



**Best Practices and Barriers:
An Update for Ontario
Needle Exchange Programs**



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PROJECT TEAM

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EXECUTIVE SUMMARY

Published in 2006, the *Ontario Needle Exchange Programs: Best Practice Recommendations* (Strike et al., 2006) contains 103 recommendations for the operational and practice challenges faced by needle exchange programs (NEPs). The project on which this report is based aimed to assess the extent to which the *Best Practice Recommendations* have been implemented, identify implementation barriers, and advance our knowledge transfer skills to improve uptake.

We surveyed 32 core NEP managers (100% response rate) and 62 satellite NEP managers (63% response rate) and asked them about their practices and policies before (2006) and two years after (2008) the release of the *Best Practice Recommendations*. To complement our survey findings, we also conducted 5 key informant interviews with Medical Officers of Health (MOHs) in Ontario.

The majority of NEPs we surveyed reported following best practices with their needle distribution policies. Only a single satellite program reported following a 1-for-1 exchange policy today. Most programs distributed injection-related equipment according to best practices. By 2008, 88% (n=28) of core NEPs and 84% (n=52) of satellite NEPs distributed cookers, and all core NEPs (100%, n=32) and nearly all satellite NEPs (97%, n=60) distributed sterile water. Commonly cited reasons for change behind NEP equipment distribution practices included the *Best Practice Recommendations* and the Ontario Harm Reduction Distribution Program (OHRDP). Implementation barriers included funding, senior management and political decision-making.

While more programs reported distributing safer inhalation equipment in 2008 than did so in 2006, the majority of NEPs do not distribute these items (e.g., glass stems). In 2008, more satellite NEPs (44%, n=27) reported distributing glass stems than the core NEPs (16%, n=5). According to both NEP managers and MOHs, the distribution of safer inhalation equipment has and continues to face a number of political barriers.

From the perspective of the MOHs interviewed, funding and scientific evidence are key considerations when they make decisions about the amount and types of equipment NEPs will distribute. Our sample of MOHs reported that in the past consideration of legal and policing issues was more important than now, but acknowledged that such issues may arise in the future and pose significant barriers for NEP operations. MOHs suggested that political barriers to program changes could sometimes be overcome by keeping NEPs 'under the radar.' Though best practice documents are regarded as useful in that they help set standards to follow, such documents might not always reach MOHs or they might not have the time to review them.

As well as asking about equipment distribution and related policies, we asked NEP managers a series of questions pertaining to program models, primary care services, law enforcement, and use of the *Best Practice Recommendations*. Between 2006 and 2008, there were fewer changes in these areas relative to equipment-related practices. Nonetheless, some evidence of important trends emerged. For example, more core NEPs and satellite NEPs involved drug users in program development in 2008 compared to 2006, though these changes were not statistically significant. Higher numbers of core NEPs provided direct vaccination and

testing services today than two years ago. Despite reports of positive relationships with the police, few NEPs followed recommendations such as providing police training and establishing protocols to resolve conflicts. When asked about suggestions for improving the best practice document, a majority of survey respondents reported that they would like to see other best practice recommendations developed and were most interested in recommendations for methamphetamine and Oxycontin™.

Our findings are very encouraging and identify barriers to overcome to increase uptake and implementation of the Best Practice Recommendations. To reduce risk and disease transmission, ensuring that NEP clients receive enough injection equipment as well as safer inhalation equipment is important. This report concludes with a number of recommendations based on our findings, including the development of a funding mechanism to ensure that the OHRDP can distribute safer inhalation equipment.

INTRODUCTION AND PURPOSE

Evidence demonstrates that needle exchange programs (NEPs) reduce HIV transmission among injection drug users (IDUs) and are cost effective public health programs (Wodak and Cooney, 2005). However, until the release of *Ontario Needle Exchange Programs: Best Practice Recommendations* (Strike et al., 2006), best practices had yet to be established. The *Best Practice Recommendations* document filled this void by providing concrete recommendations for the operational, controversial, and practical challenges faced by NEPs. In 2006, the document was disseminated to all NEPs, Medical Officers of Health (MOHs), and many other service providers in Ontario and other places. As well, the project team made numerous presentations to stakeholders, including NEP frontline workers and senior decision makers within the Ontario Ministry of Health, Public Health Agency of Canada, Canadian Drug Strategy, community members and researchers.

In March 2007, our team consulted with the Ontario NEP managers who spoke about their successes and challenges implementing the *Best Practice Recommendations*. Comments from the managers reflected that, overall, the document had been well received on the frontlines and by most senior managers (e.g., MOHs and Executive Directors). Nevertheless, there has been some resistance to full implementation. This resistance was linked with several factors including:

- Legal and financial concerns (e.g., human resources, supply and disposal costs);
- Lack of understanding or acceptance of the value of harm reduction;
- Concern that further implementation of the recommendations might increase the 'power' of harm reduction and influence other aspects of the organization;
- Philosophical opposition to the distribution of glass stems.

Using the information collected during this consultation, we developed an evaluation plan and the results of this are presented below. The findings in this report pertain to NEPs that were operational in 2008. An important consideration for the reader to keep in mind is that there are still some areas of the province that do not have active NEPs and, therefore, represent areas where IDUs lack access to the sterile injection equipment and other services that NEPs provide.

The goals of our project were to assess the extent to which the *Best Practice Recommendations* have been implemented, identify implementation barriers, and advance our knowledge transfer skills to improve uptake. Using survey data collected from Ontario NEPs and their satellite programs, as well as key informant interviews with MOHs, in this report we:

1. Evaluate the uptake and implementation of the recommendations;
2. Identify barriers to implementation;
3. Identify successful strategies that have led to implementation;
4. Identify strategies to increase or improve implementation;
5. Identify emerging issues for NEPs that may require the development of further best practice recommendations.

DEFINITIONS

Needle exchange versus distribution – The term NEP (needle exchange program) is used throughout this document to refer to programs that provide injection drug users and other drug users with access to sterile injection and other drug use equipment, health education, referrals, counselling and other services. In other parts of the world, these programs are also known as syringe exchange programs (SEP). The term needle and syringe programs (NSP) is also used to reflect the move of many programs away from the ‘exchange’ of equipment to the ‘distribution’ of equipment with or without the return of used equipment. In Ontario, these programs have been known as NEPs since their inception, when they were labelled as such by the Mandatory Programs and Services Guidelines for Ontario (Minister of Health and Long Term Care, 1997). In 2008, the Ontario Ministry of Health and Long Term Care released a new set of public health standards and now use the term ‘provision’ of needles and syringes instead of ‘exchange’, as well as referring to the programs as harm reduction services (Minister of Health and Long Term Care, 2008). Since our project was conducted before these changes in terminology, we use the term NEP throughout the report. However, as the reader will see in the section on needle and syringe exchange, many programs in Ontario have indeed moved away from ‘exchange’ in favour of ‘distribution’.

Core versus satellite NEP - Needle exchange is a required public health service in Ontario. Boards of Health, through their Public Health Units, are required to either operate NEPs or ensure that these services are provided in every health unit’s jurisdiction. ‘Core’ or ‘parent’ NEPs are either directly operated by the health unit or operated by another local agency contracted by the health unit to provide needle exchange services. Many core NEPs in Ontario have agreements with local community agencies and organizations (e.g., AIDS-service organizations, community health centres, youth services, pharmacies) to provide NEP services, thereby extending the accessibility of NEP services. Core NEPs provide training, equipment and supplies, and sometimes onsite service at these ‘satellite’ sites. Typically, core NEPs determine the exchange policies to be followed by their satellites.

