Needle and Syringe Programming within the City of Greater Sudbury

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Public Health
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Public Health's needle and syringe program

A Community Drug Strategy (CDS) focuses on improving community health, addressing drug-related issues, and encouraging partnerships among multiple stakeholders to develop comprehensive approaches, incorporating multiple perspectives. The overall goal is to build a safer and healthier community, one that is free from the harms related to substance use. The work within a CDS is organized by four pillars: health promotion, harm reduction, treatment, and enforcement and justice. The engagement and leadership of people with lived and living experience with substance use is a critical aspect that makes a CDS effective. The role of public health organizations within a CDS is to create a community with positive conditions that allow for people to lead healthier lives. This is achieved through work that reduces the harms of substance use by creating supportive environments for childhood development, fostering resilience, and addressing stigma.

Harm reduction initiatives are only one part of a comprehensive overall CDS. A CDS incorporates work spanning prevention to treatment to enforcement, working closely with multiple community partners to make the community safe and welcoming to all. This document only discusses harm reduction as one aspect of a comprehensive strategy and only one example a harm reduction approach— needle and syringe program (NSP). It is important to understand that NSPs are one piece of a larger puzzle.

The NSP is part of a larger harm reduction program offered by Public Health Sudbury & Districts (Public Health). Harm reduction is an evidence-based, client-centred approach that seeks to reduce the health and social harms or consequences associated with addiction and substance use, without requiring people who use substances from abstaining or stopping. As described by established organizations working in the field, "essential to a harm reduction approach is that it provides people who use substances a choice of how they will minimize harms through non-judgemental and non-coercive strategies in order to enhance skills and knowledge to live safer and healthier lives" (Canadian Mental Health Association [CMHA], 2023). Included in the harm reduction approach to substance use is a series of programs, services, and practices, of which an NSP is one example.

Harm reduction focuses on autonomy, informed choices, and providing resources and support to all individuals following anti-stigma and anti-oppressive principles. Harm reduction and NSPs are based on evidence of effectiveness.

Needle and syringe programs are a central form of harm reduction for individuals who use substances and support community safety. NSPs distribute sterile needles, syringes, and other drug-use materials. These programs reduce the sharing and re-use of needles, syringes, and other supplies and reduce improperly discarded needles and syringes in the community. It has been found that the distribution of sterile needles, syringes and other drug use supplies are an effective method in reducing blood-borne infections associated with injection drug use, such as HIV and HCV (Ministry of Health and Long-Term Care [MOHLTC], 2018). Additionally, these programs provide a point of access into health and social services for clients who may otherwise experience barriers to such, as well as opportunities for education on safer drug use practices (MOHLTC, 2018).

The Point is a free and confidential NSP operated by Public Health that provides harm reduction supplies and services to the Greater Sudbury community. Clients accessing *The Point* are offered education on sterile needles and syringe disposal, offered biohazard containers, and encouraged to return the used needles for proper disposal (Public Health Sudbury & Districts, 2023). When clients access *The Point* for harm reduction supplies, staff provide education on safe use of drugs, including the need to use with a buddy, safe disposal of used syringes, and the need to carry naloxone for overdose reversal. Staff also offer clients naloxone and containers to store used needles until they can be disposed of in the city's disposal kiosks or returned to local service providers. Additionally, staff will offer clients referrals to other social or medical services, if desired. This program is developed and run in collaboration with the Ministry of Health and agency partners to provide support to those who use substances.

The Point uses a needs-based model, where clients are provided the supplies requested, regardless of the number of used needles and syringes returned. Staff encourage clients to return used needles and syringes to *The Point*, an outdoor sharps disposal bin, or to a participating partner. Staff also provide instructions on the safe storage, transport, and disposal of used sharps. This includes the use of alternate hard-sided containers such as laundry soap and pop bottles.

