Following the Evidence

PREVENTING HARMS FROM SUBSTANCE USE IN BC

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Prepared by the Centre for Addictions Research of BC
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Executive Summary

Prevention of harms from psychoactive substances requires sustained e ort by individuals, families, communities, governments and many other groups and organizations. is paper uses the best available evidence in population health and prevention to identify key strategic directions for action by ministries, health authorities, local governments, and agencies involved in the development of healthy public policy in British Columbia.

 is prevention paper identi es ve strategic directions that international evidence suggests will have the most impact on preventing harms from substance use. e rst is in uencing developmental pathways, which acknowledges that di erent life stages present di ering risks and protective factors for harms. e second is delaying and preventing alcohol, tobacco and cannabis use during adolescence, when problematic patterns of use for these substances can lead to signi cant harms later in life. e third is reducing risky patterns of substance use, emphasizing interventions that can impact those types of substance use that have the greatest likelihood of causing harm. e fourth is creating safer contexts, which acknowledges that the setting or environment where substance use occurs can a ect the risk of harms. And the fth is in uencing economic availability, whereby pricing mechanisms can be used to in uence the use of substances such as alcohol and tobacco.

E ective interventions to prevent harms related to substance extend beyond the responsibility of the Ministry of Health, its health authorities and the health care delivery system. e Ministry of Health will use this paper to inform e orts in creating partnerships with government, non-government and private sectors and those involved in community-based activity both locally and provincially, with the goal of protecting and improving the health of British Columbians by minimizing the harm to individuals, families, and communities from psychoactive substance use.

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PREVENTING HARMS FROM SUBSTANCE USE IN BC

Introduction

is paper lays out conceptual foundations and strategic directions necessary to plan an integrated and comprehensive approach to preventing and reducing the harms from substance use. It provides an overview of the political context in which responses to problematic substance use are created. It addresses the nature of substance use and some of what can make it problematic, and articulates the foundational concepts such as prevention, harm reduction, population health and social capital.

e paper provides ve evidence-based strategic directions for policymakers and service providers to achieve maximum and sustained bene t with limited resources.

e rst strategic direction of early life interventions identi es key developmental stages at which children's health and wellbeing can be enhanced with long-term bene ts for a variety of problem behaviours including substance use. e second strategic direction, delaying and preventing substance use by teenagers, focuses on the time of life at which these behaviours begin to occur and re ects evidence for which substances lead to most harms, whether immediately or in the longer term. e third strategic direction, reducing risky substance use, is directed at increasing awareness among health professionals and the community at large of particularly high-risk patterns of substance use and supporting strategies to reduce or avoid such use. e fourth strategic direction focuses on striving for safer settings of substance use, recognising that substance use will continue but that the risk of serious harms occurring can be reduced by modifying environments in which use occurs. e nal strategic direction of reducing economic availability is singled out due to the unrivalled level of scienti c evidence for the importance of ensuring that prices do not drop too low, a factor identi ed in review after review as being of vital importance for public health and safety (e.g. Loxley et al, 2004).

Each of the strategic directions includes recommendations for speci c strategies supported by evidence. ese can be expected, if implemented well, to signi cantly increase protection and reduce risk for British Columbians. Bene ts will be achieved, however, by working on all ve strategic directions simultaneously, rather than focusing e orts on just one or two of them.

WHY HAVE A PREVENTION APPROACH?

An e ective approach to addressing the harms associated with psychoactive substance use begins with prevention. It is important that a prevention agenda be shaped by a common understanding of the harms to be prevented and the factors that in uence those harms. is paper seeks to establish a common understanding and provide some priorities based on the best available evidence on how to address and prevent the harms associated with substance use.

During the course of recorded history, human cultures have used a wide variety of substances to alter consciousness for non-medical purposes. ese substances have been de ned and controlled in various ways over time depending upon prevailing religious, cultural, social, political and intellectual structures and assumptions. e goal of prevention is not to eliminate psychoactive substance use completely.

In today's Western socio-cultural climate, which otherwise encourages consumption and maximization of pleasure, a "drug-free" society is particularly unrealistic. The goal of all prevention strategies set out in this paper is to protect and improve health by minimizing the harm to individuals, families, and communities from psychoactive substance use. Many of the strategies also focus more specifically on contributory goals such as:

Implementing a comprehensive, compassionate and e ective prevention strategy requires:

- Understanding and responding to substance use through various lenses (e.g. women, aboriginal, youth, gay/lesbian/bisexual/transgendered) and across multiple systems (e.g. primary health, education, enforcement, corrections
- Providing an e ective regulatory regime
- Addressing the social and structural determinants of health
- Empowering and encouraging young people to delay the age at which they begin to experiment with substances
- Providing people with credible, balanced information about substances so that they can make informed decisions about their use
- Developing social capital to strengthen assets, promotn(n)10(g)10( )10C10(s)10(i)l0(s)10(i)10(e)1
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Policy Context

is prevention paper has been developed in the context of other key policy initiatives from di erent levels of government that impact on the harms from substance use.

NATIONAL CONTEXT

e governments of Canada and the provinces and territories have begun work on developing a framework to coordinate di erent Canadian jurisdictions

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When substance use is problematic, harms caused to individuals, families and communities demand attention. Some of the harms, for example lung cancer and liver disease, result from hazardous use over a number of years. Many other harms, such as injuries when intoxicated, overdoses and infections transmitted by sharing needles, can arise from a single episode of use.

