



Deaths by Acute Drug Toxicity in Saskatchewan: A Review of Statistics from 2019-2024

Saskatchewan Coroners Service

Published: October 2026

The SCS wishes to acknowledge the land on which it is situated. The SCS operates on lands comprised of Treaties 2, 4, 5, 6, 8, and 10 and the home of the Métis.

Table of Contents

TABLE OF CONTENTS	3
LIST OF TABLES	5
LIST OF FIGURES	9
DEDICATION	11
FOREWORD	12
WHERE TO GO FOR HELP	13
FRIENDS, FAMILIES, AND LOVED ONES	15
ACKNOWLEDGEMENTS, CONTRIBUTORS, AND PARTNERS	16
ACKNOWLEDGEMENTS	16
LANGUAGE STATEMENT	16
CONTRIBUTORS AND PARTNERS	16
BACKGROUND	18
DEFINING DRUGS AND ACUTE DRUG TOXICITY	18
THE CANADIAN AND SASKATCHEWAN CONTEXT	18
<i>Canada</i>	18
<i>Saskatchewan</i>	19
THE SASKATCHEWAN CORONERS SERVICE AND DEATH INVESTIGATIONS	20
ABOUT THE DATA	24
CASE DEFINITION	24
DATA SOURCE	25
DATA AVAILABILITY AND PREPARATION	26
DATA ANALYSIS	27
RESULTS	29
CASE STATUS	29
DATE OF DEATH (YEAR, MONTH, WEEKDAY, AND TIME OF DAY)	29
MANNER OF DEATH	32
GEOGRAPHY AND LOCATION INFORMATION	33
<i>Location of death</i>	35
<i>Location of events leading up to death</i>	38
<i>Location of residence</i>	39
<i>Canadian Index of Multiple Deprivation (CIMD) analysis</i>	41
DRUGS CONTRIBUTING TO DEATH	43
<i>Polysubstance groups</i>	45
<i>Opioids</i>	46
<i>Stimulants</i>	47
<i>Benzodiazepines/benzodiazepine analogues and xylazine</i>	48
SEX	50
AGE	52
RACE	55
INDIGENOUS IDENTITY AND FIRST NATIONS RESERVES	59

<i>Indigenous identity</i>	59
<i>First Nations reserves</i>	60
MEDICAL AND MENTAL HEALTH HISTORY	61
<i>Access to primary care provider (PCP)</i>	61
<i>Healthcare setting interaction history</i>	61
<i>Substance use history</i>	62
INTERACTIONS WITH THE CORRECTIONAL SYSTEM.....	64
RELATIONSHIP STATUS	66
CONSULTATIONS	67
FEEDBACK AND FUTURE STEPS WITH THE DATA FOR PREVENTION	67
DISCUSSION AND LIMITATIONS	69
CONCLUSION AND FINAL THOUGHTS	70
GLOSSARY	71
REFERENCES	76
APPENDIX: DATA TABLE FOR FIGURES	80

List of Tables

Table 1. Categorization of variables 27

Table 2. Counts of people who died and suspected to have died from acute drug toxicity by case status, Saskatchewan, 2019-2024. 29

Table 3. Counts and crude rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by year, Saskatchewan, 2019-2024. 30

Table 4. Counts and percentage of people who died and suspected to have died from acute drug toxicity by manner of death, Saskatchewan, 2019-2024. 32

Table 5. Counts and percentage of people who died and suspected to have died from acute drug toxicity by location of death, Saskatchewan, 2019-2024. 35

Table 6. Counts, percentage, and crude rates of people who died and suspected to have died from acute drug toxicity by location of death urban/rural status, Saskatchewan, 2019-2024. . 36

Table 7. Counts, percentage, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by census health region, Saskatchewan, 2019-2024. 38

Table 8. Counts and percentage of people who died and suspected to have died from acute drug toxicity by location of events leading up to death, Saskatchewan, 2019-2024. 38

Table 9. Counts and percentage of people who died and suspected to have died from acute drug toxicity by location of residence, Saskatchewan, 2019-2024..... 40

Table 10. Counts and percentage of people who died and suspected to have died from acute drug toxicity by quintile for the dimensions of the Canadian Index of Multiple Deprivation, Saskatchewan, 2019-2024. 43

Table 11. Drug groups and corresponding metabolites from toxicology results..... 44

Table 12. Counts, percentage (n= 1909), and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by drug groups, Saskatchewan, 2019-2024. 45

Table 13. Counts and percentage of people who died and suspected to have died from acute drug toxicity by polysubstance groups, Saskatchewan, 2019-2024..... 45

Table 14. Counts and percentage of people who died and suspected to have died from acute drug toxicity by polysubstance groups and year, Saskatchewan, 2019-2024..... 46

Table 15. Percentage of people who died and suspected to have died from acute drug toxicity by number of drugs, Saskatchewan, 2019-2024.	46
Table 16. Counts and percentage of people who died and suspected to have died from acute drug toxicity by opioid groups, Saskatchewan, 2019-2024.	47
Table 17. Counts and percentage of people who died and suspected to have died from acute drug toxicity by opioid groups and year, Saskatchewan, 2019-2024.	47
Table 18. Counts and percentage of people who died and suspected to have died from acute drug toxicity by stimulant groups, Saskatchewan, 2019-2024.	48
Table 19. Counts and percentage of people who died and suspected to have died from acute drug toxicity by stimulant groups and year, Saskatchewan, 2019-2024.	48
Table 20. Counts and percentage of people who died and suspected to have died from acute drug toxicity by benzodiazepine groups, Saskatchewan, 2019-2024.	49
Table 21. Counts and percentage of people who died and suspected to have died from acute drug toxicity by benzodiazepine groups and year, Saskatchewan, 2019-2024.	49
Table 22. Counts and percentage of people who died and suspected to have died from acute drug toxicity by xylazine groups, Saskatchewan, 2019-2024.	49
Table 23. Percentage of people who died and suspected to have died from acute drug toxicity by xylazine groups and year, Saskatchewan, 2019-2024.	50
Table 24. Counts, percentage, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by sex, Saskatchewan, 2019-2024.	50
Table 25. Counts and percentage of people who died and suspected to have died from acute drug toxicity by sex and manner of death, Saskatchewan, 2019-2024.	51
Table 26. Percentage of people who died and suspected to have died from acute drug toxicity by sex, accident and suicide manner of death, Saskatchewan, 2019-2024.	52
Table 27. Counts and percentage of people who died and suspected to have died from acute drug toxicity by sex and drug groups, Saskatchewan, 2019-2024.	52
Table 28. Average and median age of death among people who died and suspected to have died from acute drug toxicity, by sex, Saskatchewan, 2019-2024.	52
Table 29. Counts, percentages, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by age group, Saskatchewan, 2019-2024.	53

Table 30. Percentage of people who died and suspected to have died and suspected to have died from acute drug toxicity by age group and manner of death, Saskatchewan, 2019-2024.	53
Table 31. Counts, percentage, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by race, Saskatchewan, 2019-2024.	56
Table 32. Percentage of people who died and suspected to have died from acute drug toxicity and proportion of provincial population by known race, Saskatchewan, 2019-2024.	56
Table 33. Counts and percentage of Indigenous Peoples who died and suspected to have died from acute drug toxicity by Indigenous identity groups, Saskatchewan, 2019-2024.	60
Table 34. Counts and percentage of Indigenous Peoples who died and suspected to have died from acute drug toxicity by Indigenous identity groups and sex, Saskatchewan, 2019-2024.	60
Table 35. Counts and percentage of people who died and suspected to have died from acute drug toxicity on first nations reserve status by place of death, place of injury, and place of residence, Saskatchewan, 2019-2024.	61
Table 36. Counts and percentage of people who died and suspected to have died from acute drug toxicity by PCP provider status, Saskatchewan, 2019-2024.	61
Table 37. Counts and percentage of people who died and suspected to have died from acute drug toxicity by healthcare setting interaction history group, Saskatchewan, 2019-2024.	62
Table 38. Counts and percentage of people who died and suspected to have died from acute drug toxicity by substance use history, Saskatchewan, 2019-2024.	63
Table 39. Counts and percentage of people who died and suspected to have died from acute drug toxicity by substance use history and sex, Saskatchewan, 2019-2024.	63
Table 40. Counts and percentage of people who died and suspected to have died from acute drug toxicity by interactions with the correctional system groups, Saskatchewan, 2019-2024.	65
Table 41. Counts and percentage of people who died and suspected to have died from acute drug toxicity by interactions with the correctional system groups and sex, Saskatchewan, 2019-2024.	65
Table 42. Counts and percentage of people who died and suspected to have died from acute drug toxicity in custody and race group, Saskatchewan, 2019-2024.	65
Table 43. Counts and percentage of people who died and suspected to have died from acute drug toxicity in custody and age group, Saskatchewan, 2019-2024.	66

Table 44. Counts and percentage of people who died and suspected to have died from acute drug toxicity by relationship status and sex, Saskatchewan, 2019-2024.	66
--	----

List of Figures

Figure 1. Counts of people who died and suspected to have died from acute drug toxicity by month and year, Saskatchewan, 2019-2024. 30

Figure 2. Counts of people who died and suspected to have died from acute drug toxicity by weekday and year, Saskatchewan, 2019-2024. 31

Figure 3. Percentage of people who died and suspected to have died from acute drug toxicity by time-of-day and year, Saskatchewan, 2019-2024..... 32

Figure 4. Map of 2021 Census provincial health regions from Statistics Canada. 34

Figure 5. Percentage of people who died and suspected to have died from acute drug toxicity by location of death and year, Saskatchewan, 2019-2024. 36

Figure 6. Counts of people who died and suspected to have died from acute drug toxicity by census health region, Saskatchewan, 2019-2024. 37

Figure 7. Percentage of people who died and suspected to have died from acute drug toxicity by location of events leading up to death and year, Saskatchewan, 2019-2024. 39

Figure 8. Counts of people who died and suspected to have died from acute drug toxicity who were identified as unsheltered by year, Saskatchewan, 2019-2024..... 40

Figure 9. Counts of people who died and suspected to have died from acute drug toxicity by location related to death urban/rural status, Saskatchewan, 2019-2024. 41

Figure 10. Percentage of people who died and suspected to have died from acute drug toxicity by sex and year, Saskatchewan, 2019-2024..... 51

Figure 11. Percentage of people who died and suspected to have died from acute drug toxicity by age group and sex, Saskatchewan, 2019-2024..... 54

Figure 12. Percentage of people who died and suspected to have died from acute drug toxicity by age group and drug group, Saskatchewan, 2019-2024. 55

Figure 13. Percentage distribution of people who died and suspected to have died from acute drug toxicity by race and year, Saskatchewan, 2019-2024..... 57

Figure 14. Percentage distribution of people who died and suspected to have died from acute drug toxicity by race and sex, Saskatchewan, 2019-2024..... 58

Figure 15. Distribution of people who died and suspected to have died from acute drug toxicity by race and drug group, Saskatchewan, 2019-2024. 59

Figure 16. Percentage of people who died and suspected to have died from acute drug toxicity by substance use history and age groups, Saskatchewan, 2019-2024.	64
---	----

Dedication

This document is dedicated to the memory of each person represented.

Each life lost to drug toxicity is a tragedy that impacts families, friends, and communities in profound ways.

The Saskatchewan Coroners Service respectfully acknowledges and dedicates this work to those who have died or been affected by drug toxicity and substance-related harms.

Foreword

The following document is a report that will present, analyze, and discuss acute drug toxicity mortality data from the Saskatchewan Coroners Service (SCS) from 2019 to 2024. The aim of this report is to further understand the circumstances and contributing factors towards deaths by acute drug toxicity in Saskatchewan. This report has been commissioned and approved by the Chief Coroner of Saskatchewan, Jeff Wagner. Furthermore, this report has been conducted under the mandate of *The Coroner's Act (1999)*, stating that the SCS has a responsibility to bring awareness and provide recommendations to reduce preventable deaths in the province. As identified by the Chief Coroner, acute drug toxicity deaths are a relevant area of interest for the SCS to engage in preventative matters, which this report aims to fulfil. The variables of interest discussed in this report have been identified through research articles and reports as relevant measurements for drug toxicity prevention efforts.

To protect the privacy of those represented in this report, measures outlined in the [Privacy Act](#), [The Freedom of Information and Privacy Protection Act](#), and the [Health Information Protection Act](#) have been implemented. All direct identifying information (e.g., names, medical record numbers) has been removed from all data tables in this document. Suppression of certain small number values has been implemented to avoid the risk of re-identification. Suppression of small values was determined through a combination of re-identification risk assessment approach and contextual assessment of data. This approach calculates the probability of correctly identifying a case based on the data presented. (1,2) Further details on the re-identification risk assessment approach will be discussed in the *Methods* section of this report.

Where to go for help

The following document discusses and presents information that may be sensitive or triggering. **If you or someone you know is in crisis, please refer to the [Mental Health and Addictions Intake](#) or contact any of the crisis helplines listed below. If life is in immediate danger, please call 911.**

- **HealthLine 811:** HealthLine 811 is a confidential, 24-hour physical and mental health and addictions advice, education, and support telephone line available to the people of Saskatchewan. It is staffed by experienced and specially trained Registered Nurses, Registered Psychiatric Nurses, and Registered Social Workers. HealthLine 811 is free. Services are offered in English, with translation available in over 100 languages. If you are having technical issues with accessing HealthLine 811 by dialling 811, you can call 1-877-800-0002 to be connected with HealthLine 811.
- **National Overdose Response Service (NORS):** A 24/7 free and virtual overdose prevention hotline available to all Canadians. Additionally, provides support to assist with safe consumption. Provides confidential, non-judgmental support whenever and wherever. Call the hotline at 1-888-688-NORS(6677).
- **Hope for Wellness Helpline:** Available to all Indigenous Peoples across Canada who need immediate crisis intervention, emotional support, or referrals to community-based services. Experienced and culturally sensitive help line counsellors can help if you want to talk or are distressed. Telephone (number: 1-855-242-3310) and [online counselling](#) are available in English and French. On request, telephone counselling is also available in Cree, Ojibway and Inuktitut.
- **Métis Nation-Saskatchewan Mental Health and Addictions Program:** A culturally specific mental health and addictions support service for Métis youth, adults, and families in Saskatchewan, available in English and French. Call the toll-free line at 1-855-671-5638 (8 AM- 4 PM UTC-6, Monday to Friday) or call the 24-hour Crisis Line at 1-877-767-7572. For more information, please visit the [Métis Nation-Saskatchewan website](#).
- **Regina Mobile Crisis Services:** crisis intervention services for mental health and addictions support available to those in Regina. To contact the 24/7 Mobile Crisis Team call (306) 757-0127. For more information, please visit the [website](#).
- **Prince Albert Mobile Crisis Unit:** a 24/7 crises intervention service for mental health and addictions support available to those within the Prince Albert city limits, call (306) 764-1011. For more information, please visit the [website](#).
- **Saskatoon Crisis Intervention Service:** a 24/7 service that provides crisis intervention services for mental health and addictions to those living in Saskatoon. Call (306) 933-6200 to connect with the Mobile Crisis Service. For more information, please visit the [website](#).
- **West Central Crisis and Family Support Centre (Kindersely):** a 24/7 service that provides crisis intervention services for mental health and addictions to those living in southwestern Saskatchewan. Call (306) 463-1860 to connect with the crisis service. For more information, please visit the [website](#).

- **North East Outreach and Support Centre (Melfort):** a 24/7 service that provides crisis intervention services for mental health and addictions to those living in northeastern Saskatchewan. Call 1-800-611-6349 to connect with the crisis service. For more information, please visit the [website](#).
- **Piwapan Women's Centre (Northern Saskatchewan):** a 24/7 service that provides crisis intervention services for mental health and addictions to those living in northern Saskatchewan. Call (306) 425-4090 to connect with the crisis service. For more information, please visit the [website](#).
- **Southwest Crisis Services (Swift Current):** a 24/7 service that provides crisis intervention services for mental health and addictions to those living in southwestern Saskatchewan. Call 1-800-567-3334 to connect with the crisis service. For more information, please visit the [website](#).
- **Wellness Together Canada:** A 24/7 free and virtual mental health and addictions support service available to all people in Canada and Canadians abroad. For adults, text WELLNESS to 741741. For youth, text WELLNESS to 686868.
- **Opioid Agonist Therapy (OAT):** an evidence-based medical treatment for opioid use disorder. It involves prescribed medications such as methadone or buprenorphine/naloxone that reduce withdrawal symptoms and cravings, helping people stabilize their health and lower their risk of overdose. Opioid Agonist Therapy is often provided alongside counselling and other health and social supports. Services are available in multiple communities across Saskatchewan. Find Opioid Agonist Therapy clinic locations, hours and contact [details](#).
- **Rapid Access Addiction Medicine (RAAM) Clinics:** provide low-barrier, rapid access to medical care for people concerned about their substance use. Individuals can often attend without a referral. Rapid Access Addiction Medicine clinics offer assessment, short-term treatment (including medications when appropriate), and connection to ongoing community supports. They support people using opioids, alcohol, stimulants, and other substances. Find Rapid Access Addiction Medicine clinic locations, hours, and contact [details](#).
- **Virtual Access to Addiction Medicine (VAAM):** connects people to addiction medicine providers by phone or secure video. It is especially helpful for people in rural, northern, or remote communities, or for those who cannot easily attend in-person services. Virtual Access to Addiction Medicine can provide assessment, treatment planning, medication support, and referrals to local services. Self-referrals are accepted. Virtual Access to Addiction Medicine is currently being offered in select communities and for people attending detox or recovery treatment centers in the province. The program will expand to additional locations over time as capacity grows. Check the [website](#) or call the clinic (1-844-449-8226) for more information.

To locate sites participating in the Take Home Naloxone Program, please visit the [Government of Saskatchewan website](#).

Friends, families, and loved ones

- **Holding Hope Support Groups:** for parents and family members of someone suffering from substance use disorders. For more information, please visit the [website](#) to find a local support group. All members must be 18+.
- **Moms Stop the Harm National Peer Support Phone Line:** a safe and confidential space that provides understanding and non-judgemental support from a trained peer for anyone impacted by substance use or loss (parent, family members, friend, etc.). Call 1-866-355-6784 from Thursdays and Fridays, from 3:00–9:00 PM PT / 5:00–11:00 PM CT / 6:00 PM–12:00 AM ET. Text services also available. For more information, please visit the [website](#).
- **Healing Hearts Bereavement Support:** bereavement support group for those grieving the loss of a loved one due to substance related harms. Offers open-format peer-facilitated model of support and all members are 18+. For more information, please visit the [website](#) to find a local support group.
- **Families for Addiction Recovery:** provides peer, phone, and family group support services to parents/family members of those struggling with substance use. For more information, please visit the [website](#).
- **Nar-Anon Family Groups:** provided by Nar-Anon, a twelve-step based program, that offers recovery and support for families and friends. details on programming please access the [website](#).

Acknowledgements, contributors, and partners

Acknowledgements

The SCS would like to acknowledge that each data point included and discussed in this report was a person first and foremost. The numbers and statistics discussed throughout this report represent people from a variety of different backgrounds who are mourned by their loved ones and communities. The SCS is committed to raising awareness and prevention of deaths from drug toxicities. The SCS would also like to acknowledge the ongoing efforts by various organizations, groups, and communities to prevent acute drug toxicities.

The SCS wishes to acknowledge the land on which it is situated. The SCS operates on lands comprised of Treaties 2, 4, 5, 6, 8, and 10 and the home of the Métis. Additionally, the SCS is dedicated to fulfilling the Truth and Reconciliation Commission's (TRC) "Calls to Action", with Calls 18-24 and 53(iv) being of relevance with this drug toxicity report as they specifically target health outcomes.

Language statement

Stigma reduction and promotion of sensitive and accurate language is fundamental when discussing drug use and acute drug toxicity deaths (3). A considerable amount of stigma is associated with people who use drugs, due to the negatively connotative language that is frequently used (4).

Stigma impacts access to help for people who use drugs and those who struggle with substance use disorders and addiction (4). It may make a person avoid seeking help due to fear of judgment from loved ones, discrimination in the workplace and healthcare settings, fear of facing criminal charges, and many more (3). Additionally, stigma can also cause a person to hide their drug use or use drugs alone, which can lead to harmful situations (5, 6).

It is important to note that not everyone who uses drugs will develop a substance use disorder (4). This will be further discussed in the *Background* section. Furthermore, it is not a choice to develop a substance use disorder or addiction. Approaching with non-judgmental language is fundamental to stigma reduction (3).

This report uses person-first language to support stigma reduction efforts and to reiterate that the statistics presented in this report represent people. Person-first language is defined as a communication approach that places emphasis on people and their experiences instead of defining people through their actions, conditions, or diagnoses (3). For example: using the phrase "person with a substance use disorder" versus "addict" (4).

Contributors and partners

This report would have not been possible without the dedication and hard work of the investigating coroners. Their investigation skills and documentation provided the data utilized for this publication. The SCS thanks their coroners for their invaluable contribution. Additionally,

multiple members of the SCS office helped in the preparation of this report and without their efforts, this report would not have been possible.

The SCS would like to thank the Chief Coroner/Chief Medical Examiner- Public Health (CC/CME-PH) Collaborative Secretariat and the Substance-Related Harms and Death Investigations (SRH-DI) Public Health Officers of the Canadian Public Health Services under the Public Health Agency of Canada (PHAC) for their expertise and guidance. This report was completed with their support as part of a broader effort to guide the use of death investigation data for public health surveillance.

Additionally, the SCS would also like to thank the Ministry of Justice, the Ministry of Health, the Saskatchewan Health Authority, Ministry of Community Safety, and the Ministry of Social Services for their contributions to this report. The SCS continues to value the perspectives and inputs of their fellow provincial government colleagues.

Background

Defining drugs and acute drug toxicity

For the purposes of this report, substances will be in reference to exogenous substances, meaning substances that originate outside of the human body and are consumed. Substances can include things such as alcohol, tobacco, drugs, etc. This report specifically focuses on drugs. Drugs are a type of substance that alters processes within the body and are classified by their effects on the body. The term ‘drugs’ is often used to refer to illegal substances, but it is also applicable to pharmaceutical drugs used for treating diseases and conditions (7).

Drugs also exist within a regulated supply and unregulated supply, the difference being the laws and regulations surrounding human usage, quality control, and distribution. Regulated drugs must meet standards and are accessed by prescription or over-the-counter in a pharmacy. Unregulated drugs are heavily restricted under Canadian law but are available to the public via illegal manufacturing and distribution without enforced standards or quality control. Drugs found in the unregulated market are often colloquially known as “street drugs” or “illicit drugs”. The unregulated drug supply is often unpredictable and toxic as the dosage is unknown and usually contains multiple active components that are highly variable in the market (8). It is important to note that acute drug toxicity can occur with drugs found in both the regulated and unregulated supply. Using regulated drugs in a way not prescribed, or by someone other than the intended person, can lead to acute drug toxicity or other harms. Additionally, pharmaceutical drugs may be diverted from the regulated supply to be sold illegally in the unregulated supply (9).

