COMMUNICATING DRUG ALERTS

*DRAFT REPORT

Exploring the Communication of Drug Alerts with People Who Use Drugs and Service Providers

INTERIM REPORT TO CANADIAN COMMUNITY EPIDEMIOLOGY NETWORK OF DRUG USE

March 31, 2021

BC Centre for Disease Control
Provincial Health Services Authority

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Acknowledgements

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How to cite this document:

Loyal, J., Buxton, J.A. (March 2021). Exploring the Communication of Drug Alerts with People Who Use Drugs and Service Providers. Vancouver, BC. BC Centre for Disease Control (BCCDC).

Contents

Acronyms

BC	British Colombia
BCCDC	BC Centre for Disease Control
CCENDU	Canadian Community Epidemiology Network on Drug Use
CCSA	Canadian Centre on Substance Use and Addiction
CDA	Communicating Drug Alerts
COVID-19	Coronavirus disease
DIANZ	Drug Information and Alerts Aotearoa New Zealand
DIMS	Drug Information and Monitoring System
DORS	Digital Overdose Response System
ED	Emergency Department
EMS	Emergency Medical Services
FG	Focus Group
GBLTQ2S	Gay, Bisexual, Lesbian, Transgender, Queer, Two Spirit
GHB	Gamma-Hydroxybutyric
GSDOA	Good Samaritan Drug Overdose Act
NDEWS	National Drug Early Warning System
NDIB	National Drug Intelligence Bureau
OD	Overdose
PWLE	People With Lived Experience (of substance use)
PWUD	Persons Who Use Drugs
RADAR	Real-time Drug Alert and Response system
TEDI	Trans European Drug Information
TPH	Toronto Public Health
UBC	University of British Colombia

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Introduction

Contamination and adulteration of the illicit drug supply, particularly when combined with fentanyl, is a leading factor in rising rates of accidental overdose in North America (1). For instance, a study of 10 states in the United States identified that more than half of overdose deaths involving fentanyl also included cocaine, methamphetamine, or heroin (1). Fentanyl, which often contaminates the heroin supply in North America, is 30 to 50 times more potent than heroin and indiscernible without drug analysis equipment, which makes heroin use particularly unpredictable and hazardous (2). In British Columbia (BC), the rate of illicit drug toxicity has been increasing since 2013 (3) driven by this increasingly toxic illegal drug supply; fentanyl is detected in 85% of deaths (4) and people are using fentanyl knowingly (5).

Due to a rise in fentanyl-related overdose rates, many jurisdictions have increased regional harm reduction strategies, which may include drug checking, sterile needle supply, supervised consumption sites, and in BC overdose prevention services, drug surveillance, overdose recognition and response training and distribution of naloxone, and more (1,6,7). Often, these strategies go hand in hand, such as the mapping of overdose-related deaths in a region and surveillance of contaminated drug supply (8). Drug-checking organizations and early-warning systems work in tandem across Europe and North America to develop various warning campaigns on contaminated supply, which are then distributed through online channels, such as websites and social media, as well as through social networks and outreach activities (9). This "toxic drug alert" strategy can play a crucial role in reducing the harm associated with adulterated drug supply.

To engage communities in harm reduction, jurisdictions have largely turned to digital communications, including websites, emails, apps, and SMS text-based communications as a means of educating the public about and promoting various services and techniques that may help in reducing opioid-related risk. In a number of jurisdictions, both governmental and other non-profit organizations have developed websites and/or smartphone applications that provide information and resources to people who use drugs and to the general public. Internet-based toxic drug alerts can look different from jurisdiction to jurisdiction, and be distributed to relevant audiences in a variety of ways, such as via overdose prevention websites and smartphone applications, and/or by email or SMS text. Commonly, these overdose prevention resources include, but are not limited to, topics such as where to acquire naloxone kits, how to administer naloxone, where and how to access treatment including opioid agonist treatment, where to find observed consumption sites and drug-checking services, and alerts on contaminated drug supply in circulation.

Coronavirus disease (COVID-19) has complicated this. Services for peers are less available, and physical distancing orders and concerns about COVID-19 infection have resulted in services being less available and peers using alone more frequently. Additionally, the illicit drug supply has become increasingly unpredictable and toxic due to border closures.

In 2020, a total of 1,724 people died due to illicit drug use (Figure 1.), representing a 75% increase from 2019, the highest number ever reported in a year within BC (3).

Building upon research conducted in 2014 (10), this report outlines findings of a study that was conducted to better understand how peers receive information regarding toxic drugs; preferred ways of communicating drug and overdose alerts; and how current alerts can be improved. Since the previous study was performed, drug checking has become more widely available in BC, though limited in rural and remote areas.

Objectives
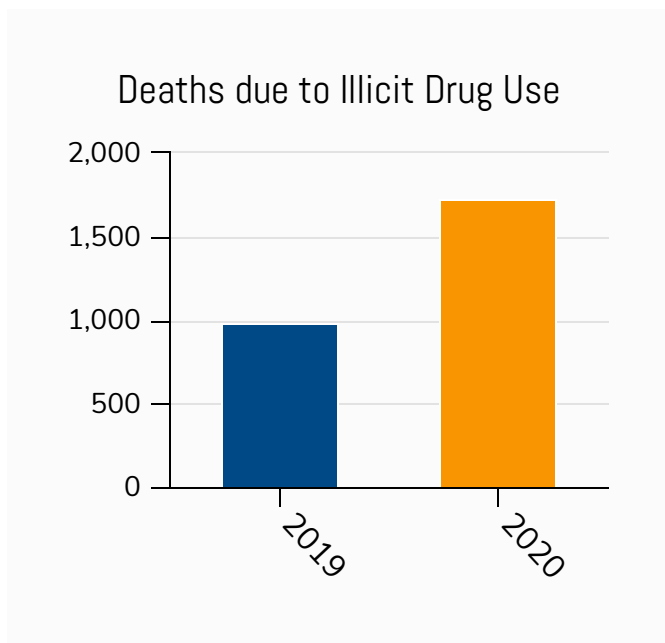
Figure 1 - Deaths due to Illicit Drug Use.