Some substance use simultaneously provides both bene ts and risks. For example, frequent light alcohol consumption may protect older people against heart disease but also elevates the risk of some cancers (Babor, et al., 2003). e risk of harms is determined by the nature and/or composition of the substance, its concentration, the amount used per occasion, the way it's administered and the setting in which use occurs. Intensity of substance use is not the only factor determining whether harms or bene ts occur. Table 1 summarises main patterns of substance use that increase risks of harmful outcomes with examples from the major domains of health, social well-being and personal safety. E ective prevention needs to reduce these risky patterns of use and modes of administration if it is to impact on population levels of harm.

Table 1: A matrix of risky substance use patterns and examples of associated harms to early development, health, safety and well-being.

CATEGORY OF HARM	DRUG ADMINISTRATION	INTOXICATION, ACUTE EFFECTS	REGULAR USE, CHRONIC EFFECTS	DEPENDENCE
Developmental harm examples	Use in pregnancy (Fetal Alcohol Spectrum Disorder); environmental tobacco smoke and children	Family conflict; impaired parenting	Early and regular use by children; parental modelling	Child abuse and neglect
Physical health examples	Blood-borne pathogen transmission associated with injection drug use; Smoking increasing risk of respiratory diseases	Acute medical conditions, e.g., poisoning, overdose	Cancers; strokes; liver or heart disease	Withdrawal symptoms; seizures
Personal safety examples	Death from burning due to discarded cigarettes	Intentional and unintentional injuries to self and others	Increased risk of injury due to loss of tolerance due to liver disease	Risk-taking to protect supply
Mental health examples	Increased risk of dependence from quick action methods (e.g. smoking, injecting)	Psychosis; reckless behaviour	Cognitive deficits	Mood disorders
Social wellbeing examples	Stigma associated with injection drug use; criminal record	Legal problems, unwanted pregnancy	Financial problems	Financial, work or relationship problems

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Harm reduction strategies apply to problematic as well as recreational substance use, and they seek to reduce harm at both the individual and community level.

Evidence emerging from the population health literature suggests particular emphasis should be placed on healthy child and youth development and gender. Healthy child and youth development addresses the e ect of prenatal and early childhood experiences on subsequent health, well being, coping skills and competence. ere is increasing evidence that intervening at critical stages or transitions in the development of children and youth has the greatest potential to positively in uence their later health and well-being (Toumbourou and Catalano, 2005).

A focus on determinants of health has increased awareness of the need for policies and programs to be gender responsive and culturally relevant. Gender refers to the array of roles, personality traits, attitudes, behaviours, values, relative power and in uence that society ascribes to people based on sex. e particular vulnerability of women and girls, males who have sex with other males, and trans-gendered persons must be addressed. In the health system, gendered norms play out in the form of longstanding preoccupation with women's maternal and reproductive functions and capacities. As well, the uniqueness of certain women's health issues impacted by the status or role of women in society and culture often receives relatively limited attention. is includes di erent patterns of tobacco, alcohol, prescription drug

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Impressive evidence has recently been marshaled to demonstrate that social

Guiding Principles

Several key principles provide the crucial foundation for the development of a balanced and pragmatic prevention e ort. ese principles must be applied in a careful and thoughtful manner. Together they articulate the ethical basis for decision making and provide the basis for implementing prevention e orts for maximum and sustained bene t.

EVIDENCE OF EFFECTIVENESS

e complexity of substance use, the public impact of related harms, advances in prevention and treatment knowledge, and escalating demand for services means that responses must be based on the best available evidence. is evidence consists of research and evaluation ndings (including process, outcome and economic evaluations), needs assessments, specialist and community knowledge, as well as the lived experiences of substance users, their families, community leaders and service providers.

e body of prevention evidence has grown signi cantly over the past decade. However, challenges remain with regard to the strength of the evidence and its gender and cultural applicability. Prevention operates in an environment where numerous cultural, social, economic and political factors interact. Prevention science strives for evidence of what interventions work and how they work, but acknowledges that repeatability of results is relatively rare (WHO, 2004). Nonetheless, a signi cant number of policies and programs have been shown to yield positive results across di erent settings that recommend their wide implementation (Loxley et al, 2004; Stockwell et al., 2005a).

e nature of evidence needed depends on what is meant by e ectiveness. For the purpose of this paper, e ectiveness refers to the extent to which the intended outcomes of intervention are achieved in accordance with stated values, and within limited resources available. To ensure e cient and e ective use of resources, it is important for policymakers and service providers to understand what an integrated response to prevention will likely cost in terms of the resources it consumes and types of outcomes that can be expected. Much evidence still rests on e ectiveness of programs without specifying the resources needed to bring this about (Loxley et al., 2004).

Other challenges also face communities seeking to apply the evidence. Research, practice and policy have usually been constructed to a ect the entire population without speci c attention to di erential e ects on women and men or various subgroups such as Aboriginal men or teen girls. As such, evidence is usually lacking on the impact of population level policies on many subpopulations, as well as for targeted approaches that address vulnerabilities speci c to diverse groups of women and men.

e principle of prudence recognizes that all evidence has weaknesses and that we can rarely know enough to act with absolute certainty, but that we can be sure enough of the quality of the existing evidence to make recommendations for action (WHO, 2004).

e precautionary principle, borrowed from the eld of environmental sustainability, states that where there are threats of serious or irreparable damage, lack of full scienti c certainty shall not be used as a reason for postponing measures to prevent harm. e challenge for policymakers and service providers, therefore, is to actively seek and promote the use of the best available evidence and to support the accumulation of a more complete evidence base, while continuing to take decisive action to prevent and reduce harm.

