Given the considerable increase in fentanyl-related overdose deaths, the BC Centre for Disease Control (BCCDC) aimed to understand the characteristics of fentanyl use among clients accessing harm reduction and detox services in BC.

**Why did we do the study?**

Fentanyl-detected illicit drug overdose deaths in British Columbia (BC) increased from 5% of total illicit drug deaths in 2012 to over 25% in 2014, signaling an emerging public health concern. This was particularly evident following a cluster of 30 overdoses at the safer injection site (Insite) in Vancouver over the 2014 Thanksgiving Weekend.

Fentanyl is a synthetic opioid which is much more toxic than morphine and heroin. It is used medically for anesthesia and management of chronic pain; however, both pharmaceutical and illicitly produced fentanyl may be abused. Pharmaceutical fentanyl is available as injectables and patches, while illicit fentanyl may be sold as pills or powders, often mixed with other substances like heroin or oxycodone.

While some people may intentionally seek out fentanyl, recent evidence suggests that many of the fentanyl-related deaths in BC are due to individuals unknowingly consuming fentanyl. People consuming illicit fentanyl, whether intentionally or unknowingly, are at much higher risk of experiencing an opioid overdose because the amount of fentanyl in the substance may be highly variable and individuals may have no tolerance to opioids. An opioid overdose can reduce breathing, resulting in brain damage or even death. This study sought to determine the prevalence and pattern of illicit fentanyl use in light of the increase in fentanyl detected overdose deaths in BC.

**How did we do the study?**

During February and March 2015, clients at 17 participating sites across BC (see map) completed an anonymous questionnaire describing what drugs they used within the last three days and provided a urine sample to test for fentanyl. Participants received a small honorarium. Fentanyl was tested on-site using Rapid Response™ test strips (20ng/ml). The study materials and protocol was adapted from previous surveys and developed through consultation with peers at the Vancouver Area Network of Drug Users (VANDU) and staff at various harm reduction supply distribution sites and detox facilities. Quantitative analysis was conducted at the BCCDC. The study was approved by the UBC Behavioral Ethics Review Board.
What did we find?

A total of 242 surveys were analyzed. Crystal meth and heroin were reported as the most commonly used substances. The majority of participants reported using more than one substance within the last three days (average = 3). The proportion of people where fentanyl was detected in the urine differed between the 5 regional health authorities. This is not surprising, as the communities in British Columbia are highly diverse, with differences in preference for, and access to, certain drugs. The reported substances used were also significantly different between health regions.

Nearly 29% of participants tested positive for fentanyl, 73% of which did not report using fentanyl within the previous 3 days. This supports the hypothesis that fentanyl is being mixed into other substances, increasing the risk of overdose for people who do not use opioids. For example, crystal meth use was found to be associated with fentanyl detection, suggesting that even stimulants may be contaminated.

What should practitioners and policy makers consider based on the results of this study?

This study demonstrates that people may not be aware that they are consuming illicit fentanyl when using other substances, which poses a considerable health risk. This population could benefit from targeted harm reduction strategies, such as overdose recognition and response training and take home naloxone kits.

Policy Recommendations

Regulatory changes that increase access to naloxone and overdose prevention & response training should be explored. These include:
- Coverage on provincial drug plans
- Removing the requirement of a prescription

Practice Recommendations

Providers should consider prescribing take home naloxone to anyone at risk of overdose.

Providers should consider requisitioning fentanyl urine testing when investigating opioid misuse.

Recommendations to general public

Learn more about the dangers of fentanyl use and the signs of an opioid overdose.

If you choose to use:
- Start with small amount
- Avoid using alone
- Call 911 at the first signs of an overdose

Research Team

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Staff and clients at participating sites

For more information, visit towardtheheart.com or contact the BCCDC Harm Reduction Program at outreach@towardtheheart.com or 604-707-2400

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