

CHAPTER 6

HARM REDUCTION

Harm Reduction (HR) is a philosophical and evidence-based approach that strives to keep people safe by minimizing death, disease, injury, and other adverse outcomes associated with high risk behaviour. HR includes a range of non-judgmental strategies that aim to improve knowledge, skills, resources, and supports for individuals, their families, and communities, in order to promote safety and better health. HR takes a participatory approach, and as such, people who use drugs (PWUD) are vital to planning and implementing successful programs.¹ HR not only benefits PWUD, but the community at large by minimizing the transmission of infectious disease.

HR is internationally recognized and supported by the WHO.^{86,87} Vancouver experienced a public health emergency in the 1990s, with the highest rate of HIV infection in the western world. The BC government supported HR strategies to deal with the epidemic.⁸⁷ The Harm Reduction Strategies and Services

(HRSS) is comprised of representatives from the five regional Health Authorities, BCCDC, the First Nations Health Authority, the Health Officer's Council of BC, the BC Ministry of Health, and PWUD from across BC (peers). The HRSS collaboratively develops policies and guidelines with a vision to ensure that British Columbians have access to evidence-based HR strategies and services.^{4,74}

According to a 2011 BCCDC public telephone survey, 76% of British Columbians report they support HR. Females, younger age groups and persons with higher education are more likely to support HR activities. Fraser Health region has the lowest level of support at 71.5%. The survey found that established HR services such as needle distribution had more support than newer ones such as those related to inhalation equipment for crack-cocaine.⁸⁸

The following HR programs are implemented in BC today:^{89,90}

- ▣ **PEER SUPPORT PROGRAMS:** Groups for people who use substances to improve their quality of life and to address gaps in services
- ▣ **NEEDLE DISTRIBUTION PROGRAMS:** Distribute clean needles and other harm reduction supplies and educate on their safe disposal
- ▣ **OUTREACH AND EDUCATION:** Make contact with people who use substances to encourage safer behaviour
- ▣ **SUBSTITUTION THERAPIES:** Substitute illegal heroin with legal, non-injection methadone or prescription heroin
- ▣ **SUPERVISED INJECTION FACILITY (INSITE):** Provides a safer, supervised environment for people using substances in Vancouver
- ▣ **TAKE HOME NALOXONE (THN) PROGRAM:** Naloxone is an antidote to opioid overdoses. THN program provides training and naloxone kits to people who use opioids.
- ▣ **IMPAIRED DRIVING PREVENTION CAMPAIGNS:** Create awareness of the risks of driving under the influence of alcohol and other legal or illegal substances

HR Supply Distribution Programs

The transmission of blood-borne pathogens including HCV and HIV through sharing drug use equipment, such as needles, cookers, and water can be reduced by providing accessible sterile equipment. This includes male and female condoms, lubricant, needles and syringes, sterile water, acidifier (vitamin C), cookers with filters, tourniquets, alcohol swabs, sharps containers, vinyl tubing and cutters to produce crack pipe mouthpieces, crack pipe screens, and push sticks. Some of these are shown in Figure 6.1⁷⁴

BCCDC oversees the BC HR supply distribution. HR sites which receive supplies directly from provincial program (receiving sites) fax their supply order to the BCCDC who tracks supplies distributed to the 233 or so receiving sites across the province. Receiving sites may in turn provide supplies to other (satellite) sites to make available to clients. The following supply numbers are those distributed to receiving sites and are therefore an approximation of where supplies are obtained by clients. The HR sites in BC can be located online at the [Toward the Heart](#).⁷⁴

SAFER SEX SUPPLIES

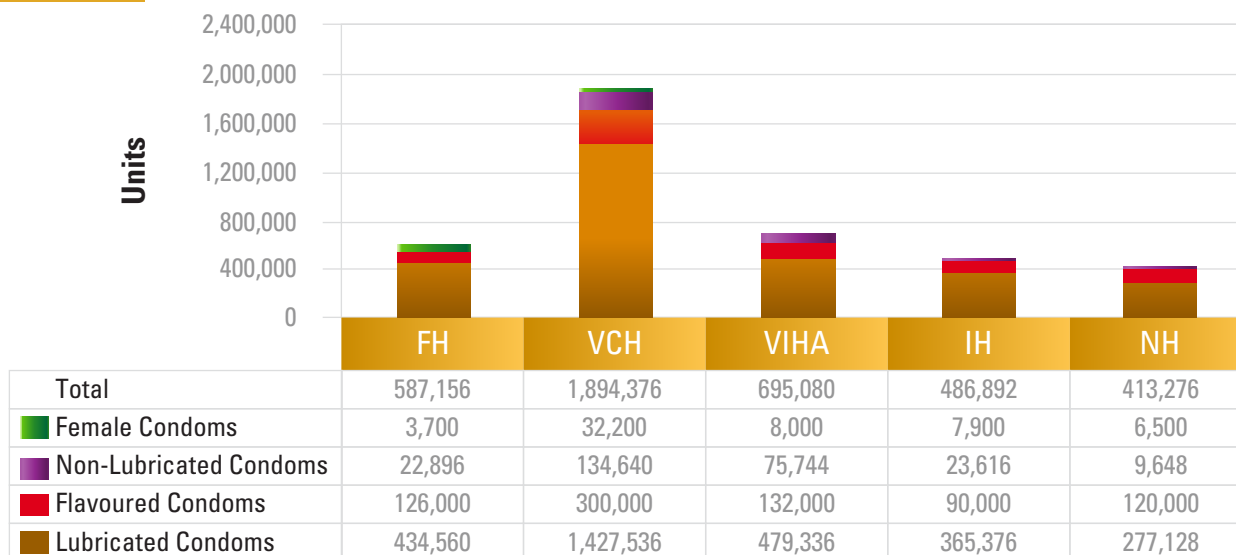
Total condom distribution for 2013 is presented in Figure 6.2. In 2013, 4,076,780 condoms were distributed in BC through HR supplies. VCH distributed the largest number of condoms. Few female-condoms are distributed although in drug-involved sexual situations, men often reject using

condoms and pressure their female partners into unprotected sex.⁹¹⁻⁹³ A female condom can be inserted several hours prior to sexual intercourse, increasing a woman's capacity to protect herself during sex.⁹⁴ It is therefore important to make sure that female condoms are widely available and that women are informed about them.

Figure 6.1 HR supplies in BC⁷⁴



Figure 6.2 Condoms by type distributed to HAs in BC through HR supplies, 2013



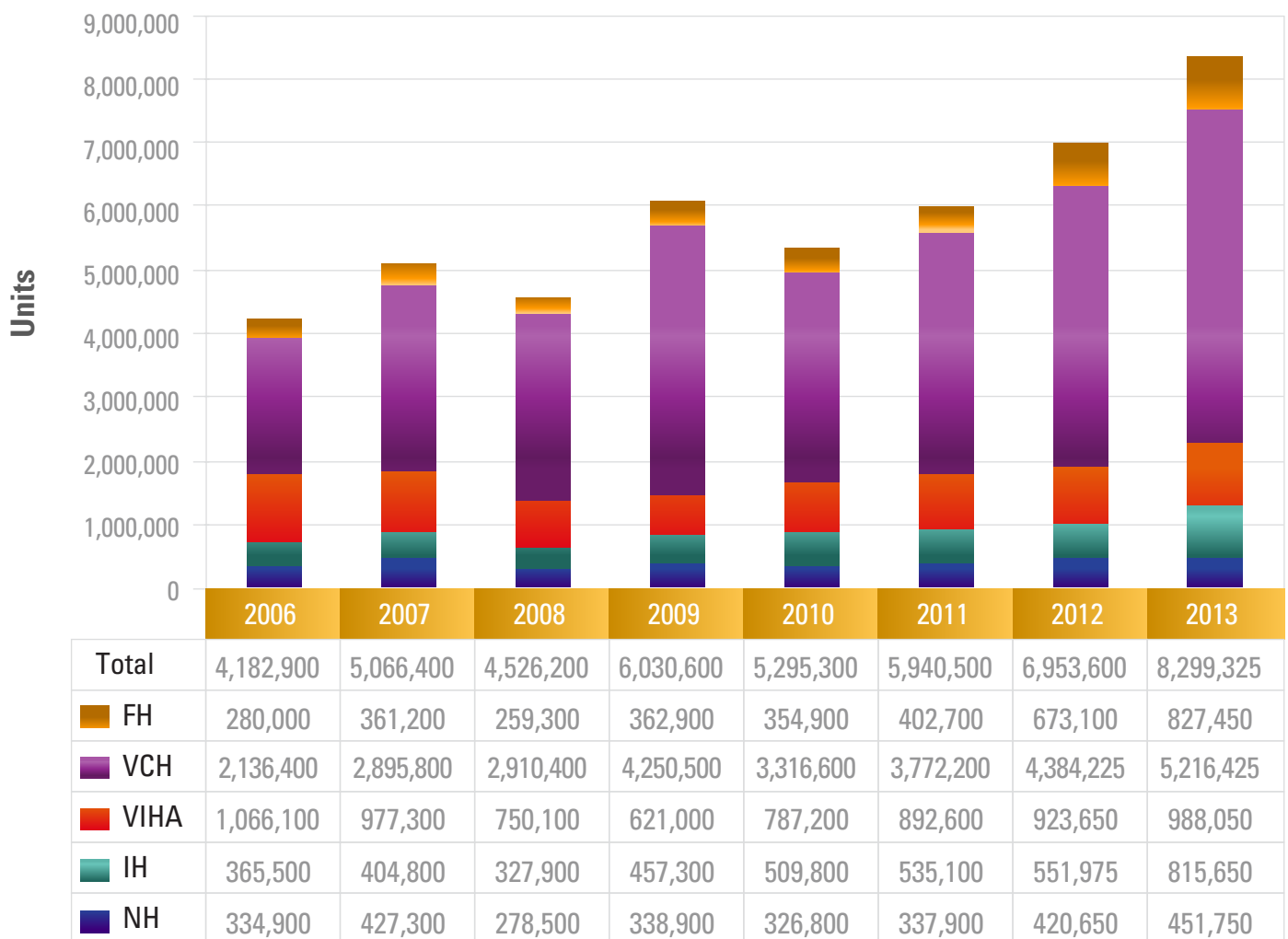
(BCCDC Communicable Disease Prevention and Control Services, personal communication, May 6, 2014)

