

EVALUATION REPORT

EVALUATION OF BRITISH COLUMBIA'S TAKE HOME
NALOXONE PROGRAM IN COMMUNITY PHARMACIES

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This report can be found on: <https://towardtheheart.com/naloxone>

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BCCDC acknowledges that this work is completed on the unceded territory of the Coast Salish peoples, including the territories of the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and Səl̓ílwətaʔ/Selilwitulh (Tseil-Waututh) Nations.

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BC Pharmacy Association

Pharmacy managers at all participating pharmacies.

ACRONYMS

BC Centre for Disease Control (BCCDC)

BC Coroners Service (BCCS)

BC Harm Reduction Services (BCHRS)

BC Pharmacy Association (BCPhA)

Facility Overdose Response Box Program (FORB)

Overdose (OD)

Overdose Prevention Services (OPS)

Take Home Naloxone Program (THN)

Toward the Heart (TTH)

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EXECUTIVE SUMMARY

Illicit drug overdose is the leading cause of unintentional death in BC, with more than 1500 deaths reported in 2018 (BC Coroners Service, 2019a). The majority of overdose deaths can be attributed to fentanyl; fentanyl was detected in 87% of illicit drug overdose deaths in 2018 (BC Coroners Service, 2019b). Deaths from opioid overdose can be prevented by using naloxone, an opioid antagonist that temporarily reverses the effects of an opioid overdose.

The BC Take Home Naloxone (THN) program, established in 2012, aims to provide low-barrier access to naloxone kits for individuals at no cost. Initially, the THN program made naloxone available through harm reduction sites and community organizations in areas where there is high prevalence of overdose. In December 2017, the THN program expanded to selected community pharmacies in order to increase access of naloxone to different populations and areas with low access to THN kits.

The purpose of this evaluation is to identify the strengths and barriers of the implementation and management of the THN program in community pharmacies, as well as to capture attitudes, perceptions and beliefs from a variety of stakeholders. This evaluation is a formative evaluation, with components of constructive process and outcome evaluations. A concurrent parallel mixed-methods evaluation design was employed, consisting of both quantitative and qualitative measures. The quantitative component of the evaluation consists of an analysis of administrative data from site registration, kit ordering and distribution forms collated by the BC Centre for Disease Control (BCCDC) Harm Reduction Services (HRS). The qualitative arm of the evaluation comprised of six interviews with pharmacy managers at different sites, an interview with a past director of BC Pharmacy Association, and one focus group with BCCDC staff.

Distribution records received from participating pharmacies indicate that 3523 kits were distributed by 562 pharmacies between January 1, 2018 and December 31, 2018. The majority of the THN kits were distributed to clients that were male, aged between 31 and 60, and were not at risk of overdosing themselves. Reported risk of overdose differed between clients picking up THN kits from community pharmacies and those picking up kits from other (non-pharmacy) THN distribution sites. While 58% of pharmacy THN clients were not at risk of overdosing themselves, only 28% of THN clients from other sites were not at risk. Furthermore, 71% of THN clients at pharmacy sites were first time THN recipients compared to only 40% at non-pharmacy THN sites. This indicates that distributing THN kits through pharmacies potentially increases the access of naloxone to a different segment of the population, i.e. friends and families of those at risk of overdose who may not access traditional harm reduction services.

Qualitative interviews revealed that the key strengths of pharmacy THN distribution include standardized procedures, standardized THN kits across the province, the centralized distribution model, a close-knit team at BCCDC, and adequate training and resources. Barriers and challenges of the program include the complicated pharmacy structure, lack of remuneration for pharmacists, communication gaps, and logistical challenges such as lag in data entry. Key stakeholders reported that the expansion of the THN program into community pharmacies has several benefits, including providing an opportunity to address stigma associated with substance use, increasing access of naloxone, and improving the image of pharmacists in the eyes of the public as key actors in addressing the opioid crisis.

Most pharmacists are happy to be involved in this life saving initiative, despite some initial concerns about lack of remuneration for training and dispensing. There are mixed views regarding further program growth; some pharmacy managers feel that naloxone is now fairly accessible and there is no need for investing further efforts into expansion, while others feel that expansion to other banners and chains that are not currently involved would be beneficial.

Recommendations to improve the program included modifications to the implementation procedures (e.g. introducing electronic records), introducing refresher training for pharmacists, increasing public awareness about the availability of naloxone through pharmacies (e.g. posters), implementing naloxone training through other means that do not require technology (providing a printed handout), and introducing intranasal naloxone kits. Overall, the one-year evaluation of the BC THN Program in community pharmacies reveals that the program has been well-received across the province.

BACKGROUND

ILLICIT DRUG OVERDOSE CRISIS

Illicit drug overdose is the leading cause of unintentional death in BC. The number of deaths associated with drug overdose has risen over the last decade from 183 illicit drug overdose deaths in 2008 to more than 1500 deaths reported in 2018 (BC Coroners Service, 2019a). The majority of overdose deaths can be attributed to fentanyl; fentanyl was detected in 87% of illicit drug overdose deaths in 2018 (BC Coroners Service, 2019b). Fentanyl is an opioid that is 20-40 times more toxic than heroin (BC Centre for Disease Control, 2019).

ABOUT OPIOIDS

Opioids are chemical substances that are commonly used as narcotics or sedatives to relieve pain. Opioids bind to opiate (μ) receptors in the brain, causing the central nervous system to be suppressed. This results in respiratory depression and has a sedative effect on the body (American Addiction Centre, 2019). In an opioid overdose event, the body is exposed to quantities of the opioid that it cannot physically tolerate. High amounts of opioids in the brain causes suppressed breathing, unconsciousness, and potentially death. If overdose events are not treated rapidly, they can cause harms such as brain injury and may be fatal (World Health Organization, 2018).

NALOXONE

Deaths from opioid overdose can be prevented by using naloxone, an opioid antagonist that temporarily reverses the effects of an opioid overdose. Naloxone competes with opioids for the same opiate receptor sites in the brain. Since naloxone has a higher binding affinity, when naloxone binds, it impedes the opioids from conducting their pharmacological action and it reverses their effects such as respiratory depression. Hence, naloxone restores breathing in opioid overdose events, reduces harms and brain injury related to a lack of oxygen and increases the opportunity of survival. Naloxone has no addictive properties and has no harmful effects on the body (World Health Organization, 2014).

BC TAKE HOME NALOXONE PROGRAM

The BC Take Home Naloxone (THN) program, established in 2012, aims to provide low-barrier access to naloxone kits for individuals. Kits are currently available, at no cost, to:

- Individuals at risk of an opioid overdose
- Individuals likely to witness and respond to an overdose such as a family or friend of someone at risk

THN kits are not provided: 1) to employers if naloxone is intended for occupational health and safety purposes, 2) to health care employees, or 3) for use by private business or other for-profit locations.

Each THN kit includes:

- Three 1 ml Naloxone ampoules (0.4 mg/mL) with ampoule snappers in a labelled medication bottle
- Three Vanish Point® 3 mL syringe
- Three Alcohol Prep Pads
- One pair of non-latex gloves
- One individual breathing mask in a pouch
- One SAVE ME Steps instructional sticker and one overdose response information form
- Naloxone expiry sticker on the outside of the kit

Additionally, naloxone (both injectable and intra-nasal) is available for sale at pharmacies for individuals who are not eligible for free kits through the BC THN program.

EXPANSION OF BC THN PROGRAM TO COMMUNITY PHARMACIES

BC prioritized making naloxone available through harm reduction sites and community organizations in areas where there is high prevalence of overdose. The rationale for this was to meet individuals where they are at and to reduce accessibility barriers for individuals most likely to experience or witness an overdose.

