

Harm reduction as the basis for Hepatitis C policy and programming

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Abstract

Harm reduction measures have helped drug users reduce the risk and severity of adverse consequences without leading to increases in overall levels of drug use in the general population. Indeed, in many cases harm reduction has been a vital first step towards recovery from addiction. This presentation explores different conceptualizations of harm reduction, presents a framework for drug policy based on an empirical concept of harm reduction and discusses the implications to Hepatitis C policy and prevention programming.

1. Introduction

Illicit drug use is a serious public health and social problem in Canada, accounting for hundreds of deaths and thousands of hospitalisations attributable to illicit drug use in Canada annually (Single, Robson et al., 1999). The economic costs of illicit drug use in Canada have been conservatively estimated at over \$1.4 billion annually (Single et al., 1998). The problems of drug use not only concern individual drug users, they also negatively affect many communities, making neighborhoods unsafe, diminishing property values and diverting limited criminal justice resources from other pressing needs.

The purpose of this presentation is to discuss the concept of harm reduction and its applicability to programming for the prevention of Hepatitis C. The focus of my remarks will be on harm reduction policy and prevention programming aimed at injection drug use such as syringe exchange, drug substitution or maintenance programmes and other use-tolerant interventions. Such policies have been termed "harm reduction" because they placed first priority on the reduction of drug-related

harm, rather than the prevention of drug use per se. The presentation begins with an historical overview of harm reduction policies and practices. Evidence of the effectiveness of harm reduction programming will be summarized and I will present an overview of a harm reduction framework that is currently being considered in British Columbia. The presentation concludes with a discussion of the implications of this new approach to Hep C policy.

2. Harm Reduction Concepts and Practices

2.1. Historical overview

Beginning in the late 1980s, a new type of health promotion program developed to reduce the spread of blood-borne disease, particularly HIV infection, among intravenous drug users. These measures include syringe or needle exchange programs, bleach kits, provision of smokable drugs and methadone maintenance (Riley, 1993; Riley, 1994). Because they emphasize the minimization of adverse consequences of drug use rather than the prevention of drug use per se, these prevention programs have come to be known as "harm reduction" or "harm minimization".

The genesis of these harm reduction programs actually began prior to the AIDS pandemic. The so-called British system for providing heroin to addicts in the U.K. is one of the earliest examples. In general, harm reduction programs have been most thoroughly developed in the U.K., the Netherlands, and other parts of Europe, and more recently in Australia (Riley et al., 1999). Harm reduction is less common but increasing in North America. Harm reduction has generally proved to be effective and it has gained increasing official acceptance. For example, it is now the official basis of Australia's National Drug Strategy and Canada's Drug Strategy.

There are several reasons underlying the emergence of harm reduction programming, discussed below. The major impetus, however, is undoubtedly the threat of HIV and other blood borne disease. The overwhelming importance of the AIDS pandemic overshadows other concerns about the adverse consequences of illicit drug use, thus providing political support for needle exchange programs and other efforts to prevent HIV infection to the general population (Riley et al., 1999).

Harm reduction was initially closely identified with syringe exchange, but harm reduction has expanded to include a wide variety of programs and practices. These include the provision of bleach kits to intravenous drug users (IDUs), provision of smokable drugs such as heroin-laced cigarettes and methadone maintenance. Such programs are also a way of establishing contact with drug users, providing education, counseling and access to treatment and other services (Riley et al., 1999). Harm reduction has also expanded to prevention programming for licit drugs such as alcohol and even tobacco.

Syringe exchanges opened unofficially in Canada in 1987, with the first official exchange opening in Vancouver in March of 1989. Services were initially provided through fixed sites and street outreach, as well as limited representation at other agencies providing services to drug users in downtown areas. Over time, mobile vans have been added to services in several cities. Kits containing needles, bleach and condoms are distributed through these agencies. Between 1989 and 1993, the

Federal government cost-shared pilot outreach programs based on a multifaceted services model in five provinces (Riley, 1994). Over this time there has also been a rapid growth in other outreach programs that include syringe exchange. Programs are now operating in the Yukon, the North West Territories, Calgary, Edmonton, and Halifax as well as in a number of communities in Quebec, BC and Ontario. At the current time, there are more than 200 syringe exchanges in rural and urban areas in Canada, with more under development. In addition, there are now numerous pharmacies that provide syringe exchange services.

Methadone treatment is now available throughout Canada. While there are still waiting lists in many jurisdictions, the number of methadone placements has increased in the recent past. For example, in British Columbia there are currently 480 physicians authorized to prescribe methadone and 190 pharmacies authorized to dispense methadone, with approximately 4,800 active clients enrolled in the provincial methadone program in 1999 (Anderson, personal communication).

Harm reduction emerged in large part as a response to the dire threat that HIV posed to IDUs. More recently, the threat of hepatitis and other blood borne infections has been a further impetus. Other factors that have supported the development of harm reduction include the positive results of evaluations and the limited effectiveness of "supply-side" strategies in reducing the spread of HIV infection and other adverse consequences of drug use.

2.2 Harm reduction and legal drugs

Harm reduction was developed as an approach to deal with problems associated with illicit drug use, particularly the spread of blood-borne disease from the sharing of needles by IDUs. Therefore we tend to think of harm reduction in the context of illicit drug use. However, the concept of harm reduction has also been applied to legal drugs such as alcohol and tobacco.

Harm reduction as it is applied to nicotine refers to those policies and programs aimed at reducing tobacco-related harm among persons who continue to smoke.⁽¹⁾ Tobacco addiction is caused and sustained by nicotine, but the major adverse consequences of smoking are caused by other agents in tobacco. A variety of ways have been devised or proposed to reduce the harm associated with smoking without ending the dependence on nicotine. Examples include low-tar, medium or high nicotine cigarettes; putting a marker on cigarettes to remind smokers not to smoke to the end where tars concentrate; placing most of the nicotine in the front part of the cigarette so that the smoker receives the dose of nicotine desired without most of the carcinogens; nicotine gum and patches when used by smokers to reduce intake (rather than for smoking cessation); smokeless tobacco; taxing cigarettes according to tar content; non-tobacco cigarettes with lower levels of carcinogens; and educating smokers to decrease the number of puffs per cigarette, and/or puff duration and puff volume.

