

R E P O R T

COMPREHENSIVE OVERDOSE RESPONSE WITH OXYGEN

Training for Shelter Providers in Toronto

JANUARY 2023



**PARKDALE
QUEEN WEST**
Community
Health Centre

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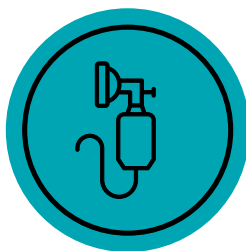
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Executive Summary

Both fatal and non-fatal overdoses have increased significantly in the Toronto shelter system in the past year, prompting many City shelter operators to mandate overdose response training for staff. Oxygen has long been utilized by harm reduction staff in overdose prevention sites (OPS) as part of a comprehensive overdose response. With the escalating contamination of benzodiazepine and benzodiazepine-like adulterants in the non-prescribed opioid supply, oxygen has become an increasingly important tool to safely manage overdoses that may only partially respond to the opioid reversal agent naloxone.

This activity is a collaboration between Parkdale Queen West Community Health Centre (PQWCHC) and Homes First Society (Homes First) shelter operators to create a medical directive for the provision of oxygen by Homes First staff in situations of suspected opioid overdose. To ensure competency in overdose response including oxygen provision, a 4.5 hour module training session was developed based on previous PQWCHC materials and in consultation with the current harm reduction educators. Research ethics approval has been obtained to evaluate the competency and skills retention of training participants; prior to this approval, feedback from participants was gathered for training quality improvement.

Currently, 41 Homes First staff have successfully completed the training and were certified as delegates of the medical directive until 2023. Feedback from participants gathered for quality improvement was robustly positive, with 95% of participants (37/39) indicating they definitely would recommend the training to a colleague. This activity will have ongoing support from PQWCHC to ensure appropriate usage of the directive and to support the sustainability of ongoing training through a “train the trainer” approach. **This activity has the potential to be scaled and modified for implementation in other shelter settings as a vital tool in responding to the ongoing morbidity and mortality from the overdose crisis.**



Activity Collaborators

This activity is a collaboration between harm reduction educators, program staff, and physicians.

Kate Hayman is an Emergency Physician at University Health Network in Toronto, Canada and an Assistant Professor in the Department of Medicine at the University of Toronto. She is an experienced simulation educator and has previously instructed CPR, Advanced Cardiac Life Support, and Advanced Trauma Life Support. Her academic work is focused on improving emergency care for members of equity-deserving groups, including people who use drugs.

Sarah Griffiths is a Family and Addictions Physician who provides care for people who use drugs at Unity Health Network in Toronto, Canada and is a Lecturer in the Department of Medicine at University of Toronto. She also works in rural and remote locations across Canada providing comprehensive family medicine care. Her professional interests include expanding harm reduction services in both hospital and community environments.

Kate Atkinson is the Project Manager of the Safer Opioid Supply Program at Parkdale Queen West Community Health Centre. Her background is in research, post-secondary education, and health advocacy.

Brittany Beaton is a supervisor at Parkdale Queen West's Supervised Consumption Site (Queen West location), with over sixteen years of experience in front line and supervisory harm reduction settings. Brittany has been conducting trainings on overdose response for a variety of different communities extensively for the past seven years. One of her passions is the ongoing coaching and education to the masses on harm reduction, particularly overdose response. Brittany truly believes that harm reduction can make a difference for all people in all walks of life.

Tara Bradford is the Senior Manager of Urban Health and Harm Reduction Services at Parkdale Queen West Community Health Centre. Tara has worked alongside communities who use drugs for the last 15 years. Her sector experience includes the planning and operation of supervised consumption services, working in social housing, and providing case management and harm reduction education to people accessing these services.

Matt Johnson is a longtime harm reduction worker and advocate who is currently working as a Health Promoter with the Safe Consumption Services of Parkdale Queen West Community Health Centre.

Gab Laurence is the Manager of Harm Reduction Services overseeing the Safer Opioid Supply initiatives and the Mobile Harm Reduction Team (LAUNCH) base site at Parkdale Queen West Community Health Centre. Gab has a background in social work and has been working in harm reduction since 2003. Gab has been focusing on the development of harm reduction projects and new initiatives in their work at the Health Centre.

Kier Martin has been working in the field of homelessness, HIV/AIDS, harm reduction and mental health for almost twenty years and is currently a case manager with the Safer Opioid Supply Program at Parkdale Queen West Community Health Centre. Their work focuses on enhancing the health of homeless street-involved urban populations through access to community health services, strengthening community action, influencing public policy, advocacy, community development, outreach, education and service development.

