

Needle Exchange Programs (NEPs) FAQs



This Needle Exchange Program (NEP) FAQ was prepared by Dr. John Weekes, Senior Research Analyst and Karen Cumberland, Policy Officer, Policy and Research Division, Canadian Centre on Substance Abuse, with the help of Darlène Palmer, CACTUS Montréal. It is intended to provide current, objective, and empirically-based information to guide the discussion on the use of NEPs in Canada.¹

What is injection drug use?

- Injection drug use (IDU) is a process whereby one or more psychoactive substance is injected directly into the body using a hypodermic needle and syringe.² Although many drug users don't like this way of taking drugs because of discomfort or fear of needles, it is often the preferred method of consumption because the drug enters the blood stream more quickly and directly than with other methods (e.g., smoking, swallowing, or snorting). It is considered by injection drug users (IDUs) to be more efficient and less wasteful than other means of consumption.

What kinds of drugs are injected?

- Almost any licit (legal) or illicit (illegal) psychoactive drug that can be liquefied can be injected into the body. These substances come from a variety of sources such as the black market and diverted prescriptions. Some of the drugs that are used frequently by IDUs in Canada include:
 - Cocaine
 - Heroin
 - Combinations of heroin and cocaine ("speedballs")
 - Amphetamines
 - Talwin and Ritalin ("T's and R's")
 - Pharmaceutical opioids (e.g., Dilaudid, morphine, etc.)
 - Anabolic steroids

How extensive is the problem of injection drug use in Canada?

- It is difficult to obtain accurate data on the prevalence and profile of injection drug use in Canada and internationally because it is an illegal activity. In addition, many IDUs do not have a stable address thereby making them difficult to identify and track. Accordingly, most estimates of injection drug use are based on information obtained from treatment programs, coroner reports of drug-related deaths, needle exchange programs and arrest reports.
- In Canada, injection drug use is a problematic activity. In the past, injection drug use was thought to be limited to Canada's largest urban centres (e.g., Vancouver, Toronto, Montréal). However, it is clear that there are large numbers of IDUs across the country (e.g., Calgary, Winnipeg, Halifax).³
- A sampling of Canadian prevalence statistics (using different methodologies) suggests that:
 - There are between 75,000 and 125,000 people who inject drugs in Canada⁴ (approximately 0.2–0.4% of the national population).
 - Approximately one-third of IDUs are women.⁵

- There are about 15,000 people in Vancouver who inject.⁶
- In Montréal, the number of people who inject cocaine is estimated between 6,000 and 25,000 and for heroin between 5,000 and 15,000 (some individuals may inject both).⁷
- Estimates suggest that about 20% of IDUs in Canada inject performance-enhancing drugs such as anabolic steroids.⁸

How does the situation in Canada compare with other developed countries?

- A 1998 Australian national survey found that over 130,000 persons reported injecting drugs in the previous 12 months (0.8% of the national population); 2.1% of the population reported injecting at least once during their lifetime.⁹
- In the United States, a 2003 national survey found that across three years of reporting, an annual average of 338,000 persons aged 12 years or older used a needle to inject drugs during the previous 12-month period (just over 0.1% of the national population); young adults aged 18–25 were the most likely group to engage in injection drug use.¹⁰
- In the UK, a prospective longitudinal treatment outcome study for a broad range of substance abuse problems found that 62% of treatment participants were injecting drugs prior to treatment. Of these, 53% injected heroin, 28% injected stimulants, and 4% were injecting benzodiazepines.¹¹
- A recent study of substance use in European Union countries and Norway estimated that approximately 50% of problem drug users engage in injection drug use; that is, between 500,000 and 750,000 of 1 million to 1.5 million problem drug users.¹²

Why is injection drug use a problem?

