Best practice recommendations

FOR CANADIAN HARM REDUCTION PROGRAMS THAT PROVIDE SERVICE TO PEOPLE WHO USE DRUGS AND ARE AT RISK FOR HIV, HCV, AND OTHER HARMS: PART 1

Working Group on Best Practice for Harm Reduction Programs in Canada
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Outline for the webinar

• Goals and objectives
• Methods
• Recommendations and related evidence
• Questions
Project goals

• Improve the quality, consistency, and effectiveness of harm reduction programs that deliver prevention services to people who use drugs and are at risk for HIV and STBBI in Canada.

• Create and disseminate a set of user-friendly, evidence-based best practice recommendations to replace BPRs: Ontario (2006) and BC (2008)

• Reduce transmission of HIV and STBBI.
Project goals

• Help programs make the case for investing in harm reduction.
• Inform decisions to direct scarce resources toward effective and efficient practice.
• Provide benchmarks for individual and provincial programs to evaluate their services.
• Help individual programs and systems to identify targets for improvement.
Methods: narrative synthesis

• Develop an explanation of how an intervention or best practice works (e.g., how providing safer smoking equipment helps reduce hepatitis C transmission).
• Similar to a systematic review but designed to address situations with varied evidence base and a need for real-world application of evidence.
• Overdose chapter is systematic review.
• Reviewed scientific evidence from Canada, US, Europe and UK, Australia, NZ and other countries that share similar public health systems.
Best Practice Recommendations: Part 1

1. Needle and syringe distribution
2. Cooker distribution
3. Filter distribution
4. Ascorbic acid distribution
5. Sterile water distribution
6. Alcohol swab distribution
7. Tourniquet distribution (not presented today)
8. Safer crack cocaine smoking equipment distribution
9. Disposal and handling of used drug use equipment (not presented today)
10. Safer drug use education
11. Opioid overdose prevention: education & naloxone distribution
Needle and syringe distribution

Rationale for the BPR statements

• Injection with a used needle puts people who inject drugs at risk for blood-borne pathogen transmission and can also damage the skin, soft tissue, and veins.

• Needle-sharing rates have declined across Canada, but continued efforts are needed.

• Placing no limits on the number of needles facilitates a new needle for each injection.

• One-for-one exchange policies are a barrier to accessing sufficient supplies.
Needle and syringe distribution

Rationale for the BPR statements

• People who inject often prefer particular types of needle gauge, syringe volume, and brand, and may not use harm reduction services if they cannot obtain their preferred types.

• Distribution of needles/syringes with a lot of “dead space” can increase risk of HIV & HCV transmission. More research is needed about safety-engineered syringes.

• Cleaning needles and syringes with bleach is not a recommended practice.
Needle and syringe distribution

Recommended best practice policies to facilitate use of a sterile needle and syringe for each injection and reduce transmission of HIV, hepatitis C (HCV), hepatitis B (HBV), and other pathogens:

• Provide sterile needles in the quantities requested by clients without requiring clients to return used needles
• Place no limit on the number of needles provided per client, per visit (one-for-one exchange is not recommended)
• Encourage clients to return and/or properly dispose of used needles and syringes
Needle and syringe distribution

Recommended best practice policies to facilitate use of a sterile needle and syringe for each injection and reduce transmission of HIV, hepatitis C (HCV), hepatitis B (HBV), and other pathogens:

• Offer a variety of needle and syringe types by gauge, size, and brand that meet the needs of clients and educate clients about the proper use of different syringes
• Educate clients about the risks of using non-sterile needles
• Provide pre-packaged safer injection kits (needles/syringes, cookers, filters, ascorbic acid when required, sterile water for injection, alcohol swabs, tourniquets, condoms and lubricant) and also individual safer injection supplies concurrently

One page format – English & French

Best Practice Recommendations for Canadian Harm Reduction Programs

**Recommended Best Practice Policies**

To facilitate use of a needle exchange and syringe program, the following recommendations are provided:

- **Provide sterile needles in the quantities requested by clients without requiring clients to return used needles**
- **Have no limit on the number of needles provided per client (with same exchange program or not recommended)**
- **Encourage clients to return and properly dispose of used needles and syringes**
- **Offer a variety of needles and syringe types by gauge, size, and brand that meet the needs of clients and educate clients about the proper use of available supplies**
- **Educate clients about the risks of using nonsterile needles**
- **Provide prepackaged safety injection kits (needles/syringes, capsules, filters, washers, alcohol-based rinse) to reduce needle and syringe sharing**

**Key Messages**

Injection with a used needle puts users at risk of drug-related illness, hepatitis, HIV, and HCV and can also damage the skin, soft tissue, and veins. HIV, HCV, and HBV can be transmitted when needles and syringes are shared. Most new HIV infections in Canada are attributed to injection drug use. The frequency of needle sharing and drug-related infection is much lower when clean needles and syringes are used.

