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**BCTOX is now shared with 220 professionals in BC.
It can increase your works' visibility!**

You may contribute to BCTOX by providing 500 word abstracts of a toxicology related problem or an initiative that you have taken!

These "Abstracts" of BCTOX are peer reviewed and referenceable. How to cite abstracts of the current issue? Authors' surname, Initials, Title. *BCTOX* 2017; 2(9): Pages.

BC Toxicology Pictures of the Month



International Overdose Awareness Day, **August 31st**, is an annual global event and aims to raise awareness of overdose and reduce the stigma of a drug-related death. (IOAD 2017)



Photo adopted from (TimesColonist 2017-08-29)

A group of frontline workers, illicit-drug users and parents have met to discuss how they can better inform the public on the one thing that unites them; "The overdose crisis."



Photo adopted from (patch.com 2017) (IOAD 2017)

Honoring the lives lost to the overdose epidemic and the families left behind! (patch.com 2017)

About Us



Aims and Scope

BC Toxicology News Monthly Bulletin (BCTOX) aims to popularise the knowledge of toxicology and expand use and the awareness of Toxicology News in British Columbia, Canada. It tries to engage health and environmental professionals with online published toxicology news, publicly available information, and by providing short communications. BCTOX mainly focuses on adapting or summarizing relevant toxicology news in BC. The Bulletin accepts and welcomes contributions from professionals and the public as long as they meet BCTOX standards.

How to access the original news items? If you click on the link related to each one of the provided stories, it will take you to the original site of the news.

Publication Frequency: BCTOX is published monthly in English by Reza Afshari.

Provided information in [GRAY](#) is not related to the current issue, but could be of interest.

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Policies:

Open Access Policy: This bulletin provides open access to all its content.

Fee: BCTOX is free-of-charge for readers and contributors.

Copyright Statement

BCTOX's content is currently prepared by Reza Afshari. The bulletin retains the copyright of their articles and will be able to archive pre-print, post-print, and publisher's versions.

This bulletin is not official and for the most parts is not peer-reviewed. It does not cover all the news, and is not liable for the accuracy of the news from media. It is, however, BC related, informative, handpicked and fun to read. The provided contents are not necessarily BCTOX's views.

BCTOX has been modified since (BCTOX 2017 June 2(6)) issue. It is now accepting 400 words educational material, commentaries, and research abstracts (with data) as long as they are within the scope of the bulletin and meets our standards. We are going to publish up to four short [but not full papers] abstracts in each issue. This section of the journal is peer reviewed.

Archiving. Digital Archiving: In addition to indexing database this Bulletin utilizes digital archive as well as hard copies to guarantee long-term preservation and restoration.

Publication Ethics

This bulletin follows International Committee of Medical Journal Editors (ICMJE)'s Recommendations. Authors (i) must declare any conflict of interest in a given manuscript, and we utilize COPE workflow to transparently handle it, (ii) follow ICMJE definition of author and contribution, and (iii) accept the ethical policy including regulation and malpractice statement.

Guide for Authors

From June 2017 (BCTOX 2017 2(6)) we publish original research, mini reviews, short communications, letters, case reports, and case series as long as they are limited to 400 words and the content is British Columbia related. These publications are peer reviewed.

References

References should be given in the Vancouver style and numbered consecutively in the order which they are first mentioned in the text. Citation in the text should be in line with text in parenthesis with Arabic numbering style.

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BCTOX does not have a professional website yet, but materials could be found from <https://plus.google.com/105713713266879554108>

Google Scholar <https://scholar.google.ca/citations?user=uaHeNh8AAAAJ&hl=en>

New subscribers will be added to the mailing list upon their request.

If this bulletin is not of interest to you, let us know please so we do not to fill up your mailbox in future.

Toxicology news in this month was focused on Wildfire and Fentanyl overdose, followed by food recall and drinking water quality.

How to cite BCTOX's articles:

AUTHOURS. TITLE, *BCTOX* 2017;2(8): PAGES.

Acknowledgment

BCTOX respectfully acknowledges that it is published on the ancestral homelands of the Coast Salish peoples, including the territories of the x^wməθkwəy̓ əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and Səl̓ ílwətaʔ/Selilwitulh (Tsleil-Waututh) Nations. [Adopted from (BCCDC 2017-Aug).]

Erratum from the previous issues None received in September.

Summary of the Toxicology News in BC and Health Authorities in September 2017

Reza Afshari*, Environmental Health Services, BC Centre for Disease Control, BC. Reza.Afshari@bccdc.ca [Editorial 2017-09-30]

What is BCTOX and why?

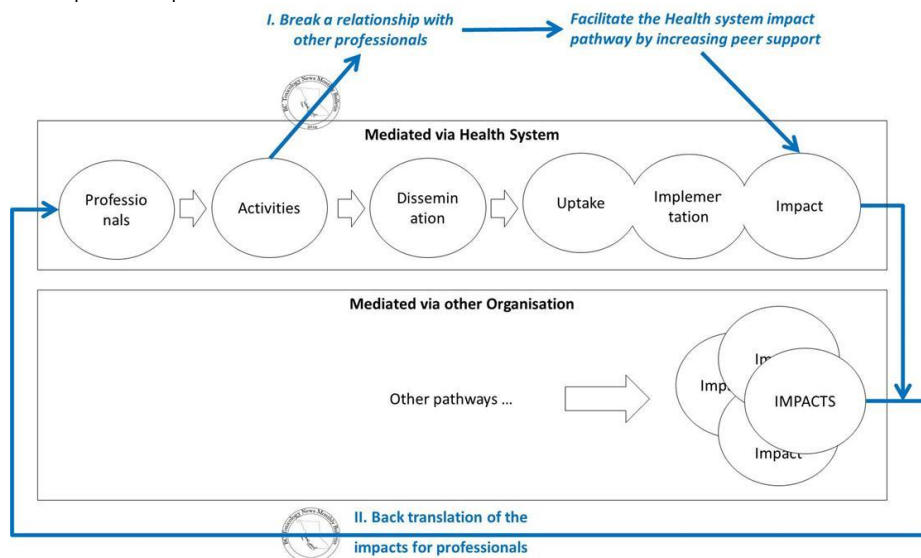
BC Toxicology News Monthly Bulletin (BCTOX) follows a theory for change and tries to make a difference. *First* it tries to form a new relationship among professionals to facilitate the impact pathway of their activities and increase their peer support. BCTOX aims to mobilise the knowledge related to professionals' work within the health system to other places where they could also be used. It magnifies the visibility of these activities, and reaches the other end of the spectrum of other professionals. Second, BCTOX back-translates the health activities that have had a life outside the health system and have made impacts in the society, which notably were picked up by the media and online sources.

The concept of BCTOX is modeled below, in which two major pathways where it could be useful are depicted (blue lines).

While BCTOX is not official and not liable for the reported news from media, it is BC related, full of information in a short space, handpicked and fun to read. BCTOX Keep you engaged with toxicology news in BC.

Media reports are valuable sources for information, as acute and chronic toxic exposures lead to accidents, which catch the attention of media. Therefore, media act as an independent surveillance system. Also keeping track of over 90,000 registered chemicals mediated via food, air, water, soil and consumer products are impossible, making the use of media even more important.

Figure. BCTOX conceptual model. Two major pathways that this initiative could make an impact are depicted in blue.



Major toxicological statistics in August

❖ **Mortalities** In total, over 700 premature deaths could be attributed to toxic exposures in BC in August including ACUTE exposures; 99 due to Illicit drug overdose and around 10 due to suicides (CO, drugs and alcohol), and CHRONIC current and past exposures; 500 due to smoking and tobacco use, 81 (air pollution), 11 (radon) and 6 (asbestos). These are equal to overall 15×10^5 toxic exposure induced deaths in August alone including 2.4×10^5 acute and 13×10^5 chronic toxicities (estimations are subjected to assumptions and limitations and overlaps are possible (see BCTOX 2(8): 103)).

❖ **Morbidities** Around 2200 calls were made to BC-DPIC [estimated from August 2017)

Toxic exposures via

AIR Daily air pollutants in Vancouver International Airport from Jan to Sep 2017 shows that recent forest fires in BC has affected PM_{10} and $PM_{2.5}$, and to a lesser extent SO_2 and CO, but not NO , NO_2 , and O_3 .

PRODUCTS Costumer product recalls included various cosmetics by Justice (Tween Brands Inc.) due to trace amounts of Asbestos in one of them.

FOOD Food recalls including Ri Wang Food brand meat and fish products were mainly due to undeclared ingredients (allergens). Bi weekly marine bio-toxin monitoring in West Coast BC Jan to Sep 2017 shows that (i) Below regulatory limits Domoic acid [Amnesic Shellfish Poisoning] is reported again after 2 months, (ii) Below regulatory limits of Okadaic acid and dinophys toxins [Diarrhetic Shellfish Poisoning] are on rise and (iii) Above regulatory limits of Saxitoxin [Paralytic shellfish poisoning] concentrations are on decline.