Alexandra Perry recently graduated with a Masters in Adult Education, Governance and Policy. She is currently Executive Director with Canadian Addiction Treatment Centres and was formerly Assistant Director of Community Partnerships and Client Services for Homes First Society, a housing and homelessness registered charity which serves the hardest to house in Toronto. Previous to this, Alexandra was Clinical Director at a residential treatment centre, and she has recently joined Guelph Humber as a faculty member within their Addiction and Mental Health post-graduate program. She has a deep passion for social change and providing platforms for us to learn directly from those who are living with mental and addiction challenges and believes as a system we are stronger together than working apart.

Gregory Rosebrugh is a supervisor of mobile harm reduction services at Parkdale Queen West Community Health Centre in Toronto, Canada, with a background in social work and clinical casework. His experience includes facilitation of harm reduction workshops in Toronto's shelter system, with a special focus on building capacity for front-line shelter workers to respond to Toronto's ongoing overdose crisis.

Contact: For more information about the activities outlined in this report, please email Gab Laurence: glaurence@pqwchc.ca.



Acknowledgements

Land Acknowledgment

We at Parkdale Queen West Community Health Centre acknowledge that we work and live on the traditional territories of the Huron-Wendat, Anishnaabeg, the Chippewa, the Haudenosaunee Confederacy and most recently, The Mississaugas of the Credit River First Nation. Ontario is covered by 46 treaties and other agreements, and is home to many First Nations, Inuit, and Métis Peoples. These treaties and other agreements, including the Dish with One Spoon Wampum Belt Covenant, are agreements to peaceably share and care for the land and its resources. Other Indigenous Nations, Europeans, and newcomers were invited into this covenant in the spirit of respect, peace, and friendship.

We are mindful of broken covenants, and we strive to make this right, with the land and with each other. We are all Treaty people. Many of us have come here as settlers, immigrants, newcomers in this generation or generations past. We also acknowledge those who came here forcibly, particularly as a result of the Trans-Atlantic Slave Trade, as stolen people to a stolen land. It is a privilege to be here and to be in solidarity with Indigenous Peoples in the continuing struggles against colonization and its lasting impacts. As a Centre we work in solidarity with Indigenous peoples' fight against colonization and for the right to land and sovereignty.

Community Acknowledgement

People Who Use Drugs (PWUD) and allied advocates have been at the forefront of foundational community support and emergency responses to substance use-related needs in the face of tremendous injustice including the ongoing criminalization of PWUD and continuous subjection to devastating social policy. Grassroots movements have paved the way for the introduction of life-saving interventions through massive advocacy efforts such as harm reduction supply distribution, campaigning for widely available naloxone, uplifting of overdose prevention services, conducting widespread health promotion and public education campaigns, and championing safer supply. We want to thank PWUD and all those allied with the movement as their relentless work, knowledge, skill, expertise and continuous advocacy efforts have informed the foundations of the shelter oxygen training. We want to extend our recognition and gratitude to PWUD and allied advocates for the ongoing fight against stigma and discrimination, and to make health care accessible and safe for all, across any environment!

Financial Support

This activity was made possible by a financial contribution from Health Canada's Substance Use and Addictions Program. The views expressed herein do not necessarily reflect those of Health Canada.





95% of participants indicated they would recommend the training to a colleague.

Introduction and Background

The overdose crisis continues to grow past previously unthinkable magnitudes.

The emergence of the highly potent opioid fentanyl in the non-prescribed opioid supply and the increasing unpredictability of toxic contaminants have contributed to an astronomical rise in overdose morbidity and mortality since initially being declared a public health emergency in B.C in 2016 (Government of British Columbia, n.d.; Special Advisory Committee on the Epidemic of Opioid Overdoses, 2022). **Exacerbated by the COVID-19 pandemic, people experiencing homelessness have borne a disproportionate impact of the crisis, with 1 in 6 opioid-related deaths in Ontario occurring in this population during the first eight months of the pandemic** (Gomes et al., 2022, p. 3). In response, overdose response training has been made mandatory for staff at many agencies in Toronto that are currently supporting people who are under- or unhoused.