Several regulatory changes occurred which led to the expansion of the THN program into community pharmacies (See Figure 1). In March 2016, Health Canada removed naloxone from the Prescription Drug List and the College of Pharmacists of BC made it available as a Schedule II drug (behind the counter). This enabled pharmacists to train and dispense naloxone to the public, and made naloxone available for sale in several pharmacies. In early April 2016, the Ministry of Health funded educational sessions for pharmacists, which were collaboratively developed by the College of Pharmacists of BC and BCCDC. A face-to-face training event led by Fraser Health harm reduction coordinators occurred on April 5, 2016. Over 1,000 pharmacists attended in person or by webinar (College of Pharmacists of British Columbia, 2016). These presentations are on the BC College of Pharmacists website (College of Pharmacists of British Columbia, 2019).

On April 14, 2016, a public health emergency was declared in BC by the Provincial Health Office due to the unprecedented increase in opioid overdose deaths (BC Gov News, 2016). As overdoses across the province increased, some stand-alone pharmacies were approved to become BC THN program distribution sites, especially in areas where there had been multiple drug overdoses. In September 2016, the College of Pharmacists of BC changed the status of naloxone for emergency use to 'unscheduled', making it available outside of pharmacies.

The ongoing high number of overdoses in BC also resulted in increased public demand for naloxone, including requests to pharmacists. According to conversations with a past director of the BC Pharmacy Association (BCPhA), some pharmacists approached the BCPhA to express their interest in participating in harm reduction efforts. The BCPhA contacted BCCDC in August 2017 to explore expanding the THN program to banner and chain pharmacies.

The managers of the major pharmacy banners and chains in BC were invited by BCPhA to attend individual teleconferences with BCCDC and BCPhA in the fall of 2017 to discuss the potential roll-out of the THN program into community pharmacies. These consultations discussed challenges faced in other provinces, such as the lack of standardized client training by pharmacists and time to complete client training, and addressed local concerns. In November 2017, a training 'app' developed by St. Paul's Hospital Emergency Department and BCCDC became available at <http://www.naloxonetraining.com/>. The app enables clients to undergo a brief standardized training on their computer, phone or in a pharmacy and receive a certificate of training completion to take to a THN distribution site.

In December 2017, the THN program officially expanded to selected community pharmacies, which improved THN access in BC because:

- Pharmacies are available in most communities
- Pharmacies are open extended hours (including weekends and evenings)
- Pharmacies may be more acceptable to some clients that do not use harm reduction sites, such as family and friends of individuals who use drugs
- Pharmacists can discuss THN with high-risk clients receiving prescriptions such as those on high dose opioids or new methadone prescriptions

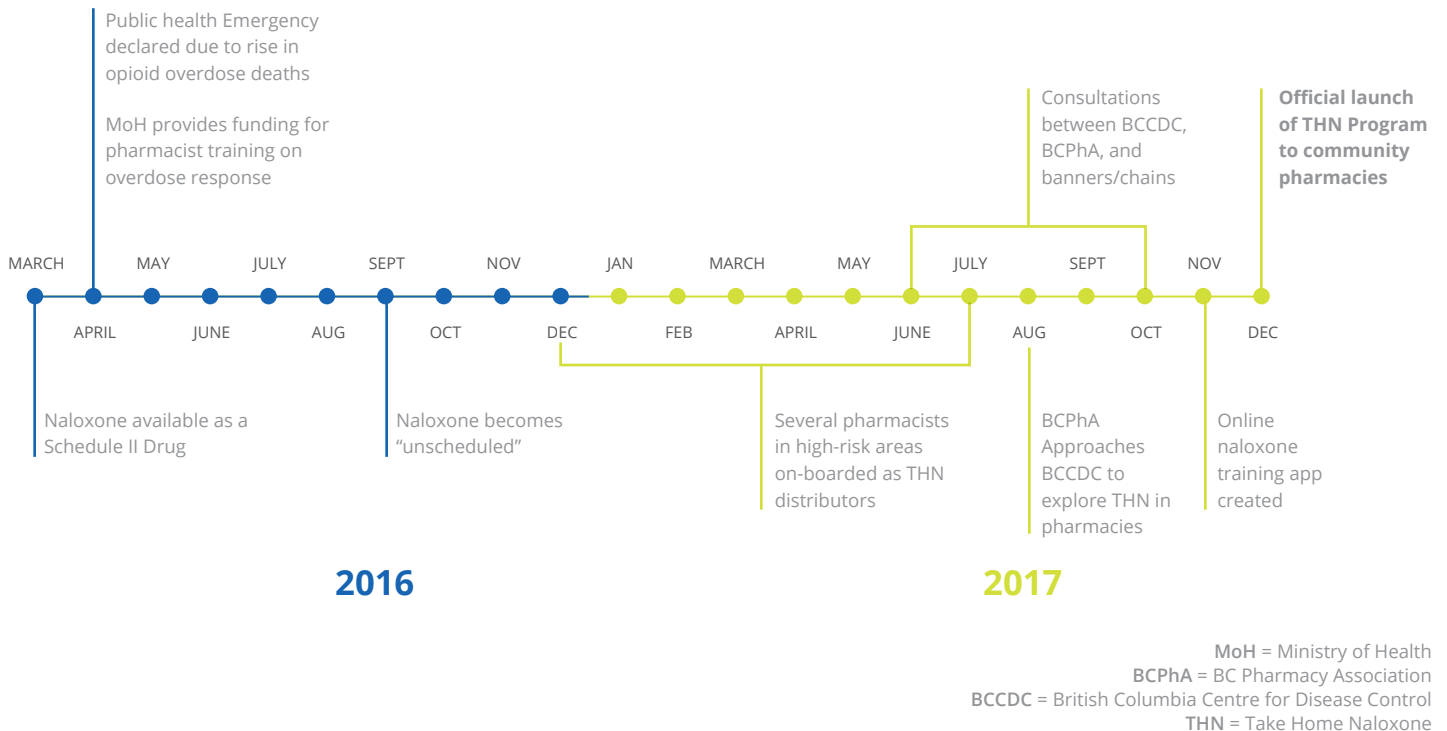


FIGURE 1. Timeline of events leading up to the launch of THN program in community pharmacies

The BC THN Program differs from other provinces. Firstly, most primary THN distribution sites are harm reduction sites and community organizations. Furthermore, pharmacies involved in the THN program are not compensated for their involvement. In other provinces e.g. Alberta, Ontario and Quebec, pharmacies are the primary dispensing site and pharmacists are paid for both dispensing naloxone kits and training clients on its administration (Alberta Blue Cross, 2017; of Health & Care, 2017; Régie de l'assurance maladie du Québec, 2017).

Process of becoming a THN Distributing Pharmacy/ Site

As at December 31st, 2018, there were 1358 community pharmacies in BC (National Association of Pharmacy Regulatory Authorities, 2019). There are different pharmacy formats (Taro Pharmaceutical Industries, 2003); the most prominent ones include:

Independent Pharmacies: These are not affiliated with any corporate banner and the name of the pharmacy is unique to that pharmacy. The owner of the pharmacy has complete control over ordering, image and marketing.

Pharmacy Chains: These are pharmacies managed by salaried employees, with minimal decision-making autonomy. Decisions pertaining to ordering, merchandising and marketing are made at the head office level. An example of a pharmacy chain is London Drugs.

Pharmacy Banners: These are independent pharmacies that pay fees to use a recognized name and participate in a centralized ordering system. They have the “look and feel” of a chain, but maintain autonomy in terms of local marketing and local activities. An example of a pharmacy banner includes Pharmasave.

