



BC Centre for Disease Control
Provincial Health Services Authority



BC HARM REDUCTION CLIENT SURVEY

Background and Significant
Findings throughout the Years

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We respectfully acknowledge that they live and work on the unceded traditional territory of the Coast Salish Peoples, including the traditional territories of x̣ṃəθkwəỵəm (Musqueam), Ṣḳwx̣ẉ u7mesh (Squamish), and Ṣəli lwətał (Tseil-Waututh) Nations and that the Harm Reduction Client Survey was conducted across the unceded traditional territories of 198 First Nations.

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Contents

List of Acronyms	4
Executive Summary	5
Introduction	6
The Surveys	
The 2012 Pilot Survey	6
The 2013 Survey	7
The 2014 Survey	8
The Fentanyl Urine Screen Study (2015)	9
The 2015 Survey	9
No Survey 2016 and 2017	9
The 2018 Survey	9
The 2019 Survey	11
Trend of substances reported used	11
Overdose and Take Home Naloxone Ownership	13
Conclusion	14
References	15

List of Text Boxes

Box 1 THE 2012 SURVEY OBJECTIVES	7
Box 2 RECOMMENDATIONS FROM 2013 SURVEY	8

List of Tables

Table 1 - Number of harm reduction (HR) distribution sites that participated and number of surveys completed of the Harm Reduction Client Survey by year	6
Table 2 - Preferred mode of substance use overall, and heroin and fentanyl use and mode of use percentage from 2018 and 2019 surveys	10

List of Figures

Figure 1 - Reported Stimulant Use in Past 7 / 3 Days	12
Figure 2 - Reported Opioid Use in Past 7 / 3 Days	12
Figure 3 - Opioid Overdose (past 6 mos) & Take Home Naloxone Kit Ownership	13

List of Acronyms

BC	British Columbia
FNHA	First Nations Health Authority
FUSS	Fentanyl Urine Screen Study
GSDOA	Good Samaritan Drug Overdose Act
HA	Health Authorities
HR	Harm Reduction
HRCS	Harm Reduction Client Survey
HRSS	Harm Reduction Strategies and Services
OAT	Opioid Agonist Therapy
OD	Overdose
OPS	Overdose Prevention Sites
OST	Opioid Substitution Therapy
SIS	Supervised Injection Sites
SUAP	Substance Use and Addiction Program
THN	Take home naloxone

Executive Summary

The British Columbia (BC) Harm Reduction Client Survey (HRCS) is completed by clients aged 19 and older at participating harm reduction supply distribution sites. The HRCS began in 2012 and continued annually until 2015 to obtain comprehensive and province wide information about drug use and related harms, perceived stigma, and access to harm reduction services. In 2015 the survey methodology was used to determine reported fentanyl use and compared with fentanyl detected by urine test strips across the province. After a two year hiatus coinciding with the emergence of the overdose crisis in BC, the survey was again implemented in 2018 and 2019. The BC Ministry of Health provided some funding support in 2018, and in 2018 and 2019, funding was obtained from Health Canada's Substance Use and Addiction Program to include urine drug screens in order to compare reported substance use and substances detected. Survey results have identified emerging trends such as increasing reported methamphetamine, poly-substance, known fentanyl use, and increase smoking of opioids, which have led to harm reduction initiatives and further research. The survey has been used to evaluate programs (e.g. uptake of take home naloxone) and allow timely and relevant questions to be added to explore concerns (e.g. reasons for using substances alone, knowledge of the Good Samaritan Drug Overdose Act, and methamphetamine concurrent use with other substances). Data are also used to inform the harm reduction indicators report regarding access and sharing of supplies.

Introduction

The number of sites and participants for each survey are shown in table 1. We describe new questions added to each survey administered. More detailed data and differences between health authorities can be found at <http://www.bccdc.ca/health-professionals/data-reports/harm-reduction-and-substance-use>. Substances used, overdoses experienced and witnessed, and take home naloxone kit ownership across different survey iterations are summarized in figures 1-3.