Ontario Harm Reduction Distribution Program (OHRDP) – Launched in 2006, the OHRDP provides injection-related and drug preparation materials, as well as knowledge and support, to Ontario’s needle exchange and harm reduction programs. The development of the OHRDP was influenced by the evidence contained in the Ontario Needle Exchange Programs: Best Practice Recommendations. The OHRDP is managed through Street Health, a part of Kingston Community Health Centres, and is funded by the Hepatitis C Secretariat, Ontario Ministry of Health and Long-Term Care (OMHLTC). The OHRDP provides injection-related materials free of charge to participating programs to reduce the transmission of infectious disease. These injection-related materials include: sterile water, alcohol prep pads, tourniquets, filters, vitamin C (acidifier), and cookers.

METHODS

For this project, we adopted a mixed methods approach that combined a report card-like online survey evaluation with key informant interviews to gather more in-depth information.

The *Ontario Needle Exchange Programs: Best Practice Recommendations* includes 103 recommendations covering issues ranging from needle distribution to first aid to program evaluation. These recommendations are divided into nine subject areas (e.g., needle distribution and disposal; other injection-related equipment distribution and disposal; education; primary care; relationships with law enforcement). All of the recommendations are directed at improving the overall health and social functioning of drug users accessing NEPs. However, the project team decided to focus on six of the nine subject areas: needle distribution and disposal; other injection-related equipment distribution; distribution of glass stems; program models; primary care; and relationships with law enforcement. The team chose these six subject areas because they relate to the primary function of NEPs and have the most impact on a needle exchange program's ability to meet their mandate of reducing disease transmission. Included within the selected subject areas are recommendations that were identified as likely to be the most controversial and least likely to have been implemented (e.g., distribution of glass stems), but highly important for prevention of disease transmission.

For the online survey, we abstracted from each of the selected six areas the relevant policies, activities, supplies, and other materials to develop a series of questions. Our informal discussion with the NEP managers, in team meetings, and during pilot testing greatly assisted in developing the sections and questions for the survey.

Sampling for the online survey

As the unit of analysis for this project is the needle exchange program, NEP managers were asked to report on the policies and practices in place in their NEP programs. The NEP managers are responsible for policy and procedure development and are, therefore, most knowledgeable about the reasons behind the implementation of the *Best Practice Recommendations* or lack thereof.

When the online survey was opened, there were 32 core NEPs and 99 active satellite NEPs in Ontario. Managers at all of the core NEP sites agreed to participate in the online survey. The core NEP managers also agreed to help us contact their satellite sites and encouraged participation by providing e-mail addresses for satellite NEP managers and sending reminders to their satellites about completing the survey.

Pilot test

To ensure flow and comprehensibility, the online survey was pilot tested prior to launching full data collection. Three core NEP managers completed the online survey. Each of the pilot testers was then contacted by telephone to discuss their experiences, solicit their recommendations, and clarify any inconsistencies in their answers. Based on feedback from the pilot testers, answer choices were further refined.

Recruitment for the online survey

Following the pilot test, invitations were sent by e-mail to all core NEP (N=32) and satellite NEP (N=99) managers on our contact list. Two weeks after these initial invitations were sent, a reminder invitation was sent by e-mail to all managers who had not yet started or completed the survey. Two weeks after the reminder, core NEP managers were asked to follow up with their satellites that had not yet responded. The survey was open for 12 weeks, from February 28th, 2008 until May 22nd, 2008.

Survey analysis

Our survey was developed using SurveyMonkey online survey software (please see <http://www.surveymonkey.com>). After the survey was conducted, the data was downloaded and entered into SPSS. The dataset was assessed for completeness, and inconsistent responses were corrected where possible. As well, we identified and corrected where possible responses to 'other' and 'please specify' options that were redundant or suggested a need to create additional variable categories. The data were then analysed using bivariate statistics (e.g., McNemar χ^2 tests) to make before-and-after comparisons. The main purpose of the analyses was to assess the implementation of the *Best Practice Recommendations* and the major reasons for lack of implementation.

Sampling and recruitment for the key informant interviews

Using data collected from the online survey, we identified issues highly relevant to the implementation or lack thereof of the recommendations. Subsequently, we designed key informant interviews to better understand the role of MOHs in decision-making about NEPs, to identify facilitators and barriers to best practice implementation from a policy-maker perspective, and to obtain suggestions for strategies to improve implementation and knowledge transfer to this audience. To complement our survey findings, we conducted 5 key informant interviews with MOHs in Ontario.

After the survey data collection was complete, our project team discussed selection for the interviews. Due to recent controversy surrounding distribution of safer crack use kits that include glass stems and our findings that the recommendations regarding this equipment have not been extensively implemented by NEPs, we decided to consider this issue within the sampling decision. In particular, we decided to select a combination of MOHs associated with core NEPs that currently distribute glass stems and MOHs associated with core NEPs that do not. For additional variation, we targeted both programs run by public health units and those outsourced to another agency (e.g., an AIDS-service organization), as well as programs that serve larger and smaller populations. Our MOH sample targets were the following:

- 1 MOH associated with a public health unit program that distributes glass stems
- 1 MOH associated with a public health unit program that does not distribute glass stems
- 1 MOH associated with an outsourced program that distributes glass stems
- 2 MOH associated with outsourced programs that do not distribute glass stems

The managers of the selected core NEPs were asked to approach their local MOH about participating in our study. Upon receiving consent, the project coordinator conducted all key

informant interviews over the telephone. The interviews took place between August 29th and October 28th, 2008.

MOH interview analysis

All key informant interviews were tape recorded and transcribed. Transcripts were managed using word processing software. One of the principal investigators and the project coordinator read all of the transcripts to extract and analyze the major facilitators and barriers to implementation, and related themes.

RESULTS

Survey response rates

We achieved a 100% response rate (32 of 32) for the core NEPs and a 67% response rate (66 of 99) for the satellite NEPs. Combined, the total response rate was 75% (98 of 131 Ontario NEPs). Of those who responded, 5 surveys from satellite NEPs were incomplete. Of these 5 surveys, 4 did not contain enough usable data and were removed from the analyses. Therefore, the summaries that follow reflect the findings from the survey data of 94 respondents - 32 core NEP managers and 62 satellite NEP managers.

Needle and syringe exchange

To prevent the transmission of HIV, Hepatitis B (HBV), Hepatitis C (HCV) and other bloodborne pathogens from injection with non-sterile needles and syringes, the *Ontario Needle Exchange Programs: Best Practice Recommendations* advises NEPs to provide sterile needles in the quantities requested by clients:

- without requiring clients to return used needles
- with no limit on the number of needles provided
- with encouragement to return used needles

Needle sharing carries a high risk of transmission of bloodborne pathogens such as HIV, HBV and HCV. Injecting with used needles also puts IDUs at risk for other types of infections, skin and vein problems. The *Best Practice Recommendations* were designed to improve access to sterile needles for NEP clients to reduce needle-sharing practices and to reduce risk.

From our survey of 94 managers from Ontario NEPs, we learned that most programs distributed needles without requiring clients to return used needles and this practice did not change over time (see Table 1).