Changes in the non-prescribed opioid supply have led to changes in the way overdoses are effectively managed. Almost 90% of deaths in Ontario due to opioids during the pandemic have been directly attributed to fentanyl (Gomes et al., 2022, p. 11), and the emergency of benzodiazepines and benzodiazepine-like adulterants in the opioid supply increasingly led to mixed overdose scenarios. A report from Toronto's Drug Checking Service revealed that 61% (812/1327) of expected fentanyl samples checked in 2021 contained at least one benzodiazepine-related drug (Thompson et al., 2022, p. 11). As naloxone, the opioid-reversal agent, has no effect on benzodiazepines, reports from community members, supervised consumption site (SCS) staff, and hospital and out-of-hospital medical providers increasingly state that many suspected opioid overdoses are only partially reversible with naloxone, and often require prolonged support to maintain effective oxygenation.

Oxygen is commonly used by trained harm reduction workers at overdose prevention sites (OPS) in community settings to provide comprehensive overdose response. Use of passive oxygen or positive pressure ventilation (e.g., delivered by a bag-valve mask) can support an overdose response and is particularly important in supporting mixed benzodiazepine and opioid overdoses, where only the opioid can be reversed with naloxone. This activity was undertaken to respond to a request from Homes First Society, a shelter operator in Toronto, for a medical directive and training in oxygen administration to support their current overdose response management. Oxygen is classified as a drug in Canada; for non-prescribers to administer it, a directive written and signed by a medical delegator is necessary (Government of Canada, 2022). To ensure shelter staff implementers of the directive were proficient in the indications and utilization of oxygen for a suspected overdose, existing training packages developed by members of the Parkdale Queen West Community Health Centre (PQWCHC) harm reduction team were modified with an emphasis on oxygen implementation and hands-on simulation learning.

This activity led to the development of a 4.5-hour training module on comprehensive overdose response including the utilization of oxygen, as well as a medical directive to support the use of oxygen for implementers who had received, and shown competency during, the training. Research approval has been granted to assess implementers' ability to safely manage an opioid overdose in the out-of-hospital setting both immediately following the training, and one to two months later, as an initial evaluation of knowledge retention. Ongoing training and certification for use of the directive will be sustained through a "train the trainer" approach where newer harm reduction staff at PQWCHC will be trained by the experienced trainers to deliver the content. **Eventually, harm reduction staff at allied agencies may also be trained with a view to offering the training more widely in the sector. This activity has the potential for scalability within the shelter system and other sites implementing harm reduction in client care in the City of Toronto.** The expansion of high-quality overdose response training and access to oxygen are essential components of the response to the current trends in the overdose crisis.

Activity Objectives

1. Increase capacity for comprehensive overdose response in shelter settings
2. Provide a signed medical directive for use by non-clinical staff in the shelter setting
3. Co-design training with existing harm reduction staff, with input from medical delegators (clinicians) and shelter supervisory staff
4. Implement a training program that ensures implementers of the directive are capable of providing oxygen in a safe and effective manner in the setting of a suspected opioid overdose
5. Ensure there is a cadre of trainers who can deliver the training in accordance with the directive, supervised by the medical delegators
6. Evaluate the impact of the training on participant attitudes, confidence, and skills in overdose response
7. Evaluate the impact of the training and directive implementation on overdose response in Homes First Shelters
8. Develop a model for ongoing quality assurance and improvement, provided by PQWCHC staff for the Homes First team
9. Transition the medical delegator role to permanent, full-time members of the PQWCHC team to ensure program stability and continuity

Methods

Curriculum Development

a) Literature scan

The training curriculum utilized was modified from the existing overdose training module that was developed and used by PQWCHC harm reduction staff. As there were multiple different modules in circulation, the authors initially consolidated these resources into a single document. As such, the creation of the final module was based on years of overdose response and harm reduction expertise.

Overdose response trainings are common and varied in terms of content, ranging from ten minutes to eight hours in duration and ranging widely in content delivery (Edwards III et al., 2020). There is currently no standard training for non-medical providers to respond to overdoses in Canada, in the way that CPR and First Aid courses have been standardized. Furthermore, none of the overdose response training intended for non-medical implementers reviewed by the delegates involved the utilization of oxygen. A literature review supported the feasibility of training non-healthcare providers to administer oxygen safely and effectively in an overdose, as trained harm reduction staff have been shown to deliver these interventions in approximation to health care providers (Dezfulian et al., 2021).

b) Curriculum Design

The consolidated training module created from the existing PQWCHC modules was initially edited to remove redundancy and to standardize language. Meetings were then held with harm reduction staff at PQWCHC and Homes First to ensure the relevance of all information included, find gaps in the current module, and guide expansion of the oxygen training component.