The initial survey was developed and analyzed by a federal field epidemiologist; the subsequent three annual surveys and the fentanyl urine screen study were administered with internal harm reduction program funds and resources, and the assistance of Masters of Public Health students and Public Health and Preventive Medicine residents. Definitions and trends reported may vary between years.

The Surveys

The 2012 Pilot Survey

The HRCS started in 2012 as a field epidemiology surveillance pilot project. At the time, understanding of

BC's high-risk drug use trends was largely based on survey and cohort study data from two cities, Vancouver and Victoria (Kuo, Shamsian, Tzemis & Buxton, 2014). These cities had an approximate population of 704,280 (Province of British Columbia, 2020), about 15% of BC's total population at that time. Data from BC's suburban, rural, and northern populations, which may have different substances available and variable access to resources compared to larger urban communities, were missing.

Each of BC's five regional Health Authorities (HAs) and First Nations Health Authority (FNHA) has representation on the Harm Reduction Strategies and Services (HRSS) committee and is responsible for bringing forward the perspectives of those involved in harm reduction activities in their region. Concerns were raised that drug use in Vancouver and Victoria may not reflect substance use in other parts of BC. It was agreed that a better understanding of drug use trends by region could inform region-specific interventions. BC had an established network of over 200 provincial harm reduction supply distribution sites across the 5 geographic HAs that could be leveraged to collect survey data around the primary objectives (see box 1.1).

Table 1 - Number of harm reduction (HR) distribution sites that participated and number of surveys completed of the Harm Reduction Client Survey by year

Year	# HR Distribution Sites	# Surveys Completed	Urinalysis
2012 (Pilot)	28	743	
2013	34	779	
2014	50	1322	
2015 Fentanyl Urine Screen Study (FUSS)*	17	242	242 (fentanyl test strip)
2015	34	812	
2018	27	486	303 LCMS
2019	22	621	621 LCMS

* Survey and urine analysis with fentanyl test strips. See reference Amlani et al., 2015.

LCMS – Broad spectrum urine toxicology screen which incorporates liquid chromatography and mass spectrometry

BOX 1 | THE 2012 SURVEY OBJECTIVES

The primary objectives of the 2012 surveillance pilot project were to:



1. Develop a simple tool to collect indicators of drug use among harm reduction clients in BC
2. Pilot the tool and process to assess feasibility for ongoing surveillance of regional harm reduction activities

A two page survey tool was developed with extensive input from stakeholders. Pilot sites administered the 10 minute paper survey to clients who received \$5 stipend in recognition of their time. Analysis focused on drug type used by region, polysubstance use, and comparison of drug use trends between major centres and communities which were ≥ 50 km from a major centre. Those surveyed in major cities were more likely to use crack cocaine and heroin while those residing ≥ 50 km from an urban centre were more likely to use morphine and cocaine (powder).

Polysubstance use (defined as two or more substances used in the prior 7-day period, including both illicit and prescription drugs as well as glue or solvents, but excluding alcohol) was reported by 71% of respondents overall.

A post-pilot acceptability questionnaire was completed by participating sites to evaluate the survey process. Sites reported that it was feasible to administer a survey once per year, the process of data collection was acceptable to both site staff and clients, and the data collected was valued for gaining knowledge and service planning. Thus, the pilot project suggested that surveillance of drug use trends across HAs was possible if the core drug use questions remained consistent (Kuo, Shamsian, Tzemis, & Buxton, 2014).

The 2013 Survey

In 2013, the survey tool was refined in response to feedback from a sample of those who had administered it to clients in 2012. The core drug use questions were preserved while questions were added to assess **harm reduction site accessibility**, details on **crack pipe use, sharing of drug paraphernalia**, and **experiences of overdose (OD)**.

Overall, marijuana (51%), alcohol (48%), and crack (35%) were the three most commonly reported substances used with patterns of use varying geographically. Nearly 2/3 of all respondents reported recent polysubstance use (defined as using at least two substances in a 6 hour period in the week prior to completing the survey).