However, two major factors limit the applicability of harm reduction measures to smoking. First, the problems of tobacco use are mainly those arising from chronic disease (Single, Robson et al., 1999), thus placing severe limits on the utility of harm reduction measures. Second, unlike alcohol or illicit drug users, the vast majority of smokers are dependent users. Efforts to find a safer way of smoking have not received much attention because it is generally held that there is no safe

level of smoking. The focus of prevention has therefore been on preventive education, treatment and cessation programs aimed at convincing smokers to stop smoking altogether rather than to cut their intake or smoke in safer ways. Nonetheless, harm reduction measures may still be used as an additional strategy that is complementary to other, abstinence-based tobacco prevention measures.

Unlike tobacco, harm reduction is playing an increasingly important role in the prevention of alcohol problems. Indeed, the trend toward harm reduction in illicit drugs is closely paralleled by a similar trend in alcohol prevention toward measures aimed at reducing the consequences of drinking.

Until recently, the focus in preventive education regarding alcohol has generally been on the adverse effects of alcohol consumption and the message for all drinkers was generally unequivocal: drinking less is better. The message in harm reduction approaches is somewhat different: avoid problems when you drink. This is complementary rather than contradictory to the message that drinking less is better. Indeed, some harm reduction approaches (e.g., the promotion of low-alcohol content beverages) involve drinking less. But harm reduction differs from prior alcohol prevention approaches in that it focuses on decreasing the risk and severity of adverse consequences arising from alcohol consumption without necessarily decreasing the level of consumption.

The defining feature of harm reduction approaches to alcohol is the attempt to reduce the harmful consequences of alcohol consumption in a situation where people will be drinking. That drinking will take place is accepted as a fact, implying neither approval nor disapproval. The drinker is not seen as abnormal in any way, and he or she is responsible for his or her actions. Harm approaches to alcohol prevention are neutral regarding the long-term goals of intervention, which may or may not include abstinence. Examples of harm reduction measures for alcohol include:

- the introduction of earlier opening hours for a liquor outlet in downtown Edmonton to reduce the use of non-beverage alcohol by Skid-row inebriates;
- compartmentalization of space and padding of furniture in licensed establishments to minimize the harm that may result if a fight breaks out;
- the introduction of new impaired driving countermeasures, such as graduated licensing systems and/or zero tolerance laws for new drivers;
- measures to reduce alcohol problems at special events, such as a B.C. program addressing drinking issues at secondary school graduation celebrations;
- the introduction of special glassware in Scottish pubs which crystallizes rather than shards when broken, thus reducing the number and severity of injuries from pub fights (Plant, et al., 1994);
- the promotion of low-alcohol beverages;
- server training programs; and
- controlled drinking programs (Wilk et al., 1997; Flemming et al., 1999).

Most of these examples of harm reduction measures are relatively new, as there is a distinct trend toward prevention measures to reduce the harmful consequences of drinking rather than drinking per se. There are several reasons for this shift in alcohol prevention towards a harm reduction approach. Most notably, there is reasonably conclusive evidence that moderate drinking conveys significant health benefits, particularly in reducing coronary heart disease (see, e.g., English et al.,

1995; Maclure, 1993; Poikolainen, 1995; Single, Ashley et al., 1999). There is also declining political support for controls over the availability of alcohol in light of declining consumption in many countries and the erosion of international trade barriers. The most recent estimates of alcohol-attributable mortality and morbidity indicate that the relative contribution of accidents to overall alcohol-related mortality and morbidity is much greater than previously thought (Single, Robson et al., 1999). Finally, there is increasing recognition of the role that pattern of drinking play in the development of alcohol problems. In particular, the setting where drinking takes place often has a significant influence on the development of acute problems arising from intoxication. Thus, how one drinks can be as important as how much one drinks in determining the likelihood that a problem will occur as a result of one's alcohol consumption.

For all of these reasons, increased attention is likely to be given to prevention measures that focus on preventing problems associated with drinking rather than restricting access to alcohol or reducing the amount of drinking per se. Thus, the trend toward harm reduction in illicit drugs is closely paralleled by a similar trend in alcohol prevention, albeit for different reasons. With declining political support for alcohol control measures and the emergence of new evidence about potential health benefits associated with low-level alcohol consumption, it may be expected that alcohol prevention will increasingly focus on the reduction of harmful consequences of alcohol rather than monitoring individual levels of consumption to avoid dependence.

3. Effectiveness of harm reduction practices and programs

Several reviews have been published assessing the effectiveness of harm reduction measures (see, e.g., MacPherson, 1999; Erickson et al., 1997; Dolan, 1997; Heather et al., 1993; Strang and Farrell, 1992). While there are clearly gaps in our information base, these reviews have generally shown that harm reduction programs have had a positive impact in reducing the spread of HIV and other infections, and in helping many dependent users to lead normal lives as productive members of society, without leading to increases in levels of drug use.

Syringe Exchange: Needle and syringe exchange programs are, to many people, the epitome of the harm reduction approach. They were first established in a few European countries in the mid-1980s and, by the end of the decade, were operating in numerous cities around the world. Some exchange programs provide outreach services in the form of mobile vans or street workers to deliver services to drug scenes or to user's homes. In Amsterdam, police stations provide clean syringes on an exchange basis. Automated syringe exchange machines are now being used in many European and Australian cities. These vending machines release a clean syringe when a used one is deposited. Such machines are fairly inexpensive and accessible on a twenty-four hour basis. The machines, however, decrease the important personal contact between drug users and health-care workers.

Bleach kits (containing bleach and instructions for cleaning equipment) can be distributed as another way to make drug injection less dangerous. While bleach is not totally effective in eliminating HIV and it does not kill the pathogen which causes hepatitis, such kits do help to reduce the likelihood of infection being passed through sharing of dirty equipment.

There is now clear evidence that attendance at syringe exchanges and increased syringe availability is associated with a decrease in risk (e.g., decreased sharing) as well as a decrease in harm (e.g., lower levels of HIV and Hep C infection).

