

Memo

To: Professor *****
From: Nolan Coetzee
Date: 4/22/2024
Re: British Columbia Drug Crisis

Hello Professor,

Under the *Controlled Drugs and Substances Act*, adults in British Columbia, Canada from January 2023 to January 2026 will not be subject to criminal charges for the personal possession of small amounts of certain illegal drugs. The illegal drugs include Cocaine, Meth, Ecstasy, and Opioids. This means that these drugs are considered like a beer, you can consume or use these drugs in public spaces around others. After hearing about this law, I was intrigued to learn more about what's going on. Fortunately, the [Government of Canada](#) had just released drug/substance data dating from Q1 2016 to Q3 2023. After tidying the data for my own usage, I wanted to answer three questions.

1. Is there a drug crisis in British Columbia compared to the rest of Canada?
2. Has the Controlled Drugs and Substances Act had a positive effect on their people?
3. If there is a drug crisis in British Columbia, will it affect neighboring provinces?

Here is the link to my data:

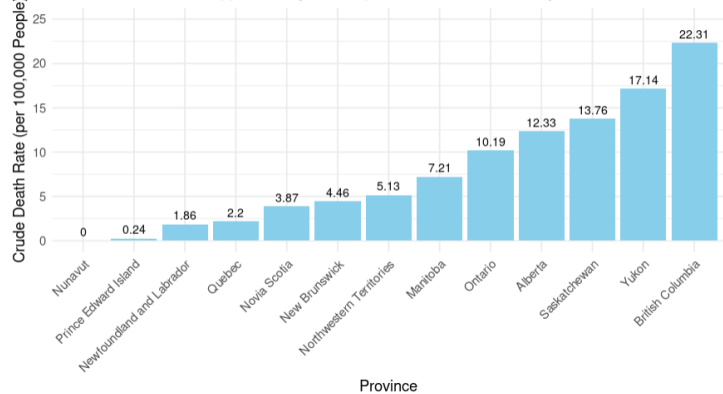
https://docs.google.com/spreadsheets/d/1FE0aGgRfRRTg4nocFqdVBeRfEqjE_ibEhFs6OSGxGzc/edit?usp=sharing

To compare the providences with each other, we have to determine the crude death rate. Because each providence has a different population, my research was mainly done with deaths per 100,000 people which is (Overdose Deaths / Population Estimate) * 100,000. For example, in 2016 the number of deaths per 100,000 in British Columbia was 8.22, meaning that for every 100,000 people in British Columbia, 8 people would die from a drug overdose.

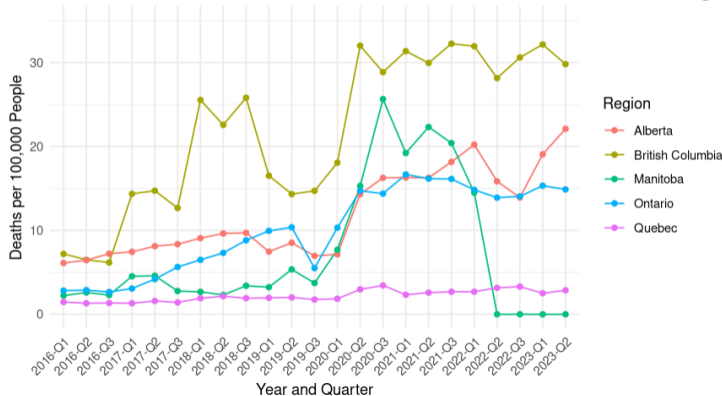
Figure 1A on the right shows the comparison between British Columbia and the other provinces.

Figure 1B below shows how British Columbia compared to the five most populated provinces over the years.

Average Deaths per 100,000 in Canadian Provinces from 2016 to 2023
British Columbia has struggled heavily with drug overdose deaths over the years



Deaths per 100,000 People in the five most populated Canadian provinces
British Columbia has consistently stayed above the rest

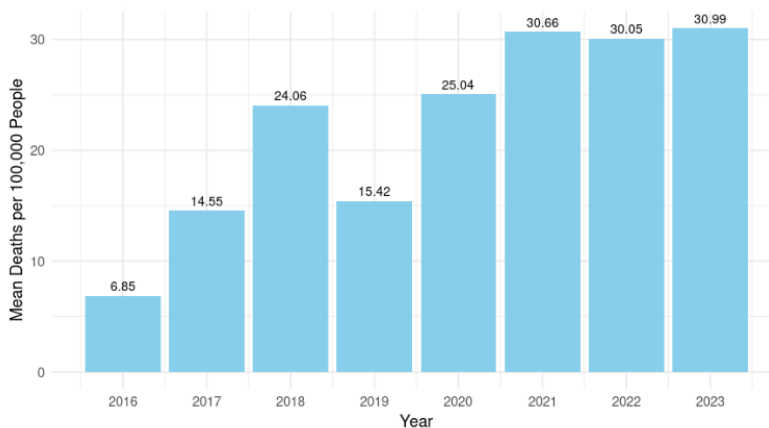


The data gives us a clear implication that there is a drug crisis happening in British Columbia. In Figure 1A above, the average deaths per 100,000 of all the provinces together is 7.74, and British Columbia had 15 more deaths than the average with a total of 22.31. In Figure 1B

on the left, B.C. consistently had a higher crude death rate than the 4 other heavily populated provinces over the 5 years by a high margin. I believe that there is unquestionably a drug crisis happening now in British Columbia when you compare their data to the other provinces.