An acute toxicity event (or an “overdose” or “poisoning”) is when a person experiences a serious and urgent physical response to the harmful effects of a toxin or chemical, ranging from cellular damage to systemic effects. These events may not be reversible (10) and can lead to unconsciousness or death. These toxicities can occur from any substance, such as alcohol, opioids, over-the-counter medications (e.g., Tylenol), or a combination of multiple substances (9).

For example: fentanyl is a pharmaceutical drug that is used for pain management and sedation purposes. It can be administered in clinical settings or prescribed as a medication. Fentanyl produces sedative-like effects (sometimes referred to as “downers”), which can provide a calming and sometimes euphoric feeling referred to as a “high”. Fentanyl is also available in the unregulated drug supply, though it is frequently combined with other substances which makes it distinct from the regulated pharmaceutical fentanyl. Unregulated fentanyl is often stronger, more toxic, and more likely to be fatal (8).

The Canadian and Saskatchewan context

Canada

In Canada, drug toxicity has become a significant public health crisis due to the rising number of people who have died (10). From January 2016 to December 2024, 52,544 people have died from an apparent opioid toxicity in Canada (11).

The drug class of opioids is the leading cause of drug toxicity deaths in Canada (10). The most current data from 2024 indicates that 75% of apparent opioid toxicity deaths involved fentanyl (in comparison to 32% in 2016). The majority of opioid toxicity deaths were determined to be from non-pharmaceutical opioids (83%) and 68% included a stimulant as well (11). Stimulants are a class of drugs that are sometimes referred to as “uppers” since they can also provide a sense of exhilaration by increasing dopamine levels in the brain. However, they can also make a person feel more agitated or anxious (8). The daily average for 2024 estimated that 21 people died from opioid toxicity and 10 people die from stimulant toxicity in Canada (11). Many opioids that contribute to acute drug toxicity deaths are from the unregulated drug supply (10).

From the late 1900s and early 2000s, the number of Canadians exposed to opioids has dramatically increased due to the opioids being regularly prescribed for pain management. Some people developed substance use disorders and in conjunction with the overall restriction of opioid prescriptions (12), turned to the unregulated drug supply if they were unable to obtain pharmaceutical opioids. An increase in illegally produced or diverted opioids was observed from 2010 to 2015. This in turn caused more people who were using drugs to be exposed to opioids. More potent opioids like fentanyl and other drugs started to infiltrate the unregulated supply which caused a sharp increase in drug toxicity deaths in 2016. Since 2016, acute drug toxicity deaths have remained high across the country (10).

Additionally, the COVID-19 pandemic significantly impacted the drug toxicity crisis. A more toxic unregulated drug supply was observed in combination with reduced access to services and more people using drugs alone. This caused death rates to increase across the country (10, 13). In particular, benzodiazepines and their analogues started to be frequently combined with fentanyl, which complicates treatment as naloxone is only effective on opioids and not benzodiazepines/benzodiazepine analogues. Benzodiazepines are a class of drugs that slow down the nervous system, having a calming effect, and are often used to treat anxiety and sleep disorders. Benzodiazepine analogues refer to drugs that are similar to benzodiazepines but are usually used for non-medical purposes and found on the unregulated drug market (14).

Canadians from all ages and backgrounds have been affected by the drug toxicity crisis (15). However, there are certain groups who are disproportionately affected by the crisis in relation to a variety of social determinants of health. National data indicates that the majority of people who have died from an opioid toxicity were identified as male (72% from current 2024 data) and within the 30 to 39 age group (24% from current 2024 data) (11). Data across the country indicates that Indigenous and racialized groups are also disproportionately affected by the toxicity crisis (16—18). In addition to the stigma that surrounds substance use, the intersection of historical, political, social, and economic conditions imposed through the legacy and ongoing effects of colonization continues to impact Indigenous communities. Factors such as intergenerational trauma, racism within the healthcare system, lack of access to culturally safe services, and loss of land and culture are some examples of barriers that Indigenous communities face (18—21).

Saskatchewan

In Saskatchewan, the drug toxicity crisis has also become a significant public health concern. The SCS has published data for suspected and confirmed drug toxicity deaths from 2010, with

regular updates. Similarly to national trends, the SCS observed an increase in drug toxicity deaths in 2015. This data is available on the SCS [website](#). The details of how drug toxicity deaths have evolved into the 2019-2024 period are to be discussed in this report.

Since 2020, Saskatchewan has consistently had higher crude mortality rates¹ for opioid toxicity in comparison to the national crude rates. For stimulant toxicity, Saskatchewan has had higher crude mortality rates since 2019 in comparison to national crude rates (11).

In 2017, the Government of Saskatchewan established the Saskatchewan Drug Task Force (SDTF), an inter-sectoral body to provide strategic oversight and help monitor and coordinate the government's response to substance use-related harms (22). SDTF activities have included a stakeholder engagement process, data monitoring and trend analysis, and implementation of a provincial drug alerts system, overdose outreach teams, and anti-stigma and trauma-informed care training.

In October 2023, the *Action Plan for Mental Health and Addictions 2023-2028* was released by the Government of Saskatchewan. The action plan identifies three pillars of focus and action:

- 1) Building capacity for treatment.
- 2) Improving the system itself.
- 3) Transitioning to a recovery-orientated system of care for addictions treatment.

Part of the action plan aims to open 500 new addictions treatment spaces across the province. Additionally, the action plan outlines the development of a central intake system for people to be directly referred to addictions treatment services. The aim of these interventions is to make care more accessible and better coordinate care and recovery (23). Further information is available on the Government of Saskatchewan [website](#).

The Saskatchewan Coroners Service and death investigations

In Canada, the provinces and territories hold jurisdictional responsibility for the legislation and provision of death investigation services. There are two main systems that exist within Canada; coroner systems and medical examiner systems. Coroners and medical examiners investigate deaths that are unexplained, unexpected, or unnatural (e.g., domestic homicides, drug toxicity deaths, motor vehicle collisions, suicides). Approximately 15% to 20% of deaths in Canada are investigated by coroners and medical examiners. Saskatchewan has a coroner-based system of death investigation. A coroner is a death investigator who uses medicolegal investigation principles and techniques to coordinate all aspects of death investigations. In Saskatchewan, coroners are appointed by the Chief Coroner and must act in accordance with *The Coroner's Act (1999)*.

The SCS is an independent agency responsible for carrying out death investigations, as defined by *The Coroner's Act (1999)*, with both full-time coroners and fee-for-service community coroners. Most community coroners are located and work outside of the cities of Regina and

¹ Crude mortality rate is defined as a calculation that determines the number of deaths that occur per 100,000 people without adjustment for age.

Saskatoon. They attend death scenes, conduct the investigation, and submit a 'Report of Coroner' (ROC) to the Saskatoon or Regina office where it is reviewed and approved by a full-time coroner. Full-time coroners oversee and assist community coroners with their investigations and reports. The findings of investigations are meant to improve the health, safety, and quality of life for the citizens of Saskatchewan by informing preventative policies and programming, as outlined in *The Coroner's Act (1999)*.

Typically, coroners will attend the scene of death and conduct an assessment. If a coroner cannot attend a scene, they will base their assessment on information provided by the police in attendance. Using the findings from the scene assessments and the circumstances of death, coroners will classify deaths as either "coroner cases" or "non-coroner cases".

A non-coroner case is when a coroner determines that a person's death does not fall within the parameters of unexplained, unexpected, or unnatural. The coroner will liaise with family or ask the physician or nurse practitioner (NP) to sign the medical certificate of death. A coroner may also sign the certificate of death if necessary.

A coroner case is when an unexplained, unexpected, or unnatural death has occurred. For example: an injury from a fall, or any death that occurs while a person is in custody or under the care of a government. In these cases, an investigation is conducted by the coroner. If the death is classified as a suspicious case and charges may be laid, police will lead the investigation with the assistance of a coroner. If the death is classified as a non-suspicious case, a coroner leads the investigation with the assistance of the police. In all deaths reported to the SCS, the coroner will investigate the scene, body, circumstances, and medical history of the decedent. Deaths by acute drug toxicity are considered coroner cases and the vast majority are considered non-suspicious deaths. Based on the information collected, the coroner will then determine if a post-mortem examination (PME) — more commonly known as an autopsy — is needed to determine the cause and manner of death and/or identity of the person.

The coroner prepares a preliminary report of the circumstances which is uploaded to the Coroner Case Management System (CCMS), the electronic database for the SCS. The coroner will connect with a variety of people (e.g., family, friends, coworkers, police, primary care providers) to provide information. They will continue to investigate until satisfied that all information related to a person's death has been gathered. They then form opinions on the who, how, when, where, and by what means a person died. The Report of Coroner (ROC) is prepared, and peer reviewed by a full-time coroner before it is finalized. If no further investigation is required, the file is concluded, and the coroner connects with the next of kin to provide information on the cause and manner of death.

The cause of death tells us why a person died – the injury or disease behind a death – whereas the manner of death is how a person died – the circumstances surrounding the death. When determining the manner of death, it must fall within one of five categories:

- Natural: death is due solely to natural disease and/or the aging process.
- Homicide: death results from an intentional or volitional act of one person against another.

- Suicide: death results from an intentional self-inflicted act intended to do self-harm, cause one's own death, or put oneself at imminent risk of injury or death.
- Accidental: death results from an injury, poisoning, or intoxication that was unintentional.
- Undetermined: cause of death is undetermined or insufficient information to distinguish between two or more manners of death.

If it is determined that a PME is required to determine cause and manner of death, the coroner will order one and issue a warrant to take possession of and transport the person's body to the pathology labs in Regina or Saskatoon. The coroner can order six different types of examinations: (1) complete PME (2) limited PME (3) external PME (4) toxicological PME (5) first blood (6) other PME.

A complete PME: external examination of a body including the clad and unclad body, documentation of general features and characteristics, documentation of any disease or injury, the incising and opening of the thoracic cavity, the abdominopelvic cavity, the cranial cavity and the neck, an inspection and dissection of the contents of the thoracic cavity, the abdominopelvic cavity, the cranial cavity and the neck; the retrieval of specimens for histological, microscopic and toxicological examination; and any other relevant examination (Section 4(1)(a) The Coroners Regulations).

A limited PME: an examination that forgoes any part of the defined complete autopsy. Examination is conducted of a specific area or areas of the body to either rule out: any injury or illness of a specific known part of the body; the extent necessary to identify a cause of death in the event toxicological results do not attribute any substances to the cause of death. Retrieval of specimens is also conducted for possible histological, toxicological and any other relevant examination.

An external PME: examination of the clad and unclad body, documentation of the general features and characteristics of the body, documentation of any evidence of disease or injury, and the retrieval of specimens for toxicology examination (Section 4(1)(b) The Coroners Regulations).

Toxicology exam: the retrieval of specimens for toxicological examination and foregoes an external examination of the clad or unclad body and, in most cases, any incising or opening of any cavities.

First Blood: the specimens drawn upon a person's initial admission at a medical facility and may or may not be done in conjunction with a complete, limited, external or toxicological post- mortem examination.

Other PME: To assist in their investigation, the coroner can order any of the following "other" examination types independently or in conjunction with any of the other PME types (e.g., anthropology examinations, dna examinations, etc.)

When a complete or external PME is completed, the pathologist assesses the results with the toxicology report and provides an opinion on the cause of death. If only a toxicology exam was

done, the forensic toxicologist will send a report to the coroner and the SCS with the therapeutic range of substance(s) found in the toxicology screen, and an opinion as to whether the substance(s) found contribute to the cause of death. Coroners will form an opinion on how the substance(s) found contribute to the cause of death.

In some instances, it is mandatory to call an inquest:

When a person's death occurs in a correctional institution or police detention centre, as defined in Part V, Section 20 of *The Coroners Act (1999)*.

When the person who died is considered a youth in custody, as defined in *The Youth Justice Administration Act (1999)*.

In other instances, the Chief Coroner or Minister may decide a discretionary inquest is required to uncover dangerous practices, provide public education, or facilitate prevention.

For further details on the roles and responsibilities of the SCS visit the [official website](#).

About the data

Case definition

This report describes those who died or were suspected to have died from acute drug toxicity where one or more of the substances was a drug from 2019 to 2024 in Saskatchewan. Note that this report does not include those:

- Who died from the medical consequences of long-term substance use or overuse, as these are considered natural deaths.
- Who died from trauma where use of the substance(s) contributed to the circumstances of the injury that led to the death but was not directly involved in the cause of death.
- Who died from alcohol-only toxicities.
- Who died under the classification of Medical Assistance in Dying (MAID).
- Whose body has not been found.
- Saskatchewan residents who died outside of the province.
- Whose investigation file has been flagged as containing sensitive or suspicious information, including those who died by homicide manner of death.

This report contains a combination of both confirmed and suspected acute drug toxicity deaths. Confirmed acute drug toxicity deaths refer to those whose death investigation process has been reviewed and completed. Suspected acute drug toxicity deaths refer to those whose death investigation was ongoing at the time of data extraction. The SCS identifies suspected drug toxicity deaths based on the presence of at least one of the following:

- 1) Drug paraphernalia at the scene of death (e.g., needles, pipes)
- 2) A witness that reports the person was using drugs prior to their death
- 3) Drugs present at the scene of death

Note: a history of illegal or prescription drug use on its own is not considered sufficient evidence to flag a death as a suspected drug toxicity death. Those who are suspected to have died from chronic drug use are not immediately identified for a suspected acute drug toxicity death, as other causes of death may be contributory (e.g., illnesses, trauma, etc.). Additionally, some people may not be flagged for a suspected acute drug toxicity death but are then identified as a confirmed acute drug toxicity death once investigation has been completed.

The SCS manually keeps track of these suspected acute drug toxicity deaths by reviewing all deaths that are reported to the service on a daily basis and publishes monthly updates on the SCS [website](#). However, for this report to meet the case definition suspected deaths are identified based on the presence of the phrase 'drug toxicity' in the cause of death statements. Coroners may not flag their suspected acute drug toxicity deaths at the beginning of investigation until further on in the investigation process. Therefore, not all cases flagged as suspected in December 2024 extraction were included in this report.

The data for this report was extracted in December 2024 and therefore data and figures from 2023 and 2024 should be approached with caution in comparison to earlier figures. Data and figures in this report may also differ from statistics posted on the SCS [website](#).

Data source

The data used in this report was collected from the coroner case files of those who died or suspected to have died from acute drug toxicity from 2019 to 2024 in Saskatchewan. Additional data sources were also used, including:

- Canadian Index of Multiple Deprivation (CIMD): provided by Statistics Canada, an area-based index of social inequalities that utilizes 2021 Census data to measure the level of deprivation across four dimensions: residential instability, economic dependency, ethno-cultural composition, and situational vulnerability. The index uses factor analysis to group many correlated variables into the four dimensions. For each dimension, the CIMD dataset provides a factor score and a ranked quintile variable, which ranks factor scores from lowest to highest and then divide them into five equally sized quintiles/groups. A quintile score of 1 is considered to be least deprived and a quintile score of 5 is considered to be most deprived (22). The files for the CIMD are available on the Statistics Canada [website](#). Further information on the specifics of analyses will be discussed in the *Data analysis* section.
- Geography conversion table: provided by the Ministry of Health, a file that converts municipalities/communities into their respective previous provincial health regions². Further information on the specifics of analyses will be discussed in the *Data analysis* section.
- Medical records: from various clinical settings (e.g., hospitals, clinics, etc.) that outline a person's medical history and include notes from healthcare providers.
- Postal Code Conversion File Plus (PCCF+): provided by Statistics Canada, a dataset that links Canada Post postal codes with standard geographic areas to provide census data. The PCCF+ is made up of a set of associated datasets (postal code population weight file, geographic attribute file, health region boundary files, etc.) and a SAS (previously "Statistical Analysis System") program. The program uses postal codes to assign standard geographic areas based on population-weighted random allocation that links postal codes to more than one geographic area (23). Further information on the specifics of analyses will be discussed in the *Data analysis* section.
- Report of Coroner (ROC): a summative report put together by the investigating coroner that outlines the who, when, why, where, and how someone died, including the cause, manner, and circumstances leading up to death.
 - Inquest coroner overview reports: in lieu of a ROC for certain circumstances (e.g., a death by suicide occurring while a person is in custody).
- Toxicology reports: the final report that outlines the results of toxicology examinations, where the forensic toxicologist will send a report to the coroner and the SCS, with the

² Saskatchewan currently does not have health regions and have since combined all regions under one health authority.

therapeutic range of substance found in the toxicology screen and an opinion on the impact of the substance(s) found.

- 2021 Canadian Census: population estimates used for rate calculations were pulled from the 2021 Canadian Census. The Census also reports on health regions in each province, this report aggregated data based on these regions. The population table for Saskatchewan is available on the Statistics Canada [website](#).

Data availability and preparation

This report presents new analysis, using data extracted in 2024 that is not included in the monthly updated statistics published on the SCS [website](#). For up to date and current statistics, please refer to the SCS [website](#) monthly reporting.

A total of 1,909 investigations met the acute drug toxicity case definition and are discussed in this report. These cases were identified through CCMS by cause of death statements including the phrase ‘drug toxicity’ and further cleaned based on the case definition. All death investigation case files are stored in CCMS, including scanned copies of paper documents.

Due to the varying limitations in data collection, some of the figures in this report may underestimate the burden and introduce potential bias due to differences in case files and documentation. It is imperative to note that this report only presents figures that represent the minimum proportion of those who died from drug toxicity in Saskatchewan and more likely underestimates the prevalence of the various variables of interest.

Variables of interest for this report were chosen through review of research, consultation, and review of case records. From 2019 to 2024, changes in coroner training and revisions to the CCMS mean that data collection varied for certain parts of the death investigation process. Variables with limited availability were excluded from this report, and for each variable, the proportion of cases where the information was missing is presented as ‘unknown’.

Table 1 presents the variables of interest categorized into three groups: case information, medical and mental health history, and sociodemographic and risk factors. ‘Case information’ refers to variables that pertain to the circumstances of death. ‘Medical and mental health history’ refers to variables that capture the health history of the deceased. ‘Sociodemographic and risk factors’ refer to variables related to the demographic information of the deceased and potential measures that may increase the risk for acute drug toxicity. Table 1 outlines the categorization of the data elements included in this report.

Table 1. Categorization of variables

Categories of data	Data groups
Case information	- Date of death (yearly, monthly, daily) - Geographic/location information - Location of death - Statistics Canada Census health regions - Location of events leading up to death - Location of residence - Canadian Index of Multiple Deprivation (CIMD) - Drugs contributing to death
Medical and mental health history	- Healthcare interactions - Access to a Primary Care Provider (PCP) - History of accessing care - History of substance use
Sociodemographic and risk factors	- Sex - Age - Race - Indigenous identity and First Nations reserves - Interactions with the justice system - Relationship status

Data analysis

A descriptive analysis of case information, medical and mental health history, and sociodemographic and risk factor information, stratified by a variety of variables, was conducted to identify differences and patterns amongst people who died from acute drug toxicity. As mentioned previously, suspected acute drug toxicity deaths are cases still under the investigative process, meaning completeness of data varied. For the purposes of this report, suspected cases that were included in the analysis had been identified through the phrase “drug toxicity” in the cause of death statements. Figures of all suspected acute drug toxicity deaths, including those excluded from the report, are presented in *Table 2*. Furthermore, figures related to substance groups are not mutually exclusive and corresponding tables will not sum to 100%. These tables will note the base denominator for percentage calculations.

Analyses of postal code data of primary residence was conducted by linking the report’s dataset to the Statistics Canada PCCF as well as the CIMD. The CIMD measures deprivation across four dimensions: (1) residential instability, which describes how the neighbourhood’s inhabitants change over time and includes indicators such as the proportion for the population living on their own, the average number of people living in a residence, and proportion of dwellings that are apartments. (2) economic dependency, which describes the reliance on the workforce or dependence on other sources of income outside of employment and includes indicators like the dependency ratio (the population aged 0-14 and population aged 65+ divided by the population aged 15-64) and the proportion of the population that is older than 65 years old. (3) ethno-cultural composition, which includes indicators such as the proportion of the population that is foreign

born, identifies as visible minority, recent immigrants, and those experiencing linguistic isolation (no knowledge of the official languages). (4) situational vulnerability, which describes the variation of housing and education while considering other socio-demographic characteristics, including indicators such as the proportion of the population that identifies as Indigenous, that is low income, aged 25-64 without a high school diploma, and the proportion of dwellings that need major repairs (24).

Measures across the four dimensions of the CIMD are used in this report to measure neighbourhood-level deprivation. The report's dataset was linked to the PCCF+ through six-character Canada Post postal codes, which were then linked to the CIMD. Quintile rankings are used to examine the relationship between deaths by suicide and community-level indicators of deprivation. Cases where postal codes were missing or unknown (a person was experiencing homelessness or there was no documented postal code in the case file) were excluded. Additionally, Statistics Canada health regions analysis was conducted after linking the report's dataset to the Ministry of Health's geographic conversion table using the municipality/community names of residence, then converted to the corresponding Statistics Canada health region.

This report will provide figures as death counts, percentages, and/or crude mortality rates. Mortality rates (or death rates) are the number of deaths in a specific population at a specific time, expressed as the number of deaths that occur per a given population size. For this report, all mortality rates will be the number of deaths per 100,000 population and unless otherwise stated, rates are presented as crude rates. Rates allow for comparison between populations to see if certain populations are affected more than others. This report utilizes crude rates, which are not adjusted for age. Death rates were calculated using 2019, 2020, 2021, 2022, 2023, and 2024 provincial population estimates from Statistics Canada. The software used to analyse the data include R Studio version 4.1.1, SAS Enterprise Guide version 9.4, and Microsoft Excel.

The SCS conducted consultations with various provincial government ministries, as well as the Saskatchewan Health Authority, to gain feedback on how the data was presented in the report and how the data may inform next steps in drug toxicity prevention efforts in the province.

To protect the privacy of those represented in this report, suppression of small figures was determined by a re-identification risk assessment approach. This report uses the risk-based data disclosure protocol developed by the Winnipeg Regional Health Authority (WRHA). It calculates a "re-identification risk" – the probability of correctly identifying a case based on the presented data – using the K -anonymization statistics ($1/K$) (1,2). Some figures do not align with this approach but were carefully assessed to ensure no privacy breaches would occur and to facilitate sharing of crucial knowledge. Additionally, all in custody deaths are made public by the Ministry of Justice due to the inquest process and therefore, are excluded from re-identification risk calculations as a group. Any suppressed figures will be denoted with "sup". Additionally, the Audit and Information Management Branch serving the Ministry of Justice was consulted for their guidance on privacy protection.