SAFER INJECTION EQUIPMENT (SYRINGE)

Overall syringe distribution throughout BC has increased in recent years with over 8 million syringes distributed in 2013 (Figure 6.3). The majority (97.6% in 2013) of syringes are 0.5ml and 1ml insulin syringes which include the needles. Separate needles and syringes are also provided as some drugs may be administered intramuscularly, be large volume or viscous such

as steroids. About 63% of syringes (5,216,425), were provided to VCH, and of these about 65% (3,402,000) were distributed within Vancouver HSDA. The total number of syringes delivered to the supervised injection site (for use within InSite and as a distribution site) account for 33% (1,745,525) of the VCH total.

Figure 6.3 Total syringes distributed to HAs in BC through HR supplies, 2006-2013

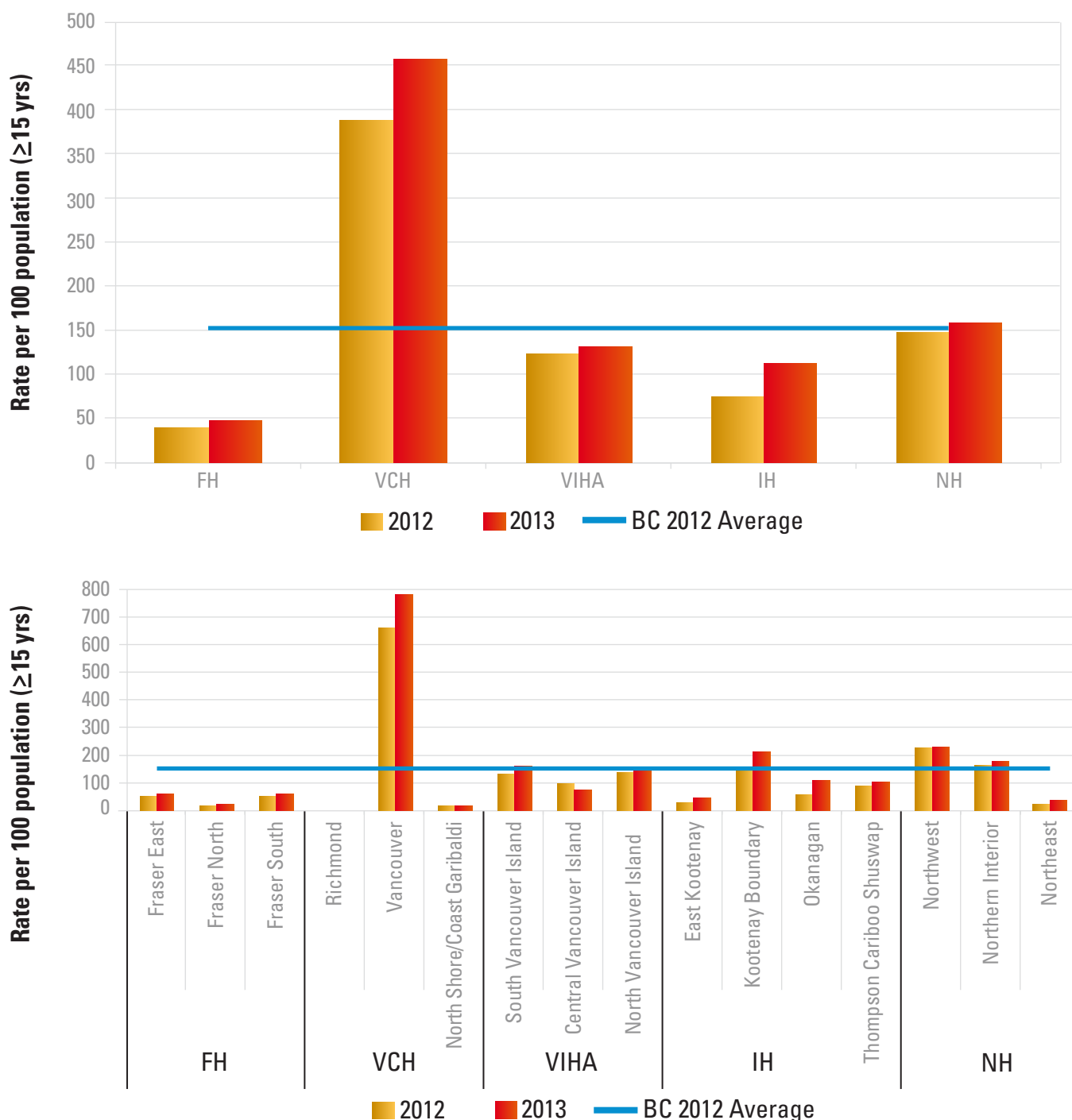


(BCCDC Communicable Disease Prevention and Control Services, personal communication, May 6, 2014)

The following 2 graphs (Figure 6.4) show syringe distribution rates for each Health Authority and HSDA for calendar year 2012 and 2013. The horizontal lines represent the 2012 BC average rate of syringe distribution per 100 population aged 15 years and older. This data illustrates the high rate of syringe distribu-