An overdose response algorithm was created, modeled on principles from a resource shared from the Moss Park OPS, and edited to align with similar algorithmic approaches in medical resources such as CPR or Advanced Cardiac Life Support (ACLS). The current PQWCHC trainers provided their expertise around the content they delivered that was not explicitly written in the source slide decks and these features were incorporated. Harm reduction staff also identified the importance of training implementers to be judicious in providing naloxone, giving smaller than standard doses (“bumps”) as an option to avoid severe withdrawal in people who have overdosed. In order to ensure competency around oxygen utilization, hands-on components of the training were expanded and formally incorporated in breakout sessions, where trainers could provide smaller group instruction around the didactically taught skills. Additional material concerning safety around oxygen, using personal protective equipment, and the specific parameters the medical delegation covers were added. To ensure implementers could demonstrate the principles of harm reduction, creating a safety plan with a person who has recently overdosed was added as a skills component. Utilizing standards developed for medical simulation education, mock situations were developed where each training participant would have the opportunity to manage an overdose using the full breadth of the skills taught in the training. To ensure competency, a skills checklist of essential skills for overdose response was developed with the harm reduction staff to create an evaluative component to the training. The training was developed with the intent of being comprehensive and accessible to a novice in overdose response, while also being able to support and expand the practice of participants who were more experienced.

c) Virtual Review of Curriculum and Dissemination

Feedback and information from the PQWCHC harm reduction staff was incorporated into the training module. The first iteration of the updated training was then virtually reviewed with the current cohort of trainers. A second round of modifications was incorporated. A training outline with outcomes, timing, and materials needed was created to ensure a consistent structure. A small laminated “cheat sheet” handout that folds to fit in a standard identification tag pouch was created, including the overdose algorithm as well as key facts in overdose response (e.g., naloxone dosing, oxygen tank setting to use) to be used as a memory tool for implementers both during and after the training.

d) “Train the Trainer” Session

The medical delegators and the current PQWCHC trainers then met in person to review the second iteration of the training in order to highlight changes from the modules they had previously developed and used. Emphasis was placed on delivering the simulated overdose scenarios. The trainers already used mock scenarios in their previous modules, but the structured approach and evaluation components were new features that were practiced to ensure standard delivery.

e) Initial Trainings

Trainings were held with a ratio of twelve Homes First staff to four trainers, with the two medical delegators present and available for questions or assistance with break-out sessions. The training was broken into interactive didactic sessions, with two trainers presenting the material at a time, and small group hands-on sessions, with two trainers or medical delegators facilitating small groups with a maximum of four Homes First staff. Participants were provided with a copy of the training slide deck, as well as the algorithm “cheat sheet” and templates for safety

planning. Oxygen tanks, oxygen delivery devices (non-rebreather and bag valve masks), naloxone delivery devices, and Laerdal Airway Management Trainers were present for hands-on components. At the end of the training, each participant responded to a simulated overdose based on the standardized cases, where they were evaluated for their ability to demonstrate the skills taught in the training, with an emphasis on the skills around oxygen.

f) Ongoing Minor Changes

In response to global feedback, modifications to the training were made after the first two sessions. Slides were modified to reduce any redundancy and streamline the didactic material. A slide was added at the beginning to formally explain the evaluation component, and to ask participants to turn off their phones during the training. Content was further modified to attempt to increase hands-on practice and increase audience participation. Additional mock scenarios to be discussed in the full group were added to illustrate the principles behind common decision points in overdose response.

g) Dissemination of Curriculum

The final iteration of the training includes the slide deck, “cheat sheet” package, safety plan templates, simulation algorithms and evaluation sheets, and the training outline. This package is available to the current PQWCHC trainers and has been requested by and shared with affiliate partners. Access to the training curriculum outside of the designated Homes First sessions does not certify participants under the medical directive for oxygen use.



Trainer Capacity Building and Assessment

a) “Train the Trainer” Session

As the initial cohort of trainers were not only familiar with but had in fact developed much of the existing curriculum modified for the Homes First training, the initial “training” session to onboard them was focused on practice towards implementing the new standardized scenarios and the evaluation component.

b) Direct Observation of Initial Sessions

The medical delegators were present during the training sessions in order to answer directive-related questions, assist during breakout sessions and the final simulations, and observe the standardization of the training.