- Health Factors
 - Injection drug use puts the user at high risk for contracting HIV, hepatitis C, and other serious blood-borne viral infections through the sharing of contaminated (non-sterile) needles or the indirect sharing of contaminated injection equipment (spoons, containers, filters, etc.).
 - Needle-sharing accounts for a large proportion of both HIV and hepatitis C transmission. For instance, research indicates that injection drug use accounts for at least 60% of hepatitis C transmission in Canada.¹³
 - On the west coast, the Vancouver IDU Study (VIDUS) found that 28% of IDUs who participated in the study are HIV-positive and 86% test positive for hepatitis C.¹⁴
 - Cocaine injection is of particular concern because some heavy users inject up to 20 times per day¹⁵—a rate of injection that dramatically increases the risk for contracting a variety of health problems.
 - Serious health complications including abscesses, infections (skin, heart and lungs), vascular damage, poor nutrition, endocarditis, adverse drug reactions, perinatal transmission of infectious diseases to unborn children, fatal and non-fatal overdose^{16,17}, sleep deprivation, amenorrhea, depression and other mental health problems, suicide, and death. The morbidity, mortality, and health care costs associated with long-term illness and palliative care are sizable.¹⁸
- Personal and Social Factors
 - IDUs frequently:
 - ▷ Experience interpersonal difficulties and social isolation, causing relationship problems with friends and family,
 - ▷ Have lower educational attainment, leading to employment problems and low income,
 - ▷ Experience stigmatization and stereotyping as a drug “addict” thereby further entrenching social isolation and marginalization,
 - ▷ Rely heavily on health and social service agencies.
 - There is a strong relationship between injection drug use and various types of criminal behaviour and criminal sub-culture (e.g., trafficking, theft, break and enter, etc.).¹⁹ In England, 19% of arrestees reported injecting drugs over their lifespan, 14% had injected within the previous 12 months.²⁰

What is a Needle Exchange Program?

- The most common harm reduction measure targeting IDUs are needle exchange programs (NEPs). In a typical NEP operation, IDUs are provided with clean needles and injection equipment in exchange for their used needles. The used equipment is then treated as hazardous bio-medical waste and is destroyed safely.
- NEPs are a central form of harm reduction. Harm reduction is a pragmatic public health approach that shifts the focus away from drug use itself and rates of use to the consequences or adverse effects of drug use. Part of the rationale for this approach is that many IDUs are either unable or unwilling to stop injecting; the provision of sterile needles and injection equipment is a simple, inexpensive way to reduce the risk for blood-borne infectious disease transmission. Harm reduction recognizes abstinence as one possible desirable outcome, but fully accepts alternative courses or interventions that reduce that harm while drug use is not necessarily terminated^{21, 22, 23}.
- Both official and unofficial needle exchanges for IDUs have been established in many countries and are widely regarded as an important component of a comprehensive program to combat the spread of HIV and other blood-borne diseases among IDUs and others with whom they may have intimate relationships.
- NEPs are often implemented along with information campaigns, HIV and hepatitis C counselling, and outreach strategies to establish and maintain contact with marginalized drug-using groups. NEPs may consist of the following activities:
 - Fixed sites and street “outreach” including the use of mobile vans or street workers,
 - Needle dispensers in key sites (not available in Canada),
 - Distribution of kits—needles, bleach, vitamin C (to help dissolve heroin or “crack”), sterilized water, disinfectant/alcohol swabs, cookers, and fix packs (needle carrying cases). Condoms are also frequently made available to IDUs.
 - Provide education on how to inject more safely,
 - Provide information and education on other related high-risk behaviours (e.g., safer sexual practices),
 - Referrals to appropriate treatment and support services,
 - Overdose prevention and management including the provision of Narcan® (naloxone hydrochloride) to reverse the effects of opioid drugs.

What is the history of NEPs?

- In 1980, the *Junkiebond* (Junkie League) was established in Rotterdam as a kind of users’ union for concerned drug users. Input from IDUs associated with the *Junkiebond* led to the development of the first NEP in Amsterdam in 1984. The Municipal Health Service delivered disposable needles in large quantities once a week to the *Junkiebond* for distribution and collection of used needles.²⁴
- In Canada, the first NEPs were opened unofficially in Toronto in 1987 and officially in Toronto and Vancouver in 1989. There are now more than 30 NEPs operating across Canada.²⁵ Currently, Prince Edward Island is the only province that does not operate a NEP.²⁶
- Many countries (e.g., Canada, European Union countries, Australia, New Zealand) support or tolerate the operation of NEPs as a pragmatic solution to combating the spread of infectious diseases.
- The United States supports a continued Congressional ban on the use of federal funds to support NEPs.²⁷ Federal funding for research on the effectiveness of NEPs is also banned in the US.²⁸ Despite these federal bans, NEPs continue to operate in some states using state and local funding.
- Definitions in the Canadian Criminal Code and the Food and Drugs Act exempt the distribution of needles by NEPs from laws governing the possession and distribution of drug paraphernalia—as long as the needle is “represented for use in preventing” HIV infection and because HIV infection is considered a “disease.” In short, it is not an offence under S.462.2 of the Criminal Code to distribute needles to prevent the spread of HIV infection.²⁹
- The provisions of the three international drug conventions do not specifically mention NEPs. However, the conventions are supportive of a variety of treatment and social reintegration measures designed to reduce drug use and health-related concerns.^{30,31,32,33} Within this context, the International Narcotics Control Board (INCB) is generally supportive of initiatives that are designed to reduce the incidence of needle-sharing and the spread of blood-borne infectious diseases.³⁴ However, the INCB has not specifically stated its support for NEPs.