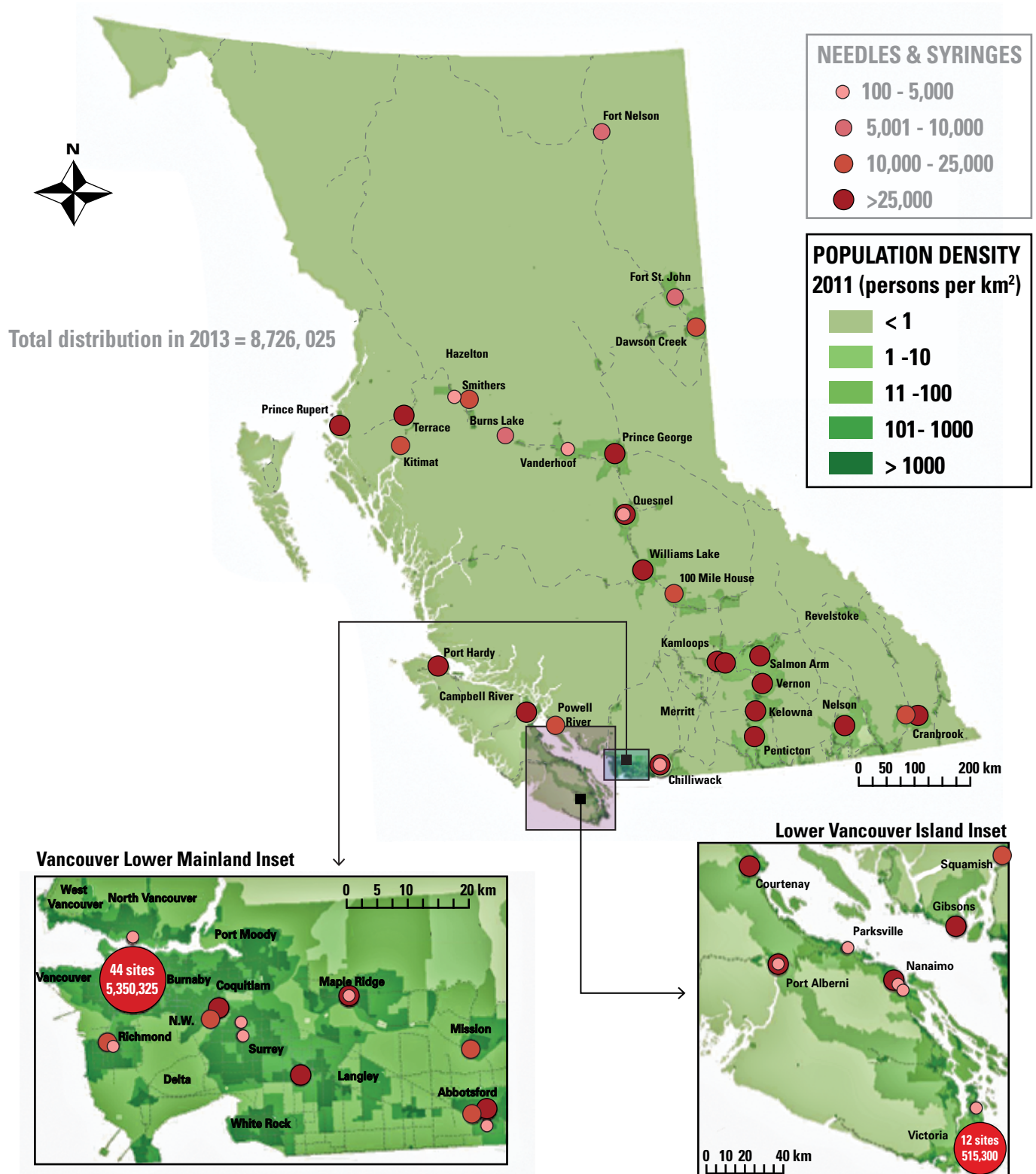
tion in VCH, and more specifically, Vancouver HSDA. Despite a doubling of syringe distribution in FH from 2011 to 2013 (Figure 6.3), Fraser HA has a low syringe distribution rate compared to the other four HAs. Rate of syringe distribution also varies between HSDA within each HA (Figure 6.4).

Figure 6.4 Syringe distribution rate by Health Authority and Health Service Delivery Area, 2012-2013



(BCCDC Communicable Disease Prevention and Control Services, personal communication, Sept 22, 2014)

Figure 6.5 Syringes distributed in BC, 2013 and population density



(BCCDC Communicable Disease Prevention and Control Services, personal communication, June 16, 2014)

* Receiving sites only

OTHER SAFER INJECTION EQUIPMENT

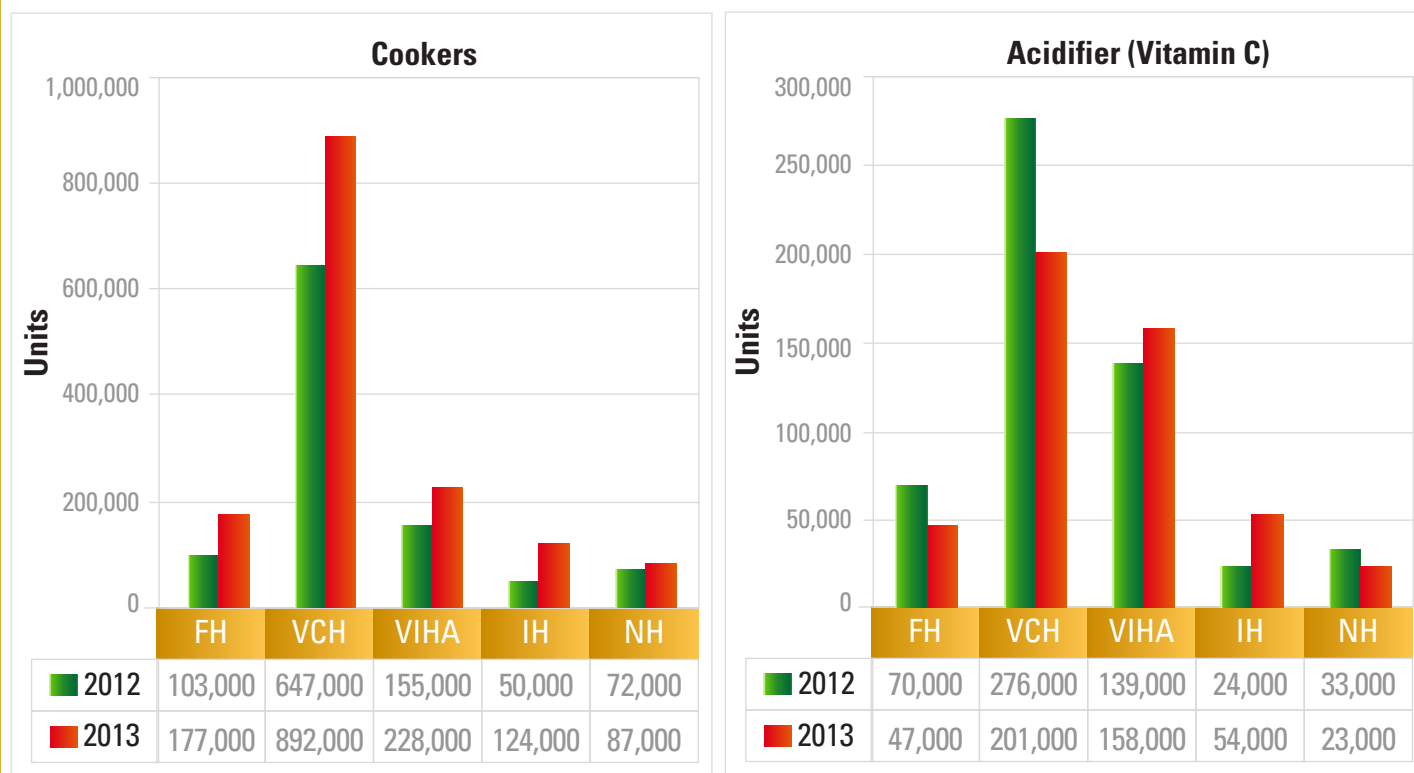
To reduce the risk of vein damage and developing infections, drugs should be fully dissolved in sterile water prior to injection. Sterile water in plastic ampoules avoids harms from using unsterile or contaminated sources such as puddle water. Best practice recommends a sterile water ampoule should be used with a sterile needle/syringe for each injection. In 2013, HRSS distributed 4,238,000 water ampoules throughout BC, which represents about half the number of syringes distributed (BCCDC Communicable Disease Prevention and Control Services, personal communication, May 6, 2014). Programs should strive to distribute as many water ampoules as required so the individual client can use a new sterile water ampoule and sterile needle/syringe for every injection.⁷⁴

Distribution of cookers and acidifiers in BC started in 2010. Cookers are used to mix and heat substances such as heroin or crack cocaine to dissolve them before injection; in the absence of cookers, unsterile teaspoons or beverage cans may be used. Providing sterile, disposable cookers decreases sharing and reduces the risk of transmitting blood-borne and bacterial

