HARM REDUCTION & ILLICIT SUBSTANCE USE

IMPLICATIONS FOR NURSING

CANADIAN NURSES ASSOCIATION ®

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Executive summary

Nurses frequently care for people experiencing the impact of substance use, regardless of the settings in which they work. Yet, providing nursing care in the context of illicit substance use can raise questions for nurses and have an impact on the provision of care.

The focus of this paper is specifically on the health and social harms associated with illicit substance use. Harm reduction is a public health response aimed at reducing the negative consequences of actions that increase the risk of adverse health outcomes, including substance use.

The paper presents current perspectives and evidence on harm reduction policy and practice and identifies the implications for nursing policy, practice, research and education. It is anticipated that this information will inform discussions about appropriate policies, practices and standards to improve the delivery of health care. Nurses can and should be involved in the development of organizational and governmental policies related to harm reduction strategies. Such policies must be grounded in the best evidence available and embedded within a human rights, health equity and social justice framework.

There are two dominant policy approaches to reducing the harms of illicit substance use: (1) an approach that uses prohibition and law enforcement to criminalize substance possession and use, and (2) a public health approach that seeks safer use of illicit substances to reduce harms to health and well-being. A review of international, national, provincial and municipal policies highlights the tensions between these two approaches. In Canada, federal, provincial and territorial policies are shifting toward harm reduction, in light of the 9-0 Supreme Court decision in 2011 to exempt supervised injection sites from prosecution along with the Canadian government's intention to legalize the distribution and regulation of cannabis (marijuana). Globally, however, tensions remain. Discussions from the 2016 UN meetings appear to endorse status quo law enforcement policies. Unfortunately, despite the strong evidence for the public health perspective, a policy schism continues that does little to support nurses in their provision of evidence-informed care.

There is substantial empirical evidence to support the benefits of harm reduction strategies in terms of public health and safety. Needle distribution and recovery programs have been shown to be safe, effective and economical ways of decreasing the risk of HIV transmission while increasing access to health and social services for people who use injected substances. Outreach strategies are a low-cost, effective means of reaching people who use substances and are particularly effective when they are peer-

based. Supervised consumption services also lower the rate of overdose deaths and the risk of HIV transmissions while increasing access to substance treatment and reducing public disorder. As well, opioid agonist treatments like methadone, buprenorphine/naloxone (Suboxone) or diacetylmorphine (prescription heroin) are safe and cost-effective approaches. Studies of diacetylmorphine have shown that the practice improves health outcomes and reduces illicit substance use and crime without any negative impacts on the community. The evidence further suggests that supervised consumption facilities such as Insite in B.C. should continue to expand into other Canadian municipalities where substance use, overdose deaths and the transmission of communicable diseases are prevalent.

Still, a review of the literature revealed a research gap related to models of delivering harm reduction services (such as needle distribution and recovery sites and supervised consumption facilities) and the nurse's role in them — which can offer a response to ongoing objections to harm reduction. Not only are these objections without grounding in evidence, they are often incompatible with community sentiments: public opinion surveys frequently show support for such programs.

Nursing professional and ethical standards are consistent with the values of harm reduction and require nurses to use the best evidence available in their practice. In the sections that follow we discuss legal and ethical perspectives on the distribution of harm reduction supplies, supervised consumption services and the provision of nursing care to people who use illicit substances.

Introduction

Nurses who provide care for people across the lifespan in acute care and community settings may encounter situations in which the health of individuals is being impacted by substance use and the circumstances that surround it. They may be the first point of contact for populations vulnerable to the harms of illicit substance use in a variety of settings, including community health centres, acute care hospitals, prisons and street outreach. There are many scenarios in which nurses might encounter issues associated with illicit substance use.

Nurses have a responsibility to provide safe, compassionate, competent and ethical care to individuals and their families who may be affected by substance use, regardless of the setting or an individual's income, age, gender or ethnicity. For example, nurses working in public health may encounter youth in schools who are experimenting with or actively using illicit substances. Nurses in the community may care for families affected by the harms of substance use. Nurses in acute care settings may care for people who are hospitalized for acute or chronic health concerns related to or involving substance use.

This update of the 2011 discussion paper was undertaken to share current perspectives and evidence on harm reduction as a goal or strategy of policies and programs that focus on preventing the harms of illicit substance use. On the basis of this review, the implications for nursing policy, practice, research and education are meant to inform discussions about appropriate policies, practices and standards in the care of people who use illicit substances. The paper was guided by two specific objectives:

1. To synthesize (1) the domestic and international literature on harm reduction theories and strategies relevant to preventing the transmission of blood-borne pathogens; illnesses secondary to injection and smoking practices; and overdose deaths, emphasizing illicit substance use; and (2) collaborative strategies (government, public health and professional associations); education; innovative public health and outreach programming; research; and existing health and public policy.

2. To describe (1) historical and theoretical approaches to harm reduction and policy trends; (2) successful innovations and resources to strengthen nursing practice in education, administration and research; and (3) key issues and gaps that hinder the nurse's role in effective prevention, treatment and care.

I. ILLICIT SUBSTANCE USE IN CANADA

Illicit substance use refers to the use of psychoactive substances that are identified as controlled substances in Canada's federal substance control statute and are grown, bought or consumed for non-medical, non-scientific or other unauthorized purposes. In Canada, commonly used illicit substances include cannabis,[1] cocaine and crack cocaine, heroin, hallucinogens, amphetamines, opiates and ecstasy, and combinations of these substances. In this paper, the term *illicit substance use* is used to reflect the relationships of these substances to current substance laws. Many prescription medications, such as morphine, oxycodone, benzodiazepines and methadone, are also bought and sold illicitly. Substance use can fall across a continuum, from abstinence to recreational use to problematic use and dependence or addiction (B.C. Ministry of Health Services [BCMHS], 2004; Everitt & Robbins, 2016). There is no implied progression in this continuum, as recreational use does not necessarily lead to problematic use.

Canada does not currently have a national registry of overdoses and overdose-related hospital visits, admissions and deaths. Acquiring timely and relevant data on illicit substance use is essential for developing effective policies and programs. The National Population Health Survey and the Canadian Community Health Survey, among others, have advanced these objectives by means of prevalence indicators obtained in self-reported data on substance and alcohol use (Canadian Centre on Substance Use and Addiction [CCSA], 2004). While the Canadian Institute for Health Information (CIHI) provides some information about rates of emergency department visits and hospitalization for opioid poisoning, there are gaps in the data since not all provinces report. The lack of comprehensiveness in current data sets also extends to opioid-related use, misuse or harms among Indigenous people (Russell, Firestone, Kelly, Mushquash, & Fischer, 2016).

In 2013 the Canadian Tobacco, Alcohol and Drugs Survey (CTADS) was launched as a biennial population survey of tobacco, alcohol and illicit substance use among Canadians aged 15 years and older. Conducted by Statistics Canada on behalf of Health Canada, CTADS replaced and merged the core content from the Canadian Tobacco Use Monitoring Survey (CTUMS) and the Canadian Alcohol and Drug Use Monitoring Survey (CADUMS) to create a more efficient data collection tool. The objective of CTADS is to monitor and compare "Canadian trends in tobacco, alcohol and substance use [to inform current and future] national and provincial strategies, policies and programs" (Government of Canada, 2015, para. 2).

[1] With the April 2017 Liberal government bill to legalize non-medical cannabis, it is no longer considered illicit, although, as with alcohol, harm reduction strategies and low-risk use guidelines can still be used to prevent harms.

According to the latest CTADS results, 13 per cent of Canadians reported using at least one of six illicit substances in 2015, up from 11 per cent in 2013 (cannabis, cocaine or crack, speed, ecstasy, hallucinogens or heroin). The observed increase from the previous cycle was based on cannabis, hallucinogens and ecstasy use. The reported rate was higher among males than females. In 2015 at least three per cent of respondents aged 15 years and older reported "experiencing at least one harm in the past year" due to illicit substance use (Government of Canada, 2015, Drug use and abuse section, para. 1). Among current users of any illicit substance (including individuals who report abusing psychoactive pharmaceuticals), "one in six, or 15 per cent reported experiencing some harm in the past year due to their drug use" in 2015 (Government of Canada, 2015, Harms related to illicit drug use section, para. 1). Statistics Canada has also provided rates of illicit substance use for "past year and lifetime" by province. While rates were more or less consistent across provinces for certain reported substance use activities (e.g., one of five illicit substance use activities in the past year, which is within 0.9-1.9 per cent), noticeable variances were observed for other indicators such as reported lifetime cocaine/crack use (e.g., 4.0 per cent in New Brunswick compared to 10.7 per cent in British Columbia; Government of Canada, 2016a, Table 11).

Both CTADS and CADUMS produce estimates of national and provincial rates of substance and alcohol use. Yet, while caution should be used when comparing their prevalence estimates (because of differences between the two surveys), the 2008 CADUMS findings show little to no change in the rates of illicit substance use for hallucinogens, cocaine, heroin and ecstasy (Health Canada, 2008a).[2] Given the retrospective nature of CTADS and CADUMS, the data does not provide an accurate picture of current substance use trends in Canada. While national statistics are not yet available for 2016-2017, Canada is experiencing what has been called an opioid crisis, with increased rates of addiction, overdose and death (Government of Canada, 2016c). Despite the lack of national statistics, provincial data from B.C., the province currently most impacted by the opioid crisis, highlights an alarming trend as the opioid epidemic begins moving across Canada. Data from the B.C. Centre for Disease Control indicates that more than 900 B.C. residents died from an illicit substance overdose, and illicit fentanyl was detected in 60 per cent of these fatalities (B.C. Centre for Disease Control [BCCDC], 2017). In 2014, 2015 and 2016, the B.C. government identified 366, 513, and 922 illicit substance overdose deaths, respectively, demonstrating an exponential increase in overdose-related fatalities (B.C. Coroners Service, 2017).

[2] Use for these drugs was less than one per cent (except cocaine, which was used by 1.9 per cent of the population).

The harms of illicit substance use are exacerbated in certain social conditions: the consequences for health and well-being are magnified for people experiencing the effects of social disadvantages such as poverty and homelessness.

Illicit substance use can be found in all sectors of the Canadian population. CTADS findings suggest that illicit substance use represents a relatively small proportion of Canadians' overall substance use. In 2006 illicit substance use was responsible for 20.7 per cent of the social cost of problematic substance use; by comparison, alcohol and tobacco use were responsible for 36.6 and 42.7 per cent, respectively (Rehm et al., 2006).[3]

A 2014 report by the Canadian Centre on Substance Use and Addiction[4] (CCSA) found that alcohol, opioids, cannabinoids and cocaine were the illicit substances consuming the most hospital resources in terms of number of stays, days stayed and associated costs (Young & Jesseman, 2014),[5] though it could reasonably be argued that, in 2016, costs associated with opioid misuse are consuming a significant amount of our health care budget. There is a need to follow up and evaluate the costs of illicit substance use in Canada, given these findings and the lack of positive change over the years.

Illicit substance dependence contributes to the overall burden of disease and is associated with increased morbidity, mortality, disability and health-care costs (Canadian Public Health Association [CPHA], 2014; Fischer, Rehm, Brissette, et al., 2005; Rehm et al., 2006; Wood, Kerr, et al., 2003). Further, the harms of illicit substance use are exacerbated under certain social conditions: the consequences for health and well-being are magnified for people experiencing the effects of social disadvantages such as poverty and homelessness (CPHA, 2014; Galea & Vlahov, 2002). For example, a study of illicit substance use in five Canadian cities (Fischer, Rehm, Brissette, et al., 2005) found that people who inject illicit substances experienced increased physical and mental health problems. Many of them also lacked permanent housing, had no access to treatment services and felt socially marginalized. Illicit substance use, particularly injection substance use, is highly stigmatized, and people affected by poverty and homelessness often carry the heaviest burden of stigma in society as a result of multiple intersecting factors (CPHA, 2014; Strike, Myers & Millson, 2004; Takahashi, 1997).

[3] For Rehm et al. (2006), the costs to health care, law enforcement and workplace and home productivity as a result of premature death and disability make up the overall social cost of substance use, which was estimated to be $39.8 billion in 2002. "Tobacco accounted for about $17 billion or 42.7% of that total estimate, alcohol accounted for about $14.6 billion (36.6%) and illicit drugs for about $8.2 billion (20.7%)" (p. 1).

[4] Formerly, the Canadian Centre on Substance Abuse.

[5] This excludes mental and behavioural disorders (Young & Jesseman, 2014).

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Health and social harms of illicit substance use

Many health and social harms are associated with illicit substance use. In 2012 it was the 10th major risk factor for disease burden in North America (Lim et al., 2012). The following section outlines some of the key harms.[6]

Blood-borne diseases: The use of specific psychoactive substances by injection or inhalation has played a dramatic role in the spread of HIV and the hepatitis C virus (HCV) worldwide. Globally, HIV prevalence among persons who inject substances is 28 times higher than the rest of the population (Cook, Phelan, Sander, Stone, & Murphy, 2016). In countries outside sub-Saharan Africa, almost one-third of HIV infections are attributed to injection substance use (United Nations Office on Drugs and Crime [UNODC], 2016). In Canada, this form of substance use was responsible for about 19 per cent of new HIV infections in 2002 (14 per cent in 2005 and 13.7 per cent in 2011; Public Health Agency of Canada [PHAC], 2007; PHAC, 2014a), although the percentage varied geographically and by population. Injection substance use is the predominant exposure category reported among Indigenous people with HIV and, in some jurisdictions, this group accounts for the majority of new HIV cases (PHAC, 2014a). In 2011, 17 per cent of HIV infections were found in individuals who injected illicit substances, among which 66 per cent contracted HCV (PHAC, 2009). In spite of a drop between 2002 and 2011, the estimated percentage of new HIV infections associated with injection substance use remains unacceptably high. Such use is also the main risk factor for the transmission of HCV (PHAC, 2010), which appears to be more readily transmitted via blood-to-blood contact than HIV: 63 per cent of HCV cases reported between 2004 and 2008 were associated with injection substance use (PHAC, 2010).

Certain risk behaviours, such as needle sharing and unprotected sex, are associated with the transmission of blood-borne infections such as HIV and HCV among persons who use illicit substances via injection. In response to the disproportionately high rates of HIV and HCV infection in this population, PHAC launched an enhanced behavioural and biological surveillance system in 2002 called I-Track. I-Track monitors the prevalence of HIV and HCV, and the associated risk behaviours among people who inject illicit substances, to inform and evaluate prevention and treatment services (PHAC, 2014b). Findings from the 2010-2012 phase of the study revealed that 15.4 per cent of

[6] Hunt et al. (2003) described a number of physical, psychosocial, psychological and societal harms associated with substance use. Not all of the harms identified have been included here.

all participants reported injecting illicit substances for the first time before the age of 16. Participants reported a variety of substances injected in the six months prior to interview, with significant gender differences in the choice of substance. Cocaine was the most commonly reported illicit substance used by participants (64.3 per cent). A significantly higher proportion of males than females reported injecting cocaine (66.0 per cent vs. 60.8 per cent), whereas a significantly higher proportion of females reported injecting non-prescribed morphine compared to males (51.3 per cent vs. 45.0 per cent; PHAC, 2014b).

A high proportion of participants (59.3 per cent) reported injecting substances alone (as opposed to injecting with friends; PHAC, 2014b), which had been a risk factor for overdose and mortality in previous studies (Strike et al., 2006). A higher proportion of female participants reported high-risk injecting behaviours, including use of contaminated needles, syringes and/or other injection equipment, as well as passing along used needles, syringes and/or other used injection equipment to others (PHAC, 2014b). These findings, coupled with data from national routine surveillance, demonstrate that a higher proportion of female adults (as compared to their male counterparts) acquire HIV through injection substance use (suggesting that females who inject substances are particularly vulnerable to HIV infection; PHAC, 2014b). Overall, 39.4 per cent of participants reported injecting substances in a public location. This also raises significant concerns, given that public injection substance use is associated with high-risk injection practices that increase the transmission risk of HIV and other blood-borne pathogens (PHAC, 2014b).