The BC THN program has its own terminology for describing THN sites. For the purposes of this evaluation, three major categories are used to classify THN pharmacy sites:

Stand-alone pharmacy sites are registered independently; they order and receive kits directly from BCCDC for their site only.

Pharmacy hub sites are typically the distribution centre which order and receive kits directly from the BCCDC. They distribute kits to ‘satellite’ pharmacies (stores) which are part of their banner, chain, or an identified primary customer (store).

Satellite pharmacy sites do not order kits directly from BCCDC; they order their kits from their centralized banner or chain distributors. In other words, they order kits from their pharmacy hub sites.

The preferred process of becoming a THN distributing pharmacy is for banner or chain pharmacies to sign up in order to have centralized distribution points for delivering THN kits as this enables the expansion and registration of many pharmacy sites at once. As part of the on-boarding process, BCCDC and the participating banners and chains sign a Memorandum of Understanding, which highlights the ordering, and delivery process, as well as program reporting and data sharing, among other agreements.

Stand-alone pharmacies interested in becoming a THN distribution site may apply to register as a THN site by completing a [New Site Registration Form](#). If approved, stand-alone pharmacies can place orders for THN kits by filling out the [THN Supply Order Form](#) and emailing the form to BCCDC.

Program Resources

Upon registration, the BCCDC provides an orientation/resource package to new banners and chains for distribution to individual stores. This document outlines eligibility and reporting requirements, training recommendations and resources, and outlines a list of other resources for pharmacists including: Toward the Heart (website platform for BCCDC HRS), the BC College of Pharmacists naloxone page, and the THN site finder.

Distribution and Reporting Requirements

All participating sites are required to complete a [Distribution Record](#) for each kit provided to an individual and advised to fax or email the form to the BCCDC monthly. Patient details such as name and date of birth are not required, only general details such as age group, gender, overdose risk (whether at risk, or at risk of witnessing an overdose), and kit type (1st kit versus replacement and reason for replacement e.g. kit used, or other reason) are collected.

Pharmacy hub sites, including banner and chain distribution offices submit monthly kit transfer records to inform the BCCDC on the number of kits transferred to each of their satellite pharmacy sites.

EVALUATION PURPOSE AND OBJECTIVES

The overall purpose of evaluating the BC THN program's pharmacy roll-out is to assess the implementation of THN into community pharmacies and to support continued expansion to pharmacies across BC. The evaluation will provide an opportunity to identify strengths and barriers to the implementation and management of the THN program in community pharmacies. It will also capture attitudes, perceptions and beliefs towards this expansion from a variety of stakeholders.

Objectives:

1. To get a snapshot of the number of pharmacies participating in the THN program, number of kits distributed, and the characteristics of clients picking up THN kits from pharmacies.
2. To identify strengths and barriers of implementing THN at community pharmacies in BC in order to inform improvement of processes for further expansion of the program.
3. To understand perceptions and attitudes of key stakeholders regarding the THN program in pharmacies.
4. To assess if the training and resources provided to pharmacists are perceived as adequate in equipping pharmacists with the knowledge, skills, and comfort to train clients about overdose recognition and response, including naloxone administration.
5. To assess the participating pharmacists' views on the need for further growth of the program.

EVALUATION DESIGN

This evaluation is a formative evaluation, with components of constructive process and outcome evaluations. A constructive process evaluation "provides information about the relative strengths/weaknesses of the program's structure or implementation processes, with the purpose of program improvement" (Chen, 2015). A constructive outcome evaluation "identifies the relative strengths/weaknesses of program elements in terms of how they may affect program outcomes" (Chen, 2015). This will identify program components that are helping the program to achieve its goals.

A pre-existing logic model for the BC THN program was adapted and revised to match the goals of the expansion of the THN program to community pharmacies (see Appendix 1). The logic model outlines key program inputs and outputs, and identifies the steps involved with participation in the THN program. Further, immediate, intermediate and long-term outcomes of the THN roll-out into pharmacies were identified.

METHODOLOGY

A concurrent parallel mixed-methods evaluation design was employed, i.e. the quantitative and qualitative data were collected and analyzed concurrently but independently, and synthesized during interpretation (Creswell & Plano Clark, 2007).

The quantitative component of the evaluation consists of an analysis of administrative data from site registration, kit ordering, and distribution forms collated by the BCCDC Harm Reduction Services. For THN distribution, only data from January 1st, 2018 to December 31st, 2018 has been presented in this report, even though some pharmacies were distributing kits several months before the official launch of the THN program in community pharmacies. Data analysis was conducted in June 2019; however, distribution data from the first six months of 2019 have not been reported to allow for the lag period for sites to submit kit distribution records and data entry at BCCDC.

The qualitative arm of the evaluation comprised of key informant interviews and a focus group with BCCDC staff. Semi-structured interview guides were informed by the logic model, and previous THN evaluation interview guides. Participants were purposefully selected for interviews to reflect various levels of program participation and site types. A number of factors were considered for site selection: a) engagement level, determined by number of kits distributed, b) geographical location, i.e. different health authority regions, c) pharmacy format i.e. banner, chain, or independent, d) THN site classification level, i.e. pharmacy hub site (distribution level), satellite (store level, receive kits from pharmacy hub site), stand-alone (store level, receive kits directly from BCCDC). Selected sites were contacted via phone or email between January and March 2019, and invited to participate in a 30-minute telephone interview. In addition to interviews with pharmacy site managers, an interview was conducted with a past director from the BCPhA who was involved with the initial planning and launch of the THN program in community pharmacies. Furthermore, a focus group was conducted with members of the BCCDC Harm Reduction Services team who were involved in the program planning and implementation. The aim of this qualitative component is to identify strengths and barriers to the implementation and management of the THN program in community pharmacies, as well as to capture attitudes, perceptions and beliefs towards the expansion of THN in pharmacies from a variety of stakeholders.

Qualitative data from the interviews and focus group were de-identified and transcribed verbatim by an external transcriber. The grounded theory framework was utilized to inductively build key themes and an analytical thread, based on close reading and iterative thematic coding of the transcripts. Results were analyzed and written using a narrative driven framework to centre participant voices and experiences.

The study received Research Ethics approval from the University of British Columbia Research Ethics Board (REB #: H12-02557-A025).

RESULTS AND DISCUSSION

DETAILS ABOUT INFORMANT INTERVIEWS AND FOCUS GROUP

A total of 11 participants provided input between January and March 2019; seven individual interviews and one focus group of four BCCDC Harm Reduction Services staff were conducted:

- Stand-alone pharmacy manager (Vancouver Coastal Health region)
- Stand-alone pharmacy manager (Island Health region)
- Stand-alone pharmacy manager (Interior Health region)
- Chain manager (pharmacy hub site, province-wide)
- Chain pharmacy (satellite site, Fraser Health region)
- Banner manager (pharmacy hub site, province-wide)
- Past director of BCPhA
- Focus Group with four staff members working within the BCCDC Harm Reduction Services

PARTICIPATING PHARMACIES IN BC

As at December 31st, 2018 there were 562 community pharmacies participating in the THN program in BC. The participating pharmacies are distributed across the five BC regional health authorities. As shown in Table 1, the percentage of participating pharmacies in each regional health authority is closely in line with the percentage of BC's population in that region. For example, in 2018, Fraser Health has highest population estimate of approximately 1.86 million people, 37% of the total BC population (BC Stats, 2018) and had the highest number of participating community pharmacies (207), accounting for 37% of all participating pharmacies in BC.