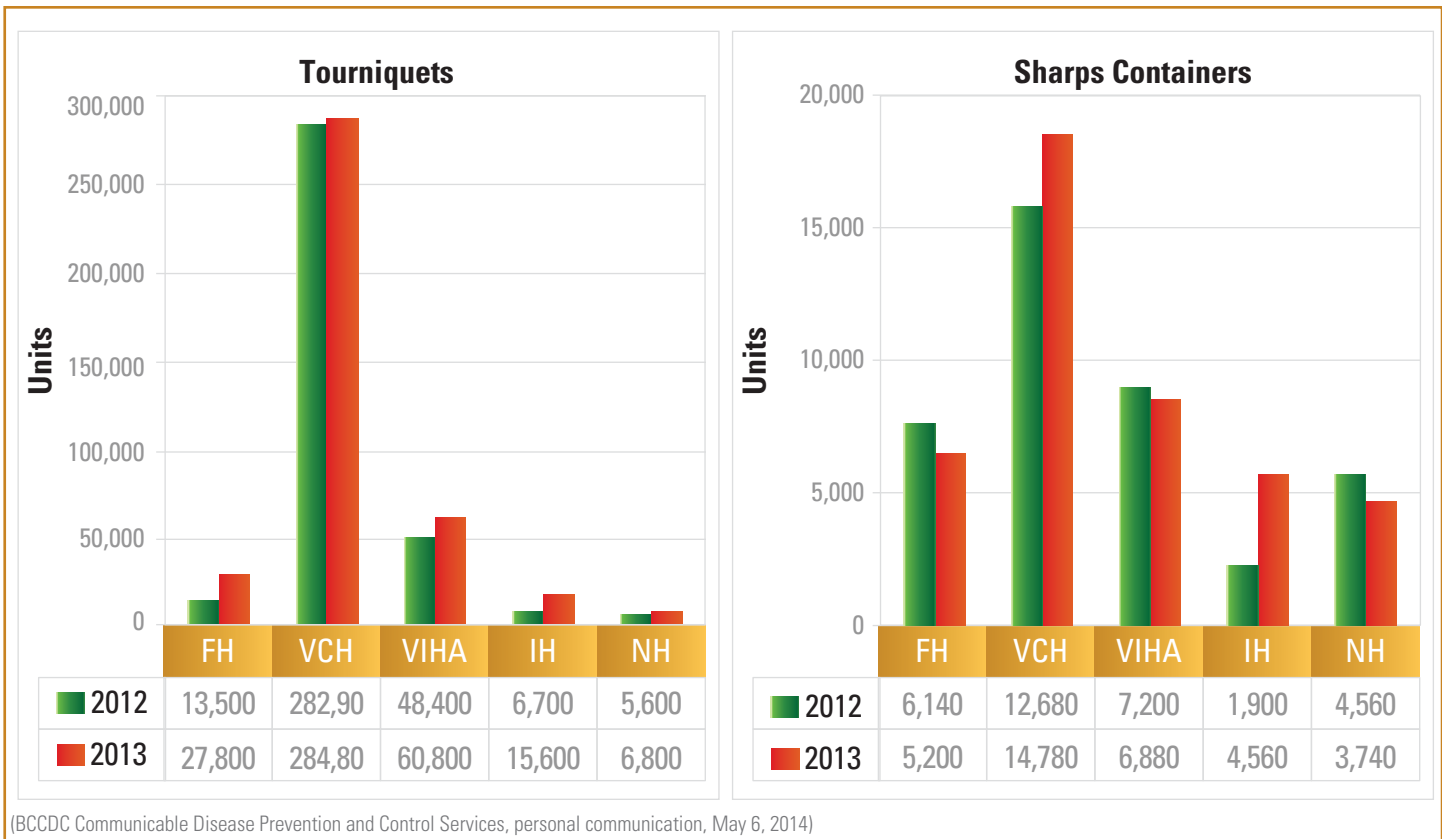
infections from unsterile paraphernalia. Acidifiers are used to dissolve crack cocaine, brown tar heroin, or coated pharmaceuticals for injection. Lemon juice or vinegar can cause pain and damage to the veins. The HR program provides single-use packets of medical grade vitamin C (ascorbic acid) powder. A tourniquet or 'tie' is an elasticated strip that is tied around the arm to help protrude veins to prevent disrupted blood flow, skin trauma, and other injection-related harms. Elastic, quick release tourniquets are preferable to a cord or belt which may be difficult to release and damage the vein. Tourniquets should not be shared as this can cause transmission of bacterial infections such as methicillin-resistant staphylococcus aureus (MRSA). Sharps containers are a safe and convenient means of disposing of used injection and inhalation equipment. Their use helps reduce injection litter, avoid needle stick injuries, and prevent the spread of infection.⁷⁴

Figure 6.6 illustrates the overall distribution of cookers, acidifiers, tourniquets and sharps containers by HA in BC. VCH distributes the most injection supplies.

Figure 6.6 The total number of safe injection supplies distribution to HAs in BC through HR supplies in 2012 and 2013; Cookers; Acidifier (Vitamins C); Tourniquets; and Sharps Containers



(BCCDC Communicable Disease Prevention and Control Services, personal communication, May 6, 2014)



SAFER INHALATION EQUIPMENT

As shown in the high-risk populations section of the drug trend chapter, smoking crack-cocaine has become more prevalent in the Vancouver area since the 1990s. Providing safer inhalation equipment can reduce harms and increase engagement. Vinyl tubing is provided in 100ft lengths and is cut to create a mouthpiece, to attach to a glass stem. The mouthpiece avoids direct contact of the mouth and lips with hot or broken glass stems and to reduce the risk of oral lesions, and allows individuals to use their own mouthpiece to reduce the potential transmission of communicable diseases via shared glass stems. Wooden push sticks scrapes the residue from inside the glass stem (pipe), and avoids the inappropriate use of syringe plungers, or metal coat hangers and car aerials, which can melt or chip the glass stems. Crack pipe screens hold the crack cocaine 'rock' in place near the end of the pipe; these brass screens reduce the use of steel wool, which can breakdown so that hot metal particles are inhaled causing burns on the lips, mouth, and respiratory tract.⁷⁴

Distribution of glass stems (crack pipes) is best practice in harm reduction programs.⁹⁵ The VCH Safer Smoking Pilot Project started in 2011 and provided safer smoking kits consisting of stems, other safer smoking supplies and educational materials to people in the DTES.⁹⁶ From December 2011 through November 2012, the pilot distributed 100,400 kits through five DTES HR service providers.⁹⁶ An evaluation found decreased smoking-related cuts, burns, and blisters among people who received the kits and statistically significant reductions in high risk behaviour such as obtaining used stems from the street.⁹⁶ Contrary to public concerns about the program, the increased availability of glass pipes in Vancouver was not found to encourage crack use; research by UHRI suggests that crack use among Vancouver area people who use illicit drugs has consistently declined since 2008 (Figure 2.8). Not surprisingly VCH distributed the most tubing, push sticks and screens in 2013.

Harm reduction supply distribution in BC is inequitable between and within health authorities and should be addressed.

BORROWING AND LENDING OF SAFER INJECTION AND INHALATION EQUIPMENT

SAFER INJECTION EQUIPMENT

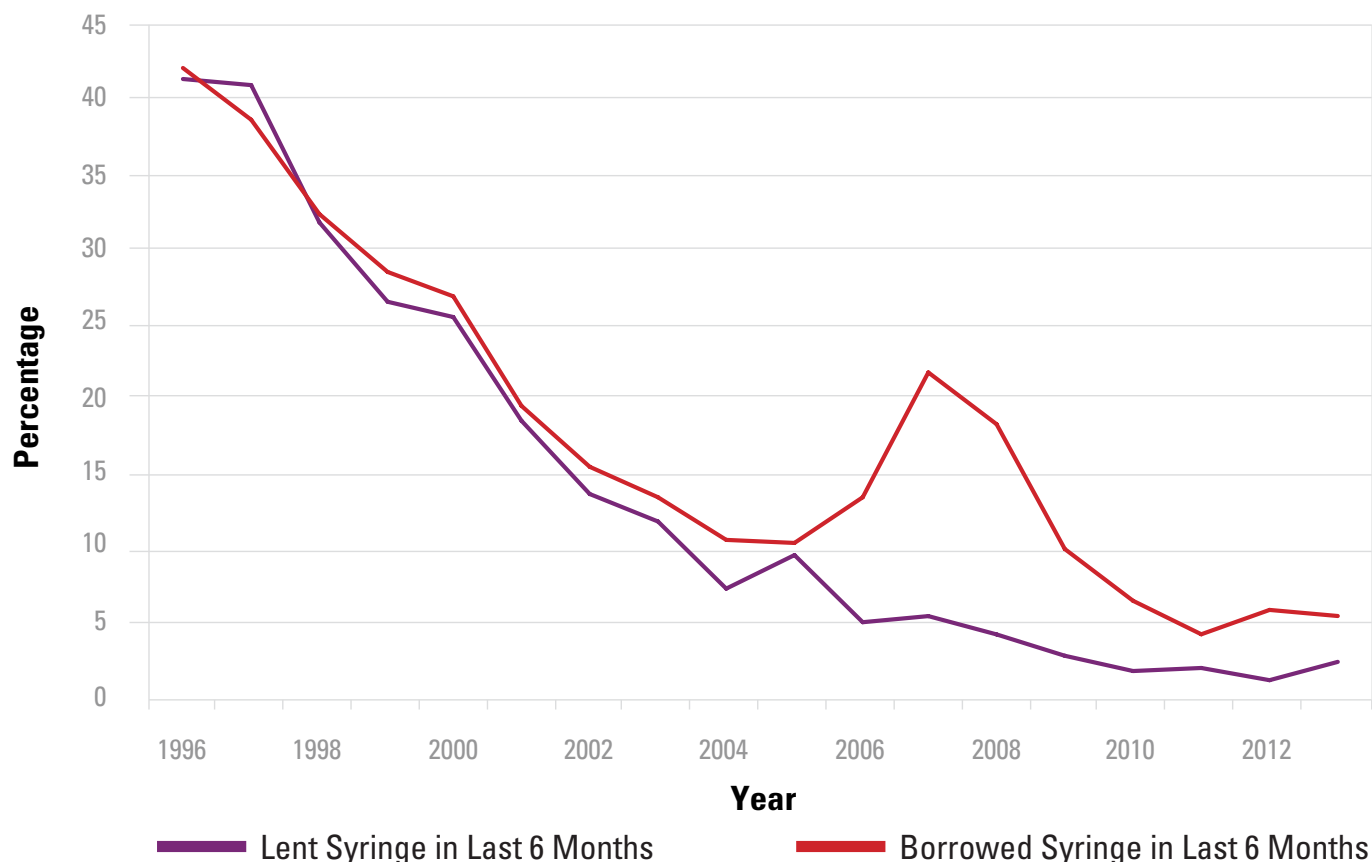
Data from UHRI's combined VIDUS and ACCESS cohorts indicate substantial declines in syringe lending and borrowing in Vancouver since the 1990s (Figure 6.7). In 2013, among people who inject drugs, 2.5% of participants reported lending a used syringe in the previous six months; 5.6% reported borrowing a used syringe within the same timeframe, down from 40% of participants who reported lending or borrowing syringes in 1996. The substantial decline is likely multi-factoral: including the BC harm reduction program and local efforts, educational initiatives, the establishment of the supervised injection facility in Vancouver and an experienced surviving cohort.