WATER A recent report from Media suggested that more than half of BC's school districts had unsafe lead levels in drinking water sources in 2016-2017. A series of actions have been taken to control the problem.

Fentanyl crisis

In July (last update), 99 cases died as a result of illicit drug overdoses in BC, which is 30% higher than June last year and 12% lower than last month. It sees that the pattern of overdose deaths has reached a plateau, if not decreased in recent months.

In September a series of strategies and actions were suggested or focused by authorities including Developing

educational curriculum (BC Ministry of Education), Province-wide naloxone kits for schools, all-ministry approach, Ask-once, get-help-fast approach, Decriminalizing drugs, Legalization and Providing testing facilities for fentanyl cooks.

In this issue, Three commentaries are presented including "Analysis of Non-Ambulance Transport Patterns for Illegal Overdose Events in BC", "The Real-time Drug Alert & Response (RADAR) project by Vancouver Coastal Health and BC CDC", and a Toxic (?) Bus Heading for Downtown Vancouver! A Historical Report from 2004.

Sola dosis facit venenum

Only the dose makes the poison!

Paracelsus (1493 – 1541 CE)

BCTOX 2017 Sep 2(9): 122

Summary of the Toxicology News in BC and Health Authorities in September 2017

--- See the rest and details of the news in other sections.

First Nations Health Authority

There is a lack of 'fair and even access' to treatment on First Nations according to the new Indigenous services minister. (CBCNews 2017-09-16)

Opening a Recovery centre A BC Interior First Nations community is opening a five-bed recovery centre of its own. Dream of recovery centre comes true for Esk'etemec First Nation. (TheWilliamsLakeTribune 2017-09-21) [Interior Health]



Photo adopted from (TheWilliamsLakeTribune 2017-09-21)
Possible outbreak of blue-green algae

The Upper Nicola Band is including Chapperon Lake in its current algae advisory. Visitors to Tunkwa Lake Provincial Park are also being asked to stay out of the water as BC Parks tests for a possible outbreak of blue-green algae. According to the band, the algae bloom was found in Chapperon Lake on September 4th. (MerrittHerald 2017-09-07)

Fraser Health Authority

The Fraser Health Authority will rapidly expand access to opioid addictions treatment including prescription methadone and Suboxone by opening 7 new opioid addiction treatment centres throughout Fraser Valley (Clinics in Burnaby, Chilliwack, Abbotsford, Langley, Mission and Maple Ridge).

Interior Health Authority

A new voluntary withdrawal management program is run by Axis Family Resources in Williams Lake, which is funded by the Interior Health Authority. This program has four beds available for people wanting to withdraw from alcohol or drugs. They can stay for three to five days. (TheWilliamsLakeTribune 2017-09-25)

Northern Health Authority

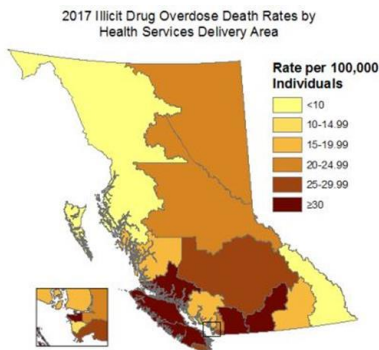


Figure adopted from (MyPrinceGeorgeNow 2017-09-07)

Northern Health has seen 31 total overdose deaths since the beginning of the year. The Northern Health Authority is seeing a

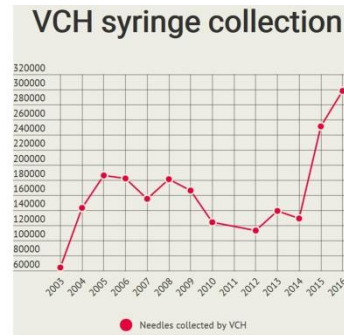
lower volume than the rest of the province.” according to the BC Coroners Service’s latest statistics (Andy Watson). (MyPrinceGeorgeNow 2017-09-07)

Vancouver Coastal Health Authority

Vancouver is becoming a 'syringe city'? The number of needles being left on city streets is on the rise, which is not just the Downtown Eastside, it's throughout the city now. (CBCNews 2017-08-31)



Garbage associated with injection drugs can be found littered all over Vancouver. (Karen Burgess/CBC). (CBCNews 2017-08-31)



The number of needles showing up in parks, on sidewalks and elsewhere is on the rise. (CBCNews 2017-08-31)

Vancouver Coastal Health authority plans to track patients to make sure they are taking their prescribed opioids (Methadone) to reduce drug overdose deaths from another one fentanyl. “It’s the first program of its kind in Canada”. A goal of 95% Methadone compliance is set according to Rolando Barrios, assistant director at the Vancouver Coastal Health. (CFJCToday 2017-09-21)

Vancouver free fentanyl-detecting drug service will be extended from an incite service to city's four overdose prevention sites. (CBCNews 2017-08-31)

Vancouver Island Health Authority

Opening an overdose prevention site

Long-awaited overdose prevention site opens in Duncan. As part of BC’s response to the overdose emergency, Island Health has opened a temporary [ninth] overdose prevention site since December 2016. (VictoriaNews 2017-09-18)



Photo adopted from (VictoriaNews 2017-09-18)

Toxic (?) Bus Heading for Downtown Vancouver! A Historical Report from 2004

John Blatherwick*, retired Chief Medical Health Officer, Vancouver Coastal Health. [Commentary; Accepted 2017-09-17]



Dr. John Blatherwick was the Chief Medical Health Officer of Vancouver (later Vancouver Coastal Health) for 23 years. In total, he was a Medical Health Officer in British Columbia for 37 years. He also spent 50 years in the Canadian Forces reserves and several years as the Commissioner of St. John Ambulance in British Columbia. He has published 24 books.

History On 25 May 2004, a passenger walked to the front of the #98 bus heading for downtown Vancouver and was about to get off at 49th Street and Granville and said to the driver, "How's your day going?" The driver replied, "Good", to which the passenger said, "It won't be for long". This would set off the "Toxic Bus battle" between public health and the police. (Bartholomew and Wessely 2007)

The driver described the passenger as aged 20 to 25, with short, dark hair and a thin moustache. He wore jeans and a blue windbreaker with multi-coloured sleeves. (Taylor-Noonan M 2004a)

The driver felt ill as he continued his drive to Waterfront Station and at Waterfront Station went to the washroom, threw up and felt better. But he had already talked to Translink control who had called the police. Police, Ambulance and Fire fighters all arrived on the scene, cordoned off a large area and "quarantined" everybody who had been in touch with the bus.

Involvement of the health authorities and the police I happened to be listening to the radio in my car and heard about the "quarantine". Nothing that I had been told to that point made me suspicious except that a bus driver had gotten ill. White powder reportings were common at this time following the 9/11 and Anthrax attacks in the USA but we had a system for handling them. The police were focused on a potential terrorist attack.

Initial toxicology tests The police proceeded to test the bus with a very, very bad scanning system that resulted in false positives 33% of the time. Later that evening I was told the test was positive "for something". I said, "Do not tell anybody about this and get a reliable test done as this positive means nothing". The follow up tests found nothing.

Advanced toxicology tests A team of toxicologists came from Canadian Forces Base Suffield in Alberta by car and from Ottawa by air. This team did extensive testing and found absolutely NOTHING. They did find a pine cone on the floor in the rear of the bus but toxicology showed nothing. The RCMP team was satisfied that there was no toxic material on the bus.

Meanwhile, two ambulance attendants who had felt ill after attending the bus scene, were released from hospital but still felt ill. Only one of the attendants had actually gone on the bus. They would be off work for six months. None of the fire fighters at the scene felt ill or missed any work. The driver was fine and so were the other passengers.

Involvement of the press The press found this story interesting and kept the story going. They called Dr. Rick Mathias at UBC and asked him his views and he said, "The illnesses were due to hysteria – the ambulance attendants had been told that the test on the bus that night was positive." When I was called, I said I agreed with Rick (who disagrees with Rick!). But the press highlighted the reports that it could have been a terrorist attack with an unknown substance. I was in Winnipeg when the final tests on the bus were done and all the tests were negative – except for the final test where they scraped every surface in the bus and did a test. These tests found traces of methyl chloride. On my return to Vancouver, I was told this by a reporter. I looked up methyl chloride and to my surprise found that it could be used in the making of bus seats! I then told the press that there was no toxic material on the bus and the illness by the driver was probably a normal virus going around at the time or something he ate and the other illness was due to hysteria. The headline in the paper the next day said authorities are in dispute! (Taylor-Noonan M 2004b) (van-den-Hemel M 2004) (TheVancouverPoliceDepartment 2004-06-25) Eventually the police and I decided not to say anymore to the press!

Lessons to be learned

Real and perceived risks

The risks of *toxic exposures* in potential terrorist attacks are real and should be taken seriously. However, they may be combined with a proportion of psychologically based symptoms and become complexed and may lead to *hysteria*.



Media involvement The press are interested in the information and may highlight certain reports over others to make a good story. Better practices in issue management should be integral to responses. Mass psychogenic illnesses are poorly understood and controversial. However, the communicable nature of hysteria should be stressed.