TARGETEDINVESTMENT

Policy makers administering limited resources must be concerned with return on investment0(i)-10(s)-10( )-10(t)-10(o)-10( )-10(a)-10(c)-10(h)-10(a)-1ncccc,Men (s)-10( )C10(o)

ese factors—which include unemployment, poverty, single motherhood, geographic isolation, and aboriginal status, among others—play key roles in in uencing individual risk and risk taking behaviour. E ective vulnerability reduction means going beyond the immediate risk taking act to address the underlying factors that create environments that support and encourage risk behaviour. A human rights perspective allows us to consider how marginalization, disadvantage and social exclusion a ect substance use, the burden of harm from use and the experience of policy and program interventions.

Human rights include individual civil, political, economic, social and cultural rights. ese rights empower individuals and communities by granting them entitlements that give rise to legal obligations on governments. Human rights, for example, can help to equalize the distribution and exercise of power within society, thereby mitigating the powerlessness of the poor. e principles of equality and freedom from discrimination demand that particular attention be paid to vulnerable groups. e right to participate in decision making processes can help to ensure that marginalized groups are able to in uence health-related matters and strategies that a ect them (WHO, 2004). Greater involvement of people who use drugs in planning policies, programs and services that a ect them is an example of how this principle can work in the substance use eld (Canadian HIV/AIDS Legal Network, 2005).

A human rights framework o ers a useful tool for understanding and responding to public health issues, such as problematic substance use. For example, the violation of human rights can increase the risk of problematic substance use and, conversely, such use can negatively a ect the extent to which human rights are upheld. By acknowledging the dynamic and mutually reinforcing relationship between health and human rights, concepts of vulnerability and risk, distribution of health outcomes, and e ectiveness of policies can be better understood (Gruskin, Plafker and Smith-Estelle, 2001).

UNIVERSAL AND TARGETED INTERVENTIONS

E ective prevention requires recognition that the bulk of preventable illness is often contributed by low to average risk individuals due to their greater numbers than those at higher risk. is 'prevention paradox' means it may be more cost-e ective in terms of population health outcomes to focus on the majority who are at low or average risk of harmful drug use, while sustaining e orts to engage the smaller proportion of high-risk users.

Recent evidence from Australia indicates that the prevention paradox holds true for youth who consume legal substances, such as alcohol and tobacco, but does not hold for illegal substances. Figure 2 illustrates how most of the teenagers in a large school survey who engaged in 'binge' drinking or tobacco use at least once a month were categorized as having either low or average adolescent risk factors for problem behaviours – and that the reverse was true in relation to the regular use of illegal substances other than cannabis (Stockwell et al, 2004). is suggests that some universal interventions (such as maintaining prices and controlling access to tobacco and alcohol by young people) are required to impact on legal drug use. More targeted interventions are more likely to be bene cial for reducing the harms from illegal drugs (Loxley et al, 2004).

Figure 2: Broad risk status of students aged 15/16 years who use di erent substances at least once a month

For the general population, it has also been repeatedly shown that the majority of people whose average alcohol consumption is quite low nonetheless contribute most cases of alcohol-related injuries and acute problems (e.g. Gmel et al., 2001). e reason for this is that occasional heavy drinking is a very common pattern. In British Columbia, a substantial portion of alcohol consumption is above levels for acute risk (Centre for Addictions Research of BC, 2005). Figure 3 illustrates that young, particularly male drinkers are particularly at risk, but that other segments of the population need to be included in a comprehensive and e ective prevention strategy (ibid).

Figure 3: Percentage of BC and Canadian residents drinking at levels for-10(r-100(f/D [(F)-10(t)c1

e challenge for policymakers and service providers is to nd the optimal balance between universal and targeted prevention strategies to achieve the desired outcome. is requires re ection on how to balance the impact on broad population health while redressing issues of vulnerability within high-risk populations. Both universal and targeted interventions have been identi ed later in this paper.

PROGRAM FIDELITY

The ultimate test of an evidence base is how it can be used effectively to inform policy and practice. There is some debate in the prevention literature about the relative merits of strict adherence to program fidelity versus allowing or even encouraging adaptation to different settings or populations. The challenge is to separate out superficial aspects of a program from the fundamental forces responsible for its effectiveness (Saltz, 2005).

Policymakers are concerned with the need to justify the allocation of resources and demonstrate added value. Service providers, in turn, are interested in the likely success of implementing interventions. Participants want to know that both the program and the process of implementation are participatory and relevant to their needs.

Our knowledge of the robustness of prevention findings across diverse contexts and settings is limited. Initiatives to disseminate effective or promising practices, and to stimulate their adoption and implementation elsewhere, should be combined with efforts to perform new outcome and process studies and to develop supportive research policy. In this way currently undocumented evidence on effective practice can make its way into the published literature.

Implementation research is critical to understanding how and under what conditions programs may succeed. This knowledge can then be translated into guidelines to support policymakers and service providers in adapting programs to local needs and resources, thereby increasing the likelihood that these interventions will be effective.

BC Scope

British Columbia's population is in many respects generally healthy; for example, BC has lower rates of tobacco use and higher rates of physical activity than other jurisdictions in Canada (BC Office of the Provincial Health Officer, 2003). However, the rates of many types of substance use in BC are similar to or higher than other Canadian provinces. Figure 4 shows the rates of alcohol use by men and women in British Columbia and Canada

Figure 4: Drinkers, former drinkers and abstainers in BC and Canada by age for men and women (CARBC, 2005).

More British Columbians have used cannabis in their lifetimes and in the past year than have other Canadians (Canadian Centre on Substance Abuse, 2005a). Young people are particularly likely to have used cannabis, with more than one in five students reporting past month use in 2003 (The McCreary Centre Society, 2004). Figure 5 shows the trend of cannabis use over the past decade, where rates of both lifetime and past year use are significantly higher now than in 1993.

