The Forgotten Ones: Drug Overdose Death's Since COVID-19

Fina Pirrone¹

ABSTRACT: Drug overdose deaths had become a matter of concern leading up to the year 2019 but became strongly overshadowed once the pandemic was declared. In addition, previous research showed that safe injection sites were not effective in reducing the curve of drug overdose deaths. This review compares the number of apparent opioid toxicity related deaths and COVID-19 related deaths. This gives way to an analysis of the lack of funding given to the drug overdose death crisis compared to the overwhelming support for the COVID-19 pandemic. Findings of this comparison indicated that over 400% more Canadian federal funding had been allocated to the COVID-19 pandemic compared to that of the drug overdose crisis, although COVID-19 had only experienced approximately 30% more deaths than the drug overdose crisis. Thus, showing great inequalities experienced by the overdose crisis during and post-pandemic.

KEYWORDS: Harm Reduction; Safe Injection Site; Policy; Canada

Introduction

The COVID-19 pandemic brought forward many challenges requiring immediate adaptive strategies. This was especially seen in the sudden spike of drug overdose deaths in Canada. Drug overdose deaths had become a matter of concern leading up to the year 2019 but became strongly overshadowed once the pandemic was declared. During the pandemic, drug overdose deaths nearly doubled across Canada (Pirrone, 2023). Substance use was on the rise and various Health Units across Canada advised on their websites that overdose death data was not being kept up to date. While it is crucial to acknowledge the profound devastation wrought by COVID-19, it is equally important to recognize that, throughout the course of the pandemic, the drug overdose death crisis continued unabated, largely overshadowed by the COVID-19 public health emergency.

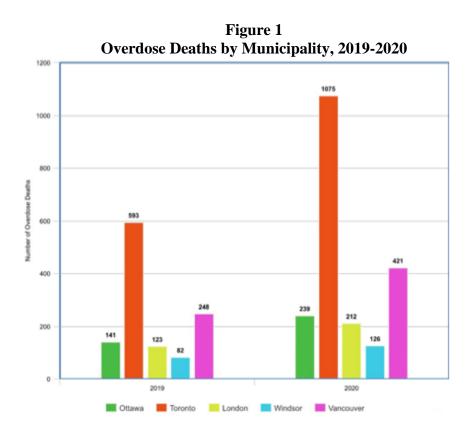
Previous research indicated that safe injection sites were not effective in reducing the curve of drug overdose deaths (Pirrone, 2023). To ensure clarity, however, although safe injection sites did not reduce the curve of drug overdose deaths, safe injection sites did save lives and additional drug overdose deaths would have occurred without them. As an example, in Ottawa, Canada there were 1,111 total overdoses reversed by either naloxone, oxygen or rescue breathing in 2019 at their site (Pirrone, 2023). Further, safe injection sites are only one possible intervention method, as there are other possible intervention methods that continue to develop. Continuing along, comparing the number of apparent opioid toxicity-related deaths and COVID-19-related deaths allows for an interesting comparison.

This gives way to an analysis of the lack of funding given to the drug overdose death crisis compared to the overwhelming support for the COVID-19 pandemic. Statistics illustrate over 400% more Canadian federal government funding had been allocated to the COVID-19 pandemic compared to that of the drug overdose crisis, although COVID-19 had only experienced approximately 30% more deaths than the drug overdose crisis. Thus, showing great inequalities experienced by the overdose crisis during- and post-pandemic.

¹ Finalba (Fina) Pirrone is pursuing her Doctoral studies at the University of Windsor in the Argumentation Studies program with a research focus on harm reduction and safe injection site policy implementation. Fina is also a bilingual employee at the City of Windsor.

Background and Context

With a view to research first conducted in 2022 (Pirrone, 2023), it can be remembered that the drug overdose death spike from 2019 to 2022 was seen heavily in Vancouver, Ottawa, Toronto, and London. Windsor, Ontario was considered within this research as, at that time, they were gearing up to open the doors to their first safe injection site. In 2019, Ottawa reported 141 overdose deaths, Toronto reported 593 overdose deaths, London reported 123 overdose deaths, Windsor reported 82 overdose deaths, and Vancouver reported 248 overdose deaths. In 2020, Ottawa reported 239 overdose deaths, Toronto reported 1075 overdose deaths, London reported 212 overdose deaths, Windsor reported 126 overdose deaths, and Vancouver reported 421 overdose deaths. What becomes concerning is the recognition of how the overdose death numbers nearly doubled in all cities mentioned. Please refer to Figure 1.1 for a visual representation of these statistics.



