both to determine the type and extent of illicit drug use in schools and to deter use.<sup>115</sup> What authorities do with the information can vary; however, this form of data collection raises human rights concerns and tends to reduce the level of trust between students and authorities.<sup>116</sup>

A major limitation of all school-based data is that they exclude those not attending school owing to illness, institutionalization, expulsion, voluntary absence (having dropped out), or the inability of parents to pay, and yet these young people are generally considered to be most vulnerable to substance-use problems for the very reason that they are not involved in school. Studies on out-of-school youth are very important, but they also represent a challenge because this group is not easily reached, particularly in connection with illegal drug-use activities. It is very important to have or to develop a rapport with these especially vulnerable youth and to engage them where they are.

Whatever methods are used, a broad assessment of the local situation should provide a range of information that includes the general age at which various substances were first used, the level of use by youth of different ages, gender differences, general age of heaviest use, forms of risky use, and problems experienced. The assessment must also determine the risk and protective factors at play among youth in the community. During this phase, it is important to account for the resources and support available to the demand reduction initiative that will be planned. Most importantly, an assessment undertaken in a participatory manner will engage targeted young people from the outset and establish a strong foundation for programme planning.

## **Employing demand reduction models**

A local assessment typically reveals that the circumstances among youth in a community vary, and analysis of the data should help to identify differences and sub-populations. The most useful way to divide the youth population is according to the level of risk or severity of the problem, and several models have been developed for this purpose. Historically, the most widely used model has been one from the public-

health sector that distinguishes between primary, secondary and tertiary prevention.<sup>117</sup> According to WHO, the aim of primary prevention is to ensure that a disorder, a process or a problem does not develop. Secondary prevention is aimed at recognizing, identifying or changing a disorder, a process or a problem at the earliest possible point in time. The aim of tertiary prevention is to stop or delay the progress of a disorder, a process or a problem and its consequences, even if the underlying condition continues to exist.

An emerging model used by the United States Institute of Medicine<sup>118</sup> covers the same range of risk or problem severity and distinguishes between universal prevention, selective prevention, indicated prevention, and treatment. Because the two models operate from different premises (see table 6.2), the precise relationship between the elements of each is not completely clear. However, communities concerned with reducing the demand for drugs need to consider how they will work with all youth (from those who are not using to those who would benefit from treatment in order to stop), and both of these models provide useful direction. The models can be seen as presenting a series of “safety nets”, with the first net (universal or primary prevention) aiming to “catch” most youth before they begin to use and the succeeding nets set up to catch the remainder.

**Table 6.2**  
**A comparison of two demand reduction models**

No/low risk	Moderate risk	High risk	
Alcohol/drug problems have not developed		Alcohol/drug problems have developed	
Public-health mode			
Primary prevention	Secondary prevention	Tertiary prevention	
Institute of Medicine mode			
Universal prevention	Selective prevention	Indicated prevention	Treatment

## Universal prevention

Prevention activity can target a broad or “universal” population (for example, all students in grades 5 and 6) with the aim of promoting the health of that population or preventing or delaying the onset of substance use. Early onset of the use of substances (including tobacco) has been found to be strongly associated with later problems such as substance dependence, poorer mental health and poorer educational performance,<sup>119</sup> though it has been suggested that the factors leading to early use, rather than the early use itself, are the primary contributors to the later problems.<sup>120</sup> The earlier young people begin smoking daily—an indication of dependency—the more cigarettes they are likely to smoke, the less likely they are to quit, and the more likely they are to be heavy smokers as adults. In many regions alcohol and tobacco are the first substances used, often in pre-teen years, though in some communities

inhalants are used by children as young as 6 years of age. Aside from the long-term concerns, there are a number of safety concerns surrounding the use of alcohol and other drugs at an early age. Consequently, preventing or delaying the first use of substances by children or adolescents is an important prevention goal in any community. The broad dissemination of universal prevention programming before the general age of first use is essential. Activities often associated with universal prevention include awareness campaigns, school drug education programmes, multiple-component community initiatives and, in the case of alcohol and tobacco, various measures to control their price and availability.