Also among people who inject substances in Canada are high rates of HIV seroprevalence (11.2 per cent) and lifetime exposure to HCV infection (68 per cent). Only 78.6 per cent of participants who tested positive for HIV when interviewed were aware of their infection (21.4 per cent of seropositive participants were unaware of their HIV positive status). This finding highlights the importance of having routine, integrated HIV and HCV testing among people who inject substances (PHAC, 2014b), since those who are unaware of their infection would not seek treatment or take necessary measures to reduce the risk of transmission to others. Routine testing also provides opportunities to raise awareness about safe injection practices and to link individuals to health and social support services (PHAC, 2014b). Injection is not the only mode of substance use with a higher risk of blood-borne pathogens, as crack smoking has been associated with increased risk of HCV infection (PHAC, 2008).[7]

Overdoses: An increased risk of overdose is associated with the use of opioids. Overdose deaths have contributed to increased mortality rates among people who use opioids (Bargagli et al., 2006; Darke, Ross, & Hall, 1996; Hulse, English, Milne, &

[7] Other common problems researchers have associated with crack use include respiratory difficulties (e.g., Hunt et al., 2003).

Holman, 1999; Oppenheimer, Tobutt, Taylor, & Andrew, 1994). One Canadian study (Fischer, Rehm, Brissette, et al., 2005) found that close to one in five people who used injected substances reported an overdose experience in the past six months. In November 2016, CIHI and CCSA reported a 30 per cent increase in the rate of hospitalizations due to opioid poisoning (between 2007-2008 and 2014-2015). Vulnerability to overdose is exacerbated in certain situations, such as release from prison, detoxification or rehabilitation programs, when substance tolerance may be reduced. Yet, this data does not capture the sharp increase in opioid-related overdoses observed from late 2015 to present-day 2017. Nor does it capture the increase in repeat overdoses.

Overdose is also common among homeless populations in the U.S. (Baggett et al., 2013). Yet, in Canada, there is a paucity of overdose data and related fatalities. Only a few provinces actively report on overdose fatalities, making it difficult to "compare between jurisdictions and to assess the extent or impact of non-fatal overdose-related, injuries" or deaths across Canada (Canadian Drug Policy Coalition [CDPC], 2013, p. 5). While the CIHI and CCSA report (2016) included hospitalizations and emergency department visits due to opioid poisoning, Ontario and Alberta were the only provinces to provide the data needed to identify opioid poisoning during the study period. What is known is that the "annual rate of fatal overdoses for people who inject illegal drugs is estimated to be between 1-3 percent" (CDPC, 2013, p. 6). In Ontario, between 2006 and 2008, 58 per cent of substance-related deaths were linked to opioids (Madadi, Hildebrandt, Lauwers, & Koren, 2013). In B.C., the increase in overdose deaths from illicit substances across regional and provincial levels rose "from 4.7 per 100,000 in 2010 to 9.9 per 100,000 in 2015" (BCCDC, 2016, p. 1; Tanner, Matsukura, Ivkov, Amlani, & Buxton, 2014). The 2016 data shows a continuation of this trend, with the death rate more than doubling to 19.4 per 100,000 (B.C. Coroners Service, 2017).

Soft-tissue infections and wounds: Soft-tissue infections such as abscesses and cellulitis are commonly associated with injection substance use (Binswanger, Kral, Bluthenthal, Rybold, & Edlin, 2000; Lloyd-Smith et al., 2005). In one Vancouver study, abscesses, cellulitis and other soft-tissue infections were found to be the most common reason for emergency department visits over a two-year period, accounting for 18.3 per cent of visits (Kerr, Wood, et al., 2005). Another study found that 65 per cent of individuals visiting Insite for services other than safe injection, sought care for injection-related infections and wounds (Ontario HIV Treatment Network [OHTN], 2014).

Criminalization: Law enforcement approaches have not reduced substance use. In fact, they have been associated with increased HIV prevalence and other harms such as stigma and discrimination (Friedman et al., 2006; Wood, Spittal, et al., 2004). As one example, illicit substance use may be associated with negative attitudes and stereo-

types (Strike, Myers, & Millson, 2004).[8] Law enforcement approaches to illicit substance use have helped expand prison populations and escalate the harms of substance use (Drucker, 1999; Friedman et al., 2006), such as in the link between incarceration and the increased risk of HIV transmission (Small, Wood, Jurgens, & Kerr, 2005; Werb et al., 2008; Wood, Montaner, & Kerr, 2005). Experience in other countries has shown that tougher substance laws not only fail to address the problems associated with illicit substance use but also exacerbate them in some cases. Criminalization of substance use and possession means that persons with related convictions can face barriers to jobs, housing, education, welfare assistance and other civil liberties (Human Rights Watch & American Civil Liberties Union, 2016). In countries such as Colombia and Mexico, the international "war on drugs" has been shown to undermine political stability and economic relations (Streatfield, 2001). In Canada, an estimated $5.4 billion has been associated with law enforcement costs related to illicit substance use (Rehm et al., 2006).

Violence: Illicit substance use in the context of rigorously enforced prohibition has been associated with violence at several levels: within the community of persons who use illicit substances, in the broader community (e.g., gangland violence), nationally (e.g., Colombia and Mexico; Streatfield, 2001; Lacey, 2009) or internationally (International Centre for Science in Drug Policy, 2010). In an effort to decrease violence against individuals and large-scale violence affecting communities and national stability, Mexico recently decriminalized personal possession of the major illicit substances ("Mexico Legalizes Drug Possession," 2009).

Stigma: Substance use is often highly stigmatized. Stigma is an outcome of social processes that mark a person as different or other on the basis of negative characteristics and result in social devaluing and spoiled identities (Goffman, 1963). Stigma can lead to active discrimination when people internalize negative beliefs about the stigmatized person or group. In marking individuals as outsiders, stigma leads to socially isolation (Takahashi, 1997). Individuals who use illicit substances are often labelled as sick or in need of treatment. Yet, the "addiction-as-disease" model is compounded by prohibition and criminalization. Because people who use illicit substances can be stigmatized as criminals and as violent, they face discrimination, social exclusion and barriers to services (CPHA, 2014; International Network of People Who Use Drugs [INPUD], 2014).

The stigma and discrimination associated with illicit substance use can restrict an individual's access to health care and have a negative impact on their health and well-

[8] Nurses may also unconsciously adopt societal attitudes that reflect the criminalization of substance use, which can fuel negative attitudes toward people who use illicit substances and prevent nurses' participation in harm reduction programs (Pauly, Goldstone, McCall, Gold, & Payne, 2007).

being (Butters & Erickson, 2003; Crockett & Gifford, 2004; Gelberg, Browner, Lejano, & Arangua, 2004; Napravnik, Royce, Walter, & Lim, 2000; Stajduhar et al., 2004). This impact distances individuals from their communities and from health and social services while leaving them more vulnerable to violence, abuse and blood-borne diseases such as HIV and HCV (INPUD, 2014). Individuals who use illicit substances are often reluctant to access services because of discrimination and problematic interactions. They may also conceal their substance use from health care and service providers (INPUD, 2014). According to a review by Ahern, Stuber and Galea (2007):

> Research suggests that when they do seek care, [people who use substances] often experience discrimination in the health care setting and receive lesser quality care. . . . Thus as a barrier to care, stigma and discrimination may adversely affect both mental health and physical health by impeding entry into the health care system, reducing accurate reporting of health issues, and lowering the quality of care received. (p. 189)

Due to the misconceptions and misunderstandings around people who use illicit substances, many experience problematic interactions with health-care providers. Nurses and other health-care providers have been found to hold negative attitudes concerning people who use illicit substances (Bartlett, Brown, Shattell, Wright, & Lewallen, 2013; Carroll, 1995; McLaughlin & Long, 1996; McLaughlin, McKenna, Leslie, Moore, & Robinson, 2006). Often, they are viewed as not worthy of the same access to services (INPUD, 2014). A systematic review of the literature by van Boekel, Brouwers, van Weeghel, & Garresten (2014) found that negative attitudes from health pro-fessionals toward those with substance use disorders negatively impact patients' feelings of empowerment and subsequent treatment outcomes.

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A study by Skinner, Feather, Freeman and Roche (2007) found that such negative attitudes were not unusual:

> Surveys of health professionals indicate that a significant proportion hold negative or stereotypical views of individuals with drug dependence that are likely to compromise the provision of high-quality care. . . . A number of studies with nurses have found that negative and punitive attitudes toward drug users are relatively common. . . . Not only are these attitudes contrary to our expectations concerning professional ethics in the health sector, but the perception that some health professionals are judgmental, unsympathetic, or hostile may discourage individuals with drug-related problems from accessing health-care services. (p. 164)

A systematic review of interventions to reduce stigma related to substance use found that change can occur through educational programs aimed at professionals (e.g.,

health-care providers, police, counsellors) and medical students (Livingston, Milne, Fang, & Amari, 2012). These programs can have implications for nurses (and the profession as a whole), who often deliver primary care services to this population.

It is increasingly evident, however, that negative attitudes and experiences are not isolated problems for individuals; rather, they occur in a cultural context in which social norms and policies play a role (Boyd, 1991; Escohotado, 1999). According to Boyd (1991), criminalization of some psychoactive substances has become part of our "cultural script." Yet, a focus on law enforcement can also contribute to a "war on drugs" mentality, which arises from prohibitionist approaches to substance use and can hinder evidence-based measures to reduce the harms of substance use (Elliott, Csete, Palepu, & Kerr, 2005).

Dependence and addiction: While not all illicit substance use is problematic, one of the possible harms of illicit substance use is dependence and/or addiction (Everitt & Robbins, 2016). Dependence can be physical and/or emotional. Substances such as opioids can produce a physical dependence that rewards and reinforces use. Tolerance and dependence happen through chronic activation of opioid receptors in the brain. For persons with substance use dependence and/or addiction, cessation of use can result in especially unpleasant withdrawal symptoms (Everitt & Robbins, 2016; Fox, Oliver, & Ellis, 2013).

Vulnerability to harms of illicit substance use

Substance use occurs within a social context; social conditions mediate the initiation of substance use and instances and patterns of ongoing use, as well as cessation, abstinence and relapse (Galea, Nandi, & Vlahov, 2004). Gender, ethnicity, age and socio-economic status affect a person's susceptibility to the harms of substance use. Indigenous people are particularly vulnerable to the harms of substance use (Russell et al., 2016) and, for women and youth, these harms include higher incidents of HIV infection and violence. In 2013, CTADS indicated that three per cent of Canadians 15 years of age and older reported having experienced "at least one harm" related to illicit substance use in the last year, an increase from past reports. This rate was twice as high among males (4 per cent vs. 2 per cent) and four times higher among youth (aged 15 to 19) and young adults (20 to 24) than adults (over 25; Government of Canada, 2015).

In several Vancouver studies, female sex workers and other women were found to have higher HIV prevalence rates than men (McInnes et al., 2009; Shannon et al., 2008). Equally concerning is the increased incidence of HIV infection among Indigenous Peoples, both men and women (Craib et al., 2003; Wood, Montaner, et al., 2008). People who use illicit substances often have a history of trauma and abuse (Liebschutz et al., 2002), and increased rates of substance use have been reported for women who

have experienced intimate partner violence. Spittal et al. (2006) found that the mortality rate for homeless women who use illicit substances is up to 50 per cent higher than among women who are not homeless. In unsafe housing conditions, women often experience physical abuse, sexual abuse, depression and addiction, and many consider suicide (McCracken & Watson, 2004; Pennbridge, Mackenzie, & Swofford, 1991). People experiencing problematic substance use frequently have higher rates of trauma such as physical or sexual abuse (during childhood or adulthood), in addition to social and economic disadvantages or cultural dislocation (Alexander, 2008; Liebschutz et al., 2002; Mehrabadi et al., 2008; Pearce et al., 2008; Stein, Burden Leslie, & Nyamathi, 2002). Indigenous populations have survived decades of trauma and abuse, which has been directly linked to poor mental and physical health outcomes and has contributed to increased rates of substance use in these populations (Russell et al., 2016).

There is growing awareness that vulnerability to the harms of illicit substance use, particularly the risk of HIV infection, increases within certain environments, including disadvantaged and impoverished neighbourhoods, correctional systems and environments where persons are homeless or underhoused.

While low socio-economic status is associated with increased substance use, based on observations of higher use rates in impoverished neighbourhoods, the relationship is multidirectional rather than linear. For example, substance use may either precede homelessness or be its result, such as when individuals use substances as a way to cope with adverse living conditions and stress (Johnson & Fendrich, 2007; McVicar, Moschion, & van Ours, 2015; Feng, DeBeck, Kerr, Mathias, Montaner, & Wood, 2013). Substance use can be understood as a coping response; addiction, as a means to adapt to desperately difficult situations (Alexander, 1990; Maté, 2008).

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positive HIV status. Manzoni, Brochu, Fischer and Rehm (2006) found that unstable housing was a predictor of engagement in property crime among persons who used crack cocaine. Persons living in social housing that do not use a harm reduction approach can be at increased risk of overdose. In such settings, rather than using substances with others or in common areas, individuals are more likely to do so alone in their own rooms (Riley, 2016) — a well-documented risk factor for opioid overdose (Kinner, Milloy, Wood, Qi, Zhang, & Kerr, 2012; Riley, 2016).

Incarceration has been identified as a risk factor for HIV infection because of the high rate of syringe sharing, the lack of needle distribution and recovery programs, and the scarcity of safer tattooing programs in institutions operated by the Correctional Service of Canada (National Collaborating Centre for Infectious Diseases, 2008; Small et al., 2005; Wood, Montaner, & Kerr, 2005). In the absence of consistent and comprehensive harm reduction programs in prisons, there is increasing evidence of high rates of needle sharing and inconsistent condom use among people who are incarcerated (Milloy, Wood et al., 2008; Werb et al., 2008). All of these authors have identified the need to address the socio-political and economic factors that increase vulnerability to HIV infection by focusing not only on drug policy but also on housing and other social policies.

Actions directed at decreasing the harms of illicit substance use need to encompass more than lowering the transmission rates of HIV or HCV. To succeed, they need to embrace changes to housing, social and health policies that reduce vulnerability, stigma and discrimination.

The studies outlined above suggest that vulnerability to HIV/AIDS is linked to unstable housing, substance use and poor health, and also that the social determinants of health play a role in shaping the harms of substance use (Galea, Rudenstine, & Vlahov, 2005; Hathaway, 2001).

The social conditions that produce vulnerability to HIV infection also contribute to increased susceptibility to other harms associated with illicit substance use. The current prohibitory approach, which seeks to prevent and control use of substances currently deemed illicit, aggravates existing social inequities by marginalizing individuals affected by societal stigma and discrimination (Kendall, 2013). Thus, actions directed at decreasing the harms of illicit substance use need to encompass more than lowering the transmission rates of HIV or HCV. To succeed, they need to embrace changes to housing, social and health policies that reduce vulnerability, stigma and discrimination (CPHA, 2014; Pauly, 2008b; Pauly, Reist, Belle-Isle, Schactman, 2013; Pauly, Reist, Schactman, & Belle-Isle, 2011). Research on "risk environments" (as a more adequate frame of reference for substance use; Rhodes, 2002; Rhodes et al., 2005) provides a

context for understanding key social factors in illicit substance use and its harms. The importance of these factors demonstrates the need for nurses to focus not simply on drug policies but also on the value of a health in all policies approach, which considers how other policies, such as social housing and income, can also contribute to or minimize the harms of substance use.

II. OVERVIEW OF HARM REDUCTION

Definitions of harm reduction

Harm reduction is a pragmatic public health approach for reducing the consequences of actions with an increased risk of negative health outcomes. While this paper focuses on its application to illicit substance use, nurses and others use a range of harm reduction strategies in other areas; for example, encouraging the use of seatbelts when driving cars, helmets when riding bicycles and condoms when engaging in sexual practices. A number of these harm reduction interventions have been incorporated into education programs on health promotion, and some (e.g., seatbelt use) have been passed into law. Their benefits for individuals, families and communities are widely recognized.