1. Identify methods and modes of communicating drug alerts in jurisdictions outside of BC;

2. Determine how peers receive information about toxic drugs;

3. Identify preferred modes of communicating drug alerts;

4. Explore the needs of peers who do not access harm reduction supply distribution sites;

5. Determine how drug alerts affect drug choice and drug use behaviours;

6. Determine how current alerts can be improved.
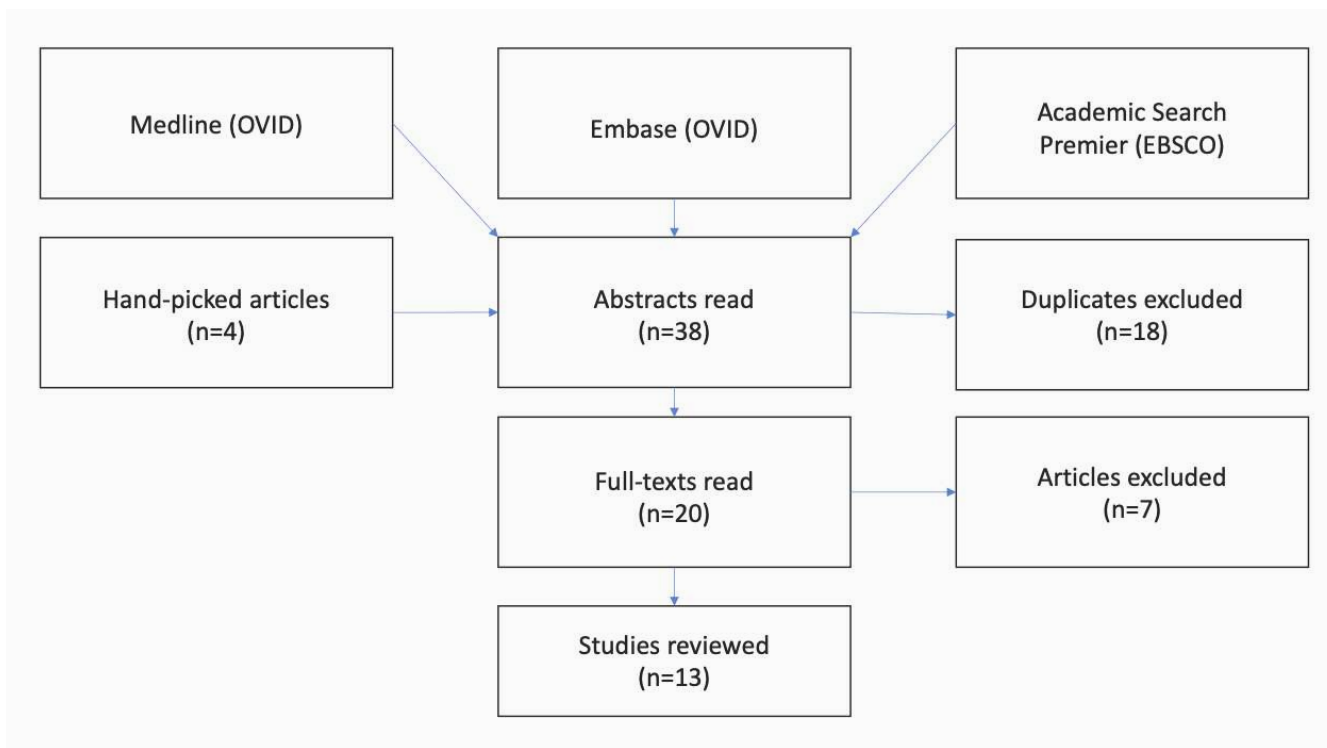
Figure 2 - Literature Review Workflow.

Methods

This project comprises a number of components including: 1) literature review, 2) scan of current alerting in British Columbia, 3) a question added to the harm reduction client survey and 4) interviews with peers and service providers across BC.

Literature Review

An independent literature scan was conducted to identify relevant publications or studies using databases, including from Medline (OVID, 1946-present), Embase (OVID, 1974-present), and Academic Search Premier (EBSCOhost, 1965- present). Literature scan search terms included the following key terms (alone and in combination): "drug*", "alert*", "overdose*", "warning*", "contamination", "adulteration", "overdose", "communication", "early warning system", "public reporting", and "smartphone application".

One reviewer identified a total of 38 relevant studies and abstracts from the three databases. Of these studies, 18 duplicates and seven irrelevant studies were excluded, resulting in 13 relevant materials that were agreed upon by two reviewers. Reasons for the exclusion of ineligible studies were determined by the proposed scope, as follows:

1. **Context:** Limited to studies of health policy systems that are similar to BC's, such as the UK, Netherlands, Australia, New Zealand, the U.S.A., and other jurisdictions within Canada .
2. **Context:** Studies conducted in BC are out of scope.
3. **Relevancy:** Limited to studies that contain information about communication of contaminated drug supply, and/or communication of overdose prevention methods.
4. **Relevancy:** Limited to the last 20 years (2001-2021).

The cross-jurisdictional scan consisted of a search of grey literature and online resources via Google, and was conducted by two researchers.

Initial search terms to identify jurisdictions with illicit drug alert systems included "communicating toxic drug alerts", "early warning system drugs", and "Illicit drug alert systems".

Scope parameters for inclusion and exclusion were determined at the outset of the research and in collaboration with the researchers and the research lead. These included:

1. Contextual parameters; for instance, inclusion of health policy systems that are similar to BC's, such as in the UK, Netherlands, the United States, Australia, New Zealand, and jurisdictions within Canada.
2. Jurisdictions with drug alert systems such as text alerts or app-based alerts. For this reason, jurisdictions with one-off alerts via news channels, social media, and/or reports on public health websites were excluded.
3. While drug checking often goes hand in hand with drug alert systems, the focus of this cross-jurisdictional review is specific to the communication of drug alerts to target audiences and mechanisms for the distribution of that information.

Environmental Scan of Current Alerting in BC Health Authorities

Harm reduction coordinators from each health authority provided input regarding how alerts are distributed throughout their region. Details included the target audience, how to sign up and receive alerts, where and how alerts are circulated, and types of alerts and templates used.

Harm Reduction Client Survey

The harm reduction client survey is an annual survey implemented across BC and administered at harm reduction supply distribution sites. The methods have been previously described (11,12). The survey collects demographic information about participants and in 2021 included specific questions about where and how people noticed drug alerts and their suggestions for improvement (see Appendix 1: Harm Reduction Client Survey – Drug Alert Communication Questions). The survey was piloted and received input from peers.

Interviews and Focus Group

Ethical approval was obtained for this study from the UBC Behavioural Research Ethics Board (H13-02876). Interviews included individuals specifically recruited for this study; however, questions regarding drug alerts were added to another BCCDC study which explored peoples' knowledge about the Good Samaritan Drug Overdose Act. All interviews were audio-recorded and transcribed verbatim. Remote interviews were conducted with 30 peers, and a focus group discussion was conducted with five health service providers from different regions in BC. Peers were recruited by posters distributed through various sites and organizations associated with substance use and harm reduction services, throughout BC (see Appendix 2: Recruitment Poster Example). Harm reduction service providers and drug checking technicians were recruited by email to participate in the focus group. The interviews and focus group were recorded and transcribed. Transcripts were analyzed using a thematic approach (13).

While anyone with a history of substance use (i.e., stimulants and/or opioids) was invited to participant in the interviews, special attention was paid to recruiting:

- Youth
- People that identify as a gay, bisexual, lesbian, transgender, queer, two spirit (GBLTQ2S)
- People that identify as South Asian
- And people working in the trades.

Community partners identified these populations of interest for reasons including high levels of substance use, and reduced likelihood of accessing substance use services due to unique barriers.

Findings

Literature Review

Academic literature related to best practices for communicating drug alerts is limited, with 14 academic articles that meet the inclusion criteria listed in our methodology and included in this paper. These limited peer-reviewed literature findings point to the emergent nature of this field, as well as the need for further research to effectively alert target populations to the presence of a toxic drug supply.

Of the 10 jurisdictions with drug alert/warning systems in place that met our inclusion criteria from the internet-based cross-jurisdictional review:

- Six have websites or smartphone applications on information about administering and acquiring naloxone.
- Six have websites or smartphone applications that show a list of drug-checking services available in the region.
- Four are linked to a drug surveillance campaign, and map or track toxic drug supply.

Best Practices for Communicating about Contaminated Drugs

While the literature on best practices for communicating drug alerts is limited, a study exploring perceptions of people who use drugs about fentanyl-adulterated and substituted "heroin" spoke to the need for strategies that go beyond public reports to ensure that communications efforts reach target audiences in a timely manner using drug checking/testing, real-time drug surveillance, and transparent public disclosure tools (2). Similarly, we see this approach being adopted in jurisdictions that include the Netherlands, Spain, the UK, the U.S. (Baltimore), and Canada (Toronto, Alberta, and Nova Scotia). For example, in the Netherlands, drug checking is embedded into a public health harm-reduction approach, and findings from drug checking are exchanged with stakeholders including law enforcement, forensic institutes, and emergency departments, and are communicated through a national warning campaign (14,15). The Netherlands' intersectional approach to drug checking, national drug surveillance, and alert systems provides many learning opportunities for improving harm reduction (15).

From the literature scan, three studies were identified that evaluated the development and implementation of a Rhode Island website that communicated overdose prevention information (8,16,17). In 2015, when half of all opioid-overdose deaths in Rhode Island involved fentanyl and fentanyl analogs, stakeholders created a strategic plan to reduce the number of overdose deaths; this included the development of a public, online dashboard to communicate timely overdose data, provide resources, and promote transparency within the jurisdiction (16). Prevent Overdose Rhode Island (preventoverdoseri.org), was launched after a year-long development process that focused on addressing the needs for a responsive design to emphasize accessibility and clear communication. The end result is an interactive, publicly available, data-focused website.