**NPS need to distribute enough needles to ensure that clients use a new needle for each injection.** Discontinuing needle exchange policies that limit the number of needles distributed to clients may reduce program effectiveness. For programs, calculating the number of needles necessary is challenging, because the number of people who use drugs, in other words, and the frequency and volume of syringes taken are from person to person. It has been estimated that approximately 1,000 needles are required per person per year.

Access to a variety of types of needles and syringes is recommended. Clients may prefer different types of needle gauge, syringe volume, and brand, and may not use NPS needles if they cannot obtain the preferred type. When selecting needles to distribute, NPS need to consider avoiding needle exchanges with a high risk of needle injury. This is associated with increased risk of HIV and HCV transmission. Safety-engineered syringes may offer some benefits, but a number of concerns have been raised. More research is needed before a recommendation can be made for or against these types of syringes.

According to evidence, bleach is not an effective way to disinfect needles and does not reduce the transmission of HIV, HCV, and other viruses or bacteria. Therefore, the importance of using sterile needles for the very injection. Therefore, 100% or greater needle coverage is an important goal.

To see the full version of the Best Practice Recommendations, go to http://www.catie.ca/en/programming/best-practices-harm-reduction.pdf


**Recommended practices for the distribution of daggles and of serings (seringe)**

**Policies recommandées pour la distribution de daggles et de serings**

- **Provide sterile needles in the quantities requested by clients without requiring clients to return used needles**
- **Have no limit on the number of needles provided per client (with same exchange program or not recommended)**
- **Encourage clients to return and properly dispose of used needles and syringes**
- **Offer a variety of needles and syringe types by gauge, size, and brand that meet the needs of clients and educate clients about the proper use of available supplies**
- **Educate clients about the risks of using nonsterile needles**
- **Provide prepackaged safety injection kits (needles/syringes, capsules, filters, washers, alcohol-based rinse) to reduce needle and syringe sharing**

**Key Messages**

Injection with a used needle puts users at risk of drug-related illness, hepatitis, HIV, and HCV and can also damage the skin, soft tissue, and veins. HIV, HCV, and HBV can be transmitted when needles and syringes are shared. As a result, HIV infections in Canada are attributed to injection drug use. The frequency of needle sharing and drug-related infection is much lower when clean needles and syringes are used.

According to evidence, bleach is not an effective way to disinfect needles and does not reduce the transmission of HIV, HCV, and other viruses or bacteria. Therefore, the importance of using sterile needles for the very injection. Therefore, 100% or greater needle coverage is an important goal.

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Cooker distribution

Rationale for the BPR statements

- Cookers are used to mix drugs into a solution
- HIV antibodies, components of HIV-1, HCV RNA have been detected on cookers
- Correlation between sharing cookers and testing positive for HIV and/or HCV, after controlling for needle sharing
- Challenge to determine the relative contribution of cooker sharing vs. sharing of needles/other equipment
- Cooker sharing is common (e.g., 25% to 80%)
- Cooker sharing more common than sharing other pieces of equipment
Cooker distribution

Recommended best practice policies to facilitate use of a sterile cooker for each injection and reduce transmission of human immunodeficiency virus (HIV), hepatitis C (HCV), and other pathogens:

• Provide individually pre-packaged, sterile cookers with flat bottoms for even heat distribution and heat-resistant handles in the quantities requested by clients with no limit on the number of cookers provided per client, per visit
• Offer a sterile cooker with each needle provided
• Offer a variety of cookers that meet the needs of clients
Cooker distribution

Recommended best practice policies continued

- Dispose of used cookers and other injection equipment in accordance with local regulations for biomedical waste
- Provide pre-packaged safer injection kits (needles/syringes, cookers, filters, ascorbic acid when required, sterile water for injection, alcohol swabs, tourniquets, condoms and lubricant) and also individual safer injection supplies concurrently
- Educate clients about the risks associated with sharing and reuse of cookers and the correct single-person use of cookers
- Educate clients about the proper disposal of used cookers
- Provide multiple, convenient locations for safe disposal of used equipment

To save time...