Nearly half of the respondents who injected drugs reported difficulty finding new rigs (needles) within the past month with the most common barrier being that the site was not open. Overall, nearly 8% of respondents reported injecting with a used needle in the last month and 12% reported sharing their needles.

Overall, the median lifespan of crack pipes was reported as 4 days, while the most common response was that crack pipes usually last less than 1 day. The most common method of crack pipe disposal was the garbage (61%); the proportion that reported using sharps containers varied by HA between 35 and 11%. One half of all respondents who smoke crack reported experiencing difficulty finding crack pipes within the last month. When unable to get a new pipe, using pop cans (51%) and sharing a pipe (50%) were the most common alternatives. Overall, 78% of survey respondents who smoke crack reported smoking with a used crack pipe or used mouthpiece in the last month and 61% reported lending a used crack pipe or mouthpiece.

BOX 2 | RECOMMENDATIONS FROM 2013 SURVEY

Recommendations to reduce sharing of supplies by improving access to harm reduction:

Supplies: HAs should continue to implement programs that support provincial harm reduction supply distribution policy to ensure new supplies are available for every use and sites provide supplies based on documented regional drug use trends.



Distribution sites: Expand HR site operating hours, increase the number of locations and/or create mobile sites, and improve acceptability by taking steps to respect client confidentiality.



Education: Reiterate the risks of using and lending previously used needles and provide peers with skills to educate those with whom they inject about the importance of not reusing needles. Increase awareness about risks of sharing crack pipes and mouthpieces, by providing educational materials on safer crack smoking and disposal.



Inuit peoples. In Northern Health, 73% self-reported as Aboriginal Peoples, compared to a range of 20-37% in other HAs (Sorge, Buxton, Amlani & Ishiguro, 2015).

Overall 89% of respondents reported using more than one substance in the past seven days. The three most commonly reported substances used in the past seven days were marijuana (54%), alcohol (52%) and heroin (46%). Reported substance use patterns varied geographically.

Overall, 42% of respondents reported smoking crystal meth with a pipe in the last month, while 50% reported smoking crack with a pipe in the last month. Of respondents who reported smoking crystal meth with a pipe, 58% reported using a modified glass stem (Pyrex) acquired from a HR supply distribution site. Of respondents that reported smoking crack with a pipe, 78% used Brillo as a screen while 34% used a brass screen supplied by a HR distribution site (Sorge, Buxton, Amlani & Ishiguro, 2015). Brillo is a steel wool which can fragment when heated and cause burns on lips and mouth and/or be inhaled or ingested causing burns in the airways. Using a brass screen rather than steel wool can minimize the likelihood of these injuries.

Questions about perceptions of Methadose were added due to concerns from people who use drugs about the transition of methadone 1mg/ml compounded by community pharmacists in orange flavoured Tang to pre-prepared cherry flavoured Methadose (10mg/ml) in February 2014. A third of respondents reported taking prescription methadone at the time of transition and completed the relevant additional questions. Most participants (81%) reported a worse taste which was significantly associated with reports of worsening of pain, feeling more dope sick, and supplementing Methadose with other opioids. This study suggests additional psychosocial supports should be provided when working with structurally vulnerable populations who may be less able to cope with transitions and loss of autonomy (Greer et al., 2016).

The 2014 Survey

Questions added to the 2014 survey included Aboriginal self-identification, (to enhance cultural relevance of the information collected, these data were shared with FNHA for analysis), take home naloxone kit ownership, smoking stimulants, and perceptions of Methadose formulation.