Figure 5: British Columbian student cannabis use, all grades.

With respect to other illegal drugs than cannabis, prevalence of lifetime use is also higher in BC than elsewhere in the country (Canadian Centre on Substance Abuse, 2005a). Table 2 shows the rates of lifetime and past year use of different substances:

Table 2: Rates of lifetime and current use (past 12 months) of different substances by British Columbians aged 15 years or older in 2004

TYPE OF SUBSTANCE	% EVER USED IN LIFETIME	% USED IN PAST 12 MONTHS
Alcohol	93.2%	79.3%
Tobacco*	37.0%	15.0%
Cannabis	52.1%	16.8%
Cocaine/crack	16.3%	2.6%
Amphetamine/speed	7.3%	0.8%**
Ecstasy	6.5%	1.1%**
Hallucinogens	16.5%	0.7%**
Any illegal drug other than cannabis	23.0%	4.0%

*CANADIAN TOBACCO USE MONITORING SURVEY (2004), ALL OTHERS FROM CCSA (2004).
** ESTIMATES FOR WHOLE OF CANADA DUE TO SMALL SAMPLE SIZE.

The substance use patterns of British Columbians may range from beneficial to non-problematic. Approximately 9.1% of British Columbians aged 15 years or older report at least one type of harm (e.g. relationships, financial, legal, work-related) from their own alcohol use, while 35.4% report at least one type of harm (e.g. physical or psychological harms) from others' drinking (Canadian Centre on Substance Abuse, 2005a). With respect to illegal drug use (including cannabis), approximately 17.6% of British Columbians report one or more harms resulting from their own drug use in the past year. It must be noted that these data are self-reported from a telephone-based survey—they do not reflect problems for some vulnerable groups, such as homeless people, and they may not accurately reflect all of the harms experienced by the BC population.

However, it is clear that the harms British Columbians experience from the problematic use of psychoactive substances warrant a concerted approach from many levels of government, different sectors and organizations, and communities, families and individuals. A comprehensive, compassionate, and effective response is needed to prevent and reduce the harm from substance use. It must address high risk patterns, modes of administration and settings of substance use. The following sections identify five strategic directions that evidence suggests will have the most impact in mitigating or reducing harms from substance use in British Columbia.

Strategic Direction #1 – Influencing Developmental Pathways

STATEMENT OF DIRECTION

Effective prevention programs influence developmental pathways across the lifespan by addressing social and structural determinants, reducing individual risk factors, and increasing protective factors. Particular attention to those transition points at which problems from substance use often emerge is important. Such key developmental stages include the pre-natal/post-natal period, the transition to school, adolescence and the transition to high school (primary focus of Strategic Direction #2), transition to independence (going to college or entering the work force), and transitions relating to family and occupation, including retirement.

INDICATORS OF PROGRESS

- Percentage of health authorities that have comprehensive FASD prevention plans in place
- Number of service providers providing services to pregnant women who receive training on counselling women about alcohol use during pregnancy
- Number of pregnant women who receive counselling about alcohol use during pregnancy
- Rates of alcohol use and smoking among women of child-bearing age and, specifically, women who were pregnant in the 2004 and later Canadian Addiction Surveys
- Scores on school experiences among Grade 4 students in Ministry of Education "School Satisfaction" survey
- Number of students (general population and Aboriginal) completing secondary school according to the 6-Year Dogwood Completion Rate statistics
- Number of adults aged 25-29 years old who are engaged in either work or school, as measured by the Statistics Canada Labour Force Survey

KEY CONSIDERATIONS

Harms from substance use may occur at different stages in an individual's life, and may arise from a variety of contributing causes. Risk factors predict early and heavy substance use, and may be individual, environmental, or social. They include such things as genetic factors, parental substance use (pre- or post-natal), childhood trauma, inadequate income and/or housing, and early initiation to substance use. Protective factors mitigate the impact of risk factors for problematic substance use. These include easy temperament, social and emotional competence, healthy family attachment, school connectedness, participation in a faith community, and having a meaningful adult role-model relationship during adolescence or a supportive relationship in adulthood. It is important to note that Aboriginal communities still endure social and economic inequities relating to the legacies of the colonial experience, and that these have considerable impact on problematic substance use and other health behaviours (Office of the Provincial Health Officer, 2001).

Table 2: Risk and Protective Factors across the Lifespan

LIFESTAGE	EXAMPLES OF RISK FACTORS
Pre-natal	• Maternal alcohol and tobacco use • Genetic influences
Early childhood (0 to 5)	• Extreme socio-economic disadvantage • Childhood trauma
Middle childhood (6 to 11)	• Extreme socio-economic disadvantage • Early school failure • Favourable parental attitudes toward substance use • Childhood behaviour problems (including mental health issues)
Adolescence (12 to 18)	• Co[illegible]
Early adulthood (19 to 29)	
Later adulthood (30 to 64)	
Senior years (65 +)	

These efforts may take many forms to shape social environments or impact living and working conditions. While detailed recommendations on this level of health promotion are beyond the scope of health and social systems, they cannot be ignored in a broad strategic plan to prevent the harms from subst10(r)20(e)6 0(i)10(o)10(n)10( )1010

Strategic Direction #2 – Prevent, Delay and Reduce Use of Alcohol, Cannabis and Tobacco by Teens

STATEMENT OF DIRECTION

Hazardous alcohol use and tobacco use cause 90% of all deaths, illnesses and disabilities related to substance use in BC. Smoking tobacco and drinking too much alcohol during teenage years can lead to later social and health problems –

Prevention of the use of legal drugs by youth has the strongest evidence for effectiveness. With respect to illegal drugs, the methods of prevention shown to be most effective for alcohol and tobacco – increasing price and decreasing availability – are much more difficult to apply. Due to the nature of black markets, price and availability of illegal drugs are beyond the control of government regulation. Despite the dedicated efforts of police, the effects of enforcement efforts are limited at best, and over the long run have had negligible impact on either price or availability of illegal drugs in Canada.

