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Finalba (Fina) Olivia Pirrone
University of Windsor, pirronef@uwindsor.ca

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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.

By

Finalba (Fina) Olivia Pirrone

An Internship Paper

Submitted to the Faculty of Graduate Studies through the Department of Political Science
in Partial Fulfillment of the Requirements for the Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada

2023

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by

Finalba (Fina) Olivia Pirrone

APPROVED BY:

J. Wittebols
Department of Political Science

L. Miljan, Advisor
Department of Political Science

January 4, 2023

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ABSTRACT

The drug and opioid overdose crisis have led to the death of hundreds of thousands of people. As such, harm reduction and safe injection sites have been making their appearances throughout Canada, specifically within British Columbia and Ontario. The policies held in Vancouver, Ottawa, Toronto, London, and Windsor raise many questions, all looking to see if their implementations are working. This policy review seeks to determine if harm reduction policy and safe injection sites are working to not only save lives, but to reduce the overall number of increasing overdose deaths. Through this review, it is concluded that harm reduction and safe injection site policy implementation is effective in saving lives through onsite overdose reversal procedures, but it is not effective in reducing the number of opioid and overdose deaths that occur and continue to grow each year.

DEDICATION

In memory of Chris and all the lives lost & affected by the opioid crisis.

ACKNOWLEDGEMENTS

Firstly, I would like to express my deepest appreciation to my family, my close friends, and my boyfriend for their ongoing support, love, and foundation they have, and continue, to provide to me.

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LIST OF ABBREVIATIONS/ACRONYMS

Name	Abbreviation	Location
Consumption and Treatment Services	CTS	London & Ottawa
Temporary Overdose Prevention Site	TOPS	London
Supervised Safe Injection Sites	SSIS or SIS	Windsor, Ottawa & Vancouver
Supervised Consumption Service	SCS	Toronto & Vancouver
Overdose Prevention Site	OPS	Toronto & Vancouver
Integrated Prevention and Harm Reduction initiative	iPHARE	Toronto
Injectable Opioid Agonist Therapy	IOAT	Toronto & Ottawa
Site Needle & Syringe Program	SNSP	Ottawa
Canada's Substance Use and Abuse Program	SUAP	Canada-wide

CHAPTER 1

Introduction

Looking in from the outside of safe injection sites, it is not uncommon to see the stereotypical appearance of unpleasant entrances, aggressive warning signs, and generally people experiencing homelessness or drug addictions sleeping somewhere nearby. Most tend to lock their car doors when driving by or turn a blind eye to someone who fits the general stereotype of a substance “user”. Although these individuals are treated as less than human, for whatever that reason may be, they are someone's child, parent, sibling, or friend. They are human and they deserve the chance to live their life the same as anyone else would. Society has created a stigma surrounding harm reduction and safe injection sites, their policies, and their locations. Yet, no questions or concerns arise when a standard emergency walk-in clinic is being established in the neighborhood. What becomes most interesting is that the drug overdose and death epidemic has only gotten worse over the past two decades, especially since the COVID-19 pandemic, yet it seems the legislation remains fragmented. With diverse approaches to harm reduction policies, Vancouver, Ottawa, Toronto, London, and Windsor are examined within this policy review to determine strategies that have made a difference and those implementations that have created additional challenges. This will lead to the determination of whether harm reduction and safe injection site implementations are effective in saving lives and reducing the number of opioid and overdose deaths each year.

CHAPTER 2

The Method of Analysis for the Policy Review

This policy review encompasses 8 chapters that look at various components of the development, implementation, and reality of harm reduction and overdose prevention sites in Vancouver, Ottawa, Toronto, London, and Windsor. While Chapter 1 is reserved for the introduction, Chapter 2 focuses on the method of analysis used, as well as a description of Section 56.1 of the Controlled Drugs and Substances Act which clearly defines all legal components of drugs and substances in Canada. Chapter 3 highlights and describes the importance of Section 56.1 of the Controlled Drugs and Substances Act. Chapter 4 is an overview of all five locations discussed in the review, which were selected in particularity for this review. Vancouver was selected as it possesses the longest-running harm reduction and overdose prevention policies not only in Canada but in North America. Ottawa and Toronto were selected because they are the two largest cities in Ontario and possess high rates of drug and opioid overdose deaths. London was selected as it is situated only two hours south of Toronto, and although smaller in size, has a large and increasing number of drug and opioid overdose deaths. Finally, Windsor was selected as the city soon to have implemented its' first overdose prevention and safe injection site in an attempt to combat the increasing number of overdose deaths. Chapter 5 provides context for the opioid crisis across Canada and the frightening increase in drug and opioid deaths. Chapter 6 illustrates how data is collected provincially for those who have died because of drug and opioid overdoses and moves on to introduce the number of drug and overdose death within each municipality. It also critically analyzes the numbers presented before and after harm reduction and overdose prevention sites are implemented

and compares these numbers to three areas of similar size and population that do not have any overdose prevention or safe injection sites in place. Chapter 7 is a discussion of the findings, while Chapter 8 looks at other findings that are important to note within the topic of harm reduction and overdose prevention sites. Finally, Chapter 9 provides the conclusion to the overall findings.

The information found within each municipality surrounding drug and opioid overdose deaths will first be assessed by looking at the accidental drug toxicity deaths in each Ontario municipality from 2010-2022, followed by the number of opioid toxicity deaths in each Ontario municipality from 2005-2022. The total number of drug and opioid overdose deaths in Vancouver from 2012-2022 is then considered. Each municipality is further assessed by comparing the total number of drug and opioid overdose deaths two years prior to harm reduction and safe injection sites are in place in the respective municipality and the total number of drug and opioid overdose deaths after the opening of the harm reduction and safe injection sites up until the present year of 2022. An additional consideration is also taken by comparing the total number of drug and opioid overdoses at harm reduction and safe injection site facilities per year and the total number of drug and opioid overdose deaths for that same year. To provide further assessment, the Simcoe Muskoka District, the municipality of Kamloops, British Columbia, and Burnaby, British Columbia are considered as they are three regions that do not currently possess an overdose prevention or safe injection site. As such, this analysis focuses on the question of whether harm reduction and safe injection site implementation prevents and reduces the number of drug and opioid overdose deaths. This policy review further aims at uncovering how effective harm reduction and safe

injection site implementations truly are in the grand scheme of the drug and opioid and overdose crisis.

CHAPTER 3

Section 56.1 of the Controlled Drugs and Substances Act

Legislation outlining what is and is not legal is very important to possess within a properly functioning society. Clearly defining the differences allows the government and its citizens to function without worry of punishment or chaos in the society. Almost all aspects of society need an Act outlining illegalities to avoid confusion, especially when it comes to illegal substances. By looking at Section 56.1 of the Controlled Drugs and Substances Act, one can clearly identify all the illegalities surrounding drugs and substances in Canada.

The Controlled Drugs and Substances Act is the Federal Act that focuses on and outlines "the control of certain drugs, their precursors and other substances and to amend certain other Acts and repeal the Narcotic Control Act in consequence thereof" (Controlled Drugs and Substances Act, 1996). The Act outlines the legalities surrounding the possession of substances, the obtaining of illicit substances, the trafficking of illicit substances, the importing and the exporting of illicit substances, the production of illicit substances, the possession, sale, etc., for use in the production of or trafficking in illicit substances, and possible punishments that comes because of (Controlled Drugs and Substances Act, 1996). Schedule I, II, III, and IV of the Act outline the specific drugs and substances that are illegal in Canada (Controlled Drugs and Substances Act, 1996). Examples of such include opium poppy, which is used to make heroin and morphine, coca which is used to make cocaine, and fentanyl which is one of the leading causes of overdose deaths today (Controlled Drugs and Substances Act, 1996). The Health Minister of Canada can offer exemptions to the Act for specific purposes within the public interest

in Section 56 (Government of Canada, 2018). Surrounding supervised consumption sites, Section 56.1 of the Act outlines specific exemptions. Explained within this section of the Act is how, under approval, people can bring their own illegally obtained substances to the site to consume under the supervision of trained personnel (Government of Canada, 2018). This anomaly allows people consuming substances a lower chance of sharing disease and infections while re-using needles and other drug paraphernalia, as well as possibly overdosing. Canadian municipalities who wish to have an exemption to the Act to legally open and operate harm reduction and safe injection site services must complete an in-depth application that must be submitted to the Office of Controlled Substances, requiring a great deal of information (Government of Canada, 2018). The exemption available under Section 56.1 of the Controlled Drugs and Substances Act allows Canadian municipalities to make every effort in reducing the lives lost in the opioid overdose death crisis. Overall, having an understanding of what Section 56.1 of the Controlled Drugs and Substances Act entails allows for a better understanding of safe injection sites in Canada. Not only does it clearly outline the federal laws in place surrounding illegal drugs and substances, but also the steps required for a municipality to request an exemption from the Act to open their own overdose prevention and safe injection site.