Even the best school-focused programmes are inherently limited because they cannot address the full range of factors contributing to substance use problems, such as poor family life and substance availability, but schools are nonetheless an effective setting for universal prevention programming for youth.<sup>121</sup> To produce results in school programmes, a minimum level of intensity of one 45- to 60-minute contact per week over at least 10 weeks has been suggested.<sup>122</sup> Programmes that provide “booster” sessions in subsequent years to reinforce earlier lessons help sustain effects; however, full programming each year is preferable. While some models are proving effective in preventing or delaying substance use within at least some populations, many universal or primary prevention school programmes are not. It makes sense to support school tobacco or drug education programmes with health-promoting school policies, but here too the evidence has not been persuasive to date.<sup>123</sup>

The more promising school-based programmes combine elements of knowledge building and skills development. Programmes that focus only on increasing knowledge or building self-esteem and general values without addressing drug-specific issues do not bring about change in adolescent substance-use behaviours.<sup>124</sup> Some school programmes include components aimed at the development of specific resistance skills. However, heavy reliance on resistance training is less likely to be effective, given that peer pressure has been exaggerated as a causal factor in risk behaviours.<sup>125</sup> Considerable evidence suggests that associating with drug-using peers is often a consequence rather than a cause of substance use, as young people thinking of using generally seek out a drug-using group.<sup>126</sup>

The interactive group process has been shown to be a critical component of universal school prevention programmes, the interaction in this case taking place between peers rather than between instructors and youth.<sup>127</sup> Examples of interactive activities include role playing, Socratic questioning, simulations, service-learning projects, brainstorming, cooperative learning and peer-to-peer discussion to promote active participation by youth. These types of hands-on activities provide valuable opportunities for youth to clarify their beliefs and to practise helpful skills such as problem solving, decision-making, dealing with conflict, assertiveness and communicating effectively.

Best conducted in small groups, interactive approaches call on the leader to oversee the activities, establish a supportive environment, keep groups on track, assume a directive role only when necessary, and ensure that each young person has an opportunity to participate and receive feedback on his or her use of the above-mentioned skills.<sup>128</sup> For older adolescents, a less structured interactive approach may

be most appropriate, with the same aim of encouraging the participation of the full group or class within a supportive atmosphere. Interactive programmes appear to be effective regardless of the substance targeted or the ethnic group being addressed.<sup>129</sup>

A broader life-skills approach may produce better results than a narrower focus on refusal or social resistance skills.<sup>130</sup> Based on social learning theory, a broad life-skills programme includes activities aimed at facilitating the development of decision-making, goal-setting, stress management, assertiveness and communication skills, which are intended for more generalized application to various situations and health-related behaviours. Mastery of these skills can enhance the young person's self-confidence in dealing with challenging situations. Requiring an interactive process, life-skills sessions usually include the demonstration of a skill, practice and feedback on the use of the skill, discussion about its practical application, and ongoing modelling of the skill.<sup>131</sup>

Another approach proving effective with secondary and post-secondary students is the so-called normative model, which challenges young people's views of how common or accepted substance use is in their schools or communities.<sup>132</sup> The logic behind the approach is that if a young person believes most people are using substances, he or she will underestimate the risk and will be less likely to abstain from or be worried about use. Programmes based on this approach seek to undermine the popular belief that everyone else is doing drugs. Student surveys and opinion polls can be used to give students an understanding of actual rates of use, and activities such as games and debates can help them in setting their own norms. The normative approach may make more sense with older students, as life skills appear to be more difficult to affect at this point.<sup>133</sup>

Parents and families play a critical role in supporting the development of their children and are an important priority for universal prevention.<sup>134</sup> Parental monitoring of children's behaviour and strong parent-child relationships are positively correlated with decreased drug use among students.<sup>135</sup> Parenting programmes can support efforts in this area by addressing issues such as parental attitudes towards (and use of) alcohol and drugs, poor and inconsistent family management practices including too much or too little discipline, family conflict, and the young person's attachment to the family.<sup>136</sup>

Parenting programmes typically have trouble attracting parents. One suggestion has been to normalize parent information, education and support by making them widely available through media, information lines, and work-site and school programmes.<sup>137</sup> It has also been suggested that programmes entrenched in a neighbourhood and available over the course of a number of years are more effective than the standard "one-off" sessions. Parents are more likely to be engaged in a parenting



programme if they think it is credible and has a good track record. Facilitating the development of bonds between parent participants has been suggested as a promising way to retain parents in these programmes.<sup>138</sup>