Results

Note: to find the corresponding data tables for each of the figures presented, please refer to the Appendix.

Case status

Table 2 below compares the counts of confirmed acute drug toxicity deaths, suspected acute drug toxicity deaths included in this report, and all suspected acute drug toxicity deaths identified by the SCS in December 2024. As previously mentioned, (refer to *About the data*), the discrepancies in these suspected figures are related to the data extraction process which is dependent on the phrase ‘drug toxicity’ being present in the cause of death statement. Therefore, not all cases flagged as suspected in December 2024 were included in this report. Coroners may not flag their suspected acute drug toxicity deaths until further on in the investigation process. For up-to-date counts, please refer to the statistics available on the SCS [website](#).

Table 2. Counts of people who died and suspected to have died from acute drug toxicity by case status, Saskatchewan, 2019-2024.

Year	Confirmed	Suspected (report)	Confirmed and suspected (report)	Suspected (SCS December website)
2019	178	0	178	0
2020	319	0	319	0
2021	413	0	413	0
2022	365	2	367	7
2023	402	2	404	39
2024	221	7	228	153
Total (2019-2024)	1898	11	1909	199

Date of death (year, month, weekday, and time of day)

Date of death refers to the date that death was pronounced and does not include any hospitalization periods (i.e., time spent in hospital prior to death being pronounced).

As seen in Table 3, 2021 had the highest number of deaths (by acute drug toxicity (413) and crude mortality rate (35.41 deaths per 100,000 population). There was a large increase in number of deaths from 2019 (178) to 2020 (319), which further increased in 2021. While there was an observed decrease in number of deaths in 2022 (367), an increase was observed in 2023 (404). Furthermore, the sum of confirmed and in total for 2019-2024, the crude mortality rate is approximately 27 per 100,000 population. At the time of data extraction, 2024 (228) had a lower number of deaths in comparison to numbers from 2020-2023, though that number is expected to increase due to the larger number of suspected cases as referenced in *Table 2*. This data is limited for discerning any trends and more up-to-date numbers the SCS [website](#) should be referenced.

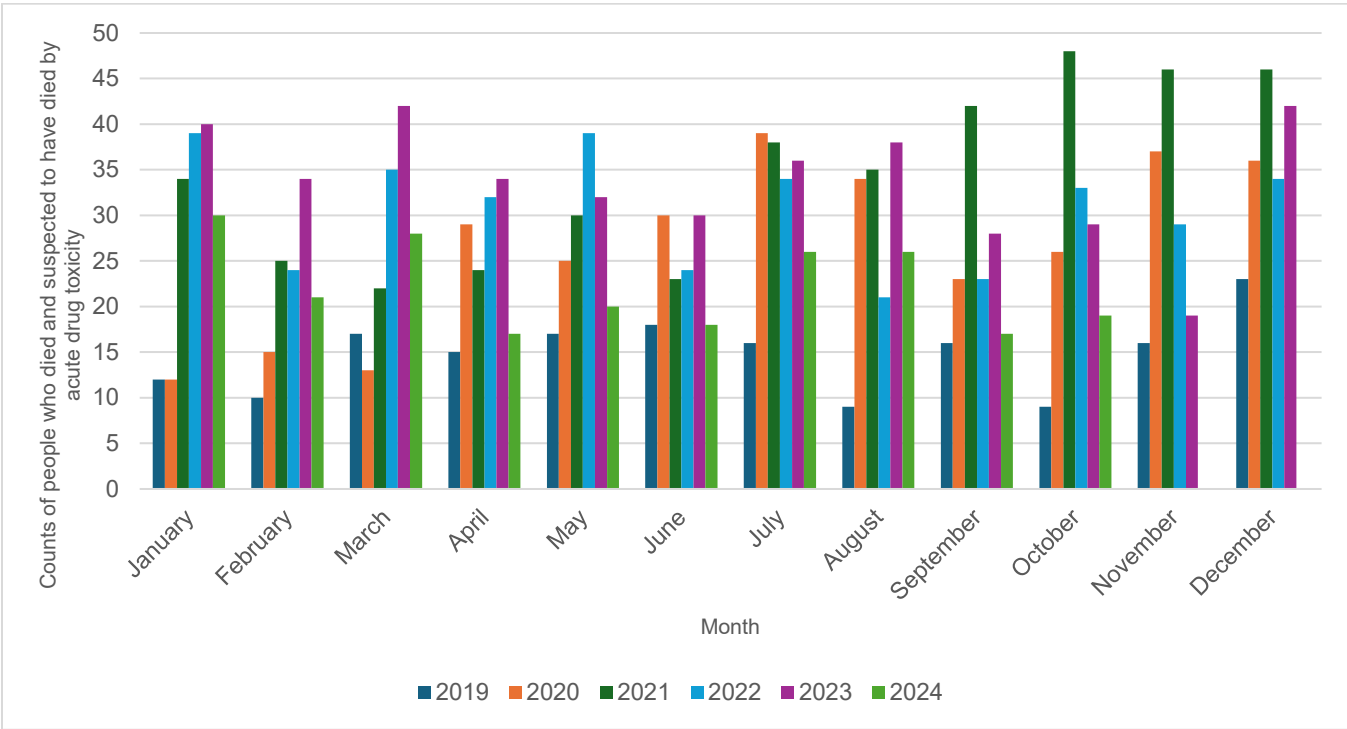
With the context of the COVID-19 pandemic, the number of acute drug toxicity deaths nearly doubled from 2019 to 2020. While a decrease was observed from 2021(413) to 2022 (370), an increase was then observed in 2023 (404). Note: figures from 2023 may also increase further due to the presence of suspected cases, in comparison to 2021 where no suspected cases remain. These trends are consistent with what is being observed across the country (Table 3).

Table 3. Counts and crude rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by year, Saskatchewan, 2019-2024.

Year	Count	Crude rate
2019	178	15.32
2020	319	27.28
2021	413	35.41
2022	367	31.34
2023	404	33.79
2024	228	18.58
Total (2019-2024)	1909	26.92

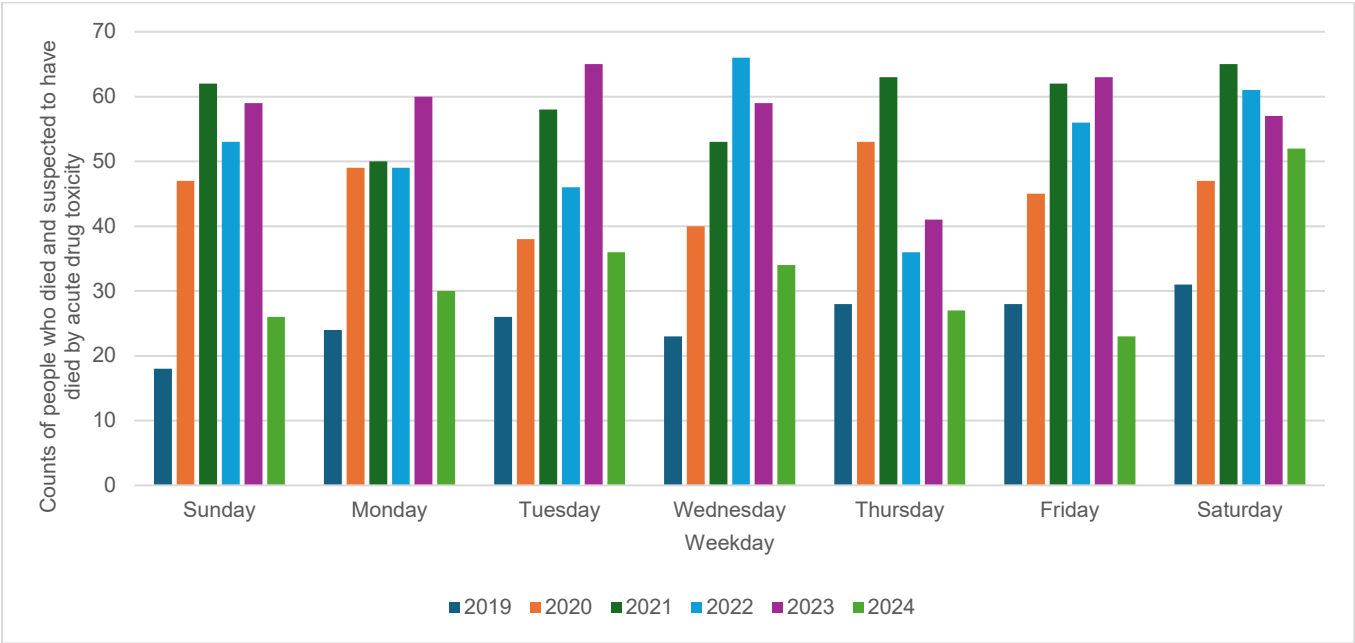
No discernable patterns were observed with monthly counts, peaks, and dips varying each year. From 2019-2024, July (189, total) had the highest total count of acute drug toxicity deaths closely followed by December (184, total). February (129, total) had the lowest total count across 2019-2024. Note: figures for November and December 2024 have been suppressed for re-identification risk (Figure 1).

Figure 1. Counts of people who died and suspected to have died from acute drug toxicity by month and year, Saskatchewan, 2019-2024.



No discernable patterns were observed with weekday counts, peaks, and dips varying each year. From 2019-2024, most drug toxicity deaths occurred on Saturdays (313, total), followed by Fridays (278, total) then Wednesdays (275, total). Thursdays (248 total) had the lowest number of deaths by drug toxicity (Figure 2).

Figure 2. Counts of people who died and suspected to have died from acute drug toxicity by weekday and year, Saskatchewan, 2019-2024.

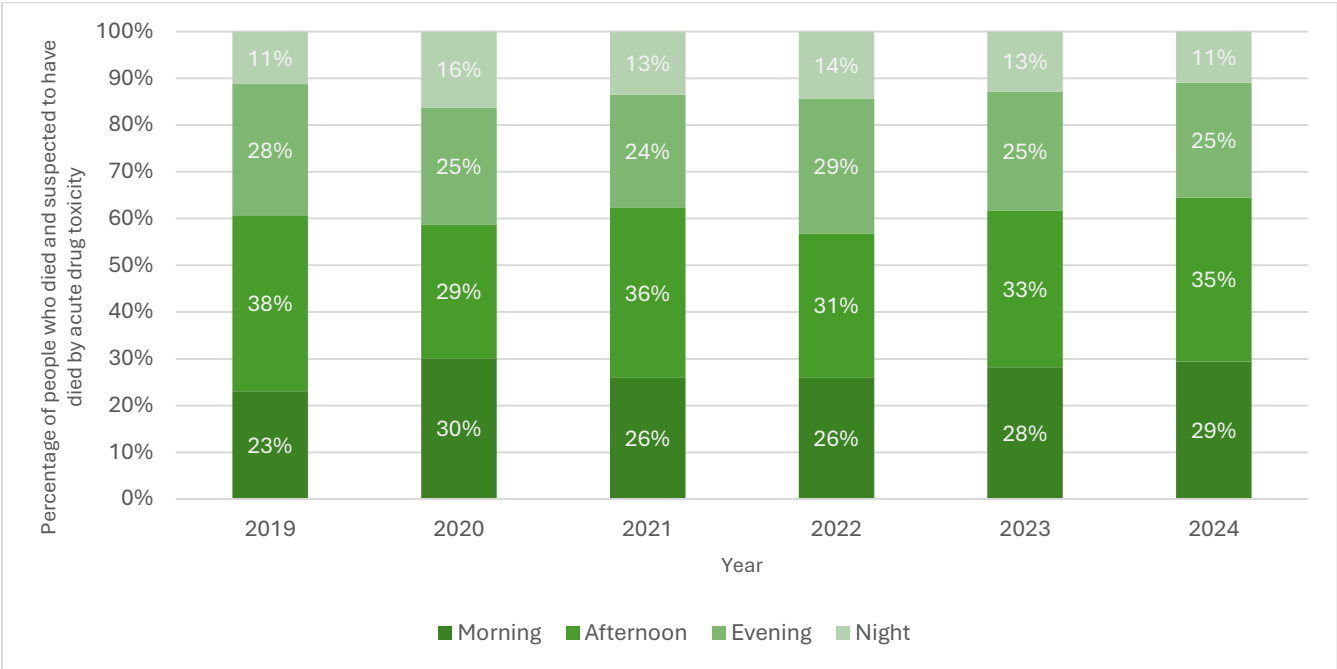


Time-of-day data was categorized into the following groups:

- Morning: 0600-1200
- Afternoon: 1200-1800
- Evening: 1800- 0000
- Night: 0000-0600

The distribution across time-of-day groups remained stable from 2019 to 2024. From 2019 to 2024, most people were pronounced dead in the afternoon (33%) and night had the lowest percentage of people pronounced dead (13%). Note: the time when death is pronounced does not always correlate to the time when death occurs. Example: people who died at night may not be found to be dead until the morning and; therefore, death is pronounced in the morning (Figure 3).

Figure 3. Percentage of people who died and suspected to have died from acute drug toxicity by time-of-day and year, Saskatchewan, 2019-2024.



Manner of Death

As previously mentioned in the ‘*The Saskatchewan Coroners Service and death investigations*’ section, manner of death refers to the circumstances surrounding the death. An additional category of ‘Suspected’ was created for those who were still pending investigation results to determine manner of death or whose death went unclassified.

As observed in Table 4, accidental manner of death made up most of the acute drug toxicity deaths from 2019-2024 (1771, 93%). While a percentage decrease is observed from 2019 to 2020 in suicide manner of death, the counts of death remained stable.

Table 4. Counts and percentage of people who died and suspected to have died from acute drug toxicity by manner of death, Saskatchewan, 2019-2024.

Year	Accident	Suicide	Undetermined	Suspected	Total
2019	154 (87%)	22 (12%)	2 (1%)	0	178 (100%)
2020	297 (93%)	21 (7%)	1 (0.3%)	0	319 (100%)
2021	389 (94%)	16 (4%)	8 (2%)	0	413 (100%)
2022	338 (92%)	26 (7%)	3 (1%)	0	367 (100%)
2023	384 (95%)	15 (4%)	5 (1%)	0	404 (100%)
2024	209 (91%)	16 (7%)	1 (0.4%)	2 (0.8%)	228 (100%)
Total (2019-2024)	1771 (93%)	116 (6%)	20 (1%)	2	1909 (100%)

Geography and location information

The SCS collects data on three distinct types of location information; location of death, the event leading to death, and residence. Location of death refers to where a person was pronounced or found dead. Location of events leading up to death refer to the locations that the incident or injury leading to death occurred, often being the last location a person was seen alive. Location of residence is defined as where a person primarily resided.

Locations were grouped into the following categories:

- In-custody: correctional facilities including all levels of government (federal, provincial) and police detention areas.
- Group/halfway home/shelter: residential facilities that have staff who provide care or support to those who reside there.
- Medical facility: includes hospitals, medical clinics, long-term care facilities, and assisted living facilities.
- Primary residence: the person's primary place of residence.
- Other residence: the primary residence of someone who is not the person who died from drug toxicity.
- Recreational/public: a place of business or is a public gathering area.
- Other: locations that do not fit the categories stated above (e.g., roadways, schools, alleyways, etc.).
- Unknown: location of interest could not be determined.

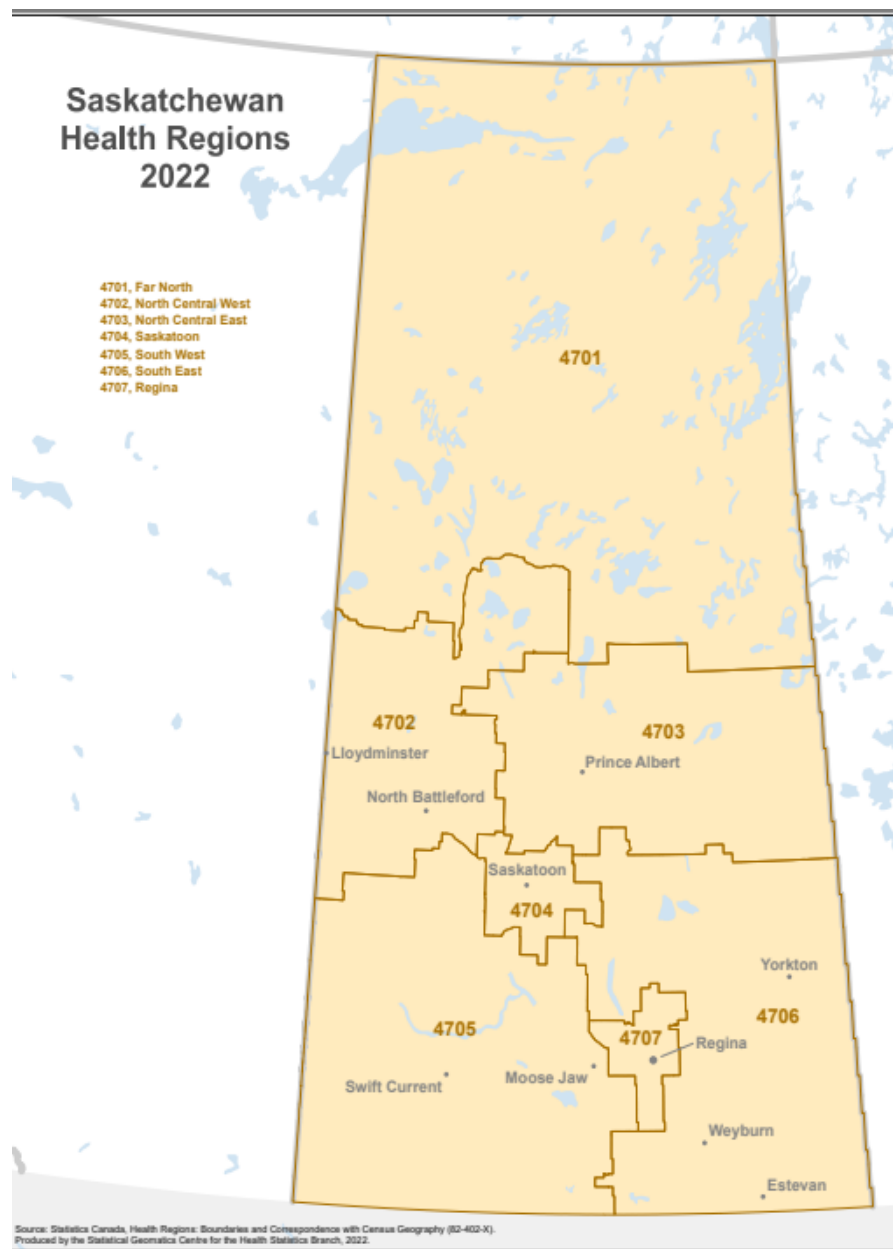
Additional analysis comparing urban and rural municipalities was also conducted. The categorizations of urban or rural was dependent on central metropolitan area (CMA) or census agglomeration (CA) status as per the 2021 Census. CMA's must have a total population of at least 100,000 and 50,000 or more must live in the core. A CA must have a core population of at least 10,000 (25). In Saskatchewan the CMAs and CAs include:

- Saskatoon (CMA)
- Regina (CMA)
- Prince Albert (CA)
- Moose Jaw (CA)
- Yorkton (CA)
- North Battleford (CA)
- Swift Current (CA)
- Estevan (CA)
- Weyburn (CA) (25)

For location of death, mapping as per the Statistics Canada Saskatchewan health regions from the 2021 Census was conducted. Saskatchewan currently does not have health regions and has since combined all regions under one health authority. However, as part of their 2021 Census release, Statistics Canada did provide population estimates on 7 health regions: Far North, North Central East, North Central West, Saskatoon, Regina, South East, and South West (see Figure

4) (26. For the purposes of this report, these health regions provided by Statistics Canada will be used to showcase distribution of deaths by drug toxicity in regional areas of the province and used in comparison to their population size.

Figure 4. Map of 2021 Census provincial health regions from Statistics Canada³.



Lastly for location of residence, this section will present the analysis using primary residence postal code data, linked to the PCCF+ and the CIMD (please refer to *Data sources*).

³ Courtesy of Statistics Canada ([link](#))

Location of death

Most people were either found or pronounced dead in their primary residence (53%), followed by other residence (22%), and then medical facilities (13%). More specifically for medical facilities, hospitals make up most of the locations of death and represent people who were either transported to receive medical care following an acute drug toxicity or were an inpatient at the hospital when the acute drug toxicity occurred (Table 5).

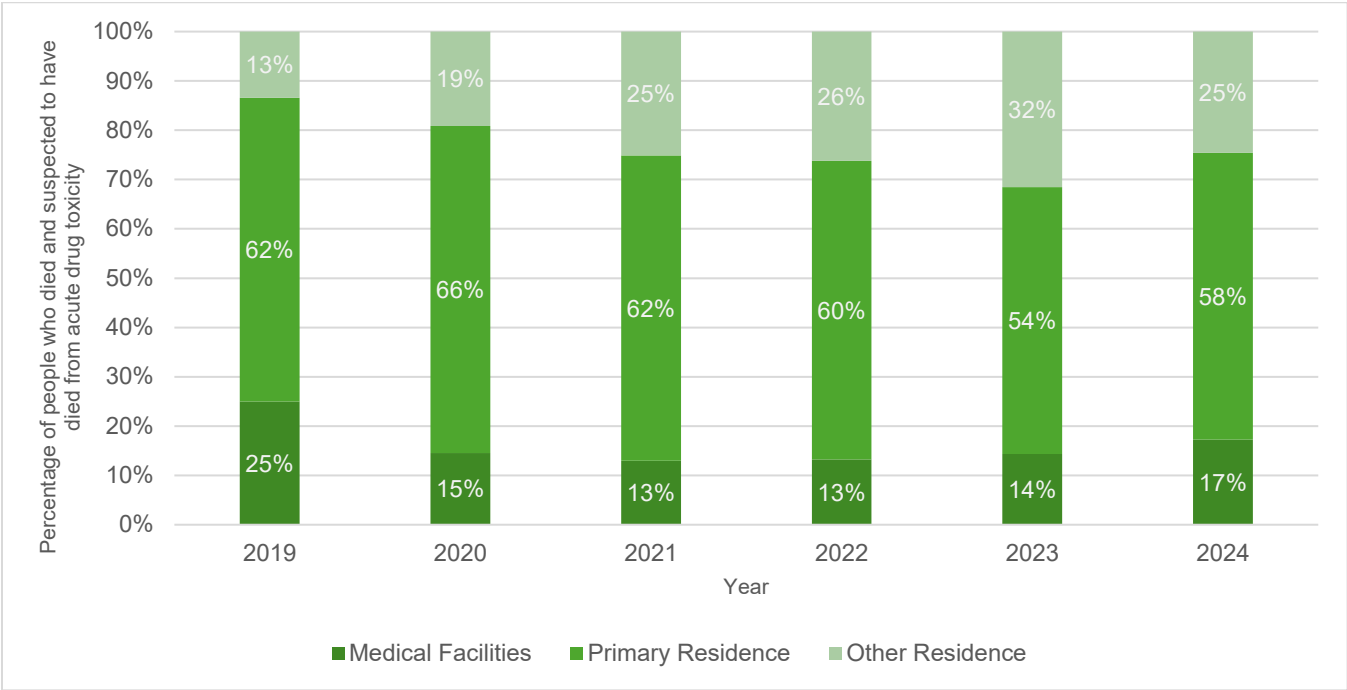
Table 5. Counts and percentage of people who died and suspected to have died from acute drug toxicity by location of death, Saskatchewan, 2019-2024.