In delivering health information, plain language, figures and infographics, and local mapping were used to inform community-driven interventions (16) With the help of health communications experts, the team adopted guidelines for neutral, evidence-based messaging to avoid shocking or triggering graphics (e.g. pictures depicting individuals experiencing overdoses (16). In terms of data, the website has focused on five domains: overdose deaths, emergency department visits, substance-use treatment admissions, medication-assisted therapy, and naloxone distribution. Although the website does not specifically have data to support and communicate drug alerts, there are key takeaways in the presentation of overdose data that could be applied to an early-warning system that encapsulates alerting drug contamination. One limitation, however, is that the overdose data is only updated twice a year with a significant time lag (8), and does not have a system in place that could, in real-time, help alert audiences to a sudden appearance of a deadlier opioid. One study proposes that providing crime data quickly (e.g. within a week or month) could improve a similar early-warning system in Ohio and provide a real opportunity to have a more rapid response to riskier drugs.

Case Study: The Drug Monitoring and Information System (DIMS) in the Netherlands

In the Netherlands, the Drug Monitoring and Information System (DIMS) is the oldest drug-checking service in the world, dating back to the late 1980s. DIMS has two main aims: 1) monitoring the illicit drug market, especially for club drugs such as ecstasy and cocaine and 2) reducing harm for those who use these drugs (18). Drug alerts through the Red Alert program are then issued as soon as the drug-checking program finds "extra hazardous" drugs in circulation (18). Red Alerts are issued 1) When drugs with a serious health risk have been identified at one of the drug-checking facilities; 2) When the police or National Forensic Institute (NFI) find hazardous drugs; and 3) When local medical authorities report serious incidents with drugs (18). The Red Alert app has been available for smartphones since 2016. When a Red Alert is issued, app users immediately receive a warning. In addition, the alert is posted on the DIMS website, www.drugs-test.nl.

In 2008, a quantitative and qualitative evaluation of the DIMS Early Warning alert system was conducted (15). The evaluation engaged multiple stakeholders, including policy officials, field workers, and staff members of the central DIMS office, and looked to identify the most significant issues and the best approaches to address them. Some of the problems identified and rated by the actors in the DIMS network that could be applicable to the development of a B.C.-based warning system include, but are not limited to:

1. It was not [always] clear which drug scene was involved in testing and/or alerting (i.e. recreational, marginalized, and/or domestic scene).
2. No information was available on activities undertaken by other test offices in the DIMS network.
3. The provision of information on drug incidents took a long time.
4. It was not clear when a Red Alert came to an end.
5. Updates of information on the website lacked instructions on how to enquire drug users.
6. Information on symptoms due to the intake of contaminated substances [cocaine] was insufficient.
7. Information on potential risks of using substances (e.g., cocaine) in combination with other substances was deficient.
8. The information given out in flyers was not always perfectly clear, did not mention the length of time drug testing took, and was not appropriate for both the recreational and marginalized scenes.
9. Local media and press releases were not always in good communication with the DIMS network and thus gave out incorrect information.

Some recommendations from the evaluation include better internal communication between testing facilities and the central office, better means of communication with the press release team, and that any physical material (e.g., flyers) should be tailored to fit the scene for which the warning is intended. In addition, testing facilities should announce the ending of a toxic drug alert, if applicable (15).

Smartphone applications have been developed to address overdose prevention with various audiences in mind, including health care providers and the general public (19–21). For instance, the Be Safe app anonymously connects people who use drugs with community members when they are vulnerable to overdose (22). While these applications do not focus on communicating drug alerts, they bolster harm reduction efforts by focusing on different aspects of harm reduction, including overdose by contacting emergency services and assisting app users with naloxone administration (19,20). Lessons learned from the evaluation of these applications point to the importance of integration into community, functionality, and interactive design for app-based harm reduction strategies (20).

Benefits of Communicating about Toxic Drug Supply

In a Connecticut study of 105 individuals who were opioid dependents, polysubstance use was reported among nearly 85% of the study participants, and 70% of participants were concerned about fentanyl contamination in their drug supply (1). While 83% of participants reported witnessing an overdose, less than half (46%) of the participants had administered naloxone. However, 85% of study participants were willing to engage in harm reduction activities (1). What's more, the study found that the knowledge of contaminated drug supply had far reaching and significant impacts on drug use and harm reduction behaviours, with nearly a third of participants reporting that they would engage in harm reduction behaviour if they knew their drug supply was contaminated (1). More specifically, 37% of participants reported that they would not use fentanyl-contaminated drugs, and

40% of participants reported that they would use drugs more slowly if they knew that their supply was contaminated with fentanyl (1).

Furthermore, a qualitative study that evaluated Prevent Overdose Rhode Island and looked into how people who use drugs perceive, find, and use online health information in relation to overdose prevention found that most participants felt motivated to disseminate overdose prevention material in their personal networks, and that they value overdose prevention materials disseminated from varying sources, including social networking through street campaigning, social media, and television ads (for short, action-based overdose prevention information), as the most useful outreach strategies (17).

A drug warning issued in the Netherlands in 2014 is an illustrative, real-world example of the benefits of toxic drug alerts—in this case for a pink Superman pill containing 173 mg of the toxic substance paramethoxymethamphetamine (14). The alert warned consumers in the Netherlands of the risk posed, resulting in no adverse health incidents being reported in connection to this pill. In contrast, the use of the pill with the same characteristics by individuals in other countries, whom the warning campaign did not reach, led to several fatal and nonfatal incidents (14). Furthermore, according to a study researching the Trans European Drug Information (TEDI) project, if a dangerous substance is identified and localized via a warning campaign such as an alert, drug traders are more inclined to rapidly withdraw their products from the market (23).

Drug Alert Systems in Jurisdictions around the World

We examined 10 jurisdictions with drug alert systems that included website, email, SMS text, or app alerts (Table 1: Drug alert systems in various jurisdictions). Approaches to harm reduction that include drug-alerting systems vary from jurisdiction to jurisdiction for a variety of social, political, and economic reasons. For instance, drug alert systems in the Netherlands, the UK, and New Zealand are geared towards a demographic of partiers and ravers, and are aimed at monitoring the market of club drugs such as ecstasy, cocaine, and GHB. Further, such alerting systems are oftentimes deployed in tandem with drug-checking services. Drug checking enables drug users to know the content and purity of a substance and allow for rapid warning among target groups in the case that contaminated substances are found on the market.

Of the following alert systems, three are website-based, meaning that the alert/warning is posted on a website which is publicly accessible and updated regularly. Two are smartphone applications; four are email-based systems such as listservs; one is distributed via SMS text messages; and one through Twitter. It should be noted that two systems (New Zealand and Spain) provide alerts both via email and on their respective websites. Further, one of the included jurisdictions, the National Drug Early Warning System (NDEWS), does not actually have a public-facing alert system.

Table 1 - Drug Alert Systems in Various Jurisdictions.

