Process evaluation of the Prevent Overdose in Toronto (POINT) program

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ABSTRACT

SETTING: A harm reduction program at a public health unit in Toronto, Ontario, between August 31, 2011 and August 31, 2013.

INTERVENTION: We conducted a process evaluation of the first two years of an opioid overdose prevention and response program, Prevent Overdose in Toronto (POINT), including analysis of data from program documentation forms, as well as qualitative interviews with program staff, representatives from partner agencies, and program clients.

OUTCOMES: In the first two years of the program, 662 individuals (52.4% male; mean age 38.3 years) were trained in opioid overdose prevention and given a naloxone kit. Among clients currently using opioids, the most frequently reported opioids were oxycodone (40.4%) and heroin (34.4%). Clients reported 98 administrations of naloxone, primarily to friends and acquaintances. Nearly all naloxone recipients reportedly survived; one did not survive, and one had an unknown outcome.

Staff and partner agencies feel the program reaches the target population and that POINT training meets clients' needs. Clients would like to see the training offered more widely. Overall, staff, partner agencies and clients were pleased with the POINT program, and they offered suggestions on program recruitment and delivery.

IMPLICATIONS: Individuals at risk of opioid overdose have participated in overdose prevention and response training, and reported using naloxone in overdose events. Results of this initial program evaluation are being used to improve the delivery of the POINT program and can inform broader public health practice in opioid overdose prevention.

KEY WORDS: Drug overdose; naloxone; program evaluation

La traduction du résumé se trouve à la fin de l'article.

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In North America, there have been parallel trends of increasing opioid prescribing with rising associated harms of addiction, emergency department visits, and overdose deaths.^{1,2} This growing problem has received national attention in both Canada and the United States as a public health crisis.^{3,4} In the US, drug overdose is now the leading cause of death due to injury, above motor vehicle collisions.⁵

Comprehensive strategies have been developed to prevent the causes and outcomes of the opioid crisis.^{3,4} An intervention that has experienced rapid growth is opioid overdose education and distribution of naloxone, a medication that is used to reverse the effects of an opioid overdose.^{6–9}

The current evidence on the effectiveness of naloxone programs remains limited.^{10–14} Naloxone programs are promising for reducing mortality¹⁵ and being cost-effective,¹⁶ and there are several descriptive reports of program data in the literature.¹⁰ To date, no rigorous prospective studies have been completed to assess impact on rates of overdose death.

As the experience with take-home naloxone programs in Canada is limited, it is important to learn from the initial stages of implementation and to monitor the impact of the program as it proceeds. There are only two previous published program evaluations for Canadian naloxone programs.^{7,17}

In August 2011, the harm reduction program (“The Works”) at Toronto Public Health (TPH) began offering an opioid overdose prevention and response training program with naloxone prescription, called Prevent Overdose in Toronto (POINT). That year, Toronto had experienced the highest yearly number of drug-related deaths since monitoring began in 2004 – there were 201 deaths in 2011 and opioids were most frequently involved.¹⁸ The POINT program is offered to current and past opioid users, with the goal of reducing morbidity and mortality from opioid overdose. POINT was the second naloxone program established in Canada and the first to be administered by a public health unit. We have previously reported on the development and implementation of the POINT program, including details of the intervention.⁸

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Conflict of Interest: None to declare.

We subsequently conducted a process evaluation of the POINT program to improve public health practice in this program by:

1. describing clients' demographics, drug use patterns, and overdose experiences prior to training;
2. documenting naloxone refills and reported uses of naloxone after training;
3. assessing staff, community partner and client perceptions of program administration and delivery.

METHODS

Setting and design

We conducted a mixed-methods process evaluation to assess the first 24 months of the POINT program at TPH to learn from its implementation and to monitor the initial outcomes of the program. This evaluation was approved by both the TPH ethics review process and the University of Toronto Research Ethics Board.