CHAPTER 4

Overview of Locations

Ottawa

As one of the fastest-growing cities in Canada and the second-largest city in Ontario, it is not surprising that Ottawa has had its' own battle with the opioid and overdose crisis. A large city, as one would assume, requires a great deal of funding to ensure the proper functioning of any service. In June 2019, Health Minister Ginette Petitpas-Taylor announced that \$600,000, an equivalency of six months of funding for only one site, would be allocated to the City of Ottawa (Pritchard, 2019). At the time of this release, the director of Health Protection of Ottawa Public Health stated that the funding, combined with additional funds in the public health budget was only enough to keep the site open running until the end of 2019, a total of 6 more months (Pritchard, 2019). There were several donations made to the site as well, however, this figure illustrates just how much is in fact needed to keep the services functioning. Ottawa has also secured federal funding to assist in the development of sites and staff. \$750,000 in addition to the \$1,320,132 already received from Canada's Substance Use and Abuse Program (SUAP) will be used to train staff within the harm reduction field, and aid in the support to the population in Ottawa that is disproportionately affected by the opioid and overdose crisis (Health Canada, 2022). Additionally, \$731,246 over 18 months has been given to The Elizabeth Fry Society of Ottawa to support the Safe Bridge Initiative which aims at addressing and eliminating the gap for women exiting the criminal justice system and adhering to their discharge conditions (Health Canada, 2022). Supplementary funding for specialized programs, such as the Safe Bridge Initiative, will allow an extra focus to be put on the areas of the crisis that need it most.

Sitting on the border of Montreal with 2,790 km² of land, Ottawa possesses four service locations. Ottawa Inner City Health Shepherds of Good Hope, Somerset West Community Health Centre Overdose Prevention Services, Sandy Hill Community Health Centre, and Site Needle & Syringe Program and supervised consumption services are located throughout the City of Ottawa. Figure 4.1 indicates the location of the services. All sites in Ottawa are represented by a purple dot. Ottawa Public Health received their exemption to Section 56.1 of the Controlled Drugs and Substances Act for the first SIS to be in operation at 179 Clarence St (the SNSP) on September 22, 2017 (Ottawa Public Health, 2020). Looking more closely at Somerset West Community Health Centre Overdose Prevention Services, it is the longest-running service in Ottawa and offers consumption and treatment services (CTS). It has provided a needle exchange program, as well as other harm reduction programs and services for over 20 years (SWCHC, 2020). A variety of services are offered at this location including onsite community workers for harm reduction, the availability of referrals, counseling, crisis support and additional information, as well as medical care from registered nurses and nurse practitioners on-site as needed by those who are utilizing the facility (SWCHC, 2020). Somerset West also offers many necessities for use that clients may need including clothing, food, water, computer and phone access, walk-in clinic services and HIV testing on-site, and one-on-one support (SWCHC, 2020). Those wishing to utilize the site for other services provided can and do not have to only attend the site to utilize the safe injection and harm reduction services that are provided.

Figure 4.1
CTS's in Ottawa, ON



Toronto

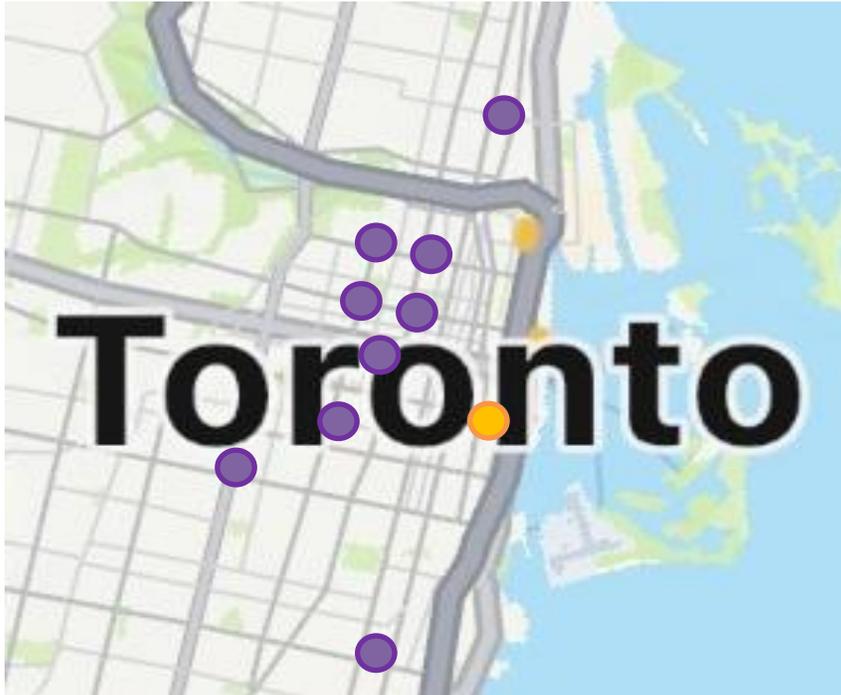
The capital city of Ontario has, unfortunately, not been able to escape the rise in overdose deaths because of opioids. November 8, 2017, marked the opening of the first permanent supervised consumption service (SCS) in the city (City of Toronto, 2022). Located in the Garden District of Downtown Toronto, the SCS is situated inside The Works at 277 Victoria St (City of Toronto, 2022). The Works opened in 1989 as an all-encompassing health centre led by Toronto Public Health, now taking the leadership role for harm reduction services and programs in the city (City of Toronto, 2022). Inside its SCS, Toronto focuses on the implementation of its Overdose Action Plan which is its preventative and response-based approach to the ongoing opioid and overdose crisis (TBH, 2017). The Overdose Action Plan closely illustrates steps Toronto is taking to

combat the opioid and overdose crisis currently being experienced in their community. Due to the larger size of the city and the earlier emergence of the opioid crisis, Toronto was able to secure some additional funding that other locations across the province may not have necessarily received. This larger sum of funding comes also because of the increased number of service locations Toronto possesses, as will be discussed shortly. The province of Ontario has committed to providing \$90,542 in addition to the \$376,612 already received in 2022 to create and sustain several overdose response workers within nine different consumption and treatment sites in Toronto (Health Canada, 2022). Additionally, the City of Toronto has committed \$7.61 million to provide harm reduction and mental health services to those who use shelters in hope of creating additional support for those who possess dire needs (City of Toronto, 2022). The specialized services that will be implemented at the shelters are known as The Integrated Prevention and Harm Reduction initiative (iPHARE) and will be located within specific SCS's and will also be equipped with professionally trained overdose supervisors (City of Toronto, 2022). Providing additional support, such as overdose prevention supervisors, to the shelters that are more likely to have clients utilizing the facility possessing drug and opioid addictions holds the aim of bringing additional assistance to those who need it most.