Location	Audience	Background	Information offered by the drug alert system	How to sign up and receive drug alerts
Toronto (24–26)	Broad audience*	Toronto Public Health (TPH) works with people who use drugs, agencies who work with people who use drugs and others to share information about potentially toxic drugs in circulation locally that are causing reactions of concern. Initially, a toxic drug reporting system called Report Bad Drugs Toronto (ReportBadDrugsTO.ca) was piloted in Toronto, but due to more resources at Toronto's Drug Checking service, the alert system was moved over to the drug-checking site.	• Web-based drug alerts • Harm reduction information	WEB-BASED: Individuals can find toxic drug alerts listed on the Toronto Drug Checking website (supported by the Centre of Drug Policy Evaluation). The list can be found here: https://drugchecking.cdpe.org/alerts/

Table 1 - *Drug Alert Systems in Various Jurisdictions continued*

Location	Audience	Background	Information offered by the drug alert system	How to sign up and receive drug alerts
Alberta (27 -29)	Broad audience*	Alberta Drug Alert Email Listserv Information. The purpose of these listservs is to support key local stakeholders in notifying each other of novel or unusual levels of drug-related harms for a) awareness and b) to request additional data or assistance. This listserv is intended to be flexible to local needs, and to serve as an additional tool to connect local organizations. Initial invitation lists were developed based on conversations with harm reduction program staff in each zone. On March 23, 2021, Alberta announced it is testing a new overdose app called Digital Overdose Response System (DORS) in Calgary in summer 2021.	• Drug alerts via listserv email • Harm reduction information	EMAIL-BASED: Alberta has a listserv drug alert system. https://docs.fntn.ca/VC16705/Handouts/Alberta%20Drug%20Alert%20Listserv%20Information.pdf To subscribe to the lists, users simply click on the respective link. It will take users to a homepage and users will need to subscribe and create a password. After users have subscribed, the zone leads will approve the request and be able to see previous alerts that were sent out and send/receive drug alerts.
Nova Scotia (30–32)	Broad audience*	The new Drug Harms Alert was launched in November 2020, and notifications are sent through Nova Scotia Health's Twitter account and emailed to community partners like the Ally Centre of Cape Breton. When drug alerts are released, they are also often covered by local media.	• Social media drug alerts • Harm reduction information	WEB-BASED: Nova Scotia Health's Twitter account posts alerts: https://twitter.com/HealthNS?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor

Table 1 - *Drug Alert Systems in Various Jurisdictions continued*

Location	Audience	Background	Information offered by the drug alert system	How to sign up and receive drug alerts
Netherlands (18, 33, 34)	Broad audience*	The Drugs and Information Monitoring System (DIMS) in the Netherlands is commonly regarded as the world's best drug early-warning systems. In 1992, the Dutch Minister of Health decided to fund the first drug-checking system in Europe. It is a nationwide system of 31 stationary testing facilities where people can anonymously bring their drug sample to be tested. This allows DIMS to monitor the Dutch illicit-drug market and take action when there is a major public health risk. DIMS also feeds into the European early-warning system, which allows authorities to track market trends across the continent. The test sample is matched against a database of over 70,000 substances to identify both psychoactive drugs and toxic contaminants.	• App-based drug alerts • Harm reduction information	APP-BASED: DIMS issues "Red Alerts" to the nation about high-risk drug supplies—something that's now done, among other means, through an app which sends push messages to people's phones. The Red Alerts app can be downloaded here: https://apps.apple.com/tt/app/red-alert/id1146850137
UK Trip App (35,36)	Broad audience*	TripApp is a mobile application designed by three non-governmental, non-profit organizations to reduce the harms associated with the use of psychoactive substances Based on location, a person can search for drug-checking services, sexual health services, drug consumption rooms, opioid substitution therapy, safer party projects, and needle and syringe exchange.	• App-based drug alerts • Harm reduction information	APP-BASED: To subscribe to this information, users download the app from the iOS Apple Store or Google Play: http://tripapp.org/ and enter their location (but no other personal information).

Table 1 - *Drug Alert Systems in Various Jurisdictions continued*

Location	Audience	Background	Information offered by the drug alert system	How to sign up and receive drug alerts
United States (37,38)	Broad audience*	The National Drug Early Warning System (NDEWS) aims to provide the field with the most timely, salient, and valuable information on emerging substance use trends. This includes drug surveillance content as well as links to a party- and festival-oriented drug-checking service, called DanceSafe.	• Harm reduction information	https://ndews.org/
Bad Batch Baltimore text alert system (39,40)	Broad audience*	Bad Batch Alert is an anonymous free text-messaging service aimed at helping those struggling with heroin addiction to stay alive in Baltimore City. Those who register with the service will receive text alerts when a lethal batch of tainted heroin may be in their neighborhood. With this knowledge, dosages can be modified and loved ones can be warned. The service is driven by data from EMS, that is analyzed for OD spikes by an epidemiologist from Behavioral Health Systems Baltimore. When a spike is detected, a text alert is sent to all the users registered in that area. The service also has a built in suite of commands aimed at providing support and recovery tools. Examples of these are quick access to the 24-hour crisis line, real-time notification of the needle exchange van's current location, and access to the Naloxone training schedule.	• SMS text-based drug alerts • Harm reduction information	TEXT-BASED: SMS text-based: Users text "Join" to (952) 222-5378 and are automatically added to the notification pool, and alerted when applicable.

Table 1 - *Drug Alert Systems in Various Jurisdictions continued*

Location	Audience	Background	Information offered by the drug alert system	How to sign up and receive drug alerts
New Zealand High Alert (41)	Broad audience*	Drug Information and Alerts Aotearoa New Zealand (DIANZ) is supported by a network of health professionals and social services (both government and non-governmental organizations), including the New Zealand Drug Foundation, KnowYourStuffNZ, St John New Zealand, and Wellington Free Ambulance. DIANZ is a function of the National Drug Intelligence Bureau (NDIB), which is a joint agency made up of representatives from the New Zealand Customs Service, New Zealand Ministry of Health, and New Zealand Police.	• Email- and web-based drug alerts • Harm reduction information	EMAIL- and WEB-BASED: Alerts are posted on the website, but people can sign up via email to receive an alert via https://highalert.org.nz/alerts-and-notifications/
Pan Canadian (42)	Broad audience*	The Canadian Community Epidemiology Network on Drug Use (CCENDU) is a nation-wide network of community partners that informs Canadians about emerging drug use trends and associated issues. By coordinating community partners and assembling the information they report, CCSA helps CCENDU by communicating topics of immediate concern and by informing communities on lessons learned in response to local drug issues. CCENDU produces alerts and bulletins on drug use trends or topics of immediate concern using information ranging from scientific literature to observations from people who use drugs and those directly working with people who use drugs (e.g., law enforcement, harm reduction program staff).	• Email-based drug alerts • Harm reduction information	EMAIL-BASED: Subscription based alerts via email: https://www.ccsa.ca/news-services-subscription

Table continued on next page ...

Table 1 - *Drug Alert Systems in Various Jurisdictions continued*

Location	Audience	Background	Information offered by the drug alert system	How to sign up and receive drug alerts
Spain: Energy Control (43)	Broad audience*	Linked with the Spanish Early Warning System (SEAT), this organization provides a variety of overdose prevention and harm reduction services, such as drug checking, educational programs, drug alerts, and more.	• Email- and web-based drug alerts • Harm reduction information	WEB-BASED: Visit alerts page on website and/or sign up for newsletters via https://energycontrol.org /alertas/

*Intended for a broad audience, including, but not limited to, persons who use drugs (PWUD)/peer, lay personnel, the general public, health care professionals, and first responders.

Drug Alerting in BC's Health Authorities

Drug alerts and overdose alerts are differentiated on the basis of their data source. Drug alerts are issued as a result of identification of unusual substances or combinations of substances which are detected by drug checking services at supervised consumption sites and overdose prevention services. Overdose alerts are based on surveillance data (e.g., increasing emergency service calls, ED visits, etc.), or when unexpected or unusual presentations are observed. All alerts released by BC health authorities are posted on the Toward the Heart website and available at https://towardtheheart.com/for-pwus.

Alert distribution methods vary between health authorities. Most use social media such as Facebook and Twitter. Vancouver Coastal Health has a text alerting system which individuals and providers can sign up to receive. The Real-time Drug Alert and Response system (RADAR) receives alerts from individual members (through a brief survey tool or by texting 'bad dope') and from drug checking in the region. RADAR pushes out alerts to its registered members. Fraser Health has an e-mail alerting system to which individuals who use drugs and providers sign up to receive alerts. In Interior Health alerts are sent to various providers who then forward to front line members. This information is collated into a one-page document (see Appendix 3: Drug Alerting in BC's Health Authorities).

