Canadian Substance Use Costs and Harms 2017–2024

Healthcare

Canadian Centre on Substance Use and Addiction

University of Victoria | Canadian Institute for Substance Use Research

Canadian Substance Use Costs and Harms Report: Healthcare 2017–2024

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KEY FINDINGS

Substance use results in substantial healthcare costs in Canada. In 2024, healthcare costs attributable to substance use reached $16.4 billion, with alcohol accounting for $7.8 billion and tobacco accounting for $6.8 billion, together making up approximately 90% of the total costs.

Costs reflect a broad range of health conditions, not just substance use disorders or acute harms (e.g., poisoning events). Substance use contributes to cancers, cardiovascular disease, liver disease, injuries, infectious diseases and other acute and chronic conditions across the healthcare system.

Prescription medications and hospitalizations are major drivers of healthcare cost. Together, these two categories represent approximately 60% of the total healthcare costs related to substance use, followed by physician time and specialized treatments.

Per-person costs vary across regions. Nationally (excluding Quebec), annual per-person costs were $440. Costs were highest in the Northwest Territories ($983), Nunavut ($959) and Yukon ($779), followed by the Atlantic provinces, reflecting differences in substance use prevalence rates and access to healthcare across regions.

Per-person costs of healthcare attributable to substance use remained relatively stable overall, decreasing slightly from $406 in 2017 to $396 in 2024 (-2.5%). However, this decrease masks important shifts across substances, including increases in opioid- and stimulant-related costs alongside declines in tobacco-related costs.

Opioid-related costs are rising the fastest. Although opioids account for the third largest share of the overall costs (4.4%), per-person healthcare costs attributable to opioids increased approximately 30% from 2017 to 2024, likely reflecting the impact of the toxic and unstable unregulated drug market, among other factors.

Hospitalizations are mostly due to alcohol and tobacco use. In 2024, an estimated 694 hospitalizations per 100,000 population were attributable to substance use, with tobacco (48.6%) and alcohol (42.2%) contributing to the majority of those hospitalizations.

Trends highlight the need for policy and monitoring. Legally available substances remain primary drivers of healthcare costs, while opioid-related harms, including medical and non-medical use, along with harms related to stimulants and other substances require sustained attention. Ongoing monitoring is essential to guide interventions and reduce morbidity.

INTRODUCTION

The Canadian Substance Use Costs and Harms (CSUCH) project provides comparable, valid and up-to-date estimates on the costs and harms of substance use (SU) in Canada. Covering healthcare, lost productivity, criminal justice and other direct costs, CSUCH generates evidence to inform public policies and guide societal responses to SU. These estimates serve as a baseline for assessing the impact of policies, services and supports across the continuum of care and for guiding future investments to reduce SU-related healthcare costs and harms.

This report presents estimates of the healthcare costs of SU in Canada from 2017 to 2024, the most recent year for which comprehensive data were available. It is intended for policy and decision makers, health system planners, public health practitioners, researchers and advocacy groups, and communities who are seeking timely information to inform and improve healthcare responses to SU in Canada.

To support more rapid access to key findings, the CSUCH project is releasing separate reports examining major cost domains, including healthcare, lost productivity and criminal justice, in advance of a forthcoming comprehensive national report, which will integrate results from all domains. This phased approach reflects a commitment to providing timely, policy-relevant evidence, while work on all domains is being completed.

This report focuses specifically on healthcare costs associated with SU. Further details on the scope of estimates and methods are provided in the following sections.

Scope of Estimates

Estimates are presented annually from 2017 to 2024 by province and territory, and substance category (i.e., alcohol, tobacco, cannabis, opioids, other central nervous system [CNS] depressants, cocaine, other CNS stimulants and other substances). Healthcare costs are estimated across seven service categories: inpatient hospitalizations, day surgeries, emergency department visits, paramedic services, specialized treatment for SU disorders, physician time and prescription medications. Hospitalization and paramedic services are reported as both costs and as harms (numbers of events attributable to SU). Hospitalization data are further disaggregated by health condition category to illustrate the types of health conditions and diseases driving the healthcare burden attributable to SU.

Overview of Methods and Data Sources

This healthcare report builds on previous CSUCH studies and incorporates methodological refinements that improve the precision and completeness of the estimates. For example, we updated our approach to estimating specialized SU treatment costs by adopting a new national data source (Canadian Institute for Health Information, 2025d), enhancing both coverage and accuracy. As methods and data sources have evolved, estimates presented here should be considered the most precise to date and should **not** be directly compared to those made in previous CSUCH reports (Canadian Substance Use Costs and Harms Scientific Working Group, 2018, 2020, 2023) or earlier Canadian cost studies (Rehm et al, 2006).

Cost estimates are provided for the healthcare categories outlined above: inpatient hospitalizations, day surgeries, emergency department visits, paramedic services, specialized treatment for SU disorders (e.g., community addiction services and withdrawal management services), physician time and prescription medications.

Fundamental to these estimates is the use of a population-attributable fraction approach for estimating the proportions of different types of illness or injury that can be attributed to the use of a particular substance (Centers for Disease Control and Prevention, 2008; World Health Organization, 2018). Attributable fractions were calculated using the latest World Health Organization methodologies to assess burden of disease (Ferrari et al., 2014; Lushniak et al., 2014; Shield et al., 2020; World Health Organization, 2024) and a widely used open-access resource, the International Model of Alcohol Harms and Policies, for alcohol-attributable fractions (Sherk et al., 2017, Sherk et al., 2020).

