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Rapid rise in fentanyl exposure among some substance users in Vancouver

13 March 2018

- **Vancouver researchers analyzed substance use trends in the Downtown Eastside**
- **The powerful opioid fentanyl was detected in 39% of participants' urine samples**
- **From March to July 2017, the probability of fentanyl detection doubled each month**

Over the past several years there has been a dramatic increase in deaths among people who have overdosed on street drugs. This initially happened in British Columbia but has since spread to Alberta and the rest of Canada. However, British Columbia continues to grapple with what has been called an "overdose epidemic" due to exposure to the powerful pain reliever fentanyl and its analogues.

In a [previous CATIE News bulletin](#), we reported that a group of researchers in Vancouver who conducted analyses of the urine of several hundred substance users found that, overall, 15% had been exposed to fentanyl. Among people in that group who injected street drugs, the figure was about 20%. That study was done in 2016 and published in 2018. Since then, the penetration of fentanyl into street drug markets has likely increased. As a result, the proportion of substance users who have been exposed to fentanyl has also likely increased.

In the Downtown Eastside

Another team of researchers in Vancouver at the University of British Columbia and Simon Fraser University have been studying the effectiveness of some health services delivered to 375 people living in a neighbourhood called the Downtown Eastside. According to the researchers, this is an impoverished neighbourhood that has had to deal with extensive health challenges, including "epidemics of HIV, hepatitis C virus, and opioid and stimulant drug use." The researchers found that "clinical treatment effectiveness was highest for HIV infection, intermediate for opioid dependence and lowest for psychosis."

Focus on substance use

The researchers also performed another study, which focused on substance use, with 237 people from the above-mentioned study. For this study, conducted from March through July 2017, participants were contacted monthly, interviewed about their substance use and had their urine screened for exposure to the following substances:

- fentanyl/norfentanyl
- morphine
- heroin
- codeine
- methadone

The average profile of participants in the substance use study was as follows:

- age - 46 years
- 78% men, 22% women
- according to the researchers, most people were "marginally housed or homeless"
- nearly 50% had injected street drugs in the past week

Results

Researchers found that during the five months of the study, 91 out of 237 people (38%) disclosed the use of non-prescribed opioids.

Fentanyl was detected in 229 out of 590 (39%) urine samples.

According to the researchers, “Overall, 83 of 91 participants (91%) reporting non-prescribed opioid use had at least one fentanyl-positive [urine] sample; 15 of these 83 (18%) reported taking fentanyl (11 of whom reported daily use).”

The researchers found that “agreement between self-report and detection was low for fentanyl, and moderate or greater for other opioids.”

Over the course of the study, researchers observed the following trends:

- “The probability of fentanyl detection doubled each month.”
- Among people who disclosed non-prescribed opioid use, “the probability of fentanyl detection was greater and increased at a faster rate overtime. In contrast, [other] opioid detection decreased over time.”

All of these trends were statistically significant; that is, not likely due to chance alone.

Over the course of the study, the deaths related to drug overdoses fell somewhat and then stabilized but remained high.

Bear in mind

As a street drug, fentanyl is not new. Prior to the current era, studies found that it was relatively rare in the market for street drugs in Canada. What is new is its wider availability as a street drug over the past several years.

The researchers stated: “In Vancouver, as [in the United States] the initial phase of the opioid epidemic was associated with [pharmaceuticals diverted from the medical system]. This changed as non-pharmaceutical fentanyl entered the market as a heroin additive. The low concordance between reported fentanyl use and detection is consistent with unawareness of exposure. In the early months, as fentanyl-positive samples rapidly increased in the participants, an increase in overdose calls to first responders occurred in the neighbourhood, and fatal overdoses increased citywide.”

The researchers stated that “tolerance to the adverse effects of higher potency opioids may be developing among some users, as some individuals report actively seeking fentanyl.”

The present study adds to the mounting evidence base that underscores the need for a coordinated and comprehensive expansion of frontline and other services to limit further overdoses (and deaths) from all opioids (including fentanyl) and, subsequently, to stabilize the lives of substance users by providing the different supportive interventions needed (including low-barrier access to mental health and addiction treatment and access to subsidized housing).

Resources

[Research Update: Supervised injection facilities in Canada: past present and future](#) – *Prevention in Focus*

[Best Practice Recommendations for Canadian Harm Reduction Programs](#)

[Implementing Supervised Injection Services](#) – Registered Nurses' Association of Ontario

—Sean R.
Hosein

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