Time and scheduling are issues for parents, so short programmes may increase the attractiveness of parenting education.<sup>139</sup> Recent research has shown that relatively brief family programmes (five to seven sessions) that are designed for general populations and address communication, coping and disciplinary skills delayed the onset of alcohol, tobacco and cannabis use among adolescents during the early to mid-teen years.<sup>140, 141</sup>

The Internet is an emerging tool with the potential to raise awareness and promote health. As more people gain access to the Internet and use it to obtain information, sites that address drug-related issues will reach ever-larger audiences.<sup>142</sup> A challenge for prevention programmers using the Internet is to segment the audience in order to provide targeted and developmentally appropriate substance-abuse messages. For Internet users, a major challenge lies in verifying the accuracy of the information found on the numerous sites. There is little evaluation of this approach, but early indications are that Internet substance-abuse prevention and health-promotion sites for youth are most useful when tied in with opportunities to participate in related local activities.<sup>143</sup> UNDCP is preparing guidelines for “by youth, for youth” Internet drug-abuse prevention based on decisions taken at a recent international meeting of young experts.<sup>144</sup>

These broad, lower-intensity efforts aimed at the general youth and parent populations can serve to “till the soil” by creating greater awareness of the issue and acceptance of the need for more targeted programmes.<sup>145</sup> Similarly, they can lead some individuals to contemplate changing risk behaviours and to present themselves for more intensive programming.<sup>146</sup>

## Selective prevention

Some youth and their families face special challenges relating to academic problems, family dysfunction, poverty, and a family history of substance use problems (that may include genetic predisposition). It makes sense to “select” such people for more intensive programming on the basis of these risk factors. Selective prevention is aimed at generally reducing the influence of certain risks and preventing or reducing substance use problems by building coping strategies and other life skills.

Children in difficult environments clearly benefit from selective prevention interventions during the pre-school and early school years. Longitudinal studies covering both the early childhood and primary school periods indicate that programmes combining child and parent components (often including home visits) produce benefits on multiple measures, including substance use.<sup>147</sup>

Students who are not succeeding in school, have few peer contacts or are not involved in extra-curricular activities are at risk for a variety of problems, including tobacco and other substance use.<sup>148</sup> School programmes that select young people on the basis of these indicators are proving effective in re-engaging students and reducing the risk of substance use.<sup>149</sup> One means of identifying young people at risk is

the student assistance approach (based on the workplace employee assistance programme model), which encourages students to seek help and trains students and staff to support others in seeking help.<sup>150</sup>

Evidence supports family-focused interventions over parent-only programming.<sup>151</sup> Family-skills training that offers several components, including behavioural parent training, children's-skills training and behavioural family training, has been shown to have a positive influence on a number of risk and protective factors, and has resulted in reductions in youth substance use. Many of these programmes increase the likelihood of attracting and retaining families by offering transportation, food and childcare during sessions, advocacy and crisis support.

Programmes for higher-risk or more vulnerable youth may be situated in multiple-service centres or other settings such as hospital emergency wards, health clinics (for expectant adolescent women), shopping malls and the street. Selective programming for higher-risk youth calls for the attention and collaboration of some groups and individuals who have not traditionally played a role in preventing substance use problems, such as urban planners, housing authorities, shopping mall managers and employment policy makers.<sup>152</sup>

On-site Ecstasy pill-testing operations are increasingly common in Europe and may be viewed as a selective prevention measure aimed at providing information and support to those attending techno dance parties or raves. These operations vary between prevention and harm reduction in their orientation and messages; however, they all share the goal of providing accurate, timely information on the chemical make-up of pills being presented as Ecstasy. Many also use the contact with dancers to provide "safer dancing" messages, counselling and other support. In the Netherlands these services are supported by the national drug strategy; elsewhere, they generally operate through informal agreements between local governments, police and dance sponsors.<sup>153</sup> Law enforcement officers have an opportunity to intervene in substance use and abuse by exercising their discretion in determining whether pressing charges will benefit a young suspect, and by using apprehension or arrest as a point of information-giving or referral. Diversion schemes that are well resourced and have project workers operating closely with the police are showing promise, though they have not been empirically evaluated.<sup>154</sup> Formal cautioning is used in some jurisdictions with those apprehended for drug offences (usually cannabis possession). Those warned are not very likely to be re-arrested for a drug offence, though the effect on actual substance use is unknown.<sup>155</sup>