Overall, 34% of respondents self-reported as Aboriginal Peoples (now referred to as Indigenous Peoples), which is defined as First Nations, Métis, and

The Fentanyl Urine Screen Study (2015)

As fentanyl was increasingly identified in decedents and in street drugs tested by the Health Canada's Drug Analysis Service laboratory, people using opioids were thought to be unaware they were taking fentanyl. In response to this, a study was performed in January/February 2015 using the same survey methodology but including fentanyl urine test strips at the participating sites to identify the distribution of fentanyl across the province and participants' awareness of taking fentanyl. The most frequently reported substances used were crystal meth (59%) and heroin (52%). Urine from 70 of the 242 participants (29%) tested positive for fentanyl, 73% of whom did not report using fentanyl. This confirmed the assumption that fentanyl was frequently being taken unknowingly by people who use drugs (Amlani et al., 2015).

The 2015 Survey

In 2015, the survey was updated to reflect current drug trends related to Supervised Injection Sites (SIS) and fentanyl specifically. The survey was administered July-September 2015 at 34 sites. Most respondents (93%) reported using more than one substance in the past 7 days. Overall, the four most commonly reported substances were marijuana (58%), crystal meth (47%), heroin (57%), and alcohol (44%).

Overall, 60% of respondents reported injecting any substance within the previous week. Of these, 21% reported having difficulty finding new rigs (needles) within the past month; the most commonly reported barrier was that the HR distribution site was closed. As a result, 14% of respondents reported injecting with a needle previously used by another individual over the past month. New to the 2015 study, information was gathered on SIS. Of respondents who reported injecting in the previous month, 74% were willing to use a SIS. Most indicated they would prefer using a standalone facility or a service within a shelter/housing facility (41% and 40%, respectively) (Davis et al., 2015).

No survey 2016 and 2017

On April 14, 2016, BC's provincial health officer declared a public health emergency in response to the rise in drug overdoses and deaths attributed to illicit fentanyl. The BCCDC's priorities included overdose surveillance and implementing expanded harm reduction activities, such as the expansion of take home naloxone (THN) sites in emergency departments, correctional facilities, and communities (BC Centre for Disease Control, 2017; Young et al., 2019). In November 2017, an on-line naloxone training application became available to ensure standardized brief training and [THN kits](#) became available through community pharmacies in December 2017. As such, the HRCS was not completed in 2016 and 2017.

The 2018 Survey

The 2018 survey marked the first HRCS done since the dramatic rise in overdose deaths due to fentanyl-containing drugs in BC. This iteration included an optional urine drug screen to compare reported substance use and substances detected. This was supported by funding from the BC Ministry of Health and Health Canada Substance Use and Addiction Program (SUAP). In order for drug use responses to be compared with drugs detected in urine, the survey asked about drug use in the prior 3 days (while previous surveys asked about prior 7 days). The 2018 survey also included questions related to substance use in the past 7 days. As no considerable difference was found between reported 3 and 7 day use, it was determined future surveys would ask about drug use in prior 3 days only.

The survey was updated to include questions on use of **Overdose Prevention Sites (OPS) and Opioid Substitution Therapy (OST)/Opioid Agonist Therapy (OAT), willingness to use alerting /monitoring technology and reasons for using drugs alone.** Overall, the four most commonly reported illicit drugs (not including alcohol and cannabis) were crystal meth (69%), heroin (49%), fentanyl (43%), and crack (26%) (Karmouzian et al., 2020).

Table 2 shows overall, smoking is the preferred method of use for any drug in more than half (52%) of respondents; while among respondents who endorse using heroin 57% and 49% report smoking and injecting respectively, while 59% and 52% smoke and inject fentanyl respectively (Karmouzian et al., 2020).

When unable to find an unused pipe, 27% of clients used a second-hand pipe while 20% injected instead. Of the 214 people that reported injecting drugs in the past month, 24% had difficulty getting unused needles so 13% fixed with a used needle. About half of participants reported using drugs alone some of the time. It was noted that half of those who injected drugs in the past month had used at an OPS.