A full list of sharp disposal bins is available at Find locations. Currently, there are 14 sharps disposal bins located within the city of Greater Sudbury available to the community to access 24/7 located at Hnatyshyn Park, Energy Court, Public Health offices at 1300 Paris Street and Elm Street/*The Point*, Marymount stairs, Memorial Park, the Main Library on Mackenzie Street, the corner of Kathleen Street and Eva Avenue, Leslie Street Bridge at the entrance of the Trans Canada Trail, Christ the King, Brady Square, Elgin Street, Red Cross Blvd, Larch Street, and Sudbury Action Centre for Youth (SACY).

Besides these available sharps disposal bins, a variety of other options exist in the Sudbury community. While not all options are managed by Public Health, these community-based programs work to increase access to safe disposal methods: NSPs, other harm reduction

programs, residential pick-up, alley and street patrols by patrons, community clean up initiatives, and a supervised consumption site.

At the end of every month, all NSP satellite sites partnered with Public Health submit their NSP activity tracking report to the attention to Public Health's NSP office assistant who compiles it for statistical analysis, as required by the Ministry and for local program surveillance. Upon completion, Public Health submits reports to the Ministry as required.

Background

Through community partners, Public Health switched from offering one-for-one needle exchange to a needs-based model NSP over 25 years ago. In 2016, Public Health announced that access to publicly funded NSP services was expanding to include health unit office locations throughout the Sudbury and Manitoulin districts. Public Health became the administrator of the NSP (*The Point*). The Elm Place office (previously the Rainbow Centre) began offering NSP supplies and services as another location, also known as *The Point*, along with other community agencies, such as Sudbury Action Centre for Youth (SACY), Réseau ACCESS Network, and Ontario Aboriginal HIV/Aids Strategy (OAHAS) who continue to provide NSP supplies and services as satellite sites of *The Point*. In September 2016, Public Health's 1300 Paris Street office began offering injection and inhalation kits, as well as disposal bins for the disposal of used needles.

To date, Public Health facilitates the NSP with 12 partners and engagement continues with Indigenous partners across the districts to determine their interest in partnering in harm reduction expansion. Partners include Noojmowin Teg Health Centre, Chapleau Methadone clinic (not yet active), Manitoulin Health Centre, Health Sciences North, M'Chigeeng First Nation, Naandwechige-Gamig Wikemikong, Atikameksheng Anishnabek, OAHAS, Go-Give, SACY, Safe Consumption Site/The Spot, Réseau ACCESS Network.

Needle and Syringe Pick-up Program Enhancement

Reducing community risk

In addition to the 14 sharps bins located within the city of Greater Sudbury, if a community member comes across a discarded needle or syringe and is not comfortable picking it up and needs more information, they can contact *The Point* or the City of Greater Sudbury who will respond to public reports of improperly discarded needles. If discarded items are found on public property, community members may call 311, and staff working at SACY will respond to the report, collect the discarded item, and properly dispose of it. If needles are on private property, community members are directed to Public Health's website for detailed instructions on how to safely pick up and discard of a needle or syringe (Public Health Sudbury & Districts - Safe needle disposal (phsd.ca)).

The exchange rate of needles and syringes being collected in Greater Sudbury is calculated by direct counts of needles and syringes distributed along with an estimate of needles and syringes being returned to organizations or discarded within the sharps disposal bins. Public Health receives a count of discarded needles from the sharps disposal bins located at Public Health Sudbury offices, *The Point*, SACY, Réseau ACCESS Network, and The Spot. Additionally, in 2022, Public Health received needle and syringe disposal counts from the City of Greater Sudbury. If needles and syringes are disposed in other locations, these will not be captured in the report unless specifically reported to Public Health.

The nature of tracking the needle and syringe collection is complex. A coordinated emptying schedule for example involves collaboration and communication between multiple community partners. For example, when the contracted company paid to empty the sharps disposal bins empties a bin, the number of needles and syringes is estimating based on how full the bin is at time of emptying. In addition, not all bins are emptied on the same schedule and values are only shared as they are emptied. Thus, the values provided are an estimate of the up-to-date data of returned needles and syringes.

Table 1 shows a breakdown of the total number of reported needles and syringes distributed and recuperated in Greater Sudbury.

Table 1: Number of needles and syringes distributed and recuperated in Greater Sudbury.