Sources of data

Data on clients' demographics, drug use patterns, overdose experiences, prescription refills and reported uses of naloxone came from a chart review of POINT clients trained between August 31, 2011 and August 31, 2013. Clients are asked to return to TPH to report any uses of naloxone (either administration to someone or receiving from a peer), and TPH staff fill out a form to detail their experiences.

To obtain qualitative feedback and suggestions for the POINT program, two authors (PL and MG) conducted semi-structured one-on-one interviews with five TPH staff and with one Harm Reduction Worker or Addictions Counselor from each of eight partner agencies involved in hosting off-site POINT training sessions. The representatives from community agencies work directly with people who use opioids and are at risk for overdose. These interviews were conducted in person or over the telephone and were audio-recorded with consent; those who did not wish to

be audio-recorded were given the interview notes and asked to review them for accuracy.

We also conducted one-on-one interviews with 15 clients of the POINT program to obtain their feedback on the program. At the end of POINT training sessions between June and August 2012, TPH staff trainers asked clients for consent to refer them for an interview. Staff trainers were asked to obtain a purposive sample to represent the diversity of POINT clients, including factors such as gender, age, housing status, drug use, and overdose risk factors. The interviewers then explained the interview process and obtained verbal consent to conduct the brief interview. Interviews took place both on-site at TPH and off-site at community agencies immediately following POINT training. Client respondents were each given a \$5.00 gift card to a coffee shop.

Analysis

Data were entered into PASW Statistics 18 (PASW Statistics for Windows, Version 18.0. Chicago: SPSS Inc., 2009) and were analyzed using frequency tabulations. Cases with missing data elements were included in the analyses, and the distributions indicate the number of cases with missing data for each element. We present valid percentages.

Two of the investigators (PL, MG) conducted a thematic analysis¹⁹ of the qualitative interviews and narrative descriptions from the charts.

RESULTS

Quantitative

From August 31, 2011 to August 31, 2013, 662 individuals were trained in the POINT program and given a naloxone kit, with a monthly average of 27.6 clients, and a range of 5 to 64 new clients per month (Figure 1).

Table 1 displays the age, gender and self-reported opioid use of clients at the time of enrolment in the POINT program. About half of clients were male and the mean age was 38.3 years, and 92% reported current or past opioid use.

Figure 1. Number of clients trained per month.

Table 1. POINT clients' gender, age and opioid drug use (N = 662)

		<i>n</i>	Valid % or SD
Gender	Male	347	52.4%
	Female	300	45.3%
	Transgender, two-spirited, queer	15	2.3%
Age (years)	Mean (range 14 to 69)	38.3	11.9
	Missing	5	
	<25	105	16.0%
	25–34	163	24.8%
	35–44	161	24.2%
	45–54	169	25.7%
Self-reported opioid use	55+	59	9.3%
	Current	458	69.3%
	Past	150	22.7%
	None	53	8.1%
	Missing	1	

SD = standard deviation.

Table 2 reports the drug-using behaviours of the 458 clients reporting current opioid use, with 52.6% (234/458) reporting daily opioid use, most frequently using oxycodone or heroin. Additionally, most clients currently using opioids (393/458, 85.8%) also reported regularly using other non-opioid drugs over the previous six months, including alcohol and benzodiazepines.

Almost one third (28.3%) of all 662 POINT clients reported having experienced an opioid overdose (Table 3). The most common opioid involved in the overdoses was heroin. Among clients reporting past opioid overdose, 40.7% reported receiving naloxone in the past.

Finally, the data reveal that 76.7% (499/651) of all clients reported ever having witnessed an overdose, and a few (26/498, 5.2%) of these had administered naloxone (obtained from another source) prior to being trained in the POINT program.

Naloxone Refills

In the first 24 months of the POINT program, 156 refills (replacement of 2 vials of naloxone in most cases and other kit contents as needed) were provided to 97 clients (14.6% of all POINT clients), with 61 persons receiving 1 refill and 36 receiving 2 or more refills. Over half (85/155, 54.8%) of refills were given because the naloxone had reportedly been used in an overdose.