Inter-organisational partnership It is important to develop inter-organisational and public-professional partnerships. Releasing the news should be a joint work.

Toxicology tests Extensive testing of most environments will often find substances that can be harmful, but may also be artefactual. The screening toxicology scans are less specific and are subjected to false positive and false negative results and therefore might be misleading. It is important to focus on the more sensitive and specific tests.

Exposed cases It is important to evaluate the subjective and objective manifestation of a toxic exposure. Time interval and proximity to the situation are important determinants.

Acknowledgment I would like to acknowledge the work of all colleagues who were involved in responding to this event.

References Bartholomew, R. and S. Wessely (2007). "Canada's "Toxic Bus": The New Challenge for Law Enforcement in the Post-9/11 World/Mass Psychogenic Illness" Canadian Journal of Criminology and Criminal Justice 49(5).

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Analysis of Non-Ambulance Transport Patterns for Illegal Overdose Events in BC

Williams S^{1,2*}, Otterstatter M^{1,3}, Kuo M^{1,3}, Buxton J^{1,3}.

¹ BC Centre for Disease Control, BC, ² Faculty of Health Sciences, Simon Fraser University, BC, ³ University of British Columbia, BC. *sierraw@sfu.ca

Introduction: On April 14, 2016, British Columbia's (BC) provincial health officer declared a public health emergency in response to the alarming rise of opioid overdose deaths in BC. The increase since 2012 appears to be due to increased use of fentanyl-detected drugs (BC Coroners, 2017).

Transport by ambulance to emergency department is recognized as an important part of care for individuals who have experienced an illegal drug overdose as they may be at risk of symptoms returning when naloxone (medication that can reverse the effects of an opioid overdose) wears off, have co-occurring illness and can be offered additional education and counselling supports (BC Overdose Action Exchange, 2016). Recent findings suggest that the proportion of individuals experiencing an illegal overdose who are transported to hospitals by BC Emergency Health Services (BCEHS) has been declining over time. Literature has identified barriers to calling emergency medical services to an overdose event (Ambrose et al., 2016). However, little is known about the relationship between transportation patterns and illegal overdose events.

Aim: The aim of this study was to describe the patterns and implications of ambulance non-transport for illegal overdose events, to help inform overdose response strategy planning, interventions and resource allocations by BCEHS, health authorities, and public health services.

Methods: We calculated descriptive statistics to compare the demographic, temporal and geographic characteristics of individuals experiencing an illegal overdose event attended by BCEHS who were transported versus not transported to hospital. An illegal overdose event was defined as an event indicated by paramedics to be most likely related to the use of recreational drugs. The primary data were de-identified patient care reports (PCR) provided by BC Ambulance Services from BC regional health authorities, which contains information gathered by paramedics attending the scene of an overdose.

The study cohort included persons who experienced an illegal drug overdose in British Columbia between January 1, 2011 and March 3, 2017.

Results: A total of 31,450 individual illegal overdose events that took place between 2011 and 2017 were analysed. Of these 4768 (15%) were not transported by BCEHS. About half (51%) of the non-transport events occurred in 2016 – 2017. During this time period, of the 8183 males who overdosed, 1588 were not transported (~19%). Similarly, of the 3281 females who overdosed, 580 were not transported (~18%). Examining only those not transported, more than half of the patients were between 25 - 44 years (53.58%) and 71% were males.

In 2016 and 2017, non-transport was higher in those who did not receive naloxone, (a medication that reverses opioid overdoses) from BCEHS (24%) in comparison to those who did receive naloxone from BCEHS (18%). It is not known if patients received naloxone from bystanders prior to arrival of paramedics.

A higher proportion of patients who did not provide a Personal Health Numbers (PHN) were not transported (39%) compared to patients providing a PHN to paramedics (14%). During 2016 – 2017, the highest proportions of non-transport occurred in cities that had

more than 400 illegal overdose events in 2016 with more than 20% of their events not transported. The majority of those not transported during the entire study period were from Vancouver's Downtown Eastside (n=1334, 28%) and Surrey (n=557, 12%).

Other major health areas included: Greater Victoria (n=337, 7%), Central Okanagan (n=264, 5.5%) and Vancouver City Centre (n=237, 5%). Overall, the proportion of individuals not transported during the study period was relatively stable until 2015 (~13%) and then increased steadily to about 24% in 2017. Further, the proportion of individuals refusing transport increased during the study period.

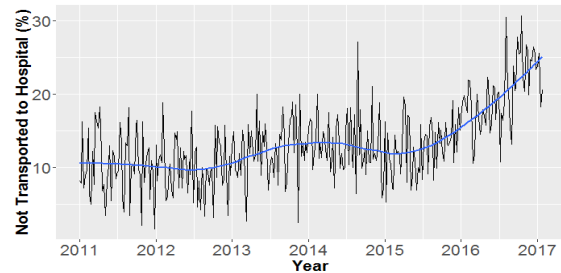


Figure 1. A graph demonstrating the proportion of individuals not transported over time during 2011 -2017.

Conclusion: The proportion of individuals with illegal drug overdose events who are transported by ambulance to BC hospitals has most steadily declined during 2015 – 2017 (Figure 1). This is consistent with an increase in the number of illegal overdose events during these years (BC Joint Taskforce Update, 2017).

A higher number of males and individuals aged 25 – 44 years experienced an overdose, and consequently are also not being transported. Those who received naloxone from paramedics, as well as patients who were unidentified were more likely to not be transported by BCEHS.

This study's geographic breakdown revealed that high numbers of illegal overdose events and non-transport events are occurring across the province. A stronger understanding of the reasons why individuals are not transported to the emergency departments, as well as a consideration of the ways in which we can assess the outcome of those not transported by EMS is needed.

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Articles/Commentaries

The Real-time Drug Alert & Response (RADAR) project by Vancouver Coastal Health and BC CDC

Lysyshyn M*, Young S, Vancouver Coastal Health. *
Mark.Lysyshyn@vch.ca [Commentary; 2017-09-17]

Vancouver Coastal Health investigates real-time methods for reporting and alerting about drug contamination

Vancouver Coastal Health (VCH) Harm Reduction staff are working with the BC Centre for Disease Control (BCCDC) on a new research project to develop a more timely and accurate way to communicate information about clusters of drug overdoses and drug contamination alerts.

The Real-time Drug Alert & Response (RADAR) project is starting to test several methods of reporting, including an online web form (at www.vch.ca/overdose), and a texting service at (236) 999-DOPE (3673).

In both methods, people can report information such as the date of the overdose, what town and neighbourhood the substance was purchased in, types of substances thought to be used, and the physical description of the substances.

Participants can also upload a photo of the drug and/or its packaging. Participants do not have to provide their names or contact information. Both methods are up and running currently and anyone can use them.



Currently, data from several sources, such as BC Emergency Health Services, emergency departments and Insite and overdose prevention sites, is analyzed to find any anomalies in the number or type of overdoses, which could signal a greater degree of toxicity and/or the presence of new substances in drugs that are being sold.

The information is then forwarded to harm reduction service providers to communicate to people who use drugs but these alerts often lag one to two weeks behind the data. This new system enables alerts the same or next day.

After eight months the project will be evaluated to determine possible future use.

The research project is funded by the Vancouver Coastal Health Research Institute.

Text "alert" to (236) 999-DOPE (3673) to start receiving alerts. For more information on the project please contact Sara Young at Sara.Young@vch.ca.

Reference:

Overdose prevention & response. <http://www.vch.ca/public-health/harm-reduction/overdose-prevention-response>

Occupational Toxicology

Detecting oil leaks

Calgary-made oil leak detection tech may make pipelines an easier sell. The technology can sense leaks and send that information to the company quickly. (Dan McGarvey/CBC) (CBCNews 2017-09-19)

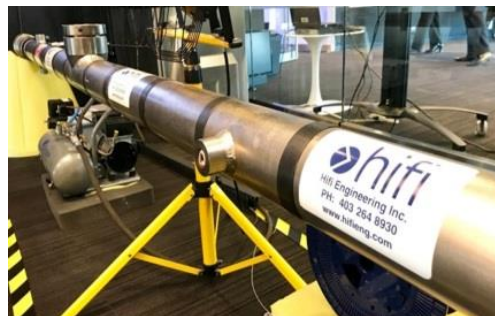


Photo from (CBCNews 2017-09-19)

Stop work orders and fines

WorkSafeBC issued more stop work orders and fines related to asbestos in the first eight months of 2017 than all of 2016. (CBCNews 2017-09-26)

Fine for faulty spray painting booth

WorkSafeBC has fined a Prince George-based machinery manufacturer (BID Group Technologies Ltd. at its Del-Tech Manufacturing Division on Penn Road) for \$50,000 for defying a Fire Rescue order to stop use of a faulty spray painting booth. (PGCitizen 2017-09-12)

Highways are outside WorkSafeBC's jurisdiction

Roadside mechanics are tired of having to deal with human waste on the side of the highway as they try to do their job. More rest stops are needed.