Year	Distributed	Recuperated*	Recuperation rate**	Notes
2018	1 544 126	1 004 436	65%	
2019	1 290 496	837 405	65%	
2020	1 261 348	487 247	39%	
2021	887 231	147 820	17%	The Point was closed between March and July due to the COVID-19 pandemic. Average monthly intake prior to closure was 13 000; average monthly out was 29 000.
2022	680 640	661 000	97%	This value includes needles and syringes returned to the city of Greater Sudbury in addition to bins located at Public Health, *The Point*, SACY, Réseau ACCESS Network, and The Spot. This is accurate data as of April 24, 2023.

*The number recuperated is an approximation. Needles and syringes are never hand counted. The numbers returned are based upon estimates derived from the fullness of a kiosk at time of emptying or on the size of container returned. Additionally, recuperated needles and syringes are estimated within a calendar year; however, needles and syringes may have been distributed in a different year. Finally, needles and syringes may have been returned to a location outside of Greater Sudbury contributing to the approximation.

**Given that the number of syringes recuperated is an approximation, the return rate is also an approximation.

The changing environment of drug use

As is the case elsewhere, our communities are facing the challenge of a rapidly changing and increasingly toxic drug supply. As the toxic drug supply continues to evolve in Sudbury and districts, it is important for services to continue to be based on client needs. Further, service providers must anticipate that client needs will change as the seasons, supply, and/or available services change. For example, inhalation trends within Sudbury and districts harm reduction distribution program have resulted in an approximate 24-fold increase in the uptake of items used for inhalation (for example, foils) from 2020 to 2022.

Toxic drug supply

For individuals who die from drug overdose, most of these overdoses are accidental and related to the unpredictable and unregulated drug supply. For example, in 2022 Public Health released three different drug warnings to alert people about higher concentrations of substances found in local supply.

Preliminary data released on April 24, 2023, from the City of Greater Sudbury Community Drug Strategy Opioid Surveillance, show that in 2022, 130 residents of the Sudbury and Manitoulin districts died from an opioid-related overdose compared to 102 in 2021, and 106 in 2020. This preliminary 2022 information represents a local annualized mortality rate of 62.8 deaths per 100 000 population per year, an increase from the 2021 rate and significantly higher than the comparable rate in Ontario overall at 16.7 deaths per 100 000 population per year (Public Health Sudbury & Districts, 2023). These preventable tragedies highlight the need to explore all options to support persons who use drugs and to reduce the harms associated with substance use through evidence-informed harm reduction services. This devastation highlights the continuous need to follow best practice recommendations and harm reduction services within Public Health's service area.

Evidence of Needs-based Model

Ministry objectives

The Ontario Public Health Standards (OPHS), Substance Use and Prevention and Harm Reduction Guideline, 2018 mandate that Public Health Sudbury & Districts Board of Health provide and ensures the availability of sterile needles and syringes, as well as safer drug use supplies currently funded and provided through the Ontario Harm Reduction Distribution Program to individuals who use drugs in the public health unit's region (MOHLTC, 2018). The OPHS outlines that community partners, policymakers, and the public, including priority populations, are meaningfully engaged in the planning, implementation, development and evaluation of programs and services for preventing injuries and substance use, and harm reduction. The program of public health interventions shall be implemented in accordance with relevant guidelines, including the *Substance Use Prevention and Harm Reduction Guideline, 2018* (or as current) (MOHLTC, 2018). Public Health must also ensure that priority populations have increased access to sexual health and harm reduction services and supports that prevent exposure to and the transmission of sexually transmitted infections and blood-borne infections (MOHLTC, 2018).

Medical evidence for a needs-based model

The distribution of sterile needle and syringes from NSPs can reduce the risk of medical harms. It is well documented that sharing needles when injecting drugs increases the risk for blood-borne disease transmission including HCV and HIV (Strike et al., 2021). There is a proven reduction in disease transmission for HIV, HCV, and HBV when injection equipment is sterile (Aspinall, et al., 2014; CADTH 2015; Strike et al., 2021). Clients should have access to new needles each time they inject to reduce transmission (Strike et al., 2021).