TABLE 1 *Distribution of participating pharmacies in each regional health authority and population estimates*

Health Authority	Population ¹ (N)	Population (%)	Participating Pharmacies ² (N)	Participating Pharmacies (%)	Pharmacy Kit distribution ³ (%)
Fraser Health	1,860,798	37%	207	37%	30%
Vancouver Coastal Health	1,210,891	24%	135	24%	29%
Island Health	835,871	17%	84	15%	23%
Interior Health	789,223	16%	103	18%	12%
Northern Health	294,904	6%	33	6%	6%
British Columbia	4,991,687	100%	562	100%	100%

Seventeen pharmacy sites were participating in the THN program prior to the launch of the pharmacy program in December 2017. The majority of the participating pharmacies joined the THN program between the official program launch in December 2017 and March 2018 (508 sites, 90% of 562 sites as at December 31st, 2018).

¹Based on BC Stats 2018 data

²Based on BCCDC THN Pharmacy Sites data as at December 31, 2018

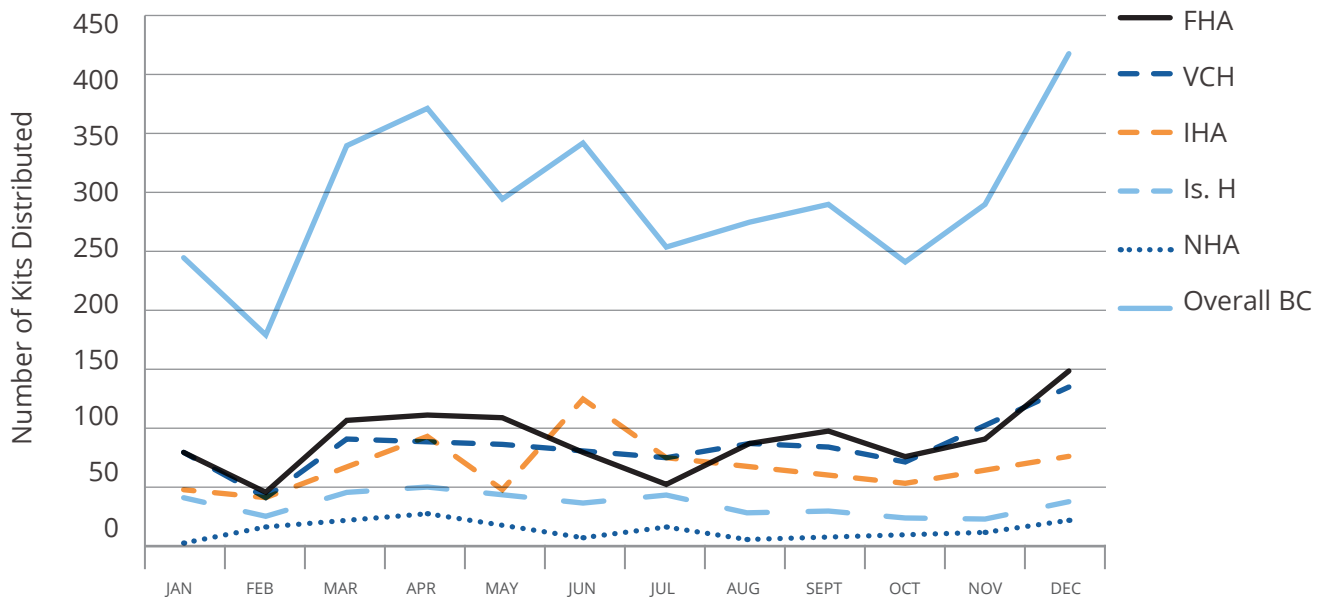
³Based on BCCDC THN Pharmacy Distribution data from Jan 1, 2018 – Dec 1, 2018 as at Jun 15, 2019

DISTRIBUTION OF THN THROUGH PHARMACIES

In 2018, 3,523 THN kits were distributed to clients through community pharmacies. Table 1 shows that the majority of these kits were distributed by Fraser Health (30%), closely followed by Vancouver Coastal (29%), Interior (23%), Island (12%), and Northern Health (6%) respectively.

As shown in Figure 2, the number of THN kits distributed to clients per month through community pharmacies in all regions was fairly consistent between January 1st and December 31st, 2018 with an overall slight dip in February and a spike in Interior Health in June 2018. The reasons for the latter are unclear, but could potentially be attributed to music festivals occurring in that region during the summer months. These differences in distribution of kits over time could have been in response to alerts and concerns raised in the media (Young, Williams, Otterstatter, Lee, & Buxton, 2019).

FIGURE 2. Distribution of THN Kits to clients by community pharmacies in each Health Authority region over time



KIT RECIPIENT CHARACTERISTICS

The demographic profile of clients that received THN kits from a community pharmacy between January 1st, 2018 and December 31st, 2018 is presented in Table 2.

TABLE 2. Characteristics of individuals that received kits from participating community pharmacies in 2018

	Pharmacy Sites	Non-pharmacy Sites
Gender		
Male	51%	50%
Female	43%	43%
Other	3%	2%
Not Reported	3%	5%
Age		
Under 19	5%	5%
19 – 30	37%	34%
31 – 60	47%	53%
Over 60	7%	3%
Not Reported	4%	6%
Risk		
At risk of overdosing	39%	68%
Not at risk of overdose	58%	28%
Not Reported	3%	4%
Experience		
1st Kit	71%	40%
Replacement kit – used kit	17%	37%
Replacement kit – other reason	8%	14%

As indicated in Table 2, the majority of the clients that obtained THN kits from community pharmacies in 2018 were male. Almost half of all clients were within the ages of 31 and 60 (47%). This was true for all gender categories.

THN Kit Distribution records from community pharmacies identified that the majority of the THN kits were distributed to clients that were not at risk of overdosing themselves (58%). In contrast, BCCDC internal data from other (non-pharmacy) THN sites for the same time period (January 1st, 2018 to December 31st, 2018) indicates that the majority of the clients picking up kits from other THN-distributing sites were at risk of overdose themselves (68%). This shows an important difference between reported client characteristics of THN-distributing pharmacies and of other THN-distributing sites. It also indicates that distributing THN kits through pharmacies potentially increases access of naloxone to a different segment of the population, i.e. friends and families of those at risk of overdose.

However, despite the results of the quantitative data from the pharmacy distribution records, some pharmacists reported they were distributing kits to individuals mostly at risk of an overdose. As one pharmacist from Island Health mentioned:



“I would say mostly those at risk for themselves. But I have definitely had some friends and family requesting as well.”

– PHARMACY MANAGER, ISLAND HEALTH REGION

Similar discrepancies between quantitative and qualitative data were also seen for the experience level of clients. Based on the distribution records, most of the kits distributed through community pharmacies were 1st kits for clients (71%), thus, the majority of the clients picking up THN kits from pharmacies would be considered inexperienced in naloxone administration. However, qualitative data from the interviews reveal a mixture of views on the experience level of clients picking up kits from pharmacies. For example, a pharmacist based in Vancouver said:



“Yeah, most people [...] coming in have [...] already been trained. We’re not getting a lot of new people. [...] Sometimes they see a kit and they’re, like, oh, you know what, I don’t have a kit. Can you just hook me up with one now? I need a replacement. I don’t know if I’ve had anybody come in that’s never had a kit at my location.”

– PHARMACY MANAGER, VANCOUVER COASTAL HEALTH REGION

However, a pharmacist from the Fraser region said:



“I think the majority of it is, like, friends and family. They’re mostly, like, first-time kits [...]. There’s only a handful that come in as a replacement, but the majority of them are going to be first-time, first-kit users.”

– PHARMACY MANAGER, FRASER HEALTH REGION

Experience using kits (as determined by clients picking up a replacement kit) was higher among individuals at risk of overdosing (37%) compared to those not at risk of overdose (20%). However, almost three quarters of THN clients at pharmacies were obtaining their first kits (71%). This indicates that many clients picking up kits from pharmacies may not be experienced with needles and it is, therefore, important to have hands on training for clients and refer them to other THN sites where they can practice drawing up and injecting.