Location of death	Counts	Percentage
Correctional	6	0.3%
Group/halfway home/shelter	38	2%
Medical facilities	255	13%
<i>Hospitals</i>	<i>234</i>	<i>12%</i>
Primary residence	1015	53%
Other residence	411	22%
Recreational/public	115	6%
Other	69	4%
Unknown	0	0%
Total	1909	100%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in custody in this report is public information and have therefore not been suppressed in this document.

When looking at the top three 'location of death' categories by year, the percentage who died in their own residence (primary residence) increased from 2019 (62%) to 2020 (66%), which steadily decreased from 2021 (62%) to 2023 (54%) but an increase was observed in 2024 (58%). For people who died in other residence, the percentage has steadily increased from 2019 (13%) to 2023 (32%) with a decrease observed in the available 2024 (25%) data. For medical facilities, the percentage of people who died decreased from 2019 (25%) to 2020 (15%). This decrease has maintained into 2023 with a slight increase observed in the available 2024 data (17%). Note: 2024 data have a smaller number of cases included in the report, which may affect percentages as the denominator for calculations (Figure 5).

Figure 5. Percentage of people who died and suspected to have died from acute drug toxicity by location of death and year, Saskatchewan, 2019-2024.



When comparing the urban vs rural status for 'location of death', most people died in urban areas (79%) and urban areas had a higher crude rate (34.28 deaths per 100,000) (Table 6). This is expected due to the higher populations in urban areas which are proportionately more likely to have a higher death count.

Table 6. Counts, percentage, and crude rates of people who died and suspected to have died from acute drug toxicity by location of death urban/rural status, Saskatchewan, 2019-2024.

Urban/rural	Counts	Percentage	Crude Rate
Rural	407	21%	16.87
Urban	1502	79%	34.28
Total	1909	100%	26.92

Most people who died from acute drug toxicity were either pronounced dead or found dead in the Regina region (810, 42%), followed by Saskatoon (529, 28%), and South East (174, 9%). When looking at crude mortality rates, Regina (52.90 deaths per 100,000) and Saskatoon (34.55 per 100,000) also had the highest rates but North Central West (21.09 per 100,000) had the third highest crude mortality rate. The South West (12.55 per 100,000) and Far North (15.27 per 100,000) regions had the lowest crude mortality rates (Figure 6 and Table 7).

Figure 6. Counts of people who died and suspected to have died from acute drug toxicity by census health region, Saskatchewan, 2019-2024.

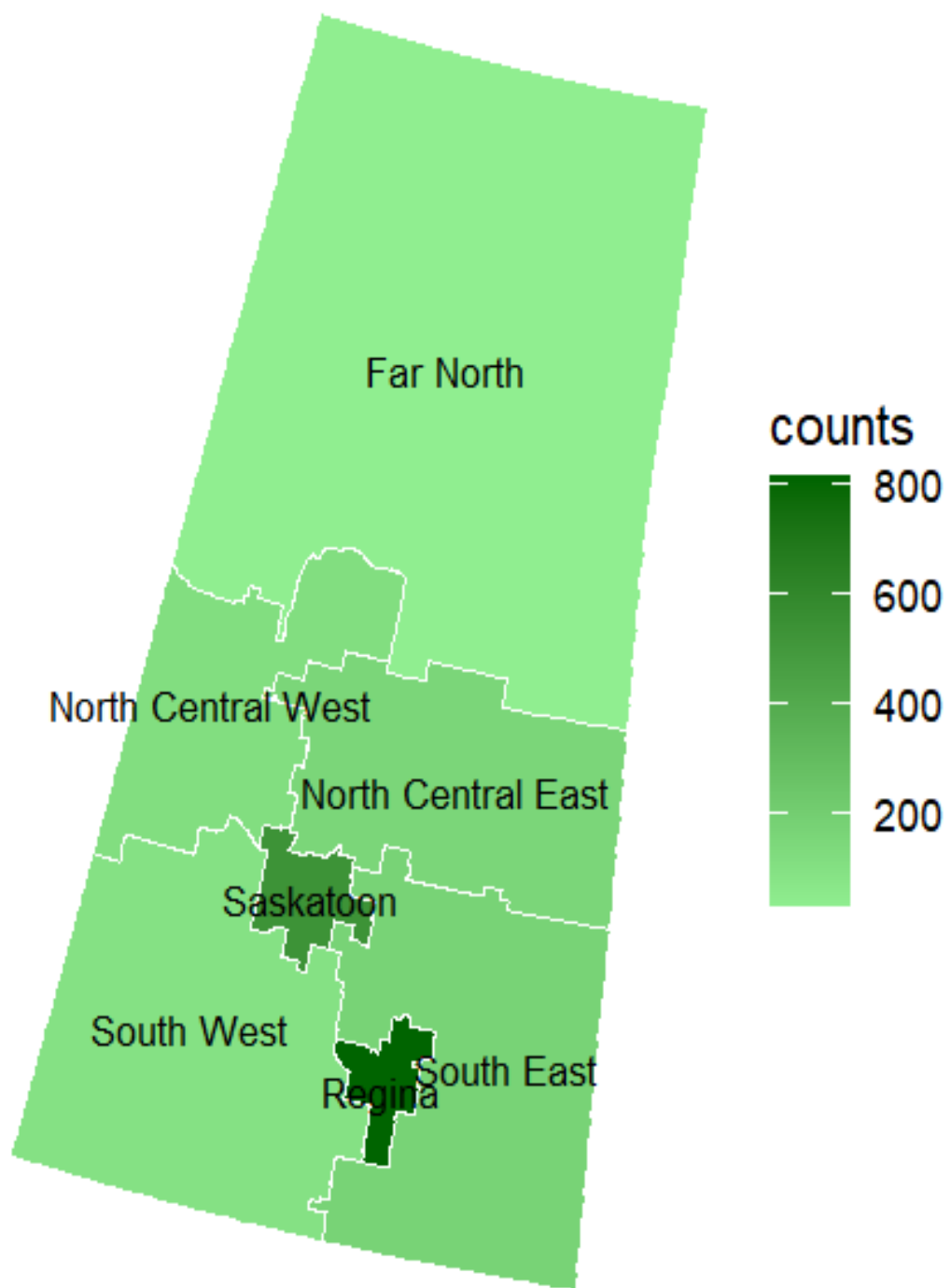


Table 7. Counts, percentage, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by census health region, Saskatchewan, 2019-2024⁴.

Zone	Counts	Percentage	Crude rate
Far North	30	2%	15.27
North Central East	155	8%	20.79
North Central West	113	6%	21.09
Regina	810	42%	52.90
Saskatoon	529	28%	34.55
South East	174	9%	16.25
South West	98	5%	12.55
Total	1909	100%	26.92

Location of events leading up to death

In Table 8, most people's 'location of events leading up to death' was determined to be their primary residence (58%), followed by someone else's residence (25%), then a recreational/public place (7%). Notably primary residence and someone else's residence make up 83% of all 'locations of events leading up to death'. Note: for location of events leading up to death specific to correctional locations, these figures have been suppressed as some of these cases are still undergoing investigations and to protect the privacy of these individuals these numbers have been suppressed.

Table 8. Counts and percentage of people who died and suspected to have died from acute drug toxicity by location of events leading up to death, Saskatchewan, 2019-2024.

Location of events leading up to death	Counts	Percentage
Correctional	sup	sup
Group/halfway home/shelter	42	2%
Medical facilities	38	2%
Primary residence	1110	58%
Other residence	472	25%
Recreational/public	135	7%
Other	83	4%
Unknown	21	1%
Total	1909	100%

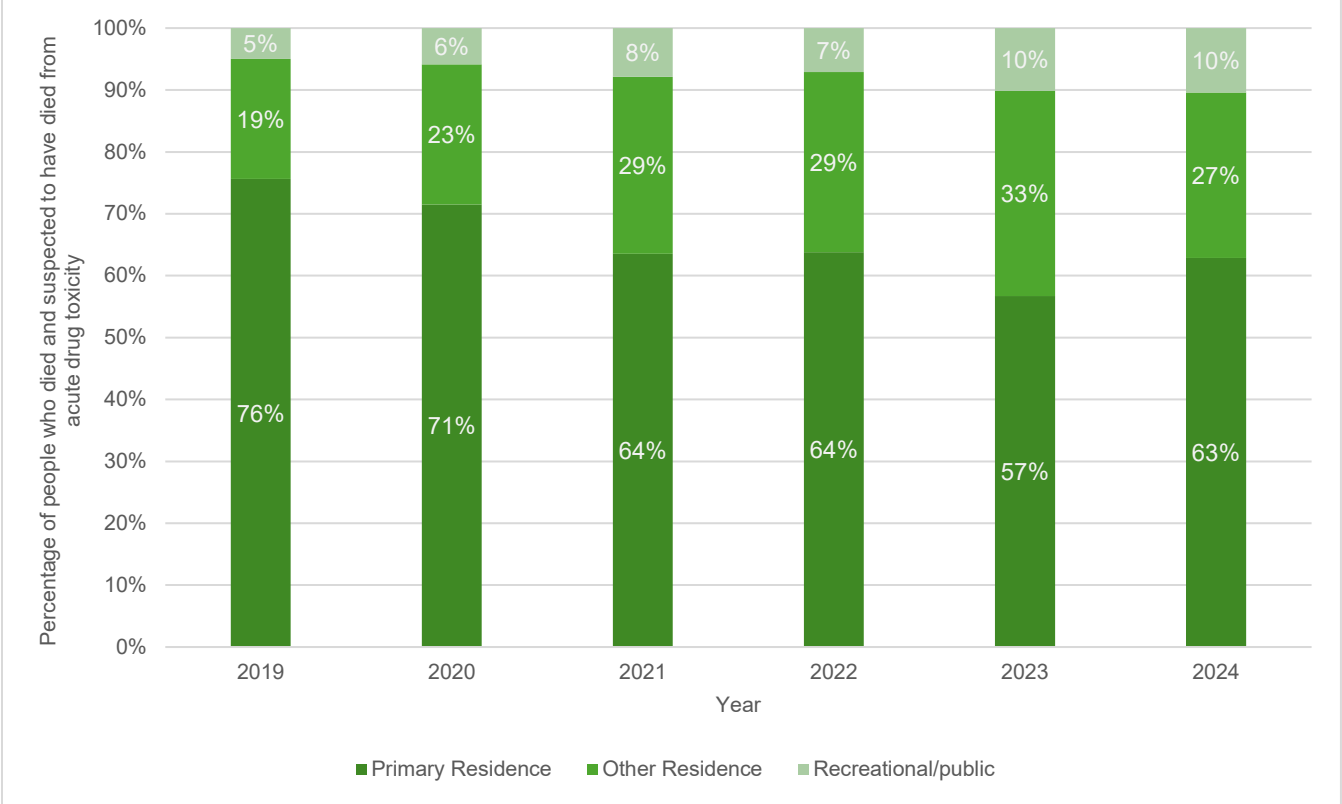
Note: all suppressed figures will be denoted with "sup". For location of events leading up to death specific to correctional locations, these figures have been suppressed as some of these cases are still undergoing investigations and to protect the privacy of these individuals these numbers have been suppressed

When looking at the top three 'location of events leading up to death' categories by year, the percentage primary residence as location of events leading up to death decreased from 2019 (76%), to 2020 (71%), and 2021 (64%) which has since maintained into 2023, with a slight increase observed with current 2024 data. For other people's residence the percentage has

⁴ Rate calculations completed using population estimates from the 2021 Census ([Statistics Canada, 2023](https://www150.statcan.gc.ca/n1/pub/92-621-x/2023001/article/00001-eng.htm))

increased over the years from 2019-2023, with a decrease observed in 2024 (27%) with current data (though this is subject to change). A similar pattern is observed for recreational/public places with a slight increase from 2019 (5%) to 2020 (6%), with 2023 and 2024 having the highest percentage (10%) (Figure 7).

Figure 7. Percentage of people who died and suspected to have died from acute drug toxicity by location of events leading up to death and year, Saskatchewan, 2019-2024.



Location of residence

For location of residence, most people were recorded to have resided in private residences (75%). The second largest group of people were identified as unsheltered by the coroners at the time of their death (16%), meaning they had no fixed address. Note: some people may have a residence but are still inadequately housed (e.g., couch surfing). Note: 22 individuals resided out of the province, and for 83 people their location of residence could not be determined during the investigation process (Table 9).

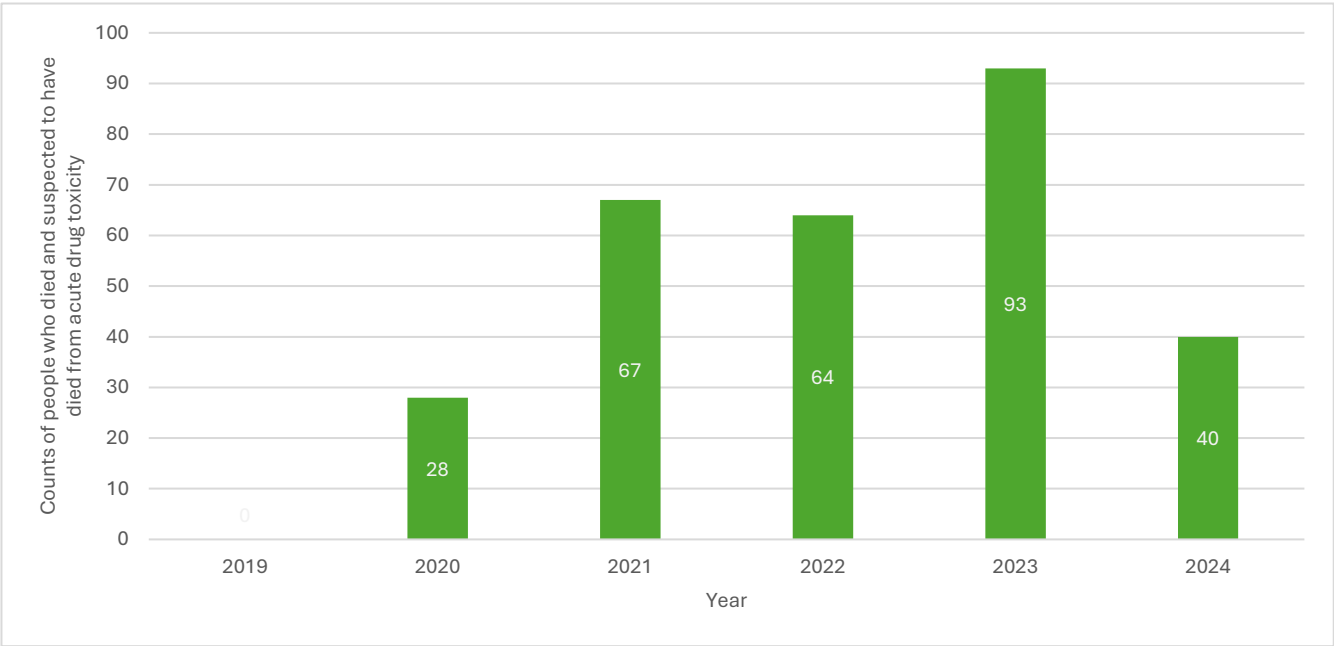
Table 9. Counts and percentage of people who died and suspected to have died from acute drug toxicity by location of residence, Saskatchewan, 2019-2024.

Location of residence	Counts	Percentage
Correctional	3	0.2%
Group/Halfway Home/Shelter	39	2%
Private Residence	1430	75%
Unsheltered	305	16%
Out of Province	22	1%
Other	27	1%
Unknown	83	4%
Total	1909	100%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in custody in this report is public information and have therefore not been suppressed in this document.

Below in Figure 8, the number of people who were identified as unsheltered has increased over the years. 2024 (40) has a lower number of unsheltered people identified, however 2024 also has a higher number of suspected deaths in comparison to other years, which could increase the number of unsheltered people identified as more cases are closed. 2023 had the highest number of people who were identified as unsheltered at the time of their death (93). Note: as the counts for 2019 were below 20, it was determined there was a potential risk for re-identification and therefore, suppressed.

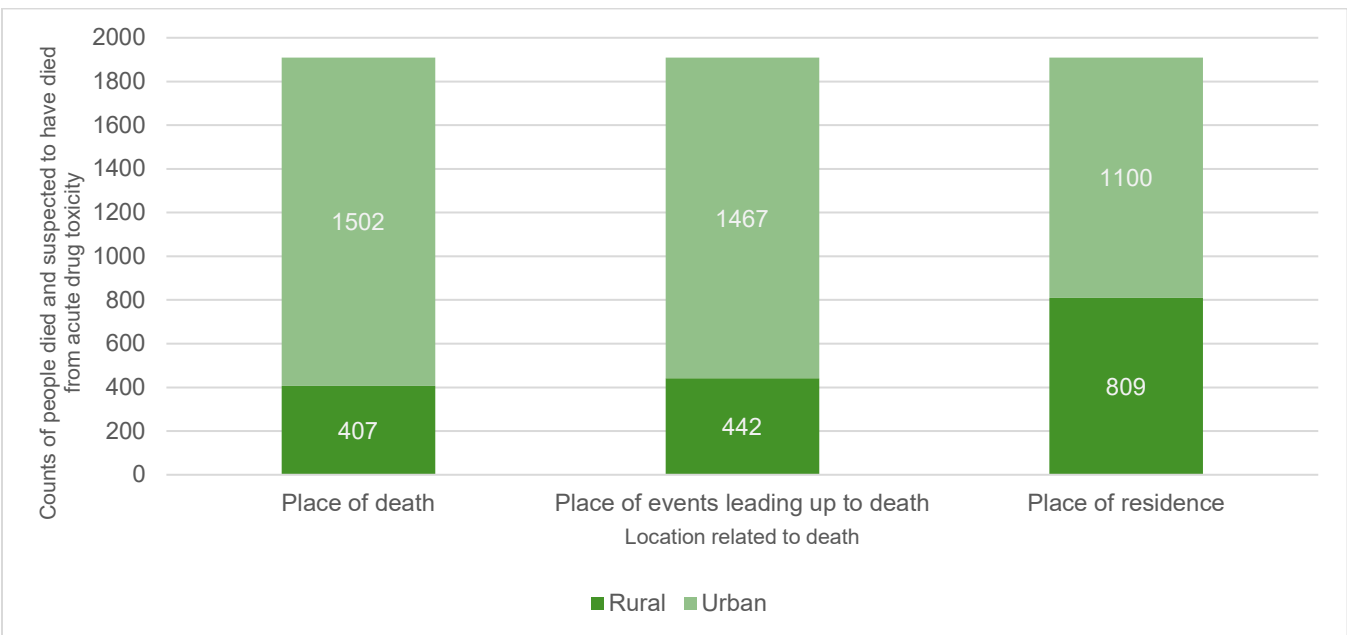
Figure 8. Counts of people who died and suspected to have died from acute drug toxicity who were identified as unsheltered by year, Saskatchewan, 2019-2024.



Note: all suppressed figures will be denoted with "sup".

While more people died in cities (1503) than rural areas (409), only 58% of people who died were urban residents, and 42% are rural residents. This indicates that there is a more even distribution of fatalities between residents of these areas than initially apparent, but also that a significant number of drug toxicity deaths in urban areas involve rural residents (Figure 9).

Figure 9. Counts of people who died and suspected to have died from acute drug toxicity by location related to death urban/rural status, Saskatchewan, 2019-2024.



Canadian Index of Multiple Deprivation (CIMD) analysis

Using the PCCF, residential postal codes were assigned to standard census geographic areas. By assigning census geographic areas, deprivation indicators at the dissemination area (DA) level could then be linked to the CIMD. The CIMD measures deprivation across four domains (15 indicators total): residential instability, economic dependency, ethno-cultural composition, and situational vulnerability (24). These domains are further elaborated below:

- Residential instability: describes how the neighbourhood's inhabitants change over time and includes indicators such as the proportion for the population living on their own and the average number of people living in a residence and proportion of dwellings that are apartments.
- Economic dependency: describes the reliance on the workforce or dependence on other sources of income outside of employment and includes indicators like the dependency ratio (the population aged 0-14 and population aged 65+ divided by the population aged 15-64) and the proportion of the population that is older than 65 years old.
- Ethno-cultural composition: includes indicators such as the proportion of the population that is foreign born, identifies as visible minority, recent immigrants, and those experiencing linguistic isolation (no knowledge of the official languages).

- Situational vulnerability: describes the variation of housing and education while considering other socio-demographic characteristics, including indicators such as the proportion of the population that identifies as Indigenous, that is low income, aged 25-64 without a high school diploma, and the proportion of dwellings that need major repairs.

Each DA is ranked based on a factor score of deprivation across the 4 domains and grouped into quintiles ranging from the least deprived (quintile 1) to the most deprived (quintile 5). For this report, the CIMD domains were specific to the prairie region of Canada, which includes the provinces of Alberta, Saskatchewan, and Manitoba. Additionally, the current CIMD are connected to the 2021 Census results (24).

For the postal code analysis, 510 people were excluded due to having no recorded postal code of primary residence (unreported or unsheltered at time of death), they primarily resided out of the province, or their primary residence postal code could not be converted to a DA. When using the PCCF, a total of 1390 (72%) postal codes were converted into census geographic areas, the rest (15 postal codes) were unmatched.