- Will not repeat common recommendations common to other equipment:
- Provide other injection related equipment with no limit on the number of cookers provided per client, per visit
- Offer each piece of injection related equipment with each needle provided
- Provide pre-packaged safer injection kits (needles/syringes, cookers, filters, ascorbic acid when required, sterile water for injection, alcohol swabs, tourniquets, condoms and lubricant) and also individual safer injection supplies concurrently
To save time...

• Dispose of other injection equipment in accordance with local regulations for biomedical waste
• Educate clients about the risks associated with sharing and reuse of other injection equipment and the correct single-person other injection equipment
• Educate clients about the proper disposal of other injection equipment
• Provide multiple, convenient locations for safe disposal of used equipment
• Equipment specific rationales & recommendations will follow below
Filter distribution

Rationale for the BPR statements

- Filters are used on the tip of the needle to prevent debris from being drawn into the syringe.
- Cigarette filters and cotton balls are commonly used but these may not be clean and/or will not filter out small particles or organisms.
- HIV-1 antibodies & HCV RNA detected in used filters.
- Sharing filters associated with HIV, HCV and HBV infection.
- Challenge to determine the relative contribution of filter sharing versus sharing of needles/other injection equipment.
Filter distribution

Rationale for the BPR statements

• Estimated prevalence of sharing filters 13%-70%
• German study showed saving used filters in aluminum foil may preserve HCV; increase the risk of transmission if shared.
• Filters may be saved, combined with other filters and later rinsed to obtain residue – called a ‘wash’ – contaminated washes pose a risk
• Other health complications associated with filters (and/or lack thereof) include “cotton fever”, bacterial infections, and DVT.
• Filters may reduce but not eliminate large particles from oral medications (i.e., tablets) from being injected.
Filter distribution

Filter specific recommended best practice policies to facilitate use of a sterile filter for each injection and reduce transmission of human immunodeficiency virus (HIV), hepatitis C (HCV), hepatitis B (HBV), and other pathogens, and to prevent other health complications, such as deep vein thrombosis (DVT), from the non-use and/or reuse of filters:

• Provide pre-packaged, sterile .22 \( \mu \text{m} \) filters that retain as little drug solution as possible in the quantities requested by clients with no limit on the number of filters provided per client, per visit

• Educate clients about the risks associated with not using filters, sharing filters, making ‘washes’ from filters, the risks of bacterial contamination and DVT if a new filter is not used, and the correct single-person use of filters
Sterile water distribution

Rationale for the BPR statements

• Mixing drugs with water creates a drug solution
• Water may also be used to rinse needles and syringes between uses (not recommended practice)
• HIV-1 antibodies & HCV detected in used water
• HCV may survive in water for 3 weeks
• Sharing mixing or rinsing water is associated with HIV, HCV, and HBV infection
• Estimated prevalence of sharing mixing/rinsing water 15%-77%
Sterile water distribution

Rationale (continued)

• Non-sterile water/fluids used (e.g., tap water, puddles, saliva, urine, bottled) can lead to bacterial infections.

• Sterile water for injection contains no added substances or microbial agents, whereas sterile water for inhalation is not specifically manufactured for injection.

• Distribution of the smallest volume vial of water may reduce the potential for water sharing.
Sterile water distribution

Sterile water specific Recommended best practice policies to facilitate use of injection-grade sterile water for each injection and reduce transmission of human immunodeficiency virus (HIV), hepatitis C (HCV), hepatitis B (HBV), and other pathogens, and to prevent bacterial infection from the use of non-sterile water and other fluids:

• Provide single-use, 2 mL plastic vials with twist-off caps of sterile water for injection in the quantities requested by clients with no limit on the number of vials provided per client, per visit. **If 2 mL vials of sterile water for injection are not available, distribute the smallest size of vial available.**

• Educate clients about the HIV- and HCV-related risks associated with sharing mixing and rinse waters, the risks of using non-sterile water (such as tap, bottled, rain, puddle, and urinal water) and other fluids (such as saliva and urine), and the correct single-person use of mixing and rinse water.
Ascorbic acid distribution

Rationale for the BPR statements

• To create an injectable solution, an acid is necessary to dissolve drugs such as crack cocaine and some heroin.