> *"'Harm Reduction' refers to policies, programmes and practices that aim primarily to reduce the adverse health, social and economic consequences of the use of legal and illegal psychoactive drugs without necessarily reducing drug consumption. Harm reduction benefits people who use drugs, their families and the community."*

The harm reduction movement gained prominence in the 1980s as injection substance use became a key mechanism for the transmission of HIV (Ball, 2007; Hilton, Thompson, Moore-Dempsey; & Janzen, 2001). The current harm reduction movement originated in the Netherlands and the United Kingdom as a more humane approach than the law enforcement approach to reducing the harms associated with substance use (Marlatt, 1996). Early work in the field of harm reduction emphasized the need for a pragmatic approach to substance use that reduced harm without expectations of abstinence or reduced use (Lenton & Single, 1998; Riley & O'Hare, 2000).

Building on this early work, Harm Reduction International[9] (HRI; n.d.) developed the following definition:

[9] Harm Reduction International, formerly the International Harm Reduction Association was developed to advance knowledge, policy and practice related to harm reduction and to support action to stop the negative consequences of substance use. Since 1990, the association has hosted an international harm reduction conference in various international locations. This has been a key forum for debating issues related to harm reduction policy, practice and research.

> 'Harm Reduction' refers to policies, programmes and practices that aim primarily to reduce the adverse health, social and economic consequences of the use of legal and illegal psychoactive drugs without necessarily reducing drug consumption. Harm reduction benefits people who use drugs, their families and the community. (para. 6)

This definition encompasses harms related to all psychoactive substances (legal and illicit), including tobacco, alcohol, prescription drugs and controlled substances. Harm reduction, as an approach, has been embraced by the World Health Organization (WHO), the Joint United Nations Programme on HIV/AIDS, the UNODC, the United Nations Children's Fund, the International Federation of Red Cross and Red Crescent Societies (2003) and the World Bank (Wodak, 2009).

Harm reduction focuses on promoting safety and preventing death and disability without requiring that substance use be discontinued. It focuses on ensuring safer use and the health and safety of all members of the community.

Harm reduction emphasizes a value-neutral position on the question of substance use (CCSA, 1996; Keane, 2003; Marlatt, 1996; Marlatt & Witkiewitz, 2010). It emphasizes the importance of treating all people with respect, dignity and compassion, which is particularly relevant given the stigma surrounding illicit substance use and the societal judgments often experienced by those who use these substances.

The values of harm reduction are consistent with the values guiding professional nursing practice as outlined in CNA's *Code of Ethics for Registered Nurses* (Lightfoot et al, 2009; Pauly, Goldstone, et al., 2007); specifically, nursing values related to the provision of safe, ethical, compassionate and competent nursing care; the promotion of health and well-being; the promotion of and respect for informed decision-making; the preservation of dignity; and the promotion of justice.

Harm reduction focuses on promoting safety and preventing death and disability without requiring that substance use be discontinued. It focuses on ensuring safer use and the health and safety of all members of the community. For example, encouraging people not to drink alcohol before driving promotes safer use that reduces harms to individuals and the community. Harm reduction complements prevention and treatment strategies and is part of a comprehensive response to substance use.

Key principles of harm reduction

HRI (n.d.) defines the underlying principle of a harm reduction approach to substance use to be a strong commitment to public health and human rights. The most commonly cited principles underpinning harm reduction include pragmatism, humanistic values, reducing risks and harms, using the strongest available evidence of costs and benefits, emphasizing human rights, focusing on immediate goals, acknowledging incremental

change, challenging policies and practices that maximize harm, transparency, and meaningful participation of those who use substances in policy-making and program development (CCSA, 1996; Hunt et al., 2003; HRI, n.d.; Riley & O'Hare, 2000; Thomas, 2005). Harm reduction is a pragmatic approach to substance use in which use is viewed as an enduring feature of human existence (CCSA, 1996; HRI, n.d.; Marlatt & Witkiewitz, 2010; Riley & O'Hare, 2000). Because substance use occurs along a continuum, ranging from abstinence to problematic use, harm reduction focuses on preventing the harms associated with use rather than eliminating use (Marlatt, 1996).

Increasingly, the harm reduction movement has embraced human rights and the right of people who use illicit substances to access the highest standard of health and social services without discrimination.

HRI itself focuses on seven principles of a harm reduction approach to illicit substance use: targeting risks and harms; using evidence-based, cost-effective approaches; acknowledging incremental change; approaching individuals with dignity and compassion; acknowledging the universality and interdependence of rights; challenging policies and practices that maximize harm; and transparency, accountability and participation (HRI, n.d.). Increasingly, the harm reduction movement has embraced human rights and the right of people who use illicit substances to access the highest standard of health and social services without discrimination — a perspective HRI refers to as the "universality and interdependence of rights" (para. 14).[10] In following such principles, harm reduction is part of a comprehensive health-care response to marginalized populations who experience health and social harms related to substance use. It fosters prevention, abstinence and treatment strategies while supporting safer environments for individuals, families and communities as a whole (CNA & Canadian Association of Nurses in AIDS Care [CANAC], 2012).

In summary, harm reduction:

- focuses on reducing the harms associated with a broad range of substances;
- does not require abstinence or discontinuation of use;
- is complementary to prevention and treatment approaches;
- empowers people who use substances to make informed decisions;
- emphasizes humanistic values, including dignity, compassion and nonjudgmental acceptance of people who use substances;

[10] An important consideration is the meaningful participation of those who use substances in the development of related policies and programs and their involvement in decisions that affect them (Canadian HIV/AIDS Legal Network, 2005).

- is cost-effective and evidence based;
- includes participation by people who use substances in policy-making and program development; and
- challenges policies and programs that maximize harm.

Harm reduction as an approach to illicit substance use

Harm reduction is part of a public health promotion and illness-prevention framework to prevent, reduce and mitigate the harms of substance use for individuals and communities (Loxley et al., 2004). There isn't just one harm reduction program model; rather, programs vary based on individual and group needs. For example, approaches to reducing harm among youth may include strategies to prevent or delay the start of substance use and promote knowledge about safer use for those who have started or are thinking of doing so (Marlatt & Witkiewitz, 2010).

A potential challenge to the harm reduction approach occurs when it is misunderstood as applying only to individual responsibility. This view fails to recognize circumstances beyond individual control that shape substance use and the efforts to reduce its harms (Pauly, 2008a). While work is needed to dispel misperceptions about the many factors that contribute to substance use, there is greater global movement to embrace harm reduction as a human right. As Cook et al. (2016) notes:

> Multiple UN human rights bodies have called on governments to implement harm reduction programs as part of fulfilling the right to the highest attainable standard of physical and mental health, the right to benefit from scientific progress and its applications, and, in places of detention, to freedom from cruel, inhuman or degrading treatment or punishment. (p. 11)

Nursing, illicit substance use and harm reduction

Regardless of the setting where nurses provide care, they will probably encounter situations in which substance use is affecting the health and safety of individuals and families. One of the key values of ethical nursing practice is to promote the health and well-being of the recipients of nursing care, regardless of income, age, gender, ethnicity and other socio-demographic characteristics (CNA, 2008). The values of harm reduction are consistent with the values outlined in the CNA code of ethics. Nurses can draw on a number of strategies to reduce harms associated with certain behaviours (CNA & CANAC, 2012). Below are seven scenarios that nurses might encounter and the benefits of using a harm reduction approach to promote health and reduce harms for individuals, families and communities.

Scenario 1: Reyna is a registered nurse who works in a busy inner-city emergency department. She routinely sees individuals who seek care for the consequences of substance use, including injection-related abscesses. Many of her colleagues have expressed their frustration at fixing people up only to have them return with the same problem. The emergency department does not have an expressed philosophy of harm reduction. However, Reyna is aware that injection-related complications could be reduced through the use of education on safer-injection practices. Nick, a homeless client, arrives in the emergency department with a large abscess on his inner arm; he has a fever and is sweating. He is angry and says he doesn't want to stay. Sue offers him a blanket and a sandwich, which he accepts. After eating, he seems calmer and says he feels better. After he is assessed, and antibiotics are initiated, Reyna speaks to Nick about housing supports in the community, and wonders if this might be a good time to share some information that would help to prevent abscesses in the future.

Scenario 2: José is a public health nurse in a mid-sized urban centre. Through his work in local high schools, he is aware that many of the youth in the community may be using club substances such as ecstasy. He is also concerned that most of the substance use education is provided by police in the schools and that the emphasis is on law enforcement and abstinence.

Scenario 3: Kim works at a primary health-care centre where many individuals seeking care are experiencing problematic substance use related to prescription drugs such as morphine, codeine, oxycodone and benzodiazepines. She is aware that a number of the substances were initially prescribed for chronic pain. However, because several of the individuals can no longer access these substances through their physician, they are buying them on the street.

Scenario 4: A group of public health nurses are aware of a growing problem of crack use. They are also aware that pipe sharing while having cuts and burns on the lips may be a source of HIV and HCV transmission. The nurses have received repeated requests for crack pipes. Since provincial guidelines support the distribution of crack pipes, the nurses begin to distribute safer crack kits. However, the program is halted when city officials learn about it.

Scenario 5: Ling works in a correctional facility. Many of the inmates have long histories of substance use and addiction. Although substance use is not permitted, and many of the inmates go through withdrawal upon incarceration, it occurs nonetheless. Ling knows that access to clean needles is extremely limited and is aware of the increased risk of HIV infection associated with injection substance use. She is concerned about the repeated sharing of syringes among inmates.

Scenario 6: A young woman named Sheryl is brought to the emergency department (ED) by paramedics, after a suspected fentanyl overdose. She was found alone and unresponsive in the washroom of a downtown coffee shop. Sheryl is known to the paramedics and ED staff, as she was brought in for treatment related to fentanyl overdoses twice in the past month. When Sheryl is being assessed, Nuvera, the nurse assigned to her, hears a colleague remark, "Another substance user. Why do they do this to themselves?" as she shakes her head. Nuvera considers what could be done to support Sheryl and prevent future overdoses. Prior to her discharge, Nuvera provides Sheryl with a take-home naloxone kit, reviews its use and discusses strategies for safer use, including not using alone. Afterwards, Nuvera seeks out the colleague who had made the disparaging remark about people who have substance use issues. Recognizing that, as a regulated nurse, she has a responsibility to address issues that perpetuate stigmas and contribute to inequity in care, Nuvera speaks to her colleague about her professional responsibility to provide safe, compassionate, competent and ethical care to all people.

Scenario 7: Ali works as a nurse at a supervised consumption site. While providing wound care for a client's abscess, Ali asks the client, Jon, how he is doing. Jon has developed a relationship with Ali over the past few months, and feels comfortable to open up about the loss of several friends to fentanyl. Jon says he feels sad and is tired of seeing his friends die. He states that, while he's not ready to stop using, he does want to do something to help others. Ali talks about opportunities for peer support networks that have had tremendous success linking people with a lived experience of substance use for the purposes of support and advocacy.

These scenarios show some of the diverse situations in which nurses might reduce the harms of substance use and promote the health and well-being of those receiving care. Nurses have recognized the need for a compassionate approach to caring for people who use illicit substances and preventing their adverse consequences. In many situations, nurses embrace harm reduction where it can promote health, reduce harm and enhance access to health care. This response is consistent with the values embedded in the CNA code of ethics, including the pursuit of health equity, human rights and social justice (2008).

Nurses can also influence the development of organizational (Fisk, 1998) and governmental policies on harm reduction as these relate to illicit substance use. For example, nurses have supported the initiation and development of needle distribution and recovery programs and supervised consumption facilities (Gold, 2003; Griffiths, 2002; Kerr, Oleson, & Wood, 2004; Kerr, Oleson, Tyndall, Montaner, & Wood, 2005; Small, Palepu, & Tyndall, 2006; Wood, Zettel, & Stewart, 2003). The growth of these facilities has led to increased numbers of nurses working within harm reduction services and using a harm reduction approach in other settings. Some nurses working in this area have made considerable efforts to document and publicize their work in harm reduction. For

example, there are foundational descriptive papers that illustrate nursing practice in harm reduction for emergency and other hospital departments (Mattinson & Hawthorne, 1996; McCall, 1999), methadone clinics (Mistral & Hollingworth, 2001), street outreach in urban and rural settings (Brown, 1998; Ruiterman & Biette,1973; Self & Peters, 2005; Pauly, 2014), home care settings (Brennan & Giles, 1996; Giles & Brennan, 2001), heroin prescription (diacetylmorphine) trials (Ferri, Davoli, & Perrucci, 2010; Plaza, Oviedo-Joekes, & March, 2007; van Beek, Kimber, Dakin, & Gilmour, 2004), policy development (Norwood et al. 2015), primary health-care centres, maternal and child care settings, and public and population health services (Carriere, 2008; Garm, 1999; Payne, 2007; Bartlett et al., 2013).

In many situations, nurses embrace harm reduction where it can promote health, reduce harm and enhance access to health care. This response is consistent with the values embedded in the CNA code of ethics, including the pursuit of health equity, human rights and social justice.

Key areas of harm reduction nursing include outreach nursing (e.g., Hilton, Thompson, & Moore-Dempsey, 2009; Hilton, Thompson, Moore-Dempsey & Hutchinson, 2001), nursing practice in relation to methadone maintenance (e.g., Wilson, MacIntosh, & Getty, 2007), supervised injection education (e.g., Wood, Wood, et al., 2008), and primary health-care centres and supervised consumption sites (e.g., Lightfoot et al., 2009; Pauly, 2008b). For example, Wood, Wood, et al. (2008) highlighted the important role of nurses in providing supervised injection education to individuals at increased risk of experiencing the harms associated with injection substance use. In the publications noted, a primary focus is the important role of nurses in developing caring and trusting client relationships while delivering harm reduction services. A study of ethical nursing practice in inner-city health-care clinics in Western Canada, for instance, found that nurses were able to enhance access to health care when using a harm reduction approach through a change in moral valuation; that is, a shift from stigmatizing attitudes to attitudes of respect regardless of whether or not individuals used illicit substances (Pauly, 2008b). Nurses and nursing groups have been and continue to be prominent in advocating for and delivering harm reduction programs in Canada.

III. DRUG POLICY ISSUES: COMPETING DISCOURSES AND CURRENT REALITIES

Two dominant and competing discourses have been identified as shaping current drug policy: the health discourse and the crime discourse (Boyd, Carter, & MacPherson, 2016). Stevens (2007) describes the health coalition as advocates for public health policies aimed at limiting the spread of HIV/AIDS through injection substance use. In

contrast, the crime coalition[11] focuses on the control of substance use and the criminalization of people who use illicit substances through law enforcement or punishment. The health coalition approach, according to Stevens, draws on substantial evidence to show that substance use has health consequences, and harm reduction strategies are effective for mitigating the harms of substance use. Nevertheless, the state has put its resources into law enforcement rather than health care and treatment (Carstairs, 2006; Giffen, Endigott, & Lambert, 1991). Accordingly, over the last 100 years (since the establishment of the Royal Canadian Mounted Police in 1920) programs for substance use prevention and treatment with a goal of abstinence have predominated.

In spite of growing evidence of the effectiveness of public health approaches such as harm reduction, drug policy continues to be underpinned by a prohibitionist and moral stance.

Hathaway (2001, 2002) observes that, in spite of growing evidence of the effectiveness of public health approaches such as harm reduction, drug policy continues to be underpinned by a prohibitionist and moral stance. The tension between these two approaches is illustrated by the history of Canada's response to illicit substance use, which Giffen et al. (1991) has characterized as "panic and indifference," given that certain types of evidence have been used to create moral anxiety (e.g., Erickson, 1998). Over the years, the emphasis on law enforcement has been supported by a selective use of evidence that overestimates and simplifies the relationship between illicit substances and crime (Stevens, 2007) and underestimates the link between crime, illicit substances and socio-economic deprivation (Seddon, 2006). A third, emerging discourse is the human rights coalition, which focuses on people's right to health and social services and rights enshrined in the Canadian Charter of Rights and Freedoms, such as life, liberty and security of the person.

Because drug policy affects the delivery of nursing care to people who use illicit substances, a brief overview of the drug policy context at the international, national, provincial and municipal levels follows. This overview aims to enrich the understanding of nursing policy decision-makers about factors that influence nurses' work and, in turn, to help influence the degree to which harm reduction strategies are introduced and integrated into nursing care.