Methadone Programs: Numerous studies have shown that methadone maintenance reduces morbidity and mortality, diminishes the users' involvement in crime, curbs the spread of blood-borne disease and helps drug users to gain control of their lives. One of the key factors underlying the success of methadone as a harm reduction measure is that it brings the user back into the community rather than treating them like an outsider or a criminal. Methadone programs work best if they are numerous, accessible and flexible.

In particular, the recent expansion of methadone programs in British Columbia appears to have had a positive impact. Anderson (1999) makes a strong argument that methadone maintenance has been an important reason why rates of HIV infection have not been greater among IDUs in British Columbia. The number of new HIV infections among IDUs has steadily declined by 60% over the past 2.5 years (Anderson, 1999). Consequently, the proportion of new HIV infections accounted for by injection drug use (IDU) declined from one-half in 1996 to one-third in 1999. Contrary to earlier predictions when the HIV infection rate was increasing among IDUs, the peak prevalence of HIV infection among IDUs in British Columbia never exceeded 20-25 per cent, and it is now decreasing (Anderson, 1999). It is reasonable to expect similarly good results regarding reductions in the spread of Hep C.

Education and Outreach Programs: Drug education materials with a harm reduction focus aimed at high-risk populations are readily available in a number of countries, including the United Kingdom, Holland and Australia. In many countries, outreach workers contact persons such as drug injectors and prostitutes at risk of becoming infected with HIV. These workers distribute educational material, syringes, condoms and bleach kits, and help users contact other services. However, such educational materials remain controversial. While not promoting drug use, such materials tell the user how to reduce the risks associated with using drugs, teaching such things as safer injecting practices. There is little research to date regarding the net impact of these programs on drug-related harm.

Law Enforcement and Criminal Justice Policies: Harm reduction approaches have been adopted by law enforcement agencies in England, Australia and many Western European countries. In these locations, there are collaborative programs between law enforcement and health authorities aimed at improving the prevention and treatment of drug problems. For example, in Amsterdam, police stations will provide clean syringes on an exchange basis. In Hamburg, Germany, police work with health officials and drug users groups working together to help drug users access social services. Yet another example is the Merseyside "Responsible Demand Enforcement" project in the U.K, where police have agreed not to conduct surveillance on drug program clients, instead referring arrested drug offenders to health services for treatment.

There are at least two significant developments in Canada in this regard. First, there has been a shift in police priorities towards the enforcement of laws against drug trafficking rather than drug possession. This has been reflected in criminal justice statistics, which show a distinct trend toward greater number of arrests for

trafficking and decreases in the number of drug possession charges as a percentage of all drug offences. Second, a special "drug court" has been established in Toronto and other drug courts are planned in other Canadian cities. Modelled after American drug courts but with some significant variations, the drug courts offer an alternative to incarceration to addicted drug offenders. Offenders are required to receive treatment and are closely monitored in regular court appearances.

To my knowledge there has been no systematic assessment of the impact of changing police priorities towards the enforcement of trafficking offences in Canada. However, the Toronto drug court is being subject to a systematic evaluation and the (unpublished) preliminary results are very promising. Offenders in drug courts compare favourably with controls regarding indicators of drug use and drug-related harm.

Prescribing drugs: The best example of this type of harm reduction measure is the heroin maintenance system in the U.K. Drug users are offered flexible prescribing regimes ranging from short-term detoxification to long-term maintenance. The majority of clients receive oral methadone, but some receive injectable methadone, others injectable heroin, and a small number receive amphetamines, cocaine or other drugs. These drugs are dispensed through local pharmacists. In the Mersey Region of England, users may also be prescribed smokable drugs. Anecdotal evidence suggests that drug-related health problems seen by services and acquisitive crime have decreased as a result of these services. The level of HIV infection amongst drug injectors in the Mersey Region is very low.

There are no Canadian data on the effectiveness of drug maintenance programs other than methadone programs. A multi-site heroin maintenance trial has been proposed for Canada and is currently under development by a team of researchers headed by Prof. Benedikt Fischer at the University of Toronto. Switzerland has carried out a large-scale national experiment with prescribing of heroin and other drugs to users. Operating in eight cities, the program offers accommodation, employment assistance, treatment for disease and psychological problems, clean syringes and counselling. Users are in regular contact with health workers and they are provided links to drug-free treatment. Most users on drug maintenance prefer heroin, which is provided up to three times a day for a small daily fee. Preliminary results indicate that heroin maintenance is efficacious but there were insufficient data to draw the same conclusion for cocaine. The program has not resulted in a black market of diverted heroin and the health of the addicts in the programs has clearly improved. The authorities have concluded from these preliminary data that heroin causes very few problems when used in a controlled manner and administered in hygienic conditions. Based on these findings, the Swiss government has expanded the program.

Injection rooms: Several European cities have developed facilities known as "injection rooms", "health rooms", "contact centres", where drug users can take drugs in a comparatively clean and safe environment. Injection rooms have been proposed for Vancouver. This is regarded as better than the open injection of illicit drugs in public places or the consumption of drugs in "shooting galleries" that are usually unhygienic and controlled by drug dealers. Evidence of impact is limited, but an evaluation of three Swiss drug rooms found that they are effective in reducing the transmission of HIV and the risk of drug overdose.

"Tolerance Areas": Open drug scenes emerged in many European cities during the late 1980s. These are areas supervised by the police where open drug use is tolerated and services provided such as syringe exchange and mobile methadone units. Examples include "Platform Zero" is located at the Rotterdam railroad station, "Needle Park in Zurich, and two tolerance areas established in parks in Frankfurt, Germany.

Contrary to the success of other harm reduction measures, open tolerance zones have not had positive results. Their impact on drug-related harm is not clear because they tend to be unstable and they are often short-lived. "Needle Park" in Zurich grew unmanageable and was closed in 1992. A second attempt also became uncontrollable, and was closed in March of 1995. In Frankfurt, the tolerance zones in parks were shut down in 1992, not for lack of control but rather because it was felt that most drug users had been successfully moved to accommodations and treatment centres outside the city centre.