Our data show that in 2008 none of the core NEPs had a 1-for-1 exchange policy and that only one satellite program reported using a 1-for-1 exchange policy. More NEPs were distributing needles in 2008 with no limit on the number provided than was the case in 2006. Interestingly, while fewer core NEPs now impose a cap on the number of needles given out to clients, more satellite NEPs implemented a cap on the number of needles given to clients who did not have any to return, though these changes were not statistically significant. In addition, all core NEPs and all satellite NEPs that responded to the survey indicated that in 2008 they were disposing of used injection equipment, sharps, and sharps containers in accordance with local regulations for biomedical waste (data not shown).

Table 1: Uptake of needle and syringe exchange recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Distributed needles without requiring clients to return used needles	94% (30)	94% (30)	93% (55)	95% (58)
Followed a 1-for-1 exchange policy	3% (1)	0% (0)	0% (0)	2% (1)
Imposed a cap on the number of needles given to clients who did not have any to return	13% (4)	3% (1)	7% (4)	11% (6)
Distributed needles with no limit on the number provided	84% (27)	91% (29)	75% (44)	86% (50)*

* McNemar binomial distribution $p \leq .039$

For the programs reporting a change in needle exchange policy, the most commonly reported reasons were the *Best Practice Recommendations* (75%, n=9), changes in the approach of staff members (75%, n=9), changes in client demand (55%, n=6), and decisions by NEP managers (50%, n=6).

Cookers

The sharing of injection equipment also carries a risk of transmitting bloodborne pathogens such as HIV and HCV. The term ‘cooker’ refers to the containers used for mixing and preparing drugs. Often, spoons and bottle caps are used for this purpose. Studies have shown that sharing cookers is common among IDUs, creating opportunities for contamination and potential disease transmission (Clatts et al., 1999; Leonard et al., 2005).

The *Best Practice Recommendations* advise NEPs to reduce the risks associated with the re-use of cookers by:

- distributing single-use cookers in the quantities requested by clients with no limit on the number of cookers provided
- offering a cooker with every needle provided

Our data show a significant increase in the number of NEPs distributing cookers in 2008 when compared to 2006 (see Table 2). In line with the *Best Practice Recommendations*, all core NEPs that distribute cookers were doing so without limits on the number they provide to their clients. While many more satellite NEPs now distribute cookers, a smaller proportion distribute with no limit, but this difference was not statistically significant.

Table 2: Uptake of cooker recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Distributed cookers	13% (4)	88% (28)*	34% (21)	84% (52)**
For programs that distributed cookers, provided cookers with no limit on the number provided	75% (3)	100% (28)	95% (20)	85% (44)
* McNemar binomial distribution $p \leq .001$				
** McNemar binomial distribution $p \leq .001$				

For those programs reporting a change in cooker distribution practices over the two-year period, the most commonly reported reasons were the availability of the OHRDP (92%, n=35), the *Best Practice Recommendations* (67%, n=24), decisions by NEP managers (49%, n=16), and decisions by the local MOH/Executive Director (46%, n=15).

Among the few core programs that did not distribute cookers in 2008, decisions by the local MOH/Executive Director were the most common reasons reported for lack of implementation (75%, n=3). For the satellite programs that did not distribute cookers, (56%, n=5) of NEP managers stated that they did not know why they did not distribute these items. Our data highlight this as an area worth exploring with the remaining Ontario NEPs that do not currently distribute cookers.

Filters

After a drug solution is prepared in a cooker, a filter is placed in the cooker and the drug solution is drawn up through the filter. This process helps to prevent undissolved drug particles, other debris, and bacteria from being drawn up into an injectable solution. The sharing of filters and 'washes' made from used filters is common among IDUs, and these practices have the potential to spread bloodborne pathogens such as HIV and HCV (Bourgeois and Pearson, 1998; Leonard et al., 2005). Using a proper filter is important because the materials commonly used as filters (e.g., cigarette filters) do not prevent bacteria from being drawn up into the drug solution and may contain other contaminants that can become mixed into the solution and injected into the body. Many IDUs experience a condition called 'cotton fever,' believed to be linked to the use of cotton filters that are not tightly bound (Harrison and Walls, 1990). Research has found that filters with a pore width of 0.22 μm are significantly more effective in preventing bacterial contamination compared to cigarette filters and 20 μm filters (Cafilisch et al., 1999).

The *Best Practice Recommendations* suggest that NEPs can decrease the risks associated with filters by:

- distributing filters with a pore width of 0.22 μm in the quantities requested by clients with no limit on the number of filters provided
- offering a 0.22 μm filter with every needle provided

NEP managers reported changes over time (see Table 3). In 2008, more NEPs distributed filters compared to two years earlier. Among these programs, the majority followed the *Best Practice Recommendations* by distributing filters without limits on the number provided to their clients.

Table 3: Uptake of filter recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Distributed filters	41% (13)	91% (29)*	65% (40)	89% (55)**
For programs that distributed filters, provided filters with no limit on the number provided	92% (12)	90% (26)	98% (39)	93% (50)
* McNemar binomial distribution $p \leq .001$				
** McNemar binomial distribution $p \leq .001$				

For those programs reporting a change in filter distribution practices, the most commonly reported reasons were the availability of the OHRDP (83%, n=25), the *Best Practice Recommendations* (66%, n=19), decisions by NEP managers (43%, n=12), and decisions by the local MOH/Executive Director (39%, n=11).

Acidifiers

Acidifiers are used to convert insoluble drugs into water-soluble form and are often used to prepare drugs for injection. Lemon juice and vinegar are acids that are commonly used by IDUs for this purpose. However, both of these acids can be growth mediums for some bacteria and fungi leading to infections if injected (Garden et al., 2004). Also, sharing acidifier sources carries the potential for HIV and HCV transmission.

The *Best Practice Recommendations* advise NEPs to reduce these risks by:

- distributing single-use, airtight and waterproof 100 mg sachets of citric acid or single-use, airtight and waterproof 300 mg sachets of ascorbic acid in the quantities requested by clients with no limit on the number of sachets provided
- offering a single-use sachet with every needle provided

Our data show that more NEPs distributed the recommended acidifiers in 2008 than was the case in 2006 (see Table 4). Fewer programs, and none of the core NEPs, distributed acidifiers in different packaging or volumes. Most programs that distribute acidifiers did so without limits on the number of sachets provided to their clients.

Table 4: Uptake of acidifier recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Acidifiers:				
a) Distributed the recommended type(s)	13% (4)	84% (27)	31% (19)	76% (47)
b) Distributed in different packaging or in different volumes	16% (5)	0% (0)	18% (11)	10% (6)
c) Did not distribute				
	72% (23)	16% (5)*	52% (32)	15% (9)**
For programs that distributed acidifiers, provided acidifiers with no limit on the number provided	100% (9)	96% (26)	83% (25)	87% (46)
* McNemar Bowker $\chi^2 = 23$; df = 2; $p \leq .001$				
** McNemar-Bowker $\chi^2 = 29.4$; df = 3; $p \leq .001$				

For those programs reporting a change in acidifier distribution practices during the past two years, the most commonly reported reasons were the availability of the OHRDP (80%, n=36), the *Best Practice Recommendations* (70%, n=28), decisions by NEP managers (46%, n=18), and decisions by the local MOH/Executive Director (36%, n=14).

Sterile water

To create a drug solution, water is used to mix and dissolve drugs prior to injection. As well, water may be used to rinse needles between injections. This water may become contaminated with bacteria and bloodborne pathogens such as HCV and HIV. Studies have shown that the re-use and sharing of mixing and rinse water, particularly non-sterile water, can lead to several health problems and infections (Thorpe et al., 2000; Ross and Shamsuddin, 2004). Providing a sterile water ampoule equivalent to the amount of water necessary for a single injection can reduce the possibility of sharing water and the risk of disease transmission.