Over the past six months most alerts from health authorities have been regarding benzodiazepines or etizolam in 'down'. The alerts highlight increased risks of overdose, the need to administer naloxone and that a person may remain sedated after breathing is restored. In response, various resources have been developed collaboratively, which are referred to in the alerts and are available online (44,45).

Harm Reduction Client Survey

COVID-19 has created challenges due to conflicting demands and priorities at participating harm reduction supply distribution sites and the need to ensure COVID-19 research protocols are in place and approved. The survey is currently in the field, but results are not yet available. This report will be updated when results are available.

Interviews and Focus Group

Interviews included individuals specifically recruited for this study; however, questions regarding drug alerts were added to another BCCDC study which explored peoples' knowledge about the Good Samaritan Drug Overdose Act.

A total of 30 peers were interviewed. the demographic characteristics of the participants are shown in table 2. The majority (13) identified as female, and male (12), while four peers respectively identified as two-spirit, gender fluid, intersex, and trans man. The gender of one participant was unknown. Individuals specifically recruited for this study (n = 7) were also asked about their sexual orientation. Three peers identified as gay, two identified as straight, one identified as queer, and one identified as straight/lesbian. Roughly a third of peers (11) identified as Indigenous. Approximately a third of peers (9) were youth (aged 15-24) of which three were under 20 years of age and one youth did not report their age. In terms of substance use, 21 peers reported their previous or current use. While a majority reported using either stimulants (7) or opioids (6), slightly more than a third (8) reported using both stimulants and opioids.

Table 2 - Interview Participant Characteristics

Participant Characteristics Total n=30*	Count
GENDER	
Female	13
Male	12
Gender Fluid	1
Two-Spirit	1
Intersex	1
Trans Man	1
Unknown	1
SEXUAL ORIENTATION**	
Gay	3
Straight	2
Queer	1
Straight/lesbian	1
AGE	
15-19	3
20-24	5
25+	21
HEALTH REGION	
Fraser	4
Interior	2
Island	9
Northern	2
Vancouver Coastal	12
PREVIOUS/CURRENT SUBSTANCE USE***	
Opioid	6
Stimulant	7
Polysubstance use	8

*Demographic information missing for one participant
**Only includes the CDA participants (n=7)
***Note that only 21 reported use

Slightly less than half of peers (13) lived in Vancouver Coastal Health, roughly a third (9) lived in Island Health, while the remainder lived in Fraser Health (4), Interior Health (2), and Northern Health (2). Harm reduction service providers and drug checking technicians represented the Fraser Health, Interior Health, Island Health, Northern Health, and Vancouver Coastal Health regions.

The findings from the interviews and focus group are summarised under the themes "Drug Alerts – Usefulness and Outcomes," "Sourcing Information," "Modes of Communication," and "Drug Using Experience." A summary of research findings can be found in Appendix 4: Communicating Drug Alert Recommendations.

Drug Alerts- Usefulness and Outcomes

Peers generally agreed that drug and overdose alerts provide useful information; service providers reported hearing similar feedback from their clients. Further, there was consensus for the continued need for alerting throughout BC.

> "I did find those signs useful because they, you know, make you think about what you're getting, use a little bit. So, they might have saved my life actually in thinking about that, right."
> CDA008

> "Being an addict it's nice to know that, like, what-- if a strain is bad or something, like, just sometimes they identify what type of product is causing the overdoses. So, it's good to know that, so that way it can signify which one-- which type of dope to not purchase."
> GSDOA Youth Van 01

However, the impact of drug alerts on drug of choice and drug use behaviours varied. Several peers reported using drug checking services, starting with smaller doses, using differently (e.g., smoking instead of injecting), using the Lifeguard App[1], and avoiding particular drugs. Others observed similar behaviours amongst peers in their social networks. Conversely, some peers and service providers highlighted that alerts may signal particular substances are highly potent, encouraging some individuals to actively seek these drugs out.

> "Some people look at the warning and they think oh, that's awesome. I want to go try that stuff because obviously it's really good. But then some people are, like, well, it's benzo-heavy, I'm not into that. And I don't want to go down... So it's, yeah, it's definitely a lot different, the reaction from the drug alert for sure."
> GSDOA Adult Vic 03

Additionally, the type of adulterant/contaminant identified in the alert influenced using behaviours:

> "One of the things that they said is that generally speaking, and again, we're talking in generalities, is a lot of people don't want benzos in their substance. So, if there's a benzo alert, they will take that information into consideration and do their best to get their drugs checked or, you know, possibly avoid that substance or, you know, use extra harm reduction measures, et cetera, et cetera."
> FG Participant

Drug alerts also influenced the drug supply. One service provider remarked receiving accounts of people dyeing a substance to appear different than a recently reported drug. However, the opposite also held true:

> "We have anecdotal reports of people who've produced drugs changing the colour to fit rumours about a certain drug. Like, the purple's really strong this week; the next week we see a lot of purple. Or there's an alert gone out about high potency of yellow substances. Everything the next week is yellow."
> FG Participant

Sourcing Information

Word of mouth was the most cited method for finding out about toxic drugs. Dealers were often said to be reliable sources of unadulterated drugs and information on purity and potency. Trust developed from extended buyer-seller relationships, endorsements from other peers, and knowledge that the dealers used, and in some cases tested, their supply.

> "Most people if they buy drugs, they have a special source they get them from. Like, it's just really reliable... And they [the dealers] do it themselves and they're like a connoisseur of doing it. They make sure they're able to get what they would want for themselves."
> CDA002

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1. The Lifeguard App connects people who use drugs with emergency services to reduce the risk of accidental overdose. Prior to consuming a substance, the individual activates a one-minute countdown. If they are unable to stop the timer before it expires, the app contacts emergency responders with details including the individual's location, the substance used, and time.

> "I'm honestly not too concerned. I've been buying off the same guy-- I've three guys, and one of them I've been buying off for five years, the other one six years and the other one three years. I have probably a steady and safe supply of whatever I get because all their stuff is tested under a mass spectrometer and everything."
>
> GSDOA Youth Van 01

> "There's three sources I get it from. Two of them have jobs, and one does this full time. And they're very cautious. So, it's like, we communicate, you know, that's the point."
>
> CDA001

Modes of Communication

Many peers favoured word of mouth because it created a sense of ownership, caring and community, and helped personalize and humanize information through story. Opportunities for dialogue also allowed people to seek out further information.

> "I kind of take notice of them just-- mostly for the sake of knowledge base and for, you know, to hearsay if I feel like it's important to pass on to somebody else as a knowledge base. Because I do my best to keep in mind that things are always somewhat subjectively, potentially dangerous like any things-- any number of things. But especially things like that. So, for my sake and for the benefit of other people, just have an awareness of my surroundings and to keep other people informed when I can."
>
> CDA006

> "Yeah, word of mouth is huge out here. That's what I've noticed a lot. People pay attention to what's going on and if they hear it or they see it or somebody they know is telling them that, you know, there's a toxic supply out there, they're usually very cautious."
>
> GSDOA Adult Van 01

Word of mouth

Moreover, word of mouth reached people that may not engage with services, those that have limited access to technology, and those that may not be able to read. It also lent credibility to drug and overdose alerts in the community. Service providers remarked how word of mouth helped contextualize trends in surveillance data: following an overdose alert issued in North Surrey, a peer was able to identify the source of the substance responsible for the overdoses. However, information spread by word of mouth can be easily disrupted. The most notable example was the impact of COVID-19. When asked about their awareness of drug alerts in the community, one peer noted:

> "Yeah, somewhat I am [aware]. But I'm not really in touch with a lot of the people as I used to be. Due to the virus, the COVID-19. That has everything to do with that. Just kind of a setback."
>
> CDA001

Others similarly noted that stay-at-home and physical distancing measures, alongside decreased availability of services, have led to increasing isolation. BC's expansive geography was also mentioned as a barrier to word of mouth:

> "With the big geography [of Northern BC], word of mouth only goes so far when the towns are small and spread apart and people aren't talking that much. And there's big gaps even in our peer groups so-- yeah."
>   FG Participant

Additionally, word of mouth may be delayed, and risks being altered over time. One peer remarked they do not know what is and is not made up, while another noted, "I'll send something out in the morning, and by the time I get it at night it's a whole different thing" (GSDOA PWLE Int1 Van3). Thus, it was considered important to have other sources of information, such as posters, to lend credibility to word of mouth.