Naloxone Use

Over the first 24 months of the POINT program, 67 individuals (10.0% of clients plus 1 individual who used a client's kit) reported having administered naloxone. Forty-five people reported administering naloxone on one occasion, and 22 people reported administering naloxone on two or more separate occasions, with a total of 98 naloxone administrations. Table 4 presents details on the 98 events in which naloxone was administered. Most often, clients reported that naloxone was administered to a friend (52.6%), the location of the overdose was a private residence (80.4%), and heroin was involved in 64.4% of overdoses. Overdose responses involving chest compressions or calling 911 represent a minority of overdose events (44.6% and 36.1% respectively). When 911 was not called, the reason was most often concern that police would become involved (56.1%).

There were also 9 events where naloxone was administered to program clients by a peer, but due to the small number of events in this category, the results were not analyzed further. Nearly all overdose victims reportedly survived; one did not survive, and the outcome for another was unknown by the reporting client.

Clients were asked by POINT staff to give feedback about their experience using naloxone (Table 4). Overall, feedback was positive, as clients commonly indicated that if they were in the

Table 2. Drug use among clients currently using opioids (N = 458)

		<i>n</i>	Valid %
Types of opioids used	Oxycodone (includes OxyContin®, Percocet® and Percodan®)	181	40.4%
	Heroin	154	34.4%
	Methadone	115	25.7%
	Morphine (includes morphine-SR and MS-contin)	94	21.0%
	Codeine (includes Tylenol® 1, 2, 3 and 4)	70	15.6%
	Hydromorphone (includes Dilaudid and Hydromorph Contin®)	54	12.1%
	Fentanyl	43	9.6%
	Demerol	<5	
	Other*	29	6.5%
	Missing	10	
Ever overdosed on opioids	Yes	161	35.7%
	Missing	7	
Use daily	Yes	234	52.6%
	Missing	13	
If use daily ... In the past year, have you ever gone 3 or more days without opioids?	Yes	108	51.9%
	Missing	26	
Other drugs used regularly in the past 6 months	Alcohol	263	57.4%
	Cocaine	213	46.5%
	Crack	192	41.9%
	Benzodiazepines	163	35.6%
	Marijuana	85	18.6%
	Speed (includes crystal meth)	80	17.5%
	Ketamine	60	13.1%
	Other non-opioid drug†	40	8.7%

* Includes drugs rarely mentioned, unspecified opioids and non-specific comments such as "variety" or "anything I can get".

† Includes drugs rarely mentioned (e.g., MDMA, mushrooms) and non-specific comments such as "pharmacy".

Table 3. Clients' overdose experiences (N = 662)

		<i>n</i>	Valid %
Ever overdosed on opioids	Yes	185	28.3
	Missing	9	
<i>If ever overdosed on opioids ... Drugs involved</i>	Heroin	95	53.4%
	Fentanyl	26	14.6%
	Oxycodone	23	12.9%
	Opioids/opiates (unspecified)	19	10.7%
	Methadone	11	6.2%
	Morphine	11	6.2%
	Codeine	8	4.5%
	Demerol	<5	
	Hydromorphone	<5	
	Other*	8	4.5%
	Missing	7	
<i>If ever overdosed on opioids ... Had been given naloxone</i>	Yes	72	40.7%
	Missing	8	
Witnessed someone else overdose	Yes	499	76.7%
	Missing	11	
<i>If ever witnessed an overdose ... ever gave a naloxone injection to someone</i>	Yes	26	5.2%
	Missing	1	

* Includes drugs rarely mentioned and non-specific comments.

same situation they would use naloxone again (96.8% of clients), that they found naloxone easy to access and use (95.5%), and that they had enough training to use naloxone (95.7%).