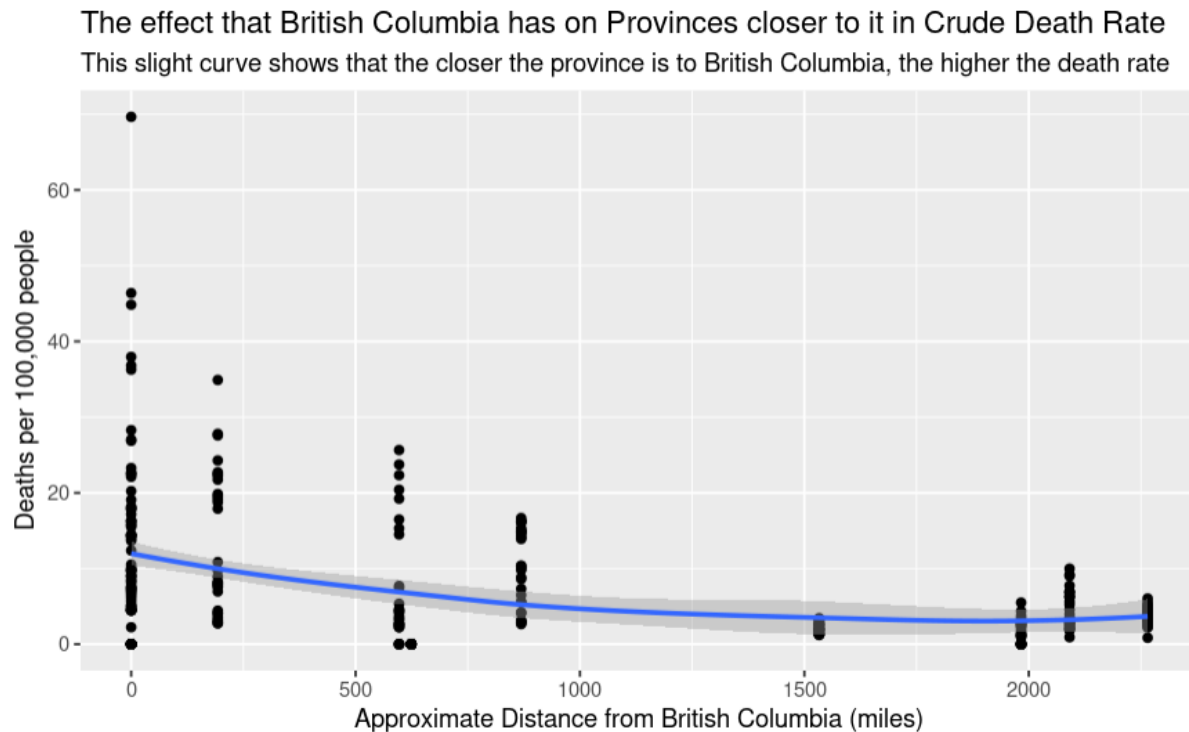
Amid the drug crisis, The Canadian Government amended the *Controlled Drugs and Substances Act* which allows adults to possess small amounts of certain drugs. Because I only had full data for the first two quarters of 2023, I compared that with the first two quarters of the years prior and here was what we saw in Figure 2A below.

Deaths per 100,000 People in British Columbia over the years
The institution of the law has had no effect on the deaths



We can see that through the first two quarters of 2023, there was no positive effect at all. The crude death rate increased from the prior years. Although I didn't have access to this in my data, the government of Canada stated that at the end of 2023, British Columbia suffered the highest amount of overdose deaths that they had ever recorded. This concludes that the amendment to the act had no positive effect on British Columbia's drug crisis. It leads you to wonder why they instituted this.

I had reason to believe that British Columbia's drug crisis affected the provinces closer to it. I believed that the closer the province was to B.C. the higher their crude death rate. Here is the data that I came up with. I measured the approximate distance of each providence by the shortest distance there was between the borders of the providences.



[Figure 3A](#) above shows that not only does British Columbia have a drug crisis, but the crisis is rubbing off on providences closer to it. It looks like a positive relationship between the closer the distance to B.C. and the higher the crude death rate. I plotted the residuals and found that this relationship is a real one.

In conclusion, I believe that there is a real crisis happening right now in British Columbia and it's hurting the providences closer to it. Washington, the state in the US which is also connected to British Columbia had the [highest increase in drug overdose death rates from 2023-2024](#) meaning that it affects the United States as well. Another bizarre fact is that in response to British Columbia's highest ever-recorded overdose death count, the government of B.C. proposed legislation to ban the usage of the illicit drugs in public spaces. However, this legislation was taken up by their Supreme Court and it was blocked, meaning that people are still able to possess cocaine, meth, ecstasy, or opioids and people are allowed to do them in public. It makes you wonder what is going on behind the scenes in British Columbia and who are the people in charge.

Citations:

1. Centers for Disease Control and Prevention. (n.d.). Drug overdose data. Retrieved from <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>
2. Health-infobase. (n.d.). Opioids and stimulants. Retrieved from <https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants/>