Posters

Multiple peers reported encountering posters in their communities, including their social housing, on telephone poles, at service sites, and on community bulletin boards. This is not unexpected given current alerting efforts which focus on using posters. Poster alerts were seen as a valuable source of information as they are easily accessible, especially for those with limited access to technology.

> "There's a lot of people that strive to see those posters every day and see what's newest of the new, right, because they want to protect themselves so-- yeah. Definitely huge impact."
>   GSDOA Adult Vic 03

> "You know what, if I seen a couple of posters downtown and if I was going to score downtown, I probably would have smoked it, not slammed it. That's for sure. Yeah."
>   CDA008

Despite this, posters were also heavily critiqued. They were often reported to contain conflicting information, signally how prolific poster alert efforts have been and also how labour intensive and difficult it is to keep them up to date. Others noted that despite their visibility, the quality of the posters was sometimes wanting:

> "They're often photocopied, and they can be poorly photocopied and they're just paper and sometimes people-- graffiti on them and they're not legible. Or they're not the same message."
>   CDA006

The boundedness of posters was also seen as a limitation. Posters were often encountered in drug using spaces, and at service sites, but less so in the wider community.

As a result, "they absolutely miss a big majority of people" (GSDOA PWLE Int3 Vic). Additionally, peers would need to actively seek out these posters, which is not a privilege that many have:

> "No, it's-- you know, the lifestyle that the people have to lead to live, to survive. They just don't have time or the patience, right. It's an all-day-- trying to get money for drugs and, you know. And, yeah, they just don't have access to the luxury of being able to do something like that."
> GSDOA Adult Van 05

Social media

Social media was identified as a preferred method for communicating drug alerts especially amongst younger peers. It has the potential to reach a broader audience, including people who hide their drug use and people that do not use drugs, and information is easy to keep current.

> "Social media is huge now. It's like, I think that that is actually, like, at this moment in time Instagram, Facebook, TikTok, these are kind of the-- where people are-- where they are these days. So, I think any kind of exposure on those platforms would be the best way to infiltrate a large amount of people."
> CDA004

> "Yeah, social media would be huge I think, especially for the younger population. Yeah, I think social media is a big thing, like Facebook, Instagram, blah, blah, blah, whatever, some other ones they're at that are popular. Those platforms are I think-- I think they're huge these days, right. I mean, that's how everybody communicates nowadays."
> GSDOA Adult Vic 04

Some peers did voice privacy concerns in relation to using social media. For example, following and engaging with drug-related social media accounts could compromise anonymity. Relatively few older peers recommended the use of social media or otherwise specified its use for engaging younger peers, likely signally discomfort or a lack of knowledge about using social media. Additionally, social media is limited to those with access technology (e.g., cell phones, internet).

Other forms of electronic communication, such as text messaging and emails, shared similar strengths and limitations to social media. While they were considered far-reaching – overcoming the spatial boundedness of word of mouth and poster alerts – peers noted that electronic communication was similarly limited to those with access to technology:

> "I mean, there's a lot of people down here that have telephones. But they might not have Internet access. They might have here and there wi-fi access. But it's not necessarily what they're looking at though."
> GSDOA Adult Van 03

Privacy concerns were also apparent with electronic communication:

> "That [text alerts] doesn't necessarily sound like a bad idea except that that has to be something that, you know, obviously that people are acceptable with. And that could be something that could curtail privacy to some degree. But it depends on how much exposure people have to the public or what type of work they do or, you know, if they do work or, you know, what their surroundings are like. What their social connections are like too. And what their level of comfortability is. I guess that kind of comes into play. I wouldn't necessarily want to receive a text like that maybe in some situations... I mean, when you receive a text it-- you have a heading or something, right."
> CDA006

Traditional media

Traditional media, including television, radio, and newspapers, were often cited because they can reach a diverse audience including peers who use openly, peers who hide their drug use, and people who do not use. Additionally, there were no privacy concerns voiced with using traditional media, likely because the information is targeted at the general population and does not need to be actively sought out in the same manner as does social media, and other electronic communication. Interestingly, traditional media sources were most often recommended by older peers.

When asked if social media and text messaging should be used for alerts, on older peer remarked:

> "Not so much, really. I suppose they could put it on the news. People love to talk about what they've seen on the news so-- I suppose it couldn't hurt."
> GSDOA Adult Van 06

That few younger peers suggested traditional media potentially signals that it was less likely to reach younger generations. Additionally, it was less likely to reach those who are precariously housed/homeless.

Drug Using Experience

The frequency and duration of a peer's drug using experience appeared to influence the reception of drug alert information. Notably, some peers perceived alerting information such as safer use strategies (e.g., not using alone) to be helpful, while others considered it commonsensical and patronizing. As one peer remarked, "maybe it's a little kind of a joke that people are thinking, well, people that use [drugs] are a little bit daft in the first place" (CDA006). Another peer mentioned they do not look for information on adulterated drugs because they are not worried about it. Indeed, peers with more extensive experience using substances reported finding the alert information less valuable for themselves, likely indicating they have a trusted supply. They may also be less worried due to their tolerance levels. Despite this they reported passing on drug alert information to people who may benefit from it, reflecting concern for peers with less experience:

> "… that's my biggest concern too is that the young people, right, that they did a line or got messed up with fent. So easy for them to die."
> CDA008

> "I guess the person might-- may be new to drugs and new-- just don't know what they're doing."
> CDA002

This appears to signal that peers with less experience using substances may find drug alerts more helpful, and are more likely to change their drug using behaviours. Conversely, peers with greater experience using drugs seem more likely to regard alerts as redundant, and may actively seek out drugs identified in alerts.

Recommendations

- Findings demonstrate that multiple modes of communication should be employed to target different peer demographics.
- A lack of South Asian peers indicates that alerts need to be provided in multiple languages, to reach those that may not be comfortable with or have difficulties understanding English.
- Peers suggested the use of bold fonts and graphics to grab attention, and to help convey information. Additionally, graphics can improve access for those that may be unable to read.
- Alt text should be used to make alerts more accessible for blind and visually impaired peers.
- Peers wanted to be involved in creating alert messaging and have opportunities to provide feedback on alerts.
- Abstinence language and words such as "bad," which confers judgment, should be avoided. Words such as "strong," "potent," "overdose," and "bad" can also signal potency and may encourage some to seek these drugs out.
- Peers suggested highlighting the ill effects of adulterated drugs by using phrases such as "withdrawal" and "dope sick," because the fear of withdrawal outweighs the fear of overdosing, especially for people with extensive experience using substances.
- Peers remarked that alerts should incorporate calls to action and provide information on relevant and available services in the surrounding are. Additionally, alerts should make sure to include notable landmarks and/or directions because "some people don't have cell phones or GPS-- they don't have Google Maps" (CDA006).
- Peers advocated for assertive alerting through outreach and education. Others suggested that.

- Alerts should be posted in highly visible, well-trafficked areas. Additionally, alerts should be made visible in "unexpected places," such as fast-food restaurants or grocery stores, to reach people who hide their drug use and to reach people who do not use. Increased visibility may help destigmatize substance use.
- Technology should be leveraged to create push notifications, similar to extreme weather alerts, or apps similar to the COVID-19 app, to map alerts.
- Alert messaging be distinct, and display consistent information, and use clear and straightforward language.
- Generational differences in media consumption, and frequency and duration of substance use need to be taken into account when creating drug alert messaging.