The CARBC Alcohol and Other Drug Monitoring project's high risk survey found street-involved adults from Victoria reported significantly more frequent sharing of needles or injecting equipment* compared to Vancouver participants (Figure 6.8).²⁰

Please note that CARBC 'needle sharing' includes both lending and borrowing. In BCCDC's 2013 HR client survey, 12% of respondents who had injected in the past week reported lending a used needle in the previous month; this proportion was highest in FH and VCH (14%), and lowest in IH (7%).²³ Furthermore, 8% of those who had injected in the past week indicated that they had injected with a used needle in the previous month; NH was highest at (12%) and IH (11%) and lowest in VIHA (7%).²³

However, among active youth injectors from the ARYS cohort prevalence of needle lending (13.1%) and needle borrowing (8.3%) in 2013 are higher than the adult population (Figure 6.9) indicating a need for appropriate harm reduction messaging for young injectors.

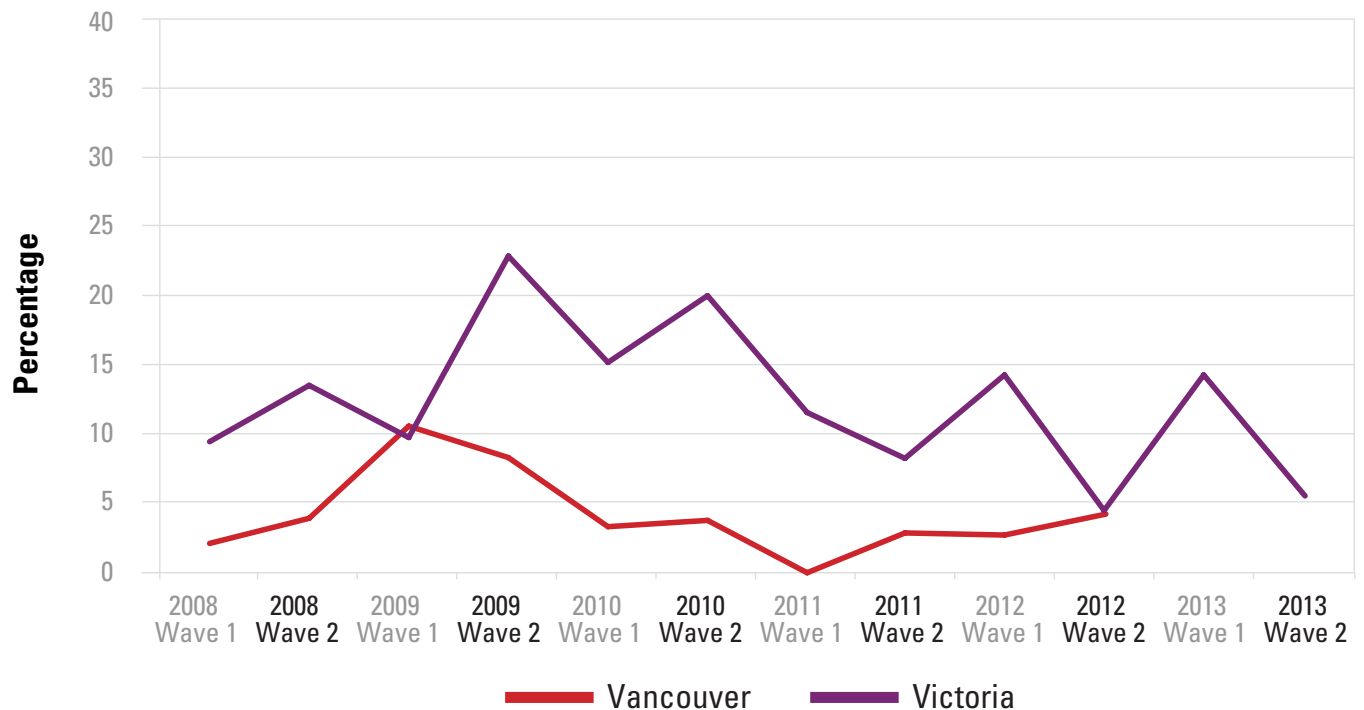
Figure 6.7 Syringe lending and borrowing among adults who inject drugs in Vancouver, 1996-2013



(BC Centre for Excellence in HIV/AIDS, personal communication, June 23, 2014)

Figure 6.8

Needle or injecting equipment* sharing (lending and borrowing) in the past 12 months among street-involved adults who inject drugs in Vancouver and Victoria, 2008-2013²⁰



*Injecting equipment includes cookers and spoons

Figure 6.9

Syringe lending and borrowing among street-involved youth who inject drugs in Vancouver, 2005-2013



(BC Centre for Excellence in HIV/AIDS, personal communication, June 23, 2014)

Table 6.1 summarises lending and borrowing rates in the various studies. Compared to the adult UHRI cohort, rates in the high risk population and BCCDC HR client survey may be unstable due to small sample sizes.^{20,23} Please also note that the time frame varies between studies.

The BCCDC HR client survey found that about half of the respondents who inject drugs reported difficulty accessing new rigs (needles) in the previous month; the proportion varied by

health authority. It should be noted that perception of difficulty accessing rigs may be influenced by expectations.

FH 57% **VCH** 57% **NH** 47% **VIHA** 38% **IH** 33%

The most cited barrier to obtaining new rigs in all five HAs was the supply distribution centre not being open when needed; other reported problems included the HR site being too far away and concerns about confidentiality.²³

Half of harm reduction clients report difficulty accessing needles/syringes. Adopting more flexible operating hours and creating mobile distribution sites may reduce some of the barriers to access.

Needle/syringe borrowing and lending remains unacceptably high (10%). Strengthening awareness and peer-to-peer education regarding risks of needle sharing is needed.²³

Table 6.1 Needle/syringe lending and borrowing rates in BC, 2013^{20,23}

Study (Timeframe)	Lending %	Borrowing %	Sharing %
UHRI Vancouver Adults Past 6 Months**	2.5	5.6	-
AOD Monitoring High Risk Adults Vancouver Past 12 Months*†	-	-	4.3
AOD Monitoring High Risk Adults Victoria Past 12 Months*	-	-	5.6
HR Client Survey Adults VCH Past Month	14	8	-
HR Client Survey Adults All BC Past Month	12	7.7	-
UHRI Vancouver Youth Past 6 Months**	13.1	8.3	-

* Sharing includes lending and borrowing. Injecting equipment includes cookers and spoons.