School-based drug education shows some evidence of effectiveness in reducing or delaying onset of alcohol and tobacco use (evidence is far weaker for illegal drugs). The evidence suggests (McBride, 2005) that in order to be effective educational programs should be:

- Supported by solid research and evaluation design
- Developed in consultation with youth and shaped via pilot testing of interventions with youth and teachers
- Applied at relevant and pivotal stages in youth development, particularly within the health component of the student curriculum
- Interactive and focussed on skill development
- Targeted toward behaviour change goals that ar

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Strategic Direction #3 – Reduce Risky Patterns of Use

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Potential harms from other types of substances may be reduced by cultural norms that regulate use and behaviours in ways that are socially integrative rather than harmful (Coomber & South, 2004; Zinberg, 1984). Distinguishing between beneficial, non-problematic and problematic patterns of use is useful in planning for preventing and reducing harm.

In BC, alcohol is responsible for the majority of substance-related deaths and hospital episodes among young people. Analyses of the 2004 Canadian Addiction Survey by CARBC (2005) show that close to 90% of all alcohol young people drank was consumed at levels placing the drinker and others at risk of acute and/or chronic harm as assessed against low risk drinking guidelines developed by the Centre for Addiction and Mental Health. Those guidelines, endorsed by the Canadian Centre on Substance Abuse, recommend consumption of no more than 14 drinks for men or 9 drinks for women in a week and no more than 2 drinks for anyone on a single day. While they have been described as conservative or “lowest risk” guidelines compared with those in some other countries (CARBC, 2005), balanced against this is evidence that the 2004 Canadian Addiction Survey substantially underestimated alcohol consumption. Additional analyses found that self-reported consumption in the 2004 Canadian Addiction Survey accounted for less than a third of known alcohol sales in BC. However defined or measured, alcohol consumption by young adults in BC is too often at a level which places them at risk of acute or chronic harm. Prevention efforts can be effective by focusing on risky patterns of alcohol use and by encouraging safer levels of use as well as delayed onset of use. New low risk drinking guidelines recently developed and promoted by the Centre for Addictions Research of BC are intended to support a range of strategies to encourage less risky drinking patterns in the province.

Tobacco smoking is the single largest preventable cause of disease and death in BC, and the vast majority of this is the result of long-term chronic use. The effect of quitting smoking entirely is a rapid decline in the risk of both mortality and morbidity. Reducing tobacco consumption does not make it safe, but can reduce the risks associated with use.

Poly-drug use is a common pattern of drug use that raises risks for health and social harms. People who use substances may use them in combinations that change or amplify their effects, increasing the potential for impairment, overdose, and other harms. For example, driving after combining alcohol with other drugs increases the risk of a motor vehicle crash more than does alcohol alone (Movig et al, 2004). Similarly, the risk of accidental injury (such as falls among the elderly) or overdose from some types of drugs, such as opioids (e.g. heroin) or benzodiazepines (e.g. Xanax™), is greatly increased when they are used in combination with alcohol (BC Office of the Provincial Health Officer, 2003). Early involvement in poly-drug use is a risk factor for later drug use problems. Intervening early with people who engage in various types of substance use will reduce the chances of later drug problems.

The use of psychoactive pharmaceutical drugs can be of great benefit to patients for whom such treatment is indicated. However, such substances also pose potential harm for some people, especially when they are used in a way other than prescribed or in combination with other substances. For example, methylphenidate (or Ritalin™) may sometimes be diverted to a schoolyard black market and unsanctioned recreational use (Poulin, 2001). Short-term use of benzodiazepines impairs cognitive functioning, memory, balance and increases the risk of dependence.

Long-term use of benzodiazepines or opioids increases the chances of chronic dependence to these types of drugs. Combining pharmaceutical drugs with alcohol or illegal street drugs creates a risk of adverse drug reactions or overdose. Women and seniors have particular vulnerabilities to problematic use of prescription psychoactive drugs, as they are often prescribed these substances at higher rates than the general population (Currie, 2003; Therapeutics Initiative, 2004).

STRATEGIES

Strategy 1: Promote clear messaging that addresses safer substance use and informs risk-reducing choices.

Strategy 3: Promote the development of programs that encourage safer drinking and tobacco cessation among Aboriginal peoples.

The social and economic situations of Aboriginal peoples, exacerbated by

5. Support brief intervention programs in justice and corrections for police and correctional staff, and provide the necessary support materials and training.

6. Improve access to telephone-based brief intervention services.

Strategy 4: Promote the development of programs that encourage the safer use of psychoactive medications to maximize benefit and minimize harm.

Psychoactive medications can provide important health benefits but can also lead to significant harms. Both public awareness and professional practice are essential to minimizing the potential harm.

1. Develop and implement evidence-based interventions that improve prescribing practices among BC physicians. Such programs could include a

Strategic Direction #4 – Creating Safer Contexts

STATEMENT OF DIRECTION

Harm reduction seeks to prevent and reduce the harms associated with substance use without necessarily requiring the reduction of use. Harm reduction strategies often focus on changing the environment in significant ways that will result in reduced harm for the community which, of course, includes the people who use psychoactive substances. Such strategies are complementary to those which seek to create changes in individual behaviour. The history of harm reduction is connected to the beginning of the HIV epidemic and injection drug use as a means for viral transmission. Harm reduction continues to be associated with strategies to prevent the spread of blood-borne illnesses related to injection drug use. However, the concept has much wider application, and is used here to draw attention to a wide range of effective strategies for preventing harm by creating safer contexts.