Moving outwards, the numbers across Canada from 2019 to 2020 are very similar in the way that the curve moves upwards consistently, almost doubling during that time frame. According to the Public Health Agency of Canada in 2019, for every 100,000 people, there were 3,718 apparent opioid toxicity deaths. For 2020, there were 6,422 apparent opioid toxicity deaths for every 100,000 (PHAC, 2024). Moving on, 2021 saw 8,082 apparent opioid toxicity deaths for every 100,000 people, and 2022 saw 7,525 for every 100,000 people (PHAC, 2024). This was the first subtle decrease seen within this timeframe.

It is important to make clear, however, that the statistics above illustrate only those that are related to apparent opioid overdoses, and no other drugs. Unfortunately, statistics on drug overdose deaths in which there is no trace of opioids are not released through Canada's Health Infobase. For definitions, common opioids can include codeine, fentanyl, morphine, and oxycodone (CCSUA, 2024). This means that other drugs, known as stimulants, that can cause drug overdoses are not included in the overdose death reports. Drugs of this nature may include cocaine and methamphetamine (Peavy, Banta-Green & Owens, 2021). As such, there is a comparison gap in total drug and opioid-related overdose deaths and COVID-19 deaths.

Nonetheless, keeping this in mind, we can continue our comparison. As there had not been clear statistics for COVID-19-related deaths in 2019, death statistics for the years 2020, 2021, 2022, and January to June 2023 will be discussed. Looking first at 2020, there were 16,151 COVID-19-related deaths in Canada (Deaths 2020, 2022). In 2021, there were 14,446 COVID-19-related deaths in Canada, and in 2022, there were 19,716 COVID-19-related deaths in Canada, the year in which COVID-19 variants began to appear (Statistic Canada, 2023). As such, the number of COVID-19 deaths has continued to increase. As of the time of the review, the Canadian Health Infobase has indicated that weekly COVID-19 deaths remain low (PHAC, 2024). For a visual aid in illustrating the comparison, please refer to Figure 1.2.

Figure 2
Apparent Opioid Toxicity Deaths Compared to COVID-19 Deaths, 2019 - 2022

Year	Apparent Opioid Toxicity Deaths	COVID-19 Deaths	
2019	3,718 per 100,000	-	
2020	6,422 per 100,000	16,151	
2021	8,082 per 100,000	14,446	
2022	7,525 per 100,000	19,716	

Now looking at cumulative numbers, there have been 58,348 total COVID-19 deaths as of February 20, 2024 (PHAC, 2024). Between January 2016, the month in which apparent opioid toxicity deaths began being traced, to June 2023, there had been 40,642 apparent opioid toxicity deaths (PHAC, 2024). Although, as of February 2024, the remainder of apparent opioid overdose death statistics has not been released, a rough comparison based on available data is possible. Please refer to Figure 1.3 for visual clarification.

Figure 3
Apparent Opioid Toxicity Deaths Between January 2016 – June 2023 Compared to COVID-19 Deaths as of February 2024

Apparent Opioid Toxicity Deaths as	COVID-19 Deaths as of		
of June 2023	February 2024		
40,642	58,348		

For the sake of conducting as close as a fair comparison, we will be adding 3,970 to the apparent opioid toxicity death count to create a very rough estimate of the amount of apparent opioid toxicity deaths. This is because the Canadian Health Infobase declared that from January 2023 – June 2023, there had been 3,970 apparent opioid toxicity deaths (PHAC, 2024). We will be using the second 3,970 to represent, again very roughly, the unavailable statistics of July 2023

– December 2023. As such, this will bring the predicted number of apparent opioid toxicity deaths as of December 2023 to 44,612. Using these numbers, we subtract the amount of reported COVID-19 deaths as of February 2024 from the predicted number of apparent opioid toxicity death counts as of December 2023. Equaling roughly 13,736 more, or approximately 30% more, COVID-19 deaths than apparent opioid toxicity deaths.

Figure 4
Predicted Number of Apparent Opioid Toxicity Deaths
Compared to Reported COVID-19 Deaths

PREDICTED	number	Apparent	Opioid	COVID-19 Deaths as of		
Toxicity Deaths as of December 2023		February 2024				
44,612				58,348		
					Difference of	
					13,736	

Using this information, we are now able to look at the amount of allocated funding to the drug and opioid overdose death crisis and the COVID-19 pandemic. This piece will look solely at funding already allocated, not funding that is promised in the future. Looking first at the drug and opioid overdose death crisis, funding towards the cause coming from the federal government remains spiritic. According to the most recent Canadian budget of 2023 published in March, more than \$800 million have been invested by the federal government to the Canadian Drugs and Substances Strategies since 2017 (DFC, 2023).