Results from the postal code analysis reveals that most people resided in areas that are ranked in quartile 4, the second to most residentially unstable (31%) and quintile 5 - most residentially unstable (37%). For economic dependency, most were residing in communities that were more economically dependent in quintile 4 (26%) moderately dependent in quintile 3 (24%). Regarding ethno-cultural diversity, most people were residing in neighbourhoods with the highest proportion of ethno-cultural diversity in quintile 5 (31%) and in moderate proportions of ethno-cultural diversity in quintile 3 (20%). Additionally, a large portion of people were residing in neighbourhoods with high situational vulnerability in the quintile 5 (53%). Results from the CIMD analysis indicate that most people who died from drug toxicity were living in areas that experience more deprived conditions (Table 10).

Table 10. Counts and percentage of people who died and suspected to have died from acute drug toxicity by quintile for the dimensions of the Canadian Index of Multiple Deprivation, Saskatchewan, 2019-2024.

Dimension	Quintile Ranking	Count	Percentage
Residential instability	1 - lowest	90	6%
	2	147	11%
	3	203	15%
	4	431	31%
	5 - highest	519	37%
Economic dependency	1 - lowest	249	18%
	2	243	17%
	3	328	24%
	4	358	26%
	5 - highest	212	15%
Ethno-cultural composition	1 - lowest	184	13%
	2	238	17%
	3	280	20%
	4	254	18%
	5 - highest	434	31%
Situational vulnerability	1 - lowest	149	11%
	2	109	8%
	3	167	12%
	4	230	17%
	5 - highest	735	53%

Drugs contributing to death

When determining which drugs were involved in causing someone's death, the forensic toxicologists will assess the level of drugs detected in biological samples. They will also assess postmortem factors (re-distribution). The forensic toxicologists will draft a toxicology report for the coroner to review. Coroners will consider the toxicology report, the prescription medication history, and the overall context of circumstances surrounding someone's death.

Both drugs and their metabolites can be listed in toxicology reports. Metabolites are used to indicate the presence of their parent substances, if they were known not to originate from other substances (e.g., norfentanyl is a metabolite of fentanyl). For the purposes of this report, the drugs and their metabolites were grouped into the following categories:

Table 11. Drug groups and corresponding metabolites from toxicology results.

Groups	Substances and metabolites
Benzodiazepines and analogues	3-hydroxy-phenazepam, Adinazolam, Alprazolam, Bromazepam, Bromazolam, Clonazepam, Clonazolam, Deschloroetizolam, Desalkylgidazepam, Diazepam, Diclazepam, Etizolam, Flualprazolam, Flubromazepam, Flubromazolam, Fluclozepam, Flunitrazepam, Flurazepam, Lorazepam, Meclonazepam, Midazolam, Nimetazepam, Nitrazepam, Nitrazolam, Norfludiazepam, Oxazepam, Phenazepam, Pyrazepam, Temazepam
Stimulants	Cocaine Methamphetamine: methamphetamine, methylenedioxy Other stimulants: amphetamine, atomoxetine, cathaiones, dexamfetamine, ethylphenidate, lisdexamfetamine, MDMA, Mephedrone, methylphenidate, modafinil, pemoline, phentermine, pseudoephedrine, TFMPP
Opioids	Fentanyl and analogues: fentanyl, acetyl fentanyl, furanyl fentanyl, norfentanyl, 3-methylfentanyl, butyrylfentanyl, carfentanyl, despropionyl-fentanyl Non-fentanyl opioids: 2-methyl AP-237, AH-7921, AP-237, buprenorphine, buprenorphine, codeine, desomorphine, dihydrocodeine, etodesnitazene, heroin, hydrocodone, hydromorphone, isopropyl-U-47700, Isotonitazene, loperamide, meperidine, methadone, metonitazene, mitragynine, monoacetylmorphine, morphine, MT-45, normeperidine, oxycodone, tapentadol, tramadol, U-47700, U-49900, U-50488,
Xylazine	Xylazine
Other	ethanol, methanol, citalopram, fluoxetine, vortioxetine, duloxetine, levomilnacipran, venlafaxine, mirtazapine, trazodone, amitriptyline, amineptine, doxepin, aripiprazole, quetiapine, olanzapine, clozapine, haloperidol, risperidone, asenapine, chlorpromazine, flupenthixol, fluphenazine, levomepromazine, loxapine, lurasidone, paliperidone, pimozide, prochlorperazine, ziprasidone, zuclopenthixol, nabilone, tetrahydrocannabinol, ketamine, PCP, gabapentin, pregabalin, psilocin, LSD, acetaminophen, ibuprofen, acetylsalicylic acid, naproxen, zopiclone, eszopiclone, zaleplon, zolpidem, buspirone, W-18, insulin, buspirone
Unknown	People who did not have toxicology results in CCMS that listed drugs that were directly linked to death (e.g., toxicology not completed at the time of data extraction, bloodwork from

	hospitals, probable drug toxicity deaths, substances that most likely contributed to death, etc.)
--	---

From 2019 to 2024, opioids (79%) were most frequently found to have contributed to death in toxicology examinations. Opioids also have the highest crude mortality rate out of all the drug groups (21.21 deaths per 100,000 population). Stimulants (65%) make the second most frequently contributory drug group, followed by benzodiazepines and their analogues (43%). 13 people did not have toxicology results in their case files at the time of analysis, due to pending toxicology results, no available samples for toxicology analysis (e.g., first bloods not available), or unspecified toxicology results. Note: the percentage calculations utilized a denominator of 1909, the total number of people who died from acute drug toxicity (Table 12).

Table 12. Counts, percentage (n= 1909), and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by drug groups, Saskatchewan, 2019-2024.

Drug groups	Counts	Percentage	Crude Rates
Benzodiazepines and analogues	816	43%	11.51
Opioids	1504	79%	21.21
Stimulants	1252	65%	17.66
Xylazine	225	12%	3.17
Other substances	120	6%	1.69
Unknown	13	1%	0.21

Note: the drug groups are not mutually exclusive to each other. The counts shown per drug group correspond to the number of people who had the drug group detected as contributing to death in toxicology examinations. Percentage calculations utilize the total number of people who died from acute drug toxicity as the denominator.

Polysubstance groups

Toxicity deaths from opioids, stimulants, and benzodiazepines (48%) were the most common combination. This was followed by opioids and stimulants (34%) then by opioids and benzodiazepines (17%). Stimulants and benzodiazepines (1%) were the least common combination in toxicity deaths (Table 13).

Table 13. Counts and percentage of people who died and suspected to have died from acute drug toxicity by polysubstance groups, Saskatchewan, 2019-2024.

Polysubstance groups	Counts	Percentages
Opioids & benzodiazepines	210	17%
Opioids & stimulants	414	34%
Stimulants & benzodiazepines	7	1%
Opioids, stimulants, & benzodiazepines	571	48%
Total	1202	100%

The proportion of deaths where the opioids, stimulants, and benzodiazepines combination contributed to death has steadily increased from 2019 to 2024, with notable increases from 2020

(17%) to 2021 (44%) and 2022 (42%) to 2023 (71%). 2024 (62%) figures are tracking to have a higher percentage of opioids, stimulants, and benzodiazepines toxicity. Opioids and stimulants have generally decreased over time, peaking in 2019 (80%), though current 2024 (18%) figures have shown an increase. Opioids and benzodiazepines increased from 2020 (12%) to 2021 (20%) and have since maintained within a similar range. Stimulants and benzodiazepines have sporadically occurred over the years (Table 14).

Table 14. Counts and percentage of people who died and suspected to have died from acute drug toxicity by polysubstance groups and year, Saskatchewan, 2019-2024.

Polysubstance groups	2019	2020	2021	2022	2023	2024
Opioids & benzodiazepines	8 (13%)	20 (12%)	55 (20%)	40 (17%)	57 (18%)	30 (19%)
Opioids & stimulants	49 (80%)	114 (71%)	93 (35%)	99 (41%)	31 (10%)	28 (18%)
Stimulants & benzodiazepines	0 (0%)	0 (0%)	3 (1%)	1 (0%)	1 (0%)	2 (1%)
Opioids, stimulants, & benzodiazepines	4 (7%)	27 (17%)	118 (44%)	101 (42%)	223 (71%)	98 (62%)
Total	61 (100%)	161 (100%)	269 (100%)	241 (100%)	312 (100%)	158 (100%)

When comparing people who died from a singular substance toxicity vs polysubstance toxicity, polysubstance toxicity deaths have made up a larger percentage of deaths since 2019. The percentage of polysubstance deaths have increased over the time period with the highest percentage in 2023 (84%). Data from 2024 (82%) is also tracking to have a similar percentage of polysubstance deaths (Table 15).

Table 15. Percentage of people who died and suspected to have died from acute drug toxicity by number of drugs, Saskatchewan, 2019-2024.

Singular/polysubstance	2019	2020	2021	2022	2023	2024
Singular substance	72 (40%)	99 (31%)	93 (23%)	84 (23%)	62 (15%)	38 (17%)
Polysubstance	106 (60%)	219 (69%)	315 (76%)	284 (77%)	338 (84%)	187 (82%)
Unknown	0 (0%)	1 (0%)	3 (1%)	2 (1%)	4 (1%)	3 (1%)
Total	178 (100%)	319 (100%)	411 (100%)	370 (100%)	404 (100%)	228 (100%)

Opioids

Of the 1504 who had opioids contribute to death, most were found with fentanyl and fentanyl analogues only (64%) detected in their toxicology (Table 13). Some people had only non-fentanyl opioids (23%) and some had both fentanyl and non-fentanyl opioids (13%) (Table 16).

393 people did not have opioids contribute to death, making up roughly 21% of all acute drug toxicity deaths.

Table 16. Counts and percentage of people who died and suspected to have died from acute drug toxicity by opioid groups, Saskatchewan, 2019-2024.

Opioid groups	Counts	Percentage
Fentanyl/analogues only	964	64%
Non-fentanyl opioids only	352	23%
Both fentanyl and non-fentanyl opioids	188	13%
Total	1504	100%

The presence of only fentanyl and fentanyl analogues increased from 2019 (28%) to 2020 (55%) and has continued to remain in the 50% and 60% range into 2024. The presence of only non-fentanyl opioids has generally decreased from 2019 (64%) which has the highest percentage of people who died. Combination of fentanyl and non-fentanyl opioids increased from 2019 (10%) to 2020 (15%) and has maintained since (Table 17).

Table 17. Counts and percentage of people who died and suspected to have died from acute drug toxicity by opioid groups and year, Saskatchewan, 2019-2024.

Opioid groups	2019	2020	2021	2022	2023	2024
Fentanyl/analogues only	32 (28%)	131 (55%)	235 (66%)	201 (66%)	245 (68%)	120 (57%)
Non-fentanyl opioids only	72 (64%)	100 (34%)	50 (21%)	61 (24%)	40 (20%)	35 (13%)
Both fentanyl and non-fentanyl opioids	11 (10%)	36 (15%)	47 (13%)	33 (11%)	43 (12%)	18 (9%)
Total	115 (100%)	239 (100%)	354 (100%)	306 (100%)	360 (100%)	210 (100%)

Stimulants

Stimulants are a class of drugs that are sometimes referred to as “uppers” since they can also provide a sense of exhilaration by increasing dopamine levels in the brain. However, they can also make a person feel more agitated or anxious (8).

Of the 1215 who had stimulants contribute to death, methamphetamine alone (60%) had the highest percentage of people who died from acute drug toxicity. This was followed by those who died from multiple stimulants (21%) than cocaine only (17%). The smallest percentage of people were those who died from other types of stimulants (2%) (Table 18). 682 people did not have stimulants contribute to death, making up roughly 36% of all acute drug toxicity deaths.

Table 18. Counts and percentage of people who died and suspected to have died from acute drug toxicity by stimulant groups, Saskatchewan, 2019-2024.

Stimulant groups	Counts	Percentage
Cocaine only	208	17%
Methamphetamine only	756	60%
Other stimulants only	21	2%
Multiple stimulants	267	21%
Total	1215	100%

Per year, methamphetamine only acute drug toxicity deaths have increased steadily. Cocaine only acute drug toxicity deaths had a peak in 2020 (24%) which then decreased, however figures in 2024 (21%) suggest another peak, considering there are still a large number of suspected cases that require toxicology processing. Additionally, a combination of stimulant acute drug toxicity has increased in 2024 (27%). Death from other stimulants has been consistently in lower percentages (Table 19).

Table 19. Counts and percentage of people who died and suspected to have died from acute drug toxicity by stimulant groups and year, Saskatchewan, 2019-2024.

Stimulant groups	2019	2020	2021	2022	2023	2024
Cocaine only	17 (18%)	43 (24%)	34 (13%)	41 (17%)	39 (13%)	34 (21%)
Methamphetamine only	54 (58%)	100 (56%)	163 (60%)	151 (62%)	206 (68%)	82 (51%)
Other stimulants only	5 (5%)	6 (3%)	8 (3%)	1 (0%)	0 (0%)	1 (1%)
Multiple stimulants	17 (18%)	31 (17%)	66 (24%)	49 (20%)	60 (20%)	44 (27%)
Total	93 (100%)	180 (100%)	271 (100%)	242 (100%)	305 (100%)	161 (100%)

Benzodiazepines/benzodiazepine analogues and xylazine

Benzodiazepines/benzodiazepine analogues are a group of drugs that are classified as sedative-hypnotics, which slow down the nervous system. Common prescription benzodiazepines include lorazepam (Ativan) and alprazolam (Xanax). Benzodiazepine analogues refer to drugs that are similar to benzodiazepines but are usually used for non-medical purposes and found on the unregulated drug market (14).

For benzodiazepines, there is a less pronounced difference between those who died from benzodiazepine acute toxicity (44%) to those who did not (56%) (Table 20).

Table 20. Counts and percentage of people who died and suspected to have died from acute drug toxicity by benzodiazepine groups, Saskatchewan, 2019-2024.

Benzodiazepines groups	Counts	Percentages
Benzodiazepines/benzodiazepine analogues	816	44%
No benzodiazepines/benzodiazepine analogues	1023	56%
Total	1839	100%

Per year, acute drug toxicity deaths including benzodiazepine and analogues have increased, with notable increases from 2020 (17%) to 2021 (45%) and from 2022 (42%) to 2023 (72%) (Table 18). 2023 and 2024 have a higher percentage of people who died from benzodiazepine toxicity in comparison to those who did not (Table 21). Note: testing for various benzodiazepines and analogues began during the 2019-2024 period (e.g., etizolam began testing in 2019), therefore the changes in year-to-year benzodiazepine and analogue numbers may be attributable to the improvement of testing for these substances.

Table 21. Counts and percentage of people who died and suspected to have died from acute drug toxicity by benzodiazepine groups and year, Saskatchewan, 2019-2024.

Benzodiazepine groups	2019	2020	2021	2022	2023	2024
Benzodiazepines	13 (8%)	51 (17%)	181 (45%)	151 (42%)	285 (72%)	135 (62%)
No benzodiazepines	157 (92%)	244 (83%)	222 (55%)	213 (59%)	109 (28%)	83 (38%)
Total	100%	100%	100%	100%	100%	100%

The SCS began publishing Xylazine figures in 2024 on the SCS [website](#). To maintain consistency with the monthly publishing, Xylazine figures were included in this report. Xylazine is classified as a non-narcotic analgesic that is used in veterinary medicine. It is not approved for human use in Canada and is often combined with fentanyl as an adulterant (27).

Those who died with Xylazine detected in their toxicology (12%) overall made up a smaller portion of drug toxicity deaths in comparison to those who did not have Xylazine detected (Table 22).

Table 22. Counts and percentage of people who died and suspected to have died from acute drug toxicity by xylazine groups, Saskatchewan, 2019-2024.

Xylazine groups	Counts	Percentage
Xylazine	223	12%
No xylazine	1616	88%
Total	1839	100%

When reviewing xylazine toxicity deaths per year, an increase is notable from 2022 (2%) to 2023 (24%) and 2024 (45%). Note: the SCS began testing for xylazine in 2021 when it was first detected, hence the omittance of 2019 and 2020 data in Table 23.

Table 23. Percentage of people who died and suspected to have died from acute drug toxicity by xylazine groups and year, Saskatchewan, 2019-2024.

Xylazine groups	2021	2022	2023	2024
Xylazine	6%	2%	24%	45%
No xylazine	94%	98%	76%	55%
Total	100%	100%	100%	100%

Sex

The following section examines the characteristics of interest in those that died from acute drug toxicity, among males and females. Note: information regarding whether a person’s gender may have differed from their sex assigned at birth is not systematically collected. For this report, analyses are based on the sex assigned at birth of people who died from acute drug toxicity.

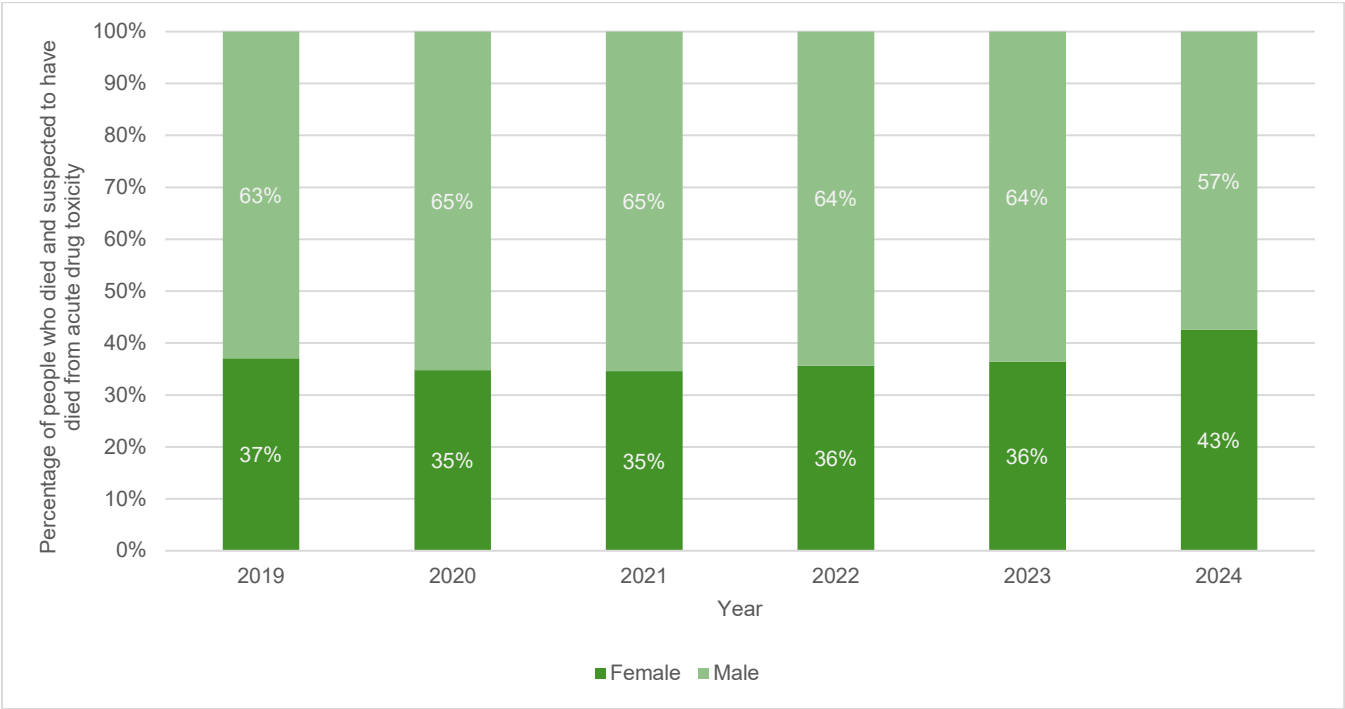
The majority of acute drug toxicity deaths occurred among males (64%), with a higher crude mortality rate (34.04 deaths per 100,000 population), compared to females (19.78 deaths per 100,000 population) (Table 24).

Table 24. Counts, percentage, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by sex, Saskatchewan, 2019-2024.

Sex	Count	Percentage	Rate
Female	695	36%	19.75
Male	1214	64%	33.98
Total	1909	100%	26.92

The percentage of female and male people who died from acute drug toxicity has remained stable throughout 2019 to 2024. Note: a larger proportion of suspected acute drug toxicity deaths are still to be processed by the SCS and may change the percentages of females and males, the SCS [website](#) should be referenced for up-to-date figures (Figure 10).

Figure 10. Percentage of people who died and suspected to have died from acute drug toxicity by sex and year, Saskatchewan, 2019-2024.



When looking at manner of death, for both males and females most people die by an accidental manner of death (95% males, 89% females). However, suicide manners of death make up a larger portion of females dying from drug toxicity (10%) in comparison to males (4%) (Table 25).

Table 25. Counts and percentage of people who died and suspected to have died from acute drug toxicity by sex and manner of death, Saskatchewan, 2019-2024.

Manner of death	Counts		Percentage	
	Female	Male	Female	Male
Accident	617	1152	89%	95%
Suicide	70	46	10%	4%
Undetermined	sup	sup	sup	sup
Suspected	sup	sup	sup	sup
Total	695	1214	100%	100%

Note: all suppressed figures will be denoted with "sup".

Looking specifically at the accidental and suicide manner of death, the percentage distribution of female and male is relatively stable for accidental manner of death. However, an increase amongst females in suicide manner of death is observed from 2020 (48%) to 2021 (69%) and has remained above 50% since (Table 26).

Table 26. Percentage of people who died and suspected to have died from acute drug toxicity by sex, accident and suicide manner of death, Saskatchewan, 2019-2024.

Accident	2019	2020	2021	2022	2023	2024
Female	36%	34%	34%	34%	35%	38%
Male	64%	66%	66%	66%	65%	62%
Suicide	2019	2020	2021	2022	2023	2024
Female	45%	48%	69%	58%	73%	81%
Male	55%	52%	31%	42%	27%	19%

The proportion of acute drug toxicity deaths by substance category did not differ between males and females (Table 27).

Table 27. Counts and percentage of people who died and suspected to have died from acute drug toxicity by sex and drug groups, Saskatchewan, 2019-2024.

Drug groups	Counts		Percentage	
	Female	Male	Female	Male
Benzodiazepines and analogues	288	528	22%	22%
Opioids	544	960	41%	40%
Stimulants	429	823	32%	35%
Other substances	64	56	5%	2%
Unknown	5	8	0%	0%
Total	1329	2371	100%	100%

Note: the drug groups are not mutually exclusive, counts for each drug group include singular and polysubstance deaths that had the drug group detected in toxicology.

Age

The average age of people who died from acute drug toxicity is 41.2 years old; for females it is 39.5 years old and for males it is 42.2 years old. Similarly, the median age of people who died from acute drug toxicity is 41 years old; for females it is 38 years old and for males it is 42 years old, suggesting minimal skewing of data (Table 28).

Table 28. Average and median age of death among people who died and suspected to have died from acute drug toxicity, by sex, Saskatchewan, 2019-2024.

