

# Feeling Safer: Effectiveness, feasibility, and acceptability of continuous pulse oximetry for people who smoke opioids at overdose prevention services in British Columbia, Canada

Category: Poster Presentation (in person)

## Abstract Body

### Background

Smoking is the most common mode of illicit drug use overall and among fatal illicit drug overdoses in British Columbia (BC). Misperceived risk of smoking (e.g., fewer who smoke carry naloxone kits) and limited smoking-specific harm reduction services contribute to overdose deaths. Overdose prevention services (OPS) offer supervised settings for drug use. OPS use declined at COVID-19 onset, especially for smoking. Continuous pulse oximetry, common in acute care, allows real-time, remote oxygen monitoring. We aimed to evaluate a new use of continuous pulse oximetry protocol technology at OPS for people who smoke opioids, to enable physical distancing requirements and promote staff and client safety during dual public health emergencies due to opioid overdoses and COVID-19.

### Methods

We developed a monitoring protocol in collaboration with clinical experts and people with lived/living experience of substance use. We implemented it from March to August 2021 at four OPS in BC that allow smoking.

We included adults ( $\geq 18$  years) presenting to smoke opioids. Peer researchers collected demographic, health, and substance use information, and conducted structured observations. Participants, OPS staff, and peer researchers completed post-monitoring surveys.

We analyzed responses using a thematic deductive approach and validated themes with peer researchers.

### Results

We included 599 smoking events. Participants' mean age was 38.5 years; 73% were male. Most (98%) reported using "down", heroin, or fentanyl; 48% concurrently used other substances (32% stimulants); 76% smoked alone in the last 3 days; and 36% had overdosed while smoking.

Respondents reported the protocol facilitated physical distancing (required by COVID-19 and outdoor spaces), they would use it again, and they were highly satisfied. It was easy to use, efficient, improved staff confidence (“provides... certainty”) and participants’ sense of safety (“feel seen”).

### Interpretation

Our study is a proof-of-principle that new uses of technology can enhance traditional face-to-face care in community settings and can be effectively used by peers. Partnerships with people with lived/living experience all aspects of design and implementation were integral to our success. Continuous pulse oximetry is effective, feasible, and acceptable at OPS, and improved harm reduction care in crisis for people who smoke opioids during the dual opioid epidemic and COVID-19 pandemic.

### Key Words

- COVID-19
- Opioids/Opiates
- Prevention/Harm Reduction

### Learning Objective # 1

1) Consider challenges and opportunities of adapting continuous pulse oximetry to overdose prevention services to meet changing needs of people who use drugs.

### Learning Objective # 2

2) Appreciate the importance of engaging people with lived/living experience of substance use in research impacting harm reduction services.

### Reference # 1

BC Coroners Service. Illicit Drug Toxicity Deaths in BC Knowledge Update: Mode of Consumption. October 11, 2022 [cited February 18, 2023]. Available from: [https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/bccs\\_illicit\\_drug\\_mode\\_of\\_consumption\\_2016-2021.pdf](https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/bccs_illicit_drug_mode_of_consumption_2016-2021.pdf)

### Reference # 2

Mamdani Z, Feldman-Kiss D, McKenzie S, Knott M, Cameron F, Voyer R, et al. Core competencies of peer workers who use pulse oximeters to supplement their overdose response in British Columbia. *PloS one*. 2022;17(9):e0273744.

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