Qualitative

Screening and Recruitment

Both POINT staff and community agency representatives felt that client recruitment into the POINT program has been effective in reaching the target population. POINT staff indicated that recruitment had exceeded expectations, and community agencies indicated that word-of-mouth promotion especially helped with recruitment. Nearly all clients we interviewed reported taking the POINT training because they knew people who use opioids, and few reported they were taking the POINT training for their own safety.

POINT staff described challenges with appropriate screening of eligible clients at partner agencies (i.e., not all clients recruited to the sessions were eligible to receive a naloxone prescription). Program staff clarified eligibility criteria at the training sessions, but some individuals may have been disappointed if they expected to receive a naloxone kit and were not eligible.

Some individuals were interested in a naloxone supply to use for others at risk (e.g., friends, family), but because of program policies, staff were not able to dispense a naloxone kit to individuals who were not at risk of overdose themselves. POINT staff suggested refining eligibility criteria to include individuals who are in contact with at-risk opioid users, even if they are not opioid users themselves.

Training Content and Format

Staff and agency representatives were satisfied with the training resources, and felt the content and delivery of training met clients' needs. Most clients indicated that the training built upon existing knowledge, felt that the training was thorough, and liked the hands-on practice.

Regarding the training format, staff suggested identifying clients who needed one-on-one rather than group training, to adapt to literacy, language or other individual barriers to training. At some

off-site training sessions, there were interruptions that made POINT program training challenging. Suggestions to minimize distractions included conducting group sessions in a private room with a small group size and discussing ground rules about disruptions prior to conducting the training.

Social Aspects

POINT staff appreciated a collaborative work environment within the program and also valued the relationships with partner agencies. They also found the general community to be supportive of the program. Agency representatives reported positive interactions between clients and TPH staff. Positive unanticipated consequences of the training were reported by agency representatives, including that it helped to de-stigmatize drug use at the organization, built a stronger sense of community (i.e., helping peers) and helped with clients' recovery with substance use. Clients viewed the staff trainers positively and felt they were non-judgemental.

Program Support and Logistics

POINT staff felt the program could benefit from a greater number of staff members to meet current demands of direct service to clients and administrative aspects of the program. Partner agencies and clients expressed an interest in additional program activity. The most common suggestion from clients was for more widespread naloxone training and advertisement of the program. Agencies also suggested TPH conduct a second training session two weeks after the initial session when there is enthusiasm among people who could not attend the first session, follow up with newly trained clients after two weeks to answer questions, recertify clients on a regular basis, and implement strategies to encourage clients to report uses of naloxone. Agencies were also interested in collaborating with TPH to develop organization-wide plans for overdose incidents (similar to a fire drill). To estimate the additional resources needed, staff suggested conducting a community assessment of unmet need for the program.

Table 4. Client reports of naloxone administration events (*N* = 98)

		<i>n</i>	Valid % or SD
Relationship to person receiving the naloxone	Friend	51	52.6%
	Acquaintance	17	17.5%
	Stranger	9	9.3%
	Partner	8	8.2%
	Family member	5	5.2%
	Self	5	5.2%
	Other	<5	
Location of overdose	Missing	1	
	Private residence	78	80.4%
	Shelter/hotel	10	10.3%
	On the street	6	6.2%
	Other	3	3.1%
Drugs involved in overdose	Missing	1	
	Heroin	58	64.4%
	Fentanyl	20	22.2%
	Morphine	7	7.8%
	Oxycodone	7	7.8%
	Opioids/opiates (not specified)	5	5.6%
	Methadone	5	5.6%
	Other	8	8.9%
Chest compressions administered	Missing/unknown	8	
	Yes	41	44.6%
Recovery position administered	Missing	6	
	Yes	62	68.9%
911 called	Missing	8	
	Yes	35	36.1%
<i>If 911 was called ... EMS transported person to hospital</i>	Missing	1	
	Yes	26	100%
<i>If 911 was not called ... Reasons why 911 not called</i>	Missing	9	
	Worried police would become involved	32	56.1%
	Thought person would recover on own	17	29.8%
	Thought someone would be blamed for the overdose	<5	
	They got better with the naloxone and decided to watch them instead	23	40.4%
	Other	20	35.1%
Victim survived the overdose	Missing	5	
	Yes	95	97.9%
	No	1	1.0%
	Unknown	1	1.0%
Number of naloxone doses administered	Missing	1	
	One dose (or less)	56	57.8%
	More than one dose	41	42.3%
Client would use naloxone again in a similar situation	Missing	1	
	Yes	91	96.8%
	No	1	1.1%
	Unsure	2	2.1%
Naloxone easy to access and use	Missing	4	
	Yes	85	95.5%
	No	3	3.4%
	Unsure	1	1.1%
Client received enough training to give naloxone	Missing	9	
	Yes	88	95.7%
	No	3	3.3%
	Unsure	1	1.1%
	Missing	6	