• Use of household items/common acidifiers (e.g., lemon juice) may cause other health-related harms like bacterial infection.

• Multi-person use of the same acidifier source may put people at risk for HIV and HCV, though there is a lack of evidence on this issue.

• Limited evidence about sharing of acidifiers.
Ascorbic acid distribution

Rationale (continued)

• Any acid injected into the bloodstream may lead to vessel irritation and possible local vein damage.
• Clients should only use acidifiers when they are needed and should use the smallest amount possible.
• Ascorbic acid (vitamin C) is less irritating to veins than citric acid.
• Current study in Canada to determine safety of vinegar as an acidifier
• To reduce the potential for sharing, the sachets of acidifiers distributed by some programs are designed to provide enough acid for only one injection.
Ascorbic acid distribution

Ascorbic acid specific Recommended best practice policies to facilitate use of ascorbic acid to dissolve drugs (e.g., crack cocaine, some forms of heroin) and to reduce the risk of vein damage and bacterial and fungal infections associated with use of other types of acidifiers:

• Ask clients if ascorbic acid is required to dissolve the drug(s) to be injected
• If needed, provide single-use sachets of ascorbic acid in the quantities requested by clients with no limit on the number of sachets provided per client, per visit
• If needed, offer acidifiers with each needle provided
• Educate clients about the potential HIV- and HCV-related risks associated with sharing acidifiers, the risks of fungal infections associated with using spore-contaminated lemon juice and other acids like acetic acid, and the correct single-person use of acidifiers including instruction on how to determine the amount of acid that is needed to dissolve the drug of choice
Alcohol swab distribution

Rationale for the BPR statements

• Alcohol swabs are used to clean injection sites and fingers/thumbs prior to injection
• HCV RNA has been detected on used swabs
• Estimated prevalence of alcohol swabs sharing 3%-8%
• Using a sterile alcohol swab to clean the skin prior to injection can reduce the occurrence of bacterial infections and formation of abscesses.
Alcohol swab distribution

Rationale for the BPR statements

• Washing with soap and water when available is effective to disinfect the skin.
• Swabs should be used to clean the skin prior to injection and not to stop blood flow after injection.
• Anecdotal reports of intoxication from non-beverage alcohol highlight the potential for swabs to be used as a source of alcohol for consumption. Consumption of non-beverage alcohol can lead to alcohol poisoning.
• There are no scientific studies to substantiate this concern. However, program may wish to monitor for high volume requests for swabs.
Alcohol swab distribution

Alcohol swab-specific Recommended best practice policies to facilitate use of sterile alcohol swabs for each injection to reduce transmission of human immunodeficiency virus (HIV), hepatitis C (HCV), and other pathogens, and to prevent bacterial infection from the reuse or non-use of swabs:

• Provide single-use, individually pre-packaged, and sterile alcohol swabs in the quantities requested by clients with no limit on the number of swabs provided per client, per visit. If clients request large quantities of alcohol swabs, make efforts to ensure that the swabs are being used for injection and not for the consumption of the non-beverage alcohol in the swabs.

• Educate clients about the HIV- and HCV-related risks associated with sharing swabs, the risks of bacterial infection if the injection site is not cleaned with an alcohol swab prior to injection, and the correct single-person use of swabs
Safer crack smoking equipment distribution

Rationale for the BPR statements

• Smoking crack cocaine with self-made pipes (e.g., glass bottles, beverage cans, plastic bottles etc.) can lead to injury and burns to mouth, lips and hands, inhalation of toxic vapours
• Risks related to injuries caused by equipment and sharing of equipment (e.g., HIV, TB, pneumonia)
• Studies identify pipe sharing as risk factor for HIV, HCV and HBV infection
• HCV detected in saliva and on a used pipe.
Safer crack smoking equipment distribution

Rationale for the BPR statements

• Among crack smokers, prevalence of HIV 6% to 18%, HCV 29% to 36% and 79% among smoker/injectors
• Crack smoking may accelerate progression of HIV/AIDS, even for those on HAART.
• Pipe sharing, including sharing of stems and mouthpieces, has been reported across Canada.
• Other risk behaviours include smoking intensity and frequency, practices like ‘shotgunning’
• Evaluations show that Canadian safer smoking equipment programs have a positive impact on pipe sharing, though more evidence is needed.
Safer crack smoking equipment distribution