Among clients that reported they were at risk of an overdose, over half (58%) were male. Among those not at risk of an overdose, there was an almost equal distribution of males and females (47% and 49% respectively).

STRENGTHS AND FACILITATORS OF THE PROGRAM EXPANSION

Interviewees and focus group participants described several strengths and facilitators of the THN program in community pharmacies. These include:

STANDARDIZED PROCEDURES

The operational processes that were developed by the team, as well as the standardized resources and messaging, has largely facilitated a successful and sustainable expansion of THN into community pharmacies. It has been repeatedly echoed by all interviewees that the program procedures are user-friendly and easy to implement.

Box 1: Respondent Views on Program Procedures



“As far as the whole procedures, as far as becoming a site and reordering stuff and training material, I think it’s done really well, and it’s very easy to follow through. [...] And I know some pharmacies are just stressed for time and they don’t want to take on a big project that doesn’t necessarily-- well, doesn’t pay anything, right. [...] But I think after you sort of get initial set up, there’s really not a whole lot to do to really maintain it. It’s a pretty easy program to do. It doesn’t take probably any of my time. It’s very easy to give out the kits, reorder on it. It’s very easy to do.”

– PHARMACY MANAGER, VANCOUVER COASTAL HEALTH REGION

CENTRALIZED DISTRIBUTION MODEL

In the planning stages of the expansion, the BCCDC worked with BCPhA to identify strategies to enroll a large number of pharmacies across the province. A centralized distribution model was agreed to be the most efficient and sustainable method. Within this model, banner and chain pharmacies were registered as satellites, and THN kits were distributed to centralized pharmacy hub sites. This centralized distribution model has been a key facilitator of the expansion of the THN program into community pharmacies. Implementing this model made it feasible to register and provide kits to several pharmacies across the province and in large volumes. The THN program does not have capacity to ship to numerous individual pharmacy stores nor able to handle individual site queries and ongoing orders.

STANDARDIZATION OF THN KITS

Another strength of the THN program, not necessarily of the pharmacy roll-out specifically, that was highlighted through the qualitative interviews is that the program has standardized and branded BCCDC THN kits, which are well recognized throughout BC. This helps with the distinction of the BC THN Program kits from other naloxone products that are available and may be purchased at a pharmacy where the naloxone request may fall outside of program scope or mandate.

GOOD SUPPORT FROM BCCDC

Most pharmacy managers agree that the team at BCCDC has been fairly accessible to them whenever they've needed support. However, since the procedures are so easily laid out, most have not felt the need to reach out for support.

ADEQUATE TRAINING AND RESOURCES

The majority of the interviewees felt that they were equipped with adequate resources to implement the program and felt confident and competent in training clients to administer naloxone. Some resources that have particularly worked well for people include the mock THN kits and step-by step guidelines in the THN kits.

A CLOSE-KNIT TEAM AT BCCDC

BCCDC staff feel that having a close-knit team that communicates well with each other and help each other out in the roll-out and day to day operations of the THN program in community pharmacies has been an important facilitator for the program.

CHALLENGES AND BARRIERS ASSOCIATED WITH PROGRAM EXPANSION

Interviewees and focus group participants also described the challenges they experienced in the implementation and day to day running of the THN program in community pharmacies; these have been described below.

PHARMACY REQUIREMENTS AND PARTICIPATION

The pharmacy structure in BC is quite complex, with a mixture of distributors, banners, chains and independent pharmacies. The pharmacies also differ in their licensing and labeling procedures and requirements for medical supplies, mainly for their internal inventory management. This required the BCCDC HRS staff to tailor the program by working directly with participating banners and chains to negotiate the most appropriate roll-out and ongoing processes to sustain the expansion.

BCCDC HRS continues to work with additional banners and chains who have expressed interest in taking part in the THN program. The BCCDC has temporarily supported select sites that may fall under a banner/chain that does not yet participate. These sites are approved on a case-by-case basis depending on community overdose risk and existing access to THN. The sites are notified that their ordering process may change should they qualify for a centralized distributor. Each distributor, banner, and chain may have specific internal policies and procedures that they must adhere to prior to enrolling their stores in the program, which has resulted in delays with on-boarding.

COST AND REMUNERATION

A barrier to expansion for some banners and chains is the cost of THN kit distribution from their distribution warehouse to the pharmacies. However, several managers from participating chains/banners reported that few additional costs were incurred.

Box 2: Respondent Views on Cost of Participation



“We put it into their regular order. [...] When you stop to think about it, this thing has basically gone from point A to point D with no charge to anybody. And I don't think the pharmacy should be really expecting any kind of, you know, payment for it”.

– PHARMACY BANNER MANAGER, DISTRIBUTION LEVEL (PROVINCE-WIDE)

Another barrier to participation has been the lack of remuneration for pharmacists for the time they spend training clients about naloxone administration and dispensing the kit. However, the reason for the lack of compensation for pharmacists is rooted in equitability and sustainability of the program; there are a variety of THN site types and all participating THN sites across BC provide training and distribute kits without remuneration.

Box 3: Respondent Views on Remuneration for Pharmacists

“The thing that really curbed [pharmacists’] enthusiasm was when they found out that pharmacists weren’t going to get paid to actually distribute the kits and educate the public. And they were expected to do all that for free”. – Past Director, BCPhA

“[W]hen you actually look at the number of kits that we distribute, and potentially could distribute through pharmacists, it really wasn’t sustainable. It seemed, you know, inequitable that we should pay pharmacists for the training but we weren’t [paying] anybody else, like the NGO’s or others”.

– STAFF, BCCDC

TYPE OF NALOXONE IN THN KITS

Several pharmacists brought up that the injectable form of naloxone is a barrier to client participation which prevents the access of naloxone for some individuals. There has been an increased demand for intranasal naloxone in the THN kits. The reasons for this increased interest include:

- Intranasal naloxone is available through pharmacies in other provinces and seems to work well.
- Fear of needles or of administering needles among friends and families of individuals who use drugs, and difficulty in training these individuals to administer needles

Box 4: Respondent Views on Intranasal Naloxone

“I mean, there are people that just-- you cannot train somebody on a needle. They don’t like needles. [...] [E]ven when I’ve done it a few times, it’s intense. There’s somebody not breathing and quickly dying in front of you and you’re trying to break open the little ampoules. [...] [Y]ou’re shaking a little bit sometimes. Sometimes you go through it and you shake afterwards.” But some of these people [...] would carry a nasal spray. Like, that’s pretty basic. I can stick it up someone’s nose and squirt it up there.”

– PHARMACY MANAGER, VANCOUVER COASTAL HEALTH REGION

- More widespread media attention and availability of intranasal naloxone at no cost under specific groups, e.g. First Nations Health Benefits

However, some interviewees do appreciate the limitations of the intranasal naloxone, including higher cost and lack of scientific evidence to support the effectiveness of the product in terms of absorption for individuals that snort drugs or have a cold.

ACCESS TO NALOXONE TRAINING

One of the challenges that was brought up regarding the THN program is that the client training on naloxone administration requires access to technology i.e. either a computer or a smart phone. This may be limiting for some individuals who do not have access to these means.

COMMUNICATION GAPS

Although the centralized distribution model makes it feasible to supply THN kits to multiple sites through a central distributor, it does create some communication gaps. BCCDC HRS is often not in direct communication with each of the satellite pharmacies and there are no administrators at the distribution level to serve as liaison. As such, it is challenging for the BCCDC HRS team to follow-up with satellite pharmacies with questions about records received (e.g. Distribution records), or send reminders when no records have been submitted. It is also challenging to understand the general re-ordering process of pharmacies, i.e. whether pharmacies re-order when they are short of supplies or keep a continual stock which may ultimately impact pharmacy hub site order volumes and frequency. The program relies on the return of distribution records from the individual pharmacies, which may not be 100% complete, be duplicated, or not be submitted on time.

