

Q&A COVID-19 Immunization & Dual Public Health Emergencies:

Q: As someone who is providing COVID-19 immunizations, what is helpful to know about the dual public health emergencies?

A: The Province of British Columbia declared a Public Health Emergency in early 2016 in response to increasing overdose deaths. Unregulated drug toxicity is now the leading cause of death in British Columbia for people aged 10 to 59, accounting for more deaths than homicides, suicides, accidents and natural disease combined.¹ A recent study identified these preventable overdose deaths have decreased life expectancy in British Columbia². The greatest health risk to people using substances is the toxic drug supply which can be further exacerbated by the harms of COVID-19, therefore ease in access to COVID-19 vaccination is imperative.

Q: Why are people who engage in substance use likely to experience a number of increased risks related to the COVID-19 pandemic?

Fentanyl and other opioid agonists depress respiration by acting on μ -opioid receptors at various sites to reduce the response to raised pCO₂ and lowered pO₂ and thus reduce the drive to breathe.³ As COVID-19 primarily targets the respiratory tract and lung parenchyma, the risks of respiratory depression in individuals experiencing both COVID-19 disease and overdose may be exacerbated.⁴ Substances in their illicit and unregulated form have been linked to substantial mortality from overdose deaths, and these deaths have increased during the COVID-19 pandemic.⁵ People engaged in substance use also experience stigma and discrimination, and may also experience homelessness or are more likely to live in congregate (group) settings. Those who experience social and economic inequities are not only at greater risk of COVID-19 infection, but often do not have the same access to health care or supports needed to recover from the illness.⁶ For individuals who have experienced an overdose, they are more likely to have 3 of the 4 severe COVID-19 risk factors such as, chronic pulmonary disease, diabetes, coronary heart disease and multiple chronic diseases. Access to safer environments to use substances has also decreased during COVID-19.⁷

¹ More than 1,000 lives lost to toxic unregulated drugs in the first five months of 2023. Retrieved from: https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/news/2023/bccs_june2023_reporting.pdf

² Ye, X., Sutherland, J., Henry, B., Tyndall, M. & Kendall, P.R.W. (2018). At-a-glance – impact of drug overdose-related deaths on life expectancy at birth in British Columbia. *Health Promotion and Chronic Disease Prevention in Canada*, 38(6): 248-251. doi: [10.24095/hpcdp.38.6.05](https://doi.org/10.24095/hpcdp.38.6.05)

³ Hill, R., Santhakumar, R., Dewey, W., Kelly, E., & Henderson, G. (2019). Fentanyl depression of respiration: Comparison with heroin and morphine. *British Journal of Pharmacology*, 177(2), 254–265. <https://doi.org/10.1111/bph.14860>

⁴ Jonathan Schimmel & Alex F. Manini (2020) Opioid Use Disorder and COVID-19: Biological Plausibility for Worsened Outcomes, *Substance Use & Misuse*, 55:11, 1900-1901, DOI: [10.1080/10826084.2020.1791184](https://doi.org/10.1080/10826084.2020.1791184)

⁵ Centers for Disease Control and Prevention (2020). Increase in Fatal Drug Overdoses Across the United States Driven by Synthetic Opioids Before and During the COVID-19 Pandemic. <https://emergency.cdc.gov/han/2020/han00438.asp>

⁶ Samuels, E. (n.d.). *Social and economic inequities open the door for COVID-19's uneven distribution* Retrieved from <https://www.spph.ubc.ca/social-and-economic-inequities/>

⁷ Slaunwhite, A. K., Gan, W. Q., Xavier, C., Zhao, B., Buxton, J. A., & Desai, R. (2020). Overdose and risk factors for coronavirus disease 2019. *Drug and Alcohol Dependence*, 212, 108047. <https://doi.org/10.1016/j.drugalcdep.2020.108047>

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Q: Is COVID-19 vaccination safe for people who engage in substance use?

Yes. Using illegal and/or legal substances does not make the vaccine unsafe and engaging in substance use is not a contraindication to receiving a COVID-19 vaccine.

For people who engage in substances, the benefits of vaccination go well beyond reducing the risk of contracting or experiencing the worst effects from COVID-19. Importantly, vaccination enables safely gathering with others again. For people experiencing addiction, or impacts to their mental wellness such as depression or anxiety that can be exacerbated by the stress of isolation, vaccination can bring a return to normalcy, including greater access to social supports.⁸

Many adults feel a bit nervous about immunization appointments. [Here are some strategies](#) that can be done before, during, and after the immunization appointment that can help make immunizations easier and less stressful.⁴

Q: What if someone presents for their COVID-19 vaccine appointment and appears to be under the influence of substances?

There isn't a concern about vaccine safety related to an individual being intoxicated or experiencing the effects of substances.³ However, informed consent is an essential pre-condition to providing immunization, and it is the professional and legal responsibility of the health care provider to obtain informed consent prior to immunization. While some substances may impair a person's ability to fully understand the health information and ask questions⁹, this is not always the case as substances can affect people in different ways. Therefore, it is important to engage in a conversation with that person. Some information that can help determine a person's capacity for consent can include: their ability to engage in a conversation, whether they are oriented to person, place and time, and if they can share why they have come to the clinic.⁹ If there are any further concerns, immunizers are encouraged to seek assistance from other experienced staff available at the immunization clinic.