Motivational approaches have been tested and found effective with youth in a number of settings, from hospital emergency rooms to universities. They are based on the assumption that everyone has strengths that can be brought out to address problems, and that a person's motivation to tap his or her inner resources is not fixed but can shift with events (such as an accident) or through contact with another person. A motivational intervention can involve as little as a single 20-minute interaction. During this brief contact, the practitioner attempts to quickly create a rapport, helping the person to weigh negative and positive effects of drug use in a new light and discussing options for making changes.<sup>156</sup> In almost all countries, adolescent males are more likely than young females to use substances in risky ways. While empirical evidence is cur-

rently lacking, many community programmers contend that engaging young males in sports or extreme physical activities can be effective in reducing their risk of substance use. The consensus from the Workshop on Using Sport for Substance Abuse Prevention, held by UNDCP in Rome in the fall of 2001, was that an approach to sport that promoted general respect (for the game, opponents and officials) and emphasized performance rather than results was most likely to have a positive effect on human development and prevention.<sup>157</sup>

Establishing opportunities for leisure, recreation, community service or alternative schooling is a proven strategy for helping at-risk youth.<sup>158</sup> Termed the “alternatives approach”, these opportunities may be most appropriate for youth who cannot be reached through school and for those who do not have adequate adult supervision for or access to a variety of activities.<sup>159</sup> A workshop held by the United Nations on Using Performance for Substance Abuse Prevention, held in Mexico City in the fall of 2000, explored the value of various forms of performance such as street theatre, graffiti, dance and public speaking, and found that the process of being involved was as valuable as the product. In Mexico City, young people tired of living with gang violence in their community created the “Revolution of Children”, which has organized graffiti contests that have helped lessen some of the inter-gang warfare.<sup>160</sup>

Caution is advised in working with high-risk youth, as in some cases bringing them together into new groups has been found to increase substance use. There is some speculation that participants in these groups may tend to validate and legitimize the antisocial behaviour of other group members.<sup>161</sup>

Older youth at university or entering the working world often continue a pattern of heavy substance use begun in secondary school. Their reported use of substances to cope with pressure is a concern, as is using to the point of intoxication and thereby risking accidents or, particularly in the case of alcohol, violence. Motivational and skills-training approaches are proving effective in reducing substance-use problems in university settings.<sup>162</sup> Businesses can help employees with substance-use issues through comprehensive action that includes careful recruiting, employee education, supervisor training, a means of identifying problems, and access to assistance for those requiring it. Both the company and the employee stand to benefit if assistance is generally preferred over disciplinary measures.<sup>163</sup>

Although selective prevention programmes tend to be more efficient than universal programmes in effecting change among at-risk youth, there are important disadvantages that need to be considered, including the possibility of labelling and stigmatization, difficulties with screening, and inadequate attention to the community-wide social context as a focus of change.<sup>164</sup>

## Indicated prevention

Some young people who abuse substances do not meet the criteria for dependency but are at high risk of doing so. These youth tend to experience an array of other health and social problems and usually benefit from indicated prevention programming. Typically, this programming is even more intensive than selective prevention efforts; however, brief motivational approaches are showing good results with different heavy-using youth populations, as mentioned earlier. Indicated prevention often

involves an outreach component to identify, engage and work with these youth to minimize the risks associated with their lifestyle. Various models of outreach work using peers, professionals or volunteers have been identified.<sup>165</sup>

With higher-risk families, family therapy has been shown to be an effective component of a comprehensive strategy. Such therapy helps family members develop interpersonal skills and improve communication, family dynamics and interpersonal behaviour. Therapy can help family members improve their perceptions about one another, decrease negative behaviour, learn and apply skills for healthy family interaction, and reduce inappropriate parental control over children.<sup>166</sup>