c) Feedback to the Trainers

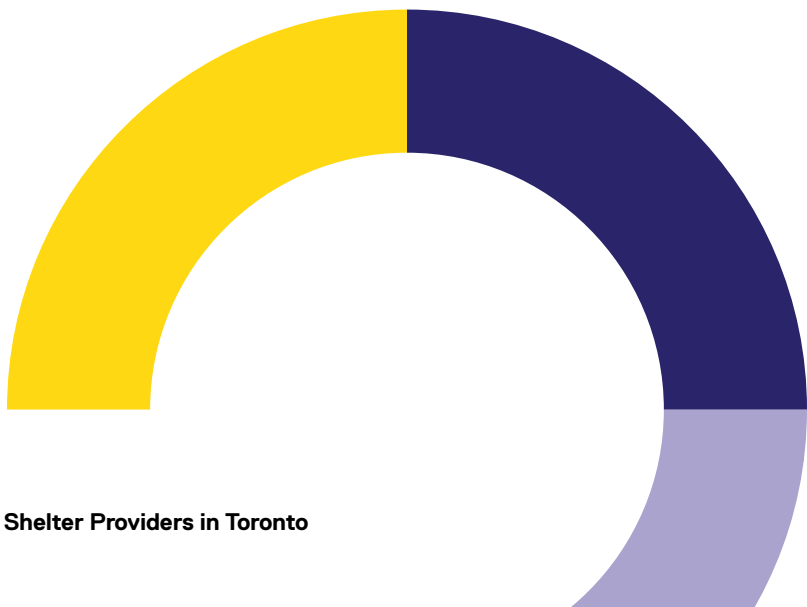
Feedback to the trainers after observation was provided by the delegators, other members of the activity team present during the training, and participants via feedback forms gathered at the end of the training. All trainers in the initial cohort have many years of harm reduction and overdose response experience, and brought a wealth of experience, examples of scenarios, and knowledge about opioid overdose to the training. Time management was identified as an issue as the training is content-heavy and adequate time for skills practice was deemed an essential component. Many of the participants had experience with identifying overdoses and administering naloxone, and the trainers were asked to focus more on the oxygen content and to elicit participants’ knowledge around the non-oxygen components to decrease didactic time. In order to maximize hands-on learning in a time-efficient manner, the trainers were asked to have participants use the oxygen tools during didactic components, in order to better utilize the break-out sessions for troubleshooting and simulations.

d) New Trainers’ Observational Role

Due to the high trainer to participant ratio, it was recognized that additional trainers would be required to support the proposed future training sessions. The initial cohort of trainers identified other harm reduction staff within PQWCHC who were experienced in overdose response and interested in delivering the training. This second cohort of trainers was given an informal primer on the changes in the training from content they may have already been familiar with. These staff were invited to observe their first session, and then assisted during skill breakout sessions while observing the complete training module delivery.

e) Sustainability

To ensure the sustainability of this activity, current trainers and leadership staff at PQWCHC will continue to build out the “train the trainer” model to support skilled harm reduction workers already employed at PQWCHC to become additional trainers. This will be facilitated by the transition of the medical directive and its delegatory responsibilities to providers at PQWCHC. In the future, PQWCHC can also expand trainer trainings to other allied agencies with a mutual interest in equipping all front-line shelter staff with skills in overdose response with oxygen. A focus of this expansion of the trainer cohort will be to ensure consistent quality and standardization.



Medical Directive

The oxygen medical directive was informed by several key sources. We reviewed the medical directive currently utilized at PQWCHC in the SCS. The directive was written and revised in accordance with the College of Physicians and Surgeons of Ontario (CPSO) policy on Delegation of Controlled Acts (2021) and Advice to the Profession: Delegation of Controlled Acts (n.d.) (See Table 1). We also completed a literature scan, however found scant examples in the medical literature describing lay rescuer use of oxygen in this setting. Once a draft was developed, the medical directive was reviewed with harm

reduction staff and by the Homes First team who were leading implementation at their sites. Following this review and revisions, the medical directive was finalized and signed by all parties in April 2022.

At present, the medical directive is signed by Dr. Sarah Griffiths and Dr. Kate Hayman as the initially contracted physicians for this activity. In the future, this role will be transitioned to full-time providers at PQWCHC, who will provide ongoing support and oversight.