On the other hand, as of the published date of June 2023, the Fraser Institute states the Canadian federal government's total funds allocated to COVID-19 was \$359.7 billion since 2020 (Fuss & Hill, 2023). Although there is a discrepancy in the year in which the funding commences, that being the funding for the opioid crisis starting in 2017 and the funding for COVID-19 in 2020, a comparison in funding can still be completed. \$359.7 billion minus \$800 million equals \$358.9 billion. This means that COVID-19 has received \$358.9 billion more dollars, or 449.6% more, in 3 years from the Canadian federal government than the Canadian Drugs and Substances Strategies, aiding the opioid and drug overdose crisis, over 6 years. Please see Figure 1.5 for a chart image. Thus, illustrating the largest disparity experienced by the drug and opioid overdose crisis.

Figure 1.5
Federal Funds Allocated to the Canadian Drugs and Substances
Strategies Since 2017 and to COVID-19 since 2020

Funds allocated to the Canadian Drugs and	Funds allocated to	
Substances Strategies since 2017	COVID-19 since 2020	
\$800 million	\$359.7 billion	
		Difference of \$358.9
		billion

Allocation of Funding

The allocation of funding and the understanding of where funds are distributed for both the Canadian Drugs and Substance Strategies and COVID-19 is important. As a reminder, the Canadian federal government did not publish an official 2020 budget due to COVID-19. Looking first at where funds were allocated for the Canadian Drugs and Substance Strategies, one can see the vast areas in which the funding is placed by the federal level of government.

The Minister of Health announced the Canadian Drugs and Substances Strategy on December 12, 2016, in which the 2017 federal government acknowledged the epidemic and took an expansive step towards reducing the lives lost at the hands of drugs and opioids. In 2017, the federal government provided support to implement the Opioid Action Plan within the Canadian Drugs and Substance Strategy by providing \$65 million over five years (DFGC, 2017). \$10 million and \$6 million were also provided to British Columbia and Alberta, respectively, to assist in combating their public health emergencies (DFGC, 2017). This budget further proposed \$100 million over 5 years to the Canadian Drugs and Substances Strategy, starting in 2017 – 2018 (DFGC, 2017).

The 2018 Canadian federal budget recalls the "Federal Actions to date" in which it is reminded of the over \$100 million that was proposed in 2017 to support the initiatives of the Canadian Drugs and Substance Strategy, as well as the millions provided to specific provinces that were experiencing high influxes of opioid-related public health emergencies (DFGC, 2018). The way the minimal information was presented in the 2018 budget indicates that no new funding initiatives were created or started within that fiscal year. The 2019 Canadian federal budget saw new proposals, in which a proposed \$30.5 million over 5 years would be allocated to address gaps within harm reduction and treatment in Canada, focusing on safe supplies, and creating more accessibility to Naloxone and Naloxone training (DFGC, 2019).

A continuation of \$1 million following the 5 years was also proposed within the 2019 Canadian federal budget (DFGC, 2019). Taking a holistic approach, the 2021 budget focused on continuing to fund treatment, hard reduction, and prevention within Canadian communities by proposing an additional \$116 million over two years, commencing within that fiscal period (DFGC, 2021). The 2022 Canadian federal budget takes a similar approach in which \$100 million had been proposed to be allocated to Health Canada for the Substance Use and Addictions Program starting in 2022 (DFGC, 2022). 2023 focuses on what the Canadian federal budget calls evidence-based services and supports, as well as focusing on breaking down drug trafficking organizations (DFGC, 2023).

A large, new proposal is introduced in which \$359.2 million over five years with \$5.7 million ongoing to assist in the growth of the goals of the Canadian Drugs and Substances Strategy (DFGC, 2023). This proposal includes funds being allocated to the Substance Use and Addictions Program of Health Canada to build community-based supports, additional youth substance abuse community-based programs, newer drug checking services, and provide better access to safer supply, invest in Public Health Care and Affordable Dental Care, as well as investment into greater data collection on substance-related harms and deaths, and analysis of the drugs within the illegal drug supply (DFGC, 2023). Under the same proposal, funds to develop an app for paramedics and first responders that monitors overdoses, and an allocation of funds to the Royal Canadian Mounted Police, Public Services and Procurement Canada, and Global Affairs Canada to continue fighting against drug trafficking are seen (DFGC, 2023). 2023 saw the first federal stretch to international territory to assist in tackling the drug and overdose death crisis.