Especially vulnerable youth that are using substances in risky ways need support in a number of areas of their lives. The focus of activity should be on minimizing harms in the context of the day-to-day challenges they face. Injecting drug use poses several serious risks, including overdose and HIV and hepatitis C infection, and young people may be particularly susceptible because of their relative inexperience, faulty knowledge and pressure from older IDUs, and because they generally do not take advantage of standard IDU and health services.<sup>167</sup> Given the particular dangers, it makes sense to try to intervene with those drug users at risk of making the transition into injecting drug use from other forms of administration. A recent study of this issue concluded that high-risk non-IDUs should be educated on the dangers of sex trading and the importance of staying in school, and should be provided protection from violence, as these conditions are associated with making the transition into injecting drug use.<sup>168</sup> Heroin smokers are seen to be at high risk of becoming IDUs, in many cases to reduce the amount consumed and to save money. Prevention messages directed at this population need to indicate that, based on the experiences of other IDUs, this approach is likely to backfire because there tends to be a rapid increase in the amounts needed when injecting.<sup>169</sup> Because current injectors are usually part of the first injecting experience, it is logical to consider measures aimed at reducing their influence on non-injecting youth. A study in Australia found that IDUs generally accepted an hour-long intervention delivered by trained drug workers and in many cases altered their behaviour afterward. The aims of the intervention included decreasing the likelihood of the IDUs talking about injecting with non-IDUs and being seen injecting by non-IDUs, and helping them manage requests to inject.<sup>170</sup>

Research clearly shows that for those who do begin to inject, increasing access to new, sterile injection equipment can reduce the sharing of needles and the spread of HIV and other blood-borne pathogens by such means, so this needs to be a programme priority.<sup>171</sup> It appears that contact with outreach workers is linked to positive behaviour change; the more often such encounters take place and the longer they last, the greater the chances are that IDUs will follow up HIV referrals and use new needles.<sup>172</sup> Supervised consumption facilities are intended to reduce overdose deaths and the transmission of blood-borne infections and to minimize the element of public nuisance; however, youth under the age of 18 are often not admitted. These options remain controversial, and their effectiveness relative to other options is unclear at this time.<sup>173</sup>

While indicated prevention programmes are clearly required to address early substance-use problems and are effective in reaching the appropriate target group, they tend to be more costly on a per-person-reached basis. Challenges in recruitment and retention are not uncommon because youth with early substance-use problems do not necessarily see their use as enough of a problem to consider changing.<sup>174</sup>

## Treatment for substance abuse

A small percentage of youth will develop substance dependency characterized by drug tolerance, withdrawal and continued use despite significant substance-related problems.<sup>175</sup> These young people can benefit greatly from outreach, followed by counselling, case management or more intensive treatment based on sound assessment. Specialized youth treatment programmes are relatively new and unproven; young people are often placed in adult programmes even though developmental, psychological, social, cognitive and family differences suggest the need for specialized treatment.<sup>176</sup> There have been few controlled trials of youth treatment programmes, and findings have been mixed. However, results generally show that treatment is better than no treatment in terms of substance use and crime measures.<sup>177</sup> Behavioural, skills-training and family therapies show some evidence of effectiveness, though lack of family support negates the value of family therapies for some.<sup>178</sup>

Recently, a large multiple-site experimental study was conducted in the United States covering youth treated in different settings (residential, outpatient drug-free, and short-term inpatient) using various modalities (education, individual and group counselling, skills training, and the 12-step programme). In all cases the programmes typically addressed peer relationships, educational concerns and family issues. Youth in these programmes generally fared better at one year after completion, in terms of cannabis and alcohol use, school attendance and criminal activity, than those who had not been treated; however, there was no indication that any single modality was superior to the others.<sup>179</sup>

Therapeutic communities represent a common form of treatment available to young people in a number of countries. These programmes, of variable duration, provide a highly structured environment and endeavour to change negative patterns of behaviour and feelings associated with substance dependence. This form of treatment may help some, but it is relatively expensive and therefore probably best reserved for those who have not been helped by other, less costly alternatives.<sup>180</sup>

Adolescents may respond best to flexible approaches that can be adjusted to meet individual needs. Young people with a drug dependency are often dealing with other issues that either existed prior to substance use or resulted from it (including co-occurring mental health problems, family dysfunction, physical/ sexual abuse, gender/sexuality concerns, criminal activity, academic performance or academic/vocational difficulties). For this reason, treatment programmes must be able to provide support in a multitude of areas, either directly or by referral.<sup>181</sup>