In addition to preventing disease transmission, sterile needle use can reduce the risk for wounds, abscesses, infections, and possible complications with these (for example, bacteremia, cellulitis, endocarditis, thrombosis). Wounds and wound infections are one of the most common causes for hospitalizations among people who inject drugs (Ontario Harm Reduction Network, 2020).

One-for-one vs. needs-based model needle and syringe programs

The goal of an NSP is to ensure "every injection is performed with a sterile needle" (Ontario Harm Reduction Network, 2021). These programs aim for "100% coverage" of injection drug use, which means ensuring every injection occurs with a new sterile needle (Ontario Harm Reduction Network, 2021; Canadian Network on Hepatitis C, 2019). One delivery model that is now considered outdated and not recommended in Canada involves a one-for-one needle exchange rule. This delivery model only permits the distribution of new sterile needle(s) for every used needle returned to the NSP. The goals of NSPs are not fulfilled by following a one-for-one exchange.

A person may need multiple sterile needles or syringes for each use of drugs, which may occur multiple times a day. One-for-one needle exchange reduces access to sterile needles and increases the likelihood of reusing needles. This style of program presents substantial barriers, such as geography, stigma, hours of operation, and safe storage with each barrier potentially increasing the likelihood of needle reuse (Ontario Harm Reduction Network, 2021; Strike et al., 2021).

Barriers to accessing sterile needles or syringes may cause some individuals to rely on peer distribution—when one acquires sterile needles from a person who collected the supplies on their behalf from an NSP or stockpile—collecting many sterile needles and syringes at once (Ontario Harm Reduction Network, 2021). Peer distribution is an effective method to reach those who may be unable or unwilling to access NSPs. This method of outreach relies on the ability to access larger quantities of sterile needles and syringes when requesting from an NSP at any time.

Increased risks associated with a one-for-one model

Multiple articles and best practice guidelines indicate a one-for-one needle exchange program will "limit the effectiveness of NSPs to prevent HIV and HCV transmission" (Strike et al., 2021, p. 7). One-for-one needle exchange is a barrier to achieving 100% coverage and is reported to not be responsive to the realities of substance use, program access, or sterile needle distribution networks which are particularly important as the drug supply and environment are constantly shifting (Ontario Harm Reduction Network, 2021). Studies demonstrated an association between needle or syringe sharing and difficulty accessing sterile equipment, particularly in non-urban regions (Strike et al., 2021; Kerr et al., 2010). One-for-one needle exchange would increase the time that used needles or syringes are carried around and the amount of time the needle would be in the community. Thus, the net effect would be increased health risks from accidental needle

stick injuries for residents and service providers including police, paramedics, and fire (Ontario Harm Reduction Network, 2021).

Decrease in syringe sharing and disease with a needs-based model

Needs based models were introduced in Canada starting in the 1990s. Needs-based models may involve bulk distribution as some clients may stockpile needles to ensure they have sufficient supplies for themselves and/or peers (Strike et al., 2021). Providing clients with the number of sterile needles or syringes they request is more likely to meet the recommendation for a new sterile needle for each injection, thereby reducing the risk of disease transmission (Strike et al., 2021). Furthermore, following the change to a needs-based model at an NSP program in Vancouver, there was a 40% reduction in needle and syringe borrowing and lending as well as a declining HIV incidence (Kerr et al., 2010)

Increase in access to other services with needs-based model

An NSP where individuals feel comfortable and welcomed may increase opportunities for individuals to be referred to additional services, both social and medical. Accessible health care is a barrier for individuals who inject drugs for a myriad of reasons (for example, stigma, location, complex system navigation) and this can result in health complications. To support this concept, a meta-analysis of NSP services noted these programs increased the number of individuals who attended addiction services (Strike & Miskovic, 2018).

Comparisons of the harm reduction practices of other municipalities

Provincial best practice recommendations from 2021 continue to focus on needs-based (non-restrictive) needle exchange programs. Ontario Harm Reduction Network or Ontario Harm Reduction Distribution Program both promote and encourage provincial health units to follow the best practice of needs based NSP. Ontario Harm Reduction Managers report that mandatory 1:1 needle exchange no longer occur within any of their sites.