Table 1. Key components of delegation and how they have been addressed through this activity	
The delegating physician should be able to assess the delegate's training and competence	All delegates must complete the 4.5 hour training, delivered by PQWCHC trainers. The training session includes a pass/fail evaluation that the trainee must successfully complete to become a delegate.
The delegating physician may only delegate within their scope of practice	Provision of oxygen is within the scope of emergency and primary care physicians, and within the scope of nurse practitioners (for future delegation)
The risk of delegation must be assessed, and the delegating physician must understand the benefit to outweigh the risk of delegation in the scenario	The major risks of oxygen use are taught in the training [fire, use in a patient with respiratory distress not due to overdose (theoretical higher risk of oxygen-induced hypercapnea)]. In the setting of an overdose, these risks are outweighed by the benefits of oxygen administration. This training and directive do not modify the existing directives for calling and utilizing emergency medical services, so we do not anticipate potential harms from lack of EMS activation.
Appropriate supervision and support must be available (this does not have to be onsite support)	The physician delegators are available to answer questions about the delegated act. The Homes First Incident Reports will also be reviewed by the delegators monthly to provide support around major arising themes.
The delegating physician must support in the quality assurance process	See above. The physician delegators will also assist with any critical incidents or concerns that are brought forward by the Homes First leadership team.
The delegated act should be documented	The Homes First Incident Report has been reviewed by the physician delegators to ensure that the key components of the oxygen response are documented (See Appendix A)
Physicians do assume liability with delegation, and they cannot bill for delegation	

Note that this framework is taken from the CPSO, however the components also apply to other delegating providers, i.e., nurse practitioners.

Training Evaluation

Given that the use of oxygen by shelter staff is relatively novel (currently in practice at one other shelter that we are aware of in the Toronto area), a robust evaluation was undertaken for this intervention. A Research Ethics Board (REB) application was submitted through the University of Toronto, to allow for the dissemination of results broadly. While the application was submitted in December 2021, it was not approved until April 2022 (largely related to delays due to the Omicron wave of COVID-19).

Given the urgency of the overdose crisis, the activity team made the decision to begin training prior to REB approval. For this reason, 29 participants completed the course prior to approval for full data collection (trainings #1-3). Twelve participants completed the course following approval (trainings #4 and #5); of these, 10 consented to participate in the research project.

All participants (pre- and post- REB approval) were asked to complete a post-course survey to provide formative feedback about the training.

Participants who participated in the research component of the evaluation also completed a pre-course survey and submitted their evaluation checklist and safety planning document to the research team.

Following oxygen implementation, research participants will also be observed at 1-2 months post-training to re-assess their skills in a simulated scenario.

Findings

All 41 participants successfully completed the training and were certified as delegates of the medical direction until 2023. No participants required remediation, and no participants were unable to complete the 4.5-hour session on the scheduled day of the training.

Pre-course survey

After REB approval, 10/12 participants completed the pre-course survey (administered only at trainings #4 and #5) (See Table 2). The mean age of participants was approximately 34 years old, and 70% identified as female. All participants have direct client contact in their role.

60% of participants had responded to an overdose within the last three months, and 60% responded 2-4 times per month – this is a frequent event in the shelter environment.

This group of trainees had a high level of baseline training (i.e., were not novice responders): 100% had already been trained in giving naloxone and 70% hold a CPR certification. Only 20% had previously been trained in oxygen administration for overdose response.

Interestingly, 70% of trainees were already very confident in their ability to respond to an overdose, with 30% being somewhat confident. Participants were somewhat less confident in their ability to safety plan prior to the course, with 60% responding that they were very confident, 30% somewhat confident, and 10% a little confident.



Table 2. Pre-course survey results	
How old are you, in years?	Mean age: 33.9 years old Range: 24-57 years old
What is your gender?	7/10 participants identified as female 3/10 participants identified as male
Do you have direct contact with clients in your current role?	8/10 participants responded YES, it is a significant part of my job 2/10 participants responded YES, occasionally No participants never have client contact
Have you responded to a suspected opioid overdose in the past three months?	6/10 participants responded YES 4/10 responded NO
If yes, how often do you respond to an overdose?	2 participants did not respond (not applicable) 1/10 respondents chose < once/month 1/10 chose once per month 6/10 chose 2-4 times per month
Have you been trained in giving naloxone for an overdose?	10/10 responded YES
Do you hold a BLS or CPR certification?	7/10 responded YES 2/10 responded NO 1/10 was unsure
Have you been trained in giving oxygen for an overdose?	2/10 responded YES 7/10 responded NO 1/10 was UNSURE
How confident are you in your ability to respond to a suspected opioid overdose?	7/10 were very confident 3/10 were moderately confident No participants were not confident or a little confident
How confident are you to support a client in safety planning if they have refused transport to hospital?	6/10 were very confident 3/10 were moderately confident 1/10 was a little confident No participants were not confident

Post-course survey

The post-course survey was completed by 39/41 participants – this was administered to all participants pre-and post-REB approval to provide formative feedback to the training team.