The *Best Practice Recommendations* advise NEPs to reduce the risks associated with the re-use of water by:

- distributing single-use 2 mL sterile water ampoules in the quantities requested by clients with no limit on the number of sterile water ampoules provided
- offering a single-use 2 mL sterile water ampoule with every needle provided

Following the *Best Practice Recommendations*, all core NEPs and nearly all satellite NEPs that responded to our survey distributed sterile water in 2008 (see Table 5). The majority did so without limits on the number of sterile water ampoules they provided to their clients.

Table 5: Uptake of sterile water recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Distributed sterile water	66% (21)	100% (32)*	84% (52)	97% (60)**
For programs that distributed sterile water, provided ampoules with no limit on the number provided	86% (18)	94% (30)	87% (45)	92% (54)
* McNemar binomial distribution $p \leq .001$				
** McNemar binomial distribution $p \leq .008$				

For NEPs reporting a change in sterile water distribution practices, the most commonly reported reasons were the availability of the OHRDP (73%, n=27), the *Best Practice Recommendations* (70%, n=23), decisions by NEP managers (45%, n=14), and decision by the OMHLTC (30%, n=9).

To prevent the multi-person use of sterile water, the *Best Practice Recommendations* advise NEPs to distribute 2 mL ampoules, but do not recommend a particular grade of sterile water to be distributed. At the time of writing, only 3 mL and 10 mL sterile ampoules are available to Ontario NEPs. In our survey, we asked respondents if their program distributed 2 mL or another volume of sterile water. While our data demonstrate that nearly 100% of responding NEPs currently distribute sterile water, we cannot determine the proportion of programs that distribute 10 mL versus 3 mL. We do know from the OHRDP that some NEPs have elected to distribute the 10 mL ampoule, which is a higher grade of sterile water, whereas others have elected to distribute the 3 mL, which is less likely to be shared (C. Cleary, OHRDP, personal communication August 2008).

Alcohol swabs

Cleaning the injection site with sterile alcohol swabs prior to injection helps prevent abscesses and other bacterial infections. However, sharing swabs is common among IDUs and carries the risk of transmitting Hepatitis C (Crofts et al., 1999).

As such, the *Best Practice Recommendations* advise NEPs to reduce risk by:

- distributing sterile alcohol swabs in the quantities requested by clients with no limit on the number of swabs provided
- offering a sterile alcohol swab with every needle provided

Table 6: Uptake of alcohol swab recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Distributed sterile alcohol swabs	88% (28)	100% (32)	90% (56)	100% (62)*
For programs that distributed swabs, provided swabs with no limit on the number provided	93% (26)	94% (30)	95% (53)	97% (60)
* McNemar binomial distribution p = .031				

Our data show that the vast majority of programs distributed sterile alcohol swabs in 2006 and 2008 (see Table 6). For the small number of programs reporting a change in sterile alcohol swab distribution practices, the two most common reasons reported were the *Best Practice Recommendations* (75%, n=6) and the availability of the OHRDP (67%, n=6).

Tourniquets

Tourniquets are used to make the vein used for injecting drugs more accessible. When thin, stretchy tourniquets are unavailable, IDUs will sometimes use other items (e.g., bandanas, belts) that are not elastic enough for quick release. This can lead to skin and blood circulation damage. Furthermore, tourniquets may become contaminated with bacteria and bloodborne pathogens (Golder et al., 2000; Rouke et al., 2001). Sharing tourniquets thus has the potential to spread infection, including HCV and HIV.

The *Best Practice Recommendations* advise NEPs to reduce tourniquet-related risks by:

- distributing thin, pliable, easy-to-release tourniquets with non-porous surfaces in the quantities requested by clients with no limit on the number of tourniquets provided
- offering a clean, quick-release tourniquet with every needle provided

Our data show that more NEPs distributed the recommended tourniquets in 2008 than was the case two years earlier (see Table 7). Fewer programs, and none of the core NEPs, distributed a different type of tourniquet. Importantly, the majority of programs that distributed tourniquets did so without limits on the number provided to their clients.

For those programs reporting a change in tourniquet distribution practices over the two-year period, the most commonly reported reasons were the availability of the OHRDP (82%, n=23), the *Best Practice Recommendations* (70%, n=19), decisions by NEP managers (44%, n=11), and removal of limits because tourniquets provided for free from the OHRDP (40%, n=10).

Table 7: Uptake of tourniquet recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Tourniquets:				
a) Distributed recommended type(s)	47% (15)	94% (30) 0% (0)	52% (32)	89% (55) 5% (3)
b) Distributed other type(s)	3% (1)	6% (2)*	16% (10)	7% (4)**
c) Did not distribute	50% (16)		32% (20)	
For programs that distributed tourniquets, provided tourniquets with no limit on the number provided	75% (12)	90% (27)	98% (41)	95% (55)
* McNemar-Bowker $\chi^2 = 153$; df = 2; $p \leq .001$				
** McNemar-Bowker $\chi^2 = 23$; df = 2; $p \leq .001$				

Glass stems, mouth pieces, and brass screens

Sharing equipment used to smoke crack and other ‘rock-type’ drugs has the potential to transmit HIV and HCV. Pipes are often crudely constructed from metal (such as pop cans) and from glass materials that can lead to cuts from sharp edges and lip burns (Haydon and Fischer, 2005). Plastic bottles and inhalers are also often used (Queen West CHC Harm Reduction Team, 2005). Cuts and burns around the mouth, lips, and hands can contaminate inhalation equipment with blood and potentially lead to transmission. When proper screens are not available, people who smoke crack will make screens for their smoking devices out of materials (e.g., brass wool cleaning pads) that tend to break apart and can cause respiratory damage (The Safer Crack Use Coalition of Toronto, 2003).

The *Best Practice Recommendations* encourage NEPs to expand their product services and reduce the health risks associated with smoking drugs by:

- distributing individual glass stems, mouth pieces, and brass screens in the quantities requested by clients with no limit on the number of items provided
- educating clients about the HIV- and HCV-related risks associated with sharing glass stems and other devices for inhaling and smoking drugs

In 2008, more programs reported distributing safer inhalation devices than in 2006 (see Table 8). It is also clear that many programs educated their clients about the risks associated with sharing these items. However, most programs do not distribute these supplies.

Table 8: Uptake of glass stem, mouth piece, and brass screen recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Distributed glass stems	3% (1)	16% (5)	33% (20)	44% (27)*
Distributed mouth pieces	3% (1)	16% (5)	25% (15)	38% (23)**
Distributed brass screens	3% (1)	13% (4)	28% (17)	41% (25)***
Educated clients about the HIV and HCV-related risks associated with sharing drug inhalation equipment	Not asked	81% (25)	Not asked	72% (43)
* McNemar binomial distribution $p \leq .039$ ** McNemar binomial distribution $p \leq .021$ *** McNemar binomial distribution $p \leq .021$				

Commonly reported reasons for not distributing glass stems, mouth pieces, or brass screens include decisions by the local MOH/Executive Director (46%, n=23) and decisions by the Board of Health/Board of Directors/City Council (27%, n=13). Managers also noted that they did not distribute these supplies because they did not receive these supplies from their health unit or the OHRDP and because there was an unfavourable political climate. For example, one core manager wrote, “Safer inhalation equipment is only distributed when we can obtain kits from outside sources. We do not currently have money in our NEP budget to purchase these items.” Similarly, a satellite manager indicated: “There is no available funding for crack kits for our local Needle Exchange Program. We are hoping that this will change as there is a lot of crack use in [the town] and folks are using very unsafe materials to create makeshift crack pipes.”