SD = standard deviation.

To ease the administrative aspects, there were suggestions from POINT staff to simplify the program's documentation forms and improve systems for capturing reports of the use of naloxone (e.g., an electronic record system to track program information on an ongoing basis). Additionally, staff and agency representatives both expressed a need for an easier system to deliver naloxone (e.g., auto-injector or intranasal device), based on feedback from clients that the current kit required many steps before naloxone could be administered.

DISCUSSION

This evaluation provides a descriptive qualitative and quantitative report on the first two years of the overdose education and naloxone distribution program in Toronto. The program continues to expand, and had distributed 1,975 naloxone kits and received reports of 335 naloxone administrations as of November 2015. Similar to other reports,^{10,12} we found that people at risk of opioid overdose were willing to be trained and to use naloxone to respond

to opioid overdose. Further, we found that staff, local agencies and clients viewed the program positively.

The POINT program enrollment was higher than in many other programs reported in the literature,¹⁰ but less than in the programs in British Columbia,⁷ Massachusetts,^{15,20} Chicago,²¹ and San Francisco,²² although the population base served by these programs varies.

The demographics and drug use pattern among POINT clients were comparable to those in other programs. The average age was similar (38.3 years compared to 37.4 years in other programs¹⁰), although the proportion of male clients was lower at 52.4%, compared to 68.3% in other programs.¹⁰ Additionally, we observed a common finding that most had witnessed an opioid overdose (76.7% compared to 79.2% in the literature¹⁰), and a large number had also experienced an opioid overdose themselves (35.7% among current opioid users and 28.3% overall, compared to 49.6% in the literature¹⁰). The literature indicates that individuals who have experienced an opioid overdose previously are at higher risk of a subsequent overdose,²³ indicating that the POINT program is reaching many high-risk individuals.

Similar to the case in other naloxone programs, the refills were provided most commonly because the client's naloxone supply had been used in a reported overdose event.^{7,22,24} The other reasons for refills were similar to reasons reported by other programs, such as having been lost, stolen or confiscated.^{7,22,24} There were very few deaths among individuals who received naloxone administered by a peer, which corresponds to the literature (83%–100% survival).^{7,10}

Several interesting findings emerged from the detailed descriptions of overdose events. We found that reported overdose events occurred largely in a private residence, underscoring the importance of several safety strategies suggested by the program, such as not using alone and telling someone else how to use your naloxone kit. A large proportion of overdoses involved heroin, which is consistent with the pattern of opioid use among clients, and also with other North American naloxone programs.^{7,10} However, many overdoses in the POINT program involved oxycodone. The higher proportion than described in the British Columbia program⁷ indicates a different pattern of opioid use in Toronto. Further, Ontario epidemiology shows a minority of opioid-related deaths involve heroin,²⁵ which may reflect the different characteristics among the needle exchange clients in Toronto compared to the general population using opioids. Additionally, our finding that individuals called emergency medical services (EMS) or performed chest compressions in a minority of events was consistent with many other programs. (Calling EMS ranges from 29%–100% and doing rescue breathing or CPR ranges from 23%–66% in other studies.)¹⁰ We found that reasons for not calling 911 were comparable to other reports, such as fear of police involvement.^{7,10} The POINT program continues to work with emergency service providers to minimize such barriers for clients.