International drug policy

The discovery and spread (after the 15th century) of the world's psychoactive resources — distilled alcohol, tea, coffee, cacao, coca, cannabis, opium and tobacco — has been

[11] The crime coalition refers to the focus on law enforcement as the primary public policy response to drug use.

called a "psychoactive revolution" (Davenport-Hines, 2001; Dikötter, Laamann, & Zhou, 2004). The violence associated with currently prohibited substances began with the importation and spread of tea in 18th-century England (Moxham, 2003) and with alcohol in the early 20th century in Canada and the United States (Alexander, 1990; Gray, 1998). Opiates were widely used as a medical panacea in 19th-century Europe, North America and Asia before modern synthetic substances were developed. Alexander (1990) argues that no epidemic of opiate or alcohol use ever existed; in the United States, it is probable that no more than one per cent of the population was opiate dependent. Nevertheless, the temperance movement of the 18th and 19th centuries arose as a response to the impact of alcohol on individuals and society. Social historians have argued that anti-opium and anti-alcohol movements in the late 19th and 20th centuries were mechanisms of social control (Alexander, 1990; Carstairs, 2006) and integral to political platforms in the United States and Canada (Alexander, 1990; Gray, 1998). As Boyd (1991) argues, substances were prohibited, not on the basis of their pharmaceutical properties, but rather to control the moral erosion that was believed to be associated with substance use among marginalized groups.

Internationally, the prohibition of currently illicit substances began with the first international treaties in 1919. Since then there have been periods of escalation, such as in the Reagan years of the 1980s when the current "war on drugs" was declared (Boyd, 1991; Gray, 1998). Subsequent treaties include the Single Convention on Narcotic Drugs (adopted in 1961 and amended by the 1972 Protocol), the Convention on Psychotropic Substances (adopted in 1971) and the Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (adopted in 1988; Giffen et al., 1991). The Economic and Social Council, the Commission on Narcotic Drugs (CND), the International Narcotics Control Board (INCB) and UNODC are involved in the functioning and oversight of these conventions. There are many criticisms of the current substance control regime, not the least of which is the charge that current policies are responsible for the vast unregulated and expanding illicit substance market. A UN report estimated this market to be worth US$320 billion annually (UNODC, 2005). The International Drug Policy Consortium (IDPC; 2007) cites the following concerns:

- The tone of the conventions is problematic. They characterize people who use illicit substances as "evil," devils" or "animals," thereby justifying the view that "the harsher the penalty, the greater the deterrent." Over 30 signatory countries retain the death penalty for substance use.
- The focus on crime and control promotes a law enforcement perspective, in part because the membership of the CND is overwhelmingly drawn from foreign affairs and law enforcement agencies.

- There has been a failure to consider policy options to mitigate the spread of HIV transmission through injection substance use.
- The response to drug-related crime and the escalation of violence is problematic.
- There has been a failure to rebuild shattered societies (e.g., Columbia and coca, Afghanistan and opium).
- There has been a failure to provide access to essential analgesia owing to overly rigid controls of controlled substances.
- There has been a failure to protect human rights, including violations of cultural practices and environmental destruction owing to crop eradication programs.
- Civil society has been minimally involved in the current policies.

In 1998, the 20th Special Session of the General Assembly of the United Nations declared its goal to substantially reduce substance demand and supply by the year 2008 (United Nations, 1998). In 2007 and 2008, in preparation for the 2008 review, regional consultations were held with civil society organizations in 13 cities, including Vancouver, and nine regions in the world (Vienna NGO committee on drugs, 2010). Two evaluations provide insights and critiques on the findings of the consultations (Centre for Addictions Research of British Columbia [CARBC], 2008; UNODC, 2009). These critiques include tensions associated with a continued reliance on law enforcement and supply reduction, the HIV and HCV epidemics in people who use injected substances, the cost of incarceration of non-violent users of illicit substances and the violation of human rights. The loss of potential tax revenue is another result of the current approach to substance control, and it is currently causing reconsideration of the status quo (Nasaw, 2009).

UNODC (2008) indicated that public health should be the first principle of substance control. Although there have been charges that harm reduction initiatives such as Insite (a supervised consumption facility in Vancouver) operate in contravention of international substance treaties, legal analysis (Malkin, Elliott, & McRae, 2003) and the 2008 UNODC report indicate that such interpretations were never the intention of substance conventions. In 2001, Portugal decriminalized (not legalized) the possession of all substances for personal use and usage itself. Use and possession remain legally prohibited, but infringements are dealt with as administrative violations and are completely removed from the criminal realm. Trafficking remains a criminal offence. In a review of the experience with decriminalization in Portugal, Greenwald (2009) found that not only has usage not increased (Portugal has one of the lowest rates of use in the European Union), but substance tourism has not occurred, the numbers of sexually transmitted infections (STIs) and deaths caused by substance usage have decreased, and access to substance treatment programs has increased. Popular and political support in Portugal

for decriminalization remains high, although it is recognized that some efficiencies need to be introduced into the programs associated with decriminalization.

The Johns Hopkins-Lancet Commission on Drug Policy in March 2016 examined the scientific evidence on the impact of drug-control policies and public health outcomes. The commission concluded that drug policies centred on prohibition and criminalization are detrimental to population health. Such policies marginalize vulnerable populations, contribute to stigma and fuel the outbreak of blood-borne diseases (e.g., HIV and HCV) including transmission in prisons. Among its recommendations was the need to scale up accessible harm reduction services ("Reforming International Drug Policy," 2016).

In April 2016, the UN General Assembly's Special Session (UNGASS) was held to discuss the world substance problem, following up on previous sessions in 1998 and 2009. The assembly's call for consensus on an outcome document that had been submitted in March 2016, and recommended for adoption by the CND, was met with resistance given that it supported the status quo despite compelling scientific evidence and expert recommendations for a different approach. There had been a number of concerns and opposing views during the CND with respect to the contents of the outcome document.[12] The approach it presented centred on the cornerstone of prior international substance conventions (i.e., prohibition and criminalization) and did not take into account the importance of human rights and public health objectives. In fact, the document made no reference to harm reduction, decriminalization, human rights violations resulting from law enforcement approaches, or the abolishment of the death penalty for substance-related offenses. It also made no reference to prohibiting discrimination in relation to arrest and detainment (IDPC, 2016).

The UNGASS meeting set the stage for future discussions at the next UN review in 2019. It highlighted the need for current drug policies to be better aligned with the UN's Sustainable Development Goals and the need to address current substance issues within the UN pillars of development, human rights, peace and security (Transnational Institute, 2016).

Canadian drug policy

In Canada, the current *Controlled Drugs and Substances Act* (CDSA), which came into effect in 1996, sets out the framework for the "control, import, production, export, distribution and possession of psychoactive substances in Canada" (Collin, 2006b, p. 3). The first act to criminalize an illicit substance in Canada was the 1908 *Opium Act*, in

[12] Objections also arose about the exclusionary process by which the CND document was developed (Transnational Institute, 2016).

which the import, sale or manufacture of opiates for non-medical use was prohibited (Collin, 2006a).[13] The *Opium Act*, in hindsight, can be viewed as driven by the social tensions (e.g., racism) of the time (Boyd, 1991; Carstairs, 2006). Several legislative policies to control and regulate psychoactive substances were subsequently enacted, including the *Opium and Drug Act* (1911), the *Food and Drugs Act* (1920), the *Narcotic Control Act* (1961) and, most recently, the CDSA.

Over the past 40 years, efforts to change drug policy and control the production, distribution and use of illicit substances have met little success. For example, the Le Dain Commission of Inquiry into the Non-Medical Use of Drugs (1969-1972) recommended that cannabis be removed from the *Narcotic Control Act* and that the provinces implement controls on possession and cultivation similar to those governing the use of alcohol (Government of Canada, 1972). In 2000, the Senate special committee on illicit drugs was charged with conducting an exhaustive review of public policies related to marijuana (Collin, 2006b). The Senate committee concluded that "cannabis should not be treated as a criminal issue but as a social and public health issue and that the drug should be legalized" (Collin, 2006b, p. 3). On the basis of this report, a number of bills to amend the act were put forward, without success. According to Collin (2006b), Prime Minister Stephen Harper, in a 2006 speech at the executive board meeting and legislative conference of the Canadian Professional Police Association, announced that his government would not pursue the introduction of marijuana decriminalization legislation but would pursue tougher penalties, such as minimum mandatory sentencing and increased fines for marijuana growers and dealers. This exemplified the "tough on drugs" or "war on drugs" strategy that emphasizes law enforcement as the dominant approach to reducing the harms of illicit substances.

In 2017, the Liberal government tabled legislation to legalize non-medical cannabis. The government argues that doing so would enable it to tax the product, enforce strict regulations and keep it away from minors, and take the sale and supply out of the hands of organized crime. Key recommendations from the federal task force for the legalization and regulation of cannabis in Canada (2016) focus on minimizing harms of use, establishing a safe and responsible supply chain, enforcing public safety and protection, medical access, and implementation.

This shift would set an important precedent in Canadian drug policy, moving it away from a "war on drugs" paradigm and toward a strategy based on prevention, regulation and non-discrimination.

[13] Most of the information in this section was derived from two comprehensive papers on drug policy prepared by Collin (2006a, 2006b).

Canada's national drug strategy

The first national drug strategy (1987), known as Canada's Drug Strategy, outlined a broad policy framework for prevention, treatment and reduction of the harms of substance use (legal and illicit; Collin, 2006a). In 1998, the original six components of Canada's Drug Strategy were reformulated into the following four pillars: education and prevention, treatment and rehabilitation, harm reduction, and enforcement and control. However, consistent with previous budgetary trends, funding was substantially reduced, and advocates working in the field of substance use expressed concern that this was "the sunset of Canada's Drug Strategy" (Collin, 2006a, p. 2). In 2003, the government of Canada renewed its commitment to Canada's Drug Strategy with $245 million over the next five years (Collin, 2006a).

There has been little evaluation of the effectiveness of law enforcement as an approach to controlling illicit substance use. In fact, evidence suggests that law enforcement is ineffective in reducing substance use and contributes to harms among people who use them including increased rates of HIV infection, especially in contained settings such as prisons.

In 1988, CCSA was created by an act of Parliament as the lead agency in the development of research and policy on substance use (Collin, 2006b). The centre is funded by — although intended to be at arm's length from — the federal government and has led many national initiatives including a cost assessment of substance use (Rehm et al., 2006). The centre also helped facilitate the development of a pan-Canadian framework to reduce the harm associated with alcohol and other substances, including a National Treatment Strategy and a National Alcohol Strategy (CCSA & Health Canada, 2005; National Advisory Council on Prescription Drug Misuse, 2013). Eric Single, founding director of policy and research at the centre, was an early contributor to discussions about the definition of harm reduction (Lenton & Single, 1998). CCSA took a lead role in developing principles of harm reduction that have been used internationally (CCSA, 1996), and harm reduction was a core principle of this framework. Twelve years later, the centre released a document describing harm reduction as a contentious issue but reaffirmed the principles outlined in 1996 while reviewing the evidence that supported harm reduction (Beirness, Jesseman, Notarandrea, & Perron, 2008). The primary focus was on reducing the direct physical harms to individuals, yet social determinants and other factors that increase vulnerability to the harms associated with substance use were rarely mentioned.

Concerns have been raised by several high-profile government committees and the auditor general about the direction and effectiveness of Canada's Drug Strategy. In an analysis of the funding of drug policy initiatives, DeBeck, Wood, Montaner and Kerr

(2006) found that 73 per cent of the money allocated to Canada's Drug Strategy in 2004-2005 to address the harms of illicit substances went to law enforcement. As this article pointed out, there has been little evaluation of the effectiveness of law enforcement as an approach to controlling illicit substance use. In fact, evidence suggests that law enforcement is ineffective for reducing illicit substance use and contributes to harms among people who use them including increased rates of HIV infection, especially in contained settings such as prisons (Friedman et al., 2006; Wood, Montaner, et al., 2005; Wood, Spittal, et al., 2004).

In 2007, Canada's Drug Strategy was renamed the National Anti-Drug Strategy. It includes a commitment to three pillars and areas for action: preventing illicit substance use, treating people with illicit substance dependencies, and combating the production and distribution of illicit substances. Harm reduction, the fourth pillar of the earlier strategy, was removed, and Health Canada was no longer the sole lead agency. The National Anti-Drug Strategy became a collaborative effort involving the Department of Justice, Public Safety Canada and Health Canada. Before this change, harm reduction initiatives had not been well funded, but at least harm reduction was identified as a key element of a comprehensive national policy. The change in 2007 was regressive; it moved away from public health and toward crime prevention.

In December of 2016, the Liberal government announced a new Canadian Drugs and Substances Strategy. Replacing the National Anti-Drug Strategy, it restored harm reduction as a core pillar of Canada's drug policy while maintaining the three existing pillars: prevention, treatment and enforcement. The strategy also moves the oversight of issues related to drug policy from the Department of Justice to the Department of Health (Government of Canada, 2016b).

The association between illicit substance use, violence and crime have been well documented. Research shows that many crimes are committed by individuals who are under the influence of various psychoactive substances or are committing a crime to acquire them (Bennett, Holloway, & Farrington 2008; INCB, 2003; Pernanen, Cousineau, Brochu, & Sun, 2002). There are also crimes that stem from the structure of the substance use system (e.g., the production, manufacture, transport and sale of illicit substances) and from people's involvement in organized crime to supply and distribute them (Royal Canadian Mounted Police, 2010; Canada Border Services Agency, 2014). In addition, it is common among many people who use such substances and are caught up in the criminal justice system to be involved in (or exploited by) the sex trade. The National Council on Alcoholism and Drug Dependence (2015) points to evidence that substance use is both a pre-determining factor and a coping mechanism in sexual exploitation.

CCSA has estimated the justice-related costs associated with illicit substance use (e.g., expenses for police, courts and correctional services) at $2 billion annually. Yet, this

figure is substantially higher when factoring in other social and health-related costs such as medical expenses and loss of productivity (Rehm et al., 2006; Statistics Canada, 2015).

Provincial and municipal drug policies

In 2007, most provinces and territories — through the federal/provincial/territorial advisory committee on AIDS and the federal/provincial/territorial committee on substance use and abuse (composed of representatives of ministries of health across Canada) — officially endorsed harm reduction and highlighted their concerns about the absence of harm reduction in the 2007 National Anti-Drug Strategy. These endorsements and concerns were documented in letters to the co-chairs of the Pan-Canadian Public Health Network council, including the head of the Public Health Agency of Canada. Several Canadian provinces have actively embraced harm reduction policies, a national policy under the federal government's CDSS. For example, the B.C. Ministry of Health (2006) developed three key documents outlining the province's position and endorsement of harm reduction as part of a broader strategy to reduce and prevent the harms associated with substance use (BCMHS, 2004; CARBC, 2006). The following definition of harm reduction was provided:

> At the practical level, the aim of harm reduction is to reduce the more immediate harmful consequences of drug use through pragmatic, realistic and low threshold programs. Examples of the more widely known harm reduction strategies are needle [distribution and recovery] programs, methadone maintenance treatment, outreach and education programs for high risk populations, law enforcement cooperation, medical prescription of heroin and other substances, and supervised consumption facilities. (B.C. Ministry of Health, 2006, p. 4)

In collaboration with the Ministry of Health, the B.C. harm reduction strategies and services committee has produced documents on best practices to guide the implementation of harm reduction (Chandler, 2008). Vancouver is one of the major Canadian cities to have adopted harm reduction policies and to have supported the development of harm reduction initiatives (MacPherson, 2001). The supervised consumption facility in Vancouver was launched and continues to operate with the leadership of successive mayors (Boyd, MacPherson, & Osborn, 2009; Campbell, Boyd, & Culbert, 2009; Small et al., 2006). Other municipal governments have rejected harm reduction approaches, often in the face of explicit protests from public health officers (Symington, 2007). Public health officers in B.C. (Health Officers Council of British Columbia, 2005) and others (City of Vancouver, 2005; King County Bar Association, 2005; Royal Society for the Arts, 2007; Transform Drug Policy Foundation, 2005, 2009) have argued for a regulated market for all psychoactive substances. For example, each substance would be regulated according to its risk to health; cannabis would be available in mechanisms similar to tobacco but with

very heavy penalties for selling to minors, and heroin would be available by prescription (diacetylmorphine) through specialized addiction services.