Just over one quarter of both core and satellite managers who answered the question reported decisions by the Board of Health/Board of Directors/City Council as reasons for not distributing safer inhalation equipment. Lack of approval or support also emerged as another reason behind not distributing these items. As an example, a satellite manager reported, “[The] shelter board will not permit safe crack pipe kits.” Caution regarding the political effects of distributing glass stems was also suggested by a few respondents. Some NEPs reported opposition from law enforcement as a reason for not distributing glass stems (21%, n=5 of core managers and 15%, n=4 of satellite managers). In relation to the issue of glass stem distribution, one core manager wrote, “[The] police rep on the Advisory Committee has a high degree of certainty that the Chief of Police will not support this, although it is unclear if they would actively oppose or interfere.” A core manager stated, “At the moment, we do not want to jeopardize the current harm reduction program by distributing safer inhalation equipment.” Further, a satellite manager indicated, “Small town mentality/I’ve had to give my word that I would not distribute glass stems behind their backs.” Of all of the recommendations, NEPs are least likely to follow the recommendations regarding the distribution of glass stems, mouthpieces and screens. This issue is deserving of further exploration.

Program models

The model of service delivery is an important component of NEP effectiveness because it can impact whom the program reaches and whom it does not. While some clients will access drop-ins, others may prefer street outreach or mobile services. Attracting and retaining clients is vital to encourage behavioural change and provide materials and education. Improving accessibility is challenging because of the wide diversity among drug users in terms of characteristics (e.g., gender, culture and age), needs, and preferences.

The *Best Practice Recommendations* directs NEPs toward combining multiple models of service delivery to better reach and serve their clients. Specifically, the recommendations include:

- providing NEP services using a delivery model(s) that maximizes accessibility for clients
- tailoring NEP services to meet the needs of sub-populations of drug users
- involving drug users in the design and delivery of services

The majority of NEPs offered service from a fixed location (see Table 9). In 2008, 63% (n=19) of core programs reported that they provide multi-model service delivery (i.e., 2 models or more). The model of service delivery did not change much except that more core NEPs now offer peer-based outreach today than in 2006. This type of model, as well as street outreach, is key complements to fixed sites because of IDU reluctance to go to other service providers for assistance.

We also asked NEP managers about their practice of tailoring services to meet the specific needs of four diverse sub-populations of drug users. In 2008, 25% (n=8) of core NEPs reported that they tailored programs to meet the needs of youth and 25% (n=8) also tailored service to meet the needs of women. Somewhat fewer tailored their services to meet the needs of ethno-cultural groups (22%, n=7) or lesbian, gay, bisexual, transgender, and queer clients (13%, n=4). In 2008, more satellite NEPs tailored services to meet the needs of particular client groups: youth (43%, n=26), women (43%, n=26), ethno-cultural groups (39%, n=23), and lesbian, gay, bisexual, transgender, and queer clients (36%, n=20). The differences between core and satellite NEPs may reflect the attempts of core NEPs to partner with agencies serving diverse populations. Between 2006 and 2008, there were few changes in terms of tailoring services. Among the few programs that changed their practice of tailoring services during the past two years, the most common reason reported was more need or demand from specific client groups (86%, n=6).

Table 9: Uptake of program model recommendations

Types of program models offered				
	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Fixed site NEP	94% (30)	97% (31)	88% (53)	93% (56)
Mobile NEP	39% (12)	41% (13)	18% (10)	18% (10)
Home visits	32% (10)	32% (10)	21% (12)	21% (12)
Peer-based outreach	28% (9)	36% (11)	30% (17)	29% (16)
Street outreach	44% (14)	44% (14)	39% (23)	40% (23)
Number of models offered				
1 type	40% (12)	37% (11)	55% (30)	58% (30)
2 types (e.g., fixed site & mobile)	27% (8)	30% (9)	9% (5)	8% (4)
3 types	3% (1)	3% (1)	11% (6)	12% (6)
4 types	13% (4)	10% (3)	13% (7)	12% (6)
5 types	13% (4)	20% (6)	6% (3)	6% (3)
Average number of models	2.2	2.5	1.8	1.8

Table 10: Uptake of program design, planning, and delivery recommendations

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Involved users in program design	31% (10)	39% (12)	38% (22)	45% (26)
Involved users in program planning	34% (11)	44% (14)	42% (25)	47% (27)
Involved users in program delivery	38% (12)	45% (14)	39% (22)	48% (28)

Finally, we asked managers about the involvement of drug users in program design, planning, and delivery (see Table 10). Our data show that more NEPs involved drug users in program development in 2008 than did so in 2006, though these changes were not statistically significant. According to managers who answered the question, these changes were mainly attributed to having more drug users voice suggestions for their programs (75%, n=12) and change in the approach of staff members (59%, n=10).

Primary care

IDUs are at increased risk of exposure to bloodborne pathogens such as HIV and Hepatitis C, and many other health concerns such as respiratory diseases, other sexually transmitted infections (STI), and skin conditions. However, many IDUs do not have a regular source of primary care and are reluctant to access health service providers for assistance. NEPs located within public health units are well placed to provide immunization, testing, and first aid services to their clients. NEPs that do not offer primary care services within their organization need to refer clients to these services.

The *Best Practice Recommendations* identify the importance for NEPs to find a balance between providing direct primary care services and helping their clients access services elsewhere in the community. NEPs are encouraged to achieve this by:

- providing services in keeping with the health needs of clients and alternative resources available in the community, including vaccination, testing, and first aid

Our data show that more core NEPs provided direct vaccination and testing services in 2008 than did so in 2006, though these changes were not statistically significant (see Table 11). We also asked NEP managers about referral to another agency for vaccination and testing.

Table 11: Uptake of vaccination and testing recommendations – direct program delivery

Vaccinations delivered directly by the program				
Type of vaccination	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Hepatitis A	59% (19)	69% (22)	25% (15)	27% (16)
Hepatitis B	59% (19)	69% (22)	30% (18)	31% (18)
Influenza	59% (19)	66% (21)	31% (18)	29% (17)
Pneumococcal	47% (15)	56% (18)	12% (7)	17% (10)
Tetanus	42% (13)	53% (17)	19% (11)	18% (10)
Testing delivered directly by the program				
Type of testing	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
HIV	53% (17)	65% (20)	29% (17)	29% (17)
Hepatitis B	53% (17)	61% (19)	27% (16)	25% (15)
Hepatitis C	53% (17)	61% (19)	27% (16)	25% (15)
Tuberculosis	41% (13)	45% (14)	20% (12)	17% (10)
Other STI	53% (17)	61% (19)	25% (15)	24% (14)

Though fewer satellite NEPs provided direct vaccination and testing compared to the core NEPs, our data show that many satellites provided these services by referral to another agency (see Table 12). It is important to recognize, however, that not all core NEPs or their satellites have an agency mandate or the professional staff to provide testing and vaccination services. In 2008, 41% (n=13) of the core NEPs and 59% (n=35) of the satellites also reported that they had an established referral relationship with a primary care provider willing to work with drug users. This type of relationship is key to connecting IDUs, particularly those who are poor, homeless, or marginally housed, with the medical care they need.

Finally, 31% (n=10) of core NEPs and 32% (n=19) of satellite NEPs reported that they provided first aid for abscesses and skin problems.