** BC Centre for Excellence in HIV/AIDS, personal communication, June 23, 2014

† The most recent CARBC Vancouver data is from 2012

SAFER INHALATION EQUIPMENT

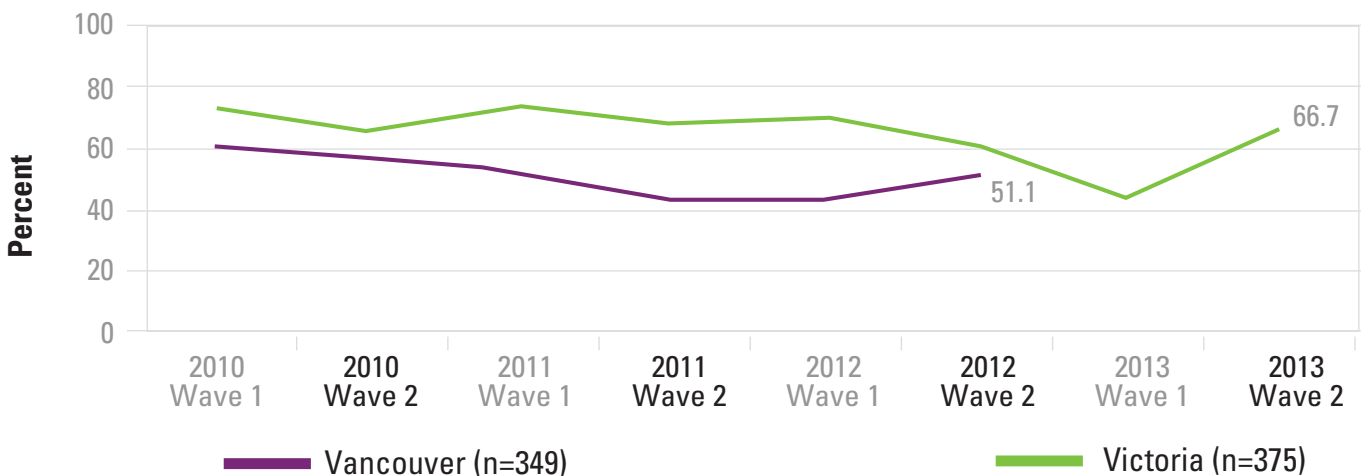
Reported crack pipe sharing from the AOD Monitoring project's High Risk Populations survey is shown in Figure 6.10. Crack pipe sharing among street-involved adults in Vancouver was lower than in Victoria throughout the observed study period. It should be noted that crack smoking was more prevalent among Vancouver street-involved adults than Victoria street-involved adults during this timeframe. Vancouver's lower rates of pipe sharing may be partially attributable to the VCH Safer Smoking Pilot Project.²⁰

In 2013, half of HR client survey respondents reported difficulty acquiring crack pipes in the previous month, highest in VCH (59%), and lowest in VIHA (39%). However, Vancouver HR sites selected for the survey were not distributing crack pipes at

the time, which may partially explain the higher percentages in VCH overall. Among survey participants, the most frequently reported alternative to crack pipes were pop cans (51%) and pipe sharing (50%). The majority (78%) of respondents reported borrowing crack pipes or mouthpieces in the previous month, while 61% indicated that they had lent a pipe or mouthpiece. The HR client survey asked about crack pipe disposal; the most frequently reported method of disposal was regular garbage (61%), followed by sharps container (21%), return to HR site (8%), and unspecified "other" (24%). More detailed regional comparisons of needle and crack pipe acquisition, disposal, and sharing behaviour can be obtained from the BCCDC website.²³

Figure 6.10

Crack pipe sharing in the past 12 months among street-involved adults in Victoria and Vancouver, 2010-2013²⁰



Note: Data is only available for Vancouver upto 2012 wave 2

High rates of sharing crack pipes and mouthpieces (about 50%) were reported throughout BC, reflecting the general lack of availability of safer smoking supplies.

■ Supervised Injection Site (InSite)

InSite is the only sanctioned supervised injection facility (SIF) in North America. The BC Ministry of Health provides operational funding for InSite through VCH. Since opening in 2003, the facility has had more than 2 million visits.⁹⁷ In 2012, there were 376,149 visits to InSite by 9,259 unique individuals.⁹⁷

VCH and the Portland Hotel Society (PHS) Community Services provide a comprehensive support network at InSite. PHS is a non-profit organization that promotes supportive affordable housing for Vancouver area individuals who are at increased risk of homelessness due to substance abuse and other mental health problems. InSite has 12 injection booths where clients inject pre-obtained illicit drugs under the supervision of nurses and health care staff. There were 1418 overdoses at InSite between 2004 and 2010, and staff successfully intervened each time. To date there has been no fatality at InSite. In addition to nurses, InSite also has addictions counselors, mental health workers, and peer staff who connect clients to community resources such as housing, addictions treatment, and other supportive services.⁹⁷

Research shows that InSite reduced fatal overdose cases within 500 metres of the facility by 35% between 2001 and 2005, and may have prevented up to 51 overdose deaths between March 2004 and July 2007.⁹⁸⁻¹⁰⁰ The SIF may have reduced needle sharing and increased condom use; these behavioural changes could translate to about \$6 million in annual healthcare cost savings.¹⁰¹⁻¹⁰⁵ Peer-reviewed research demonstrates other health benefits that InSite has provided for the larger community.¹⁰⁶

- Only one person out of 1,065 reported performing their first injection at InSite, suggesting InSite has not promoted illicit drug injecting, but has attracted individuals with long histories of injection drug use.¹⁰⁷
- Among more than 1,000 InSite visitors, 18% began a detoxification program. There was a 33% increase in detoxification service use compared to the year preceding the opening of the facility. Individuals who used InSite at least weekly were 1.7 times more likely to enroll in a detox program than those who visited the centre less frequently.^{108,109}
- There is no evidence suggesting InSite is linked to an increase in drug-related crime activities in the surrounding area.¹¹⁰
- The presence of InSite improved public order in the area around the facility; there were significant decreases in the number of publicly discarded syringes, injection-related litter such as syringe wrappers, and people injecting in the area around InSite.¹¹¹

- Local police are actively referring PWID to InSite, signifying that InSite is providing an opportunity to coordinate policing and public health efforts. Police are helping to meet both public health and public order objectives and are playing an important role in supporting Vancouver's supervised injection site. This indicates a disconnect between the views of local police officers working in direct proximity to InSite and those of external law enforcement organizations who remain vocally opposed to the facility.¹¹²

■ Take Home Naloxone (THN) Program

Unintentional deaths from opioid overdose are preventable with overdose prevention, recognition, and response education including naloxone administration training. Naloxone, or Narcan®, has been used in emergency settings for over 40 years in Canada and is on the WHO List of Essential Medicines. It is a pure opioid antagonist that quickly (in 2-5 minutes) reverses life-threatening respiratory depression to restore breathing. Naloxone is not a controlled substance, it cannot be abused, and in the absence of opioids has no pharmacologic activity. Research also demonstrates that having naloxone available does not increase risk-taking behaviour. Naloxone can be given by injection (into the vein or muscle or under the skin) or intra-nasal (sprayed into the nose). Naloxone for injection is currently the only formulation approved by Health Canada and is a prescription only medication (POM). The intra-muscular injection can be given through clothing into the muscle of the upper arm, buttock, or upper leg.⁹⁰

Numerous THN programs exist globally, including more than 180 programs in the US, the first of which was established in 1996.

¹¹³ Edmonton started the first THN program in Canada in 2005, Toronto began in 2010 and in 2012 BC and Ontario launched provincial initiatives to provide naloxone education and kits. Ontario's program was implemented at harm reduction distribution sites but was put on hold for six months but recommenced in October 2013.¹¹⁴ BC's Overdose Prevention Program is modeled on the successes of existing programs and combines education (overdose prevention, recognition, and response) with a THN kit for individuals who use opioids (legally prescribed or illegally obtained) and are at risk of an overdose.⁹⁰

Because 85% of overdoses happen in the company of others, having naloxone available offers the opportunity to save a life and reduce harms related to the overdose while waiting for the

paramedics to arrive. It is not intended to replace emergency care or minimize the importance of calling 911. Mathematical modeling in the US demonstrates that naloxone, in conjunction with overdose education, has a synergistic effect i.e. has greater effect on reducing overdose events than if each was provided individually. As shown in Figure 6.11, in 24 months, 2,214 people

have been trained, over 1215 THN kits have been distributed through 51 HR sites in BC and 125 overdoses have been successfully reversed. The locations of sites in BC providing naloxone are available at the [Toward the Heart](#) website.⁹⁰

Figure 6.11 BC Take home naloxone program statistics, August 2014



The BC THN pilot program provides kits containing: 2 glass ampoules of 0.4 mg/ml naloxone, 2 safety syringes, 2 alcohol swabs, 2 latex gloves, a one-way rescue breathing barrier mask, THN administration information form and an illustrated guide on how to respond to an opioid overdose (Figure 6.12 and Figure 6.13). In BC prescription only medications must be prescribed to a specific individual with indications for personal use by a

physician or nurse practitioner; other Canadian provinces continue to utilize pre-written orders where a nurse can sign-off on a prescription or Medical Directives are in place. Resources for the program including training and administration materials are available at the [Toward the Heart](#) website.⁹⁰

Figure 6.12 The BC Take Home Naloxone Kit⁹⁰**Figure 6.13** Toward the Heart SAVE ME steps for responding to an overdose⁹⁰

Take home naloxone programs save lives and prevent brain damage due to lack of oxygen in opioid overdose situations.