Now shifting focus over to the funding provided to COVID-19 from the Canadian federal government, it is much more expansive than what is seen by the Canadian Drugs and Substances Strategies. Based on the 2021 Canadian federal budget, COVID-19 saw \$3.4 billion go to vaccine research, development and production, and \$2 billion to a safe return to class fund (DFGC, 2021). The Safe Restart Agreement received \$13.8 billion from the nearly \$20 billion agreement which includes top-ups for smaller jurisdictions, testing, contact tracing, data management, personal protective equipment, supporting vulnerable populations, and health care capacity (DFGC, 2021).

In total, \$4.6 billion was allocated to support provinces and territories in addressing their healthcare system priorities which include critical healthcare system needs, additional support for the territories, and a proposed amount to help healthcare systems recover (DFGC, 2021). \$1.3 billion has been administered for vaccine deployment and administration while \$2.5 billion has been provided to support Indigenous communities (DFGC, 2021). Personal protective equipment (PPE) received \$2 billion which included PPE and related equipment for essential workers and additional PPE procurement for the healthcare sector (DFGC, 2021). 2021 was a key year while continuing to combat COVID-19.

The years 2022 and 2023 started to move away from emergency COVID-19 response funding and towards preventive measures and succession planning. In 2022, the Canadian federal budget focused on implementing a plan that would ensure federal debt remained on a downward track following the pandemic (DFGC, 2022). This included an already invested \$2.7 billion to assist in providing vaccines, testing, and therapeutics to middle- and low-income countries (DFGC, 2022). The 2022 Canadian federal budget further proposed to provide millions of dollars to Global Affairs Canada to ensure the country continues to take part in the global fight against COVID-19 (DFGC, 2022).

As well as millions to the Canadian Institute of Health Research and the Indigenous Services Canada for the Indigenous Community Support Fund (DFGC, 2022). Further funding was allocated to support vaccine procurement, deployment, and administration, contact tracing and data management, procurement of PPE, medical equipment, provincial and territorial top-ups, as well as funding to assist in the hospital and surgery backlogs, to keep seniors safe within long term care facilities, and keep schools safe for students to return (DFGC, 2022). Finally, proposed funds within the 2022 budget looked forward to supporting those experiencing further mental health concerns because of COVID-19 (DFGC, 2022).

Moving to the 2023 Canadian federal budget, the focus on rebuilding remains. Much of the funding centered on students whose lives were greatly affected by the outfalls of COVID-19 by providing grants of up to \$6,000 for eligible students (DFGC, 2023). The federal government further outlined in its 2023 budget that it will continue to invest unprecedented funding to both the territorial and provincial health systems to assist in the acquisition of treatments, testing, PPE, vaccines, and varying public health measures (DFGC, 2023). Finally, the budget provides a proposed \$53.8 million to be provided to the Canadian Employment and Social Services Development to assist in overpayments that have been found because of COVID-19 emergency income supplemental support (DFGC, 2023). As demonstrated above, the federal funds allocated to COVID-19 can be found in almost every corner of the Country, as well as in parts across the world.

Discussion and Analysis

On a grand scale, stating simply that COVID-19 had received 449.6% more Canadian federal funding than the Canadian Drugs and Substances Strategies may be overreaching. However, after discussing the areas of funding allocated by the Canadian federal government, COVID-19 has received funding in many more areas, both nationally and internationally, in comparison to the Canadian Drugs and Substances Strategies. COVID-19 saw funding in places such as employment support payments, vaccine development, and citizen funding top-ups. This is funding that is quite different and expansive than the funding received in the Substances Strategies, thus emphasizing the disparities between the above-mentioned funding.

It can, however, be frustrating to find reasons to explain the lack of transparency in drug and opioid-related deaths in the way the information is gathered and released publicly, in comparison to that of COVID-19-related deaths. In no way do I wish to take any attention away from the great difficulty that COVID-19 presented us with, nor the deaths that occurred during this time. However, the intention of this review has been to illustrate just how the drug and opioid overdose death crisis seems to continue to lack resources and funding, all while it has been experienced firsthand by Canadians, especially how governments are able to allocate large amounts of funding to a crisis that are taking lives at a grueling rate.