In sum, the available evidence generally supports a positive assessment of harm reduction measures, particularly with regard to syringe exchange, drug maintenance and drug courts. However, the weight of evidence is that tolerance zones have not been successful and the jury is still out with regard to other harm reduction measures.

4. The current conceptual confusion surrounding the term "harm reduction"

Although the available evidence indicates that harm reduction has generally been successful in reducing the spread of AIDS and ameliorating other drug-related harm, there is still a lack of consensus regarding the meaning of the term. At least three different concepts of harm reduction have emerged in the recent past:

1. Harm reduction restricted to measures aimed at continuing users: Harm reduction originally referred only to those policies and programs that attempt to reduce the risk of harm among persons who continue to use drugs. This concept of harm reduction excludes abstinence-oriented approaches. A key aspect of this conceptualization is that the user's decision to take drugs is accepted as a fact, at least for the time being. This does not mean approval of the user's decision to continue using drugs. Rather, use-tolerant measures such as syringe exchange presume that for the present the user is going to continue his or her drug use, and that interventions must necessarily take that fact into account. Another important aspect is that the user is treated as a normal person rather than as sick or deviant. There is an expectation that the user will behave "normally", i.e. as a citizen with rights and obligations under the law. Thus, the drug user is responsible for his or her behaviour. This concept is embodied in the phrase often used by the Dutch when they describe their drug users as "Dutch citizens who use drugs."

2. The all-encompassing concept of harm reduction: Thus, in its original sense, harm reduction referred to only those policies and programs aimed at reducing the harm caused by drug use among

persons who could not be expected to cease using drugs at the present time. But to many, harm reduction refers to any program and policy aimed at reducing drug-related harm. Abstinence-oriented treatment programs see their work as contributing to the reduction of drug-related harm, and with good reason. Law enforcement representatives clearly view supply restrictions as reducing drug-related harm. Thus, the second conceptualization of harm reduction is an all-encompassing one, reflected in general definitions which refer to any program and policy aimed at reducing drug-related harm as harm reduction. Harm reduction is officially the basis of Canada's Drug Strategy, not in the restricted sense but in this all-encompassing meaning of the term.

Unfortunately, this conceptualization does not discriminate well between harm reduction and other programs, as virtually every alcohol and drug policy and program attempts to reduce harm. For example, although they would not be considered to be harm reduction programs in the original sense of the term, the reduction of drug-related harm is the ultimate goal of supply restrictions and abstinence oriented treatment programs.

Thus, the two most common understandings of the concept of harm reduction are quite different from one another. The original, more restrictive notion of harm reduction has the advantage of being more conceptually clear-- it distinguishes "harm reduction" from other substance abuse programs and policies. As the basis for a drug strategy, however, it has the disadvantage that it excludes some policies and programs that clearly represent an important aspect to drug policy, namely, abstinence-oriented treatment and supply restriction strategies. The second, all-inclusive conceptualization of harm reduction has the advantage of including abstinence-oriented programs and policies. However, this meaning of harm reduction is not useful for providing strategic direction. If harm reduction refers to any policy or program aimed at reducing drug-related harm, then any alcohol, tobacco and drug policy or program can justifiably be included in a drug strategy because all substance abuse strategies seek to reduce drug-related harm in some fashion.

3. Harm reduction as an empirical test: In part as a response to the all-inclusive conceptualization of harm reduction, some harm reduction advocates have attempted to dissociate the policy of criminalization of drug users from harm reduction by applying an empirical test as the defining criterion of harm reduction. According to this line of argument, the criminalization of drug use is not harm reduction because it creates more harm than it avoids.

Regardless of whether one views the criminalization of illicit drug users as creating more harm than good, the policy debate has led to a third conceptualization of harm reduction in which a policy or program is deemed to be harm reduction based on an empirical assessment of the evidence. That is, a policy or program is considered to be harm reduction, not if it is intended to reduce harm, but only if it actually does reduce harm (Lenton and Single, 1998).[\(2\)](#)

This empirical definition incorporates a cost benefit equation at its very core. It presumes a calculation of the net gain or loss for a given policy or program. It is the effectiveness of the policy or program that determines whether it should be deemed to be harm reduction.

The empirical definition of harm reduction entails certain disadvantages. First, defining harm reduction in terms of its net effectiveness in reducing harm may not be consistent with the way that many people think of the term. Policies and programs that might pass the empirical test of net effectiveness are not necessarily those which some persons would consider to be harm reduction. For example, the money-laundering laws in Canada have succeeded in producing substantial revenue at relatively little cost. While one might question whether this has had a significant impact on the supply of illicit drugs, it could reasonably be argued that the diversion of illicit drug profits into government coffers and government funded prevention programs represents a net gain and that the new laws against money laundering are therefore a harm reduction policy. Whether or not one agrees with this assessment, the point is that many persons who subscribe to harm reduction in its original sense would not view any supply side strategy as harm reduction. To redefine harm reduction in terms of empirical evidence of effectiveness could therefore lead to confusion. Those supply strategies and abstinence-oriented interventions that demonstrably reduce drug-related harm would now be considered to be harm reduction measures, and use-tolerant measures that do not reduce harm would not be considered harm reduction. It would require a communications strategy that recognizes the original meaning of harm reduction and clearly explains the proposed new conceptualization.

A second drawback to the "effectiveness" definition is that it generally does not include a notion of cost effectiveness. A very expensive intervention would be considered to be harm reduction as long as it can be demonstrated that there is a net gain in reducing drug-related harm. If the ultimate goal is to distinguish policies and programs that should be given priority, consideration must be given not only to their effectiveness, but also to their costs.

Third, as a practical matter it is very difficult to determine whether specific policies involve a net reduction in drug-related harm. Many of the benefits and undesirable side effects (such as the adverse social consequences of marginalizing drug users) are intangible and thus difficult to include in the calculus. Such a definition leaves open the question of whether many, if not most, drug policies and programs are "harm reduction."

Fourth, an empirical definition of harm reduction could create an obstacle for new and innovative interventions. If support were limited to those programs that have demonstrated effectiveness, it would be potentially more difficult to promote and develop new programs, which must necessarily go through preliminary development and piloting without empirical evidence of effectiveness.