Take home naloxone programs for people who use opioids are acceptable, safe, cost effective and do not increase drug use.

Methadone Maintenance Therapy

Methadone Maintenance Therapy (MMT) has become the standard therapy for opioid substance dependence. Methadone is a long acting synthetic opiate agonist which does not cause euphoric or sedating effects. When taken orally methadone is readily absorbed, has a slow onset and thus can be taken orally once daily. It should be given at a relatively constant dose in order to reduce heroin cravings and block opioid withdrawal symptoms.¹¹⁵

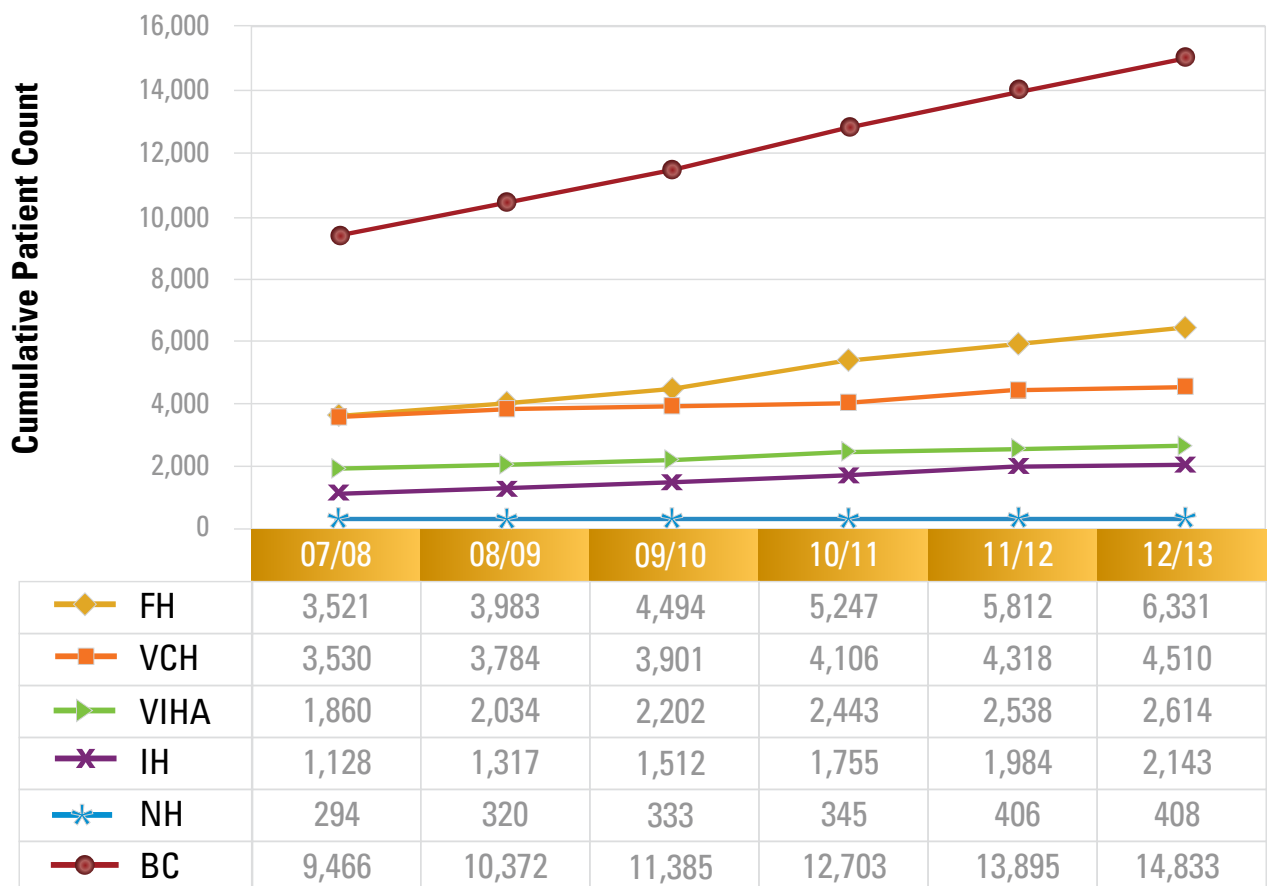
Patients on MMT may progress to abstinence, remain on methadone indefinitely, or leave the program perhaps to return at a later date. Studies have found that among opioid addicted patients, those who maintain MMT have a reduced risk of morbidity and mortality and reduced involvement in crime and helps them have control over their lives.

In BC, the Methadone Maintenance System regulates the MMT program based on a multidisciplinary approach with three key components: 1) prescribing, 2) dispensing, and 3) counselling.

The College of Physicians and Surgeons of British Columbia (CPSBC) and the College of Pharmacists of British Columbia (CPBC) are the professional regulatory bodies accountable for methadone maintenance prescribing and dispensing. The objective of CPSBC's program is to ensure that physicians safely and effectively prescribe methadone for maintenance purposes. CPBC licenses and regulates pharmacists, pharmacy technicians, and their places of practice. CPBC also offers policy guidance and training for pharmacists who purchase and dispense methadone.¹¹⁷

Recently (2014) the Government of BC has adopted the term 'opioid substitution treatment' (OST) which includes suboxone (buprenorphine and naloxone) as well as methadone. However the vast majority (>94% 14,833 of 15,754 in 2012/13) of patients on OST in BC are prescribed methadone.¹¹⁶ Figure 6.14 shows patients on methadone maintenance therapy by health authority.

Figure 6.14 Methadone Maintenance Therapy patients by health authority, BC 2007/08 to 2012/13