Funding, if anything, when it comes to safe injection sites and harm reduction attempts as it relates to drug and opioid overdose death reduction is being cut. An example of such is the SafePoint site, a safe injection site and harm reduction facility that opened in Windsor, Ontario on April 23, 2023, and closed its doors in December 2023 (WECOSS, 2023). It has been illustrated within this review that COVID-19 deaths have decreased heavily, while opioid-related deaths do decrease, but at a concerningly slow rate. It is to be reminded, again, that other drug or stimulant-related death statistics are not available. However, the funding for harm reduction resources and research for the drug and opioid overdose death crisis has yet to see anywhere near the same amount of funding that the COVID-19 crisis received.

A rate of federal funding of 449.6% more when there are only 30% more deaths can be shocking to hear. This disparity in funding and resources could continue to greatly affect the lives of Canadians now that the world is moving into a post-COVID-19 era. A further point of concern and frustration is the way in which the statistics for each crisis are presented. When looking at apparent opioid toxicity deaths, the statistics present themselves in stating "x number of apparent opioid toxicity deaths per 100,000 people" while COVID-19 reporting through the Canadian Health InfoBase is clear and concise with the exact number of deaths. Thus, creating confusion and difficulty in gathering the statistics.

Taking a wider approach to this conversation by looking at contrasting arguments would bring forward the argument that COVID-19 was unprecedented in the way that it was unknown. Unknown in the sense that COVID-19 could pass from person to person without rhyme or reason, taking the lives of people of all different levels of health. With that being said a person, for the most part, could not necessarily choose if they would catch COVID-19, especially in the beginning before personal protective equipment came into play. On the other hand, a person, again for the most part, can control the drugs, such as deathly opioids, that go into their own body.

This consideration creates another layer of frustrations and diversified opinions. On a similar point, COVID-19 was one that did affect the day-to-day lives of almost every single Canadian, from restrictions to mandatory masking. This was also a pandemic in which the causes of the illness, for a long time, were unknown which created additional chaos, panic, and anxiety.

Again, as mentioned above, the causes of death for those who have passed due to apparent opioid toxicity are known. On a greater scale, nonetheless, people are dying.

What does this say otherwise? COVID-19 was an illness completely *unknown*, and continues to remain unknown to a certain extent, while the cause of the drug and opioid overdose death crisis is *known*. This statement can most definitely float either way. On one hand, individuals may say for the reason that COVID-19 was so unknown, the amount of funding it received was defendable. On the other hand, one could say that the driving reason behind the drug and opioid overdose death crisis is, at base, the drugs. There are numerous additional layers, however, that are to be considered on both sides which then creates a long line of further questions.

Was the amount of funding allocated to COVID-19 done out of fear, that the radical idea of allocating x amount of funds to the unknown would hopefully bring forward solutions? Although the base cause of drug and opioid overdose deaths is known, where would additional funding go? Would it go to preventative measures? More mental health resources? The idea here is that questions for those in support of either side or no side at all can most definitely produce extravagant counterarguments from almost any point of view.

It is as this point that the consideration of stigmas should be noted and how these stigmas could create funding discrepancies, as well as biases in the mortality-based framework used to visualize drug use. The stigmatization towards those who use drugs and opioids may create barriers or unclear steps for combatting the overdose drug crisis. The approach looked at within this report, safe injection sites, is an approach that is geared to support those who may be experiencing additional barriers, such as mental health struggles and homelessness. However, it should be acknowledged that those who are experiencing addiction to drugs and opioids may be employed, may be those who have homes, and may be those who have loving and supporting friends and family. As such, stereotypes and biases can play a large role in how the use of safe injection sites, and the sites themselves are viewed.

Conclusion

It is important that studies continue to be constructed, specifically as it surrounds the allocation of funding towards the Canadian Drugs and Substances Strategies in order to combat that drug and opioid overdose crisis. The data collection of drug and opioid overdoses remains scarce; however, a hopeful light is being shed on new ways, with greater emphasis on prevention methods as opposed to reactive measures. As indicated within this report, discrepancies of funding have become a concern coming out of COVID-19, yet hopeful movements are being made towards attempting to address the overdose death crisis by better monitoring and gathering data, as well as allowing for comparatives from other states and countries to be conducted.