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Alcohol continues to be a contributing factor in domestic violence, with close to half of spousal assault incidents in BC related to alcohol (BC Ministry of Public Safety and Solicitor General, 2004). BC residents, along with those in other western provinces, report higher than average experience of harm from others' use of alcohol—35.4% of British Columbians said they had experienced such harm in the past year (Canadian Centre on Substance Abuse, 2004).

Impaired operation of a vehicle still makes up the majority of Criminal Code traffic offenses, although the frequency of this type of offence has decreased 4% over the past decade (BC Ministry of Public Safety and Solicitor General, 2004). However, this may reflect a reduction in enforcement efforts rather than a change in drinking and driving behaviour in BC.

Alcohol-impaired driving is a contributing factor in a significant proportion of motor vehicle crashes. Attending police officers determined that alcohol was a contributing factor in 23.5% of the fatal collisions in British Columbia. Yet police reports tend to underestimate the presence of alcohol in collisions. Toxicology tests on fatally injured drivers in Canada show 35% were found to have been drinking (Transport Canada, 2004). Young male drivers are predominately responsible for alcohol-related collisions. Of all collisions attended by police where alcohol was a considered a factor, 79.3% of the drivers were male (BC Motor Vehicle Branch, 2003).

Strategies for reducing impaired driving include random breath testing, which has been shown to be effective in reducing fatalities, injuries, and road crashes. In order to be successful, these programs need high-visibility and a public perception that there is a high chance of being caught. Public education has made some gains in reducing impaired driving and consequent harms over the past few decades and warrants continuation.

The exposure of adults and children to second-hand smoke is a considerable risk factor for harm to others from tobacco smoking (BC Ministry of Health Services, 2004). Although British Columbia has made significant progress in reducing second-hand smoke exposure through legislation that protects workers, some people remain at risk for illness from other peoples' smoking. Increasing education and other measures to reduce environmental smoke in places such as homes and automobiles is an important part of improving the health of British Columbians.

The practice of sharing injection equipment for injection drug use continues to be a primary means of transmission for HIV and hepatitis C. Additionally, injection drug use is the cause of other illnesses and infections such as endocarditis (BC Ministries of Health Services and Health Planning, 2003; Broadhead, et al., 2002). Health Authorities in British Columbia offer needle exchange and other harm reduction services in accordance with best practice guidelines (BC Centre for Disease Control & BC Ministry of Health Services, 2004). How(n)10(.)10( )10(H)28(o)22(e)10(r)1

STRATEGIES

Strategy 1: Develop and implement evidence-based programs to increase safety and promote social responsibility around licensed premises in order to reduce violence and injuries.

Injuries account for a very substantial portion of the harm related to alcohol and much of this relates to the behaviour of young males in or about licensed premises. These harms increase where policies and practices encourage the concentration of alcohol outlets. Nonetheless, several actions have shown significant effectiveness in reducing harm when applied consistently and especially when implemented in combination (Room et al 2005; Grube & Nygaard 2005).

1. Encourage standard policies for the training of all staff at licensed premises.

2. Improve the process for active enforcement of regulations related to serving intoxicated or underage clients and also to health and safety issues.

3. Restrict liquor outlet density so as to reduce intense competition between establishments resulting in cheap alcohol and lax serving standards. This is of particular concern in so-called "entertainment districts" that require extra attention to infrastructure planning (e.g. transportation, garbage removal).

4. Introduce a publicly reported monitoring system that tracks serious alcohol-related harms associated with drinking at particular licensed premises. This system should include violent incidents and data on 'last place of drinking' for all drinking and driving offenders.

Strategy 2: Implement actions to decrease the harm from impaired driving.

Taken together impaired-driving counter measures have demonstrated effectiveness and should be vigorously applied (Room et al. 2005).

1. Introduce a highly publicized and highly visible system of random breath testing. These have been shown to be significantly more effective than standard sobriety checkpoints currently used in BC.

2.

Strategy 3: Implement actions to decrease the harm from second-hand smoke.

Young children exposed to passive, or second-hand, smoke have a higher risk of ear infections, asthma, bronchitis and pneumonia than children of non-smokers. In thundnfef(e a h asthma, br)6(onchitl(e a h with[(enited)6f -6 -2.16exposed D i /GS0(r)40(a)10(t6

Strategic Direction #5 – Influencing Economic Availability

STATEMENT OF DIRECTION

As with other products, the prices and marketing of alcoholic drinks, cigarettes,

By contrast, low prices, largely associated with drink discounts, special offers and happy hours, have been correlated with binge-drinking, physical violence, impaired driving and traffic deaths (Babor, et al., 1978; Farrell, et al., 2003; Homel and Tomsen, 1993; Kuo, et al. 2003).

Taxation has been the single most effective strategy for reducing demand for tobacco and alcohol, especially among the young and high quantity users who are more sensitive to price changes (U.S. Department of Health and Human Services, 2000; Chaloupka, 1999). A 10% rise in the retail price of tobacco will reduce smoking by about 4% in economically developed countries such as Canada.

Tax increases at the provincial sales or federal excise level are particularly cost-effective because of the low expense associated with introducing these measures and the potential for substantial revenues.

There are also opportunities at the local level to minimise discounting and point-of-sale advertising of alcohol and tobacco products. Liberal sales and marketing practices are strong predictors of alcohol-related harm, especially among new and young drinkers (Babor, et al., 2003; Room, et al., 2003).