Overall, the qualitative feedback from POINT staff, local agencies and clients was positive. These groups felt the program was reaching the intended risk groups, provided helpful information and served a need in the community. The POINT program received suggestions for improvement in the content and format of the training, many of which have been implemented since the

evaluation concluded. These include improving documentation forms, updating the medical directive to offer training without naloxone to people who do not fit the criteria for naloxone dispensing (e.g., friends and family of clients who do not use opioids themselves), and offering retraining as requested. The program is also working to address additional suggestions by revising the training manual and promotion materials, certifying additional POINT trainers and designating a staff member to organize community training sessions. Ongoing efforts include working with a newly established naloxone advisory group and a quality improvement specialist, monitoring new evidence from other jurisdictions, and continued advocacy and outreach to emergency service providers, government and other organizations.

The suggestions about the naloxone delivery format reflect factors external to the program. In Canada, naloxone is currently available in ampoules and vials, whereas pre-filled syringes and auto-injectors are approved in other jurisdictions. The TPH program will continue to monitor these developments and adapt the program accordingly.

Limitations

We acknowledge some limitations to this evaluation. First, our data relied on client self-report, and the program does not prospectively contact all clients for follow-up. Second, some data elements in some individual records were not clearly or fully completed, which may have reduced the accuracy of the data. Additionally, resources for data entry and analysis limited us to examining only the first two years of data, although the program has been operating for four years at the time of writing. It is possible that the demographics of program clientele and circumstances involved in overdose events have changed over time. Finally, our evaluation was not designed to examine the impact on outcomes such as non-fatal and fatal overdose. Local data suggest that drug-induced deaths in Toronto totaled 201 in 2011 at the time the program began, and 206 in 2013 when the evaluation was completed (Office of the Chief Coroner for Ontario, compiled by Toronto Public Health), but the relationship with the reach or effectiveness of the program is unknown.

CONCLUSION

Overall, this evaluation found that individuals at high risk of overdose participated in opioid overdose education and response training, several had used their naloxone supply to respond to a reported overdose event, and the program was viewed positively by staff, agencies and clients. This report contributes to the minimal literature on naloxone programs in Canada^{7,17} and the growing body of knowledge of community-based naloxone programs in North America. This information has been used by the POINT program to improve its services and can be used to inform other organizations considering or involved in naloxone distribution. Future work is necessary to prospectively evaluate the optimal program delivery format, reduce client barriers to calling EMS during an overdose, assess client knowledge retention, and determine impacts of community-based naloxone programs on health service utilization and mortality in the population.