Policy discrepancies have created a schism in which nurses in practice, administration and education are caught between law enforcement and harm reduction approaches.

Of particular concern to nurses is that there is a patchwork of policies related to harm reduction and substance use, both provincially and within health-care organizations. Street nursing programs, community health programs and primary health-care services have, in some cases, adopted harm reduction (as either a philosophy or policy) and offer harm reduction services. According to Rachlis, Kerr, Montaner and Wood (2009), abstinence-based policies in hospital settings are the norm and have been associated with patients leaving against medical advice — and some organizations have policies that discharge or even evict patients for illicit substance use.

Looking at harm reduction globally, federally, provincially and organizationally, we can see discordant approaches. International drug policy bodies that squarely focused on a crime coalition approach in the past have begun to acknowledge and support harm reduction as part of a public health response. While we have seen the Canadian federal government return to a focus of harm reduction, provincial and organizational policies do not always endorse this approach. As the work of nurses is often governed by organizational and provincial policies, this discrepancy can be both a challenge and a barrier as nurses strive to deliver the most appropriate, evidence-informed programs and interventions in harm reduction. It has created a policy schism in which nurses in practice, administration and education are caught between law enforcement and harm reduction approaches. Drug policy is one, albeit an important, aspect of addressing the root causes of health inequities. Professional nursing bodies can play an important role in assisting nurses at all levels by considering and developing policies related to harm reduction.

IV. REVIEW OF EVIDENCE BASE FOR HARM REDUCTION STRATEGIES

Harm reduction strategies and interventions: Current status and evidence

This section provides an overview of foundational evidence while briefly describing the following harm reduction strategies:

- needle distribution and recovery programs;
- outreach strategies;
- opioid overdose prevention strategies;
- methadone use for detoxification and maintenance therapy;
- buprenorphine/naloxone (Suboxone);

- diacetylmorphine (heroin) therapy;
- supervised consumption sites and supervised injection sites;
- safer crack smoking and supervised inhalation rooms; and
- Housing First.[14]

Needle distribution and recovery programs

The primary goal of needle distribution and recovery programs is to interrupt the spread of blood-borne pathogens such as HIV, HCV and the hepatitis B virus (HBV) through providing sterile injection equipment and recovering it after use by individuals who inject substances. Although some programs may offer distribution and recovery, these functions may be separated in that some may only provide sterile equipment while others focus more on recovery. Secondary goals of needle distribution and recovery programs are to increase access to treatment and other supports, to provide education and information about safer injection practices and safer sex and to link hard-to-reach populations to services (Ritter & Cameron, 2006). Needle distribution and recovery programs were initiated in the early 1980s to interrupt the spread of HIV; they were first developed in Amsterdam, followed by North America, then other parts of Europe, and Australia (Friedman et al., 2007; Sherman & Purchase, 2001; Vlahov et al., 2001).

Research on needle distribution and recovery programs has examined HIV seroconversion, HIV seroprevalence, changes in HIV risk behaviours, cost-effectiveness, and iatrogenic effects using a variety of research designs (Gibson, Flynn, & Perales, 2001; Leonard, Forrester, Navarro, Hansen, & Doucet, 1999; MacDonald, Law, Kaldor, Hales, & Dore, 2003; Ritter & Cameron, 2006; Wodak & Cooney, 2005, 2006). Findings of several ecological studies have suggested that HIV seroprevalence is lower in cities with needle distribution and recovery services. In a review of 1997-1998 data, Leonard et al. (1999) concluded that needle distribution and recovery programs were not protective against infection with HIV, HBV or HCV because of inconclusive evidence in studies of HIV seroprevalence and seroconversion. However, more current and comprehensive reviews (Gibson et al., 2001; Ritter & Cameron, 2006; Wodak & Cooney, 2005, 2006) have suggested that differences in the findings related to seroprevalence in cities with and without needle distribution and recovery programs, and in seroconversion rates between users and non-users of needle distribution and recovery programs, are likely due to differences in research design and other confounding factors, such as (1) differences

[14] Several interventions, including street-drug testing for purity/adulterants and early warning systems, have not been included in the discussion of harm reduction strategies because of their less controversial nature and nurses' limited involvement in their delivery. For a brief discussion of these programs, see B.C. Ministry of Health (2006) and Benschop, Rabes, & Korf (2002).

in access to syringes in pharmacy programs; (2) the nature of substance use; and (3) characteristics of the users of needle distribution and recovery services. For example, in Montreal and Vancouver, outbreaks of HIV, despite the presence of programs, were probably due to the prevalence of cocaine use, which requires more frequent injecting and thus involves an increased transmission risk. Several studies have shown that needle distribution and recovery programs attract individuals whose living situations (e.g., homeless or unstably housed) and substance-use patterns elevate their risk of acquiring a blood-borne infection (Corneil et al., 2006; Des Jarlais et al., 2005; Fisher, Reynolds, & Harbke, 2002; Hagan et al., 2002). Several authors have concluded that needle distribution and recovery alone is not enough to protect against HIV infection (Gibson et al., 2001; Ritter & Cameron, 2006; Strathdee et al., 1997).

Needle distribution and recovery services have not been found to increase substance use, initiation into substance use or injection substance use, nor have they been found to increase rates of crime, public disorder or public nuisance, such as discarded needles.

Although the evidence concerning reductions in the rate of HIV seroconversion and seroprevalence appears to be inconclusive, several reviewers have concluded that needle distribution and recovery programs are effective in reducing HIV risk behaviours (such as needle sharing and reuse) that contribute to HIV transmission (Gibson et al., 2001; Palmateer et al., 2010; Ritter & Cameron, 2006; Wodak & Cooney, 2005, 2006). Three studies found increased reuse of injecting equipment when local needle distribution and recovery services closed (Broadhead, Van Hulst, & Heckathorn, 1999; Ivsins et al., 2010; MacNeil & Pauly, 2010a).

While concerns about negative, or iatrogenic, effects being associated with needle distribution and recovery programs have been raised, none has been reported in previous research (Fisher, Fenaughty, Cagle, & Wells, 2003; Marx et al., 2000; Ritter & Cameron, 2006; Strathdee & Vlahov, 2001; Wodak & Cooney, 2005, 2006). Needle distribution and recovery services have not been found to increase substance use, initiation into substance use or injection substance use, nor have they been found to increase rates of crime, public disorder or public nuisance, such as discarded needles. Needle distribution and recovery services have been found to be cost-effective on the basis of estimated numbers of HIV infections averted by the implementation of distribution and recovery exchange services. In all 10 studies reviewed by Wodak and Cooney (2006), needle distribution and recovery programs were found to be cost-effective and less expensive because their costs were lower than treating the estimated number of averted infections.

Numerous studies have identified secondary and unanticipated benefits of needle distribution and recovery programs (Wodak & Cooney, 2005, 2006), such as increased access to health services (particularly nursing services); housing referrals; substance treatment; counselling; education; and testing for HIV, HCV and tuberculosis (Heimer, 1998; MacNeil & Pauly, 2010b; Masson et al., 2007; Strathdee et al., 2006). Given that many who use needle distribution and recovery services are hidden or hard-to-reach individuals who lack access to health-care services, such benefits are particularly important.

In spite of the evidence supporting the effectiveness, safety and cost-effectiveness of needle distribution and recovery services, these services often face opposition that results in limitations on the delivery of services and, in some cases, discontinuation of services.

Most of the research on needle distribution and recovery services to date has focused on effectiveness; less attention has been given to different models for the delivery of these services, including peer outreach;[15] mobile services; fixed-site services; and distribution through pharmacies, hospitals or secondary means (Miller et al., 2002; Riley et al., 2000; Strike, Challacombe, Myers, & Millson, 2002; Strike et al., 2006). Several authors found that fixed sites, mobile sites and pharmacy services reach different groups of people, suggesting that different types of services are needed. Fixed sites have the advantage of providing more confidential spaces for counselling and generate a higher rate of referrals (Strike et al., 2002). Mobile services tend to reach users at higher risk who may not otherwise access services, but they provide less space for confidential interactions. Some initial investigations of secondary distribution by people who use injected substances have been undertaken to determine their impact on reducing risk behaviours compared with established needle distribution and recovery services (Huo, Bailey, Hershow, & Ouellet, 2005; Snead et al., 2003; Tyndall et al., 2002). To address the increased risk of HIV transmission in prisons, prison-based needle distribution and recovery programs were implemented in the 1990s, first in Switzerland and then in other parts of Europe (Dolan, Rutter, & Wodak, 2003). In prisons, needle distribution and recovery services are provided in a variety of ways, including vending machines, health-care staff, corrections staff and outside workers. Evaluations of prison-based needle distribution and recovery programs have found evidence of reduced risk behaviours without unintended consequences, such as increased injection use or the use of syringes as weapons (Dolan et al., 2003; Lines et al., 2006; Wodak & Cooney, 2006).

[15] Outreach, including peer outreach, will be addressed more specifically in the section that follows on outreach strategies.

In spite of the evidence supporting the effectiveness, safety and cost-effectiveness of needle distribution and recovery services, these services often face opposition that results in limitations on the delivery of services and, in some cases, discontinuation of services (Broadhead et al, 1999; MacNeil & Pauly, 2010a; Tempalski, Friedman, Keem, Cooper, & Friedman, 2007). "Not-in-my-backyard" objections from neighbours, political pressure, protests by community coalitions, and activism have been found to override client needs as the primary predictors of the presence of needle distribution and recovery services, resulting in their uneven distribution (Downing et al., 2005; Tempalski, Flom, et al., 2007). In short, social and political processes play a critical role in community acceptance or rejection of needle distribution and recovery services and other services for people who use illicit substances.

Outreach strategies

Outreach is a strategy designed to reach hidden or partially hidden populations who use illicit substances in their own community (Needle et al., 2004, 2005). The most common outreach models include providing information about safer use and clean injecting equipment, access to testing, and referral to health, social and substance treatment services (Ritter & Cameron, 2006). Outreach may be provided by peers with past or current experience with substance use, professional health or social service outreach workers, or a combination of these (Coyle, Needle, & Normand, 1998; Latkin 1998; Needle et al., 2004, 2005). Peer-based models have been shown to be more effective than traditional outreach approaches (Broadhead et al., 1998).

In the first comprehensive review of outreach programs, Coyle et al. (1998) included 36 studies that primarily used one-group pre-test, post-test or quasi-experimental designs and assessed them according to Hill's 1971 standards for evaluating public health interventions (p. 27). These authors found consistent results in the studies. Five major risk behaviours were reduced: "stopping injection use; reducing frequency of injection; reducing reuse of syringes; reducing reuse of other equipment (cookers, cotton, rinse water); and reducing crack use" (p. 23). They also found the programs to have a significant effect on three protective behaviours: "(1) more frequent needle disinfection, (2) entry into drug treatment, and (3) increases in condom use" (p. 23).

In 2004, in conjunction with WHO, the same authors updated their review to assess the effectiveness of community-based outreach strategies for reaching hard-to-reach and hidden populations who use injected substances (Needle et al., 2004). Specifically, they looked at whether community-based strategies reduced HIV risk behaviours and rates of HIV infection. As in their previous review, Needle et al. (2004) employed Hill's criteria. Although it is often difficult to determine how many people who use injected substances have been reached, the authors concluded that community-based outreach had expanded and extended the reach of traditional health and social services to those

at risk of harms associated with injection substance use. Of note in this review is evidence that street outreach was a factor in facilitating entry into and continuation of methadone maintenance therapy. As well, mobile testing for HIV was found to be more effective than referral to services for HIV testing. There was also some evidence that street outreach increases HIV testing through referrals. An important further conclusion is that community-based interventions are relatively inexpensive and effective and can be a first step in offering HIV prevention, treatment and care, as well as access to other programs. Cost-effectiveness is primarily achieved by the prevention of HIV infections (Ritter & Cameron, 2006). However, as Needle et al. (2005) observed, there is still a gap in many countries between the people who would benefit from outreach services and those who receive such services.

Social networks have been identified as an important way to reach people who use illicit substances (Broadhead et al., 1998; Latkin, Hua, & Davey, 2004). Substance user groups, with a focus on activism, advocacy and (sometimes) harm reduction services, are examples of self-organizing social networks that address health and community issues (Crofts & Herkt, 1993; Kerr, Oleson, et al., 2004; Kerr, Small, et al., 2006). Friedman et al. (2007) pointed to the potential effectiveness of substance user groups in addressing the stigma of substance use and advocating for the rights of those who use illicit substances.

An important further conclusion is that community-based interventions are relatively inexpensive and effective and can be a first step in offering HIV prevention, treatment and care, as well as access to other programs.

In Canada, particularly in Vancouver, which has been a site of open substance use and activity, nurses are among the workers providing outreach services in downtown areas known for substance use (Banks & Loftus, 1991; Giles & Brennan, 2001). The street nurse program in Vancouver, which focuses on prevention of HIV infection and STIs with hard-to-reach groups within a framework of harm reduction and health promotion, was formally evaluated in the late 1990s (Hilton et al., 2009; Hilton, Thompson, Moore-Dempsey, & Hutchinson, 2001). The evaluation focused on the nature of the nurses' work, the challenges they face, the fit of this program with other programs and the impact of their work (Hilton, Thompson, Moore-Dempsey, & Hutchinson, 2001). Drawing on qualitative interviews and focus group data from clients, street nurses and others, the authors described nursing work according to five themes: (1) reaching marginalized populations at high risk for acquiring HIV infection and STIs; (2) building and maintaining trust, respect and acceptance; (3) working on early detection, prevention and treatment of HIV/STIs and providing referrals; (4) connecting clients with the health-care system; and (5) influencing the system and colleagues to be responsive. The nurses' work was also described as having a positive impact on clients' knowledge, providing access to harm reduction

supplies, connecting clients to help, providing clients with a sense of support and helping them to change their substance use and health behaviours.

Opioid overdose prevention strategies

Opioid overdose deaths often occur in the presence of other people (Marlatt & Witkiewitz, 2010) and can therefore be prevented. Naloxone, known as an opioid antagonist, is able to temporarily reverse the effects of an opioid overdose[16] by having a greater affinity for opioid receptors in the central nervous system. Naloxone is relatively inexpensive sub-stance with no potential for abuse and, historically, has been generally available in health-care facilities and administered by health-care providers. In 2012, a community-based pilot program gathered data on naloxone that was used to reverse opioid overdose (Dong et al., 2012). The study reported no adverse reactions or fatalities after naloxone use, indicating its potential to reduce morbidity and mortality. Community-based naloxone programs have also shown promising outcomes in other jurisdictions, including B.C., where a take-home naloxone program has operated since 2012 (Deonarine, Amlani, Ambrose, & Buxton, 2016). Statistics from Toward the Heart show that, as of mid-May 2017, B.C.'s take-home naloxone program distributed nearly 43,000 kits, with 8,236 being used to reverse an opioid overdose (Toward the Heart, 2017).

Initially in the U.S., and now Canada, we see an increase in the number of programs that provide education for people who use substances on how to prevent an overdose (including its signs and symptoms) and for their peers on how to administer naloxone. Overdose prevention education includes information on early intervention and can be an important aspect of peer education.

In 2016, Health Canada set out to make naloxone more widely available to Canadians in support of efforts to address the growing number of opioid overdoses. Its proposed amendment to the prescription drug list would allow for a non-prescription use of naloxone, specifically for emergency opioid overdoses outside the hospital setting. Health Canada also suggested simpler product labelling and compulsory training for those who would potentially administer naloxone. If the evidence supports these amend-ments, Health Canada intends "to waive the usual six-month implementation period [to enable a] change in status . . . as quickly as possible" (Health Canada, 2016, para. 4).

Methadone use as an opioid agonist therapy

As a type of opioid agonist therapy, methadone is a widely studied treatment, proven to be safe and effective, for opiate addiction. In 2007, methadone was added to the WHO Model List of Essential Medicines (WHO, 2015). Methadone can be used to relieve withdrawal symptoms during detoxification, or it can be used as a maintenance

[16] Depending on the amount of opioid in the person's system, multiple doses of naloxone may be required.

therapy to help individuals living with opiate addiction remain in treatment and reduce their heroin use. Thirteen systematic reviews, six meta-analyses, six randomized controlled trials, one economic evaluation and six non-randomized trials were included in the review of the evidence concerning methadone maintenance therapy.