The full post-training survey results are provided in Table 3. Most exciting is that 95% of participants (37/39) would definitely recommend the training to a colleague; 5% would probably recommend the training to a colleague.

The formative feedback provided was used to make major modifications to the training between trainings #2 and #3. We saw a change in the feedback provided after these modifications, suggesting that they were well received by the trainees.

Table 3. Post-course survey results	
How confident are you in your ability to respond to a suspected opioid overdose?	4/39 participants were moderately confident 35/39 participants were very confident No participants were not confident/a little confident
How confident are you in your ability to complete a safety plan with a client?	3/39 participants were moderately confident 36/39 participants were very confident No participants were not confident/a little confident
How did you find the length of this training?	2/39 participants found it a little short 30/39 participants found it just right 7/39 participants found it a little long No participants selected way too long/too short
How did you find the class size in this training?	39/39 participants found it just right (One participant did specify that it would have been just right if the class size had been as planned)
Would you recommend this training to a colleague?	2/39 participants would probably recommend 37/39 would definitely recommend No participants selected definitely not/probably not/maybe
What part of this training did you find most helpful?	<ul style="list-style-type: none"> • Clinical and scientific explanations • Scenarios/simulations • Hands-on evaluation • Identifying different approaches to overdose response • The practice role play. I was able to use the skills learned and adjust as necessary • Discovering oxygen along with naloxone administration, the various breakout groups • Medical directive • Going through all the steps from finding an overdose to aftercare • Practical part was very helpful, role play was very impactful • Using the oxygen • The final training scenarios. They were realistic to our work setting • Hands-on training in small groups • I found the training of when to use oxygen instead of naloxone important. I think all shelters should have this training when working with this population • The medical reasoning between interventions and the flow chart.
What part of this training did you find least helpful?	<p>Feedback from trainings #1 and #2:</p> <ul style="list-style-type: none"> • Too long • We all knew the first part, but there was still a bit of information • Lots of info, sometimes flow was confusing • Many of us have already gone through naloxone training (but not unhelpful) <p>Feedback from trainings #3-5</p> <ul style="list-style-type: none"> • All helpful skill development, reminders, practice • I am around this work often and I still learned a lot • More food options (trainings at Homes First site provided pizza)

Safety plans

Seven participants submitted their safety plan to the evaluation team for review.

Components of the written safety plan included:

- Checking on client (“room checks”) – frequency ranged from every 10 minutes to every hour
- Making sure staff are on alert
- Staying with a friend or staff member to prevent relapse
- Avoiding using opioids for the next 2-3 hours
- Using with others
- Using a test dose/smaller dose
- Knowing where to find naloxone or having it on their person
- Using with a trusted person (staff or a friend if not comfortable with staff)
- Letting staff know when they are using

Trainers noted that staff tended to emphasize room checks when verbally safety planning with the client in the simulated scenarios, however a range of options were provided in the written safety plans, demonstrating knowledge of some harm reduction techniques for clients.

Evaluation checklist

The complete evaluation checklist was used for all participants when completing their end-of-training simulation ([Appendix B](#)). There was not a pre-specified passing score required to complete the course; this was left up to the best judgment of the trainers, and all evaluation checklists were reviewed by the medical delegators prior to certifying the candidate as a delegate of the directive.

Checklists were collected from participants following REB approval (trainings #4 and #5), so data from ten participants was available for dissemination. Candidates missed 0-5 items on the checklist (out of 18-20 items total, with 2 non-applicable items in some scenarios – one scenario was outside, so “close door” was not applicable, and in one scenario, EMS arrived before the recovery position was appropriate).

Missed items were as follows:

- 5/10 participants did not apply PPE or verbalize applying PPE during the scenario
- 5/10 participants did not “move others away from the scene”
- 4/10 did not close the door, if applicable
- 1/10 did not call for help
- 1/10 did not count breaths during the pulse check
- 1/10 did not perform a head tilt/chin lift
- 1/10 did not initiate a debrief with the team

Importantly, all ten participants were able to correctly apply the pulse oximeter, turn on the oxygen tank, choose the appropriate oxygen delivery device, and apply oxygen through the device correctly. All participants also appropriately utilized naloxone. This provided the evaluators with confidence that the participants could appropriately apply the medical directive.

The missed items may be explained in part by the fidelity of the simulation, as crowd control, closing the door, and applying PPE are challenging to remember when working with the manikin. The trainers emphasized the importance of PPE following the training, to ensure that this part of the directive can be safely performed.