As highways are outside WorkSafeBC's jurisdiction, it would have no control over the situation according to a WorkSafeBC representative. WorkSafeBC advised workers and employers to protect their health in whatever way possible. (CBCNews 2017-09-13)

Chemical (?) incident at BC shipping terminal

An unspecified incident at Fairview Container Terminal in Prince Rupert, BC sent 11 workers to the hospital for precautionary treatment. The workers developed symptoms of respiratory and eye irritation. They received treatment and all of the employees are fine. DP World stated that they continue to check on workers' well-being. (OHSCanada 2017-09)

Wood Pellet Association of Canada conference

Improve safety measures in the wood pellet industry can only be achieved if all members of a team are engaged and committed to adopting that safety culture. 'Safety is everybody's business' according to speaker in Wood Pellet Association of Canada conference on Sep 20th. (CanadainBiomass 2017-09-20)

GAS LEAK

A gas leak near Thomas Road in Esquimalt - smell of gas was evident in the air some distance from the site. - resulted in vehicle traffic turning around on Admirals Road at Maplebank Road, and people were asked to avoid the area. (BCLocalNews 2017-09-07)

Drug Overdoses and Forensic Toxicology in BC (I) - BCTOX

Statistics and epidemiology

Fentanyl was present in 5% of drug overdose deaths in 2012 and increased to 31% in 2015. (GlobalNews 2017-08-04) Fentanyl detected in 81% of overdose deaths, BC Coroners Service. (HiTechFacts 2017-09-10) (CBCNews 2017-09-07)

90% of illicit drug overdose deaths take place inside private residences or other locations, no deaths was reported from supervised consumption or drug overdose prevention sites. (CBCNews 2017-09-07)

Kindness, compassion and empathy towards people battling addiction go a long way; Son of B.C. Finance Minister shares story of recovery from addiction. (CBCNews 2017-09-09)

RCMP has launched at least 20 investigations involving 70 vendors shipping fentanyl directly from China to Canada. (GlobalNews 2017-09-18)

Proposed Strategies / Actions in September

Developing educational curriculum (BC Ministry of Education)

BC Ministry of Education has added modules on overdosing to its Grade 6 and high school curriculum. Several larger BC school districts have programs dedicated to teaching kids about the risks associated with drug contaminants. (CBCNews 2017-09-05)

"We know from years of drug education that scaring people, youth in particular, around drugs and giving them very frightening information that you hope will discourage their use, is something that does not work" according to Dr Marc Lysyshyn. (CBCNews 2017-09-05)

--- **Yukon** students from *kindergarten to Grade 12* will learn about the potential dangers of fentanyl as part of their curriculum in 2017. (BCLocalNews 2017-09-07)]

--- *A comprehensive education around overdose prevention is needed.* Elaine Hyska from the **University of Alberta**: the apparent inconsistencies in drug education programming for school-age kids across the country reflect the "inequities and a patchwork" of harm-reduction, prevention and awareness initiatives in Canada. (CBCNews 2017-09-05)

Province-wide naloxone kits for schools

BC school trustee pushes for province-wide naloxone kits to be placed in schools. Schools have been given permission to purchase naloxone kits according to a Maple Ridge school trustee. The kits with a cost of \$50 per package, has purchased following a 2016 letter from the provincial health officer to all BC school superintendents, where administrators have a high risk population or where staff are aware of students using drugs on or near school grounds. (CTVNews 2017-09-26)

All-ministry approach

B.C.'s minister of mental health and addictions will take an "all-ministry" approach to the overdose crisis, influenced in part by Portugal's renowned policy for drug use and addiction. (VancouverSun 2017-09-08)

Ask-once, get-help-fast approach

B.C.'s new government is promising to implement its own "ask-once, get-help-fast" approach to treatment and recovery. (VancouverSun 2017-09-08)

Decriminalizing drugs Prime Minister says no to decriminalizing drugs, while B.C. addictions minister open to idea. (Humboldt 2017-09-07) (TheStar 2017-09-07)

Legalization

Vancouver Kingsway NDP MP Don Davies and BC Centre for Disease Control executive director, are calling for "not only decriminalization but the full legalization and regulation of some drugs". Jagmeet Singh, a federal New Democratic leadership hopeful made his pledge on to decriminalize petty drug possession.

"I don't think that other political leaders have gone anywhere near that, although ... that should be the obvious conclusion when many politicians will say that the war on drugs is a failure" says Dr. Tyndall said. (TheGlobal&Mail 2017-09-11)

Providing testing facilities for fentanyl cooks

Providing testing facilities for fentanyl cooks to let them know the potency of their product is a good idea as illegal fentanyl lab operators don't intend to kill users. "They would prefer to have return customers. The problem, I suspect, is that the fentanyl used is so concentrated that it's hard to dissolve to a uniform consistency. The resulting doses are uneven –from low to deadly." Says Dr. Mark Tyndall (CFJCToday 2017-09-07)

Marijuana

Survey

68% of Canadians favour the impending legalization of pot, according to a poll by researchers at Dalhousie University. People are curious about marijuana edibles, but wary of risk to kids. (NationalPost 2017-09-26)

Tainted cannabis

BCCDC and the RCMP have both said in the past that there's no evidence that cannabis has been tainted with fentanyl. In an interview with the Western News in July, the BCCDC's Marcus Lem named fentanyl-laced marijuana among its top fentanyl-related myths. Some clinics still kept a message saying so. (AgassizHarrisonObserver 2017-09-15)

Tax

BC Liberal leadership hopeful Dianne Watts pledges to direct any tax windfall from legalized pot to the BC communities who she said will be on the front lines. (GlovalNews 2017-09-26)

Cannabis legalization and Universities

University and college campuses will need to re-evaluate their smoking policies considering the proposed legalization of marijuana set for July 1, 2018. BC Institute of Technology (BCIT) asks students to keep a 6.1-metre distance from buildings in accordance with City of Vancouver bylaws. (GlobalNews 2017-09-25) Wherever smoking is prohibited that smoking cannabis is also prohibited. (GlobalNews 2017-09-25)

Other / Information

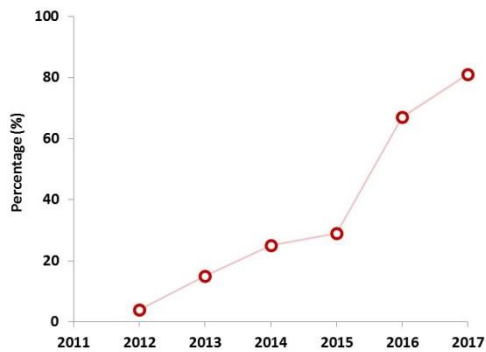
75 µg will fix most pain for about 20 minutes, 150 µg lead to 6 breaths per minute, and 250 µg will stop someone from breathing according to Dr Martin Davis, professor of pharmacology at the University of Alberta in Poplar Ridge Community Hall in BC. (BCLocalNews 2017-09-07)

Judge orders blood test after Nanaimo firefighter hit in face with vomit when he was treating a patient for a suspected fentanyl overdose in late August. Now "we can provide peace of mind for the firefighter." It's the first time B.C.'s law designed to protect first responders has been used to compel a blood test. (CBCNews 2017-09-15)

Kindness, compassion and empathy towards people battling addiction go a long way; Son of B.C. Finance Minister shares story of recovery from addiction. (CBCNews 2017-09-09)

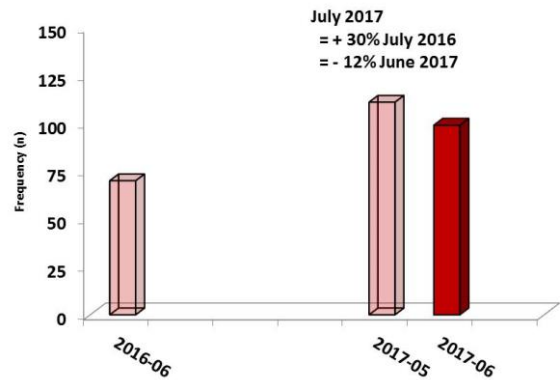
Drug Overdoses and Forensic Toxicology in BC (II) – BCTOX

Fentanyl Detected Illicit Drug Overdose Deaths in BC in September 2017

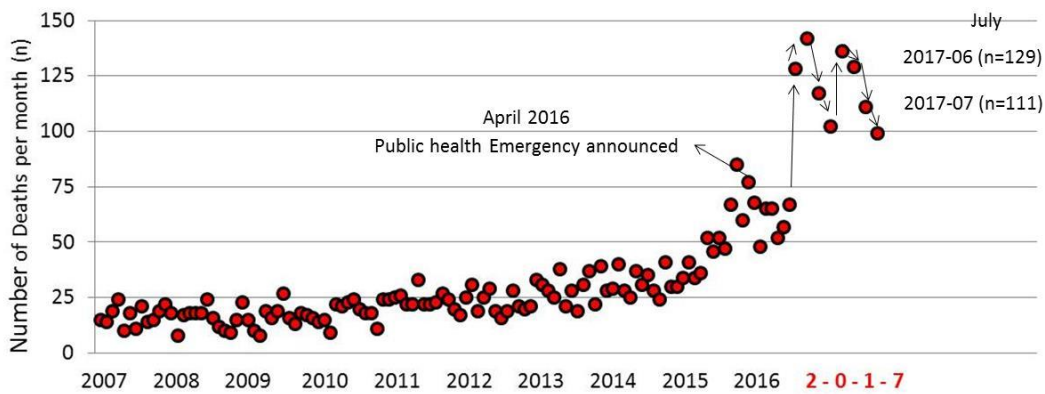


Fentanyl Detected Illicit Drug Overdose Deaths (2012- 2017[JULY]) [BCTOX graph] [LAST UPDATE - July] Data from (BCCoronersService(b) 2017-09-07)