REFERENCES

- Dart RC, Surratt HL, Cicero TJ, Parrino MW, Severtson SG, Bucher-Bartelson B, et al. Trends in opioid analgesic abuse and mortality in the United States. *N Engl J Med* 2015;372(3):241–48. PMID: 25587948. doi: 10.1056/NEJMsa1406143.
- Hasegawa K, Espinola JA, Brown DF, Camargo CA Jr. Trends in U.S. emergency department visits for opioid overdose, 1993–2010. *Pain Med* 2014; 15(10):1765–70. PMID: 25139712. doi: 10.1111/pme.12461.
- National Advisory Committee on Prescription Drug Misuse. *First Do No Harm: Responding to Canada's Prescription Drug Crisis*. 2013. Available at: <http://www.ccsa.ca/2013%20CCSA%20Documents/Canada-Strategy-Prescription-Drug-Misuse-Report-en.pdf> (Accessed May 13, 2013).
- Office of National Drug Control Policy, US Executive Office of the President. *Epidemic: Responding to America's Prescription Drug Abuse Crisis*. 2011. Available at: http://www.whitehouse.gov/sites/default/files/ondcp/issues-content/prescription-drugs/rx_abuse_plan.pdf (Accessed May 13, 2013).
- Johnson NB, Hayes LD, Brown K, Hoo EC, Ethier KA. CDC national health report: Leading causes of morbidity and mortality and associated behavioral risk and protective factors – United States, 2005–2013. *MMWR Surveill Summ* 2014;63(Suppl 4):3–27.
- Wheeler E, Jones TS, Gilbert MK, Davidson PJ. Opioid overdose prevention programs providing naloxone to laypersons – United States, 2014. *MMWR Morb Mortal Wkly Rep* 2015;64(23):631–35. PMID: 26086633.
- Banjo O, Tzemis D, Al-Qutub D, Amlani A, Kesselring S, Buxton JA. A quantitative and qualitative evaluation of the British Columbia Take Home Naloxone program. *CMAJ Open* 2014;2(3):E153–61. doi: 10.9778/cmajo.20140008.
- Leece PN, Hopkins S, Marshall C, Orkin A, Gassanov MA, Shahin RM. Development and implementation of an opioid overdose prevention and response program in Toronto, Ontario. *Can J Public Health* 2013;104(3):e200–4. PMID: 23823882.
- World Health Organization. *Community Management of Opioid Overdose*. 2014. Available at: http://www.who.int/substance_abuse/publications/management_opioid_overdose/en/ (Accessed June 1, 2015).
- Clark AK, Wilder CM, Winstanley EL. A systematic review of community opioid overdose prevention and naloxone distribution programs. *J Addict Med* 2014;8(3):153–63. PMID: 24874759. doi: 10.1097/ADM.0000000000000034.
- McAuley A, Aucutt L, Matheson C. Exploring the life-saving potential of naloxone: A systematic review and descriptive meta-analysis of take home naloxone (THN) programmes for opioid users. *Int J Drug Policy* 2015; 26(12):1183–88. PMID: 26508033. doi: 10.1016/j.drugpo.2015.09.011.
- Mueller SR, Walley AY, Calcaterra SL, Glanz JM, Binswanger IA. A review of opioid overdose prevention and naloxone prescribing: Implications for translating community programming into clinical practice. *Subst Abuse* 2015; 36(2):240–53. PMID: 25774771. doi: 10.1080/08897077.2015.1010032.
- Administration of Naloxone in a Home or Community Setting: A Review of the Clinical Effectiveness, Cost-effectiveness, and Guidelines. *Rapid Response Report: Summary with Critical Appraisal*. Ottawa, ON: Canadian Agency for Drugs and Technologies in Health, 2014.
- Giglio RE, Li G, DiMaggio CJ. Effectiveness of bystander naloxone administration and overdose education programs: A meta-analysis. *Inj Epidemiol* 2015;2(10):1. doi: 10.1186/s40621-015-0041-8.
- Walley AY, Xuan Z, Hackman HH, Quinn E, Doe-Simkins M, Sorensen-Alawad A, et al. Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: Interrupted time series analysis. *BMJ* 2013;346:f174.
- Coffin PO, Sullivan SD. Cost-effectiveness of distributing naloxone to heroin users for lay overdose reversal. *Ann Intern Med* 2013;158(1):1–9. PMID: 23277895. doi: 10.7326/0003-4819-158-1-201301010-00003.
- Dong KA, Taylor M, Wild CT, Villa-Roel C, Rose M, Salvalaggio G, et al. Community-based naloxone: A Canadian pilot program. *Can J Addict Med* 2012;3(2):4–9.
- Medical Officer of Health, City of Toronto. *Overdose in Toronto: Trends, Prevention, and Response*. 2015. Available at: <http://www.toronto.ca/legdocs/mmis/2015/hl/bgrd/backgroundfile-83429.pdf> (Accessed January 18, 2016).
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3(2):77–101. doi: 10.1191/1478088706qp0630a.
- Walley AY, Doe-Simkins M, Quinn E, Pierce C, Xuan Z, Ozonoff A. Opioid overdose prevention with intranasal naloxone among people who take methadone. *J Subst Abuse Treat* 2013;44(2):241–47. PMID: 22980450. doi: 10.1016/j.jsat.2012.07.004.
- Maxwell S, Bigg D, Stanczykiewicz K, Carlberg-Racich S. Prescribing naloxone to actively injecting heroin users: A program to reduce heroin overdose deaths. *J Addict Dis* 2006;25(3):89–96. PMID: 16956873. doi: 10.1300/J069v25n03_11.
- Enteen L, Bauer J, McLean R, Wheeler E, Huriaux E, Kral AH, et al. Overdose prevention and naloxone prescription for opioid users in San Francisco. *J Urban Health* 2010;87(6):931–41. PMID: 20967505. doi: 10.1007/s11524-010-9495-8.
- Stoove MA, Dietze PM, Jolley D. Overdose deaths following previous non-fatal heroin overdose: Record linkage of ambulance attendance and death registry data. *Drug Alcohol Rev* 2009;28(4):347–52. PMID: 19594787. doi: 10.1111/j.1465-3362.2009.00057.x.
- Bennett AS, Bell A, Tomedi L, Hulse E, Kral AH. Characteristics of an overdose prevention, response, and naloxone distribution program in Pittsburgh and Allegheny County, Pennsylvania. *J Urban Health* 2011; 88(6):1020–30. PMID: 21773877. doi: 10.1007/s11524-011-9600-7.
- Global News. *New coroner's numbers say Ontario opioid deaths are up even though Oxy's killing fewer*. 2013 December 12. Available at: <http://globalnews.ca/news/1027453/new-coroners-numbers-say-ontario-opioid-deaths-are-up-even-though-oxy-s-killing-fewer/> (Accessed July 28, 2014).