Of the 245 participants that had tried to access OAT in the previous 6 months, 1 in 4 reported difficulties. This included 38% reporting being unable to find a prescribing physician, 19% having their prescription

Table 2 - Preferred mode of substance use overall, and heroin and fentanyl use and mode of use percentage from 2018 and 2019 surveys

Substance use reported	2018	2019
Prefer smoking substances overall	52%	63%
Prefer injecting substances overall	34%	28%
Prefer snorting substances overall	6%	4%
<hr/>		
Heroin use in prior 3 days	44%	44%
Heroin use via smoking	57%	73%
Heroin use via injecting	49%	50%
<hr/>		
Fentanyl use in prior 3 days	39%	46%
Fentanyl use via smoking	59%	67%
Fentanyl use via injecting	52%	48%

stopped due to a positive urine test, and 19% worried about being stigmatized at the clinic. Among those that reported discontinuing OAT in the previous 6 months, difficulty adhering to strict prescription pick-up and appointment times was reported as their primary reason for stopping.

To date, data from the 2018 iteration of the HRCS and urinalysis led to the publication of four peer reviewed manuscripts:

- Convenience and comfort; Reasons reported for using drugs alone among clients of harm reduction sites in British Columbia, Canada. Harm Red J (2020) Papamihali K et al
- Acceptability of technological solutions for overdose monitoring: perspectives of people who use drugs substance abuse (2019) Tsang et al
- Correlates of take-home naloxone kit possession among people who use drugs in British Columbia: A cross-sectional analysis. Drug and alcohol dependence (2019) Moustaqim-Barette et al
- Known fentanyl use is increasing among people who use drugs in British Columbia, Canada: Findings of the BC Harm Reduction Clients' Survey. Int J Drug Policy (2020) Karmouzian et al

The 2019 Survey

The 2019 survey included the core drug use questions in the past three days, as well as questions added from previous surveys to further evaluate the use of fentanyl, OPS/supervised consumption sites, harm reduction supplies, THN/naloxone, and OST/OAT. A new question was added to understand the experiences and knowledge of the **Good Samaritan Drug Overdose Act (GSDOA)** among people who are at risk of experiencing and/or witnessing an overdose in BC (Take Home Naloxone, 2020) and also identifying the prevalence and reasons for methamphetamine concurrent use with other drugs.

Summary infographics of 2019 survey can be found on BCCDC website (BC Centre for Disease Control, 2020 summary infographics 2019). Overall, 63% of survey participants identified smoking or inhalation as their preferred method of drug use (for any drug), while 28% preferred injection, and 4% preferred snorting. We identified smoking was the preferred route of using illicit opioids (heroin and fentanyl) see table 2. Compared to the 2018 survey results, we saw the proportion of respondents reporting using illicit opioids by inhalation increase. Since 2017, smoking has been the main mode of substance use identified by the BC Coroners Service when investigating overdose deaths (British Columbia Coroners Service, 2020). Together this information regarding increased smoking opioids and overdose deaths has led to the Ministry of Mental Health and Addictions announcing funding for OPS sites including inhalation sites and for safer smoking supplies (Mental Health and Addictions, 2020; Daowd, Buxton, 2021).

Publications are in development using the 2019 iteration of the HRCS:

- Good Samaritan Drug Overdose Act awareness among people who use drugs in British Columbia, Canada
- Exploring motivations for concurrent use of uppers and downers among people who access harm reduction services in British Columbia: a thematic analysis based on findings from the 2019 British Columbia Harm Reduction Client Survey

- Predictors of concurrent use of stimulants and opioids among people who access harm reduction services in British Columbia, Canada: findings from the 2019 British Columbia Harm Reduction Client Survey
- Smoking exceeds injecting opioids: examining prevalence and correlates of smoking opioids in British Columbia
- Preferences of down (heroin and fentanyl) to assist in safer supply planning; results of 2019 BC harm reduction client survey (Older people prefer heroin while younger prefer fentanyl)

Trend of Substances Reported Used

During 2012-2015 substances used in past 7 days were reported; in 2018 substance use in past 3 and 7 days was reported to be congruent with substances detected in the urine. In 2019 substance use in past 3 days only was asked. (See figures 1 and 2).