Research has not found any strategies aimed at halting tobacco use to be particularly effective for adolescents.<sup>182</sup> As a result, it is generally recommended that adolescents who wish to stop using tobacco try strategies found to be effective with adults, including approaches ranging from brief advice from a physician to intensive clinical interventions.<sup>183</sup>

Indicated prevention and treatment approaches are likely to have less of an impact than universal and selective approaches on drug demand in a community. From a human rights perspective, however, it is very important to address the needs of those with substance use problems, so a mix of universal, selective and indicated prevention and treatment programmes is needed.<sup>184</sup> It has been suggested that young people without access to a range of appropriate prevention and treatment services suffer from “programmatically vulnerability”, which may ultimately be viewed as a human rights issue.<sup>185</sup> Harsh zero-tolerance approaches to dealing with youth drug problems have also been questioned on human rights grounds,<sup>186</sup> and with regard to their effectiveness.<sup>187</sup> Some suggest that tough penalties discourage students from helping their drug-abusing peers. Those expelled for drug abuse often wind up on the streets or in alternative schools in which drugs are plentiful; this contributes to social exclusion and increases the risk of more serious drug problems.

With the wide range of options available, it is not always clear which demand reduction measure or programme constitutes the best choice; however, programme sponsors can base their decisions on the answers to a number of questions: Is the programme supported by scientific evidence? Has an epidemiological need been clearly established for the programme in this community? Have other, less intensive or more cost-effective options been implemented? Will the measure be part of a comprehensive range of services? Are there sufficient resources to sustain the effort? Does the measure or programme have the support of all key parts of the community? Clear answers to these questions will not always be found, but the basis of programme selection will be stronger if they are addressed and discussed.

## Involving youth in programme design and implementation

Regardless of their level of risk, it is critical that youth be involved in prevention programme design and implementation according to their capabilities. Efforts must be made to nurture trust and work cooperatively with credible representatives of the youth population, and to support them as they assess the situation, determine appropriate goals, design and (if possible) deliver the programme, and evaluate the results. It is necessary to ensure the supportive involvement of adults to facilitate and supervise programme activities and to put youth in touch with other resources.<sup>188</sup>

Participatory approaches—including the methodology developed by the UNDCP/WHO Global Initiative on Prevention of Substance Abuse—hold great promise.<sup>189</sup> A participatory approach challenges sponsors to truly share power and be receptive to new ideas, to listen to young people (instead of lecturing them), and to open up the process rather than trying to control it.<sup>190</sup> Youth participants who are involved in data collection and programme planning, modification and evaluation are less likely to drop out of the intervention, which has a greater chance of success as a result.<sup>191</sup> These young people are also more likely to be motivated to actively develop new skills and to be open to accepting new information. In some cases, they may have the opportunity to contribute to decisions about the process and pacing of the programme; in other cases, it will make sense for the young people to assume primary responsibility for developing programme messages and implementing the programme.

Peer-based approaches are being used with mainstream youth to address issues as wide-ranging as reducing impaired driving and promoting safer dancing at raves.<sup>192</sup> Especially vulnerable young people (including those living in poverty, gay or lesbian individuals, and those with mental health problems) often have negative experiences with the service delivery system and are poorly informed about available services. It is important to encourage the involvement of these young people in programming decisions in a respectful and non-judgemental way.<sup>193</sup> Peer outreach by street contact, telephone or the Internet is commonly used to engage such youth.<sup>194</sup> A programme in the Philippines uses trained “young advocates” to conduct a range of outreach activities including street education, theatre activities and employment-seeking tours. Incorporating income-generating opportunities into a project is an important aspect of peer-leader recruitment in developing countries.<sup>195</sup>

Youth involved in injecting drug use are not likely to avail themselves of mainstream health services, so peer education approaches are sometimes used to establish contact with these young people. Peer educators are more likely than others to reach such youth and to be viewed as credible advocates of health-promoting behaviour.<sup>196</sup> A programme using incentives to encourage young IDUs to increase their knowledge and to recruit their peers to attend educational sessions substantially reduced hepatitis C risk behaviours.<sup>197</sup> According to recent United Nations experience, when IDUs believe someone is showing a real interest in their problems and cares about them, they are motivated to take an active part in project activities as volunteers.