Then Federal Health Minister Patty Hadju had also made public that the Ministry would be allocating \$2.3 million in funding to Toronto Public Health to aid in the implementation of iOAT, an injectable opioid agonist therapy, which is currently in the testing phase at the downtown Toronto safe injection site, The Works (Rider & Lavery, 2021). iOAT is an innovation that has recently emerged and is in the testing phase. It is a

cost-effective treatment option for those who have severe opioid use disorder and addictions that have not been able to succeed with other treatment options (Fairbairn, et al., 2019). One is hopeful that this new treatment method will be successful for those experiencing difficulties otherwise. Today, there are a total of 9 operating SCS's within the city limits, all strategically located throughout the city. Parkdale Queen West Community Health Centre, Fred Victor, Street Health, Regent Park Community Health Centre, Kensington Market Overdose Prevention Service, Parkdale Queen West Community Health Centre, South Riverdale Community Health Centre, Toronto Public Health The Works, and Moss Park Overdose Prevention Site (Wilhelm, 2022). Figure 4.2 demonstrates the location of each SCS on a map in relation to the CN Tower, a staple structure located in the heart of downtown Toronto. All SCS's are represented by a purple dot and the CN tower is represented by an orange dot. Elaborating further on the Moss Park Overdose Prevention Site (OPS), this supervised injection service site was established in 2017 unsanctioned and was operated by volunteers who had decided to take a stand against the opioid and overdose crisis after 187 lives had been lost as a result (Pagliaro, 2018). Starting only as a camping tent that was set up in Moss Park, the site quickly grew while also making a large impact on the opioid and overdose crisis. Very quickly it had received over \$100,000 in financial donations and had over 150 volunteers (SRCHC, 2022). As it was considered illegal, it experienced many police visits, however, after only 5 months, police officers stood down allowing the site to reverse at least 200 overdoses that same year (Pagliaro, 2018). Moss Park OPS and its volunteer operators shined a light on the crisis that was hidden in plain sight in the City of Toronto and launched the SCS's in that are present in the area today.

Figure 4.2
SCS's in Toronto, ON



London

London is a mid-sized city, in comparison to other parts of the province, located in southern Ontario approximately 2 hours south of Toronto. As such, it has also become a city that has experienced encounters with the opioid and overdose crisis. A substantial number of London citizens have utilized the harm reduction services. Located in the heart of downtown London, Carepoint Consumption and Treatment Services (CTS) can be found. CTS opened its doors in February of 2018 as a temporary location originally located at 186 King Street but has since moved to a permanent location at 446 York Street (ML Health Unit, 2022). As of late summer 2022, the new permanent location is under construction and working out of a temporary 18-meter trailer to assist clients (ML Health Unit, 2022). The new location will be able to accommodate the needs of up to 6 clients in total while also allowing room for other resources, such as a medical clinic and

social and additional supports (ML Health Unit, 2022). The extra space will allow those utilizing the site to take advantage of all services available and even meet with medical professionals that may be able to assist them further on their journey to sobriety and good health. Moving from a temporary site to a permanent location will further allow the site clients to become more comfortable with the site, and it is hoped that they better utilize the services provided. The London CTS requires substantial funding to keep its doors open, at a minimum of 1.7 million dollars in operating and capital costs totaling as much as 1.2 million dollars (Graham, 2021). These costs would of course increase as the needs of the London at risk population continue to grow.

Windsor

In the most southern part of Ontario, Windsor is not far behind in the implementation of safe injection and harm reduction sites. However, it seems as if their progress toward implementation has been slower than other cities in the province. Windsor does not yet have an open and operating Supervised Safe Injection Site (SSIS), however, there had been two locations of interest for their placements. Windsor City Council had originally approved 628 Goyeau Street, a central downtown location, to be the permanent site, however, the building owner later became unagreeable with the usage of this location for the SSIS (Wilhelm, 2022). The newly proposed location of 101 Wyandotte Street East, which now also has the approval of the City Council, is set to become the permanent location of the facility (Wilhelm, 2022). The location has had some points of controversy for it is established directly in front of the entrance to The Detroit/Windsor Tunnel (Wilhelm, 2022). Nonetheless, this location is moving forward. The Windsor Essex Community Opioid and Substance Strategy (WECOSS) was

implemented in 2016 and encompasses the policy for implementation of harm reduction in Windsor and its surrounding area, known as Essex County (WECOSS, 2022). The policy report focuses on a four-pillar-based action plan that has been designed to reduce harm and deaths occurring because of substance abuse within the community (WECHU, 2022). By putting forth the four pillar strategies, the city can approach its harm reduction plan linearly, allowing for step-by-step implementation, and hopefully easier and stronger execution. Funding information is vague for the city of Windsor, however, it is estimated that at least 90% of funding for the SSIS's in Windsor would have to come from the Ministry of Health due to limited funding available within the community (CTV Windsor, 2018). Additional funding is anticipated from both public and private entities but is not promised.

Vancouver

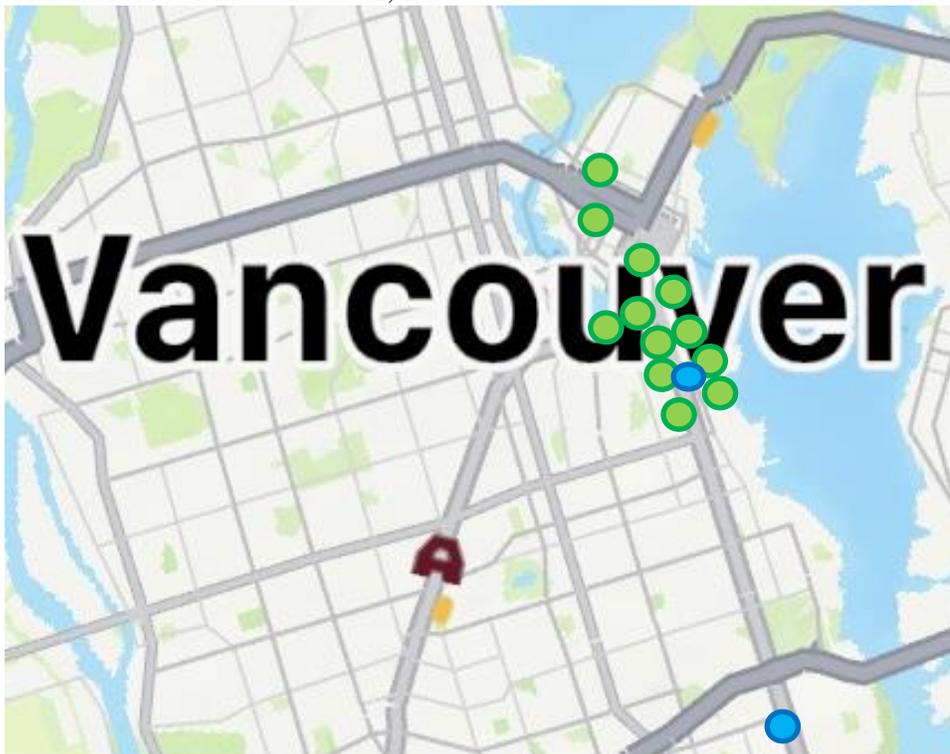
Located on the far West coast of Canada, Vancouver, British Columbia is the city that has been most affected by the opioid and overdose crisis in the country. Vancouver, being the only city not located within Ontario for this review, was selected for its long-running harm reduction and safe injection strategy implementations. It is anticipated that a comparison of this distinctive location and the four Ontario cities will allow for a better understanding of why certain legislation was implemented within newer Ontario-based harm reduction and safe injection services. Vancouver holds the title of having opened the first Supervised Consumption Sites (SCS) in North America in 2003, meaning it has also had the longest-running harm reduction site (VCH, 2020). This title, sadly, comes because of the overwhelming number of lives lost within the city. Vancouver SCS's function using a harm-reduction model and operates under the Health Canada exemption

in regard to the federal drug laws (VCH, 2020). In February 2021, Vancouver was one of two cities in British Columbia that received a total of \$15 million in funding from the Federal Government because of record-breaking annual overdose fatalities (Bains, 2021). Furthermore, Vancouver Coastal Health, the city's health unit, provides all the funding, operations, senior administrative staff, and health care workers at the SCS's (VCH, 2020). Thus, demonstrating that Vancouver has municipal, provincial, and federal support to combat its' opioid and overdose crisis.