Crystal meth was the most commonly used substance among clients of harm reduction sites in BC in 2018 and 2019, and was frequently used concurrently with opioids. The odds of crystal meth use was significantly higher among those who were not regularly housed, were unemployed; older age (≥ 50) was inversely associated with crystal meth use. (Papamihali 2021)

Figure 1 - Reported Stimulant Use in Past 7 / 3 Days

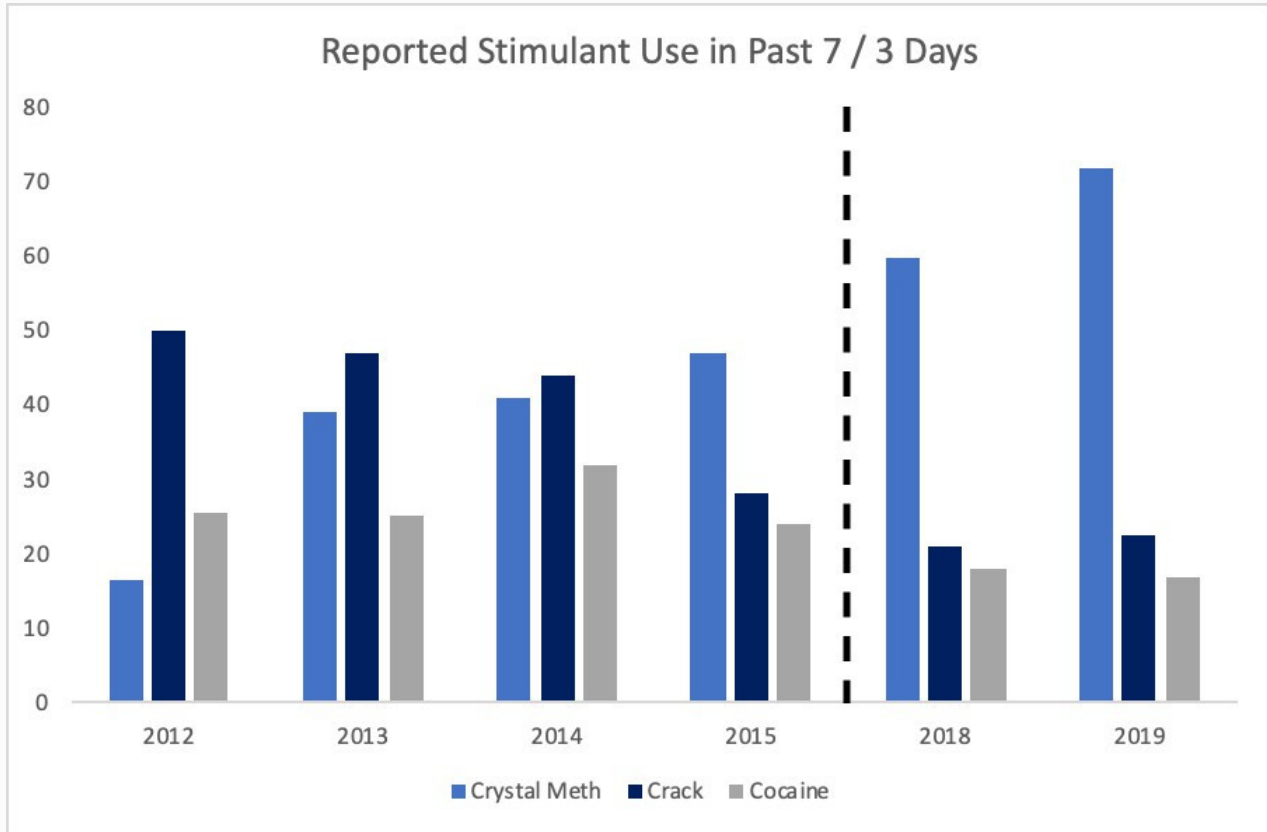
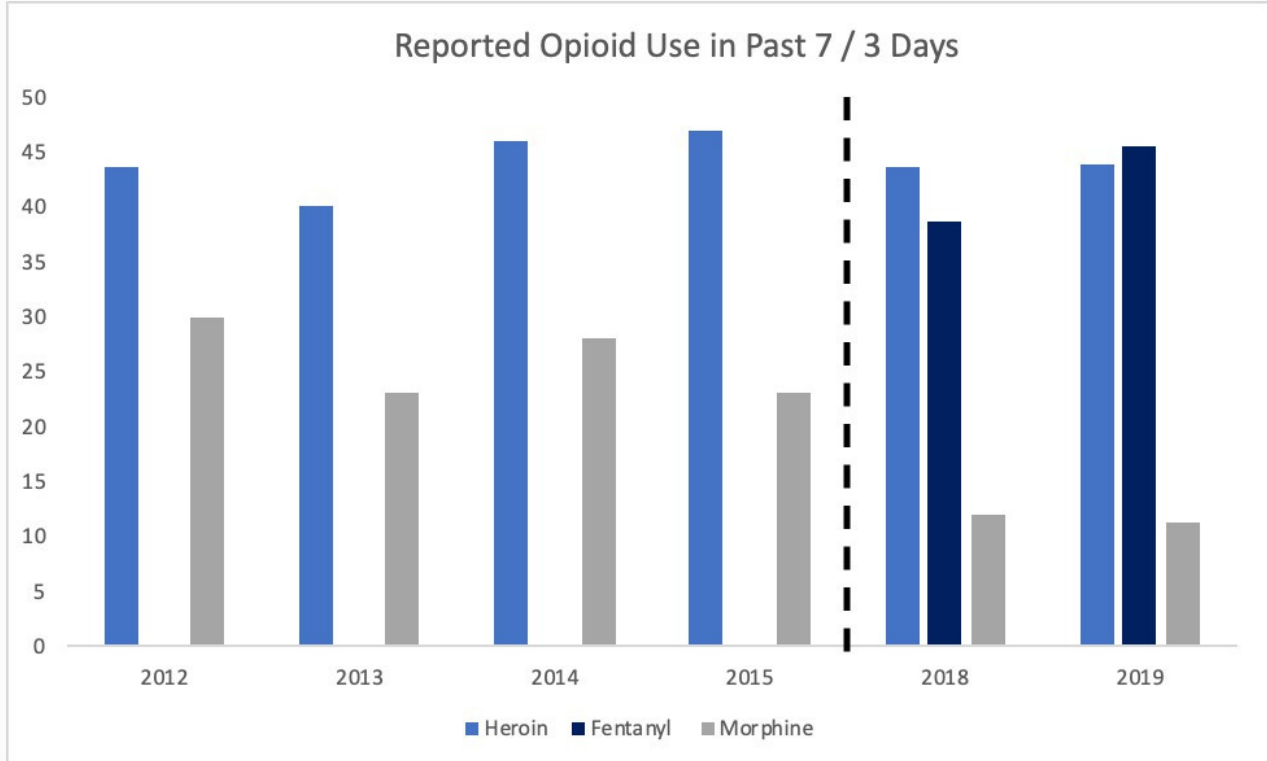