For detoxification purposes, methadone has been found to be superior to placebo (Amato, Davoli, Minozzi, Ferroni, Ali, & Ferri, 2013; Amato, Davoli, Perucci, et al., 2005), clonidine and lofexidine (Gowing, Farrell, Ali, & White, 2009). The addition of psychosocial treatment can help increase the percentage of participants completing detoxification (Amato, Minozzi, Davoli, & Vecchi, 2011). For maintenance, methadone is more effective than placebo, detoxification, substance-free rehabilitation and Levo-alpha-acetylmethadol (LAAM) therapy at retaining patients in treatment (Amato et al., 2011; Amato et al., 2005; Connock et al., 2007; Glanz, Klawansky, McAullife, & Chalmers, 1997; Johansson, Berglund, & Lindgren, 2007; Mattick, Breen, Kimber, & Davoli, 2009). Better outcomes are achieved with higher doses of methadone than with lower doses (Faggiano, Vigna-Taglianti, Versino, & Lemma, 2003; Farré, Mas, Torrens, Moreno, & Cami, 2002). LAAM (Amato et al., 2005; Clark et al., 2002; Glanz et al., 1997) and buprenorphine have been shown to be slightly more effective than lower doses of methadone at reducing heroin use (Barnett, Rodgers & Bloch, 2001).

Three reports outlining the role and contribution of nurses in methadone maintenance programs were identified in the literature review. Mistral and Hollingworth (2001) and Wilson et al. (2007) describe the role of nurses in a methadone clinic and their contribution to the program through the development of relationships and interactions with clients. Loth, Schippers, Hart & van de Wijngaart (2007) describe an action research project in which nurses were encouraged to reflect on the process of providing nursing care as a means of gaining insight into strategies to enhance the functioning of the clinic. The Registered Nurses' Association of Ontario (2009) has developed best practice guidelines to assist nurses in supporting people on methadone maintenance therapy.

Buprenorphine/naloxone (Suboxone)

Another type of opioid agonist therapy, buprenorphine/naloxone (Suboxone) was placed on the WHO (2015) Model List of Essential Medicines in 2015. Like methadone, buprenorphine can be used during detoxification, as well as for maintenance. Suboxone is a fixed-dose sublingual tablet that combines buprenorphine (partial opioid agonist) and naloxone (opioid antagonist). When taken orally, only buprenorphine is absorbed into the bloodstream. However, if Suboxone is crushed and injected, naloxone will enter the bloodstream and cause abrupt withdrawal symptoms (CADTH, 2013). Among adult patients with opioid dependence, limited evidence suggests that, for treatment retention and heroin use, the clinical effects of Suboxone may be similar to methadone and cost

less.[17] Among other subgroups, there was no evidence of its comparative effectiveness versus methadone. While Health Canada approved the sale of Suboxone in Canada in 2007, it has historically been prescribed when methadone is contraindicated. Suboxone is not currently covered by many provincial or territorial drug plans.

Diacetylmorphine

Diacetylmorphine, also referred to as prescription heroin, is a cost-effective therapy for individuals living with a chronic opiate (heroin) addiction that can help reduce illicit heroin use and reduce criminal activity. Prescription heroin programs or clinical trials have been or are being implemented in Australia, Belgium, Canada, France, Germany, Holland, Spain, Switzerland and the United Kingdom (Fischer, Rehm, Kirst, et al., 2002; Plaza, et al., 2007). Ten papers were included in the review of the evidence regarding the effects of heroin maintenance therapy: two systematic reviews, seven randomized controlled trials and one economic evaluation. The evidence shows that prescription heroin can help recipients use less illicit heroin and engage in less criminal activity than people not receiving this treatment (Ferri, Davoli, & Perucci, 2010; Hartnoll et al., 1980; March, Oviedo-Joekes, Perea-Milla, Carrasco, & PEPSA Team, 2006; Perneger, Giner, del Rio, & Mino, 1998; van den Brink et al., 2003). Dijkgraff et al. (2005) found that heroin prescription is cost-effective.

The evidence shows that prescription heroin can help recipients use less illicit heroin and engage in less criminal activity than people not receiving this treatment.

A randomized controlled trial in Vancouver and Montreal, known as the North American Opiate Medication Initiative (NAOMI), compared diacetylmorphine and methadone opioid agonist therapies (Oviedo-Joekes et al., 2009). Similar to previous studies, these and other authors found that participants had higher treatment retention rates (than people in methadone maintenance programs), used less illicit heroin, engaged in less crime and had improved psychological health. In addition, there were no negative impacts on the surrounding neighbourhoods (Lasnier, Brochu, Boyd, & Fischer, 2010; Oviedo-Joekes et al, 2010). As reported in both North American and British trials evaluating the use of methadone and diacetylmorphine over a long term, injectable diacetylmorphine was more effective than oral methadone for injectors of heroin who had "failed" with other treatment interventions (Oviedo-Jokes et al., 2009; Strang et al., 2010).

As Berridge (2009) writes:

> The rise and fall of methods of treatment in this controversial area owe their rationale to evidence, but they also often owe more to the politics of the situation — to the

[17] The cost-effectiveness of Suboxone in a Canadian population is uncertain (Centre for Addiction and Mental Health, 2011; CADTH, 2013).

> context within which the evidence is received and to the interests that are prepared to support or oppose it. (p. 821)

Prescription heroin clinics are frequently staffed by RNs. Only one study was found that specifically addressed the role of RNs in prescription heroin programs (Plaza et al., 2007). The authors highlighted the central role of nurses in developing trust and facilitating care for people enrolled in the opioid agonist therapy program.

Supervised consumption sites and supervised injection sites

There are more than 90 supervised consumption sites or supervised injection sites in Europe (Germany, France, Luxembourg, the Netherlands, Norway, Spain, Switzerland and Ireland; Potier, Laprévote, Dubois-Arber, Cottencin, & Rolland, 2014). While Canada has only a few, numerous applications to open sites across major cities are pending — some for several years. "Drug consumption facilities or rooms (DCRs) are legally sanctioned low threshold facilities which allow the hygienic consumption of pre-obtained drugs under professional supervision in a non-judgmental environment" (Kimber, Dolan, van Beek, Hedrich, & Zurhold, 2003, p. 227). A wide range of terms are used to refer to such centres, including "supervised injecting centres," "safe(r) injecting rooms," "fixing rooms," "drug consumption rooms or facilities," or "medically supervised injecting centres" (Joseph Rountree Foundation, 2006, p. 3). The term "supervised injection site or centre" is used for sites where the focus is on the supervision of substance injection, whereas the term "supervised consumption site" is used for facilities that also provide supervision for the consumption of inhaled substances. Supervised injection sites have been proposed as a means of addressing the following objectives (Fischer, Rehm, Kim, & Robins, 2002; Kimber et al., 2003):

- reducing fatal and nonfatal overdoses;
- reducing the transmission of blood-borne viruses (HIV, HCV);
- reducing risk behaviours for the transmission of blood-borne viruses;
- increasing access to health and social services for hard-to-reach populations through connections with health-care professionals; and
- reducing public disorder, including reducing discarded equipment, public injecting, and the open dealing of illicit substances.

Before 2002, there were no published systematic evaluations on the effectiveness of such sites in meeting the objectives set out for them (Broadhead, Kerr, Grund, & Altice, 2002).

REDUCED OVERDOSE DEATHS

Globally, there is abundant foundational research on the efficacy of supervised consumption sites to reduce overdose mortality, as statistics from Insite (Vancouver Costal Health, 2016), through March of 2016, clearly indicate:

- More than 3.47 million visits since the clinic opened in March 2003
- 4,922 overdose interventions
- Zero deaths

Among these overdose events, 45 per cent were considered potentially fatal, requiring the administration of naloxone, a 911 call and/or an ambulance (Milloy, Kerr, et al., 2008; Potier et al. 2014). Based on projections of this data, approximately 2-13 deaths per year may have been prevented in Vancouver since the program began (OHTN, 2014; Potier et al., 2014). Nurses working in supervised injection sites, who are trained in airway management, oxygen and naloxone administration, can often identify and intervene in overdose events more promptly than for those occurring in the community. These early interventions may account for the improved outcomes at these sites and also reduced hospitalizations (Kimber, Dolan, & Wodak, 2005). In addition, the education nurses provide on safer injection may play a role in reducing risk behaviours associated with overdoses outside the clinic (Milloy, Kerr, et al., 2008).

Vancouver's Insite: more than 3.47 million visits since the clinic opened in March 2003; 4.922 overdose interventions; zero deaths.

In a study of Insite clients, Petrar et al. (2007) found that Insite plays a mediating role in reducing the risks of public injecting; for example, the need to rush an injection for fear of being arrested. Another study reported that Insite helped mediate risks that are associated with overdoses, such as injecting alone or with strangers (Kerr, Small, Moore, & Wood, 2007). An important benefit of the site identified by participants was the immediate emergency response of nurses, which contrasted with the lack of observation for overdose events on the street and related difficulties and delays getting emergency care in that setting.

REDUCED RISK BEHAVIOURS AND REDUCED TRANSMISSION OF BLOOD-BORNE INFECTIONS

There is no evidence that supervised injection sites directly reduce transmission of HIV, HCV and other blood-borne viruses. The main mechanism by which supervised injection sites may reduce transmission of blood-borne infections is modification of risk behaviours, such as needle sharing. At Insite, use of the facility has been associated with reductions in HIV risk behaviours (Kerr, Tyndall, Li, Montaner, & Wood, 2005; Wood, Tyndall, Stoltz, Small, Lloyd-Smith, et al., 2005). No instances of syringe sharing have been reported at Insite. In a survey of Insite clients, Petrar et al. (2007) found that 75 per cent of clients reported changes in their injecting behaviours, including fewer rushed injections, public injections and unsafe syringe disposal, and a greater likelihood of using clean water, a clean injection site and proper syringe disposal after use. In a study of 16 German supervised injection sites (Stoever, 2002), an increased frequency of visits was associated with reductions in risk behaviours. In addition, those who attend

supervised injection sites receive education on safer injection, which can also reduce HIV risk behaviours (Wood, Tyndall, Stoltz, Small, Zhang, et al., 2005). At Insite, one in three users of the facility received education on safer injection (Wood, Tyndall, Stoltz, Small, Zhang, et al., 2005). Nurses play a key role in such education and are reaching almost half the users at this facility (Wood, Wood, et al., 2008).

A survey found that 75 per cent of Insite clients reported changes in their injecting behaviours, including fewer rushed injections, public injections and unsafe syringe disposal, and a greater likelihood of using clean water, a clean injection site and proper syringe disposal after use.

INCREASED ACCESS TO HEALTH AND ADDICTION CARE

Evaluations of supervised injection sites in Sydney, Australia, and Vancouver included assessments of staff referrals as indicators of increasing contact between site users and health service providers. At the Vancouver site, Tyndall et al. (2006) reported 2,171 referrals between March 2004 and April 2005, the most frequent (37 per cent) being referrals for addiction counselling. Other referrals by Insite nurses were to community health centres (16 per cent), hospital emergency departments (11.3 per cent), detoxification facilities (11.7 per cent), other community services (9.4 per cent), housing services (9.0 per cent), methadone maintenance programs (3.7 per cent) and recovery house programs (2.7 per cent). It is not known how many clients made contact with the agencies they were referred to. In a further analysis of Insite data, Wood, Tyndall, Zhang, et al. (2006) reported that weekly use of the supervised injection site and contact with the site's addictions counsellor were associated with a more rapid entry into detoxification programs. After analyzing data linked to residential treatment databases, Wood, Tyndall, Zhang, Montaner and Kerr (2007) reported that Insite's opening was associated with a 30 per cent increase in use of detoxification services which, in turn, was associated with initiating longer-term treatment and less frequent use of the supervised injection site. In an evaluation of the Sydney supervised injection site, van Beek (2003) reported that of more than 1,800 referrals to health and social services in the first two years 44 per cent were for substance treatment and rehabilitation services, and 31 per cent were for nearby primary medical care services. A retrospective, population-based study on Insite's effect on overdose fatalities (Marshall, Milloy, Wood, Montaner, & Kerr, 2011) found a 35 per cent decrease in local fatalities after the site opened, compared to a 9 per cent decrease in the rest of Vancouver.

Among Insite's improvements to public disorder are (1) less frequent public injecting; (2) reductions in the public discarding of syringes and other substance-related paraphernalia; and (3) having no observed increase in substance dealing in the area around the site.

IMPROVING PUBLIC ORDER

The impact of supervised consumption sites on public order has been studied in relation to the frequency of open public injection, littering and loitering, substance-related crime and substance use in the community. Over 40 peer-reviewed articles evaluating Insite have shown that its harm reduction program has had a positive effect — both for those who use the facility and for the surrounding community. Among the site's improvements to public disorder are (1) less frequent public injecting; (2) reductions in the public discarding of syringes and other substance-related paraphernalia; and (3) having no observed increase in substance dealing in the area around the site (Wood, Kerr, et al., 2004; Wood, Tyndall, Lai, Montaner, & Kerr, 2006). At the Sydney facility, a time-series analysis (Freeman et al., 2005) found no evidence of a positive or negative impact on substance-related crime and no increase in substance-related loitering near the site. A survey of people who used supervised consumption sites in Rotterdam, the Netherlands, Van der Poel, Barendregt and van de Mheen (2003) reported less frequent public sub-stance use and some decrease in substance use. Similarly, Petrar et al. (2007) found that 71 per cent of Insite users injected less often outdoors, and 56 per cent reported less unsafe syringe disposal. Factors which limited the use of the facility included having to travel to Insite, its limited operating hours (18 hours/day) and wait times for access to the site. While a survey of 39 substance consumption rooms in the Netherlands, Germany, Spain and Switzerland (Kimber, Dolan, & Wodak, 2005) found six facilities with increased substance dealing in the vicinity (two of which also reported a higher frequency of petty crime or aggressive incidents among clients), Hedrich (2004) has noted that such problems seem more likely to occur when the service is not meeting local needs (e.g., when wait times are long or when the service lacks the capacity to monitor activity outside the site).

PROFESSIONAL AND PUBLIC OPINION

Results from a stratified random sample of Ontario residents suggested that "individuals who support other harm reduction strategies, more liberal substance policies and who view illicit substance users as deserving of social and health assistance, are significantly more likely to support SIFs [supervised injection facilities] and HAT [heroin-assisted therapy]" (Cruz, Patra, Fischer, Rehm, & Kalousek, 2007, p. 59). In both Canada and Australia, public opinion concerning the sites has been found to be positive (Angus Reid Institute, 2010; Salmon, Thein, Kimber, Kaldor, & Maher, 2007). Numerous health professionals and community organizations have endorsed Insite, including the B.C. Nurses' Union, the Canadian Medical Association, CNA, and the College of Family Physicians of Canada (B.C. Nurses' Union, 2008; Canadian Medical Association, 2010; Dooling & Rachlis, 2010; Hwang, 2007; National Specialty Society for Community Medicine, 2009; Smadu, 2008).

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EXTERNAL EVALUATION OF EVIDENCE FROM INSITE

In 2008, an external advisory committee of experts appointed by Health Canada (2008b) released a comprehensive review and evaluation of the evidence related to Insite and other supervised injection sites. After its review of published and unpublished research on Insite, as well as evidence on facilities in Australia and certain European countries, the panel concluded that Insite has had a positive impact on the health of the community, the health of the people who use it, residents, service providers and local business owners. They also found strong support for Insite among neighbourhood business owners, service providers and residents, and showed that the facility produced (significant) cost savings for taxpayers, decreased risk behaviours associated with the spread of HIV, reduced the (subsequent) costs of HIV treatment and prevented overdose deaths. In addition, no adverse effects from Insite were found regarding substance use patterns, crime or public disorder. Two limitations of the research, as noted by the expert panel, were the lack of comparison studies on other methods (e.g., outreach) that might increase referrals and the lack of a comparison or control group to assess differences in risk behaviours (e.g., needle sharing).