Table 12: Uptake of vaccination and testing recommendations - by referral

Vaccinations and testing by referral to another agency (2008 only)					
	Core NEPs	Satellite NEPs		Core NEPs	Satellite NEPs
Type of vaccination	2008 (#)	2008 (#)	Type of testing	2008 (#)	2008 (#)
Hepatitis A	31% (10)	68% (39)	HIV	44% (14)	67% (39)
Hepatitis B	31% (10)	67% (38)	Hepatitis B	44% (14)	66% (38)
Influenza	34% (11)	64% (37)	Hepatitis C	44% (14)	67% (39)
Pneumococcal	39% (12)	59% (33)	Tuberculosis	50% (16)	64% (37)
Tetanus	38% (12)	58% (33)	Other STI	44% (14)	67% (38)

Law enforcement

The mandates and underlying philosophies of NEPs and law enforcement agencies differ and this difference may be a source of conflict and have a negative impact on NEP efforts to reach clients, provide equipment, and reduce risk. For example, police have been known to harass and confiscate injection equipment from clients leaving NEP sites (Leonard et al., 2008). These actions may discourage future client attendance at the NEP. For IDUs who use drugs in public locations, fear of arrest can lead to rushed injections and skipping safer injection techniques which can increase the risk for infection, skin and vein damage, and overdose.

The *Best Practice Recommendations* direct NEPs to:

- develop and establish collaborative relationships with law enforcement which may include negotiating agreements, establishing protocol to resolve conflicts, and providing in-service training to law enforcement agents

Our data show that more NEPs had established working relationships with their local law enforcement in 2008 than in 2006 (see Table 13). It is also encouraging that very few programs reported having a mostly negative relationship with their local law enforcement and none reported a negative relationship. The most common reason reported for change in NEP relationships with law enforcement was more efforts being made to establish a relationship (71%, n=10).

Table 13: Relationships with law enforcement

	Core NEPs		Satellite NEPs	
	2006 (#)	2008 (#)	2006 (#)	2008 (#)
Program had established working relationship with the local law enforcement	53% (17)	63% (20)	40% (24)	45% (27)
Program's relationship with the local law enforcement characterized as:				
Positive				
Mostly positive	29% (5)	25% (5)	17% (4)	19% (5)
Neither positive nor negative	35% (6)	40% (8)	63% (15)	63% (17)
Mostly negative	35% (6)	30% (6)	17% (4)	19% (5)
Negative	0% (0)	5% (1)	4% (1)	0% (0)
	0% (0)	0% (0)	0% (0)	0% (0)

We also asked NEP managers about some types of agreements they may have negotiated with their local law enforcement agencies (see Table 14). In most settings, agreements with the police are negotiated by the core NEP to cover itself and its satellites (Strike, 2001). Our findings reflect this situation because compared to the satellite NEPs, a higher proportion of core NEPs had negotiated agreements to prevent police interference with NEP activities. It is interesting to note that only 9% (n=3) of core programs and 12% (n=7) of satellites reported having an established protocol to resolve conflicts between NEP staff and law enforcement agents.

Table 14: NEP agreements with law enforcement – 2008

Program has negotiated agreements with law enforcement to ensure that:	Core NEPs % (#)	Satellite NEPs % (#)
Clients are not harassed while entering or leaving NEP sites and vehicles	53% (16)	20% (11)
NEP equipment is not destroyed or confiscated from clients	35% (10)	17% (9)
NEP sites are not used for surveillance purposes	47% (14)	20% (11)
NEP staff will not interfere with law enforcement activities	47% (14)	28% (15)

When asked about in-service training to law enforcement agents, 41% (n=13) of the core programs reported providing such training versus 10% (n=6) of the satellite NEPs. All managers that addressed these questions indicated that in-service training focuses on the purpose and goals of NEPs as well as the health and social concerns of drug users.

Use of the Best Practice Recommendations

The *Ontario Needle Exchange Programs: Best Practice Recommendations* document was developed to assist NEPs with providing evidence-based service, to aid program development, and to help programs defend their policies and practices. Since this document was the first of its kind, we were interested to know how the document has been used and to identify areas for future improvement.

Table 15: Use of the Best Practice Recommendations

Program has used the <i>Best Practice Recommendations</i> to:	Core NEPs % (#)	Satellite NEPs % (#)
Make planning decisions about program practices and policies	97% (30)	59% (32)
Make changes to program practices and policies	94% (29)	54% (29)
Advocate to change program practices and policies	97% (30)	46% (25)
Defend the program in the community	80% (24)	59% (32)
Explain the program to outsiders	87% (26)	67% (37)
Evaluate the program	63% (19)	42% (23)
Train with new staff	90% (27)	67% (36)
Train with staff at other agencies	80% (24)	47% (26)

The *Best Practice Recommendations* were used for a variety of purposes including planning, policy change, advocacy, and training (see Table 15). While the majority of core NEPs used the document for many purposes, a smaller proportion of satellite NEPs reported using the document. Fewer satellite NEP managers (76%, n=44) reported having read the *Best Practice Recommendations* compared to the core managers (94%, n=30). Further, while 90% (n=28) of the core NEP managers rated the document as ‘very helpful’ overall, 58% (n=29) of the satellite managers gave the same rating. The remaining satellites rated the *Best Practice Recommendations* as either ‘somewhat helpful’ (24%, n=12) or ‘neither helpful nor unhelpful’ (18%, n=9). None of the programs provided negative ratings of the document. Our data highlights the need to better understand why fewer satellite NEPs have read or used the *Best Practice Recommendations*.

The suggestions for improving the *Best Practice Recommendations* we received included obtaining approval/endorsement from the government, particularly the OMHLTC, adding and updating the evidence, and creating a shorter or quick-reference version.

Table 16: Requests for future Best Practice Recommendations

Would like to see a Best Practices document for:	Core NEPs % (#)	Satellite NEPs % (#)
Methamphetamine	97% (28)	94% (51)
Oxycontin™	97% (28)	94% (51)
Buprenorphine	79% (22)	84% (42)
Heroin substitution	86% (24)	89% (47)
Safer injecting facilities	89% (25)	86% (42)
Prison-based NEPs	89% (23)	80% (40)

Finally, we asked NEP managers whether they would like to see a *Best Practice Recommendations* document for other types of substances and harm reduction programs (see Table 16). Most respondents reported a need for other best practice recommendations and were most interested in recommendations for methamphetamine and Oxycontin™.

Medical Officers of Health and NEP decision making

When asked to identify factors that influence decision-making, NEP managers consistently identified the importance of their local MOHs. Given this finding, we interviewed a purposive sample of MOHs to better understand their perceptions of their roles and decision-making regarding NEPs.

For the most part, the MOHs described an arm’s-length relationship with their local NEPs. From the MOH perspective, day-to-day operations are the responsibility of the NEP managers and their staff at the public health unit or outside agency, while MOHs are involved with major decisions regarding policy and significant changes to NEP service delivery. For example, MOHs perceived their responsibilities to include advocating for and defending policy change, deciding whether to add new NEP sites and reviewing program budgets. Controversial matters, such as decisions about offering safer inhalation equipment, were also noted to be within the realm of MOH responsibilities. To illustrate, one Associate MOH told us:

Essentially anything that could potentially cause community response or media response or cause some political unrest, I want to be involved in, and that’s so that we make sure...we follow the proper process and we involve who we need to involve. (Interview 5)

When asked about the role of the Board of Health in decision-making, MOHs noted that Boards tended to be involved at the policy level, but not operations. Overall, MOHs expressed satisfaction with the extent to which they are involved in NEP decision-making.