Estimation of Illicit drug overdose attributed deaths in BC in September 2017



The number of Illicit drug overdose deaths in July 2017 was 99 which is 30% higher than July last year and 12% lower than last month [BCTOX graph] [LAST UPDATE - July] Data from (BCCoronersService(a) 2017-09-07)



Illicit drug overdose deaths per month in BC (2007 to July 2017) [BCTOX graph] [LAST UPDATE - July]

The pattern of overdose deaths suggests that the sharp increase in deaths has reached a plateau, if not decreased in recent months. Data from (BCCoronersService(a) 2017-09-07)



International Overdose Awareness Day, **August 31st**, is an annual global event and aims to raise awareness of overdose and reduce the stigma of a drug-related death. (IOAD 2017)

Events & contacts in BC (IOAD 2017) ([Ctrl Click here](#))

Abbotsford; Jubli Park, 32315 S Fraser Way, Kari Hackett/Monika Verma, 778-239-1411, director@plfv.ca

Courtenay; 6 pm to 8 pm, Simms Park, 489 Old Island Hwy, Jennifer Hedican, 2503384487, 1hed3@telus.net

Fort St James; Spirt Square, Stephanie Sutton 2505701073 healthnurse1@nakazdli.ca

Kamloops; 12 Noon till 9PM, Riverside Park, 100 Lorne St, Sherry Robinson kamloopsodawareday@gmail.com

Nanaimo; 2 PM – 4 PM, Maffeo Sutton Park, 100 Comox Road, Nanaimos First, Tanya Hiltz, 2507551014, ladyblackrose@telus.net

New Westminster; 6 pm – 7:30 pm. Hyack Square, Sasha, sbwood@uvic.ca

Powell River, Willingdon Beach Upper Lot. Amanda Evans or Darlana Treloar 604 485 0992 604 483 9059 amanda@prcc.org

Salmon Arm; 1:30 to 3:30 pm at Ross Street Plaza. Contact: Kaley York-Pearce Phone: 250-833-4101, kaley.york@interiorhealth.ca

Salt Spring Island; 12 NOON Location: Centennial Park, Contact: Trinda Gajek. 250-538-4886

Vancouver; 12-4pm, 58 W. Hastings Street, Holly Kleban, 604-642-5809, holly.kleban@vch.ca

Vancouver; 5 pm until 8 pm, North Plaza of the Vancouver Art Gallery. Tabitha Montgomery, 604 445 9299, tvmontgomery2014@gmail.com

Victoria; 4:30 pm to 8:00 pm, 1 Centennial Square, Heather Hobbs, 250-384-2366, load2017vic@gmail.com

Articles Related to Toxicological Issues in BC that Published in SEPTEMBER

For articles to be more clear from a local point of view, citation of each article is reported based on the following order within the text; *correspondence author or BC resident author* (multicentre articles), and first author. The real order of authors could be found from the references.

Risk of death from cocaine overdose is associated with the elevated ambient temperature

Kosatsky et al studied all deaths from cocaine or other drug overdose between the months of May and September, from 2000 through 2013 in Quebec.

They showed that elevated ambient temperature is associated with the risk of death from cocaine overdose. (Auger, Bilodeau-Bertrand et al. 2017)

Outcomes of Drug Consumption Facilities A Systematic Review

Kerr et al.'s review suggests that benefits of drug consumption facilities are

- Mitigate overdose-related harms
- Mitigate unsafe drug use behaviours
- Facilitate uptake of addiction treatment and other health services
- Improves public order without increasing drug-related crime.
- Is cost-effective.

This systematic review supports the effective role these facilities within a continuum of services. (Kennedy, Karamouzian et al. 2017)

First case of eslicarbazepine presented with recurrent seizures and ventricular dysrhythmias

Thompson et al reported the first case of overdose eslicarbazepine, the novel anti-epileptic drug, from Kelowna.

This case was presented with confusion, rigidity and clonus, followed by recurrent seizures, hypoxemia and wide complex tachycardia requiring defibrillation and cardiac arrest.

They successfully used benzodiazepines, eventual intubation and sedation with propofol, sodium bicarbonate, empiric hemodialysis and supportive care. (Thompson, Powell et al. 2017)

The lessons learned from the fentanyl overdose crises in British Columbia, Canada

Thomson et al. suggested the following next steps regarding fentanyl overdose crises

- Acknowledging the relapsing nature of addiction
- Acknowledging that some people are not willing or ready to stop using
- Legalization and regulation of illegal drugs
- Expand evidence-based harm reduction programs, including peer-run supervised consumption facilities,
- Opioid agonist substitution treatment,
- Full cost coverage for the naloxone kit
- Supportive housing and peer-harm reduction engagements
- Work together (collaboratively) (Thomson, Lampkin et al. 2017)

Prescription opioid restrictions in the time of fentanyl and other street drug adulterants

Cheng and DeBeck discussed that an increased non-medical prescription of opioid use has resulted in strict prescribing restrictions on opioids.

Authors argued that a comprehensive response that includes improvements to addiction management and harm-reduction services is needed. (Cheng and DeBeck 2017)

Lifetime excess cancer risk due to carcinogens in food and beverages; Urban versus rural differences in Canada

Chesley et al. from Uvic compared lifetime excess cancer risk due to carcinogens in food and beverages in urban and rural differences in Canada.

They showed that lifetime excess cancer risk from food and beverages for lead and PERC were below 10 per million; whereas at least 50% of the population were above 10 per million excess cancers. (Chesley, Keller et al. 2017)

Vitamin B12 in pregnant women in Vancouver; A comparison of South Asian European ethnicities

Schroder et al. studied banked serum samples of 748 healthy pregnant South Asian (n 371) and European (n 377) women.

They showed that South Asian women living in Vancouver have substantially lower B12 status during early pregnancy. (Schroder, Sinclair et al. 2017)

Seasonal road dust ambient particulate matter and population health; Comparison of PM_{2.5} and PM₁₀

Henderson et al. argued that although many air quality monitoring programs have favored measurement of particles less than 2.5 µm (PM_{2.5}) over particles less than 10 µm (PM₁₀) due to the fact that health impacts are mostly from the fine fraction,

→ different impacts of different PM fractions by season exist with a robust association between the coarse fraction and nonaccidental mortality in communities and periods affected by road dust.

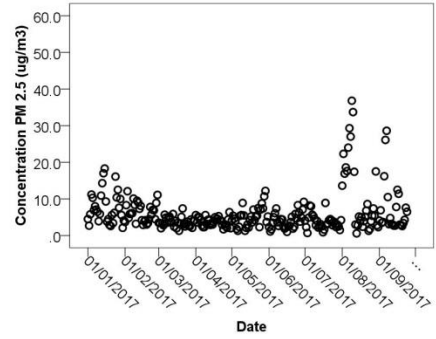
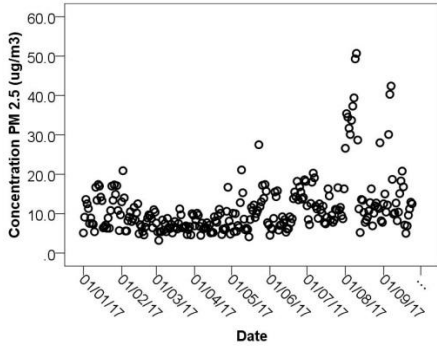
They recommended that PM₁₀ monitoring networks be maintained. (Hong, King et al. 2017)

Exposure to polybrominated diphenyl ethers are not associated with poorer impulse and attention control among 8 year olds

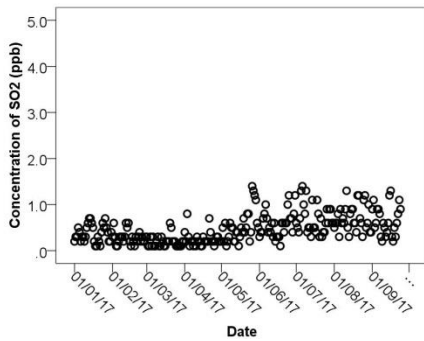
Lanphear et al. applied data from 214 children in the Health Outcomes and Measures of the Environment Study, a prospective pregnancy and birth cohort with enrollment from 2003 to 2006 in the *Greater Cincinnati Area*.