Vancouver has numerous locations of both overdose prevention sites (OPS) and supervised injection sites (SIS). The OPS's encompass supervised injection services where there are professionally trained medical personnel on-site. There are fewer barriers in place to access the services in comparison to the SIS's (Kennedy, et al., 2022). This is because SIS's commonly have sign-in and sign-out procedures and additional resources that may make the client feel pressured to quit and address their addiction while some are not ready yet (Kennedy, et al., 2022). Although the introduction of additional OPS's around Vancouver can be argued to not help the client as much as there is not much pressure to seek treatment or other resources, they are saving more lives. Researchers found that after the implementation of further OPS's in the city, the use of their services increased immediately and continued to slowly increase after that (Kennedy, et al., 2022). There are currently twelve locations offering overdose prevention services, represented by the green circles on the map in Figure 4.3, and two main locations offering supervised injection services and resources, represented by the blue circles on the map. Focusing on SIS's, Insite opened its doors in 2003 and remains in operation today in the Downtown East side of Vancouver (VCH, 2020). This location operates following a model of harm-

reduction services where individuals do not have to abstain from drug use but are distanced from the social, economic, and health effects of drug use (VCH, 2020). The second location, Powell Street Getaway, opened in July 2017 and has five booths available for clients to use or inject pre-obtained drugs (VCH, 2020). This location has staff that monitors and supervises clients for signs or symptoms of an overdose, offers referrals to resources, and teaches clients safe injection practices (VCH, 2020). The goal of the SIS is to not only provide an environment of safety for the clients but also provide a whole-rounded service to assist the client in long-term life stabilization and recovery. There have been no reports of deaths at drug overdose prevention sites or supervised consumption sites in Vancouver since they have been in existence (BC Coroners Service, 2022). Accordingly, this demonstrates that the services have the potential of preventing opioid overdose deaths, at least for those who are utilizing the site.

Figure 4.3
SCS's & OPS's in Vancouver, BC



CHAPTER 5

The Opioid Crisis

The opioid crisis and overdose deaths associated with it look very different among the five cities explored above. This comes because of the varying size of the population, differing geographical locations, and different densities of citizens with different needs. Even so, there is no lack of lives lost from the crisis. In Ottawa, when the first injection site opened in November of 2017, they had registered 1049 different clients in just under a year (Public Health Agency of Canada, 2019). The visitor expectation at the site was only 60-80 visitors a day, however, it averaged approximately 121 visitors per day (Public Health Agency of Canada, 2019). There was also an average of 29 oxygen overdose reversals and 28 naloxone overdose reversals during 2017 and 2018 (Public Health Agency of Canada, 2019). In 2019, Ottawa CTS sites saw a total of 84,223 visits, with the most frequent drugs being both fentanyl and heroin (Ottawa Public Health, 2020). During this same time, there was a total of 524 overdoses that were reversed only with oxygen and/or rescue breathing, and 587 overdoses reversed by naloxone (Ottawa Public Health, 2020). This number is considerable as Ottawa has a population of 944,753 people (World Population Review, 2022). In 2022, the total population of Toronto is just over 2.7 million people (Canada Population, 2022). From January to March 2019, the Sherbourne St. SCS was visited 6,484 times by individuals using drugs, and a total of 257 overdoses were reversed by on-site staff (SRCHC, 2020). Between January 1, 2022, and August 31, 2022, there had been a combined total of 121,158 visits to supervised consumption services in the city (TBH, 2022). During the same 8-month period, there were 3176 overdoses and 1882 requiring naloxone (TBH, 2022). This represents a 74%

increase from 2019 and a 273% increase from 2015 (City of Toronto, 2022). This increase illustrating the severity of the crisis.

As a mid-sized city, London holds a population of approximately 515,000 people as of 2022 (MacroTrends, 2022). Between February 12th and August 31st, 2018, the temporary overdose prevention site, referred to as “the trailer” because of the service being located in a travel trailer, experienced a total of 7152 visits (MLHU, 2019). First looking at 2019, there were 28,859 visits, 1,576 referrals, and 171 overdoses (Dyck, 2022). 2020 saw 20,047 visits, 810 referrals, and 126 overdoses, and 2021 saw 14,013 visits, 13,932 referrals, and 237 overdoses (Dyck, 2022). London experienced trends that were comparable to those seen across Ontario during the same time (Dyck, 2022). In June 2021, the average number of opioid-related deaths was 12, while in 2020 the average was only 8 (Dyck, 2022). Additionally, the number of opioid-related emergency department visits tripled from 37 in January 2020 to 113 in June 2021 (Dyck, 2022). Unfortunately, statistics indicate that drug use went up during the pandemic which could have a direct correlation with the increase in opioid overdoses (Dyck, 2022). It is important to further note that London police reported no increase in crime-related incidents because of consumption and treatment services in 2021 (Carepoint, 2021). No increase in crime-related incidents with consumption and treatment services being available is key in reassuring public concerns.

Windsor is the smallest city that is explored within this review, holding a population of 339,515 as of early 2022 (World Populations, 2022). Within Windsor-Essex County, Windsor is the most affected area followed by Leamington, a town within the county roughly 45 minutes away from the City of Windsor. In 2017, Windsor-Essex

County is affected 18.9% more than the provincial average as it relates to the opioid and overdose crisis (Gill et al., 2022). The concentration of this percentage of overdoses is in the downtown city core of Windsor. Windsor, like London, found overall increases in opioid-related overdoses and emergency room visits (Gill et al., 2022). Windsor-Essex was faced with 108 opioid-related emergency room visits in 2016 and 346 opioid-related emergency room visits in 2020 (Gill et al., 2022). Additionally, there were 416 opioid-related emergency room visits in 2021 (WECHU, 2022). Looking at emergency department visits for opioid overdoses in Windsor, there were 114 visits in 2010, 351 visits in 2020, and 505 visits in 2021 (WECOSS, 2022). Unfortunately, the statistics regarding the size of the clientele at this date are scarce. With a population of 631,486, Vancouver possesses a unique geographical location as it borders a large body of water (Canada Population, 2022). Since the opening of Insite in 2003, the site has seen more than 3.6 million visits by those who used the site to inject drugs under supervision (VCH, 2019). Since 2003, there have been 6,440 overdose interventions at Insite (VCH, 2019). For 2018, there was a total of 189,837 visits to the site by 5,436 individuals, with an average of 337 visitors per day (VCH, 2019). While for the year 2019, there were 170,731 visits by 5,111 individuals, with an average of 312 visitors per day (VCH, 2019). Importantly, there have been no reports of overdose deaths that occurred at the harm reduction or safe injection sites discussed.

This leads to the conclusion that the overdose crisis is present in all five municipalities, illustrating not only how many lives are lost to the opioid and overdose crisis, but also the number of people that utilize the harm reduction and safe injection services that are available. In the next chapter, a breakdown of accidental drug toxicity

deaths and opioid toxicity deaths will be conducted, illustrating the reality of the number of reported overdose deaths there are per municipality, per year.

CHAPTER 6

Overdose Deaths

As this review focuses on harm reduction and safe injection sites in Ontario and uses Vancouver as a comparable value, the Chief Coroners of Ontario had been consulted to ensure accurate figures surrounding the number of opioid-related deaths that have occurred in Ottawa, Toronto, Windsor, and London over the years. All death investigations that take place in Ontario are led by both the Office of the Chief Coroner and the Ontario Forensic Pathology Service (Ontario, 2022). Collaboratively, they ensure that no death is overlooked, ignored, or concealed, and can make further recommendations to prevent similar deaths or improve public safety across the province (Ontario, 2022). The coroner and/or the forensic pathologist follow a thorough process where their investigation must give answers to the identity of the deceased, the date of the death, the location of death, the medical cause of death, and the means of death which could be determined as natural causes, accident, homicide, suicide or undetermined (Ontario, 2022). The investigators can obtain information from as many sources as needed to proceed in the investigation including, but not limited to, friends, family, neighbours, family doctors, etc. (Ontario, 2022). The coroners' office focuses on investigating deaths that look to be because of sudden or unexpected natural deaths or unnatural causes (Chief Coroner, 2022). In other words, they focus on deaths that appear to be suspicious or questionable. The coroner may also be asked to be involved in an active death investigation if there are questions arising leading to the possibility of the death coming because of care provided to the individual before their death (Chief Coroner, 2022). In addition to the coroner collecting information about the circumstances of death and history as part of their investigation, drug toxicity deaths typically involve post-mortem toxicology and full post-mortem examination, also known as an autopsy. An autopsy is where a pathologist conducts their investigation by examining the deceased's body, commonly the internal organs as well, to determine the cause of their death (Ontario, 2022). The coroner's decisions and findings are legal and binding (Ontario, 2022). These decisions are kept in a provincial database that can be used at any time for the creation of policies and legislation.