Sex	Median age of death (2019-2024)	Average age of death (2019-2024)
Female	38	39.5
Male	42	42.2
Total	41	41.2

Note: for privacy reasons due to small number publishing (see *About the Data*) two additional age groups were created: 0- to 19-year-olds and those age 70+. Most people who died from acute drug toxicity were in the 30 to 39 age group (26%) and those in the 70+ age group had the smallest percentage (1%) (Table 29).

Table 29. Counts, percentages, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by age group, Saskatchewan, 2019-2024.

Age Group	Count	Percentage	Rate
0 to 19	49	3%	1.36
20 to 29	357	19%	19.57
30 to 39	498	26%	24.61
40 to 49	458	24%	26.05
50 to 59	377	20%	22.50
60 to 69	149	8%	8.87
70+	21	1%	1.31
Total	1909	100%	20.71

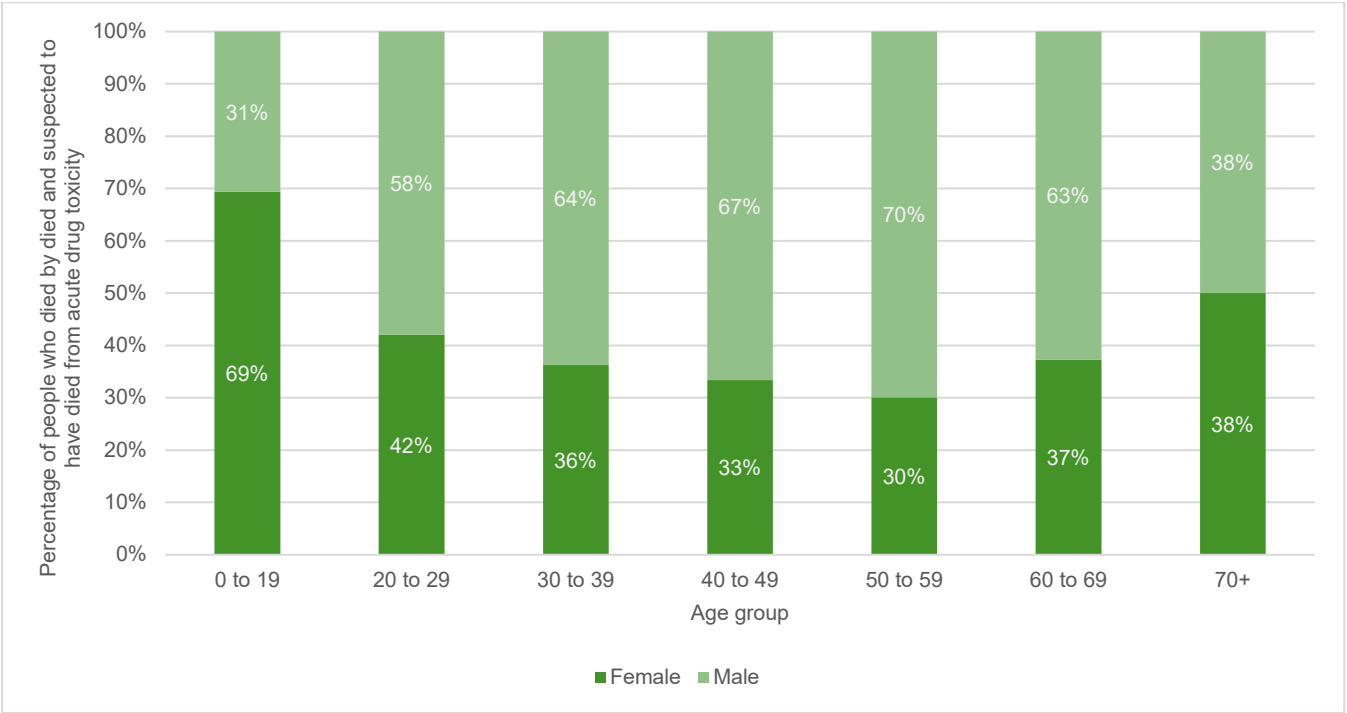
Accidental manner of death made up the largest percentage of acute drug toxicity deaths across all age groups. Suicide manner of death was highest for those in the 70+ age group (32%), 60 to 69 age group (15%), and 0 to 19 age group (12%) (Table 30).

Table 30. Percentage of people who died and suspected to have died from acute drug toxicity by age group and manner of death, Saskatchewan, 2019-2024.

Age Group	Accident	Suicide	Undetermined	Suspected
0 to 19	88%	12%	0%	0%
20 to 29	94%	5%	1%	0%
30 to 39	97%	3%	0%	0%
40 to 49	95%	4%	1%	0%
50 to 59	89%	8%	3%	0%
60 to 69	83%	15%	1%	1%
70+	64%	32%	0%	4%

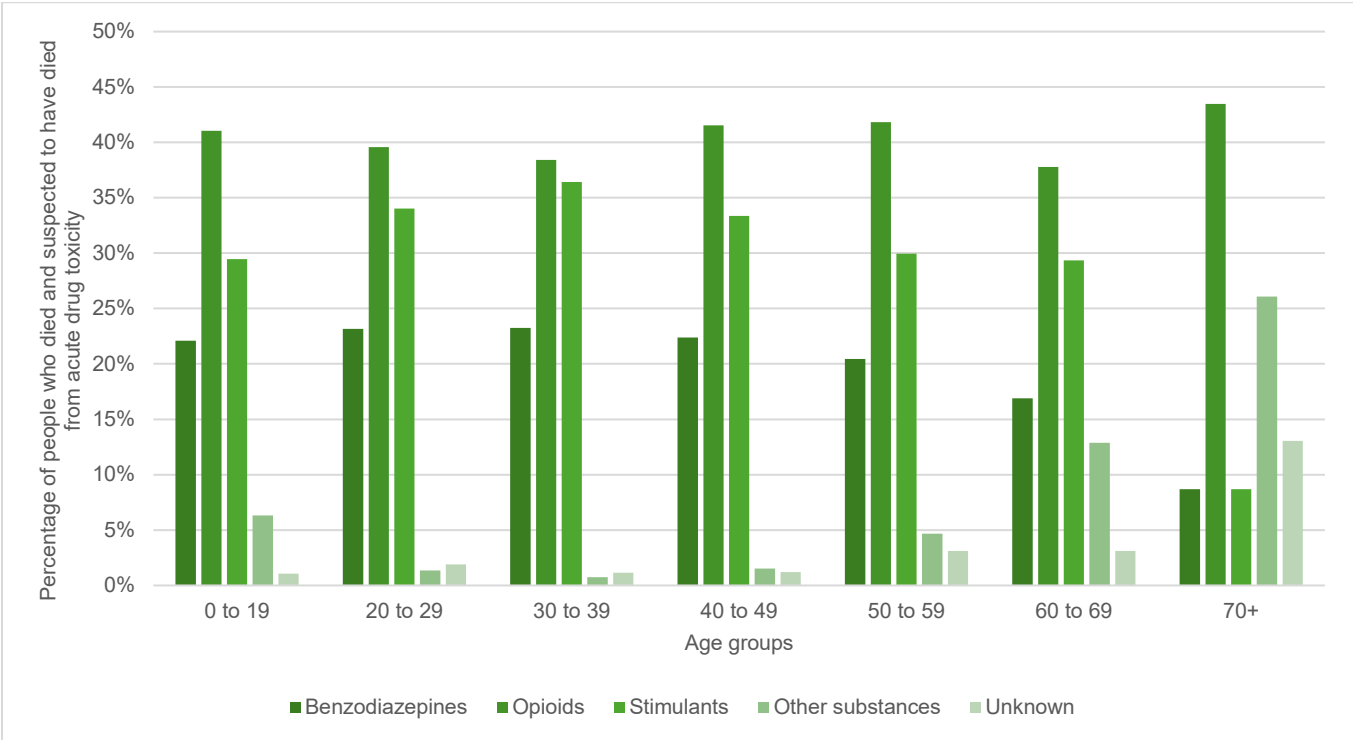
For most of the age groups, males made up a larger percentage of people who died from acute drug toxicity. However, for the 0 to 19 age group, females made up a larger percentage of deaths (69%) in comparison to males (31%). In the 70+ age group there is an even split between females (38%) and males (38%) (Figure 11).

Figure 11. Percentage of people who died and suspected to have died from acute drug toxicity by age group and sex, Saskatchewan, 2019-2024.



Opioids made up the highest percentage of drugs that contributed to death in all age groups. Stimulants were the second highest percentage of drugs across most age groups, followed by benzodiazepines. Stimulants percentage was the highest in the 30 to 39 age group (36%). Benzodiazepines were in a similar range for those under the age of 60, then a decrease is noted in the 60 to 69 (17%) and the 70+ (9%) age group. In the 70+ age group, the percentage of other drugs (26%) is highest amongst all age groups, likely due to the age group having a higher number of prescription medications (Figure 12).

Figure 12. Percentage of people who died and suspected to have died from acute drug toxicity by age group and drug group, Saskatchewan, 2019-2024.



Note: the drug groups are not mutually exclusive, counts for each drug group include singular and polysubstance deaths that had the drug group detected in toxicology.

Race

Race-based data is primarily collected by coroners through identification from next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records). If the coroner cannot find documentation of race and is unable to identify the person's race, they are documented as unknown. For this report, the race-based data from the coroner case files were categorized into groups based on the Canadian Institute for Health Information's (CIHI) [Standards for Race-Based and Indigenous Identity Data Collection and Health Reporting in Canada](#) and Statistics Canada 2021 Census.

The race-based groups used for this report include:

- Indigenous (includes those of First Nations, Métis, and Inuit descent)
- White
- Visible minorities (including those who were identified as East Asian, South Asian, and Southeast Asian, Black, Latino, and other specified races)
- Unknown

Those who were identified as East Asian, South Asian, and Southeast Asian, Black, Latino, and other specified races were aggregated into one group "Visible minorities". The Visible minorities

category is congruent with the Statistics Canada 2021 Census definition of people who are not Caucasian in race or non-white in colour and excludes Indigenous Peoples. These figures should be approached with the knowledge that it covers a diverse group of people and with caution due to small sample sizes.

Indigenous Peoples make up more than half of all acute drug toxicity deaths (52%) and had the highest crude rate (88.26 deaths per 100,000) of people who died from acute drug toxicity. The second largest group was individuals who were identified as White (40% and 16.39 deaths per 100,000), then individuals who were identified as Visible minorities (2% and 3.97 deaths per 100,000). Those whose race could not be identified made up 5% of acute drug toxicity deaths (Table 31).

Table 31. Counts, percentage, and crude mortality rates (per 100,000 population) of people who died and suspected to have died from acute drug toxicity by race, Saskatchewan, 2019-2024.

Race	Counts	Percentage	Rate
Indigenous	995	52%	88.26
White	772	40%	16.39
Visible minorities	38	2%	3.97
Unknown	104	5%	N/A
Total	1909	100%	20.71

Note: For race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records).

Table 32 compares the relative percentage of acute drug toxicity deaths by race groups to the percentage of those race groups in the Saskatchewan population (excluding the Unknown group). Indigenous Peoples are overrepresented, with 55% of all deaths by drug toxicity despite making up only 17% of the provincial population. In contrast, 43% of drug toxicity deaths were among the White race group, while this group comprises 69% of the Saskatchewan population. The Visible minorities group makes up 2% of drug toxicity deaths and 14% of the provincial population. Note: the unknown group was eliminated from this table as there is no equivalent percentage comparison in the SK population.

Table 32. Percentage of people who died and suspected to have died from acute drug toxicity and proportion of provincial population by known race, Saskatchewan, 2019-2024.

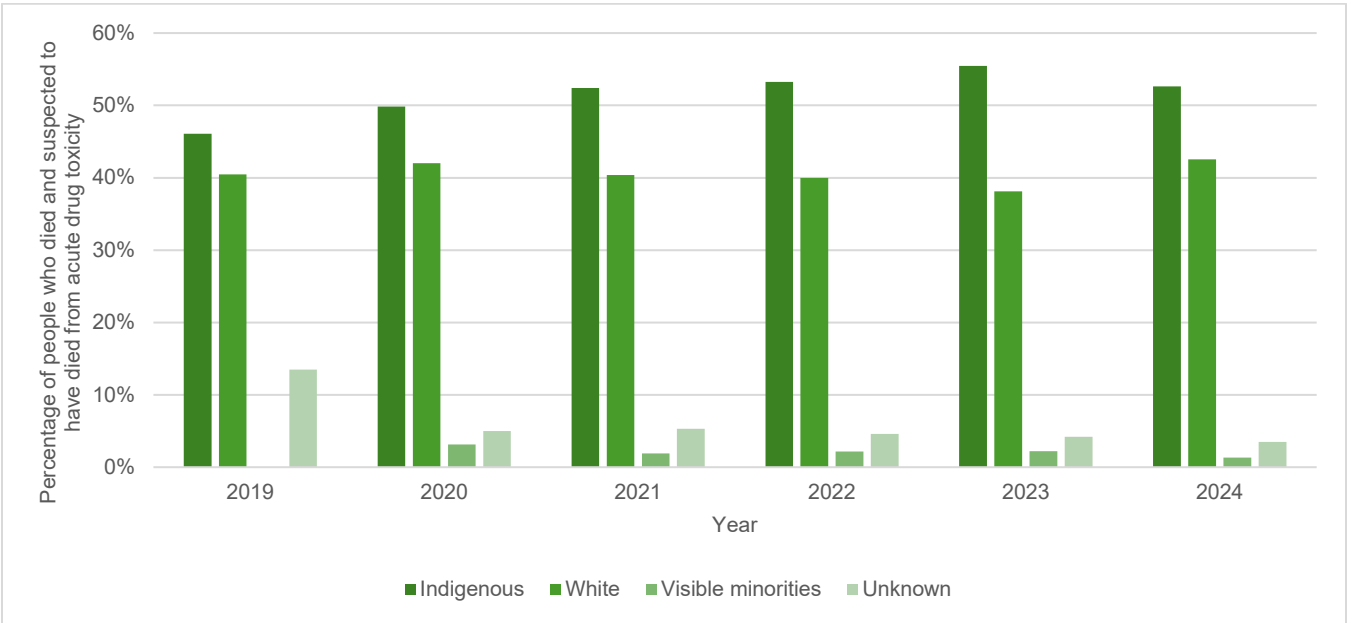
Race (known)	% of deaths by drug toxicity (n= 1808)	% of SK population ⁵
Indigenous	55%	17%
White	43%	69%
Visible minorities	2%	14%

⁵ Population calculations were completed with figures from the 2021 Canadian Census

Note: Percentage calculation for race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records).

Indigenous Peoples also made up the largest percentage of drug toxicity deaths across 2019 to 2024. Furthermore, the percentage of Indigenous Peoples who have died from acute drug toxicity has increased yearly from 2019 to 2023. Data from 2024 has the largest proportion of suspected deaths due to the time at which data was extracted, however Indigenous Peoples still make up the largest percentage of death data collected for this report. In comparison, the White and Visible minorities groups have stayed relatively stable throughout the years. The unknown category has decreased from 2019 (13%) to 2024 (4%), potentially indicating that the SCS has improved its documentation of race data. Further analysis would need to be conducted to determine the impacts of potential improvements in race documentation (Figure 13).

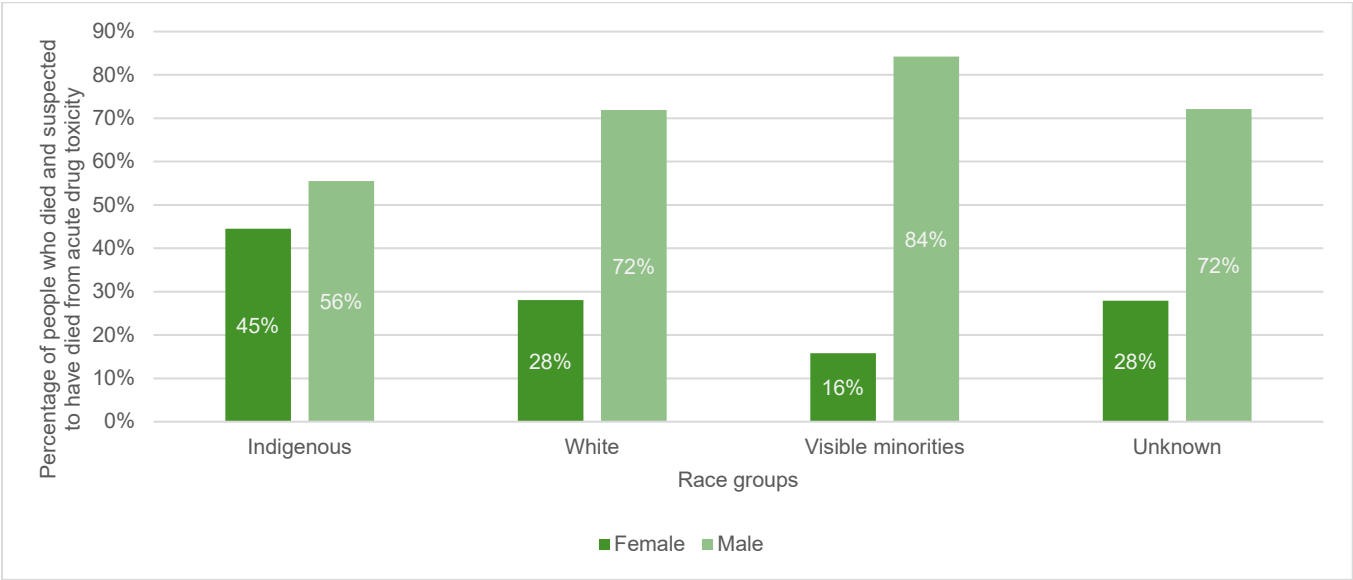
Figure 13. Percentage distribution of people who died and suspected to have died from acute drug toxicity by race and year, Saskatchewan, 2019-2024.



Note: For race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records).

Consistent with the overall trends, males (64%, total average) accounted for the majority of deaths by drug toxicity across all race groups. However, the percentage of females (45%) and males (56%) is less pronounced amongst Indigenous Peoples in comparison to non-Indigenous groups (Figure 14).

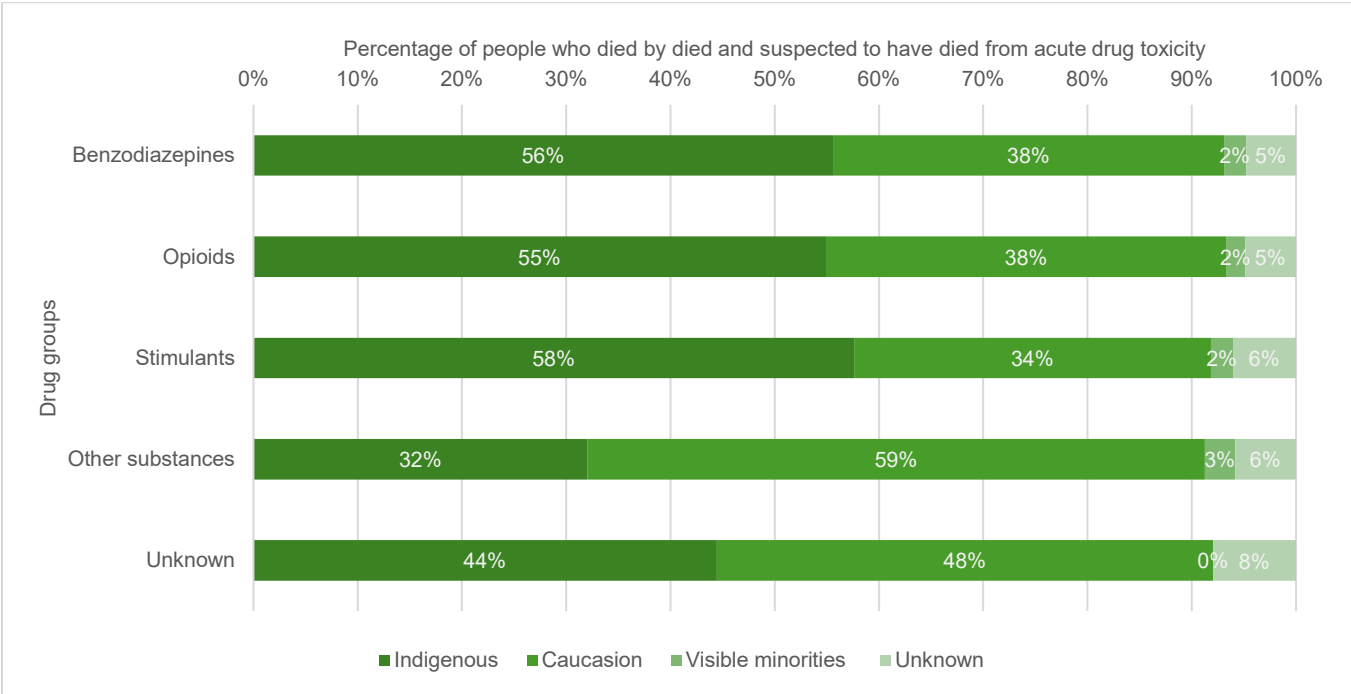
Figure 14. Percentage distribution of people who died and suspected to have died from acute drug toxicity by race and sex, Saskatchewan, 2019-2024.



Note: For race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records).

Indigenous Peoples made up the largest proportion of deaths from benzodiazepines (56%), opioids (55%), and/or stimulants (58%) as compared to the non-indigenous groups. The White race group made up the largest proportion of deaths from other substances (59%) and/or unknown substances (48%) (Figure 15).

Figure 15. Distribution of people who died and suspected to have died from acute drug toxicity by race and drug group, Saskatchewan, 2019-2024.



Note: For race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records).

Indigenous identity and First Nations reserves

Note: for privacy reasons due to small number publishing (see *About the Data*), people who were identified as Inuk were suppressed in the statistics for this section due to risk of re-identification. These figures should be interpreted within the context that not all Indigenous Peoples are represented.

Indigenous identity

In Canada, “status” of a First Nations person refers to whether they are registered under the *Indian Act*, making them a “Status Indian”. This is determined through lineage of those who were registered or entitled to be registered. Note: people can still self-identify as First Nations without being registered under the *Indian Act* as a Status Indian and having identity tied to the federally regulated status reserve system is a colonial construct (28). The SCS collects status data through Status numbers, which are assigned to each individual registered under the *Indian Act*. Note: the Métis and Inuit people do not have legal “Status” under federal legislation as First Nations People do (29,30).

Of the people who were identified as Indigenous, 94% were identified as First Nations and 6% were identified as Métis. Of those who were identified as First Nations, 66% were registered under the *Indian Act* with a Status number present in their coroner case file and 23% did not

have a Status number on file either due to non-status or unavailability of identification (Table 33).