Their result does not support the fact that exposure to polybrominated diphenyl ethers are associated with poorer impulse and attention control among 8 year old children. (Vuong, Yolton et al. 2017)

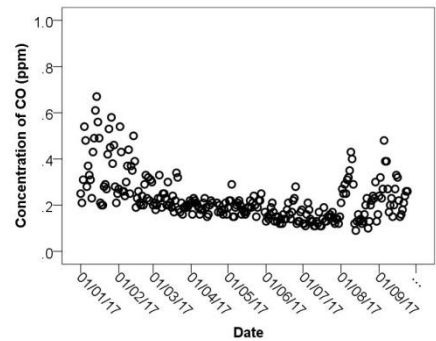
Toxic exposure mediated via AIR (I) in BC– Data from Ministry of Environment, BCTOX Graph
Average daily air pollutants in Vancouver international airport (Jan to September 2017)



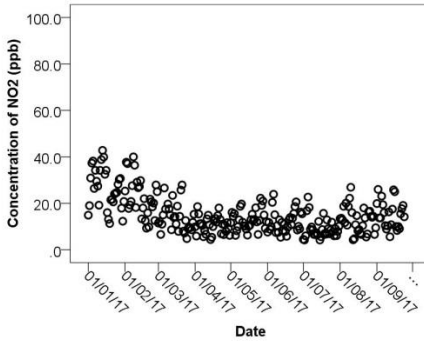
PM₁₀ (µg/m³) (Jan – Sep 2017)



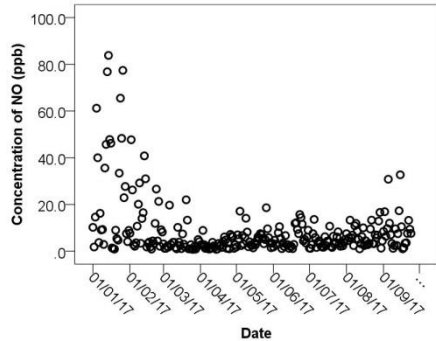
PM_{2.5} (µg/m³) (Jan – Sep 2017)



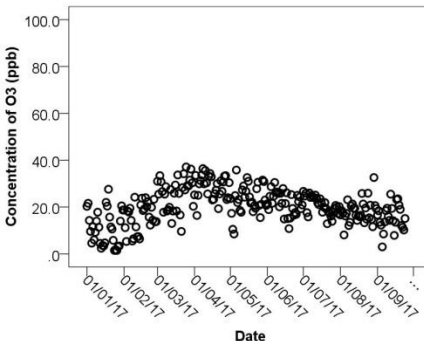
SO₂ (ppb) (Jan – Sep 2017)



CO (ppm) (Jan – Sep 2017)



NO₂ (ppb) (Jan – Sep 2017)



NO (ppb) (Jan – Sep 2017)

O₃ (ppb) (Jan – Sep 2017)

Daily air pollutants in Vancouver international airport
Jan to Sep 2017

Apparently, recent forest fires in BC has affected

- ✓ PM₁₀ and PM_{2.5},
- ✓ And to a lesser extend SO₂, CO,
- ✓ But not NO, NO₂, and O₃.

Toxic exposure mediated via AIR in BC(II)-BCTOX

Wildfires in BC since 2006

Mean (min - max) wildfire in BC from 2006 to 2016 are:

- Total fires was 1844 (653 (2011) - 3064 (2009)),
- Total hectares 154944 (12604 (2011)-369 (2014))
- Total cost 182 (54 (2011) - 297 (2014)) millions dollars

Among them 39% caused by people and 61% caused by lightning.

Total wildfire from April 1, 2017 to September 24, 2017 (current fiscal year) in BC is 12,123 km².

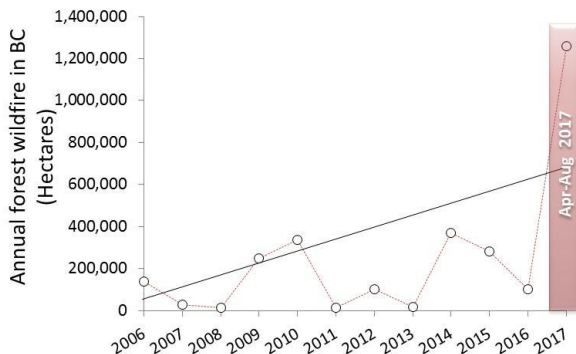
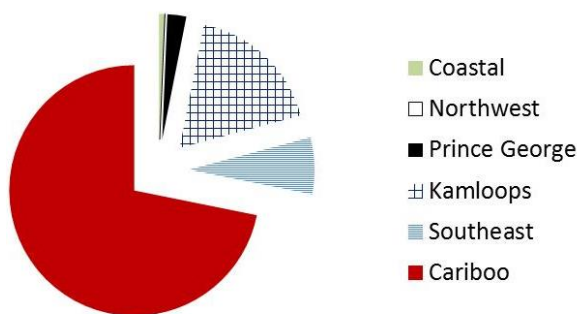


Figure. Annual forest wildfire in BC (Hectares) (2006 to 2016) . Depicts wildfire from April 1, 2017 to Sep 24, 2017 (current fiscal year) (12,123 km²) Source of data BC Wildfire Service [BCTOX Graph]

--- Values related to 2017 are released as estimates and subjected to modification (increase or decrease) in later stages.

Distribution of wildfire in BC



Current Statistics from BC Wildfire service shows that a total of 1,212,345 hectares burned from April 1, 2017 to Sep 24, 2017 (current fiscal year) in BC.

Distribution of wildfires in BC from April 1, 2017 to Sep 24, 2017 is shown in the figure. Source of data BC Wildfire Service [BCTOX Graph] (BC-Wildfire-Service)

Toxic exposure mediated via SOIL in BC-BCTOX

Soil update September 2017

Effects of wildfires on drinking water supplies

The West Coast experienced an unprecedented forest fire season this summer, predicted to increase in severity every year due to climate change. As a result, sedimentation into drinking water is expected to increase, according to a new study by the U.S. Geological Survey (USGS). Burned areas threaten drinking water by increasing soil erosion rates within watersheds, potentially enhancing sedimentation in downstream rivers and reservoirs. This excess sedimentation causes additional turbidity that increases water-treatment costs and harms marine life. Understanding how changes in forest fires will affect these watersheds and reservoirs is of great health importance. (USGS 2017-09-07) (ThinkProgress 2017-09-08)

Soil, farming and climate change

Parts of BC are in an "extreme drought", which occurs with a frequency of 20 to 25 years. The most severely affected areas in central BC are receiving less than 60% of the average precipitation since April 1, a date which marks the beginning of growing season. Precipitation shortages fuelled the largest wildfire season in B.C.'s history, affecting roughly one million hectares by the end of August. These unpredictable weather patterns and climate change signify the need for adjustments by many businesses, including farms. This includes increasing constructing tiling systems for floods and dry spell management, seeding previously unplanted crops, such as soybeans, and breeding plants to become more resistant to diseases caused by precipitation fluctuations. The increased costs associated with these practices could push smaller farms out of business, and may actually cause further environmental harm. Government intervention may be necessary to pay operators to farm when it is not economically viable due to droughts, to preserve soil, pastures and nutrients during weather extremes. (TheGlobal&Mail 2017-09-08)

Creek flow improvements to control storm surges in Victoria

Victoria airport spending \$675,000 on creek flow improvements to control storm surges. This project is creating a 5,000-cubic metre pond area that can hold back water from sources on the VAA property.

That pond is the site of heavy metal contamination and is subject to a remediation effort, which is listed as a high priority for clean up by Transport Canada. (PeninsulaNewsReview 2017-09-27)





Clean up of Laurel Point Park in Victoria

Laurel Point Park in Victoria is contaminated and a potential \$5-million bill to clean it up is expected. \$350,000 have already been spent to confirm the degree of contamination and create a remediation plan. (Hazmatmag 2017-09-11)

Toxic Exposure Mediated via PRODUCTS - BCTOX

Toxicological related product recalls

(Recalls-and-safety-alerts) - Updated 2017-08-24

Date	Items	--- Reasons to recall
2017-09-08	Recall Justice (Tween Brands Inc.) recalls various cosmetics	<p>Just Shine Shimmer Powder contains trace amounts of Asbestos. All other products from the same manufacturer are being recalled as a cautionary measure.</p> <div style="display: flex; justify-content: space-around;">   </div>
2017-09-13	Recall Sage Products LLC recalls Toothette Oral Care Mouth Moisturizer and Advanced Oral Moisturizer Spray due to potential contamination.	<p>This recall is due to potential contamination.</p> <div style="display: flex; justify-content: space-around;">  <div style="font-size: small;"> <p>Directions: Place nozzle in oral cavity. Depress pump several times to coat entire oral cavity, concentrating on dry areas. Use as often as required to replenish oral moisture levels.</p> <p>Ingredients: Water, glycerin, xylitol, mint flavor, polysorbate 20, polysorbate 80, potassium sorbate, sodium hyaluronate, cetylpyridinium chloride. LATEX FREE</p> <p>Questions? call toll-free 1-800-323-2220</p> <p>Manufactured by: Sage Products, Inc. 3909 Three Oaks Road • Cary, IL 60013 www.sageproducts.com • 800-323-2220</p> <p>Reorder # 5210</p>  <p>6 18029 86011 8</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">E144-43B Patent pending</p> </div> </div>
2017-09-19	Recall PartyMart.com recalls various Turkey Feather Boas	<p>Health Canada's sampling and evaluation program has determined that these feather boas do not meet the flammability requirements for textile products under Canadian law.</p> <div style="display: flex; justify-content: space-around;">   </div>