Box 4: Respondent Views on Communication Gaps



“We imagined that there would be a coordinator at the banner level that would help track distributions at the site level and manage some of the administrative pieces, which we realized quite quickly was not going to happen because we were actually dealing with the distribution centre. So we’ve had to have a fair bit of leeway and change our processes slightly in terms of how we deal with each separate banner. And that process is slightly different than it would be for a typical Take Home Naloxone site.”

– STAFF, BCCDC

LACK OF AWARENESS OF IMPLEMENTATION PROCEDURES

One of the other challenges raised was the lack of awareness of implementation procedures. This may also be attributed to the centralized distribution model. BCCDC HRS team provides an orientation manual to pharmacies at the distribution level (i.e. banners and chains) as they are accepted into the program. However, due to internal communication gaps within the pharmacy structure, it is possible that these program procedures are not always shared with all the satellite pharmacies, resulting in some unfamiliarity with the implementation procedures. For example, individual pharmacies are sometimes unaware that they are registered as a satellite and can only order from their central distribution hub. Some satellite pharmacies continue to send requests for kits directly to BCCDC. Furthermore, although eligibility screening guidelines are included in the orientation/

resource package, several pharmacy managers that were interviewed were unclear about the eligibility of clients for THN kits, including around giving free THN kits to health professionals or emergency medicine personnel. In addition, there was some uncertainty regarding client training requirements. Some pharmacists thought that clients must have a certificate of completion of the naloxone training in order to be eligible to receive a THN kit.

LAG IN DATA ENTRY

Many pharmacies do not have 100% compliance of returning distribution records to BCCDC via fax or e-mail. Pharmacies send the distribution records back to BCCDC at different times; some do it monthly, others send it back when the sheet is full. A challenge has been that pharmacies have submitted a half-filled form back to BCCDC, and then continue filling out the same form until all the lines are filled, sending back the same updated form the following month. This often causes confusion and delay in data entry, as the BCCDC HRS team must compare the forms with pharmacy hub site transfer records. It makes it difficult to ascertain which pharmacies are actively participating in the program. The large program volumes and small size of the BCCDC HRS team that manually enters the data also contributes to a lag in data entry.

REPORTING REQUIREMENTS AND METHOD OF TRANSMISSION TO BCCDC

One of the managers at the distribution level mentioned that the distribution records that pharmacies were expected to fill out and send back to BCCDC every month seem a bit cumbersome. However, this was not echoed by any other interviewees.

There were mixed views regarding the use of fax to send reports to BCCDC. While some pharmacists feel that the current method of hand-writing distribution records and emailing or faxing them to BCCDC works well for them, others would prefer an online record form, and perhaps an online ordering form, rather than ordering via email.

INVENTORY MANAGEMENT

Inventory management is crucial at all levels of the program (at BCCDC, at centralized distribution hubs, as well as at satellite sites). Some pharmacies are able to manage their supplies and order an appropriate quantity as required. However, there are often concerns about satellite sites over-ordering kits, which could lead to naloxone expiring on the shelves, while preventing access for other sites in the province. On the other hand, some banner and chain pharmacies tend to place large urgent orders for THN kits when the warehouse is critically low on supplies. This poses an unnecessary gap in availability of THN in pharmacies. It would, therefore, be beneficial to monitor inventory volumes to estimate needs in advance.

TOWARD THE HEART WEBSITE AND OTHER RESOURCES

There were mixed views from the interviewees regarding the website and other resources provided to participating pharmacies. While most felt that the resources provided were adequate and had positive comments about the website, some indicated that the website was difficult to navigate.

BENEFITS AND POTENTIAL IMPACT

OPPORTUNITY TO ADDRESS STIGMA AROUND DRUG USE

One of the key benefits of the expansion of THN into community pharmacies is that it opens up opportunities for conversations and dialogue about substance use. It also portrays naloxone as any other medicine. This can help in addressing some of the stigma associated with drug use.

Box 6: Respondent Views on Stigma



“I think it’s another way of destigmatizing, that this is just another medication. It’s not just for people who use substances and, you know, I’m sure people will be happier coming to the pharmacy to pick it up than going to some of the other sites that may, you know, they may feel is more stigmatizing.”

– STAFF, BCCDC

INCREASES ACCESS TO NALOXONE

One of the key goals for the expansion of the THN program into community pharmacies was to increase access for individuals who may not access naloxone through other harm reduction sites, as well as in areas where there are limited community health organizations and / or harm reduction sites that provide THN kits. Increasing access to naloxone, especially to different segments of the population that do not use drugs themselves, but who are likely to witness an overdose, will also increase the number of first responders.

Box 7: Respondent Views on Access of Naloxone



“And there’s a lot of people that I’ve seen even on SkyTrain or whatever, [...] and a lot of people that I know even personally who carry a kit with them. And [...] only because they say potentially they might respond to an overdose. But they’re not an opioid user themselves. [...] [T]here is a point of pride that; if I could save a life, I’d sure like to do that.”

– PAST DIRECTOR, BCPhA

IMPROVED IMAGE OF PHARMACISTS

Participating in the THN program without any remuneration has the potential to improve the image of pharmacists in the eyes of the public.

Box 8: Respondent Views on Benefits



“And for pharmacies in particular, it’s also helped improve the image of pharmacies in the public’s eye as a place of healthcare, as a profession that’s participating broadly in public health issues and working to do whatever we can as a profession to participate in helping find some solution to the opioid crisis.”

– PAST DIRECTOR, BCPhA

ATTITUDES REGARDING EXPANSION OF THN TO PHARMACIES

The public’s increasing need for naloxone access drove the expansion of THN into community pharmacies. The initial attitudes towards the expansion into community pharmacies were mixed. Many banners and chains were very happy to be involved right from the get-go. Some pharmacists anticipated remuneration for the time they spent in training clients to administer naloxone and for dispensing a kit. A few banners and chains specifically declined to join the program unless they were compensated for their participation. Other pharmacies joined the program once it became more of a norm across the province. Initial attitudes have mostly changed overtime and there is increased recognition of the community need, as more banners and chains have become willing to support their communities and connect with their clients.

Box 9: Initial Attitudes Regarding THN in Pharmacies



“We were all for it right away.”

– PHARMACY BANNER MANAGER, DISTRIBUTION-LEVEL (PROVINCE-WIDE)

At an individual level, most pharmacists interviewed had a positive attitude towards the program and are happy to be involved in this life saving initiative. They believe that this is “the right thing” to do. In fact, some pharmacists were surprised that they were not part of the solution already. Several satellite pharmacies are really eager to participate and want to be able to provide services to their clients, despite their banner or chain not currently participating.

Box 10: Respondent Attitudes Regarding THN in Pharmacies

“The general consensus for us here was this is something that we need to do to address this crisis. And we were open to being a part of that and helping with that situation. [...] We’re easily accessible. We’re trained in how to give injections. And just we’re dealing with patients who are in the community on opioids and just we were a bit dumbfounded as to why pharmacies weren’t the primary site to begin with. [...] [I]t’s definitely a step in the right direction.”

– PHARMACY MANAGER, INTERIOR HEALTH REGION

FURTHER EXPANSION OF THE THN PROGRAM IN PHARMACIES

Several interviewees feel that the naloxone is by now fairly accessible to the people who need it the most. Some commented that the program could benefit from expanding to all pharmacies in BC, but especially in remote and rural areas with poor access to naloxone.