It is hopeful that education campaigns could be conducted in order to assist in removing barriers and stigmatization surrounding those who use drugs and opioids. From this, it would be anticipated that the current ambiguous and confusing data that exist will become clearer, in turn, assisting to better allocate and support increased funding to the drug and opioid overdose crisis. Although it is understood that this review is not able to provide a perfectly clear analysis due to the lack of transparent statistics and differences in yearly reports, what this review does accomplish is the illustration of a large disparity between funding received by COVID-19 and the drug and opioid overdose crisis.

Showing greater inequalities experienced by the overdose crisis during- and post-pandemic, one can better understand how inequalities may develop after the discussion surrounding where the funding is allocated in each case. A further dive into varying countries that have experienced devastation following both COVID-19 and the drug and opioid overdose crises will continue to be researched and developed to bring to light any gaps and differences, as well as looking to see if there are any similarities to the findings seen within Canada.

References

- Canadian Centre on Substance Use and Addictions (CCSUA). (2024). *Opioids*. Substances and Addictions. https://www.ccsa.ca/opioids
- Department of Finance Government of Canada (DFGC). (2017, March 22). *Budget 2017*. Government of Canada. https://www.budget.canada.ca/2017/home-accueil-en.html
- Department of Finance Government of Canada. (2018, February 27). *Budget 2018: Equality + Growth: A Strong Middle Class*. Government of Canada. https://www.budget.canada.ca/2018/home-accueil-en.html
- Department of Finance Government of Canada. (2019, March 19). *Budget 2019*. Government of Canada. https://www.budget.canada.ca/2019/home-accueil-en.html
- Department of Finance Government of Canada (DFGC). (2021, April 19). *Budget 2021*. Government of Canada. https://www.budget.canada.ca/2021/home-accueil-en.html
- Department of Finance Government of Canada (DFGC). (2022, April 7). *Budget 2022: A Plan to Grow Our Economy and Make Life More Affordable*. Government of Canada https://www.budget.canada.ca/2022/home-accueil-en.html
- Department of Finance Government of Canada (DFGC). (2023, March 28). *Budget 2023: A Made-in-Canada Plan: Strong Middle Class, Affordable Economy, Healthy Future*. Government of Canada. https://www.budget.canada.ca/2023/home-accueil-en.html
- Department of Finance Canada (DFC). (2023, March 28). *Chapter 2: Investing in public health care and affordable dental care: Budget 2023*. Government of Canada. https://www.budget.canada.ca/2023/report-rapport/chap2-en.html#m12
- Federal, provincial, and territorial Special Advisory Committee on the Epidemic of Opioid Overdoses. Opioid- and Stimulant-related Harms in Canada. Ottawa: Public Health Agency of Canada (PHAC); March 2024. https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants/
- Fuss, J., & Hill, T. (2023, June 27). Fiscal waste during the pandemic in Canada and the United States. Fraser Institute. https://www.fraserinstitute.org/studies/fiscal-waste-during-the-pandemic-in-canada-and-the-united-states#:~:text=Canada's%20federal%20COVID%20spending%20totaled,attributable%20to %20wasteful%20COVID%20spending
- Peavy KM, Banta-Green C, Owens M. (2021, April) *Opioids and Stimulants: What Are They and How Are People Using Them?* Seattle, WA: Addictions, Drug & Alcohol Institute, University of Washington, April 2021. http://adai.uw.edu/pubs/pdf/2021opioidsstimulants.pdf
- Pirrone, F (2023), The Hidden Hauntings of the Opioid & Overdose Crisis: A Policy Review of Harm Reduction and Safe Injection Sites in Vancouver, Ottawa, Toronto, London, and Windsor. Windsor, ON, University of Windsor: https://scholar.uwindsor.ca/major-papers/237

- Public Health Agency of Canada (PHAC). (2024, March 27). *Opioid- and stimulant-related harms in Canada: Health infobase*. Canada.ca. https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants/
- Public Health Agency of Canada (PHAC). (2024, April 30). *Covid-19 epidemiology update: Summary*. Canada.ca. https://health-infobase.canada.ca/covid-19/
- Statistics Canada. (2022, January 24). *Deaths, 2020*. The Daily. https://www150.statcan.gc.ca/n1/daily-quotidien/220124/dq220124a-eng.htm
- Statistics Canada. (2023, November 27). *Deaths*, 2022. The Daily. https://www150.statcan.gc.ca/n1/daily-quotidien/231127/dq231127b-eng.htm
- WECOSS. (2023, December). Consumption and treatment services site. Consumption and Treatment Services Site | Windsor-Essex Community Opioid and Substance Strategy (WECOSS). https://wecoss.ca/consumption-and-treatment-site