Financial analysis of a needs-based model needle and syringe program

Due to the reduction in illness/disease transmission, referral to services, and increasing access to basic health care needs, NSPs are demonstrated to be cost-effective and are a "strong investment" for a community (Sweeney et al., 2019; Wong et al., 2021; Shakeri et al., 2021; Des Jarlais et al., 2021; Kwon et al., 2012). Furthermore, a benefit of an NSP is the opportunity to refer individuals who use drugs to other health care and social services (Pruitt et al., 2018). These referrals from an NSP may be a cost-saving mechanism by decreasing the likelihood that these individuals will require acute care services (for example, HCV diagnosis and treatment) (Pruitt et al., 2018).

Strategies to encourage proper disposal of needles and syringes

Recommended within CATIE's Best Practice Recommendations for Canadian Programs that provide harm reduction supplies to people who use drugs are several strategies to increase proper syringe disposal (Strike et al., 2021). Some strategies include adopting needle and syringe distribution policies; providing multiple locations for equipment disposal; lengthening hours of operation of NSPs; installing public disposal boxes; promoting pharmacy disposal; conducting community clean-ups to collect needles; and providing supervised injection sites for people who use drugs (Strike et al., 2021). Public Health is already meeting several of the best-practice recommendations for harm reduction.

In April 2023, the Health Products Stewardship Association (HPSA), which operates free take-back programs for the safe disposal of unwanted medications and used sharps in Ontario, launched a new program for delivery and collection of 1.8L sharps containers (Health Products Stewardship Association, 20231). These 1.8L sharps containers are a convenient option for storing used needles and are available to anyone from participating pharmacies. Full containers can be returned to pharmacies for safe disposal. Public Health contacted all pharmacies within Greater Sudbury to determine availability of containers. All 47 pharmacies contacted participate in the distribution and collection of sharps containers but only two currently offer 1.8L containers. Five (5) out of the 47 pharmacies confirmed they will be receiving the 1.8L containers, 32 are unsure, and 9 reported they will not be receiving the new containers at this time.

Conclusion

Harm reduction strategies are an essential component of an effective Community Drug Strategies. Within harm reduction strategies, NSPs are proven to save lives, protect health, and mitigate societal harms.

Based on the evidence and recommendations, one-for-one NSPs are outdated and are no longer considered best practice. A needs-based model NSP remains the most effective for reducing disease transmission, injury, and community risk. Future efforts must continue to allow for clients to access unlimited sterile equipment for substance use to ensure that injections are performed safely. Further efforts must also allow for disposal bins to be held in convenient locations in the community.

The needs-based approach to NSPs is cost saving to the health system. Offering harm reduction equipment to meet the needs of the community decreases the risks of developing or being exposed to communicable diseases such as hepatitis and HIV, both of which are costly to the health care system and of course, to individuals' health.

An issue not addressed in this report is that of improperly discarded needles. This is a real issue affecting many communities—even with a high average recuperated rate of over 90%. The community is already implementing many best practices for needle disposal with many sites, agencies and individuals engaged in disposal and pick up. Further work to improve appropriate disposal and reduce the risk of discarded needles should be based on the following best practices:

- Engage with community members with lived and living experience to learn more about what they believe may assist with increasing safer sharps disposal within the community.
- Monitor current sharps disposal bins and evaluate whether they should be relocated to where they could be of greater use by community members.
- Amplify education of parents, children, educators, and health care providers about safe disposal/handling and about how to reduce the risks of handling used needles.
- Increased promotion of locations for the safe return of used needles and sharps, for example, kiosks or pharmacies.
- Continue with the provision of residential pick-up.
- Support alley and street patrols with local community groups.
- Continue to support community clean-up initiatives.

The use of substances by community members will continue. Harm reduction initiatives such as NSPs aim to reduce harms to those who use substances *and* harms to society overall. Effective harm reduction initiatives treat people with dignity and respect and create a nonjudgmental and safe environment for participants. They meet people where they are at and encourage clients to set their own goals. This compassion-based work enhances the health of those who use substances and improves the safety and wellbeing of our communities overall.

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