Last but not least, the empirical conceptualization of harm reduction is value-free. While this has clear advantages in defusing drug policy debates by referring to evidence rather than personal beliefs, it should also be recognized that there are limits to what are acceptable options that have nothing to do with empirical evidence or effectiveness. The choice of which drug policies and programmes to support necessarily involves some value judgments. There are drug enforcement practices

which may be effective but would still be unacceptable to most Canadians because of civil rights and social justice implications. For example, it was normative considerations, not concern with a lack of effectiveness, which led the government to end the "writs of assistance". These were virtually lifetime search warrants for drug enforcement officers, which, once issued, did not require judicial approval for searching private property in drug cases. While undoubtedly effective in facilitating drug enforcement, writs of assistance were ended due to concerns that they violated rights to privacy that had evolved in law over a thousand years. Another example is the debate over appropriate penalties for drug offences. One argument in favour of less severe penalties for offences such as cannabis possession has been that the punishment doesn't fit the crime. This is not based on consideration of effectiveness so much as a value judgment concerning the severity of punishment in relation to the nature of the crime.

Thus there are limits regarding what is socially and politically acceptable in interventions--one can minimize value judgments in drug policy issues by considering empirical evidence of effectiveness but value judgments regarding what is acceptable policy can never be eliminated. Nor should they be. We can and should give greater consideration to evidence of effectiveness when prioritizing interventions, but only among those options which are legally, morally and politically acceptable in the Canadian context.

5. A potential solution: policy based on an empirical conceptualization of harm reduction

Thus, throughout Canada and elsewhere, policies directed at problems arising from injection use of illicit drugs, such as Hep C strategies, are faced with a problem of strategic direction. The concept of harm reduction has been the underlying basis of many programs and measures in the recent past. It has provided the initial rationale and strategic direction for the development of a wide variety of new and often innovative approaches to IDU problems such as the widespread development of syringe exchange programs, methadone maintenance and outreach programming aimed at injection drug users.

These more recently developed harm reduction measures co-exist with traditional, abstinence-based approaches such as abstinence-oriented treatment programs and supply side strategies aimed at preventing the initiation of drug use. The place of these more traditional, abstinence-based approaches in a harm reduction-based policy is unclear. While few would dispute the desirability of reducing drug-related harm, there is a need for clarification of the concept of harm reduction and the development of greater consensus regarding its implications to policy and programming.

I am convinced that ultimately, the most suitable conceptualization of harm reduction is the empirical definition despite its drawbacks. The problems created by requiring evidence of effectiveness are considerable but not insurmountable.

5.1 Key features of a policy framework based on an empirical conceptualization of harm reduction

In a policy based on an empirical concept of harm reduction, a policy or program is considered to be harm reduction not merely if its aim is to reduce drug-related harm, but only to the extent that evidence indicates that it actually does reduce harm. This requires a reasonable evidentiary basis for decision-making. A conceptualization of harm reduction based on empirical criteria would not automatically assume that programs such as needle exchange are harm-reducing. Only by determining whether an intervention actually achieves its goals in terms of reducing measurable performance indicators such as Hep C infection rates can we really determine if it should be considered harm reduction. By the same token, the empirical definition also has the advantage of not excluding abstinence-based approaches on a priori grounds. If such programs reduce drug-related harm, they should be considered harm reduction.

To maintain harm reduction as a primary conceptual basis of policy in the absence of complete information on the effectiveness of interventions, it is recommended that there a consensus be developed concerning strategic operating principles until better information becomes available. The unfortunate fact of the matter is that the empirical evidence of the effectiveness of policies or programs is currently inadequate. Until this situation is redressed by enhanced research, any harm reduction-based policy will require a set of strategic principles in order to provide a reasonable sense of priorities and focus. Foremost among these would be the principle: "first, do no harm". This does not exclude abstinence-oriented approaches, yet it gives a clear sense of strategic direction, with priority given to immediate steps to prevent harm in situations where injection drug users cannot be reasonably expected to cease use at the present time. Other strategic principles include:

- Respect the basic human dignity of injection drug users.
- Focus on the harms caused by injection drug use, rather than drug use per se.
- Maximize intervention options.
- Choose appropriate outcome goals, giving priority to effective programs with practical, realizable goals.

5.2 A harm reduction framework for injection drug use policy

The following conceptual framework has been proposed for policies directed at reducing the harms (such as Hep C infection) resulting from illicit drug use. As seen in Figure 1, the framework components consist of the primary goal of the policy, strategies to achieve this goal, agencies responsible for interventions, strategic planning to develop program priorities and performance indicators, research underpinning planning and evaluation, and funding. There is a feedback loop whereby performance indicators are monitored and the results used to inform strategic planning for the next phase of the strategy.

The goal of a harm reduction-based policy is to reduce the harms associated with drug use as much as possible within the limits of available resources. The strategies to achieve this goal fall into three general categories: demand reduction, supply interdiction and interventions directed at drug users. The three major strategies are