SUPERVISED CONSUMPTION SITE MODELS AND NURSING

Internationally, there are a range of models for supervised consumption sites, with variations in the hours of operation, staffing, facilities, services and rules (Kimber Dolan, & Wodak, 2005; Potier et al. 2014). On the basis of a survey of 15 drug consumption rooms, Kimber, Dolan and Wodak (2005) reported that social workers were the type of professional most frequently employed at these sites, followed by nurses. In Canada, Insite's injection room is staffed by RNs who provide essential health services "to a highly marginalized population, using a comprehensive nursing framework that is rooted in client-centred relationship building and primary nursing care activities that are guided by a harm reduction philosophy and core principles of health promotion" (Lightfoot et al., 2009, p. 19). Regarding the site in Sydney, van Beek (2004) and Potier et al. (2014) also outlined and highlighted the role of nurses. Although in descriptions of services offered at supervised injection sites nurses' roles centre around wound care and vein maintenance, there is limited evidence on the processes and outcomes of nursing care within such settings. Wood, Wood, et al. (2008) and OHTN (2014) reported that nurses provided almost half of Insite users with education on safer injection. In examining the characteristics of people receiving such education, the authors found that Insite's nurses were most likely to educate those at highest risk (e.g., women and people who had trouble injecting). In Vancouver, the Dr. Peter Centre provides an

integrated model of supervised injection as part of its nursing services (Wood, Zettel, et al., 2003). In evaluating the harm reduction room at the Dr. Peter Centre, Krüsi, Small, Wood and Kerr (2009) found that staff increased client access by building more open and trusting relationships, although shame and a fear of judgment limited some clients' use of the supervised injection service.

The panel concluded that Insite has had a positive impact on the health of the community, the health of the people who use it, residents, service providers and local business owners.

Safer crack smoking and supervised inhalation rooms

Since the 1990s, there have been indications that the prevalence of crack smoking is increasing in both urban and rural settings (Fischer, Rehm, Patra, et al., 2006; Fischer et al., 2010). Safer crack kits provide the equipment and hardware for crack smoking, including glass pipes, tubing and lubricant, along with information about harm reduction. Sharing of crack pipes has been associated with increased risk of exposure to HCV and other communicable diseases (Macias et al., 2008; Tortu, McMahon, Pouget, & Hamid, 2004; Tortu, Neaigus, McMahon, & Hagen, 2001). DeBeck et al. (2009) found that smoking crack was an independent risk factor for HIV seroconversion among injection substance users.

Malchy, Bungay and Johnson (2008) found considerable evidence of unsafe crack smoking practices in Vancouver and recommended the implementation of education and programming using safer crack kits to reduce the negative consequences of substance use as part of disease prevention and health promotion programming. Strike et al. (2006) recommended that safer crack use equipment be included in established needle distribution and recovery programs. In an evaluation of programs to distribute safer crack kits, Leonard, DeRubeis and Birkett (2006) found that such distribution was associated with a decrease in risk behaviours associated with transmission of HIV and HCV. They concluded that distributing safer crack-smoking materials to crack smokers contributes to smokers' transition to safer methods of substance consumption and significantly reduces disease-related risk practices. Larger-scale studies and systematic evaluations are needed to determine the effectiveness of safer crack kits in reducing disease transmission and modifying risk behaviours. Similar to needle distribution and recovery programs, safer crack kit programs could have the potential to facilitate access to other harm reduction, health and social services. More recently, the case has been made to expand supervised injection sites to include supervised consumption (Collins et al., 2005) to reduce some of the harms associated with crack smoking.

Housing First

Housing programs often require abstinence from substance use as a condition of housing (Tsemberis, Gulcur, & Nakae, 2004). In contrast, Housing First programs place people who are homeless directly into housing without requiring their involvement in substance use treatment (Padgett, 2007). Harm reduction is therefore one of its key principles. At the same time, Housing First is often combined with intensive health services provided by assertive community treatment teams.

Evaluations of Housing First programs have found that participants achieved increased housing tenure, with at least 70 per cent remaining housed for four years or longer. In addition, participants in Housing First programs experienced no increase in substance use, psychiatric hospitalizations or acute care hospital use, and they perceive themselves as having greater choice (Gulcur, Stefancic, Shinn, Tsemberis, & Fischer, 2003; Padgett, Gulcur, & Tsemberis, 2006; Stefancic & Tsemberis, 2007; Tsemberis & Eisenberg, 2000; Tsemberis et al., 2004). An identified research limitation on Housing First programs is that the majority of study participants were recruited on the basis of a severe mental health diagnosis and appear to have had limited problematic substance use or addiction issues (Kertesz, Crouch, Milby, Cusimano, & Schumacher, 2009).

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In an analysis of the health, social and policing service costs of Housing First programs, Larimer et al. (2009) found that participants had decreased their alcohol use (in comparison with a control group), the costs for those with high health and social service usage were reduced. Using a before-and-after design, Podymow, Turnbull, Coyle, Yetisir and Wells (2006) found that a shelter-based-managed alcohol program led to decreasing trends in the mean number of ambulance calls, emergency room visits, hospital admissions and police encounters, which also lowered service costs for those in the program. In 2014, the Mental Health Commission of Canada (MHCC) launched its At Home/Chez Soi program to examine Housing First as a means of ending homelessness for people living with mental illness. In following more than 2,000 participants over a two-year period, it became the world's largest Housing First trial. Key findings showed that participants "across all cities . . . obtained housing and retained their housing at a much higher rate" than those in the treatment-as-usual group (MHCC, 2014, p. 5). Most "were actively engaged in support and treatment through to the end of [the followup period, while many] with previously unmet needs were able to access appropriate and needed services

during the study" (p. 5). Other outcomes included more positive housing stability, quality of life and community functioning (MHCC, 2014).

Criticisms of harm reduction

Harm reduction as a response to illicit substance use has been the focus of considerable controversy, and numerous criticisms of harm reduction have emerged (Christie, Groarke, & Sweet, 2008; Hunt et al., 2003; Magura, 2007). It may be useful to highlight some of these criticisms and outline responses based on the definitions and evidence previously reviewed in this paper. Frequently heard criticisms, several of which have been identified by Hunt et al. (2003), include but are not limited to the following points:

- Harm reduction keeps "addicts" stuck.
- Harm reduction fails to get people off illicit substances.
- Harm reduction encourages substance use.
- Harm reduction sends the wrong message.
- Harm reduction does not encourage personal responsibility.
- The evidence for harm reduction is inadequate.

The first three criticisms highlight the tension between abstinence-based approaches, which seek to prevent or discontinue substance use, and harm reduction, which seeks to reduce the harms associated with substance use. Evidence from Switzerland, where a large-scale open substance use scene thrived in a number of cities in the 1980s, showed that substance treatment programs that required abstinence for entry (i.e., high- and medium-threshold treatment programs) reached only 20 per cent of people actively using illicit substances. Harm reduction programming is designed to reach the other 80 per cent — many of whom may not be dependent or addicted — through needle distribution and recovery programs, street outreach, supervised consumption sites, programming in prisons, and low-threshold methadone and diacetylmorphine programs (MacPherson, 1999). Treatment for substance dependence is often assumed to be highly effective, but this assumption is not borne out by scientific evidence. In an abstinence-seeking context, harm reduction is seen as enabling substance use. However, treatment programs might have a success rate of only three per cent when abstinence is used as the benchmark of success after repeated cycles of treatment and relapse. Further, many people in Canada's inner cities need access to replacement and/or substitution therapy in the end stages of a chronic, relapsing illness (S. Burgess, personal communication, June 26, 2007).

Harm reduction strategies can be viewed as part of a continuum of prevention and treatment strategies. While criticized for not reducing substance use, reducing substance use and treating addiction are not among its stated goals. Therefore, if

someone fails to strive for or achieve abstinence, it does not necessarily mean the harm reduction approach has failed. Since its goal is to reduce the harms of substance use and manage addiction, these goals are the standard by which the harm reduction approach should be judged. Bearing that in mind, evidence shows that outreach programs and the referral process associated with supervised injection sites do not increase substance use (e.g., Wood, Tyndall, Montaner, & Kerr, 2006).

Harm reduction strategies can be viewed as part of a continuum of prevention and treatment strategies. Therefore, if someone fails to strive for or achieve abstinence, it does not necessarily mean the harm reduction approach has failed.

The fourth criticism is that harm reduction sends the wrong message to youth about substance use. However, there is no evidence that harm reduction services encourage substance use among youth. Supervised consumption sites such as Insite have been shown to attract long-term substance users (Kerr, Tyndall, et al., 2007), and many harm reduction programs have specific policies that restrict access based on age. The prevention of substance use harms can refer to preventing the onset of substance use or reducing the harms of all use or just non-problematic use. Thus, harm prevention can encompass a range of meanings (Tupper, 2008a, 2008b). A failure to promote health out of fear that such information will exacerbate use could make nurses feel conflicted about their ability to ensure the health and safety of youth.

The fifth criticism is that harm reduction does not encourage personal responsibility for substance use. In a society where individual liberty and personal responsibility are highly valued, an inability to discontinue substance use is seen as a personal failure. Yet, this view does not account for the social or structural factors (e.g., poverty, violence and abuse) that shape substance use, whereas harm reduction principles emphasize the importance of informed decision-making. In fact, governments may be viewed as responsible for safer substance use through their regulation of the production and distribution of psychoactive substances — as they already are with other potentially harmful items such as children's toys, automobiles, food, prescribed pharmaceuticals and alcohol.

Harm reduction efforts have also been criticized as creating a new social order and form of surveillance, as in the case of supervised injection sites (Fischer, Turnbull, Poland, & Haydon, 2004). Nurses recognize that personal responsibility is contextualized by life situations. According to the CNA code of ethics (2008), RNs should be committed to eliminating social inequities. The code recognizes the importance of advocacy to change the social conditions that affect health, such as poverty, violence and food insecurity, and to change policies that exacerbate inequities, such as drug policies that criminalize substance use.

There is substantial evidence that harm reduction strategies have achieved a range of positive health and social outcomes, including increased referrals and access to services, fewer transmissions of blood-borne diseases, a reduced number of overdose deaths and less public disorder and crime.

Finally, some authors have outlined criticisms of harm reduction in relation to evidence of its effectiveness, effects and intentions (Christie et al., 2008; Hunt et al., 2003), which describe it as ineffectual and without adequate evidence to support it. However, as the present literature review shows, there is substantial evidence that needle distribution and recovery programs, opioid maintenance therapy, take-home naloxone, supervised consumption sites and outreach services have achieved a range of positive health and social outcomes, including increased referrals and access to services, fewer transmissions of blood-borne diseases, a reduced number of overdose deaths and less public disorder and crime. As stated previously, many organizations (e.g., WHO, UNODC and UNAIDS) have endorsed harm reduction strategies as a public health measure on the basis of a well-established body of evidence (Wodak, 2009).

V. LEGAL AND ETHICAL PERSPECTIVES IN NURSING AND HARM REDUCTION

Because harm reduction strategies associated with illicit substance use raise difficult legal and ethical questions for nurses in relation to federal, provincial and organizational policies, this section looks at legal issues and ethical perspectives that are relevant to nursing.

Legal Issues

Distribution of harm reduction supplies

Needle distribution and recovery and safer crack use programs often prompt questions about the legalities of distributing harm reduction supplies and possessing used supplies. The legal opinion of the Canadian HIV/AIDS Legal Network (2008) is that distributing new or unused safer crack use kits and syringes is not a crime. The primary reasoning is that, under the Criminal Code of Canada, while an instrument designed primarily to consume a substance is illicit, safer crack kits and syringes are considered devices intended to prevent disease transmission through reduced sharing of equipment; thus, they would be regulated under the *Food and Drugs Act*. As the network notes, however, "no court in Canada has ruled on this interpretation of the law, neither for NSPs [needle syringe programs], nor for programs that distribute safer crack use kits" (2008, p. 3).

Possession of a controlled substance is prohibited under the CDSA. According to the Canadian HIV/AIDS Legal Network, in at least one case in Canada possession of a used crack pipe was "considered as providing reasonable grounds for arrest" (2008, p. 4). However, the network argues that arresting someone for such possession is contrary to the purpose of distributing safer crack kits. If people carrying a used crack pipe run the risk of being arrested, they will be less likely to use their own crack pipes and more likely to share and publicly discard them. It sees at least two reasons why "the federal government should make it clear that is it not illegal to possess used crack pipes (or needles used for injecting drugs)" (2008, p. 4). First, when public health services distribute crack supplies or needles, the purpose is to reduce harms such as preventing disease and ensuring safer use. Second, a ministerial exemption from criminal prosecution is possible under the CDSA for people in possession of used harm reduction supplies. Insite is able to operate because it has been granted this type of exemption.

Supervised consumption services

Three approaches have been identified to support the operation of supervised consumption services without concern for criminal liability: administrative agreements, regulatory or ministerial exemptions, and amendments to substance laws (Elliott, Malkin, & Gold, 2002). Insite was able to begin operation in March 2003 because the federal minister of health, under section 56 of the CDSA, exempted users and staff from the provisions of the act. Exemptions may be granted for medical, scientific or any other purposes deemed to be in the public interest (*PHS Community Services v. Attorney General of Canada*, 2008). The initial three-year exemption for Insite, granted on September 12, 2003,[18] was for scientific purposes. In 2008, a constitutional challenge was presented to the B.C. Supreme Court to keep Insite's doors open. The court ruled in favour of the exemption stating that existing laws that prohibit possession and trafficking of illicit substances are unconstitutional, since they deny access to health services offered to substance users at Insite (*PHS Community Services v. Attorney General of Canada*, 2008). Justice Ian Pitfield gave the federal government until the end of June 2009 to amend the CDSA and align it with constitutional principles embodied in the Canadian Charter of Rights and Freedoms. Further to this ruling, the B.C. Supreme Court granted Insite immediate exemption from the law, along with legal grounds to continue operations (*PHS Community Services v. Attorney General of Canada*, 2008).

If Insite's ability to operate had depended on the exemption without further extensions, it would have had to close its doors on June 30, 2008. However, before its extension expired, the Portland Hotel Society[19] sought relief from the ongoing series of

[18] The exemption was subsequently extended to December 31, 2007, and then to June 30, 2008.

[19] The Portland Health Society operates Insite in partnership with the Vancouver Coastal Health Authority, along with a number of other plaintiffs in the case.

extensions, launching a court case in the Supreme Court of British Columbia based on the position that Insite was a health-care facility and therefore under provincial jurisdiction. The Vancouver Area Network of Drug Users also filed suit, arguing that closing Insite would deprive injection substance users of access to health care and violate their Section 7 right to security of person under the Canadian Charter of Rights and Freedoms (*PHS Community Services v. Attorney General of Canada*, 2008). In court, witnesses testifying in support of the case made the following arguments:

- A review of evidence clearly indicates that Vancouver's Downtown Eastside has faced a public health crisis for several years, with increasing rates of HIV and HCV infection and an explosion of overdose deaths in the 1990s.
- Addiction is an illness that is chronic in nature and can be progressive, relapsing and fatal.
- Addiction has neurochemical, genetic, psychological and social determinants (e.g., stress, trauma and abuse).
- Unsafe injection practices increase the rate of HIV and HCV transmission.
- Supervised injections reduce morbidity and mortality.
- The introduction of the four-pillars approach (MacPherson, 2001) and Vancouver Coastal Health Authority's continuum of services (which include Insite) are intended to reduce overdose deaths, increase safer injections and provide points of entry to health and social services.

In his ruling, Justice Ian Pitfield determined the following:

> While users do not use Insite to directly treat their addiction, they receive services and assistance at Insite which reduce the risk of overdose that is a feature of their illness, they avoid the risk of being infected or of infecting others by injection, and they gain access to counselling and consultation that may lead to abstinence and rehabilitation. All of this is health care. (*PHS Community Services v. Attorney General of Canada*, 2008, p. 51)

Justice Pitfield ruled that to close Insite would violate human rights, specifically in Section 7 (risk to life) of the charter, on the following grounds: regardless of the circumstances of entry into substance use, the result is an illness of addiction, and failure to manage addiction may lead to death from overdose or other illnesses. "If the root cause of death derives from the illness of addiction," he said, "then a law that prevents access to health care services that can prevent death clearly engages the right to life" (*PHS Community Services v. Attorney General of Canada*, 2008, p. 53).