Limitations

Initially, individuals who use drugs and identify as Indigenous, GBLTQ2S, and South-Asian, as well as those who work in trades and/or in rural/remote communities were identified as populations of focus. However, due to gaps in relevant literature, none of the reviewed articles support any specific research on these targeted populations.

Overall, recruitment was lower and more challenging than anticipated. This was likely influenced by COVID-19 which necessitated the use of passive recruitment methods (i.e., posters) and remote data collection. Seven additional interviews were scheduled; however, these participants were lost to follow up.

Ethical approval to include translators to assist with interviews did not arrive in time; thus, despite targeted efforts no peers who identify as South Asian were recruited.

Conclusion

This literature and cross-jurisdictional review was aimed at capturing the current landscape of drug-alerting systems from jurisdiction to jurisdiction, and at compiling information to identify best practices in early-warning systems. Ultimately, the findings suggest that toxic drug alert systems vary, but that almost all systems are internet-based (i.e. websites, smartphone apps, and email lists). The scan of jurisdictions with health systems similar to that of B.C.'s showed that smartphone apps are becoming more frequently implemented as a means of opioid overdose prevention strategies. However, more studies are needed to determine the effectiveness and reach of this communication method.

Similarly, a large literature gap also exists in terms of general best practices for communicating toxic drug alerts to specific populations, and more research is needed to determine the effectiveness and impact of this harm reduction strategy across varying communities of people who use drugs.

The majority of identified drug alert systems provided information on substances like MDMA, ecstasy, cocaine, etc., which are common in the recreational (e.g., parties, raves, and music festivals) scene. Given that this context significantly differs from the context of the B.C. opioid crisis, a drug alert system for B.C. will need to consider context-specific factors such as distribution

efforts and accessibility within rural and remote contexts; best practices for getting messaging to target populations (i.e., trades people, LGBTQ2 individuals, B.C.'s South Asian population, and B.C.'s Indigenous population); and other factors including mental illness, housing insecurity, and stigma.

Communicating drug alerts is a complex undertaking, and the reception of information is influenced by a variety of factors. The project was successful in better understanding perspectives on drug alerts, especially as they are now more established in the community. The project also demonstrated COVID-19 has negatively impacted drug alert communication in BC, given the importance of word of mouth in spreading information about adulterated drugs. No recruitment of people who identify as South Asian signals that research and alerting efforts need to take into greater consideration non-English speakers through use of translated materials and interpreters. While some people working in the construction industry were reached, underrepresentation highlights that further efforts are needed here also; however, recent announcements are encouraging (46). Recruitment issues point to a need for more assertive recruitment efforts, engagement with peer researchers, and different data collection methods (e.g., fieldwork), which will be more feasible as COVID vaccines are more available. Additionally, research into methods to successfully engage with difficult to reach populations within the context of limitations such as those necessitated by COVID-19 (i.e., physical distancing, self-isolation, remote data collection, passive recruitment) is needed. That substance use experience appears to influence the perception and impact of drug alerts is important to consider and warrants further investigation.

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Appendix

Appendix 1: Harm Reduction Client Survey – Drug Alert Communication Questions

2020 Harm Reduction Client Survey

To participate in this survey, you must have used an illegal drug within the last 6 months.

1. What is your current gender identity? (Select one)

☐ Woman ☐ Man ☐ Trans man ☐ Trans woman ☐ Two-Spirit
☐ Gender non-conforming ☐ Other, specify: _____ ☐ Prefer not to say

2. How old are you? _____(years) ☐ Prefer not to say

3. Do you identify as any of the following? (Select one)

☐ First Nations ☐ Métis ☐ Inuit ☐ No, I don't identify as any of these ☐ Prefer not to say

6. Which best describes your sexual orientation? (Select one)

☐ Gay ☐ Lesbian ☐ Straight ☐ Bisexual ☐ Queer ☐ Two-Spirit
☐ Other, specify _____ ☐ Prefer not to say

7. Which of the following options best describes where you currently live? (Select one)

☐ In a private residence, alone ☐ In a private residence, with someone else
☐ In another residence (hotels/motels, rooming houses, single room occupancy (SRO), social/supportive housing)
☐ In a shelter ☐ I have no regular place to stay (homeless, couch surf, no fixed address)
☐ Other, specify _____ ☐ Prefer not to say

8. Are you currently employed? (Select all that apply)

☐ Yes, paid volunteer ☐ Yes, part -time ☐ Yes, full-time ☐ No ☐ Prefer not to say

11. Do you have a cellphone? (Select one)

☐ Yes ☐ No ☐ Prefer not to say

---

24. Have you recently seen or heard an alert about recent drug overdoses, toxic drugs found e.g. from drug checking/testing, and other possible issues with street drugs? (Select one)

☐ Yes ☐ No *(skip to 25)* ☐ Prefer not to say *(skip to 25)*

Where did you notice these alerts? (Select all that apply)

☐ At harm reduction site/observed consumption site/community organization ☐ At healthcare provider
☐ On social media such as Facebook/Twitter ☐ Received an email/text ☐ On the news/media
☐ Heard about it from a friend/peer network ☐ Posters on the street
☐ Other, specify: _____ ☐ Prefer not to say

Other than those listed above, where/how else do you think alerts should be posted/made available?

Specify: _____

Do you find these alerts useful? (Select one)

☐ Yes. If so, why/how? _____
☐ No. If so, why not? _____ ☐ Prefer not to say

Do you take any steps to be safer (get drugs checked/tested, use overdose prevention sites, use with a buddy, etc.) when you see an alert about drugs you may use? (Select all that apply)

☐ Yes, I take precautions ☐ No, it doesn't change anything
☐ Other, specify _____ ☐ Prefer not to say

Is there anything you can suggest to improve alerts?

Specify: _____

Appendix 2: Recruitment Poster Example

Research Participants Needed

If you:

☑ Are 16 years of age or older

☑ Identify as GBLTQ2S

☑ Use illicit drugs

☑ Speak, read and understand English

Then we would like to interview you!

Currently, alerts are issued within the community to warn about contaminated drugs and inconsistent drug potency. We would like to interview you and learn how to improve these alerts and make them more relevant and accessible to the GBLTQ2S community. Interviews will be tape recorded for accuracy, and last approximately 30 to 45 minutes. To protect your health interviews will be conducted over the phone. You will receive a $20 honorarium for participating.

Participation is voluntary and your involvement will be kept confidential.

If you're interested in participating or want to learn more, please contact Jackson Loyal at jackson.loyal@bccdc.ca or 438.928.2788. You can also visit **towardtheheart.com**.