The Method of Determining Accurate Death Figures

The following statistics surround those who have died in a way that is considered non-natural and have had levels of acute toxicity. Deaths that have occurred with a present level of drug toxicity in the body that may not be accounted for in the acute drug toxicity report include homicide, suicide, motor vehicle collisions, falls, drownings, and hypothermia (Chief Coroner, 2022). This is because, although there are drug toxicity levels found in the deceased's body, it is not the direct cause of death. Additionally, non-natural deaths are to be understood to be deaths that have occurred unexpectedly and suddenly (Chief Coroner, 2022). To avoid confusion, a death occurring because of a health treatment complication or disease is not considered to be a non-natural death (Chief Coroner, 2022). Furthermore, deaths in which the individual died because of infections or sepsis as a result of substance use, those possessing diabetic-related complications, cardiac disease, or heart attacks accelerated by substance use, as well as other diseases that have come as a result of chronic substance use and abuse are not included (Chief Coroner, 2022). What is exclusively explored here are deaths that have come because of sudden unnatural deaths by those who have acute toxicity levels in their system and have died as a result of this factor. This combined with the additional investigative measures conducted by the coroners, such as speaking to friends and family, would assist in concluding that the manner of death came because of a drug or opioid overdose. Two differing figures will be analyzed. First accidental drug toxicity deaths in Ontario by the municipality from 2010-2022 and second, opioid toxicity deaths in Ontario by the municipality from 2005-2022. They will be discussed in 5-year increments up until 2020, followed by 2021 and 2022 which encompasses preliminary information that is subject to change or adjustments.

The Number of Lives Lost to the Opioid and Overdose Crisis

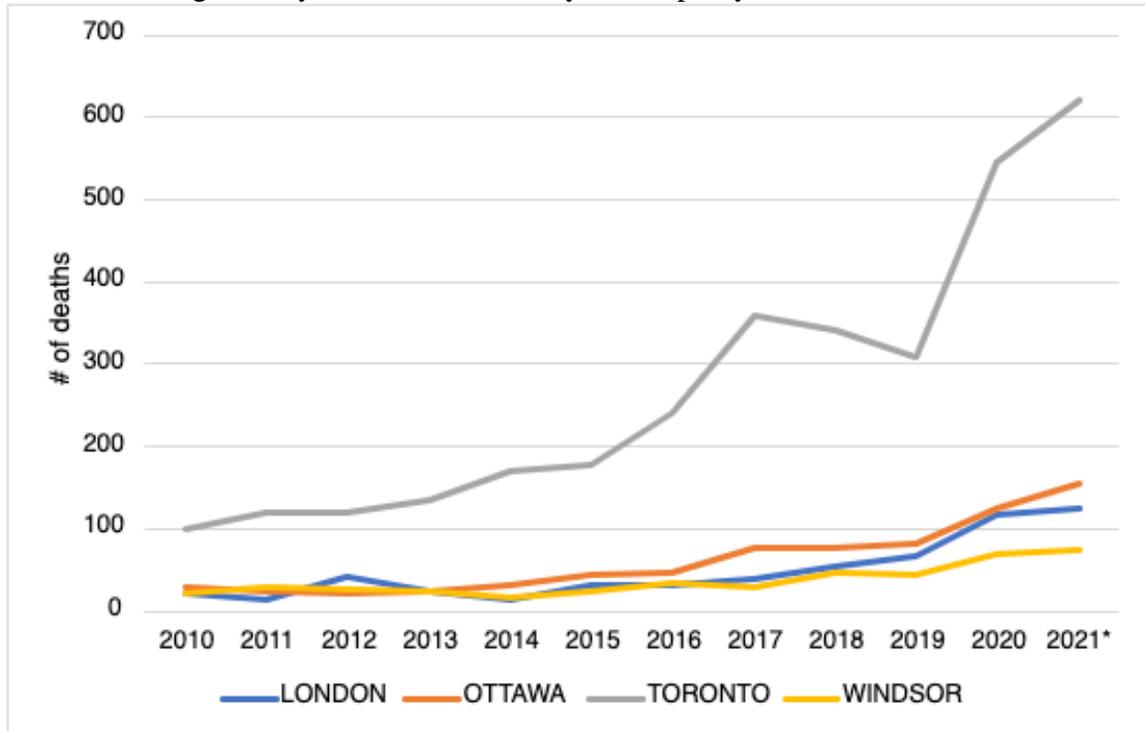
Looking first at accidental drug toxicity deaths in Ontario by the municipality from 2010-2022, the number of deaths has increased significantly. In 2010, Ottawa had 29, Toronto had 100, and London and Windsor both had 21 accidental drug toxicity deaths (Chief Coroner, 2022). For reference, all of Ontario experienced a total of 566 deaths during that same year (Chief Coroner, 2022). These four municipalities accounted for approximately 30% of accidental drug toxicity deaths in Ontario in 2010. In 2015, Ottawa encountered 43 deaths, Toronto had 179 deaths, London 32, and Windsor 25, all due to accidental drug toxicity overdoses (Chief Coroner, 2022). For reference, all of Ontario experienced a total of 821 accidental drug toxicity deaths during that same year (Chief Coroner, 2022). Looking at accidental drug toxicity deaths in 2020, Ottawa had 124, Toronto had 546, London had 117, and Windsor had 70 (Chief Coroner, 2022). For reference, all of Ontario experienced a total of 2589 accidental drug toxicity deaths during that same year (Chief Coroner, 2022). In 2021, Ottawa had 154, Toronto 620, London 126, and Windsor 74 accidental drug toxicity deaths (Chief Coroner, 2022). For reference, all of Ontario experienced a total of 2985 accidental drug toxicity deaths during that same year (Chief Coroner, 2022). Looking only at figures available for 2022 from January to June, Ottawa has had 58, Toronto has had 240, London has had 41, and Windsor has had 28 accidental drug toxicity deaths (Chief Coroner, 2022). For reference, up until June 2022, all of Ontario has had 1146 accidental drug toxicity deaths (Chief Coroner, 2022). As a disclaimer, all figures presented for 2021 and 2022 are preliminary and subject to change as investigations may still be underway or uncompleted.

Statistically looking at the percentage of increase from 2010 to 2020 at each city, Ottawa had an increase of roughly 428%, Toronto had an increase of 546%, London had an

increase of 557%, and Windsor had an increase of 333% (Chief Coroner, 2022). Ontario saw an increase from 566 accidental drug toxicity deaths in 2010 to 2589 in 2020, an increase of 457%. As illustrated in Figure 6.1, there has been a gradual and constant increase in accidental drug toxicity deaths in Ottawa, Toronto, London, and Windsor.