Plan for Quality Assurance

At the time of writing, Homes First has not yet implemented oxygen as a component of their overdose response. Once oxygen for overdose response has been implemented under the medical directive, Homes First will provide the “Oxygen Usage Detailed Incident Report” ([Appendix A](#)) to the medical delegators on a weekly basis. In addition, Homes First will meet with the medical delegators and trainers monthly

to discuss major arising themes and opportunities for practice improvement. The medical delegators will also respond on an ad hoc basis to any critical incidents or requests for urgent debriefs.

We estimate that incident review, monthly meeting, and ad hoc supports will require 3-5 hours per month.



Dissemination and Knowledge Translation

Since the new overdose response with oxygen training tools were developed, updated trainings using these materials have been delivered by PQWCHC harm reduction staff in various settings across the Greater Toronto and Hamilton Area. These settings include a large shelter operator in Toronto, a new harm reduction program in Hamilton, and at Parkdale Queen West Community Health Centre with various harm reduction program staff.

In addition, the training materials have been disseminated via the National Safer Supply Community of Practice (NSS-CoP) website’s Member Resources section, giving access to over 1000 members. Information about the training has also been shared with some of the other projects across Canada that are funded by Health Canada’s Substance Use and Addictions Program.

As mentioned in sections above, to assist with scaling the training for future roll-out in new shelter and harm reduction sites, PQWCHC will assume the responsibility of ongoing “train the trainer” sessions and curriculum. This will include creating a comprehensive training manual and adding further context to the teaching materials, preserving training standards, and ensuring that new trainers are supported with both the didactic and knowledge components of delivering the training.

Conclusion

This activity has successfully trained 41 client-facing supervisory staff from Homes First shelters to provide oxygen as a component of overdose response. The staff rated the training very positively, particularly in the later iterations of the training. The medical delegators observed all five training sessions and the evaluations and are confident that the core training team are able to appropriately assess that the trainees have the required skills, knowledge, and judgment to implement the medical directive. This training package is available for all PQWCHC trainers to utilize (when appropriate) and will also be shared with other organizations seeking to implement oxygen utilization for lay responders in a non-medical setting.

At present, we cannot assess the effectiveness of this intervention in the shelter system; however, a framework has been established for ongoing quality assessment and improvement.

This activity has strengthened relationships between the PQWCHC harm reduction team and shelter staff, and provided opportunities for dialogue, problem-solving, and support to a team of staff who often respond to challenging situations in their environment. **We believe that the training package and model will provide the basis for a scalable intervention that can be utilized in other shelter environments in the future.**



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Appendix A: Oxygen Usage Detailed Incident Report

Program: _____

SMIS Incident ID: _____

Date: _____

Time: _____

Details:

SMIS Client ID:

Client Name:

Staff ID:

Staff Name:

Witnesses:

Others Involved:

Nature Of Incident:

Was Naloxone
Administered?

☐

Yes

☐

No

If Yes, How Much Was Administered:

Current Tank Reading:

Location Of Incident:

Report Completed By: _____

Date: _____

Report Reviewed By: _____

Date: _____



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Appendix B: Evaluation Checklist

No.	Evaluation Item	Complete	Comments
1	Recognizes the signs and symptoms of an overdose		
2	Attempts to stimulate a response		
3	Calls for help		
4	Applies appropriate PPE (must have eye protection and N95 at a minimum)		
5	Clears extra people/those without PPE away from the scene		
6	Closes the door if applicable		
7	Checks pulse		
8	Counts breaths during pulse check		
9	Applies pulse oximeter, correctly interprets reading		
10	Attempts to open the airway (chin lift/jaw thrust), looks in airway to clear if needed		



No.	Evaluation Item	Complete	Comments
11	Turns on oxygen tank, connects tubing, opens to 15L/min		
12	Chooses the appropriate oxygen delivery device based on respiratory rate (NRB if breathing <12 seconds between breaths or BVM if >12 seconds between)		
13	Applies oxygen appropriately through selected device (passive application of NRB covering mouth and nose, or attempt to seal mask and give active breaths with BVM)		
14	Checks pulse oximeter and colour to assess response to oxygen		
15	If no improvement with oxygen, correctly identifies need for naloxone and administers at an appropriate dose		
16	Assesses response to naloxone, repeats the dose as needed		
17	Moves the person into recovery position once respiratory rate is improved		
18	Stays with the client until EMS arrives		
19	If client refuses EMS – completes client education and safety planning		
20	Initiates a debrief with team members		





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