1 Sign up to participate

2 Schedule your interview

3 Participate in your interview

4 Receive $20 honorarium

H13-02876
Version 1: 14 Dec 2020

THE UNIVERSITY OF BRITISH COLUMBIA

BC Centre for Disease Control
Provincial Health Services Authority

Appendix 3: Drug Alerting in BC's Health Authorities

	Audience[1]	How to sign-up & receive	Where/how alerts are circulated	Alerting type & use of template
Northern Health (NH)	Intended for all	• Email Nursing Lead for NH Harm Reduction (e-mail@northernhealth.ca) to get on distribution list • Alerts go out internally via several methods to all staff and staff working with PWUD[1] • Individuals or groups who want to be informed are directed to one of the alert pathways where they are posted and circulated	• Harm reduction sites (both in NH and alerts from regions outside of NH) • Overdose prevention sites (both NH and non-NH) • Peer group/harm reduction sites • Northern Health Overdose Prevention page • NH media centre • NH social media (Facebook, Facebook community groups, Twitter)	• No formal template used – information provided as informed by the Medical Health Officer and based on information from local teams, partners, and peers
Interior Health (IH)	Intended for organizations, groups, and professionals at management & service level[2]	• Harm reduction coordinators of new departments or programs reach out to IH harm reduction team (e-mail@interiorhealth.ca) to be added to the distribution list • Alerts are emailed via the distribution list and they are then forwarded to the front line	• Interior Health webpage - Alerts & Reports • IH social media (Facebook, Twitter) • Toward the Heart • Picked up/sent to media	Two types of alerts: • **Drug checking alert** (based on testing) • **Overdose alert** (based on surveillance) *Each alert has an email and poster template. Additional alert: • **Advisory email** - keeps partners informed about drug checking findings that may be old, or where risk is unknown. *Template is also used here.*
Island Health (IsH)	Intended for all	• Organizations and health care professionals contact the regional harm reduction coordinators (e-mail@viha.ca or other Island Health staff to be included in the email distribution list • Individuals who want to be informed are directed by their health care professional to one of the alert pathways where they are posted and circulated	• Email distribution list (accompanying JPEG file poster for public posting) • Island Health Social Media (Facebook, Twitter) and Toward the Heart	• Template used for email distribution *Note: Currently working with the First Nations Health Authority and other First Nations & Indigenous partners to development a template that is oriented towards engaging First Nations & Indigenous peoples*
Vancouver Coastal Health (VCH)	Intended for all	• Organizations and peers email Overdose Emergency Response Team Project Coordinator (e-mail@vch.ca) to be included on the distribution list. • Utilizes Real-time Drug Alert & Response System (RADAR). Individuals text 'alert' to 236-999-DOPE (3673)	• Text (RADAR) • Email distribution list • Posters • Toward the Heart	Use of overdose reporting tools for public: • Via redcap survey • Via RADAR, text 'bad dope' to 236-999-DOPE (3673) • HA/organization level alerting: • E-mail distribution list (posters attached)
Fraser Health (FH)	Intended for all	• Connect with Harm Reduction Coordinators (e-mail@fraserhealth.ca to be added to distribution list (MailChimp) • Individuals can sign up to receive emails for Fraser Health overdose alerts using their online form	Tiered alert process: • **Community specific alerts:** sent to Harm Reduction Coordinator community contacts, inclusive of drug user groups, people who use drugs, HA contacts, first responders and community partners[3] • **Regional alerts:** sent via e-mail directly to harm reduction sites with poster for public	*A template is used and information is curated dependant on audience:* • **Service providers/organizations:** message may include encouraging distributing naloxone, having conversations, checking high risk areas more frequently, etc. • **Emergency responders:** dependant on the Intel and nature of alert, for example, information may include transport and naloxone administration • **PWUDs:** harm reduction messages apply depending on nature of alert and Intel

1. Drug alerts from most health authorities are aimed for a broad audience, not limited to: person who uses drugs (PWUD)/Peer, lay personnel, general public, health care professionals, first responders, and Community Action Tables.
2. Organizations and groups that receive drug alerts from Interior Health include, but are not limited to: internal leadership & managers of Mental Health & Substance Use, Aboriginal Health, British Columbia Centre on Substance Use, Royal Canadian Mounted Police, Peer coordinators, Community Action Teams, and First Nation Health Authority leads. Primary Care.
3. Fraser Health noted that they are finding community specific alerts are usually more helpful and meaningful – more information is provided to inform these alerts.

Appendix 4: Communicating Drug Alert Recommendations - Page One

COMMUNICATING DRUG ALERTS

The illicit drug supply in British Columbia (BC) has become increasingly toxic since 2013 due to fentanyl adulteration. In response, drug and overdose alerts are issued when adulterated drugs are identified and/or drugs are causing unexpected overdose responses within particular regions in BC.

The need for effective drug alert communication is even more apparent within the context of COVID-19.

Deaths due to Illicit Drugs

2,000

1,724

1,000

985

0

2019   2020
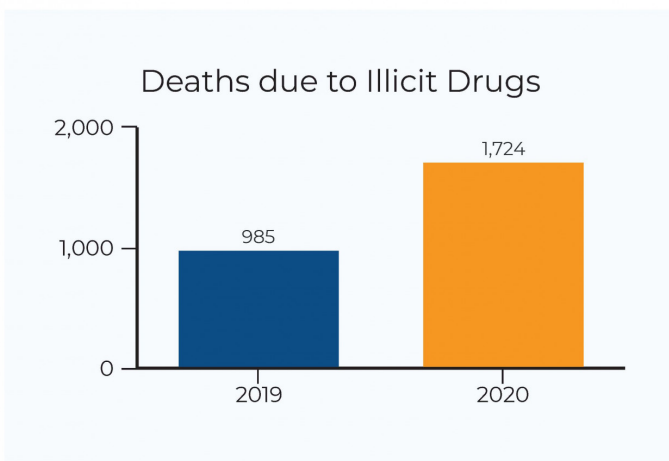
From 2019 to 2020 there was a **75% increase in deaths** due to illicit drug use.

- Services for people who use drugs (peers) are less available.
- Peers are using drugs alone more frequently due to physical distancing orders and concerns about COVID-19 infection.
- Illegal drugs are increasingly unpredictable and toxic due to border closures.

The following outlines recommendations from an analysis of interviews with 30 peers, and a focus group with five health service providers, building on previous research on drug alert communication in BC.

PREFERRED MODES OF COMMUNICATION

Peer Social Networks
Important sources and means of spreading information relating to adulterated drugs.

Dealers
Extended buyer-seller relationships engender trust, and dealers are considered reliable sources of unadultered drugs and information on potency.

Poster Alerts
Contains useful information. Peers reported altering drug use behaviours after seeing posters (e.g., smoking instead of injecting).

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Appendix 4: Communicating Drug Alert Recommendations - Page Two

COMMUNICATING DRUG ALERTS

PREFERRED MODES OF COMMUNICATION

	Strengths	Limitations
WORD OF MOUTH	• Reaches people that may not engage with services, have limited access to technology (e.g. cell phones, computers, internet), or may not be able to read. • Cultivates a sense of ownership, caring and community; allows peers to personalize information (e.g., through story) to convey risk. • Contextualizes trends in the data (e.g., spikes in emergency service calls).	• Communication breaks down, especially in rural and remote communities. • Information may be delayed and altered as it spreads. • Can be easily disrupted (e.g., COVID-19).
SOCIAL MEDIA	• Identified as a preferred method amongst younger peers. • Potential to reach broader audience, including people who hide their drug use. • Easy to keep information current.	• May compromise anonymity. • Older generations may be less comfortable using social media. • Limited to those with access to technology.
TRADITIONAL MEDIA	• Targets a broad audience, including both peers and people who do not use drugs.	• Less likely to reach younger generations. • Less likely to reach those who are precariously housed/homeless.
ELECTRONIC COMMUNICATION	• Several peers suggested push notifications similar to emergency alerts (e.g., extreme weather warnings).	• Limited to those with access to technology. • Possible barrier for those who have difficulties keeping the same phone. • Concerns over privacy and anonymity (e.g., notification banners).
POSTERS	• Easily accessible especially for those with limited access to technology.	• Difficult to keep up to date; lead to potentially conflicting information. • Labour intensive to distribute.

ADDITIONAL CONSIDERATIONS

- Use multiple modes of communication to target different peer demographics (e.g., social media for youth) and provide in multiple languages.
- Include bold font and graphics to grab attention, and help convey message. Graphics can improve access for those that may be unable to read. Use alt text to make alerts more accessible for blind and visually impaired peers.
- Create opportunities for peers to peers to be involved in alert messaging, and provide feedback.
- Avoid abstinence language and words such as "bad" which confers judgment. Words such as "strong," "potent," "overdose," and "bad" can also signal potency and may encourage some to seek these drugs out.
- Highlight ill effects of adulterated drugs by using phrases such as "withdrawal" and "dope sick," because the fear of withdrawal outweighs the fear of overdosing.
- Incorporate calls to action and provide information on relevant and available services in the surrounding are, making sure to include notable landmarks and/or directions.

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