Figure 6.1

Accidental drug toxicity deaths in Ontario by municipality, 2010-2022

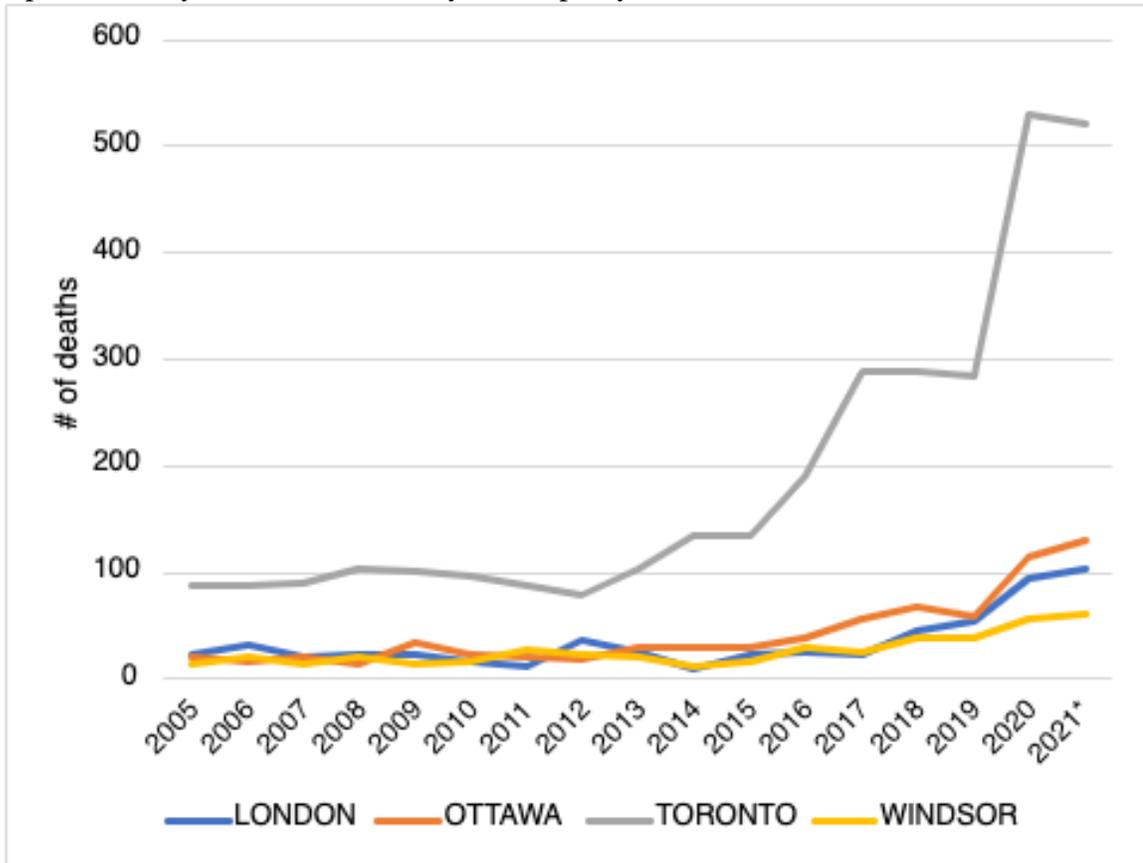


Now looking at opioid toxicity deaths in Ontario by the municipality from 2005-2022, the gradual increase is also seen over the past decade. To note, the deaths counted within these figures have been determined, by the coroner, to have had at least 1 opioid listed at the time of the autopsy (Chief Coroner, 2022). In 2005, Ottawa had 20, Toronto had 88, London had 23, and Windsor had 14 opioid toxicity deaths (Chief Coroner, 2022). There was a total of 444 deaths with at least 1 opioid listed in the drug toxicity report in Ontario during that time (Chief Coroner, 2022). In 2010, Ottawa saw 23, Toronto saw 97, London had 16, and Windsor had 17, with a total of 560 opioid toxicity

deaths in Ontario (Chief Coroner, 2022). Ottawa had 29, Toronto had 134, London had 24, and Windsor had 17 opioid toxicity deaths, and a total of 712 of these deaths in Ontario in 2015 (Chief Coroner, 2022). In 2020, Ottawa experienced 115 opioid toxicity deaths, Toronto 529, London 95, and Windsor 56 (Chief Coroner, 2022). All of Ontario had reported a total of 2327 opioid toxicity deaths for that year (Chief Coroner, 2022). In 2021, there were 131 opioid toxicity deaths in Ottawa, 522 in Toronto, 103 in London, and 62 in Windsor, with 2522 reported in all of Ontario. Looking only at figures available for 2022 from January to June, Ottawa has experienced 72 opioid toxicity deaths, Toronto has had 243, London 49, and Windsor 48 (Chief Coroner, 2022). All of Ontario has had 1199 up until June of 2022 (Chief Coroner, 2022). As a disclaimer, all figures presented for 2021 and 2022 are preliminary and subject to change as investigations may still be underway or unconcluded. To examine the increases, these percentages of growth will be dated from 2010 to 2020 within each city to ensure consistency in comparison between accidental drug toxicity deaths and opioid toxicity deaths. Ottawa had an increase of 500%, Toronto had an increase of roughly 545%, London had an increase of 593%, and Windsor had an increase of approximately 329% (Chief Coroner, 2022). Ontario saw an increase from 560 opioid drug toxicity deaths in 2010 to 2327 in 2020, an increase of roughly 416%. As illustrated in Figure 6.2, there has been a constant increase in opioid toxicity deaths in Ottawa, Toronto, London, and Windsor.

Figure 6.2

Opioid toxicity deaths in Ontario by municipality, 2005-2022



Looking lastly at Vancouver for comparison with data from the Chief Coroner's office of British Columbia, the first 6 months of 2022 have seen more overdose deaths than in any other year within the province of British Columbia, creating an overall death toll of over 10,000 in the province (Mangione, 2022). Additionally, the number of deaths in 2022 in the first half of the year has already surpassed the same period in 2021 (Public Safety and Solicitor General, 2022). From January 1, 2022, to June 30, 2022, 1,095 people have lost their lives to opioids in the province (Mangione, 2022). Vancouver has had the most drug toxicity deaths within the entire province of British Columbia, by a significant amount. In 2012, Vancouver experienced 65 drug toxicity deaths, 2015 saw 138, 2020 had 421, 2021 has had 534, and 2022 has had 453 from January 1 to October

31 (BC Coroners Service, 2022). The province of British Columbia has also seen a sharp increase with 270 total drug toxicity deaths in 2012, 529 in 2015, 1,775 in 2020, 2,267 in 2021, and 1,827 up until October 31, 2022 (BC Coroners Service, 2022). Vancouver provides another layer of insight to assist in the development of additional policy and legislation.

