

The rise and fall of carfentanil in Toronto's unregulated drug supply

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Since the beginning of Toronto's overdose epidemic in 2017, few substances have been as deadly as carfentanil, despite having a brief presence in the drug supply. Carfentanil, a synthetic opioid so potent that a dose the size of a grain of salt could be fatal (i.e., up to 10,000 times more potent than morphine and 100 times more potent than fentanyl),¹ first appeared in Toronto's unregulated opioid market in 2016. By 2019, it was linked to more than a third (35%) of Toronto's accidental opioid toxicity deaths.² By 2022, carfentanil detections in Toronto peaked at 84 samples, followed by a significant decline to 4 detections in 2024 and 10 detections in 2025 (January–May), according to data from Toronto's Drug Checking Service (TDCS).³

The rapid rise and subsequent fall of carfentanil in Toronto reflects the volatility of the unregulated drug market, but was not unique to Toronto. Canada's drug analysis survey reveals how carfentanil has fluctuated throughout Canada, present in just 0.3% of opioid samples in 2016 before spiking to 10% in 2019 and later declining to 4.9% in 2022.⁴ While the exact reasons behind carfentanil's decline remain uncertain, its extreme potency likely made it challenging to work with and dose. This raised significant risks for both people who use drugs and suppliers, potentially leading to its gradual replacement by other substances better suited to the market's demands. Regardless of the reasons, carfentanil's decline has not made the market any safer. Instead, the combination of clandestine chemists, rapidly evolving supply networks, and the relentless pursuit of profit by criminal organizations has created a drug market where every dose carries unpredictable risks.

Indeed, the story does not end with carfentanil's fall. While carfentanil detections have waned, other fentanyl derivatives (e.g., fluorofentanyl, methylenefentanyl), as well as other potent substances, have taken its place in Toronto's unregulated opioid market.³ Nitazene-class opioids, sometimes referred to as 'Frankenstein opioids,' are among the most concerning, with some being up to 90 times more potent than fentanyl.³ TDCS

first detected nitazenes in February 2021, and since then, twelve distinct nitazene opioids have been identified in local samples.³ Compounding the toxicity of the unregulated supply are benzodiazepine analogues, veterinary tranquilizers, and synthetic cannabinoids, all of which have been detected in increasing frequency over the past seven years.³ Together, these substances have made the unregulated opioid market more unpredictable and more lethal than ever.

Toronto has made significant strides in monitoring its unregulated drug supply through nimble, real-time monitoring and surveillance systems, such as the TDCS. However, TDCS has operated as a reactive yet vital lifeline. It offers Torontonians who use drugs a fighting chance to adapt and survive in an unpredictable market, but it cannot address the root causes of this volatility. The stark reality is that as long as criminal organizations and drug cartels dictate the composition and potency of the city's drug supply, they will continue experimenting with and exploiting people's lives for profit. New and more dangerous substances will continue to replace those that disappear. Toronto needs bold, evidence-informed reforms to address its unregulated opioid supply. This includes exploring supply regulation initiatives, expanding harm reduction programs instead of shutting them down,⁵ and providing comprehensive support across the substance use care continuum for people who use drugs. Without systemic change in how we engage with the city's drug supply, the cycle of harms and suffering will persist, and the next wave of deadly substances will always be just around the corner.

Contributors

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Declaration of interests

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who donate samples to reduce harms from unregulated substances and support community-led drug market monitoring and education.
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