When asked to identify factors that they would take into consideration when making decisions about their NEPs, participants identified a similar range of factors and external actors. All MOHs reported that funding was an important consideration when making decisions. In particular, decisions about the quantity of supplies to offer are contingent on available funding. In some cases, funding was noted to have increased in importance over time as the number of clients and their demand for supplies has increased. MOHs noted that budgets, including overall public health unit budgets, have constrained the expansion of NEP services.

Scientific evidence was identified as a very important factor that is considered during decision-making processes. The availability of accessible and high-quality evidence that demonstrates the public health benefits of NEP services was noted to be a key factor in helping garner support for new policies and practices, including the distribution of injection-related items. According to the MOHs interviewed, questions about scientific evidence have and continue to serve as barriers to the implementation of safer inhalation equipment distribution.

What I found persuasive when I made the argument for [safer inhalation equipment] here in [the city] was not to rely excessively on the relatively weak evidence around communicable disease transmission, but rather on the role of crack use supplies in establishing relationships with a highly marginalized population to draw them in for other services which could be beneficial. (Interview 2)

Yeah, [scientific evidence] to me, is probably the most important and quite lacking and so challenging... I need to convince my Medical Officer of Health that we need to move in certain directions and I can't do that if there isn't evidence. Yeah, it needs to be evidence based. (Interview 4)

Several MOHs also reported that lack of or weak scientific evidence would be a consideration that might prevent them from approving certain types of equipment for NEP distribution.

With one exception, most of our key informants did not identify legal and policing issues as major factors considered in the decision-making process. A few reported that legal and policing issues had arisen from time to time and had been more important in the past. An Associate MOH provided an example:

Like the cooker issue, that was an issue. But they don't really pop up. I think we've ironed those out. We ironed them out many years ago and the relationship with the police, and that sort of thing. (Interview 1)

While perhaps not important considerations at the present time, participants acknowledged that legal and policing issues could certainly be potential barriers for NEPs. Another Associate MOH stated, "It hasn't been an issue to date, but I think potentially it could be a huge issue depending on who your police are." (Interview 5) Some Ontario NEPs noted that policing issues are crucial when making decisions. These NEPs described difficulties with their local law enforcement regarding NEP policies and procedures. Most of the MOHs we interviewed were aware of these difficulties and expressed a desire to avoid similar problems.

At the time of the interviews, the above considerations appeared to be particularly important with respect to decisions surrounding safer inhalation equipment. MOHs reported that the issue of crack pipes received considerable political attention that has served as a major barrier to distribution in some jurisdictions. In other areas of Ontario, the issue has not triggered such strong political opposition. Several MOHs suggested that strategies involving ‘flying under the radar’ help to successfully overcome such political barriers, even in conservative regions. That is, reducing the visibility of changes to NEP policies and practices can help prevent controversy. An Associate MOH advised:

[T]hat has always been our motto, is to keep the needle exchange under the radar screen, like try not to let it hit public attention or not public, but the media or, well, I mean if it has to, it does, the political. Like keep it off the political radar screen so that it doesn't cause people to grab at the issues and for conservative views to come out and to question harm reduction strategies and those sorts of things. (Interview 1)

To further attenuate potential political backlash around safer inhalation equipment and other emerging issues for NEPs, MOHs suggested consensus building with community partners and stakeholders, including the police, and embedding the issues within a regional drug strategy. They noted that efforts such as these sometimes require a willingness to be innovative, try new approaches, and take on opposing political views.

Key informants were also asked about the usefulness of documents like the *Best Practice Recommendations* to their work and how to effectively communicate scientific knowledge to MOHs. Some indicated that having such documents is very useful because the documents set a standard and rationale for practice and accountability. According to an Associate MOH, best practices are valuable when controversial issues arise as they provide a norm to be followed and evidence to defend and answer questions about what programs are doing. Another Associate MOH associated with an outsourced NEP reported that the *Best Practice Recommendations* document was very helpful when, “we wanted to clean up and clarify our relationship with the agency that was delivering the program.” (Interview 4) MOHs also reported the utility of having evidence presented in a single, comprehensive and convenient document.

Nevertheless, we also heard from MOHs that there are times when best practice documents might not have much impact on their work. When asked about the usefulness of such documents, one MOH reported that that depends on compliance and current practice, especially where the best practices recommend something that is not being practiced or is different from current practice. Coming from an organization with its own capacity to develop policy and examine research, the same MOH stated, “We certainly look at [best practice recommendations] when we use them, but we don't usually wait for them.” (Interview 2) Furthermore, MOHs may not always have the time to read large documents. Preferring executive summaries to “weighty tomes,” another MOH explained:

So I think the audience is more geared towards the program implementers rather than the program decision makers. But you can rely on a document like that to bolster your own kind of positions at a high level, should the need arise. (Interview 3)

Finally, MOHs reported that scientific research findings are best communicated to them via credible and expert sources. In particular, having other physicians, the Ministry, and the wider public health community involved in such communications is beneficial because they represent “people that we deal with and see as legitimate.” (Interview 5) Potentially effective communication strategies that were reported included the dissemination of research findings via teleconferences, face-to-face meetings, and presentations. A few key informants discussed having research presentations added to provincial MOH meetings and incorporated into their continuing education curriculum. E-mail or other types of mail-out communications were regarded by MOHs as ineffective strategies because they may get filed away and not read.

DISCUSSION AND INTERPRETATION

Our findings demonstrate that the *Best Practice Recommendations* have been widely implemented by NEPs across Ontario. As a result, NEPs are now better able to respond to the health and social needs of their clients than they were two years ago. Nevertheless, there remain some important challenges for full implementation. What follows below is a more contextualized summary of this project's findings that distinguishes between the successes, barriers, and suggestions for the future.

Successes and facilitators

The results from our survey confirm that needle and syringe exchange policies in Ontario have moved in the direction of distribution as opposed to one-for-one exchange. This is evident as the majority of needle exchange programs reported distributing needles without requiring returns. As well, more programs now distribute needles without limits. Our survey data also appear to support the claims of NEP managers and frontline workers that one-for-one exchange is an outdated policy and practice.

The biggest changes in *Best Practice Recommendations* uptake that our survey revealed are with respect to the other types of injection equipment. Considerably more NEPs in Ontario are distributing cookers, filters, acidifiers, sterile water, alcohol swabs, and tourniquets to their clients today compared to just two years ago. The majority distribute without placing limits on the number of items provided. According to NEP managers, the OHRDP and *Best Practice Recommendations* have been significant catalysts behind these positive findings, as they were the most commonly reported reasons for changes in other injection-related equipment distribution. The OHRDP appears to be an especially important source of change because this program provides equipment to participating NEPs at no cost, thus partially resolving the ongoing funding issues that confront Ontario NEPs. As one core manager reported, “[F]unding/supplies through the OHRDP was a huge driving factor and the best practice guidelines provided much needed evidence for us.” All of the MOHs we interviewed considered funding to be an important consideration when making decisions about NEPs, especially with respect to decisions about equipment supplies.

Some programs reported that decisions by NEP managers and decisions by the local MOH/Executive Director were reasons for change in equipment distribution practices. These findings suggest that even with the availability of free supplies from the OHRDP, support and approval from management and policy makers remains an important ingredient to ensure that NEPs distribute a variety of harm reduction materials. These views were corroborated by MOHs who spoke about their involvement in major changes to NEP policies and practices.

