

Jan 2, 2025

Dear Provincial Medical Health Officers and Dr Tam,

I am writing to urge you to follow Alberta Health Services' lead, and include '**stiff body or seizure like movement**' in the list of possible signs and symptoms of opioid overdoses/toxicity in your educational material:

<https://www.albertahealthservices.ca/dsa/Page16025.aspx>

This addition would bring your guidelines up to date and make them safer and more accurate.

As you are likely aware, fentanyl can cause stiffness and abnormal muscle movement. Not only has this been well documented in the anesthesia literature for decades, a similar phenomenon has been well documented in recreational opioid overdoses. In a large observational study at a safe consumption site in Vancouver in 2018, twenty four percent of 1581 clients who overdosed had either stiffness or abnormal muscle movement:

<https://harmreductionjournal.biomedcentral.com/articles/10.1186/s12954-018-0271-5#:~:text=It%20is%20important%20to%20recognize,treatment%20with%20oxygen%20and%20naloxone.>

Despite this large Canadian study demonstrating that one in four overdoses had stiffness or dyskinesia, most provinces, as well as Health Canada, are missing this critical piece of information in their published educational material about opioid overdose recognition. Not including this information in your educational literature can have deadly consequences.

On January 23, 2024 my daughter and another 18 year old student collapsed in a University of Victoria residence after taking a drug contaminated with fentanyl. The two teenagers had a witnessed collapse and 911 and campus security first aid responders were called immediately. When my daughter collapsed she was stiff for about 2 minutes with a bit of hand twitching. She then became limp and soon after turned blue. The other student had intermittent jerking accompanied by loud striderous snoring/wheezing, activity that was interpreted as seizures. Despite contacting emergency services immediately, both kids were denied the very basic care they needed until it was too late. This happened in large part, because the people on scene believed the two students had a seizure, and first responders and the 911 call taker did not understand that symptoms of a fentanyl overdose can look like a seizure. This led to a cascade of errors that resulted in my daughter's death and a hypoxic brain injury in the other child.

Campus security arrived within a minute of both teenagers turning blue. The security officers were both trained in CPR and carried nasal naloxone and responded within minutes of the students collapsing. Despite arriving to two blue unconscious teenagers, they waited 9 minutes to give the Narcan that they carried, and 12 minutes to initiate CPR.

911 was contacted within a minute of the girls collapsing. Although the 911 call taker knew both girls were unconscious and turning blue from the moment she asked what happened, she did not direct CPR for 16 minutes from the start of the call. She did not ask about possible drug use for 11 minutes, and did not direct Narcan administration until she received a

full confession from a bystander about possible opioid consumption. She did not do these things, because the caller told her the students may have had seizures. That description prompted the 911 operator to use their seizure protocol that did not allow her to ask about possible drug use, or recommend treatment with Naloxone, even with two unconscious teenagers at a university residence who were turning blue. Even when she finally learned that Narcan was available, the 911 operator waited for a full confession from a bystander about possible opioid consumption prior to recommending Narcan administration.

The 911 call takers in British Columbia uses the same rigid protocol system that is used in most jurisdictions in Canada. The seizure protocol did not allow the B.C. ambulance call taker to direct CPR when patients were unconscious and turning blue. Using that protocol, the call taker could not even dispatch an ambulance for two blue unconscious teenagers, until she first asked about brain tumours, pregnancy and strokes, and administered a breathing diagnostic tool that is not recognized in mainstream medical literature. Incredibly, prior to committing to this generalized seizure protocol, the 911 call taker could not even ask for a description of the potential seizure, but was instead obligated to choose the seizure protocol based on a caller saying they collapsed and 'I think they started seizing'. As a result of using the seizure protocol, CPR was only directed at the 16 minute mark, when someone on scene finally announced that they could no longer find a pulse on my blue unconscious child, after she suffered a catastrophic hypoxic brain injury that killed her.

As an emergency physician who practices in a province that is the epicentre of the opioid crisis in Canada, I remain shocked and dismayed that our prehospital 911 system would leave two blue unconscious teenagers without basic CPR for 13 minutes (16 from the start of the call), and would wait 7 minutes to even dispatch an ambulance, simply because the call taker was told that the teenagers may have had a seizure. It is incomprehensible that the paid campus security first aid responders, who carried naloxone and were trained how to use it, would not recognize a possible opioid overdose simply because someone believed they had a seizure. Clearly there were multiple errors and no single thing would have prevented them all, but a better understanding of the presentation of a possible opioid overdose certainly would have helped. If any one of the 5 witnesses, the two security officers or the 911 operator were aware that opioids can cause activity that may look like a seizure, the outcome likely would have been different.

Unfortunately the MPDS/ProQA protocol system used in most Canadian prehospital systems is owned by a large American company (Priority Dispatch). Given it is a for-profit system with proprietary protocols that are not in the public domain, exposing what is happening in our prehospital system and convincing them to make changes for patient safety has been very challenging. Although the company made a couple of minor changes 10 months after my daughter's preventable death, if a 911 caller mistakenly reports that a patient had a seizure, when in fact they had overdosed, a similar scenario could easily unfold with the current iteration of their protocol.

Opioids have caused a decrease in life expectancy in Canada. They are currently the leading cause of death in people between the age of 11 and 60 years old in B.C, responsible for more deaths than suicides, homicides, accidents and natural deaths combined. It is the leading reason for calls to 911 for multiple patients. Yet in 2024, both the 911 call taker and the paid university first aid responders failed to recognize that two unconscious teenagers who were turning blue in a university residence may have suffered an overdose and needed to be given

the life saving drug that they carried in their kit, and deliver basic first aid in the form of basic CPR, simply because they believed they had a seizure. My daughter was left to die, and the other student was left to suffer a hypoxic brain injury, when both were so easily preventable with the time and resources available. Close to ten years into the fentanyl crisis that is ravaging this country, what happened in that university residence is truly incomprehensible. As public health officials you have a duty to educate the public about the opioid crisis. Yet with the exception of Alberta, most of you have failed to include this common symptom of fentanyl toxicity. Please follow Alberta's lead and make this change.

Although the primary reason for this letter is to ask you to include stiffness and seizure like activity in your list of possible signs and symptoms of opioid toxicity, I also implore you to take a more active role in ensuring young people in your province are adequately educated about the opioid crisis and are taught the basic skills they need to stay safe and save a life. When teenagers and young adults were at minimal risk of harm from COVID 19, public health agencies across this country were willing to close their schools, ban them from interacting with their friends and ban extra curricular activities... all measures that caused significant harm to them. Yet during the opioid public health crisis that is actually causing significant harm and death in this population, you have done little to ensure young people are taught the basic skills they need to navigate it. Please take a more active role to advocate for, and ensure the following in your province:

1. Mandate CPR **and** naloxone training in high schools, as well as education about the toxic drug supply. This does not have to cost your province anything, the ACT Foundation in Canada has the infrastructure in place and will do this for free.
2. Provide free public access to nasal naloxone in your province, if it is not already available (kudos to Ontario, Quebec, Yukon and NWT for already doing this). The archaic injection kits are a huge barrier for the majority of the population.
3. Mandate simple overdose response programs in all your secondary and post secondary institutions, with widely available nasal naloxone on campuses. Most of you have no provincial guidelines for overdose response in these institutions.

You must do more to protect our youth.

Sincerely,

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