Toxic exposure mediated via FOOD in BC (II) - BCTOX®

Toxicological related food recalls

Dates	Food (Company / Firm)	Reason to recall	Class	Link
2017-09-21	Update Ri Wang Food brand meat and fish products (Allergen) - Undeclared	Milk, egg/ soy	1	National
2017-09-15	Ri Wang Food brand Chinese Brand sausages (Allergen)	Undeclared milk	1	National
2017-09-14	Correction - Love Child Organics brand Baby's 1st Buckwheat + Chia Organic Infant Cereal (Allergen)	Undeclared gluten	2	National

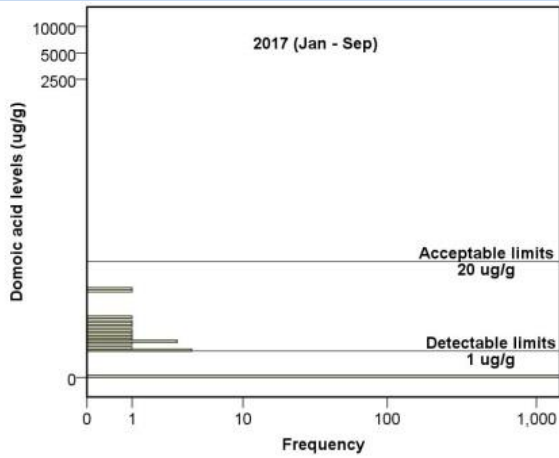
Bi weekly marine bio-toxin monitoring in West Coast BC in August shows:

- ✓ Below regulatory limits Domoic acid [Amnesic Shellfish Poisoning] is reported again after 2 months
- ✓ Below regulatory limits of Okadaic acid and dinophysis toxins [Diarrhetic Shellfish Poisoning] are on rise
- ✓ Above regulatory limits of Saxitoxin [Paralytic shellfish poisoning] concentrations are on decline

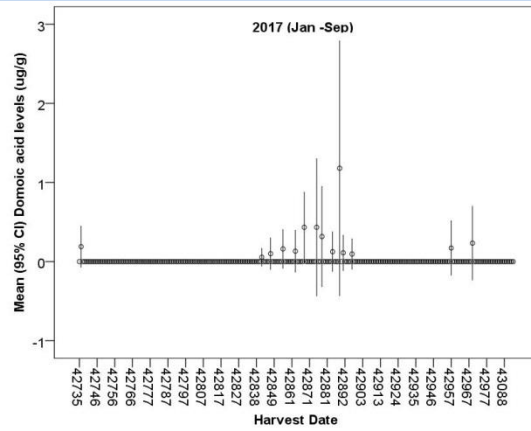
Toxic exposure mediated via FOOD in BC (I) - BCTOX®

Marine biotoxins (January to Sep 2017) in BC - Data from CFIA – BCTOX graphs

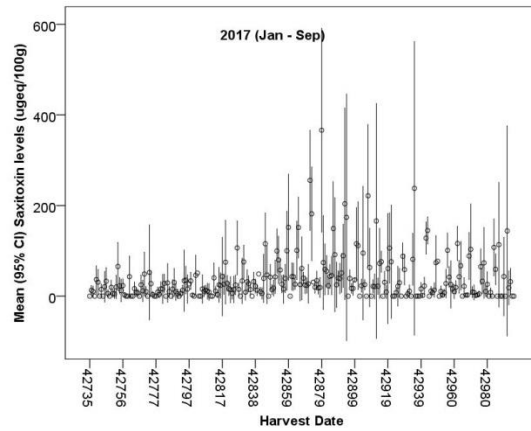
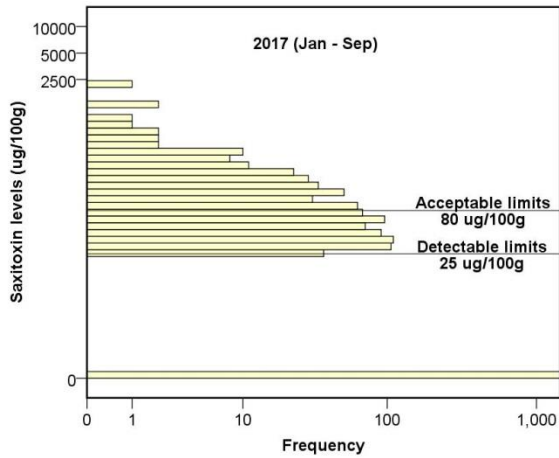
Histogram



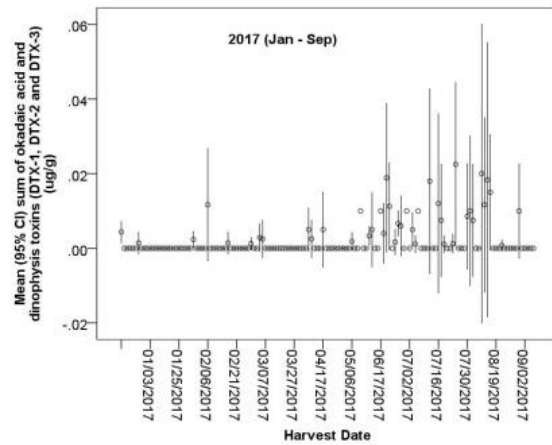
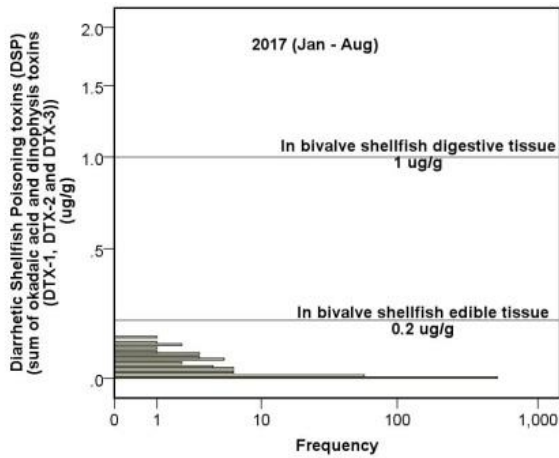
Mean (95% SEM) concentrations



Domoic acid (ug/g) (Amnesic shellfish poisoning (ASP)) among detected shellfish samples in BC (January to Sep 2017) (n=20 out of 2312) [This graph is prepared to imply the trend, and it should be interpreted with caution] [BCTOX Graph]



Saxitoxin (ug/100g) (Paralytic shellfish poisoning (PSP)) among detected shellfish samples in BC (January to Sep 2017) (n=850 detected out of 2643 samples) [This graph is prepared to imply the trend, and it should be interpreted with caution] [Data from CFIA - BCTOX Graph]



Okadaic acid (sum of okadaic acid and dinophysis toxins (DTX-1, DTX-2 and DTX-3) (Diarrhetic Shellfish Poisoning toxins (DSP)) among shellfish samples in BC (Jan to Sep 2017) (n=93 detected out of 607 sample) [This graph is prepared to imply the trend, and it should be interpreted with caution] [BCTOX Graph] [Data from CFIA - BCTOX Graph]

Toxic exposure mediated via WATER in BC - BCTOX

B.C.'s school districts had unsafe lead levels in drinking water sources [before intervention] according to media

A recent report from Media (VancouverSun 2017-09-15) suggested that more than half of B.C.'s school districts had unsafe lead levels in drinking water sources (fountains and sinks) that exceeded the maximum allowable limit of 10 ppb for in 2016-2017. This report also mentions that the lead levels were very high in certain samples.

Using other media sources, it was revealed that these values are related to prior to the intervention. Since then – according to the media – a variety of measures have been taken to bring the lead levels to safe levels. Mark Walsh (Secretary-treasurer) revealed steps taken in Greater Victoria school district: (TimesColonist 2017-09-18)

- Increase flushing (immediate response)
- Allocating \$200,000 to install filters to lower lead content in water at Greater Victoria school district facilities (about 500 filters have been installed) (later stage)
- --- Follow-up testing showed good result. If not we added a filter right onto the tap overnight. If lead filters clogged with other materials, “pre-filter” by attaching another filter where the municipal water flows into schools.
- Replacing pipes and other elements (options down the road)
- District superintendent, Gulf Islands school district, Lisa Halstead, announced the preventive steps.(TimesColonist 2017-09-18)
- Checking on a regular basis, some schools have water filters, some do flushing and some rank totally fine.
- --- Lead in water was traced primarily to the leaching from brass alloys [brass is a metallic alloy that is made of copper and zinc] that were part of drinking fountains’ control valves.
- A program being carried out to replace existing fountains with models that have stainless steel or plastic components.