Justice Pitfield ruled that to close Insite would violate human rights.

With regard to risks to security, Justice Pitfield determined the following: "Society cannot condone addiction, but in the face of its presence it cannot fail to manage it, hopefully with ultimate success reflected in the cure of the addicted individual and abstinence" (*PHS Community Services v. Attorney General of Canada*, 2008, p. 54). He did not agree with denying people with an addiction access to health-care services that would reduce the effects of their condition: "Simply stated, I cannot agree with Canada's submission that an addict must feed his addiction in an unsafe environment when a safe environment that may lead to rehabilitation is the alternative" (*PHS Community Services v. Attorney General of Canada*, 2008, p. 55).

Justice Pitfield further determined that a failure to protect Insite's staff from prosecution for possession and trafficking would be a violation of the charter because it would restrict access to health care. As a result of this case, Insite was granted a constitutional exemption to sections 4(1) and 5(1) of the CDSA, and the federal government had until June 2009 to revise sections of the act. Justice Pitfield did not agree that it was a matter of provincial jurisdiction.

The federal government, however, sought redress in the B.C. Court of Appeal. In the January 2010 Court of Appeal decision the lower court ruling was upheld. Two of the three judges ruled that Insite was a health service and a provincial jurisdiction but refrained from ruling on the charter issue. The third judge disagreed that it was a provincial jurisdiction yet agreed it was a charter issue. The federal government then appealed to the Supreme Court of Canada, which agreed to hear the case.

Although not as well known as Insite, the Dr. Peter Centre in Vancouver — operated by a not-for-profit society, the Dr. Peter AIDS Foundation — has provided supervised injection services as part of its integrated health-care model since 2002 (Wood, Zettel, et al., 2003). Supervised injection services are part of registered nursing and registered psychiatric nursing practice in both the day health program and the 24-hour skilled nursing care residence. Many Dr. Peter Centre clients live with multiple illnesses, disabilities and social inequities in addition to HIV/AIDS.

The centre's RNs became increasingly concerned about overdose events on site and recurrent but preventable soft-tissue infections associated with non-medical injection substance use. The centre's executive director and its RNs approached the Registered Nurses Association of British Columbia (RNABC)[20] with the following question: "Is providing clients with evidence-based information to safely give themselves intravenous injections within the scope of registered nursing practice?"

[20] The predecessor of the College of Registered Nurses of British Columbia.

In 2002, RNABC answered yes:

> Assessing clients' knowledge and skill to safely give themselves intravenous injections is within the scope of nursing practice. Teaching and promoting evidence-based self-care activities prevents illness and promotes health, especially in relation to high risk client behaviours. Providing this information to these clients fosters the therapeutic alliance between the registered nurses and the clients and can facilitate promoting healthier client activities. . . . Employers have an obligation to provide essential support systems so that registered nurses are able to meet the Standards for Nursing Practice in British Columbia. The essential support systems include the necessary policies and resources to assist nurses to provide competent, evidence-based and ethical care. (M. Aldersberg, RNABC, personal communication to M. Davis, Dr. Peter Centre, February 19, 2002)

In 2005, RNABC became CRNBC under the new *Health Professions Act of British Columbia*. Two years later, CRNBC re-confirmed that supervised injection was part of RN practice for the purposes of preventing illness and promoting health. It also reiterated the employer obligation to support nursing practice (M. Aldersberg, CRNBC, personal communication to M. Davis, Dr. Peter Centre, December 11, 2007).

Unlike Insite, the Dr. Peter Centre did not have a Section 56 exemption to the CDSA. It stated that it was upholding provincial law and is doing everything reasonably possible to uphold federal law: nurses do not touch, inject or supply the substances.

The Dr. Peter AIDS Foundation was granted intervener status in Insite's B.C. Court of Appeal case. In her written summary of judgment, Justice Carol Huddart stated:

> The evidence [provided by the foundation] established how and why the decision in this case will have significant effect on registered nurses seeking to comply with the professional and ethical standards to which they are held by their governing body. That concern is at the root of the division of powers issue and the evidence will be helpful to a full understanding of that issue. (*PHS Community Services Society v. Canada (Attorney General)*, 2010, para. 188)

The federal government appealed the B.C. ruling to the Supreme Court of Canada. In its decision, on September 29, 2011, the Supreme Court of Canada ruled unanimously (9-0) — in *Canada (Attorney General) v. PHS Community Services Society* — that the federal minister's decision to withdraw Insite's exemption under the CDSA was

> arbitrary, undermining the very purposes of the CDSA, which include public health and safety. It is also grossly disproportionate: the potential denial of health services and the correlative increase in the risk of death and disease to injection drug users outweigh any benefit that might be derived from maintaining an absolute prohibition on possession of illegal drugs on Insite's premises. (Canada v. PHS Community Services Society, 2011, para. 136)

The court then ordered the federal health minister to grant an indefinite exemption to Insite. Following the ruling, the Conservative government tabled the bill that would

become the *Respect for Communities Act* (passed into law in March 2015), which sought a federal regulatory framework for supervised injection sites, along with provisions for certification and inspections. The act also tried to ensure that provincial health and public safety ministers would supply the federal health minister with support letters before the minister might grant an exemption to existing substance laws. The act outlined 26 criteria for applicants to meet before a site could be licensed. These criteria meant arduous delays in many areas where there was a demonstrated need for supervised consumption services. The act would require Insite and any future supervised injection sites to meet specific requirements for continued operation while providing regular reports on the facility, on crime rates in the surrounding area and on health outcomes. Then, in December of 2016, concurrent with the release of the Canadian Drugs and Substances Strategy (CDSS), the Liberal government introduced Bill C-37 into parliament. The bill, which supports the CDSS, proposes to amend the *Controlled Drugs and Substances Act* and repeal the *Respect for Communities Act*, reducing barriers and streamlining the process for communities in Canada who wish to apply for supervised consumption sites (Government of Canada, 2016b).

The Pitfield decision (*PHS Community Services v. Attorney General of Canada*, 2008), the B.C. Court of Appeal decision (2010), and the experience of the Dr. Peter Centre, followed by the 2011 Supreme Court of Canada ruling, provide important legal perspectives on supervised injection services. Among the implications for nurses are that:

- Addiction is understood to be a chronic disease.
- Harm reduction services are core health-care services for managing problematic substance use.
- It is unconstitutional to deny access to health-care services because of illicit substance use.
- Supervised injection education is within the scope of nursing practice.
- Managers and employers should support practice on the basis of current research.
- Managers and employers should support the development of organizational policies that are consistent with a harm reduction approach.

Ethical issues

In relation to the response to illicit substance use, at least two conflicts have particular relevance for nurses in Canada. The first is between evidence and policy; the second, between harm reduction and health equity, fairness and social justice.

While nurses have an ethical responsibility to promote health and well-being and a responsibility to base their practice on current evidence, they may work in organizations that do not support harm reduction or may endorse or follow an abstinence-based

model. In essence, the illicit status of many substances, along with current prohibitionist drug policies, create a concern about the very nature of ethical practice in the care of people who use illicit substances. To examine ethical nursing practice in this context, a discussion of the professional values that underpin nursing practice is helpful.

The values of harm reduction are consistent with the values of professional nursing presented in the code of ethics: the provision of safe, ethical, competent and compassionate care; the promotion of health and well-being; the promotion of and respect for informed decision-making; the preservation of dignity, in which care is provided on the basis of need; and the promotion of justice.

The ethical commitments of nurses are outlined in CNA's code of ethics (2008), which highlights important values that guide nursing practice and the delivery of care to all Canadians. The values of harm reduction are consistent with the values of professional nursing presented in the code of ethics: the provision of safe, ethical, competent and compassionate care; the promotion of health and well-being; the promotion of and respect for informed decision-making; the preservation of dignity, in which care is provided on the basis of need; and the promotion of justice (Lightfoot et al., 2009; Pauly, Goldstone, et al., 2007). In particular, in providing safe, competent and ethical care, nurses have a duty to base their practice on the best evidence available. The evidence reviewed previously in this paper suggests that harm reduction strategies, including needle distribution and recovery services, supervised consumption sites, peer outreach, distribution of safer crack kits, and opioid agonist treatments such as methadone, buprenorphine/naloxone, or diacetylmorphine, are associated with reducing risk behaviours and promoting the health and well-being of people who use illicit substances.

Nurses have a duty to base their practice on the best evidence available.

In some situations, the lack of a harm reduction policy in a health-care organization can contribute to and reinforce the existing societal stigmas of a culture permeated by negative attitudes toward illicit substance use. In this context, nurses may be concerned about legal and organizational censure if they take a harm reduction approach in their practice. Although legal prosecution appears unlikely (Pauly, Goldstone, et al., 2007), it is nonetheless possible that a nurse working under such conditions may face organizational censure if he or she departs from the organization's norms of practice.

National and provincial professional nursing associations have a key role in this regard. In Canada, CNA and CANAC (2012) have developed a joint position statement on harm reduction as part of the response to addressing health inequities. The creation of a national position on harm reduction is particularly important. At the provincial level, existing nursing policy (e.g., the definition of nursing practice, professional standards

and the CNA code of ethics) may be applied and interpreted to highlight important directions for nurses that are caring for people who use substances.

Fry, Cvetkovski and Cameron (2006) observed that questions of "microethics," or everyday ethics, abound in the operation and evaluation of supervised injection sites and supervised consumption sites, even though these "applied ethical issues (e.g., maintenance of client privacy and confidentiality, consent in the case of intoxicated clients, staff role boundaries and duty of care in the case of self-harm through injection) may be considered by some as second-order compared to other clinical and empirical concerns" (p. 465). They argue that reflecting on and discussing these issues is how to make values more explicit and enhance nursing practice. For example, concerns have been raised about the increased risk of HIV infection for people who require assistance with injecting (Wood, Spittal, et al., 2003). Individuals who are unable to inject themselves because of decreased mobility or lost limbs present ethically challenging cases for nurses who are at the front line of providing service in such situations. Within supervised injection sites and supervised consumption sites there is limited understanding of these issues and, more generally, issues related to poor health and inequities in access to health care for the individuals who use such facilities. Of key concern to nurses are the many ethical issues related to implementing harm reduction interventions (Pauly, Goldstone, et al., 2007).

The second conflict for nurses is the degree to which harm reduction is aligned with the fundamental commitments to equity and social justice outlined in CNA's code of ethics (2008). While harm reduction has been identified as "value-neutral" on the question of illicit substance use (Keane, 2003), it is not value-free. Some have therefore argued for a more ethically invested understanding of harm reduction, one that acknowledges its underlying values and fosters ethical engagement as a means of enhancing research, treatment and policy (Fry, Treloar & Maher, 2005). There are differing views on the extent to which the harm reduction approach should include strategies to change the policy and political context that shapes the harms of substance use (Fry et al., 2005; Hunt, 2004). Historically, the depoliticization of substance use has been promoted as a means of reducing judgments associated with substance use. Yet others have pointed out the limitations of depoliticizing harm reduction and the importance of explicitly addressing the social factors that magnify the harms of illicit substance use (Fischer, Rehm, Kim, & Kirst, 2005; Hathaway, 2001, 2002; Miller, 2001). Some have criticized the harm reduction movement for not doing enough to address social harms or the root causes of substance-related harms, such as homelessness and poverty (Miller, 2001). Increasingly, the movement has highlighted the relationship between current international substance control regimes and human rights violations (Barrett, Lines, Schleifer, Elliot, & Bewley-Taylor, 2008). HRI's (n.d.) principles have clearly embraced the need to challenge policies and practices that contribute to criminalization, discrimination and

social inequities as germane to harm reduction. This positioning is particularly relevant to the practice of nursing and the goals of social justice. For example, education on safer substance use will never end the homelessness that contributes to the harms of substance use (Hardill, 2007). Harm reduction can be seen as a way to partially address inequities in health and health care for people who are experiencing marginalization as a result of substance use (Pauly, 2008a).

VI. CONCLUSIONS

- Nurses play an important role in mitigating the health-related harms associated with illicit substance use. Nurses can also act as a primary point of access to health care for people who use illicit substances, and can link individuals to housing and social services to decrease some of the other harms of substance use. The organizational factors that shape access to health care, housing and social services need to be improved. For example, the potential for services not culturally or gender sensitive to further traumatize people who use illicit substances is of serious concern. There is an urgent need to critically analyze access to health and social services and to develop and refine their structures, particularly harm reduction, counselling and trauma-care services.
- Including "social harms" in the definition of the harms of substance use holds significant implications for the way harm is perceived and for nursing practices and policies associated with substance use. As Rhodes (2002) highlights, it is important to consider social harms because housing, economic and employment policies contribute to the risk of poor health for people affected by substance use. Nursing goals and commitments are consistent with a comprehensive definition of harm reduction, which recognizes the intersections of social determinants of health with illicit substance use and is based on an understanding of the underlying social conditions that shape inequities. Nurses are well placed to extend understanding of the root causes of the harms of illicit substance use as a means to address health inequities, and such efforts are consistent with the nursing mandate as set out in CNA's code of ethics (2008).
- Legal perspectives on the supply of harm reduction equipment and supervised consumption are consistent with pre-existing standards of professional and ethical practice in nursing. The legal opinion of the Canadian HIV/AIDS Legal Network is that distribution of safer crack kits and syringes is unlikely to result in prosecution. The Pitfield decision and the experience at the Dr. Peter Centre support the provision of supervised injection as part of nursing practice in primary health-care services. However, there is limited development and often a gap or absence of official nursing policies in relation to these issues in the majority of health-care settings. To date, there has been limited examination of micro-ethical issues in

harm reduction and nursing practice. More consideration of the ethical concerns associated with caring for people who use illicit substances is needed.

- There is substantial evidence of the benefits of several targeted harm reduction strategies. Needle distribution and recovery programs have been shown to be safe, effective and cost-saving in reducing HIV risk behaviours and increasing access to health and social services for people who use injected substances. Outreach strategies are a low-cost and effective means of reaching people who use illicit substances and are particularly effective if they incorporate peer-based outreach. Supervised consumption sites reduce HIV risk behaviours and overdose deaths, increase access to substance use treatment and reduce public disorder. Opioid agonist treatments such as methadone, buprenorphine/naloxone, or diacetylmorphine (prescription heroin) are safe and cost-effective, with initial evidence indicating that diacetylmorphine is more effective than methadone for people who have failed previous treatment approaches. Initial studies of diacetylmorphine have found that it improves health outcomes and reduces illicit substance use and crime without any negative impacts on the community. Newer research also cites possible improved safety of buprenorphine/naloxone (Suboxone) over methadone.
- Although there is considerable evidence concerning various harm reduction strategies such as needle distribution and recovery programs, opioid agonist treatments such as methadone, buprenorphine/naloxone, or diacetylmorphine, supervised consumption sites, distribution of safer crack use kits and peer outreach, assessments of the role and impact of nursing in these strategies have been limited. Most of the nursing literature on harm reduction consists of descriptive accounts of nursing practice. Although these accounts provide important insight into the role of nurses in reducing the harms associated with illicit substance use, research by or with nurses is also needed to monitor and evaluate nursing processes and outcomes.
- While international and provincial drug policies have shifted to support harm reduction strategies consistent with a public health approach to illicit substance use, federal policies have increasingly embraced abstinence and a "war on drugs" approach. There is a patchwork of policies at the organizational level that may support or discourage efforts to reduce the harms of illicit substance use. In the absence of nursing policy on harm reduction, nurses are often caught between evidence and policy. Research on risk environments as a framework for understanding social factors that produce harms that influence illicit substance use (Rhodes, 2002; Rhodes et al., 2005) points to the need for nurses to focus their attention not simply on drug policies, but also on policies related to social housing and income that contribute to these harms. In addition, histories of gender inequality, colonization and ethnic disparities strongly point to the need to

develop policies through a gendered and culturally appropriate lens that pays attention to the conditions that create inequities associated with illicit substance use. Challenging policies and practices that contribute to harms is consistent not only with the principles of harm reduction but with the CNA code of ethics (2008), in which commitments to equity and social justice include addressing unfair or unjust policies.

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