Advertisement-free zones and total bans on ads are associated with lower rates of binge-drinking and vehicular fatalities (Babor, et al., 2003; Kuo, et al., 2003); and regulations on deep discounts and promotional specials on substances have the effect of maintaining standard costs and thus controlling for the harms related to lower prices, including disease, injury, death, violence and crime (Chaloupka, et al., 2002). Accords between business, law enforcement and local government have also shown success in regulating alcohol use and making licensees accountable for irresponsible marketing and for promotions strategies that glorify overindulgence and cheap drinks (Homel, et al., 1997; Lincoln and Homel, 2001; Stockwell, 2001; Vaughan 2001).

The benefits of higher prices are usually offset to only a limited degree by smokers selecting higher tar and nicotine cigarettes, by drinkers selecting cheaper brands with high alcohol content and by both seeking out illegal tax-free alternatives. To be most effective, alcohol and tobacco taxes must be linked to the cost of living and not be allowed to fall over time.

These taxes must also be directly linked to the alcohol content of drinks and the number of cigarettes in cigarette packs. Lower rates of tax for lower-strength alcohol drinks have been shown to encourage drinkers to shift to these products and thereby lower their risk of alcohol-related harm (Stockwell and Crosbie, 2001).

One criticism of high taxation strategies is that while they improve health and safety outcomes for all social groups, they may also have some adverse impacts on economically disadvantaged sections of the community. Potential adverse impacts can be minimised through innovative welfare arrangements that protect allowances for essential services and improve access to treatment services. In addition, reductions in public and domestic violence and improvements in health and safety are significant benefits that may off-set these potential disadvantages, especially for women and children (Stockwell et al., 1998).

Maintaining high taxation on tobacco has strong and broad support in the community. Public opinion in Canada on high taxation for alcohol products, however, is mixed (Anglin et al. 2001; Room et al., 1995).

In other countries there is strong community support for the concept of a "harm reduction levy" on alcoholic drinks in which a few cents per drink are collected to fund treatment and prevention programmes (Lang, et al., 1995; also Wagenaar et al., 2000). Strong support for taxing higher alcohol content drinks at higher levels has also been demonstrated elsewhere (Loxley et al., 2000). Public opinion on these issues has not been tested in Canada.

STRATEGIES

Strategy 1: Restrict price discounting and advertising of full and high-strength alcohol and tobacco at the retail level

1. Explore opportunities for the province and local municipalities to restrict advertisement of the prices of tobacco and alcohol products, especially discounts.

2. Explore opportunities for municipalities and universities to collaborate on eliminating interior and exterior alcohol advertisements on and near college and school campuses.

3. Develop municipal laws to standardize the price of alcohol products across licensed establishments.

4. Impose fines on, or suspend or revoke the licenses of, businesses offering discounts or special rates on alcohol and tobacco products (including two-for-one features, coupons, and cheap specials in return for high-priced entrance fees).

Strategy 2: Create opportunities for promoting consumption of lower alcohol content and non-alcoholic drinks through price incentives.

1. Develop provincial and ActualText (þÿ)>>BDC 0.73 0 Td ( )Tj EMC 2.27 3-3.3 -2

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Strategy 3: Promote industry accords and community action projects to increase licensee accountability and expand responsibility for harm reduction

1. Encourage local accords between municipalities, police and liquor licensees or introduce municipal bylaws which promote responsible service, limit price discounting and ban all forms of local price advertising.

2. Require that licensees prepare, circulate and abide by a Code of Practice which distinguishes appropriate from inappropriate service behaviour.

3. Engage the media in monitoring the success of industry accords, and in reporting on offenders and problem establishments.

Strategy 4: Increase taxation on liquor and tobacco products in accordance with current costs of living and supply and demand

1. Review taxation levels and options to ensure minimum prices of tobacco and alcohol are not too low.

2. Align taxes with liquor and tobacco quantity and weight, such that higher strengths of alcoholic beverages and greater numbers of cigarettes and volumes of loose tobacco see increasingly higher taxation.

3. Adjust federal excise and provincial sales taxes on a consistent basis to match fluctuations in the cost of living.

4. Impose an additional levy on full and high strength alcohol and tobacco products to directly fund treatment and prevention research.

Key Elements of System Capacity

In order to implement the integrated and comprehensive approach to preventing and reducing the harm from substance use put forward in this paper several key elements of system capacity need to be addressed. The five issues briefly discussed in this section have each been identified as needing particular attention.

LEADERSHIP

Strong leadership is a critical success factor. The key responsibilities of leadership are strategic direction, healthy public policy development, and collaboration with multiple sectors and advocacy. Strategic leadership is required to:

- Articulate and promote a shared vision for preventing and reducing harms from substance use in British Columbia
- Engage and sustain the participation of a wide variety of stakeholders
- Foster relationships and alliances with partners
- Mobilize resources and inspire public support
- Facilitate the development of collaborative responses
- Nourish innovative research and knowledge transfer

Effective leadership requires the development of a range of skills and competencies that must be fostered and enhanced over time. Concerted efforts are required to recruit and support skilled and respected individuals to assume key positions of responsibility in addressing problematic substance use.

PARTNERSHIPS AND COLLABORATION

The drivers of health lie outside the health sector (Marmot, 1999). This holds true for the prevention and reduction of harm from substance use. The need for intersectoral partnerships and collaboration is clearly defined by the social, economic and environmental determinants of health, which cannot be influenced by health sector action alone.

Intersectoral collaboration makes possible the joining of forces, knowledge and means to understand and solve complex issues whose solutions lie outside the mandate and capacity of a single sector. It promotes and helps achieve shared goals in many areas, including research, planning, policy, practice and resource allocation (FPT Advisory Committee on Population Health, 1999).