What are some of the characteristics and backgrounds of those who use NEPs?

- It is difficult to define overall characteristics or behaviour of people who use NEPs. Some studies have shown that IDUs who use NEPs belong to a higher risk group for infectious disease transmission with more severe substance abuse problems than those who do not make use of these services.³⁵
- Collective evidence from Australia, Britain, and the US indicate that NEPs, pharmacies who provide needles, and needle exchange programs attract different types of clientele with varying levels of risk behaviour. These findings suggest that diverse needle exchange sources and service delivery models are needed to maximize coverage.³⁶
- Injection drug use often begins in late adolescence and young people make up a substantial proportion of those who inject frequently.³⁷ In general, these tend to be socially marginalized individuals living in urban areas.
- Injection drug use is much more common among street youth and incarcerated youth compared with young people in school (typically in the 1–3% range). For example,
 - 21% of Aboriginal street youth in seven major Canadian cities had injected drugs.³⁸
 - 36% of street youth had injected at least once in their lifetime in Canada.³⁹
 - 45% of street youth had injected at least once during their lifetime in the US.⁴⁰
 - 17% of male and 38% of female young offenders had injected in jail in the previous month in Australia.⁴¹
- The average ratio of males to females among IDUs is three to one. On the other hand, the average age for female IDUs is significantly lower than for males. Although the reasons for these gender differences are not clear, research with young users of injection drugs suggests that females are starting to inject at an earlier age than males.⁴²

Who provides the funding for NEPs in Canada?

- From 1989 to 1993 the Canadian government shared the cost of pilot outreach programs with five provinces.
- More recently, funding agreements vary widely across Canada; however, many inter-governmental partnerships have been established between provincial and municipal governments. For example, in Ottawa there is an approximate 50/50 cost sharing partnership between the City of Ottawa and the Province of Ontario to fund NEP operations.⁴³
- In Québec, NEPs are funded by the Régie régionale de la santé publique de Montréal-Centre.

What are some of the outcomes associated with the presence and availability of NEPs?

- Attendance at NEPs and increased needle availability are associated with decreases in risk (decreased needle sharing) as well as a decrease in harm (lower levels of HIV injection).^{44,45} IDUs who attend NEPs reduce their risk behaviour. A global survey found that in cities with NEPs the rate of HIV infection among IDUs was reduced by 5.8% a year whereas the rate of HIV infection increased by 5.9% in cities without NEPs.
- Studies in countries such as Netherlands, Britain, and Australia have demonstrated that NEPs significantly reduce the risk of HIV infection through injection drug use.⁴⁶
- In Montréal, the CACTUS NEP reported a decrease in use of dirty needles from 37% to 26% over six months, and an increase in the use of cleaning solutions (e.g., bleach) from 83% to 93% by NEP attendees.
- The availability of NEPs increases the likelihood that IDUs will become involved in treatment and prevention interventions.⁴⁷
- NEPs are cost-effective because they help to prevent significant health care costs incurred for the care and treatment of hepatitis C, HIV/AIDS, and other injection drug use-related health concerns.⁴⁸ For example,
 - In 1991, the Australian government spent \$10 million (Australian dollars) on NEPs, and, in doing so, prevented approximately 3,000 cases of new HIV infection. The savings for that year alone were more than \$266 million in health care costs.⁴⁹

- Another Australian study estimated that by the year 2000, approximately 25,000 HIV infections would be prevented among injecting drug users as a result of the introduction of NEPs in 1988, and by 2010 approximately 4,500 deaths will have been prevented.⁵⁰
 - In the US, the cost of treating HIV infections that resulted from injection drug use between 1987 and 1995 was estimated to range from \$244 million to \$538 million (US dollars).⁵¹
- By contrast, the cost of a complete “kit” (e.g., needle, a “cooker,” water, vitamin C, and anti-bacterial ointment, etc.) is slightly more than \$1 (Canadian).⁵²

Do NEPs pose a risk to the public?