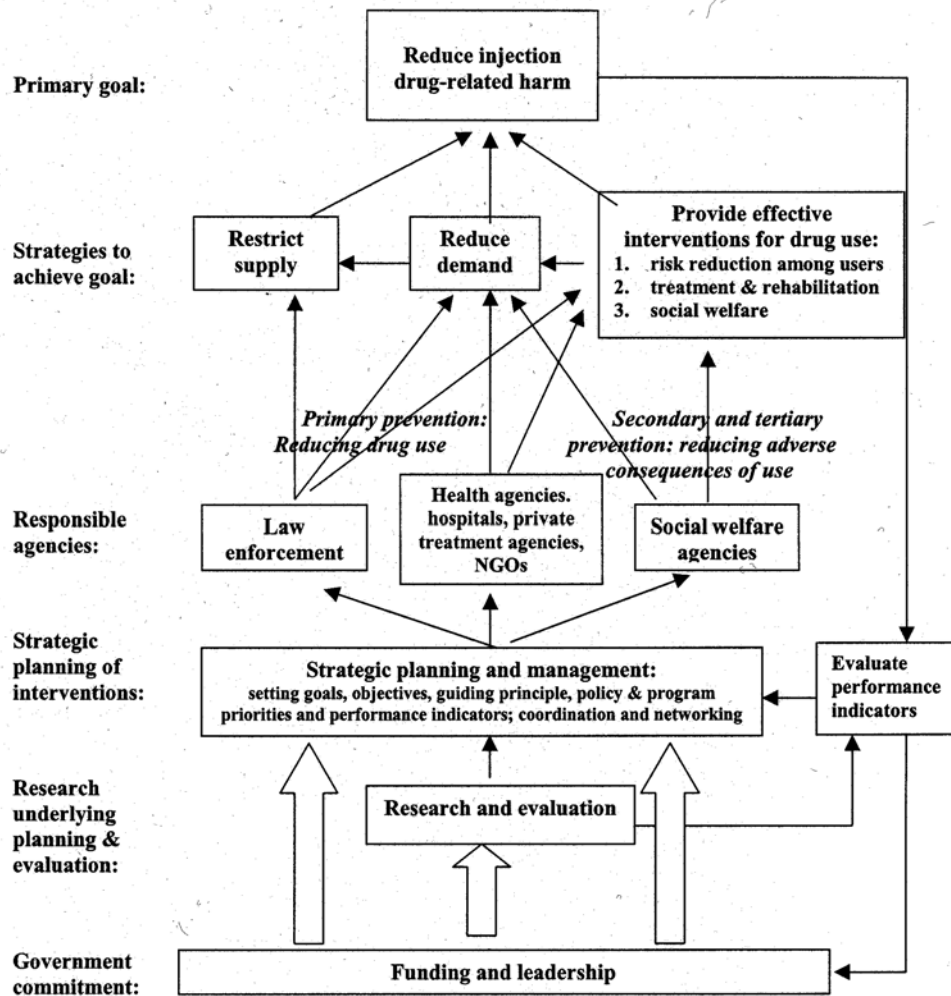
not entirely mutually exclusive-improving treatment effectiveness reduces drug demand, and reducing drug demand is likely to result in a decrease in the supply of drugs. Nonetheless, these three strategies represent a reasonable classification of the major ways in which reductions in drug-related harm can be achieved.

Interventions to achieve these objectives consist of demand reduction prevention programming, the enforcement of drug laws and interventions directed at drug users. The first two sets of interventions-supply and demand reduction-correspond to primary prevention, while the third set of interventions directed at drug users corresponds to secondary and tertiary prevention. Interventions aimed at drug users consist of risk reduction measures (i.e., harm reduction in the original sense of the term), treatment and rehabilitation of drug users, and social welfare policies that support treatment and rehabilitation. Law enforcement is primarily responsible for supply interdiction and health agencies are generally responsible for demand reduction, while interventions aimed at drug users are the responsibility of both health and social welfare agencies.

Again, there is necessarily some overlap with regard to responsible agencies. For example, law enforcement contributes to prevention programming through school-based educational programs, and social welfare agencies contribute to the reduction of drug demand. The use of new drug courts to divert users from jail to treatment represents another example where law enforcement contributes to more than just supply interdiction.

Ideally, the three major types of interventions should be well planned and coordinated with one another. In practice, this is made difficult by the multiplicity of government and non-governmental organizations involved. To ensure effective strategic

Figure 1: A conceptual framework for drug policy



Source: E. Single, A Harm Reduction Framework for Drug Policy in British Columbia, background paper prepared for the British Columbia Federal/Provincial Harm Reduction Working Group, December 1999.

planning, goals should be agreed upon, as well as strategic objectives and guiding principles. Decisions must be made concerning program priorities and funding, and performance indicators must be specified and monitored.

The basis of good strategic planning is sound research. Informed decisions on program priorities requires scientifically credible basic research on the basic biological mechanisms of dependence, the psycho-social risk factors, and the interplay of individual characteristics, pharmacological properties of psychoactive substances and the environment in which consumption occurs. Applied research on the effectiveness of specific interventions is also vital. Research plays a key role in the evaluation of performance indicators, which in turn provides information needed to strategically plan interventions in the future.

Last but not least, government commitment to the drug strategy is the final and perhaps most essential component to the framework. The degree of commitment

determines funding levels, which dictates the limits of what can be accomplished. The framework is a dynamic model in that it includes a feedback loop whereby performance indicators are monitored and this information is used to adjust programming and strategically plan the next phase of the drug strategy. The results of evaluation also have an impact on the level of government commitment—a strategy that is achieving its goals is more likely to receive continued support. A strategy that is unable to demonstrate its effectiveness is less likely to receive continued funding.

5.3 Distinguishing features of a harm reduction drug policy

The components of the framework presented in Figure 1 would generally apply to any drug policy, whether or not it is based on harm reduction principles. There are several aspects of the proposed framework that characterize it as a harm reduction framework:

- First, the overriding goal is harm reduction. The choice of this goal has significant impacts on program priorities and performance indicators, focusing on specific drug-related health and safety problems. An alternative goal, e.g., to create a drug-free society, would focus instead on reducing the number of citizens who use any drugs and lead to different program priorities.
- Second, in a harm reduction-based strategy, one of the most important types of interventions is the set of measures that attempt to reduce the risk of adverse consequences among continuing drug users. This refers to harm reduction measures in the original sense of the term such as drug substitution or syringe exchange programs. A drug strategy not based on harm reduction would place less emphasis or even exclude such strategies.
- Another way in which this represents a harm reduction framework concerns the key role that research plays in the dynamic aspect of the framework. If one adopts the empirical definition of harm reduction, research is essential to establish which programs are truly harm reducing and whether the strategy is meeting its goals. A zero-tolerance drug policy would entail less research to monitor success, basically requiring information only the proportion of the population who use any drugs in any amount, rather than more detailed information on specific patterns of use and specific drug-related harms.
- Finally, a distinguishing feature of a harm reduction framework is the greater consideration that is given to unintended adverse consequences that might arise from interventions. The overriding criteria in evaluating impact is net harm—the extent to which a policy or program reduces adverse consequences, taking into account all the consequences that result from the intervention. As noted earlier, the first and foremost guiding principle of a harm reduction policy is: first, do no harm.