Table 33. Counts and percentage of Indigenous Peoples who died and suspected to have died from acute drug toxicity by Indigenous identity groups, Saskatchewan, 2019-2024.

Indigenous Identity	Count	Percentage
First Nations	933	94%
<i>Status</i>	613	66%
<i>Non-Status or Unknown Status</i>	320	34%
Métis	61	6%
Inuk	sup	sup
Total	995	100%

Note: For race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records).

The difference in percentages of females and males in both First Nations and Métis peoples is generally even. In the First Nations group, males (56%) made up a larger percentage of deaths in comparison to females (44%). However, for the Métis group, women made up the larger percentage of deaths (51%) in comparison to males (49%) (Table 34).

Table 34. Counts and percentage of Indigenous Peoples who died and suspected to have died from acute drug toxicity by Indigenous identity groups and sex, Saskatchewan, 2019-2024.

Indigenous identity	Counts		Percentage	
	Female	Male	Female	Male
First Nations	411	522	44%	56%
Métis	31	30	51%	49%
Inuk	sup	sup	sup	sup

Note: For race identification, coroners will first ask next of kin (e.g., spouse, family members, etc.) or other loved ones (i.e., friends) who can identify the race of a person. Additional methods of identification include referencing documents where race may be included (i.e., hospital records). Totals for this table were not included to reduce risk of re-identification.

First Nations reserves

Table 35 provides figures on how many people who died on a First Nations reserve (156), whose place of injury occurred on a First Nations reserve (168), and those whose place of primary residence was a First Nations reserve (166).

Table 35. Counts and percentage of people who died and suspected to have died from acute drug toxicity on first nations reserve status by place of death, place of injury, and place of residence, Saskatchewan, 2019-2024.

First Nations reserve place of death	Counts	Percentage
No	1753	92%
Yes	156	8%
Total	1909	100%
First Nations reserve place of events leading up to death	Counts	Percentage
No	1741	91%
Yes	168	9%
Total	1909	100%
First Nations reserve place of residence	Counts	Percentage
No	1743	91%
Yes	166	9%
Total	1909	100%

Medical and mental health history

Access to primary care provider (PCP)

Upon reviewing the case files of those who died from acute drug toxicity, 637 people (33%) had an identified primary care provider (PCP) in their files. For the purposes of this report a PCP was defined as registered and license professional who was providing care to a person on more than one occasion. Some examples of PCP include family doctors, psychiatrists, and nurse practitioners. Most people who died from drug toxicity had no documentation of a PCP that the coroner could identify (1272 people, 67%) (Table 36).

Table 36. Counts and percentage of people who died and suspected to have died from acute drug toxicity by PCP provider status, Saskatchewan, 2019-2024.

PCP Provider	Counts	Percentage
No or unknown	1272	67%
Yes	637	33%
Total	1909	100%

Healthcare setting interaction history

Upon reviewing the case files of people who died from acute drug toxicity, data was collected on the last healthcare setting a person interacted with prior to their death, that the coroners could identify. There were no timeline limitations set on when the health setting interaction occurred. Healthcare settings were categorized into the following groups:

- Correctional: seeing and receiving care from healthcare providers in a correctional setting.

- Hospital or inpatient: seeing and receiving care from a hospital or another form of inpatient care (e.g., detox, rehab, etc.). Note: hospital includes both inpatient units and emergency departments.
- Outpatient: seeing and receiving care in an outpatient setting (e.g., family doctor clinic, therapy office, etc.).
- Other: seeing and receiving care that does not fit the definition of correctional, hospital or inpatient, or outpatient (e.g., crisis service, homecare, etc.).
- None: the person had no documentation of a healthcare setting interaction.
- Unknown: it was unknown if the person had any healthcare setting interactions prior to their death.

Most people belonged to the 'Unknown' category (56%). Among those with a documented history most were either seen in an outpatient setting (21%) or in a hospital or inpatient setting (19%) (Table 37).

Table 37. Counts and percentage of people who died and suspected to have died from acute drug toxicity by healthcare setting interaction history group, Saskatchewan, 2019-2024.

Healthcare setting interaction history	Counts	Percentage
Correctional	14	1%
Hospital or inpatient	353	19%
Outpatient	398	21%
Other	11	1%
None	68	4%
Unknown	1065	56%
Total	1909	100%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in a correctional facility is public information and have therefore not been suppressed in this document.

Substance use history

Substance use history was also collected upon reviewing the coroner case files of people who died from drug toxicity. Substance use history refers to documentation from family/friends, medical records, or other sources that the person who died from drug toxicity had a history of using drugs and/or alcohol. Note: for some people, their substance use may not have been disclosed to family/friends or within medical records; and therefore not able to be recorded by coroners. Substance use history was grouped into the following categories:

- Yes: a person had a history of using drugs outside of prescription medication use.
- Yes, alcohol only: a person had a history of using alcohol in the higher risk or addiction end of the substance use spectrum.
- No: a person had no history of using drugs or alcohol.
- Unknown: a person's drug and alcohol history was unknown at their time of death.

Most people who died from acute drug toxicity had a drug use history (67%), followed by those who did not have a drug or alcohol history (23%). The smallest proportion was those with a history of alcohol use only (6%) (Table 38).

Table 38. Counts and percentage of people who died and suspected to have died from acute drug toxicity by substance use history, Saskatchewan, 2019-2024.

Substance use history	Counts	Percentage
Yes	1285	67%
Yes, alcohol only	111	6%
No	441	23%
Unknown	72	4%
Total	1909	100%

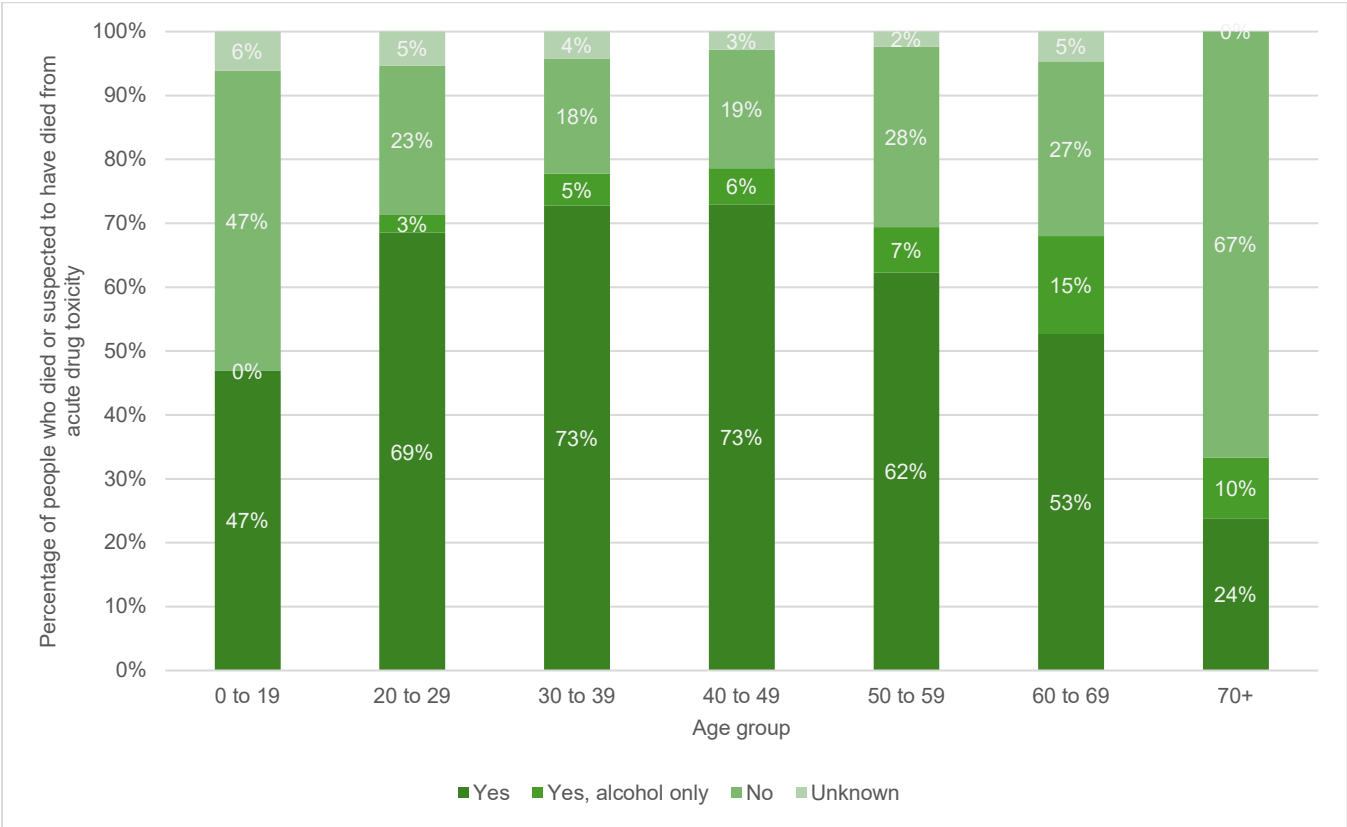
Males and females had similar patterns of substance use history. Both sexes had people with a history of drug use (68% female, 67% male); females had a slightly higher percentage of those who did not have any drug or alcohol use history (25%) in comparison to males (22%). Additionally, men had a slightly higher percentage of those who had alcohol only use history (7%) in comparison to females (4%) (Table 39).

Table 39. Counts and percentage of people who died and suspected to have died from acute drug toxicity by substance use history and sex, Saskatchewan, 2019-2024.

Substance use history	Counts		Percentage	
	Female	Male	Female	Male
Yes	472	813	68%	67%
Yes, alcohol only	28	83	4%	7%
No	174	267	25%	22%
Unknown	21	51	3%	4%
Total	695	1214	100%	100%

Drug use history made up the largest percentage across all age groups except for those 70+ (24%). The 70+ age group (67%), followed by the 0 to 19 group (47%) had the largest percentages of people with no drug or alcohol use history. Alcohol only use was largest amongst the 60 to 69 age group (15%), followed by the 70+ group (10%) (Figure 16).

Figure 16. Percentage of people who died and suspected to have died from acute drug toxicity by substance use history and age groups, Saskatchewan, 2019-2024.



Interactions with the correctional system

In total, 85 people (5% of all acute drug toxicity deaths) were identified as having a previous interaction with the correctional system prior to their death. As previously stated, six (7%) people died in custody from acute drug toxicity. Note: some individuals have been excluded from the in custody figures because an inquest has not been completed at the time of publication, therefore the details of these individuals have not been made public. To protect the privacy of these individuals they have been omitted from the in custody figures. Further review of case files identified that 58 (68%) people had been released from custody recently within one year prior to death, and 21 (25%) people had a history of being incarcerated beyond one year prior to death, or with an undefined timeline (Table 40).

Table 40. Counts and percentage of people who died and suspected to have died from acute drug toxicity by interactions with the correctional system groups, Saskatchewan, 2019-2024.

Interactions with the correctional system	Counts	Percentage
In custody	6	7%
Recently released	58	68%
Previously incarcerated or undefined timeline	21	25%
Total	85	100%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in a correctional facility is public information and have therefore not been suppressed in this document.

All those who died in custody were male and males constituted the largest percentage of those recently released and previously incarcerated (81%) (Table 41).

Table 41. Counts and percentage of people who died and suspected to have died from acute drug toxicity by interactions with the correctional system groups and sex, Saskatchewan, 2019-2024.

Interactions with the correctional system groups	Counts		Percentage	
	Female	Male	Female	Male
In custody	0	6	0%	100%
Recently released and previously incarcerated	15	64	19%	81%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in a correctional facility is public information and have therefore not been suppressed in this document. Some individuals have been excluded from the in-custody figures because an inquest has not been completed at the time of publication, therefore the details of these individuals have not been made public. To protect the privacy of these individuals they have been omitted from the in-custody figures.

Most of those who died in custody were identified as Indigenous (50%), followed by White (33%), then followed by those whose race was Unknown (17%). (Table 42).

Table 42. Counts and percentage of people who died and suspected to have died from acute drug toxicity in custody and race group, Saskatchewan, 2019-2024.

Race groups	Counts	Percentage
Indigenous	3	50%
White	2	33%
Unknown	1	17%
Total	6	100%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in a correctional facility is public information and have therefore not been suppressed in this document. Some individuals have been excluded from the in-custody figures because an inquest has not been completed at the time of publication, therefore the details of these individuals have not been made public. To protect the privacy of these individuals they have been omitted from the in-custody figures.

Furthermore, amongst those who died in custody most belonged to the 20 to 29 (33%) and the 50 to 59 (33%) age group. (Table 43).

Table 43. Counts and percentage of people who died and suspected to have died from acute drug toxicity in custody and age group, Saskatchewan, 2019-2024.

Age group	Counts	Percentage
20 to 29	2	33%
30 to 39	1	17%
40 to 49	1	17%
50 to 59	2	33%
Total	6	100%

Note: the Ministry of Justice publicly reports every death in custody that is not the result of natural causes. Therefore, those who have died in a correctional facility is public information and have therefore not been suppressed in this document. Some individuals have been excluded from the in custody figures because an inquest has not been completed at the time of publication, therefore the details of these individuals have not been made public. To protect the privacy of these individuals they have been omitted from the in custody figures.

Relationship status

For both females (43%) and males (48%), most people who died from acute drug toxicity were single at the time of their death. Females (27%) had a larger percentage of people who were in relationships (married, common law, and other partnerships) in comparison to males (21%). Conversely, males (11%) had a larger percentage of people who experienced a form of separation (divorced, separated, widowed) in comparison to females (9%) (Table 44).

Table 44. Counts and percentage of people who died and suspected to have died from acute drug toxicity by relationship status and sex, Saskatchewan, 2019-2024.

Relationship status	Counts		Percentage	
	Female	Male	Female	Male
In relationships	186	252	27%	21%
Single	299	581	43%	48%
Separation	63	137	9%	11%
Unknown	147	244	21%	20%
Total	695	1214	100%	100%

Consultations

The SCS conducted consultations as part of the acute drug toxicity report. Consultations were completed in two steps:

1. Initial communication: the SCS reached out to identified ministries of interest to introduce the project, provide an executive summary, and gauge interest and capacity to provide feedback.
2. Feedback collection: ministries that expressed interest in participating were then sent a copy of the full report and asked to provide their feedback.

The SCS sought consultation feedback from the following ministries: the Ministry of Justice, the Ministry of Health, Ministry of Community Safety, and the Ministry of Social Services. In addition, consultation feedback was also sought from the Saskatchewan Health Authority. Note: The Ministry of Health was also consulted to act as editors for this report. Their comments and suggestions were collected and analyzed to determine common themes, which have been integrated into this document.

The SCS sought feedback on two areas of interest:

1. How the data has been presented in the report; and
2. How this data may inform next steps in acute drug toxicity prevention efforts in the province.

Feedback pertaining to how data has been presented in the report has been integrated into this report.

Feedback and future steps with the data for prevention

Overall, organizations expressed the importance of publicly available acute drug toxicity death data. There is also a need for public education to be integrated in future acute drug toxicity death prevention efforts.

The feedback collected was analysed to identify core themes and the findings have been grouped into the two areas of interest noted above.

The following summarizes the key findings from all participating organizations into these themes:

How the data has been presented in the report:

- Such data is timely and needed and the report provides a clear overview. Statistics around acute drug toxicity death that is accessible to the public is important.
- Multi-year substance analysis illustrates how substance use trends continue to evolve.
- In combination with other data (EMS, hospital, etc.), coroners data helps improve understanding of substance use trends in Saskatchewan.
- The report is a valuable document for both government agencies and communities for designing and improving services and processes. Government agencies also note that

this data can help engagement with key partners, other government ministries, those affected by the drug toxicity crisis.

- Comparative Saskatchewan and national data provide further context to how provincial numbers differ and relate to other jurisdictions.
- Some information could have been further broken down in areas such as geographics and medical history.⁶ Additionally, the report is quite technical so providing important background information is essential.
- Language in the report is presented in a way that considers cultural safety and person first language. While race analysis may be sensitive, it is valuable and important data.
- The acknowledgement of stigma and how it impacts people in seeking out help is important and appreciated.

How this data may inform next steps in acute drug toxicity prevention efforts in the province:

- The data in the report will help inform preventative interventions and existing programs.
- Data from this report can help inform prescription opioid use and help to address diversion into the unregulated supply.
- Statistics around acute drug toxicity death that is accessible to the public is important.
- This report can help reduce misinformation and stigma, helping to support broader understanding amongst the general public.
- Prevention efforts should help reduce overall acute drug toxicity deaths and help target groups who are overrepresented in the data.
- Data provides important information on resource allocation and where they should be directed.
- The report underscores and reaffirms the importance of the Mental Health and Addictions Action Plan.
- Public education is needed to help inform on the growing opioid crisis and those who are most likely to be affected.

⁶ Some of the aggregations could not be completed due to privacy concerns (see *About the data*)

Discussion and limitations

Drug toxicity is a significant public health concern that affects people from diverse backgrounds and circumstances. This report is the first of its kind in Saskatchewan, providing an in-depth analysis to further understand deaths by acute drug toxicity. As per the findings, 1909 people were determined to have died from acute drug toxicity as per the case definition during the 6-year period (2019-2024). Previous reporting focussed on socio-demographics and geographics. This report presents new data across multiple factors related to case information, medical and mental health history, and sociodemographic and risk factors. The SCS has improved the monthly reporting on deaths by acute drug toxicity; however, this report provides a further in-depth analysis on the context of people's lives and deaths.

Data for this report was collected from all coroner case files of deaths that met the definition of a acute drug toxicity in Saskatchewan. It is possible that there are some people who died from acute drug toxicity that were not included in this report if their deaths were not reported to the SCS or not identified as a death by acute drug toxicity. Additionally, this report includes suspected cases in the years 2022 to 2024, which may have less complete data and contribute to 'unknown' categories. Additionally, the 2024 data is incomplete, the counts and rates presented from that calendar year are likely underestimates. Furthermore, individuals who died outside of the province but are residents of Saskatchewan were not included in this report as their death investigations would be under the jurisdiction of the location they died in. The SCS does not have access to these case files and, therefore, cannot conduct an analysis on these deaths.

The availability of data across the variables of interest differed across individual coroner case files and calendar year, due to changes and developments within the SCS in coroner training and documentation standards. Due to the varying limitations in data collection, some of the figures in this report may underestimate the burden and introduce potential bias due to differences in case files and documentation. It is imperative to note that this report only presents figures that represent the minimum proportion of those who died from acute drug toxicity in Saskatchewan and more likely underestimates the prevalence of the various variables of interest.

Additionally, this report utilizes documents in coroner case files that are subject to the interpretation and opinion of coroners, law enforcement, members of the general public, family, friends, coworkers, etc. This presents potential opportunities for bias to be introduced due to other's interpretations of certain events and circumstances. The SCS attempts to reduce this bias by implementing extensive standardized training and policies for all coroners, as well as peer reviews of coroner case files by a panel of full-time coroners before submission. Coroners also complete thorough investigations of each person's death by collecting information from a variety of sources direct from the person such as personal diaries, social media posts, text messages, etc.

Conclusion and final thoughts

The results from this report demonstrate that the circumstances leading up to a person's death by acute drug toxicity are complex and multifaceted. The SCS would like to once again emphasize that every figure in this report represents aspects of people's lives that cannot be fully captured in singular data tables and graphics. The aim of this report is to better understand the personal and contextual factors that surround deaths by drug toxicity in the hopes of providing an opportunity for further discussion and awareness on acute drug toxicity prevention in the province.

This report covers data from a crucial time period, the beginning of the COVID-19 pandemic and lockdown periods during 2020-2022. Drug use behaviours, drugs in the unregulated market, and overall mental health and wellbeing were a significant concern during these years due to the variety of stressors and barriers that people were experiencing related to the pandemic. As we continue to move forward, the impacts of the pandemic on acute drug toxicity deaths is a major concern and further research is needed to fully understand the scope of the impact. The SCS hopes that this report provides some preliminary baseline data and community feedback to provide guidance in interventions moving forward.

The SCS hopes that the findings of this report will help support and evaluate policies, programming, and interventions that inform and prioritize acute drug toxicity prevention and mental health support and promote further research opportunities.

Glossary

Acute toxicity: sometimes referred to as an “overdose” or “poisoning”, is when a person experiences a serious and urgent physical response to the harmful effects of a toxin or chemical, ranging from cellular damage to systemic effects. These events may not be reversible (10) and can lead to unconsciousness or death. These toxicities can occur from any substance, such as alcohol, opioids, over-the-counter medications (e.g., Tylenol), or a combination of multiple substances (9).

Benzodiazepines and analogues: a class of drugs that slow down the nervous system, having a calming effect, and are often used to treat anxiety and sleep disorders. Benzodiazepine analogues refer drugs that are similar to benzodiazepines but are usually used for non-medical purposes and found on the unregulated drug market.

Case information: variables that pertain to the circumstances of death.

Community coroner: fee-for-service coroners who conduct the death investigations and are assigned regions to cover.

Complete post-mortem examination (PME): external examination of a body including the clad and unclad body, documentation of general features and characteristics, documentation of any disease or injury, the incising and opening of the thoracic cavity, the abdominopelvic cavity, the cranial cavity and the neck, an inspection and dissection of the contents of the thoracic cavity, the abdominopelvic cavity, the cranial cavity and the neck; the retrieval of specimens for histological, microscopic and toxicological examination; and any other relevant examination (Section 4(1)(a) The Coroners Regulations).

Confirmed case: when the death investigation process has been completed.

Coroner Case Management System (CCMS): SCS electronic database where all coroner case files are stored.

Coroner case: when an unexpected, unnatural, or unexplained death has occurred. For example: an injury from a fall, or any death that occurs while a person is in custody or under the care of a government. In these cases, an investigation is conducted by the coroner. If the death is classified as a suspicious case and charges may be laid, police will lead the investigation with the assistance of a coroner. If the death is classified as a non-suspicious case, a coroner leads the investigation with the assistance of the police.

Coroner: a death investigator who uses medicolegal investigation principles and techniques to coordinate all aspects of death investigations.

Correctional location: correctional facilities including all levels of government (federal, provincial, municipal).

Crude rates: mortality rates that are not adjusted for factors like age.

Date of death: the date that death was pronounced of the deceased. This data does not include any hospitalization periods (i.e., time spent in hospital after an attempt but prior to death being pronounced).

Drug metabolites: used to indicate the presence of their parent substances, if they were known not to originate from other substances (e.g., acetylfentanyl is a metabolite of fentanyl and therefore indicates that fentanyl was present).

Employment stressors: stressors related to employment (e.g., workload, conflict, etc.), including unemployment.