Box 11: Respondent Views on Growth

“But I think the overdose to death ratio is just so much higher as you get out of some of these pockets, that I really wish more pharmacies would pick up [the program] [...] I wish more would get involved. If there was a way to kind of show it’s really not a huge project. [...] I think most of us [...] are involved in it. But it’s the other areas that people just aren’t ready to respond that I think we can maybe make a difference, at least in the amount of deaths that are happening.”

– PHARMACY MANAGER, VANCOUVER COASTAL HEALTH REGION

However, on-boarding all remaining non-participating pharmacies as stand-alone THN sites would be difficult, mainly because the program spans multiple sites, only a fraction of which are community pharmacies. Therefore, it would be more efficient if the remaining banners and chains that are not currently participating joined the program to centralize the distribution. Truly independent pharmacies and those located in a remote area with no other THN distributing site nearby would be considered as stand alone sites.

Box 12: Respondent Views on Growth

“If the outstanding banner[s] go through, [that] will hugely increase the sites that are eligible. It’s just not feasible for us to onboard all of those sites at this time individually, and it’s not manageable from an operations perspective and from a management perspective.”

– STAFF, BCCDC

RECOMMENDATIONS

IMPLEMENTATION PROCEDURES AND ONGOING COMMUNICATION

- 1. Orientation:** Most pharmacists agree that the start-up was a painless process and the resources provided for training and implementation were sufficient. However, this information may not be reaching all the individual satellite sites. One pharmacy manager mentioned that having a quick orientation via a webinar would be useful during the initial set up to lay out the expectations and implementation procedures. This would also be beneficial for emphasizing important areas where there appears to be a knowledge gap, such as eligibility guidelines, process and frequency of submitting distribution records (by fax or email), and kit ordering procedures through the centralized distribution hubs.
- 2. Ongoing Communication and Follow-up:** Since there appears to be some communication gaps between banners and chains at the distribution level and the satellite sites, it is recommended that banners and chains conduct regular follow up with their satellite sites and provide reminders about the implementation procedures. Annual communication about the program, e.g. through a newsletter, may be useful.
- 3. Online Distribution Records:** Some pharmacists indicated that they would prefer having a computerized system or an online form to fill out to send back their distribution records to BCCDC. This system would also potentially reduce the time taken to enter data and may eliminate duplications in data entry.
- 4. Highlight Resources on the Website:** A few pharmacists mentioned that the Toward the Heart website is difficult to navigate and the resource section is not clearly visible. It was also difficult for some pharmacists to find copies of the ordering sheets and distribution record forms on the website. It would be beneficial to re-organize the website and highlight the important resources.

PHARMACIST REFRESHER TRAINING

Although pharmacists feel they have adequate level of training and are competent to train clients on naloxone administration, some did recommend having regular refreshers to keep updated with the information. Online refresher courses (or webinars) were highly recommended since these would fit well with pharmacists' schedules and could be completed at pharmacists' own time. It should be noted that a quick-learn app is available to provide refreshers for pharmacists, but there may be some lack of awareness about this. It was also recommended by pharmacists that refresher courses should be mandated so as to nudge pharmacists to actually do the training, similar to CPR refresher courses which need to be done every three years.

Some content suggestions for the refresher trainings include:

- 1. Injection training:** Although most pharmacists are injection-trained, being comfortable with administering needles and being able to train clients on the same is important.

- 2. More simulation-based training:** There was a suggestion for a training that simulates a real overdose event in order to better prepare pharmacists for responding during an overdose event.
- 3. More emphasis on giving breaths:** The pharmacist refresher training could provide some more emphasis on providing breaths and calling 911 during an overdose response.

PUBLIC AWARENESS

Pharmacists feel that there is a need for more public awareness about the availability of THN kits through pharmacies and provided several suggestions for doing so:

- 1. Posters:** Pharmacists feel that it would be beneficial to have posters provided as part of their start-up kit. These posters could be displayed in the pharmacies and would serve as a reminder for clients to pick up THN kits when they come in to fill their prescriptions. There are some existing naloxone decals on the Toward the Heart website which BCCDC could refer participating pharmacies to. Pharmacists also suggested having posters on the streets in target areas to remind individuals to pick up THN kits from pharmacies.
- 2. Mail-out:** Another method suggested for creating public awareness is a mail-out to homes in high-risk areas.
- 3. Education about benefits of naloxone:** Pharmacists feel there is a need for more public education about the benefits of naloxone, as there continues to be some resistance and stigma towards carrying naloxone.
- 4. Social Media:** Staff at BCCDC suggested creating awareness through social media and encouraging use of the online site finder where THN distribution pharmacies nearest to the client can be identified.
- 5. Public events and community engagement:** Public events, such as Overdose Awareness Days, can also be leveraged to create awareness about THN distribution sites and pharmacies. Similarly, more community engagement would be a way to increase awareness about availability of THN through pharmacies. Several pharmacies already participate in public events and have a good relationship with clients in their neighborhood, and this can be useful in creating awareness about the benefits of carrying naloxone and its availability through pharmacies.
- 6. Public Service Announcement:** Pharmacists also recommend creating awareness about THN availability through pharmacies using public service announcements.

TRAINING THE PUBLIC

While the overall feedback from the pharmacists about the acceptance of the naloxone training among clients was positive, some did suggest alternative means of training which would make it less time consuming for pharmacists and more accessible for clients. These recommendations include:

- 1. Handout:** Some pharmacists stated that a one-page handout that highlights key points about naloxone and its administration would be a good supplement to the training conducted by pharmacists for clients, especially for those who do not have access to phones or a laptop.
- 2. Phone App:** An interactive phone application which could be downloaded on a smart phone and referred to whenever a refresher is needed. It must be noted that the web-based training that currently exists can be accessed through cell phones.

INTRANASAL NALOXONE

There is an increased demand in the province for intranasal naloxone because of its ease of administration and positive attitudes of people in regards to carrying this over injectable naloxone and a syringe. Several pharmacists suggest that enhancing options for people, and making intranasal naloxone available as well as injectable naloxone, will increase access to naloxone in general. However, more research on the effectiveness of intranasal naloxone and additional funding would be required to make this possible.

LIMITATIONS OF THE EVALUATION

The quantitative component of this evaluation was based on BCCDC administrative data on site registration, kit ordering, and kit distribution. This distribution data relies on the return of distribution records from each individual pharmacy site, and records are received at various times, creating a lag in data entry. This poses a limitation to the evaluation results presented because in this live environment, data snapshots are subject to change.

The qualitative component of the evaluation is based on responses from 11 individuals, with only 5 pharmacy managers. This is a fairly small sample size, given the scope of the program.

Despite attempts to purposefully select sites to reflect various levels of program participation and site types, the views of the pharmacy managers at the selected sites may not be reflective of experiences of all banners, chains and stand-alone pharmacy sites in the province. Experiences often vary by community, and selection of a handful of pharmacies for the interviews may have led to selection bias.

The interviews also had a fair amount of questions around initial attitudes and on-boarding procedures which required participants to recall experiences from over year ago. This may have led to recall bias as participants may not remember previous events or experiences accurately or omit details. Thus, the internal validity of the results, i.e. the confidence with which conclusions about the THN program in community pharmacies can be made, may be compromised.

There were also some discrepancies observed between the qualitative and quantitative results, specifically in relation to client characteristics. This may have been a result of the higher number of quantitative records reviewed versus the number of interviewees.

CONCLUSION

The BC THN Program spans across multiple sites, and pharmacies are one aspect of a much larger provincial program. Distribution sites, including pharmacies, have willingly joined the program to best support the communities they serve and increase access of naloxone during the ongoing opioid crisis.