5.3 Issues in the use of an empirically based concept of harm reduction

It was noted earlier that there are certain disadvantages to using an empirically based definition of harm reduction. First, it might well result in some policies and programs being labeled as harm reduction even though many people would not ordinarily think of them in that way. For example, some forms of abstinence-oriented treatment or the enforcement of proceeds of crime legislation are not typically thought of as harm reduction programs. If such measures produce a demonstrable

net reduction in harm, however, perhaps they should be considered harm reduction. By the same token, a policy or program that has been traditionally thought of harm reduction should perhaps not be carry that label if it fails to reduce harm.

A second difficulty with the empirical definition is that it does not include a notion of cost effectiveness. While this would not necessarily be part of the definition of harm reduction, the overall goal of drug policy should be framed to include cost effectiveness. For example, the goal might be expressed as follows: to reduce drug-related harm as much as possible within the limits imposed by available resources. When framed in this manner, the cost effectiveness of alternative policies and programs must necessarily be a prime consideration in determining priorities.

Perhaps the major difficulty with the empirical definition of harm reduction is the burden it imposes on data systems and research. As noted earlier, we simply don't know the net impact of many interventions. If policies and programs that are harm reduction are to be given priority, then all interventions under a drug policy should be subject to systematic evaluation in order to determine whether they are in fact harm reducing. This will require the development of appropriate, reliable and valid performance indicators for program impacts, and considerable research. It may lead to some resistance by health care workers and law enforcement specialists already overburdened by dealing with drug problems. But the empirical justification that a program is harm-reducing need not necessarily be based on compelling evidence. For many interventions, standards could be set such that effectiveness is assessed on weight of evidence rather than more rigorous, expensive and potentially disruptive evaluation studies. One of the first steps in developing a drug policy based on an empirical conceptualization of harm reduction would be to develop a consensus among health care workers, law enforcement and others involved in the policy concerning the evidentiary framework that would be employed.

Despite these problems, the empirical conceptualization of harm reduction has compelling advantages. While we can never eliminate normative aspects of drug policy, evidence-based decision-making is the only realistic option for prioritizing intervention options. Policies and programs cannot expect to continue to receive support indefinitely without evidence of effectiveness. The requirement that an intervention demonstrate a net positive impact in reducing drug-related harm before it can be deemed to be harm reduction would promote evidence-based decision-making and more cost effective programming. Only by determining whether an intervention actually achieves its can we really determine if it should be considered harm reduction. There would not be a priori classification of policies and programs into harm reduction vs. other strategies. Measures that have been traditionally associated with the term harm reduction, such as syringe exchange programs, would have to demonstrate effectiveness if they are to be considered harm reduction. Further, this concept of harm reduction would not exclude abstinence-based approaches on a priori grounds. If such programs reduce drug-related harm, they would be considered harm reduction. For both abstinence-oriented interventions and use-tolerant harm reduction measures, continued support would depend on evidence of effectiveness.

6. Implications of a harm reduction strategy

6.1 Relationship of harm reduction to other approaches

Harm reduction and abstinence-oriented approaches: The empirical definition entails no a priori judgment concerning harm reduction. It would apply the same criteria to abstinence-oriented interventions that would be applied to any drug policy or program to determine whether it is harm reduction. That is, if the weight of evidence indicates that there is a net positive impact on drug-related harm, it would be considered harm reduction. Some abstinence-oriented interventions would likely be considered harm reduction on this basis, while others would not. By the same token, some measures that have been thought of as harm reduction would no longer be considered as such if they fail to produce a net reduction in drug-related harm.

Harm reduction and supply reduction: As with use-tolerant interventions, an empirical definition of harm reduction would include those supply side strategies that have a net positive impact on drug-related harm and exclude those which do not.

Harm reduction and drug reform (such as decriminalization or legalization of particular drugs or all drugs): However it is defined, harm reduction should not be confused with support for drug reform. Rather, it should be viewed as the middle ground where persons with widely differing views on drug policy can agree with one another regarding practical, immediate ways to reduce drug-related harm among users. A harm reduction concept that is clearly defined and based on evidence of cost effectiveness would foster the building of meaningful alliances and support for programs such as needle exchange from all persons who share the same goal of reducing the harm associated with drug use, even though there may be strong disagreements (largely normative) regarding the prevention of use per se in the general population.

6.2 Implications to Hep C program priorities

The proposed harm reduction framework for drug policy would have important implications to Hep C programming and program priorities. These implications flow not only from the suggested guiding principles for harm reduction, but also from other considerations that would apply to any Hep C policy. The harm reduction principles would suggest giving a relatively high priority to the following types of programming:

- Prevention, treatment and law enforcement policies and programs that do not exacerbate the Hep C infection and other problems caused by injection drug use;
 - Policies and programs which maximize intervention options for health care workers, law enforcement personnel and others dealing with injection drug users at high risk of incurring or spreading Hep C infection;
 - Policies and programs with practical, realistic goals; and
 - Policies and programs that treat injection drug users as members of the community and minimize the marginalization of users.
- In addition to the guiding principles, consideration of cost effectiveness would indicate that the following interventions should be given high priority:
- Programs that are supported by evidence of effectiveness;

- Programs targeted to high-risk groups;
- Prevention and early intervention programs;
- Programs that are comprehensive in scope, addressing a wide of range of issues bearing upon the spread of Hep C by injection drug use; and
- Programs that make maximal use of existing networks of specialists and organizations dealing with injection drug users.

There are yet other considerations in setting program priorities that would necessarily have to be taken into account, even though they may not be specific to a harm reduction strategy. For example, any Hep C strategy should be sensitive to the cultural needs of the community it serves and the context in which it is implemented. It should be balanced with regard to geographic distribution of resources. It should also ensure that it addresses all aspects of the continuum of risk, including health enhancement for those with little or no risk, risk avoidance measures for those with moderate risk, and early intervention and treatment for those at highest risk.