Rationale for the BPR statements
Four items are considered to be “core” supplies for safer crack cocaine smoking:
A. Heat-resistant glass (Pyrex or Borosilicate) stems
B. Mouthpieces – Composed of food-grade material
C. Push sticks – Composed of a non-scratching material
D. Screens – High heat resistance, pliable, and with no chemical coatings.
Safer crack smoking equipment distribution

Rationale for the BPR statements

• Equipment is considered unsafe and needs to be replaced when:
  – The pipe and/or the mouthpiece have been used by anyone else
  – The pipe is scratched, chipped or cracked
  – The mouthpiece is burnt
  – The screen shrinks and is loose in the stem

Safer crack smoking equipment distribution

Recommended best practice policies to facilitate smoking with a pipe – stem, mouthpiece, and screen – which is made from materials that are non-hazardous to health and have never been shared.

- Provide safer smoking equipment - **stems, mouthpieces, screens, and push sticks** - in the quantities requested by clients without requiring clients to return used equipment
- Make available both pre-packaged kits and individual pieces of equipment
- Integrate distribution of safer smoking equipment into existing harm reduction programs and services, including within needle and syringe programs (NSPs)
- Provide safe disposal options, including personal sharps containers, and encourage clients to return and/or properly dispose of used or broken pipes

Safer crack smoking equipment distribution

Recommended best practice policies to facilitate smoking with a pipe – stem, mouthpiece, and screen – which is made from materials that are non-hazardous to health and have never been shared.

- Provide other harm reduction supplies, such as condoms and lubricant, in the quantities requested by clients with no limit on the number provided
- Educate clients about safer use of equipment, safer smoking practices, the risks of sharing smoking supplies, and safer sex
- Educate clients about the proper disposal of used safer smoking equipment
- Provide multiple, convenient locations for safe disposal of used equipment

Safer drug use education

• Most challenging chapter to write:
  – Limited/lack of evidence
  – Among studies that exist, interventions studies vary greatly in terms of content and design. What components work?
  – Plethora of unevaluated education materials available online
  – Great need for recommendations for practice

• Solution:
  – Focus on principles of health education that can be used
  – Review existing evidence, comment on what is missing
  – Recommend evaluation of all educational interventions (also – please publish)
  – Comment on grey literature and its usage
Safer drug use education

Rationale for the BPR statements

• Injection related interventions lead to reductions in injection-related risk behaviours, such as sharing and reusing needles.

• Educational interventions
  – Cover varied topics (e.g., HIV basics information, testing, injection and sexual risk behaviours)
  – Delivered using varied formats (e.g., one-on-one counselling, group sessions, written materials).
Safer drug use education

Rationale for the BPR statements

• Single-session, brief interventions may be as effective as longer or multi-session interventions. Brief interventions are likely more cost-effective.
• Few studies of the impact of safer smoking education interventions. More are needed!
• Need to determine what components and/or processes related to injection and smoking interventions are essential to lead to reductions in behavioural risk.
• A “one size fits all” approach to education may not address variation in the contexts create particular risks and behaviours
Safer drug use education

Rationale for the BPR statements

• Vast ‘grey’ literature – tips sheets, recipe cards etc. exist
• Some developed by and for people who use drugs who have many years of experience
• Most not formally evaluated; quality is unclear
• Some may address emerging risks or risks ignored in the literature
• Challenge for programs to address ‘known’ risks in the absence of formal evidence
Safer drug use education

Recommended best practice policies to facilitate knowledge and application of drug consumption practices that reduce or eliminate the risk of transmission of HIV, HCV, HBV and other pathogens; drug overdose; soft tissue injuries; and other drug consumption related harms

- Provide educational interventions targeted toward reduction of injection-related risk behaviours (e.g., needle and other injection equipment reuse and sharing) associated with HIV and HCV transmission, drug overdose, soft tissue injuries, and other drug consumption related harms
- Provide educational interventions targeted toward reduction of crack cocaine smoking risk behaviours (e.g., pipe reuse and sharing) to reduce smoking-related harms, such as injuries to the mouth and lips, associated with HIV and HCV transmission
Safer drug use education