Between 2006 and 2008, there was stability in the type and number of program models offered by NEPs. Program stability is important because it signals to clients that they can trust that their local NEP will provide the services they have come to rely upon. However, stability may also reflect that NEPs have not received additional funding needed to expand their service complements. Nonetheless, a substantial minority of NEPs, particularly among the satellites, reported tailoring services to address the needs of specific sub-populations of drug users such as women and youth. Although the changes were not statistically significant, more programs began to involve drug users in program design, planning, and delivery over

the past two years. Some managers attributed changes to program tailoring and user involvement to more need or demand from specific client groups and receiving suggestions for programs from clients. As programs age, they may also develop the expertise necessary to tailor their services. These examples highlight steps towards staying current with changes in the IDU community and integrating clients into program development.

Further, our findings regarding primary care show that more core NEPs offered vaccination and testing in 2008 than in 2006. A smaller proportion of satellite NEPs compared with core NEPs provide vaccination and testing services. This difference remained stable over time. However, many satellite NEPs offer these services by referral to other agencies. It is important to remember that these services may be beyond the scope, function, and professional staffing of many of the satellite NEPs.

Issues and barriers

Although our survey findings are encouraging, there were a few counter trends that deserve attention. In terms of needle exchange policies, a few more satellite managers reported that their programs have moved towards stricter exchange than was the case in 2006. In 2008, one satellite program reported using a 1-for-1 exchange policy while six satellites reported imposing caps on the number of needles given to clients who do not have any to return. These numbers are small, but the potential health risks and consequences may be large for IDUs who do not receive enough sterile needles to cover their needs from these sites. Between 2006 and 2008, the number of NEPs that distributed other types of injection-related equipment increased dramatically; however, for some types of equipment the proportion of programs distributing with no limits fell. It is unclear why a small number of programs have yet to adopt no-limit policies.

The distribution of safer inhalation equipment used for smoking crack and other drugs has not been extensively implemented in Ontario, especially among the core programs. Unlike needles which have dedicated funding from the Public Health Branch of the OMHLTC, and the supplies of injection-related equipment provided to NEPs free of charge through the OHRDP, many programs have not secured stable funding for safer inhalation equipment. Individual organizations must typically organize funding for these items through various sources. In light of this challenge, the OHRDP has received requests for safer inhalation equipment from NEPs (Ontario Harm Reduction Distribution Program, 2007).

Importantly, decision-making and politics appear to influence the distribution of safer inhalation equipment. This is not surprising given the ongoing controversy surrounding this issue. Just over half of the core NEP managers and roughly a third of satellite managers who addressed the question identified decisions by the local MOH/Executive Director as reasons why their programs do not distribute glass stems, mouth pieces, or brass screens. It is worth reminding the reader that decisions by the local MOH/Executive Director were reported by some NEP managers as reasons behind not distributing certain types of injection-related equipment as well, such as cookers and acidifiers. As noted above, decisions made by Boards of Health/Board of Directors/City Council have also impeded distribution of safer inhalation supplies. These challenges reflect broader issues for NEPs regarding how external actors and agencies influence public health policy, rather than scientific evidence, need, or public health impact.

MOHs expressed awareness of the contentious issues and political barriers Ontario NEPs have faced regarding the distribution of safer inhalation equipment. The interviews revealed that MOHs perceived these political barriers as extending further into the community and through the Ministry. Some MOHs suggested that keeping NEPs below the 'radar' by minimizing the visibility of major changes to policies and practices have helped avoid some of these problems. However, MOHs also discussed scientific evidence as a key consideration in NEP decision-making. From the MOH perspective, uncertainty about the strength of evidence regarding the harm-reduction potential of safer inhalation equipment is an important barrier that factors into some of the political debates.

Our data suggest that NEPs tend to have mostly positive relationships with local law enforcement agents. Just over half reported that they have an established working relationship with their local law enforcement. Nevertheless, some NEP managers noted the role that law enforcement plays in NEP operational issues. In particular, 1 in 5 core NEPs reported opposition from law enforcement as a reason for not distributing safer inhalation equipment. Interestingly, opposition from law enforcement was not noted by any respondents as a reason for not distributing cookers, filters, acidifiers, sterile water, or tourniquets.

These findings should not discount the potential influence law enforcement may have over NEP activities. Other data demonstrate that Ontario NEP clients have experienced having their new glass stems confiscated and/or destroyed by police officers (Leonard et al., 2008). As well, several media reports during the course of our study identified police opposition and interference with operations in an Ontario NEP. These instances of interference are troubling because they represent the power of external actors when it comes to influencing decisions about public health programs. Even though most of the MOHs we interviewed did not report legal and policing issues as currently important considerations in their regions, they recognized that opposition from law enforcement has the potential to become a major barrier for NEP services.

Given that most NEPs do not report police interference, it is not surprising that few have established a protocol to resolve conflicts between NEP staff and law enforcement agents. However, relationships can change over time and it might be prudent to better understand how to develop these protocols. Our data highlight an opportunity to learn from the small number of programs that have established these agreements.

RECOMMENDATIONS

Practice and Policy

- Encourage the Ontario Ministry of Health and Long-Term Care to use the *Best Practice Recommendations* as the foundation for the future development of policy and practice standards.
- Ensure that all NEPs distribute all injection-related equipment, distribute the types of equipment that are recommended, and distribute safer inhalation equipment.
- Develop provincial-level policies to approve a program to distribute safer inhalation equipment.
 - **Key decision makers** - NEP managers; Medical Officers of Health; Executive Directors; local Boards of Health; Public Health Branch, Ontario Ministry of Health and Long-Term Care; Ontario's Chief Medical Officer of Health; and the Ontario Agency for Health Protection and Promotion.

Training

- Ensure that core NEPs share the *Best Practice Recommendations* with their satellite programs.
- Ensure in-service training to assist NEPs to develop agreements and conflict resolution protocols with local law enforcement.
 - **Key decision makers** - NEP managers; Medical Officers of Health; Executive Directors; local Boards of Health; and local law enforcement agencies.

Funding

- Develop a funding mechanism to ensure that the OHRDP can distribute safer inhalation equipment.
- Assist NEPs to identify and secure sustainable funding to increase the number of service models that are available.
 - **Key decision makers** - Medical Officers of Health; local Boards of Health; Public Health Branch, Ontario Ministry of Health and Long-Term Care; and Ontario's Chief Medical Officer of Health.

Best practices

- Secure funding, develop, and disseminate *Best Practice Recommendations* for programmatic responses to the following: methamphetamine, Oxycontin™, safer injecting facilities, and prison-based NEPs.
- Develop a partnership with the College of Physicians and Surgeons of Ontario to ensure that *Best Practice Recommendations* are developed for buprenorphine and heroin substitution programs.
- Develop a plan and identify a funding source to update the *Best Practice Recommendations*, particularly the evidence regarding safer inhalation equipment.

- **Key decision makers** - Ontario Needle Exchange Coordinating Committee; and Best Practice Research and Evaluation Team members.

Knowledge transfer

- Distribute these findings to all NEPs and their satellite programs.
 - To ensure ongoing access to these findings by all NEPs and other interested organizations, post the findings on the OHRDP website, the OHTN website, and the AIDS Bureau website.
 - Present the findings at regional NEP manager meetings.
 - Present findings to other interested jurisdictions.
- **Key decision makers** - NEP managers; Ontario Needle Exchange Coordinating Committee; and Best Practice Research and Evaluation Team members.

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