The Results of Harm Reduction and Safe Injection Site Implementation

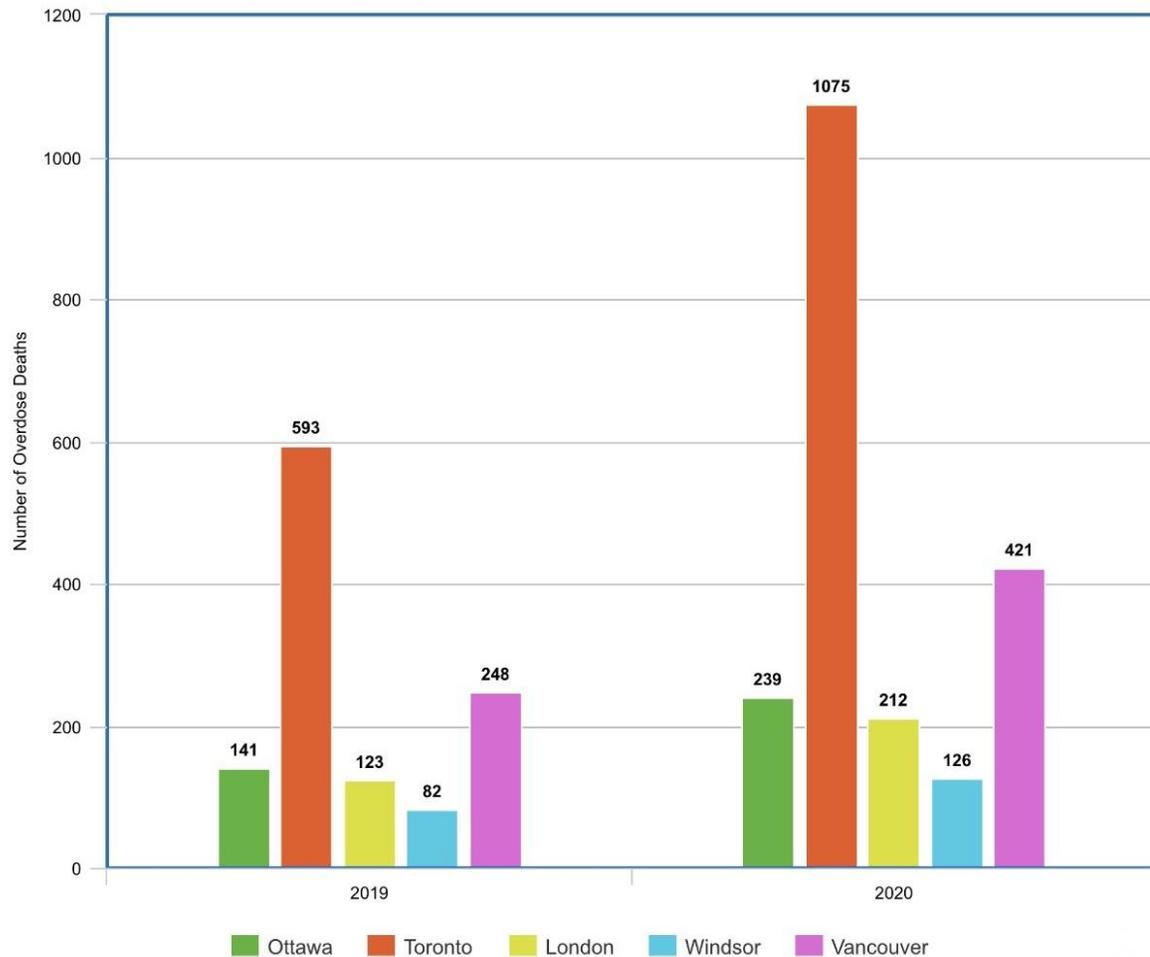
The figures above clearly illustrate that there has been a sharp increase in both accidental drug toxicity deaths and opioid toxicity deaths within Ottawa, Toronto, London, and Windsor. It should be remembered that although this data is discussed as numbers, each number represents a human that has lost their life to the drug and opioid overdose crisis. A consistent increase is seen extensively across all four Ontario municipalities. As a result, it is difficult to conclude if the harm reduction and safe injection site policies being implemented are assisting. First considering Ottawa after receiving its first SIS in 2017, it is difficult to state that it has had a positive impact in stopping overdose deaths overall. Combining both accidental drug toxicity deaths and opioid toxicity deaths leading up to the year of implementation, 2015 had a combined 72 deaths, and 2016 had a combined 86 deaths. After the site implementation in 2017, there were 135 deaths, 146 in 2018, 141 in 2019, and 239 in 2020. Thus, alluding to the fact that the implementation has not stopped the increase in overdose deaths in Ottawa. There was a minuscule decrease from 146 deaths in 2018 to 141 deaths in 2019, however, this amount is inadequate to create a difference in trend overall. Toronto legally implemented its first harm reduction and safe injection site policy in 2017. The opening date of Moss Park will not be included in this discussion due to the illegality of the site at the

beginning of its operation, as well as the sporadic data collection that occurred in its first years.

Combining both accidental drug toxicity deaths and opioid toxicity deaths leading up to the year of implementation, 2015 had a combined 313 deaths, and 2016 had a combined 430 deaths. After implementation in 2017, there were 650 deaths, 631 in 2018, 593 in 2019, and 1,075 in 2020. A hopeful decrease is present when looking at the death decline from 2017, 2018, and 2019. It can be argued here that this decrease is a result of the harm reduction and safe injection site policy implementation in 2017, as this factor was introduced at the time of the decline. However, there is a sudden increase when looking at opioid and accidental drug toxicity deaths from 2019 to 2020. Leading up to 2018 when London received their first CTS in 2018, there was a gradual increase in overdose deaths. Combining both accidental drug toxicity deaths and opioid toxicity deaths leading up to the year of implementation, 2015 had a combined 56 deaths, 2016 had a combined 58 deaths, and 2017 had a combined 62 deaths. After implementation in 2018, there were 100 deaths, 123 in 2019, and 212 in 2020. There is no decrease to note after the implementation of the harm reduction and safe injection policy in London. Lastly, although there has been harm reduction and safe injection policy development in Windsor, there has yet to be policy implementation allowing the opening of a safe injection and overdose prevention site. For this reason, a combination of both accidental drug toxicity deaths and opioid toxicity deaths will be analyzed from 2015 to 2020, the last year with completely accurate numbers that are not preliminary and subject to change. 2015 had a combined 42 deaths, 2016 had a combined 63 deaths, 2017 had a combined 53 deaths, 2018 had a combined 88 deaths, 2019 had a combined 82, and 2020

had a combined 126 deaths. Looking at all municipalities discussed, a sudden increase in overdose deaths in 2015 can be noticed. This may have been precipitated because of the popularization of fentanyl during that time (Government of Canada, 2019). It is clear, here, that there are some fluctuations in deaths, yet there is a gradual upward trend overall. Please refer to Figure 6.3 for a visual representation of the above statistics.

Figure 6.3
Overdose deaths by municipality, 2019-2020



As discussed previously, Vancouver has had their SCS's in operation for more than a decade longer than the four Ontario municipalities discussed. Leading up to the year of implementation, Vancouver experienced a total of approximately 85 deaths in 2000, 90 deaths in 2001, and roughly 49 deaths in 2002 and 2003 (Marshall, 2012). After

implementation, there were roughly 70 overdose deaths in 2004, 51 in 2005, and 54 in 2006. Looking at most recent years, as previously noted above, Vancouver has had a total of 231 deaths in 2016, 374 deaths in 2017, 398 deaths in 2018, 248 deaths in 2019, and 421 deaths in 2020. Vancouver has put a great deal of time, effort, and resources into assuring their harm reduction and safe injection site policies are saving lives and reducing drug overdose deaths. Statistics show, however, that there continues to be a steady increase in overdose deaths, even with the early implementation of supervised consumption services. The continued increase in all municipalities analyzed in the review leads to the belief that harm reduction and safe injection site policy implementation are not ceasing the sharp increase seen provincially and nationally.

With the increase in overdoses, however, there has been a difference in increases of lives saved due to immediate onsite overdose intervention increased as well, at least in Ontario. As previously noted, Ottawa experienced an average of 57 overdose reversals in 2017 and 2018. In 2019, there were 1,111 overdose reversals, either by naloxone, oxygen, or rescue breathing. In Toronto, there were 1,017 total overdoses reversed between January 2019 and March 2019, and 3176 overdose reversals from January 2022 to August 2022 (RCHC, 2020). London had 171 overdose reversals in 2019, 126 overdose reversals in 2020, and 237 overdose reversals in 2021. Windsor is unable to provide data to this discussion due to the absence of a site. Vancouver, unfortunately, has experienced a decline in overdose prevention with 1983 overdose interventions in 2017, 1466 overdose interventions in 2018, and 1314 overdose interventions in 2019 (VCH, 2019). Please refer to Figure 6.4 for visual representation of the above numbers.