Figure 2 - Reported Opioid Use in Past 7 / 3 Days



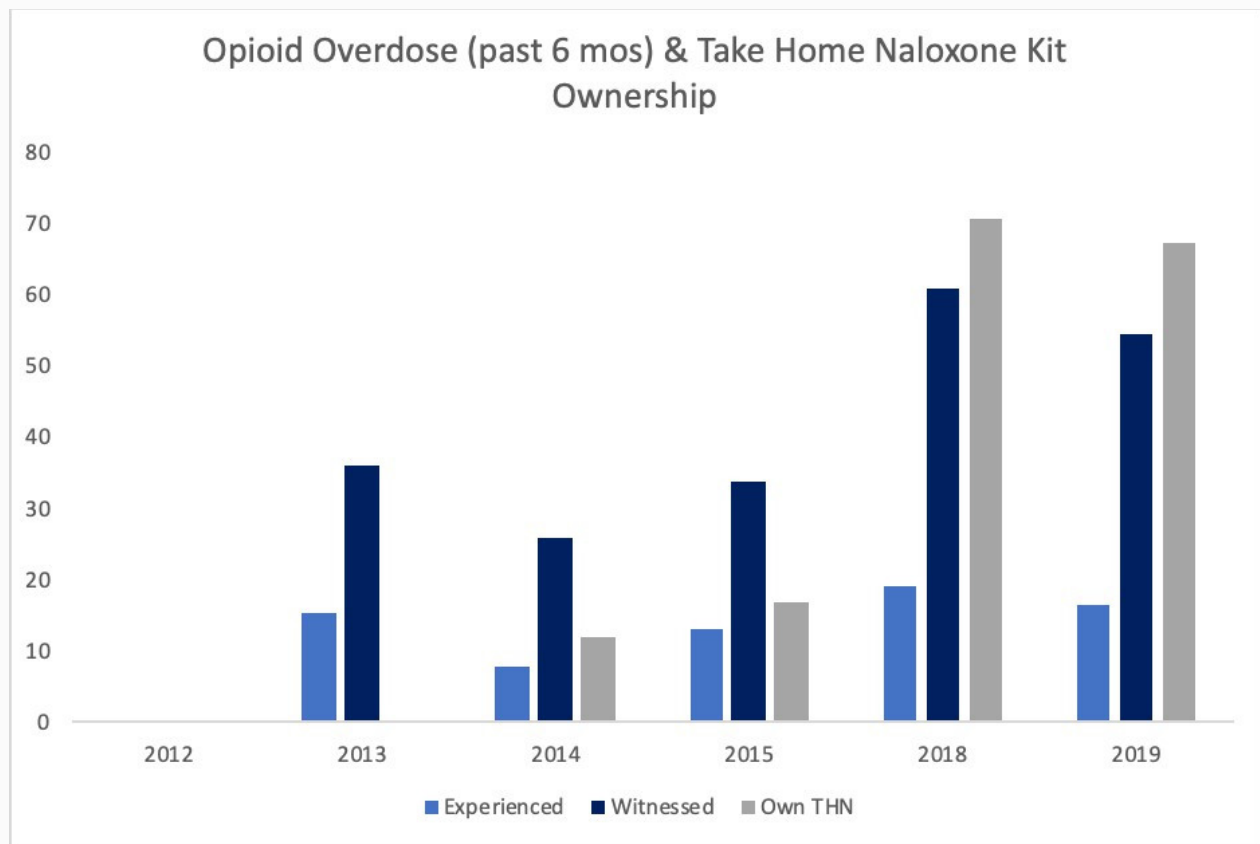
Overdoses and Take Home Naloxone Ownership

In 2013, questions were added regarding experiencing and witnessing an overdose in the past 6 months and in 2014 a question was added about take home naloxone kit ownership. In 2014, 26% of respondents reported witnessing an opioid overdose in the past 6 months, of these, 19% reported administering naloxone.

Of respondents that did not administer naloxone, 46% reported that they did not know how to use it while 36% stated it was not available.

In 2014, 12% of respondents reported owning a take-home naloxone kit. In 2018 and 2019 this increased to above two-thirds of respondents.

Figure 3 - Opioid Overdose (past 6 mos) & Take Home Naloxone Kit Ownership



Conclusion

In summary, data collected from the HRCS continue to inform harm reduction planning. The data identifies emerging issues and geographic differences across the province including suburban and rural areas. It can help evaluate and improve the quality of harm reduction services in BC.

Relevant survey findings are included in the BC harm reduction policy indicators report (Papamihali K, Ng J, Buxton JA 2020). Our aim is to continue conducting the survey annually. Full urine screening is expensive so could be performed every other year; on the year without urine screening, urine test strips could be considered. It is important to continue to engage people with lived and living experience to help identify new and timely questions related to emerging issues, provide input into question wording and to inform knowledge dissemination activities of findings and to identify creative potential interventions to reduce harms.

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