- The rate at which needles are turned in is often the same as or higher than the rate at which they are handed out. For example, the NEP operated in the City of Vancouver by Vancouver Coastal Health recently reported that, across three separate years (2000–2002), more needles were turned in by IDUs than were handed out.⁵³
- In 1995, the US National Academy Press and the National Research Council and Institute of Medicine reported that the presence of NEPs has not resulted in reckless disposal of injecting equipment, nor has it resulted in increased incidence of needle stick accidents in public places (e.g., parks and playgrounds).⁵⁴

How have the police reacted to NEPs?

- There is national support from the police community in Canada for NEPs. In 1995, the Canadian Association of Chiefs of Police (CACP) passed a resolution in support of the National AIDS Strategy, which included a community-based NEP.⁵⁵ In general, there appears to be a positive working relationship between police and agencies that operate NEPs in Canada.
- However, at times concern has been expressed by police and local residents that the presence of NEPs contributes to public intoxication, loitering, trafficking, prostitution, increased violence and other forms of criminal activity associated with the presence of increased numbers of IDUs and dealers.⁵⁶
- A number of Canadian and international studies have found that enforcement campaigns and “crackdowns” in the proximity of NEPs resulted in:
- Fewer needles being exchanged and fewer sterile needles reaching IDUs,⁵⁷
 - Fewer injection drug-using clients using NEPs,⁵⁸
 - Displacement of the “drug scene” to nearby metropolitan areas,
 - Discouragement of safe injecting practice and needle disposal,
 - Increased incidences of violence and fraud.⁵⁹
- Law enforcement campaigns also affected the number of volunteers who were willing to become involved with NEPs.⁶⁰
- Despite concern that the presence of an NEP and IDUs might attract dealers drawn by a “honey pot” affect, an Australian report indicates that this has not been the case.⁶¹

Are there NEPs in correctional institutions?

- Over the past 15 years, NEPs have been introduced in 46 prisons in six countries: Switzerland, Germany, Spain, Moldova, Kyrgyzstan, and Estonia.⁶²
- The main impetus behind the introduction of NEPs in these correctional jurisdictions has been concern over the risk of infectious disease transmission through the sharing of dirty needles in the context of drug use in prisons. Indeed, research indicates that the rate of HIV and hepatitis C infection is much higher in prison populations than in the general population.⁶³ A number of Canadian studies have found hepatitis C infection rates between 28–40% in prisons⁶⁴ compared with an infection rate of approximately 2% in the Canadian population.
- In Canada, a 1995 survey of inmates in federal prisons revealed that 11% reported injecting drugs since coming to prison.⁶⁵

- Prison-based NEPs are seen as an integral part of a comprehensive drug strategy, along with methadone maintenance treatment, bleach provision, condoms, dental dams, and substance abuse treatment, to reduce prisoner engagement in high-risk behaviours.
- To date, there are no documented cases in which needles have been used as weapons against either correctional staff or prisoners.⁶⁶
- A recent review found no increase in drug use or injection drug use in prisons offering NEPs.⁶⁷
- Currently, NEPs are not available in correctional institutions in Canada.

What is the future of NEPs?

- NEPs are now recognized internationally as a “low threshold” form of harm reduction.
- NEPs have earned an important place on the expanding continuum of harm reduction approaches to reduce the spread of blood-borne diseases as other harm reduction strategies (e.g., supervised injection sites, prescription heroin, etc.) become operational.
- The availability of single-use, retractable needles holds the promise of making NEPs an even safer resource for IDUs.

Endnotes

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- ¹ The authors would like to thank Dr. Benedikt Fischer and Dr. Diane Riley for their constructive comments and input to an earlier version of this document. Any errors or omissions are solely the responsibility of CCSA.
- ² A syringe is defined as a device containing a small needle to inject (into body tissue) or withdraw fluids. Injection can also be carried out without the use of a needle or syringe. A variety of other instruments and make-shift devices can be used for injection (e.g., straws, ink tubes in ball point pens, etc.).
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The Canadian Centre on Substance Abuse (CCSA), Canada's national addictions agency, was established in 1988 by an Act of Parliament. CCSA provides a national focus for efforts to reduce health, social and economic harm associated with substance abuse and addictions.

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ISBN 1-896323-30-8

Prepared by the Canadian Centre on Substance Abuse