Figure 6.4

City	Overdoses Deaths per Year, per Municipality with Safe Injection Sites										
	2000	2001	2002	2003	2004	2015	2016	2017	2018	2019	2020
Ottawa	-	-	-	-	-	72	86	135*	146	141	239
Toronto	-	-	-	-	-	313	430	650*	631	593	1,075
London	-	-	-	-	-	56	58	62	100*	123	212
Windsor	-	-	-	-	-	-	-	-	-	-	-
Vancouver	85	90	49	49*	70	-	231	374	398	248	421

*Year of overdose prevention and safe injection site implementation

Other Areas of Comparison

To provide a greater comparison, the following areas are of similar population size to the previously discussed municipalities but do not currently possess an overdose prevention or safe injection site. The Simcoe Muskoka District is in Northern Ontario and holds a population of approximately 540,249 (SMDS, 2022). This area has applied for an exemption from Section 56.1 of the Controlled Drugs and Substances Act, which has been approved, but is awaiting confirmation from the federal Ministry of Health (SMHS, 2022). In 2020, there were approximately 131 drug and opioid overdose deaths, in 2021 there were 175, and from January 2022 to June 2022, there have been 67 (SMHS, 2022). As per the Simcoe Muskoka Health Unit, drug and opioid overdose deaths have more than doubled since 2017 and have been increasing significantly since 2005 (SMHS, 2022). Kamloops, British Columbia has a population of roughly 104,000 people, as well as a very high number of drug and opioid overdose deaths (World Populations, 2022). In 2015, there were 7 drug and opioid overdose deaths, in 2020 there were 60, in 2021 there were 77, and as of October 31, 2022, there have been 74 (BC Coroners Service, 2022) As a disclaimer, all figures presented for 2021 and 2022 are subject to change. As illustrated, Kamloops is another area that is facing dramatic increases in opioid and drug overdose

deaths. Also located in British Columbia with a population of over 249,000, Burnaby is another municipality that has had a large increase in opioid and overdose deaths but does not have an overdose prevention or safe injection site (Cite of Burnaby, 2022). In 2015, there were 15 drug and opioid overdose deaths, in 2020 there were 59, in 2021 there were 78, and as of October 31, 2022, there has been 54 (BC Coroners Service, 2022). As a disclaimer, all figures presented for 2021 and 2022 are subject to change. Like the municipalities possessing safe injection sites, these three municipalities follow their trend of constant increasing drug and opioid overdose deaths per year. As a result of such differentiation, it becomes unclear to state how effective the safe injection sites and harm reduction services truly become in the grand scheme. Nonetheless, the results create an unclear conclusion.

CHAPTER 7

Discussion

The data suggests several points. Firstly, it draws to the fact that the findings are inconclusive to determine if the harm reduction and safe injection site policy implementation is working. Although numbers in Ontario demonstrate that with the increase in overdose deaths, there has also been an increase in overdose reversals in safe injection and overdose prevention sites, these factors do not co-relate with the numbers from Vancouver. As Vancouver is the independent variable in this study, for it has had the longest-running harm reduction and safe injection site policy implementation, it leads to the conclusion that it cannot be argued that these sites are truly preventing overdose deaths. This argument can be further supported when taking into consideration the constant increase in opioid and overdose deaths seen within the areas that do not have overdose prevention or safe injection site policies. The Simcoe Muskoka District, and Kamloops and Burnaby, British Columbia have all illustrated very similar trends to all the municipalities discussed as it surrounds the increases of opioid and overdose deaths. What can be stated most likely, supported by data previously discussed, is that harm reduction and safe injection site policy implementation are not stopping the increase in overdose deaths. Even with the positive correlation in increases of overall overdose deaths in the province of Ontario to the increase in overdose reversals at the sites, there are not fewer lives being lost to the opioid and overdose crisis. Put simply if the goal is to reduce deaths, overall, it is not working. There may be three factors that are a result of the continuous implementation of harm reduction and safe injection site policy, even if statistics illustrate negative results.

Firstly, there may be a political component to the implementation of the sites that disregard the statistics. To explain, it cannot be contested that the opioid and overdose crisis has not increased dramatically. For this reason, citizens may be calling on their government and politicians to implement some sort of policy to assist in stopping opioid and overdose deaths. As such, what may be seen as politically acceptable might not be supported by the data. In defense of this point of view, at least in Ottawa, Toronto, and London, data shows that there are many overdose deaths that have been prevented because of the prevention sites. However, this has not stopped the number of overdose deaths that continue to increase. Secondly, the potency and the uncertainty of the quality and ingredients of the substances could be another variable that has caused the deaths to increase. It is nearly impossible to know exactly the ingredients and other substances that are within substances, especially if their consistency is nearly identical. For example, an individual purchasing cocaine may be under the impression that the only ingredient is cocaine, yet it could be laced with fentanyl. Both of these substances are most commonly seen in a white, powdery form. As even a small dosage of fentanyl is fatal, an individual consuming what they assume to be only cocaine may overdose and die as a result of this lacing.

Moving on, an interesting trend that has revealed itself is the drastic increase in drug overdose deaths visible from 2019 to 2020. One common denominator across the country, and the world, that may account for this increase is the COVID-19 pandemic. March 2020 commenced a time of isolation, unsurety, and grave restrictions that left most to their home if they were not already experiencing homelessness. It can be assumed that this dramatic increase came because of people either being scared to enter

into a facility with a large rotation of people or may have had limited access to these facilities. This would have people already using drugs needing to find alternative locations of consumption with no supervision or perhaps consuming more substances than they would otherwise. On the other hand, however, the factor of isolation and forced lifestyle adjustment that came along with the pandemic may have led individuals to attempt substances they may not have consumed otherwise. If this were to be the case, it can be further surmised that it would be possible that individuals who had never consumed substances prior accidentally overdosed due to consuming an uncalculated dose of a substance or a substance that was laced with a combination of other substances, such as fentanyl. This dramatic increase is also visible in Figure 6.3. It is hopeful that additional research will solidify these assumptions further soon.

CHAPTER 8

Other Findings

There have been several additional findings that have appeared throughout this research that are quite interesting and worth noting. Firstly, much of the data found quite effortlessly regarding all five municipalities is dated no later than 2019, especially news articles. An example of this is seen on the Ottawa Public Health website where it is stated “due to the demands of COVID-19, this data has not been updated” (Ottawa Public Health, 2018). Unfortunately, this inconsistency in reporting may have resulted in the public being ill-informed about the reality of the number of lives lost to opioid and overdose deaths, especially since 2019. This becomes more concerning for there is a positive correlation in the sudden increase in overdose deaths coming after the pandemic. On another note, for the sites located in Ontario, there has been some positive work done to create additional permanent locations. Originally, SCS’s were a long-term harm reduction approach within the province of Ontario and also doubled as a SIS’s, while the OPS’s were used as temporary sites that were only in operation for 3-6 months (WECHU, 2022). Ontario's Deputy Premier and Minister of Health and Long-Term Care announced in October 2018 that CTS’s would replace SCS’s and OPS’s in Ontario and will provide wrap-around services to connect those using the sites to resources and programs as they see fit (MOH, 2021). This extra effort placed on harm reduction and safe injection sites, however, was being implemented before the COVID-19 pandemic. There have been no additional efforts to positively affect or change sites or services since that time, at least that has been publicly announced.

CHAPTER 9

Conclusion

Policy development surrounding harm reduction continues to increase in Ontario, although it seems to be growing slowly. Unfortunately, although there is an implementation of policy and legislation with the goal of reducing drug and opioid overdose deaths across the province of Ontario, and Canada as a whole, the implementations in place today does not seem to be working. The hopeful light is seen in the fact that deaths are being prevented, however, the increase in overdose deaths is not being stopped. As for Windsor, it is difficult to conclude that the implementation of a safe injection site in the city will lead to the prevention of overdose deaths. As seen in Windsor's municipal counterparts that have harm reduction and safe injection policy implementation strategies discussed within this review, Windsor's statistics are presumed to be no different in the future. As such, it can be predicted that the site will prevent overdose deaths, but it will not prevent the increase in overdose deaths in the area overall. Data is required to be more widely available in a transparent matter in order to assist in the growth of harm reduction policy. Data is difficult to find and of that data that is found, it must be patched together. This creates further difficulty in the evaluation of efficacy and measurements to determine if the policies in place are properly functioning. Thus, an examination of harm reduction policy in Vancouver, Ottawa, Toronto, London, and Windsor has led to the determination that harm reduction and safe injection site policy implementation is effective in saving lives through onsite overdose reversal procedures, but it is not effective in reducing the number of opioid and overdose deaths that occur and continue to grow each year.

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VITA AUCTORIS

NAME: Finalba (Fina) Olivia Pirrone

PLACE OF BIRTH: Windsor, ON

YEAR OF BIRTH: 2000

EDUCATION: St. Thomas of Villanova Secondary School,
LaSalle, ON, 2018

University of Windsor, B.A(H), Windsor, ON,
2021

University of Windsor, M.A., Windsor, ON,
2023