Q: Do we know whether substance use has an impact on vaccine effectiveness?

As people who engage in substance use live in all areas of the province and were among the earliest groups eligible for COVID-19 vaccination, we do know that vaccination has had a significant impact on preventing COVID-19 transmission, and reducing severe illness and outcomes related to COVID-19 infection throughout the province. To date, there is no evidence that people who engage in substance use do not benefit equally from vaccination

⁸ Volkow, N. (2021, Jun 11). Encourage people with substance use disorders to get vaccinated against COVID-19. [Blog post]. Retrieved from <https://www.drugabuse.gov/about-nida/noras-blog/2021/06/encourage-people-substance-use-disorders-to-get-vaccinated-against-covid-19>

⁹ Taylor, D., Ho, A., Mâsse, L. C., Van Borek, N., Li, N., Patterson, M., Ogilvie, G., & Buxton, J. A. (2016). Assessment of Capacity to Consent by Nurses Who Deliver Health Care to Patients Who Misuse Substances. *Global Qualitative Nursing Research*, 3, 233339361667107. <https://doi.org/10.1177/2333393616671076>

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as compared to other groups¹⁰, but more information may become available as our experience with dual public health emergencies continues to evolve.

Q: I'll be working at a COVID-19 vaccine clinic. How will I know if someone is having an anaphylactic reaction to the vaccine or is experiencing an overdose?

An anaphylactic reaction can be differentiated from an overdose by examining the client. If one of these syndromes is suspected, obtain vital signs and look for changes in respiration, mental status, pupils, and the skin. The table below outlines the key differences between anaphylaxis and overdose.

As per Part 3 of the BCCDC Immunization Manual, an individual experiencing anaphylaxis may experience:

System	Initial Signs and Symptoms of Anaphylaxis One or more sign or symptom may be present	Initial signs of overdose
Mental status	Awake and anxious	Euphoria to comatose
Pupils	Normal to dilated	Usually constricted; can be normal
Skin*	Hives, swelling (face, lips, tongue), angioedema, itching, warmth, redness, drooling in children	Cyanosis and pallor (pale, blue, grayish or ashen skin)
Respiratory	Normal to increased respiratory effort; coughing, wheezing, shortness of breath, chest pain or tightness, throat tightness, hoarse voice, nasal congestion or hay fever-like symptoms (runny, itchy nose and watery eyes, sneezing), trouble swallowing, drooling in children	Respiratory depression (less than 10 breaths per minute); poor respiratory effort
Cardiovascular	Normal to fast heart rate, Weak pulse, dizziness or light headedness, collapse, hypotension**, shock	Normal to low heart rate; mild hypotension
Gastrointestinal	Nausea, pain or cramps, vomiting, diarrhea	Decreased bowel sounds
Other	Anxiety, sense of doom, headache, uterine cramps, metallic taste Suddenly quiet, sleepy or lethargic in children	Responsive to naloxone

*Skin signs, such as hives are present in ~80% of cases but may develop after other symptoms have already occurred. Patients can have anaphylaxis without having hives. **Hypotension may be the only sign of anaphylaxis.

¹⁰ University of British Columbia Faculty of Medicine. (2021, July 14). *Researchers launch study into COVID-19 vaccine uptake and efficacy in vulnerable urban populations*. <https://www.med.ubc.ca/news/researchers-launch-study-into-covid-19-vaccine-uptake-and-efficacy-in-vulnerable-urban-populations/>

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The [BCCDC Responding to Opioid Overdoses Toolkit](#)¹¹ is a resource for healthcare professionals that includes guidance on assessment and interventions when responding to an opioid overdose.

Both events are potentially life-threatening and require immediate treatment. It is important to note that the treatment and management to these events differ; refer to the respective guidelines & resources:

- [BCCDC Immunization Manual, Chapter 2: Immunization, Part 3 – Management of Anaphylaxis in a Non-Hospital Setting](#)
- [BCCDC COVID-19 Harm Reduction and Overdose Response Information Sheet](#)
- [Toward the Heart SAVE ME STEPS: How to recognize and respond to an overdose](#)

If a client presents with any of the above symptoms, follow site protocol regarding emergency events and notify appropriate medical staff immediately.

Q: Where can I get more information on overdose prevention, and training on how to use a Naloxone kit?

- Toward the Heart Take Home Naloxone Program: <https://towardtheheart.com/naloxone>
- BCCDC Harm Reduction Services: <http://www.bccdc.ca/our-services/programs/harm-reduction>
- Each health authority has overdose prevention information and information on Naloxone training that can be accessed here: <http://www.bccdc.ca/health-professionals/clinical-resources/harm-reduction>

¹¹ <https://towardtheheart.com/resource/bccdc-opioid-overdose-response-toolkit/open>