Involving youth in the development of programme messages is important. Some programme messages are explicit (all drug use is unacceptable), while others are implied (a lecture by an adult may communicate that youth participants do not have worthwhile views). A vitally important principle for every programme, regardless of its goal, is that drug information must be scientifically accurate, objective, unbiased and presented without value judgement. Regardless of the age range of the intended target group, participants must be provided with accurate information and strategies for developing skills. Messages that focus solely on the negative aspects of drug use may initially be accepted by younger participants but can lose credibility once these youth receive more accurate and/or comprehensive information.

Fear-arousing messages accompanied by incorrect or exaggerated information are ineffective and can generate scepticism, disrespect and resistance among youth with regard to any advice that may be offered on substance use or other risky behaviours. These messages can actually erode motivation to deal with a problem, particularly if no accompanying coping strategies are presented or if the consequences are presented as unavoidable.<sup>198</sup> Similarly, simplistic messages that young people believe to be unrealistic (“just say no”) or infeasible (sports activities are recommended when no facilities are readily available) will not be seen as credible. Because children and youth are less interested in distant, long-term effects, programmes must give greater attention to concrete “here and now” social consequences that can be avoided, such as being less attractive, smelling of tobacco and regretting actions taken earlier.<sup>199</sup>

The likelihood of substance use rises as students age. In many regions, a majority of older adolescents currently use alcohol, and varying proportions use other substances. With this population, acknowledging the perceived benefits of substance

use while providing information on the possible health and social consequences in a factual, balanced fashion can clarify personal risks and support decision-making.<sup>200</sup> Basic information about drug effects should be integrated with messages about risky behaviours. The focus must be on practical rather than theoretical information that (a) identifies dangerous or unhealthy practices such as driving or playing sports after using, chugging or bingeing; engaging in unplanned sex after using; studying or working after using; and using and sharing needles; (b) addresses the risk of dependence and long-term problems associated with heavy use; and (c) increases awareness of the resources available for those motivated to reduce or stop use and supports access to services.<sup>201</sup>

Street youth are relatively knowledgeable about the health risks associated with the use of various substances and are unlikely to pay attention to information on the negative consequences of drug use. However, they may be receptive to a practical message encouraging them to “try a little first to see how it feels rather than taking a regular dose”, or telling them where they can find help or how they can help others. Youth can often develop this information based on their own experiences.<sup>202</sup>

In developing media messages, it is important to pay attention to the norms, values and language of young people and the youth culture.<sup>203</sup> Substance-use messages that are sensitive to these considerations, address issues important to youth, and reflect the aspirations and values of young people are more likely to be well-received. The best way to ensure appropriate message development is to involve youth participants in the design process. Sponsors of a tobacco demand reduction campaign in Florida attribute their very positive short-term results to the fact that young people devised the message.<sup>204</sup> The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) has recommended ongoing monitoring of youth media as a way to track and understand youth drug trends and to identify innovative prevention messages.<sup>205</sup> The complexity of the issue is illustrated in a 1995 journal article indicating that young Australian IDUs thought sharing needles with friends or sexual partners was acceptable even though the social norm was generally not to share. Because trust is seen as an important part of close relationships and needle sharing, in such cases, represents a way of demonstrating that trust, the simple message that one should never share needles might have a limited impact.<sup>206</sup>

Youth do not constitute a homogeneous population; there are a number of subgroups and subcultures with their own distinct norms and values (reflected in, for example, Ecstasy use at raves and non-violence among “ravers”). Gender must also be considered in developing appropriate prevention messages. Provocative messages that trigger strong affective responses and interpersonal discussions have been found to be effective with young girls. Boys, who are more likely to use substances in risky ways, will likely be influenced more by themes relating to action, competition, bodily sensations and peer-group membership.<sup>207</sup> Youth who seek novel and exciting experiences tend to be more likely to engage in substance use.<sup>208</sup> Therefore, messages that acknowledge curiosity and the appeal of risk-taking while offering reasonable alternatives to achieve the desired objectives may be effective with these adolescents. It is crucial that ethnocultural beliefs of participating youth be understood

when developing programme messages. For example, messages that incorporate traditional teachings and practices appear most promising in prevention programmes for indigenous youth.<sup>209</sup>