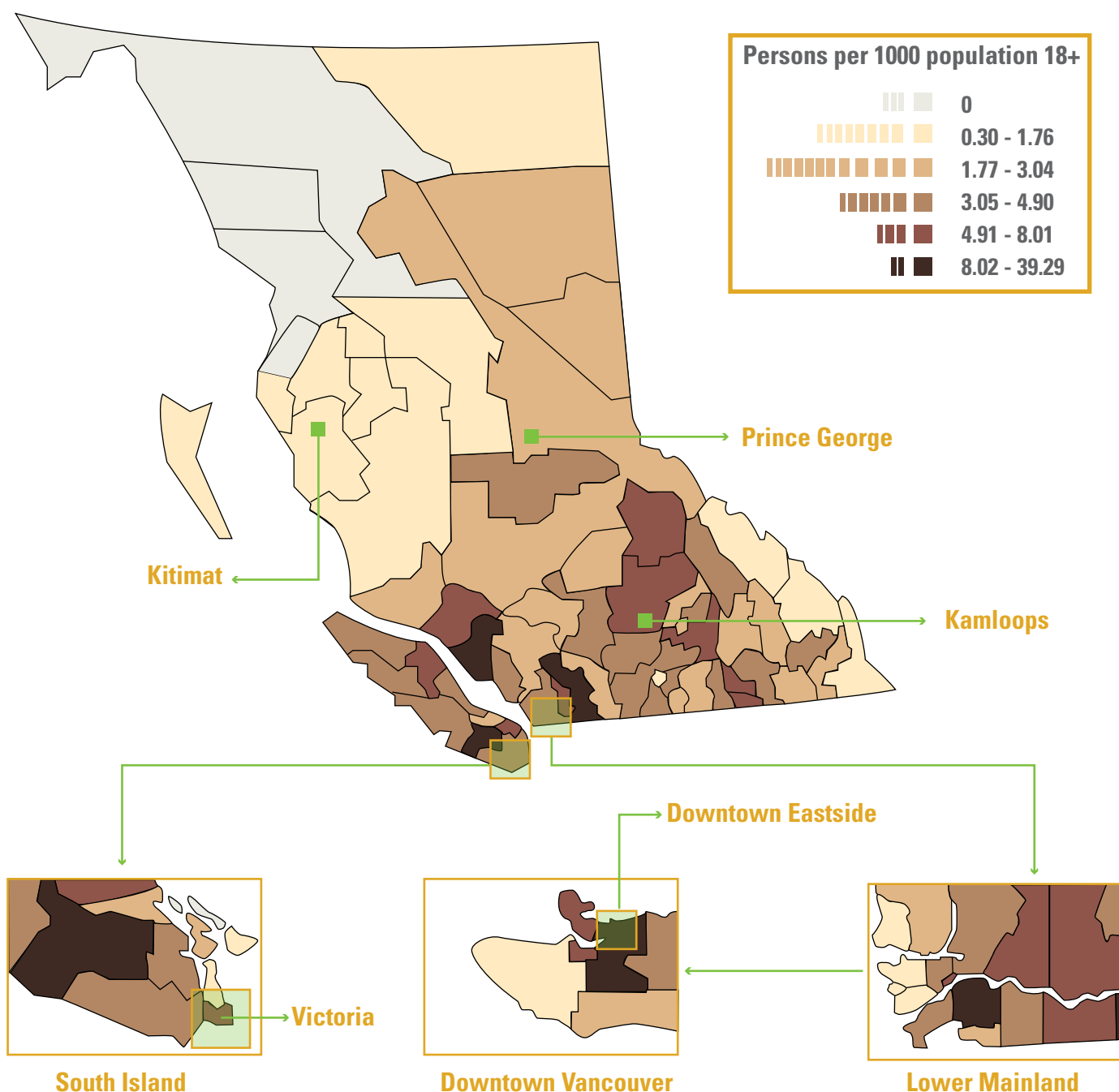


In 2012/13 53% of patients received a stabilizing dose of methadone >60mg; and between 34% and 45% of people started on methadone in 2011/12 were retained in treatment at 12 months.¹¹⁶ In 2012/2013 FH had the highest number of new and continuing patients but the number of patients in MMT in NH has remained low and relatively unchanged during over the past 10-years.¹¹⁶ Long travel times to Northern MMT clinics remains a barrier to access. In 2011, about 9% of NH MMT clients lived over 100 km from the nearest methadone prescriber.¹¹⁸

The distribution of OST clients in BC varies by LHA. (Figure 6.15)

A recent review of FNHA's National Native Alcohol & Drug Abuse Program found that harm reduction approaches are supported in the majority of residential treatment centres in BC. Additionally about half of the centres accept clients who are receiving methadone. However, accessibility to MMT service providers and pharmacies offering methadone can be limited,

Figure 6.15 Opioid substitution treatment patients by local health area 2012/13⁷⁹



particularly in rural and remote areas, which poses challenges for methadone initiation and continued adherence and may require clients to travel considerable distances.¹¹⁹ The FNHA welcomes future opportunities for dialogue related to harm reduction and other aspects of these programs and services to better meet the treatment needs of First Nations clients, in collaboration with regions, communities and other partners and services providers.

METHADOSE

In February 2014, BC changed the formulation of methadone from a compounded 1mg/ml solution dispensed as an orange flavored drink, to a standard 10mg/ml, cherry flavored liquid called Methadose®. Benefits of Methadose include 1) longer shelf life and no need to refrigerate 2) quality control and consistent dosing, 3) painful when injected so discourages injection. The new BC guidelines also reduced home delivery of methadone by pharmacists to only exceptional circumstances (i.e. due to a patient's restricted mobility, and with physician authorization).¹²⁰

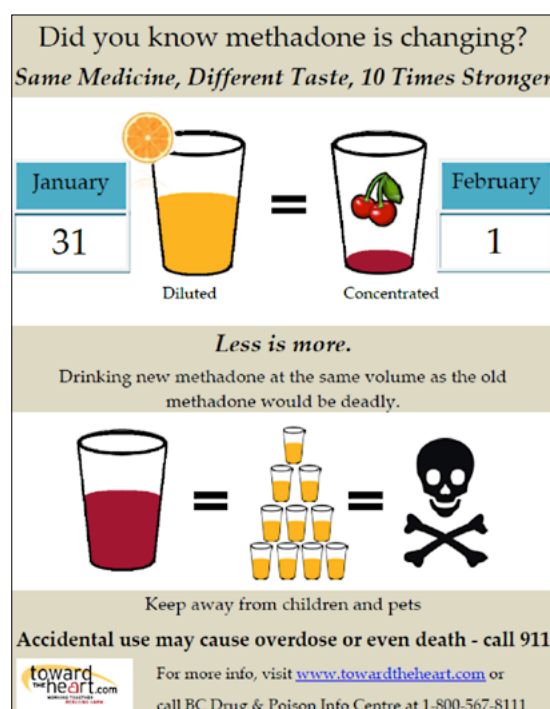
Alberta changed to Methadose in September 2012 and some US states have used Methadose since the 1970's. Other jurisdictions may permit pharmacists to dilute unflavoured Methadose at their discretion. In BC, only the cherry flavoured formulation is available and if dispensed for carry out is done so in individual doses. Concerns related to the change in BC were expressed by

people on methadone, communities, and local health agencies. Concerns included the potential for unintended overdose due to: 1) difficulty in titrating dose changes; 2) diversion (i.e. persons consuming illicitly without a prescription being unaware of 10-fold higher concentration); and 3) accidental ingestion by a child because Methadose looks like Children's Tylenol®, and a small amount (1 ml) can be fatal in children.¹²¹

Raising public and professional awareness of the new Methadose formulation was important to ensure a smooth and safe transition. All pharmacy managers, staff, relief pharmacists, and pharmacy technicians employed in community pharmacies that provide MMT-related services were required to complete training designed to help them transition patients over to Methadose. Educational pamphlets and posters were developed collaboratively by CPSBC, CPBC, and the BC Ministry of Health. Posters developed by HRSS (Figure 6.16) were translated into Chinese and Punjabi to help inform patients of the change.

Some MMT patients report the effect of Methadose does not last as long as the previous methadone formulation, needing higher doses or have returned to illicit opioid use. To assess these concerns more objectively a question was added to the 2014 HR client survey. For further updates and information regarding the change to Methadose in BC, please refer to the [Toward the Heart](#) website.

Figure 6.16 Public awareness poster for the methadone formulation change in BC¹²¹



■ SALOME and NAOMI Studies

MMT may be ineffective for a small proportion of long-term heroin users. The North American Opiate Medications Initiative (NAOMI) study, which took place between 2005 and 2008, was the first clinical trial to investigate whether providing injectable pharmaceutical grade heroin was more effective than oral MMT in recruiting, retaining, and benefiting chronic treatment resistant opioid users. NAOMI found that participants treated with diacetylmorphine (the active ingredient of heroin) showed improved mental and physical health. After one year, 88% of the diacetylmorphine group remained in treatment, compared to 54% of the MMT group. Many participants in the diacetylmorphine group also successfully transitioned to oral treatment, detox programs, and abstinence. Furthermore, the NAOMI study found that many participants could not tell the difference between diacetylmorphine and hydromorphone (HDM), a licensed pain medication.

The Study to Assess Longer-term Opioid Medication Effectiveness (SALOME) study was established to determine if HDM is as effective as diacetylmorphine.¹²² In 2013, 75 participants in the SALOME study had completed 12 months in the clinical study. Some of individuals were transferred to

methadone, HDM, or drug-free programs. However, some patients did not respond to these treatments and still required diacetylmorphine assisted therapy after the trial. In response to their health needs, doctors with the SALOME project applied to Health Canada's Special Access Programme (SAP) to legally prescribe diacetylmorphine outside of the study. SAP approved the 21 applications. But the federal Health Minister intervened by introducing new regulations identifying diacetylmorphine as a restricted substance under the Food and Drug Act. This subsequently barred access to the treatment, despite SAP approval. In response, Providence Health Care and five former SALOME patients launched a constitutional challenge on November 13, 2013 arguing that the Health Minister's actions violated the Charter of Rights. On May 29, 2014 the BC Supreme Court granted a temporary injunction that re-establishes access to diacetylmorphine assisted treatment. This decision will permit prescription diacetylmorphine for SAP approved cases and future requests made by SALOME until the case goes to trial.¹²³