Overall, the one-year evaluation of the BC THN Program in community pharmacies reveals that the program has been well-received across the province and has been successfully implemented.

One of the key findings of the evaluation is that the majority of clients picking up kits from pharmacies do not report being at risk of overdosing themselves, and are first time recipients of THN. This indicates that pharmacies increase access of naloxone to a different segment of the population, i.e. friends and families of those at risk of overdose.

Implementing the recommended improvements highlighted in this report may lead to increased success and acceptability, and will support continued expansion of the THN program in community pharmacies.

POST SCRIPT

The BC THN Program in community pharmacies has expanded substantially since this evaluation was completed. As at September 15, 2019 there are 703 community pharmacies participating in the BC THN Program. Furthermore, discussions are ongoing with one of the major pharmacy distribution chains in BC and there is a possibility of on-boarding over 400 pharmacy sites under this chain, should these negotiations succeed.

There has also been progress in implementing some of the recommendations that emerged from this evaluation. BCCDC HRS recently released a new training video that addresses the importance of giving breaths for opioid overdose response. This video is available online and can serve as a refresher for pharmacists. Furthermore, the BCCDC recently collaborated with First Nations Health Authority to release a video to support awareness of how to access nasal naloxone through First Nations Health Benefits and created a nasal naloxone demonstration video as a training resource.

BIBLIOGRAPHY

- Alberta Blue Cross. (2017). Take Home Naloxone (THN) Program Update. Pharmacy Benefact. Retrieved from www.albertahealthservices.ca/info/Page15586.aspx.
- American Addiction Centre. (2019). The Effects of Opiates on your Body. Retrieved January 29, 2019, from <https://drugabuse.com/featured/the-effects-of-opiates-on-the-body/>
- BC Coroners Service. (2019a). Illicit Drug Toxicity Deaths in BC. Retrieved from <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/illicit-drug.pdf>
- BC Coroners Service. (2019b). Fentanyl-Detected Illicit Drug Toxicity Deaths. Retrieved from <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/fentanyl-detected-overdose.pdf>
- BC Gov News. (2016). Provincial health officer declares public health emergency | BC Gov News. Retrieved September 19, 2019, from <https://news.gov.bc.ca/releases/2016HLTH0026-000568>
- BC Stats. (2018). Sub-Provincial Population Estimates. Retrieved April 2, 2019, from <http://www.bcstats.gov.bc.ca/apps/PopulationEstimates.aspx>
- Chen, H. (2015). Fundamentals of Program Evaluation. In Practical program evaluation: theory driven evaluation and the integrated evaluation perspective (2nd ed., p. 7). California: SAGE Publications.
- College of Pharmacists of British Columbia. (2016). Community Pharmacy Distribution of Naloxone. Retrieved from http://library.bcpharmacists.org/6_Resources/6-5_Pharmacy_Resources/5187-Naloxone_Training.pdf
- College of Pharmacists of British Columbia. (2019). Naloxone. Retrieved September 19, 2019, from <https://www.bcpharmacists.org/naloxone>
- Creswell, J. W., & Plano Clark, V. L. (2007). Choosing a Mixed Methods Design. In Designing and Conducting Mixed Methods Research (pp. 64–81). California: SAGE Publications.
- National Association of Pharmacy Regulatory Authorities. (2019). National Statistics. Retrieved September 19, 2019, from <https://napra.ca/national-statistics>
- Ontario Ministry of Health and Longterm Care (2017). Ontario Public Drug Programs Division Ontario Naloxone Program for Pharmacies (ONPP) Frequently Asked Questions for Pharmacy Dispensers: Providing Publicly Funded Naloxone Kits and Claims Submission Using the Health Network System. Retrieved from www.opatoday.com/professional/naloxone_kit_tools.
- Régie de l'assurance maladie du Québec. (2017). Programme de gratuité du médicament naloxone et de certaines fournitures. Retrieved from www.ramq.gouv.qc.ca/professionnels
- Taro Pharmaceutical Industries. (2003). Definitions of Pharmacy Formats. Retrieved September 19, 2019, from <http://216.150.136.82/article.asp?siteID=273&catID=1638&pgID=5060&sub1=1>
- World Health Organization. (2014). Community management of opioid overdose. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/137462/9789241548816_eng.pdf;jsessionid=40A9BDB7E7B6C-C8BD742F13A01E6F090?sequence=1
- World Health Organization. (2018). Information sheet on opioid overdose. Retrieved from https://www.who.int/substance_abuse/information-sheet/en/
- Young, S., Williams, S., Otterstatter, M., Lee, J., & Buxton, J. (2019). Lessons learned from ramping up a provincial Take Home Naloxone program during a public health emergency: a mix-methods evaluation. *BMJ Open*.

APPENDIX 1: BC THN PROGRAM IN COMMUNITY PHARMACIES – LOGIC MODEL

Situation: The BC THN program provides free naloxone kits and training resources on opioid overdose prevention, recognition, and response -including naloxone administration. Beginning in December 2017, the BC THN program was introduced to several community pharmacies across BC.

INPUTS What we will invest	OUTPUTS		OUTCOMES - IMPACT		
	ACTIVITIES Processes Involved	PARTICIPATION Who we will reach	SHORT TERM RESULTS	MEDIUM TERM RESULTS	LONG TERM RESULTS
STAFF FUNDING EDUCATION PARTNERSHIPS THN KITS	<p>Pharmacist Training: Through BC College of Pharmacists and BCCDC naloxone training app</p> <p>Pharmacy Recruitment: Stand-alone pharmacies apply to become THN distributing sites, BCCDC contacts pharmacy banners / chains to recruit them</p> <p>Ordering of THN kits by pharmacies (banners / chains / independent)</p> <p>Naloxone training and kit distribution for clients</p> <p>Recording and reporting to BCCDC: Kit distribution records, kit transfer records (for distributors / pharmacy hub sites)</p> <p>Communication between BCCDC and participating banners / chains and sites</p>	<p>Suppliers: Pharmacies across BC, especially those in areas with few harm reduction sites or limited access to THN kits</p> <p>Clients: Individuals who use opioids who may be at risk of overdose</p> <p>Clients: Family and friends of individuals who may be at risk of overdose</p>	<p>Increased knowledge and competency of pharmacists with overdose prevention, and ability to train other individuals in the same</p> <p>Increase in the number of individuals trained in overdose prevention, recognition and response across BC, and that have the attitude, competency and self-efficacy to respond to an overdose</p> <p>Increased access / distribution of THN kits to public (especially those not wishing to attend harm reduction sites)</p>	<p>Retention of knowledge and skills obtained through naloxone training.</p> <p>Increase in % of reported opioid-related overdoses that are reversed through the administration of naloxone (i.e. increase in reversal events).</p> <p>Increase in the number of responders that use naloxone to reverse opioid overdoses (i.e. increase of number of responders).</p> <p>Increase in positive attitudes and comfort surrounding naloxone administration and willingness to participate as a first responder.</p> <p>Reduction in stigma associated with drug use.</p>	<p>To decrease mortality and morbidity caused by opioid overdoses in BC.</p>

Assumptions

1. Individuals at risk of overdose and/or families and friends of individuals at risk of overdose are willing to come to pharmacies to obtain naloxone kits.
2. The online naloxone training is sufficient in preparing individuals for actual administration of naloxone in the event of an overdose.
3. Having a THN kit will indeed encourage individuals to participate in reversing overdoses, should they witness one.

External Factors

1. Availability of THN kits from the manufacturers/ suppliers.
2. Comfort and willingness of individuals to administer needles in the event of overdose.
3. Pharmacists are willing and prepared to participate in this initiative and provide training to clients being given a kit on overdose recognition and response.