Intersectoral collaboration has two dimensions: a horizontal dimension that links different sectors at a given level, and a vertical dimension that links different levels within each sector.

The potential benefits include an enhanced capacity to tackle and resolve complex health and social problems which have eluded individual sectors for many years, a pooling of resources, knowledge and expertise, and reduced duplication of effort.

Conditions for successful intersectoral collaboration are:

- Shared values, interest and alignment of purpose
- Shared leadership, accountability and rewards
- Senior governmental and community champions
- Appropriate horizontal and vertical linkages
- Supportive policy environment
- Engagement of key stakeholders, including consumers, communities, service providers, policymakers and funders
- Investment in alliance building and consensus-based decision making
- Concrete objectives and visible results
- Team building and supports
- Strong information and evidence base
- Practical models, tools and mechanisms to support implementation

WORKFORCE DEVELOPMENT

The prevention and reduction of harms from substance use creates many workforce opportunities and challenges for health authorities, service providers and community partners. Chief among these is the harmonization of diverse organizational structures and processes, service philosophies and practices, and work cultures. Ongoing collaborative efforts among academic institutions, professional associations and employers are needed to ensure an integrated workforce has the knowledge, skills, resources and supports to respond effectively to consumer needs.

A system of inter-professional competency definitions similar to the National Vocational Qualifications in the UK may provide a framework. It ensures the workforce has the necessary knowledge and training to perform effectively across sectors, disciplines and professions. Inter-professional education (learning together) provides a further mechanism that promotes collaboration and identifies the requisite competencies for collaborative practice. It facilitates transfer of knowledge and integration of activities across the entire continuum of services through interdisciplinary dialogue. Service providers learn to work together in shared problem solving and decision making for the benefit of clients and consumers. In so doing, they develop mutual understanding and respect for the contributions of various disciplines.

SURVEILLANCE, RESEARCH AND EVALUATION

A comprehensive response requires regular, well-conducted surveillance, research and evaluation concerning the social and structural determinants, epidemiology, prevention and treatment of harmful substance use. A robust surveillance, research and evaluation capacity provides the evidence needed to formulate sound policies and practices, allocate resources effectively and efficiently, and support decision making at all levels preventing and reducing harms from substance use. It is an avenue for innovation, learning and quality improvement.

The strategies in this Paper have been selected on the basis of available research as being effective in preventing and reducing the harm from substance use, provided they are implemented well. To ensure sound implementation and the achievement of intended results, the strategies will need to be carefully monitored through a comprehensive surveillance system. Ideally, such a system will operate consistently at the provincial, regional and local level. It will track patterns of risky substance use and related impacts on public health, safety and order, as well as patterns of social risk and protection in communities.

A comprehensive surveillance system will also include sex, gender and diversity variables, support sex and diversity disaggregation of data, and support gender and diversity analysis related to substance use and the consequences of alcohol, tobacco and other drug policy. Thus outcomes will be monitored both for the population as a whole in different regions and also for particular sub-groups where available data permit this.

Models for surveillance are the National Alcohol Indicators Project (per capita consumption, patterns of drinking, alcohol-caused mortality, hospital episodes, road crashes and violence – see Chikritzhs et al., 2003) and Australia's Illicit Drug Reporting System (trends in injecting drug use and party drugs, drug purity and price, see http://ndarc.med.unsw.edu.au/ndarc.nsf/website/IDRS) which use nationally comparable data collection systems for different jurisdictions in a country with a similar federal structure to Canada.

In addition to surveillance and evaluation, community and research partnerships will be required for the development and testing of new strategies with a strong rationale in areas of identified need.

KNOWLEDGEEXCHANGE

In British Columbia, there is a growing need to facilitate dialogue and the exchange of knowledge about substance use and the associated harms. This exchange must ensure that different types of knowledge are shared between all communities of interest, including research, policy and practice.

Effective knowledge exchange requires opportunities for in-person dialogue within and between communities of practice. Evidence suggests that knowledge producers and knowledge users understand and integrate information best when they work together to ensure the dialogue addresses current real-world circumstances (Lavis, Robertson, Woodside et al., 2003).

Conclusion

Addressing the harms associated with psychoactive substance use begins with prevention. The goal of all prevention strategies in this paper is to protect and improve the health of British Columbians by minimizing the harm to individuals, families and communities from the use of tobacco, alcohol, certain pharmaceuticals and illegal drugs. Many of the prevention strategies focus more specifically on increasing knowledge about psychoactive substances, delaying the onset of first use, reducing problematic patterns of use, reducing use to safer levels, supporting abstinence, especially for young adolescents, and supporting environments that promote health.

The five strategic directions that evidence suggests will have the most input in mitigating harms from substance use serve as a starting point for focusing efforts across British Columbia. Influencing developmental pathways, delaying and preventing alcohol, tobacco and cannabis use during adolescence, reducing risky patterns of substance use, creating safer contexts and influencing economic availability will build the Province's capacity to prevent and reduce the harms associated with substance use.

To be effective, prevention efforts must be comprehensive, evidence-based and implemented beyond the direct responsibility of the health care delivery system. Other public systems in British Columbia, including education, social services, police, housing, courts, corrections, federal, Aboriginal and local governments, have a role to play. The strategies outlined in this paper will inform the Ministry of Health's efforts to seek out partnerships with other ministries, agencies and levels of government to reduce and prevent harm from problematic substance use in British Columbia, and they will complement, guide and support the efforts already being undertaken at the provincial level in communities and regions throughout the province.

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