External post-mortem examination (PME): examination of the clad and unclad body, documentation of the general features and characteristics of the body, documentation of any evidence of disease or injury, and the retrieval of specimens for toxicology examination (Section 4(1)(b) *The Coroners Regulations*).

Family person: those who had familial connections to the person who died from suicide but excludes intimate partners. Examples: children, parents, siblings, cousins, grandparents, etc.

First blood: the specimens drawn upon a person's initial admission at a medical facility and may or may not be done in conjunction with a complete, limited, or external post-mortem examination.

First Nation(s): "Legally defined under the *Indian Act* (1876) to describe the First Peoples in North America who are living in what is now known as Canada". (28, p.4)

Full-time coroner: Registered Nurses who oversee and assist community coroners with their investigations and reports and conduct death investigations.

Geography conversion table: provided by the Ministry of Health, a file that converts municipalities/communities into their respective provincial health regions.

In custody: refers to those who died in correctional facilities including federal and provincial centres and police detention areas.

Indigenous Peoples: Used in reference to the original peoples of any lands globally. The Indigenous peoples of Canada are comprised of the First Nations, Inuit, and Métis, all of whom have distinct cultures, languages, and histories.

Inquest: a mandatory or discretionary legal process for when a person's unnatural death occurs in any lock-up, i.e., correctional institution or police detention centre, as defined in Part V, Section 20 of *The Coroners Act* (1999) or when the person who died is considered a youth in custody, as defined in *The Youth Criminal Justice Act* (2003). The Chief Coroner may also call an inquest if of the opinion that one or more of the criteria set out in Section 19 of *The Coroners Act* (1999), are met.

Inuit: "Circumpolar peoples who have a distinct language, culture and traditions. Canadian Inuit live primarily in Inuit Nunangat, which is made up of four regions: Inuvialuit in the

Northwest Territories, Nunavut, Nunavik in Northern Quebec, and Nunatsiavut in Northern Labrador” (28, p.4)

Limited post-mortem examination (PME): an examination that forgoes any part of the defined complete autopsy. Examination is conducted of a specific area or areas of the body to either rule out: any injury or illness of a specific known part of the body; the extent necessary to identify a cause of death in the event toxicological results do not attribute any substances to the cause of death. Retrieval of specimens is also conducted for possible histological, toxicological and any other relevant examination.

Medical Assistance in Dying (MAID): when an authorized physician or nurse practitioner administers medications that intentionally brings about a person’s death at their approved request.

Medical records: from various clinical settings (e.g., hospitals, clinics, etc.), that outline a person’s medical history in writing and include notes from healthcare providers who provided care.

Métis: “A person who self-identifies as Métis, is distinct from other Aboriginal peoples, is of historic Métis Nation Ancestry and who is accepted by the Métis Nation” (29)

Mortality rates (or death rates): the number of deaths in a specific population at a specific time, expressed as the number of deaths that occur per a given population size. For this report, all mortality rates will be number of deaths per 100,000 population.

Non-coroner case: when a coroner determines that a person’s death does not fall within the parameters of unexpected, unnatural, or unexplained. The death must be entirely from natural causes and physician or nurse practitioner agrees to complete the Medical Certificate of Death (MCD).

Opioids: a class of drugs that are primarily used to treat pain but also have sedative-like effects (will sometimes be referred to as “downers” due to these effects), which can provide a calming and sometimes euphoric feeling referred to as a “high”. Opioids are available in the regulated and unregulated drug supply. Opioids in the unregulated supply are often stronger, more toxic, and more likely to be fatal.

Other PME: To assist in their investigation, the coroner can order any of the following “other” examination types independently or in conjunction with any of the other PME types (e.g., anthropology examinations, dna examinations, etc.).

Person-first language: a communication approach that places emphasis on people and their experiences instead of defining people through their actions, conditions, or diagnoses. For example: using the phrase people with depression versus depressed people (5).

Police reports: prepared by the present law enforcement individuals at the scene of death, provides the initial assessment of the scene and when/how the person was found.

Polysubstance use: when a person uses a combination of substances (10).

Postal Code Conversion File Plus (PCCF+): provided by Statistics Canada, a dataset that links Canada Post postal codes with standard geographic areas to provide census data. The PCCF+ is made up of a set of associated datasets (postal code population weight file, geographic attribute file, health region boundary files, etc.) and a SAS program. The program uses postal codes to assign standard geographic areas based on population-weighted random allocation that links postal codes to more than one geographic area (23). Further information on the specifics of analyses will be discussed in the *Data analysis* section.

Race: a social construct that is used to for categorization and judgment of individuals based on perceived physical differences to create and maintain social hierarchies and power dynamics. There is no scientific background to support discrete racial groups based on biology.

Report of Coroner (ROC): a final report created by the investigating coroner that summarizes all findings of the death investigation.

Saskatchewan Coroner Service (SCS): independent agency responsible for carrying out death investigations, as defined by *The Coroner's Act (1999)*.

Sociodemographic and risk factors: variables related to the demographic information of the deceased and potential measures that are predictive of suicide.

Statistics Canada Census health regions: specific to the 2021 Census, includes seven health regions: Far North, North Central East, North Central West, Saskatoon, Regina, South East, and South West.

Status Indian: refers to the status given to a First Nations person under the *Indian Act* which is determined through lineage of those who were registered or entitled to be registered.

Stimulants: a class of drugs that are sometimes referred to as “uppers” since they can also provide a sense of exhilaration by increasing dopamine levels in the brain. However, they can also make a person feel more agitated or anxious.

Substance use stressors: stressors related to one's own substance use.

Substance use: consumption of substances beyond recreational use that include non-pharmaceutical substances (e.g., “illegal” or “illicit” substances as noted in the ROC), pharmaceuticals (only include substances that are not prescribed or diverted), alcohol, and cannabis.

Substances: for the purposes of this report, substances are exogenous substances that originate outside of the human body and are consumed. Examples include: alcohol, opioids, stimulants, and over-the-counter medications like Tylenol. Furthermore, substances can be found in a regulated market, meaning there are laws and regulations surrounding distribution, or in an unregulated market.

Suspected case: when the death investigation process is still ongoing, meaning that aspects of the case are still subject to change.

The Coroners Act, (1999): *The Coroners Act, (1999)* is Saskatchewan's legislation setting out the authority and responsibilities of the Office of the Chief Coroner. In this report it will be referred to as *The Coroners Act, (1999)*.

Toxicology exam: the retrieval of specimens for toxicological examination and foregoes an external examination of the clad or unclad body and, in most cases, any incising or opening of any cavities.

Visible minorities: people who are not Caucasian in race or non-white in colour but does not include Indigenous Peoples.

Xylazine: is classified as a non-narcotic analgesic that is used in veterinary medicine. It is not approved for human use in Canada and is often combined with fentanyl as an adulterant (27).

References

1. Wilkinson K, Green C, Nowicki D, Von Schindler C. Less than five is less than ideal: replacing the "less than 5 cell size" rule with a risk-based data disclosure protocol in a public health setting. *Can J Public Health*. 2020;111(5):761-765. doi:10.17269/s41997-020-00303-8
2. Government of Canada. Privacy Implementation Notice 2020-03: Protecting privacy when releasing information about a small number of individuals [Internet]. Ottawa, ON: Government of Canada; 2020 [updated 2020 Oct 08, cited 2023 February 15]. Available from: Privacy Implementation Notice 2020-03: Protecting privacy when releasing information about a small number of individuals - Canada.ca
3. Health Canada. Stigma around drug use [Internet]. Ottawa, ON: Government of Canada, 2022 [updated 2024 Apr 22; cited 2025 Apr 27]. Available from: <https://www.canada.ca/en/health-canada/services/opioids/stigma.html>
4. Canadian Centre on Substance Use and Addiction. Overcoming Stigma Through Language: A Primer [Internet]. Ottawa, ON: Canadian Centre on Substance Use and Addiction, 2019 [cited 2024 Apr 27]. 15 p. Available: <https://www.ccsa.ca/sites/default/files/2019-09/CCSA-Language-and-Stigma-in-Substance-Use-Addiction-Guide-2019-en.pdf>
5. Government of British Columbia. Understanding why people use substances alone: Listening to those with lived experience [Internet]. Victoria, BC: Government of British Columbia, 2022 [updated 2024 Jan 17; cited 2025 Apr 27]. Available from: <https://www2.gov.bc.ca/gov/content/governments/services-for-government/service-experience-digital-delivery/service-content-design/case-studies/why-do-people-use-substances-alone>
6. Saskatchewan Drug Task Force. People with lived experience – substance use engagements: A consultation summary [Internet]. Regina, SK: Government of Saskatchewan, 2021 [cited 2025 Aug 11]. Available from: <https://www.saskatchewan.ca/residents/health/accessing-health-care-services/mental-health-and-addictions-support-services/overdose-information-and-prevention/drug-task-force>
7. Health Canada. Canada's overdose crisis and the toxic illegal drug supply [Internet]. Ottawa, ON: Government of Canada, 2022 [updated 2024 Mar 25; cited 2025 Apr 29]. Available from: <https://www.canada.ca/en/health-canada/services/opioids/overdose-crisis-toxic-illegal-drug-supply.html>
8. Public Health Agency of Canada. Substance-related acute toxicity deaths in Canada from 2016 to 2017: A review of coroner and medical examiner files [Internet]. Ottawa, ON: Government of Canada, 2022 [cited 2025 Apr 29]. 114 p. ISSN: 978-0-660-46432-9. Available from: <https://www.canada.ca/en/health-canada/services/opioids/data-surveillance-research/substance-related-acute-toxicity-deaths-canada-2016-2017-review-coroner-medical-examiner-files.html#a7.8>
- 9.

9. Health Infobase. Opioid- and stimulant-related harms in Canada. Ottawa, ON: Government of Canada; n.d. <https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants/>. Updated 2025 Mar 7. Accessed 2025 May 4.
10. Canadian Institute of Health Information. Opioid Prescribing in Canada How Are Practices Changing? [Internet]. Ottawa, ON: Canadian Institute for Health Information, 2019 [cited 2025 Aug 11]. 42 p. ISBN: 978-1-77109-819-9. Available from: <https://www.cihi.ca/sites/default/files/document/opioid-prescribing-canada-trends-en-web.pdf>
11. Canadian Centre on Substance Use and Addiction. Impacts of the COVID-19 Pandemic on People Who Use Substances: What We Heard [Internet]. Ottawa, ON: Canadian Centre on Substance Use and Addiction; 2020 [cited 2025 May 4]. 8 p. Available from: <https://www.ccsa.ca/sites/default/files/2020-07/CCSA-COVID-19-Impacts-on-People-Who-Use-Substances-Report-2020-en.pdf>
12. Canadian Centre on Substance Use and Addiction. CCENDU Bulletin: Risks and Harms Associated with the Nonmedical Use of Benzodiazepines in the Unregulated Drug Supply in Canada [Internet]. Ottawa, ON: Canadian Centre on Substance Use and Addiction; 2023 [cited 2025 May 4]. 27 p. Available from: <https://www.ccsa.ca/sites/default/files/2021-12/CCSA-CCENDU-Nonmedical-Use-Benzodiazepines-Unregulated-Drug-Supply-Bulletin-2021-en.pdf>
13. Chang GYS, Ha JH, Burt J, et al. A comparison of the characteristics of accidental substance-related acute toxicity deaths in Canada across life stages, 2016–2017. *Health Promotion and Chronic Disease Prevention in Canada*. 2024;44(7/8):331-337. doi:<https://doi.org/10.24095/hpcdp.44.7/8.04>
14. Lavalley J, Kastor S, Valleriani J, McNeil R. Reconciliation and Canada's overdose crisis: responding to the needs of Indigenous Peoples. *Canadian Medical Association Journal*. 2018;190(50):E1466-E1467. doi:<https://doi.org/10.1503/cmaj.181093>
15. Campbell TJ, Kitchen SA, Tadrous M, et al. Varying circumstances surrounding opioid toxicity deaths across ethno-racial groups in Ontario, Canada: a population-based descriptive cross-sectional study. *BMJ Public Health*. 2024;2(1):e000480-e000480. doi:<https://doi.org/10.1136/bmjph-2023-000480>
16. Indigenous Services Canada. 2024 First Nations Health Status Report Saskatchewan Region [Internet]. Ottawa, ON: Government of Canada, 2025 [cited 2026 Mar 6]. 167 p. Available from: https://www.nitha.com/wp-content/uploads/2025/10/2024_Health_Status_Report_Final.pdf
17. First Nations Health Authority. Overdose Data and First Nations in BC [Internet]. Coast Salish Territory, BC: First Nations Health Authority, n.d. [cited 2026 Mar 6]. 16 p. Available from: https://www2.gov.bc.ca/assets/gov/overdose-awareness/fnha_overdosedataandfirstnationsinbc_preliminaryfindings_finalweb_july20.pdf
18. Poitras C, Kloss O, Sanguins J, Rodway L, Chartrand A F, Nickel N C, Driedger S M, Katz A. Understanding the Opioid Crisis in Manitoba Métis: Evidence to Support Interventions [Internet]. Winnipeg, MB: Manitoba Métis Federation, 2024 [cited 2026

- Mar 6].52 p. Available from: https://www.mmf.mb.ca/wcm-docs/docs/hwd/opioidsreport_finalv1.1.pdf
19. Canadian Centre on Substance Use and Addiction. Substance Use, Mental Health and Suicide among Inuit in Canada [Internet]. Ottawa, ON: Canadian Centre on Substance Use and Addiction; 2021 [cited 2026 Mar 6]. 9 p. Available from: https://www.ccsa.ca/sites/default/files/2021-10/CCSA-Substance-Use-Mental-Health-Suicide-among-Inuit-Report-Summary-2021-en_2.pdf
 20. Government of Saskatchewan. Saskatchewan Drug Task Force [Internet]. Regina, SK: Government of Saskatchewan; n.d [cited 2025 Aug 11]. Available from: <https://www.saskatchewan.ca/residents/health/accessing-health-care-services/mental-health-and-addictions-support-services/overdose-information-and-prevention/drug-task-force>
 21. Government of Saskatchewan. Action Plan for Mental Health and Addictions [Internet]. Regina, SK: Government of Saskatchewan, 2023 [cited 2025 May 12]. 10 p. Available from: [Action%2BPlan%2Bfor%2BMental%2BHealth%2Band%2BAddictions%2B2023-2028.pdf](#)
 22. Statistics Canada. The Canadian Index of Multiple Deprivation (CIMD) [Internet]. Ottawa, ON: Government of Canada, 2025 [updated 2025 Feb 9; cited 2025 Jun 9]. Available from: <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5274>
 23. Statistics Canada. Postal Code OM Conversion File [Internet]. Ottawa, ON: Government of Canada, 2025 [updated 2024 Jun 13; cited 2025 Jun 9]. Available from: <https://www150.statcan.gc.ca/n1/en/catalogue/92-154-X>
 24. Statistics Canada. Census metropolitan area (CMA) and census agglomeration (CA) [Internet]. Ottawa, ON: Government of Canada, 2021 [updated 2025 Mar 4; cited 2025 Jun 16]. Available from: <https://www150.statcan.gc.ca/n1/pub/92-195-x/2021001/geo/cma-rmr/cma-rmr-eng.htm>
 25. Statistics Canada. Population and dwelling counts: Census metropolitan areas, census agglomerations and census subdivisions (municipalities) [Internet]. Ottawa, ON: Statistics Canada; 2022 Jun 13 [cited 2025 Jun 6]. Statistics Canada Catalogue no. 98-10-0003-01, Census subdivision, Census metropolitan area, Census agglomeration. Available from: <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Saskatchewan&DGUIDlist=2021A000247&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0>
 26. Statistics Canada. Table 1 Detailed list of census subdivisions split by two or more health regions, 2023 [Internet]. Ottawa, ON: Statistics Canada; 2023 [cited 2025 Jun 6]. Statistics Canada, 2021 Census of Population. Health Regions: Boundaries and Correspondence with Census Geography. Available from: <https://www150.statcan.gc.ca/n1/pub/82-402-x/2024001/tbl/tbl01-eng.htm>
 27. Health Canada. Spotlight : The emergence of Xylazine in Canada [Internet]. Ottawa, ON: Government of Canada, 2023 [cited 2025 Jun 11]. 8 p. ISBN: 978-0-660-46039-0. Available from: <https://www.canada.ca/en/health-canada/services/publications/healthy-living/emergence-xylazine-canada.html>

28. Mashford-Pringle A, Skura C, Stutz S, Tohathasan T. Indigenous Peoples and COVID-19 [Internet]. Ottawa: Government of Canada; 2021 [cited 2025 Jun 11].28 p. Available from: <https://www.canada.ca/content/dam/phac-aspc/documents/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/from-risk-resilience-equity-approach-covid-19/indigenous-peoples-covid-19-report/cpho-wwh-report-en.pdf>
29. Métis National Council. Citizenship [Internet]. Ottawa ON: Métis National Council, n.d., [cited 2025 Jun 11]. Available from: <https://www.metisnation.ca/about/citizenship>
30. Inuit Tapiriit Kanatami. About Inuit [Internet]. Ottawa ON: Inuit Tapiriit Kanatami, n.d., [cited 2025 Jun 11]. Available from: <https://www.itk.ca/about-canadian-inuit/>

Appendix: Data Table for Figures

Figure 1. Counts of people who died and suspected to have died from acute drug toxicity by month and year, Saskatchewan, 2019-2024.

Month	2019	2020	2021	2022	2023	2024
January	12	12	34	40	40	30
February	10	15	25	24	34	21
March	17	13	22	35	42	28
April	15	29	24	33	34	17
May	17	25	30	39	32	20
June	18	30	23	24	30	18
July	16	39	38	34	36	26
August	9	34	35	21	38	26
September	16	23	42	23	28	17
October	9	26	48	33	29	19
November	16	37	46	29	19	sup
December	23	36	46	35	42	sup

Figure 2. Counts of people who died and suspected to have died from acute drug toxicity by weekday and year, Saskatchewan, 2019-2024.

Weekdays	2019	2020	2021	2022	2023	2024
Sunday	18	47	62	54	59	26
Monday	24	49	50	50	60	30
Tuesday	26	38	58	46	65	36
Wednesday	23	40	53	66	59	34
Thursday	28	53	63	36	41	27
Friday	28	45	62	57	63	23
Saturday	31	47	65	61	57	52

Figure 3. Percentage of people who died and suspected to have died from acute drug toxicity by time-of-day and year, Saskatchewan, 2019-2024.

Year	Morning	Afternoon	Evening	Night
2019	23%	38%	28%	11%
2020	30%	29%	25%	16%
2021	26%	36%	24%	14%
2022	26%	31%	29%	14%
2023	28%	33%	25%	13%
2024	29%	35%	25%	11%

Figure 5. Percentage of people who died and suspected to have died from acute drug toxicity by location of death and year, Saskatchewan, 2019-2024.

Place of death category	2019	2020	2021	2022	2023	2024
Medical Facilities	25%	15%	13%	13%	14%	17%
Primary Residence	62%	66%	62%	60%	54%	58%
Other Residence	13%	19%	25%	26%	32%	25%

Figure 7. Percentage of people who died and suspected to have died from acute drug toxicity by location of injury and year, Saskatchewan, 2019-2024.

Place of injury category	2019	2020	2021	2022	2023	2024
Primary residence	76%	71%	64%	64%	57%	63%
Residence	19%	23%	29%	29%	33%	27%
Recreational/public	5%	6%	8%	7%	10%	10%

Figure 8. Counts of people who died and suspected to have died from acute drug toxicity who were identified as homeless by year, Saskatchewan, 2019-2024.

Homeless Status	2019	2020	2021	2022	2023	2024
Homeless	sup (<20)	28	67	66	93	40

Figure 9. Counts of people who died and suspected to have died from acute drug toxicity by location related to death urban/rural status, Saskatchewan, 2019-2024.

Urban/rural	Place of death	Place of events leading up to death	Place of residence
Rural	409	444	813
Urban	1503	1468	1103

Figure 10. Percentage of people who died and suspected to have died from acute drug toxicity by sex and year, Saskatchewan, 2019-2024.

Year	Female	Male
2019	37%	63%
2020	35%	65%
2021	35%	65%
2022	36%	64%
2023	36%	64%
2024	43%	57%

Figure 11. Percentage of people who died and suspected to have died from acute drug toxicity by age group and sex, Saskatchewan, 2019-2024.

Age Group	Female	Male
0 to 19	69%	31%
20 to 29	42%	58%
30 to 39	36%	64%
40 to 49	33%	67%
50 to 59	30%	70%
60 to 69	37%	63%
70+	38%	38%

Figure 12. Percentage of people who died and suspected to have died from acute drug toxicity by age group and drug group, Saskatchewan, 2019-2024.

Drug groups	0 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70+
Benzodiazepines	22%	23%	23%	22%	20%	17%	9%
Opioids	41%	40%	38%	42%	42%	38%	43%
Stimulants	29%	34%	36%	33%	30%	29%	9%
Other substances	6%	1%	1%	2%	5%	13%	26%
Unknown	1%	2%	1%	1%	3%	3%	13%

Figure 13. Percentage distribution of people who died and suspected to have died from acute drug toxicity by race and year, Saskatchewan, 2019-2024.

Race groups	2019	2020	2021	2022	2023	2024
Indigenous	46%	50%	52%	53%	55%	53%
White	40%	42%	40%	40%	38%	43%
Visible minorities	0%	3%	2%	2%	2%	1%
Unknown	13%	5%	5%	5%	4%	4%

Figure 14. Percentage distribution of people who died and suspected to have died from acute drug toxicity by race and sex, Saskatchewan, 2019-2024.

Race groups	Female	Male
Indigenous	45%	56%
White	28%	72%
Visible minorities	16%	84%
Unknown	28%	72%

Figure 16. Distribution of people who died and suspected to have died from acute drug toxicity by race and drug group, Saskatchewan, 2019-2024.

Drug groups	Indigenous	Caucasian	Visible minorities	Unknown
Benzodiazepines	56%	38%	2%	5%
Opioids	55%	38%	2%	5%
Stimulants	58%	34%	2%	6%
Other substances	32%	59%	3%	6%
Unknown	44%	48%	0%	8%

Figure 17. Percentage of people who died and suspected to have died from acute drug toxicity by substance use history and age groups, Saskatchewan, 2019-2024.

Substance use history	0 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70+
Yes	47%	69%	73%	73%	62%	53%	24%
Yes, alcohol only	0%	3%	5%	6%	7%	15%	10%
No	47%	23%	18%	19%	28%	27%	67%
Unknown	6%	5%	4%	3%	2%	5%	0%
Total	100%	100%	100%	100%	100%	100%	100%