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RÉSUMÉ

LIEU : Un programme de réduction des méfaits mené dans un bureau de santé publique de Toronto (Ontario) entre le 31 août 2011 et le 31 août 2013.

INTERVENTION : Nous avons mené une évaluation des processus après les deux premières années d'un programme de prévention et d'intervention en cas de surdoses d'opioïdes, *Prevent Overdose in Toronto* (POINT); l'évaluation a compris l'analyse des données des formulaires du programme, ainsi que des entretiens qualitatifs avec le personnel de POINT, les représentants des organismes partenaires et les clients.

RÉSULTATS : Au cours des deux premières années du programme, 662 personnes (52,4 % hommes; âge moyen de 38,3 ans) ont été formées à la prévention des surdoses d'opioïdes et ont reçu une trousse de naloxone. Chez les clients qui consommaient actuellement des opioïdes, les opioïdes les plus souvent déclarés étaient l'oxycodone (40,4 %) et l'héroïne (34,4 %). Les clients ont fait état de 98 administrations de naloxone, principalement à des amis et à des connaissances. Presque toutes les personnes auxquelles on a administré la naloxone ont survécu; une n'a pas survécu, et on ignore ce qui est arrivé dans un autre cas.

Selon le personnel et les organismes partenaires, le programme joint sa population cible, et la formation donnée par POINT répond aux besoins des clients. Ces derniers aimeraient que la formation soit offerte à plus grande échelle. Dans l'ensemble, le personnel, les organismes partenaires et les clients étaient satisfaits et ont suggéré des améliorations au recrutement et à l'exécution du programme.

CONSÉQUENCES : Des personnes à risque de surdose d'opioïde ont suivi une formation sur la prévention et l'intervention en cas de surdose et déclaré avoir administré de la naloxone lors de surdoses. Les résultats de cette évaluation initiale servent à améliorer l'exécution du programme POINT; ils peuvent aussi éclairer les pratiques de prévention des surdoses d'opioïdes ailleurs dans le domaine de la santé publique.

MOTS CLÉS : surdose; naloxone; programme