Recommended best practice policies to facilitate knowledge and application of drug consumption practices that reduce or eliminate the risk of transmission of HIV, HCV, HBV and other pathogens; drug overdose; soft tissue injuries; and other drug consumption related harms

- Provide safer drug use education in a variety of formats including one-on-one education, workshops and group education, skills-building sessions, information pamphlets, instructional videos, demonstrations, and other formats as necessary
- Provide peer-delivered, brief interventions, and longer interventions to reach a broad range and diversity of clients
- Develop and evaluate programs to train peers to deliver safer drug use education.
Safer drug use education

Recommended best practice policies to facilitate knowledge and application of drug consumption practices that reduce or eliminate the risk of transmission of HIV, HCV, HBV and other pathogens; drug overdose; soft tissue injuries; and other drug consumption related harms

- Develop and evaluate programs to train peers to deliver safer drug use education.
- Involve clients in the design and evaluation of educational materials and interventions to ensure message acceptability, relevance, and comprehension. Tailor education for the populations and contexts served by the program.
- Integrate evaluation of educational interventions into programming to ensure desired impact and to build evidence
Overdose prevention: education and naloxone distribution

Rationale for the BPR statements

• Overdose (OD) is the most common cause of death among people who use opioids
• OD prevention and naloxone programs train clients how to avoid OD and how to respond if they witness another person experiencing OD.
• Naloxone is a fast-acting, safe, and effective opioid reversal agent with the potential to decrease morbidity and mortality from OD.
Overdose prevention: education and naloxone distribution

Rationale for the BPR statements

• Edmonton (2005) first in Canada to distribute naloxone
• Chapter based on systematic review methods
• Most programs offer overdose prevention education, basic life support training to clients, physician prescribe naloxone in an intramuscular format (one intranasal)
• Outcomes include: varied rates of naloxone use for self or others, reduces overdoses, improved knowledge, confidence and willingness to intervene, reduced drug use, some improper use of naloxone, cost-effective
• More evidence and more rigorous studies are needed.
Overdose prevention: education and naloxone distribution

Recommended best practice policies to facilitate knowledge and application of opioid overdose prevention strategies, and how to appropriately respond in the event of an overdose (including the use of naloxone if available):

• Educate clients about opioid overdose prevention techniques
• Educate clients about the signs and symptoms of opioid overdose
• Provide first aid and CPR training to clients
• Educate clients about how to respond to an opioid overdose including calling 911
Overdose prevention: education and naloxone distribution

Recommended best practice policies to facilitate knowledge and application of opioid overdose prevention strategies, and how to appropriately respond in the event of an overdose (including the use of naloxone if available):

• Assess feasibility and acceptability of a naloxone distribution program
• Partner with multiple community stakeholders to prevent mortality from opioid overdose
• Where naloxone is available, ensure eligible and at risk clients are trained on appropriate use of naloxone and offer kits and training in a variety of locations. Evaluate opioid overdose prevention and response interventions to ensure desired impact and to build evidence
2013-2014 CIHR funding!

BPRs Part 2 – new chapters to come late in 2014, including:

- Other drug-related equipment: crystal methamphetamine pipes, foil for smoking, needles for hormone and steroid injection
- Program models: fixed, mobile, outreach, pharmacy, peer, etc.
- Testing and vaccination
- Referrals and counselling
- Skin and vein care
- Relationships with MMT and buprenorphine programs
- Relationships with other agencies: law enforcement, municipal or town council, public health agencies, ASOs
- Program monitoring and evaluation
Acknowledgements

• Canadian Institutes of Health Research: development funding

• AIDS Bureau, Ontario Ministry of Health and Long-Term Care funding to complete the narrative syntheses for chapters related to needles and syringes, other injecting equipment, safer crack cocaine smoking equipment, and disposal and handling.

• Advice and wisdom: Horst Backe (Winnipeg Regional Health Authority), Darlene Palmer (Cactus Montreal), Francine Keough (Safe Works Access Program, AIDS Committee of Newfoundland and Labrador), Patricia Bacon (Blood Ties Four Directions Centre), Aiyanas Ormond (VANDU), Sheila Lacroix (Centre for Addiction and Mental Health), Carol Danis (Sistering), and Alex Lee (U of Toronto).

• Graphic design: Ryan Nunn