6.3 Implications to research and evaluation

A policy based on harm reduction also has significant implications to evaluation and research. First, the choice of policies and programs used to achieve strategic objectives must be evidence-based. Only those interventions that have a net impact of reducing drug-related harm would be supported. This in turn implies that all policies and programs would subject to systematic evaluation.

Second, all aspects of a policy should be subject to same standards regarding the need to demonstrate effectiveness. This implies that in addition to prevention and treatment programming, supply side interventions should also be subject to systematic research on its net impact on drug-related harm such as Hep C infection rates. As with prevention and treatment interventions, the efforts to restrict illicit drug supplies should be assessed in terms of the immediate and long-term impacts, including impact on drug prices and availability as well as unintended consequences, such as the difficulties that drug enforcement may create for treatment or the inadvertent promotion of unsafe methods of drug administration. Although drug enforcement costs Canada more than \$400 million annually (Single et al., 1998), there is virtually no research regarding its impact in reducing Hep C infection or other drug-related harm.

A harm reduction strategy clearly would entail considerable demands on research. It would require regular national and provincial surveys on the extent and correlates of injection drug use as well as specialized studies on particular issues. Currently, however, there is paucity of funding for research required to underpin evidence-based strategies.⁽³⁾ Without a long-term investment in research to evaluate programming and monitor performance indicators, a drug strategy can be called harm reduction only with regard to its intent. To be harm reduction in more than name only, research and monitoring systems are required to ensure that interventions actually reduce drug-related harm.

7. Summary and conclusions

In sum, a new kind of drug prevention programming has emerged in the recent past aimed at reducing the spread of blood-borne disease such as HIV and Hep C as well as other adverse consequences of drug use among drug users, particularly injection drug users, who cannot be expected to cease their drug use at the present time. Termed "harm reduction", these programs have been relatively successful in reducing adverse consequences.

However, there is currently considerable confusion surrounding the term harm reduction and its implications to drug policy. To alleviate this confusion and provide drug policy with a clearer sense of strategic direction, it is recommended that policies aimed at preventing the spread of Hep C and other blood-borne disease by injection drug users be based on an empirical conceptualization of harm reduction. This would require that the goal of harm reduction be pursued by requiring evidence of effectiveness for all interventions, including not only prevention programs and treatment but supply-side interventions as well. Recognizing that such evidence is often lacking, there should also be a set of guiding principles for program development and prioritization, the first and foremost principle being "first, do no harm."

The requirement of evidence of effectiveness to determine whether or not an intervention is harm reduction entails an increased focus on research. Performance indicators for all types of interventions would be developed and monitored by research. A communications strategy will also be required to ensure that the public and key stakeholders understand the use of the term harm reduction in the strategy, and to make it clear that use-tolerant risk reduction measures such as syringe exchange programs are not meant to encourage illicit drug use.

A commitment to a policy based on an empirical conceptualization of harm reduction is in my opinion the best way to resolve the current conceptual confusion and takes the harm reduction concept to the logical next phase. The application of this framework will require a strong commitment to evidence-based decision making and therefore to research. It will not resolve underlying value issues in drug policy regarding what are politically and acceptable means to deal with drug problems, and it will not be cheap or easy, but it offers the potential to coordinate and improve the full range of interventions under a single policy framework, while at the same time retaining the positive features of harm reduction in its original sense.

I would like to close with a quotation by one of the pioneers of harm reduction, John Strang, which I think articulately summarizes what harm reduction should mean:

"The true champion of harm reduction is not necessarily anti-drugs nor necessarily pro-drugs. He or she expresses support, opposition or indifference to a proposed public or personal approach or a proposed legal or social response solely on the basis of the extent to which it increases or decreases the amount of harm consequent upon the drug in question...Thus the champion of harm reduction is neither for nor against increased civil rights for drug users; neither for or against increased availability of drug substitution or drug free programmes; neither for or against the legalization or decriminalization of drug use; neither for or against diversions from the criminal justice system-except insofar as one or other of these choices influence the nature and extent of harms consequent upon use." (Strang, 1993: 3-4; italics added)

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Endnotes:

(1) This is using the term harm reduction in its original sense as referring to policies and programs aimed at reducing drug-related harm among persons who continue to use drugs.

(2) Lenton and Single define harm reduction as follows: "A policy, programme or intervention should be called harm reduction if, and only if: (1) the primary goal is the reduction of drug-related harm rather than drug use per se; (2) where abstinence-oriented strategies are included, strategies are also included to reduce the harm for those who continue to use drugs; and (3) strategies are included which aim to demonstrate that, on the balance of probabilities, it is likely to result in a net reduction in drug-related harm." (Lenton and Single, 1988: 219).

(3) To quote a recent proposal for a new national addictions research institute under the Canadian Institute of Health Research:

"Unfortunately, there is a lack of adequate research funding for substance abuse in Canada today. Substance abuse accounts for more than one in five deaths, hundreds of thousands of hospitalizations and billions of dollars in costs to the Canadian economy. Yet, the Canadian government invested about 12 cents per capita on research on alcohol and other drugs in 1992-93 - the peak year of Canada's Drug Strategy (CDS). In the same year, the Australian government spent CDN\$0.27 per capita, and the US government spent CDN\$3.33. Since then, CDS funding has ceased and Australia and the US have increased their research spending.

"No special funding has been provided for Canada's Drug Strategy since 1997, and there have been no national surveys of the Canadian population on addiction issues for the past five years. The federal government receives more than \$3.3 billion annually in tobacco and alcohol taxes alone. Yet, the US government spends six times as much on addiction research conducted in Canada than does the Canadian government. Provincial governments support some addiction research, but in a patchwork fashion, with virtually no funds available in some provinces. Canada once played a pre-eminent role in substance abuse research, but funding cutbacks at both the federal and provincial levels have led to a substantial loss of many eminent scientists in this area. No Canadian researcher has won the Jellinek award since 1980 and not one of the six Canadians who have won this prestigious award is working in Canada today. More importantly, the lack of institutional support and funding has driven many promising young scientists to work in other countries or in other fields." (Single, Gliksman et al., 1999: 10)

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