In another report from **April** 2017, School district tests water for lead, closes down 39 fountains as a precaution in Mission. (MissionCityRecord 2017-04-13)

According to media reports, lead in school water brought to safe levels: Greater Victoria district. (TimesColonist 2017-09-18) (BCLocalNews 2017-09-19)

Water Quality

First thing in the morning

Run the water for two minutes before drinking

Throughout the day.....

Let the water run until it is cold before drinking

Sign reproduced from a photo from (CTVNews 2017-04-18) / (Castanet 2017-04-19)

Greater Victoria School District Secretary-Treasurer Mark Walsh has said that he hasn't heard of any students or parents coming forward with problems related to lead ingestion. (BCLocalNews 2017-09-19)

Data related to post intervention lead levels was not available from the media.

--- As it is stated in BCOX's copy right statement, this bulletin is

not official and is not liable for the accuracy of the news from media in this report. This summary report provides no direct information from official sources and should not be used as a reference from BCTOX.



Wastewater management

Mayor Lee Brain and council members attend the Union of B.C. Municipalities Conference Sept. 25 - 29. According to Prince Rupert's mayor the city has already secured \$11.5 million for the first two phases of the water project, but it needs a total of \$20 million to complete phase three. (TheNorthernView 2017-09-25)

Following the start of construction of the \$525-million contract of the new sewage treatment plant in the spring in Metro Vancouver, the board will decide soon to spend \$17.9 million on a system to capture thermal energy from treated sewage at the new North Shore Waste Water Treatment Plant. (VancouverSun 2017-09-18)

Toxic Spills/Dumps

If you do experience a “small spill”, contain it with a spill kit or report it at 1.800.OILS.911. (100MileFreePress 2017-08-04)

[Spill Incidents in September](#) (Spill-Incidents 2017) has reported no event after 31 August. (accessed Sep 26, 2017)

In July 2013, a tanker truck overturned, gushing about 33,000 litres of fuel into Lemon Creek, which led to a mass evacuation and a \$4-million cleanup. A criminal trial has now begun. (CBCNews 2017-09-26)

Managers plead guilty in B.C. coal mine spill (Tulameen River ran black with coal slurry). Crown attorney told the court the events of August 24, 2013 – when 60,000 liters of coal slurry were dumped into the Tulameen River. It was the result of a perfect storm, not following the legislative requirements, slow reaction time, fatigue, conflicting demands, production and cost pressures and inadequate training. (SalmonArmObserver 2017-09-20)

Adverse Reaction Reporting Canada Vigilance Program

Consumers/patients and health professionals can report adverse reactions (also known as side effects) to health products, including prescription and non-prescription medications, biologics, natural health products and radiopharmaceuticals, to the Canada Vigilance Program. (Health-Canada 2016-02-24 (modified)) (Canada-Vigilance-Program 2016-02-19)

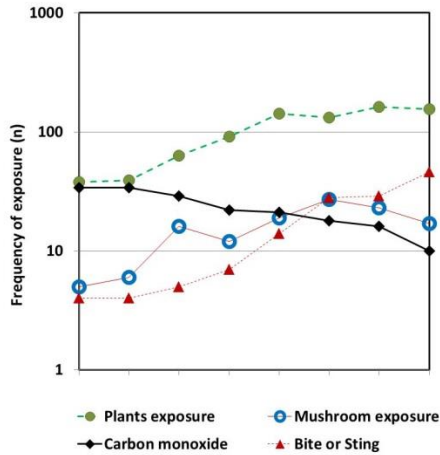
Toxicology Surveillance

BC Drug and Poison Information Centre

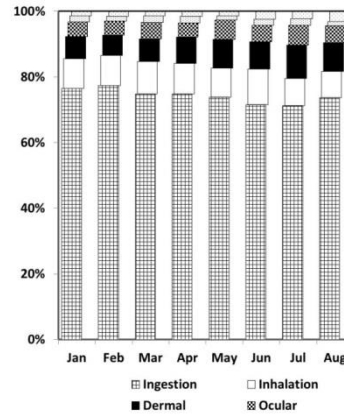
These graphs show the number of calls to BC drug and poison information centre (DPIC) from Jan to Aug 2017. As can be seen, by approaching the warmer months of the year, the number of calls related to plant poisonings, mushroom poisonings and bites increase. The ratio of the unintentional poisonings is also increases in summer. No major change regarding the routes of exposure and age groups were observed.

The most common drug related generic categories & generic substances from Jan to Aug 2017 were Analgesics, Sedative/Hypnotics/ Antipsychotics, Stimulants and Street Drugs, Cardiovascular drugs, Vitamins, Hormones and Hormone Antagonists, Dietary Supplements/Herbals/ Homeopathic, Antihistamines, Topical preparations and Antimicrobials respectively.

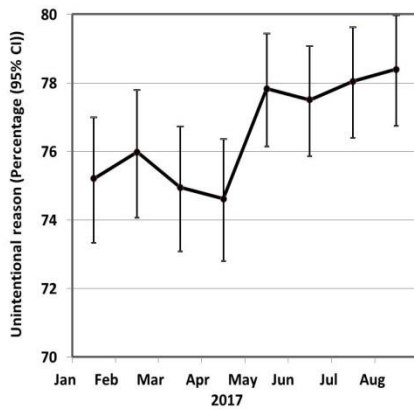
Poison Information (24-Hour Line) is available: 604-682-5050 for the lower mainland and 1-800-567-8911 for the lower mainland.



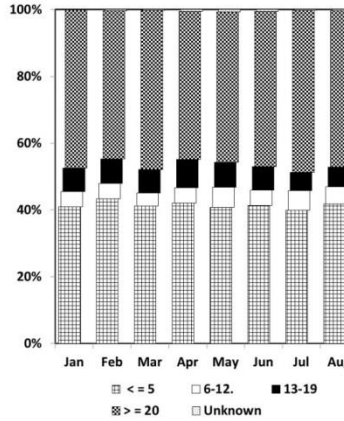
Frequency of cases (Jan – Aug 2017)



Routes of exposure (percentage of cases from Jan to Aug 2017)



Unintentional poisoning (ratio over all poisoning cases from Jan to Aug 2017)



Age groups (percentage of cases from Jan to Aug 2017)

Announcements - BCTOX

BC Government New Supports for Toxicology Related Issues

B.C.'s New Democrat government will hike taxes on corporations and polluters, while pumping more money into overdose crisis. (Vancouver-Sun 2017-09-11)

The government has set aside \$61 million to respond to the fentanyl overdose crisis and fund its new Ministry of Mental Health.

Fentanyl testing kits

Canadian retail chain, 180 Smoke Vape Store, will make fentanyl testing kits available in its retail stores and website in Canada. (COSION 2017-09-19)

Gun clubs and lead shots

Gun clubs need to get the lead out. The BC Wildlife Federation said Gun Club can continue to operate using lead shot, provided they manage the toxin. (BCLocalNews 2017-09-17)

Upcoming Toxicology conferences

Vancouver Mycological Society meeting, -- [Introduction to Mushroom Identification](#) – a 3-session course by Vancouver Mycological Society in Vancouver Sept. 21, 2017 7-9 pm, Sept. 27, 7-9 pm, Oct 4, 7-9 pm For registration email info@vanmyco.com

[44th Canadian Ecotoxicity Workshop](#), 2017-10-01/04 in Guelph <https://ecotoxcan.ca/registration>

[49th Annual Symposium of the Society of Toxicology of Canada](#), November 29 to December 1, 2017 in Montreal <http://www.stcweb.ca/en/events.shtml>

[North American Congress of Clinical Toxicology \(NACCT\) 2017](#) - in Vancouver
PRE-MEETING - OCTOBER 11-12, 2017 MAIN CONGRESS - OCTOBER 13-15, 2017
<http://www.clintox.org/wp-content/uploads/2017/05/NACCT-BROCHURE-2017-FINAL.pdf>

Upcoming Toxicology jobs in BC (September 2017)

- [Toxicology and Risk Assessment](#), Environmental Scientist - Toxicology Job. Golder Associates, BC Environmental Scientist
- [Environmental Risk Assessor](#) - SLR Consulting (Canada) Ltd. Vancouver, BC ([Ctrl click here](#)) [Sep 2017]
- [Environmental Risk Assessor](#), Arcadis Canada (ARCADIS) - Vancouver, BC ([Ctrl Click here](#)) [Sep 2017]
- [Project Manager – Asbestos](#), Design Group Staffing Inc – Vancouver, ([Ctrl Click here](#))
- [E-commerce Risk Analyst](#), Lush Cosmetics - Vancouver, BC [just risk analysis] ([Ctrl Click here](#))
- [Drug and Poison Information Pharmacist](#), PHSA. Vancouver, BC ([Ctrl Click here](#))

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