Messages are more likely to be heeded if the programme leader or teacher is accepted and respected by the target group, and acceptance is more likely if the leader is comfortable with the programme's content and process. Most effective prevention programmes require teachers or leaders who are comfortable in a facilitative rather than a directive role. Even programmes that have been shown to be effective will be seriously hampered by teachers or leaders who are unable to conduct the programmes and communicate the messages as originally intended.<sup>210</sup> Mental health professionals have been shown to be effective in this capacity, particularly with older youth.<sup>211</sup> Teachers who have been trained for these types of programmes can also have a positive impact and come with the added advantage of being available on a daily basis.<sup>212</sup> As already noted, young people can serve as leaders or as partners with adults.<sup>213</sup> Across the spectrum of intervention levels, what appears to matter most is that the teacher, leader or counsellor demonstrates competence, empathy and an ability to engage young people.

## CONCLUSION

Research indicates that programmes involving multiple components can be effective,<sup>214</sup> though the "more intervention is better" principle raises questions of cost-effectiveness. The coordination of various interventions can be accomplished in a number of settings or within a single organization or agency. For example, schools can combine classroom instruction, peer assistance programmes, parent education, school policies and mentoring for at-risk students. Municipalities can coordinate recreation programmes, community policing and neighbourhood support programmes.

Comprehensiveness also requires that attention be given to organizational policies (of the school board or youth agency, for example) to ensure that they reinforce programme aims.<sup>215</sup> At a broader level, legal and regulatory measures such as price increases, server training programmes that focus on under-age drinkers, and the enforcement of minimum-age purchase laws need to be considered, as they have been shown to be effective in reducing alcohol-related harm among youth.<sup>216</sup> Most evaluations show that as time passes, programme effects erode and programme content needs to be replenished.<sup>217</sup> Consequently, programmers need to see their prevention initiatives as part of a thread of interventions that present developmentally appropriate messages to young people throughout their childhood and adolescence. A cumulative benefit may occur when evidence-based programmes are combined in a community, even though the individual programmes may have only modest effects.<sup>218</sup>

A growing number of the youth programmes implemented today are being set up on the basis of sound scientific evidence. Such progress needs to be maintained. Promising programmes whose results have been subjected to rigorous, controlled research need to be replicated with different subpopulations (diverse ethnocultural groups) in various settings around the world. Governments and other funding bodies

need to give evaluation greater priority by providing technical and financial support for this purpose (generally agreed to require an amount equal to at least 10 per cent of other costs).<sup>219</sup>

Although there are early signs that prevention programmes for youth can demonstrate modest cost-effectiveness, prevention programmers need to give more attention to this issue.<sup>220</sup> The intensity and cost of some of the evidence-based programmes described in this section vary widely. There is a general consensus that higher-risk youth need more extensive interventions; however, brief (20-minute) motivational interviews have been shown to be effective with a range of youth experiencing substance-use problems. Similarly, outreach “information talks” of five minutes or more at raves or on the street have the potential to influence substance use among hard-to-reach young people.<sup>221</sup> Programmes need to begin collecting cost data and weighing outcomes against costs. In doing so, it will be necessary to determine which costs to include (expenses for programme materials, teacher/leader training, teacher salaries during programme delivery, facility use, and research and evaluation), and to identify who is bearing the costs (the primary sponsor, partner agencies or participants).<sup>222</sup>

By promoting and undertaking evidence-based work, those involved in the demand reduction field can provide services of value to communities. Efforts must be made to continuously educate the public with accurate data on trends and issues. Communities and politicians around the world tend to react to perceived drug crises with strong but short-lived responses.<sup>223</sup> In order to maintain long-term support for their own programmes, and for demand reduction efforts generally, sponsors need to convey the fact that substance-use problems are neither a one-time crisis nor an issue to be dismissed, but rather an inevitable part of life that can be affected by committed action. Most importantly, they need to continually remind themselves that youth are their own best resource for dealing with drug issues. ■

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