The International Statistical Classification of Diseases and Related Health Problems (ICD-10) diagnostic information for hospitalizations and day surgeries provides the most comprehensive and reliable clinical data in the healthcare domain. Record-level administrative data were used to estimate costs for different types of hospital admissions, including conditions that are wholly attributable to SU and those that are partially attributable. These data were combined to generate total SU-attributable hospitalization counts, rates and costs. This information was also used as a basis for estimating SU-attributable healthcare costs in other domains. The data sources used to develop the healthcare cost estimates are summarized in Table 1. A full description of methods, including data sources and assumptions, and a list of health conditions considered either wholly or partially attributable to SU will be available in the CSUCH technical report (forthcoming, available upon request).

Table 1. Data sources used to calculate costs of healthcare related to SU

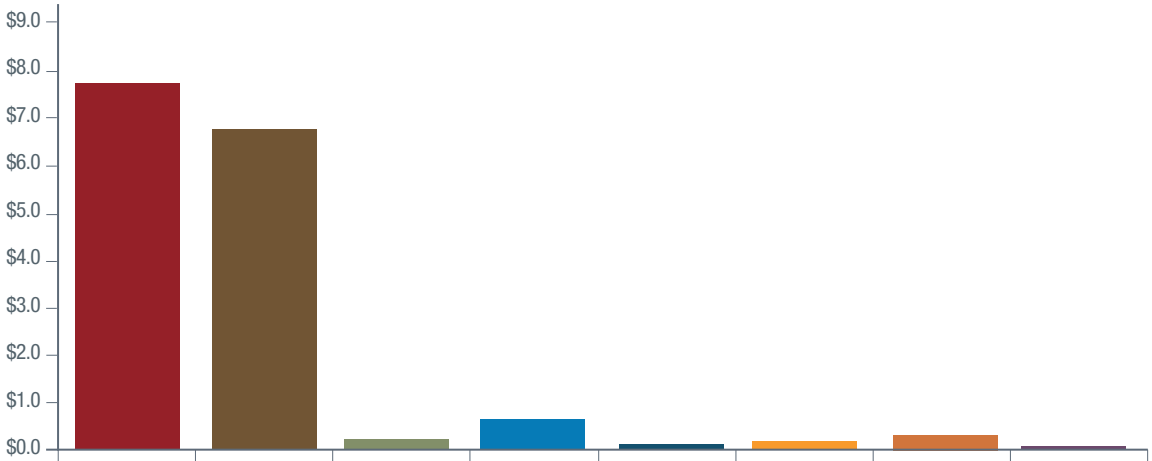
Costs and Harm	Data Source
SU-attributable fractions	Alcohol: Calculated using the International Model of Alcohol Harms and Policies (Sherk et al., 2017; Sherk et al., 2020) Tobacco: Relative risks taken from the U.S. Surgeon General's report (King et al, 2014) Other substances: Various relative risks taken from the literature on specific conditions (refer to CSUCH technical report)
In-patient hospitalizations	Discharge Abstract Database (DAD) 2016–2017 to 2024-Q1–2024-Q4 (counts) (Canadian Institute for Health Information, abbreviated as CIHI in this table, 2025a); Cost of a standard hospital stay (indicator) (CIHI, 2025b)
Day surgeries	DAD 2016–2017 to 2024Q1–2024Q4 (CIHI, 2025a); National Ambulatory Care Reporting System (NACRS) 2016–2017 to 2024-Q1–2024-Q4 (CIHI, 2025c) (counts); Cost of a standard hospital stay (indicator) (CIHI, 2025b)
Emergency department visits	NACRS 2016–2017 to 2024-Q1–2024-Q4 (counts) (CIHI, 2025c); Cost of a standard hospital stay (indicator) (CIHI, 2025b)
Paramedic services	DAD 2016–2017 to 2024-Q1–2024-Q4 (CIHI, 2025a); NACRS 2016–2017 to 2024-Q1–2024-Q4 (counts) (CIHI, 2025c); Provincial or territorial reports on fee per ambulance transport for non-insured individuals (costs) (refer to CSUCH technical report)
Specialized treatment for SU disorders	Canadian Management Information System Database from 2016–2017 to 2024–2024 (costs) (CIHI, 2025d); Canadian Community Health Survey 2012 and the Mental Health and Access to Care Survey 2022, used to estimate the proportion of mental health and SU professional services (Statistics Canada, 2013, 2023)
Physician time	National Physician Database 2017 to 2022 (CIHI, 2025e); DAD 2016–2077 to 2024Q1–2024Q4 (counts) (CIHI, 2025a); Hospital Stays in Canada, 2017–2024 (CIHI, 2025f)
Prescription medications	National Health Expenditure Trends 2017–2024 (CIHI, 2025g)

All dollar figures presented in this report have been adjusted according to the Consumer Price Index to 2024 Canadian dollars.

RESULTS

In 2024, healthcare costs attributable to SU were $16.4 billion. These estimates reflect a broad range of health system impacts associated with SU, extending well beyond poisonings and SU disorders to include conditions such as cancers, cardiovascular disease, liver disease, diabetes, injuries, infectious diseases and other acute and chronic health conditions that are wholly or partially attributable to SU. Costs associated with the use of alcohol and tobacco were estimated to account for approximately 90% of total SU-attributable healthcare costs ($7.8 billion and $6.8 billion, respectively). Opioid use accounted for the third-highest share of healthcare costs ($0.7 billion, 4.4%). These costs are broken down by substance (Figure 1) and cost category (Figure 2). Taken together, prescription medications ($4.9 billion, 30%) and inpatient hospitalizations ($4.6 billion, 28%) were responsible for approximately 60% of total SU-attributable healthcare costs. Importantly, prescription medication costs are not limited to medications used to treat SU disorders; they also include medications used to treat the many acute and chronic health conditions attributable to SU. These costs were followed by costs for physician time ($3.9 billion, 24%) and specialized treatment ($1.8 billion, 11%).

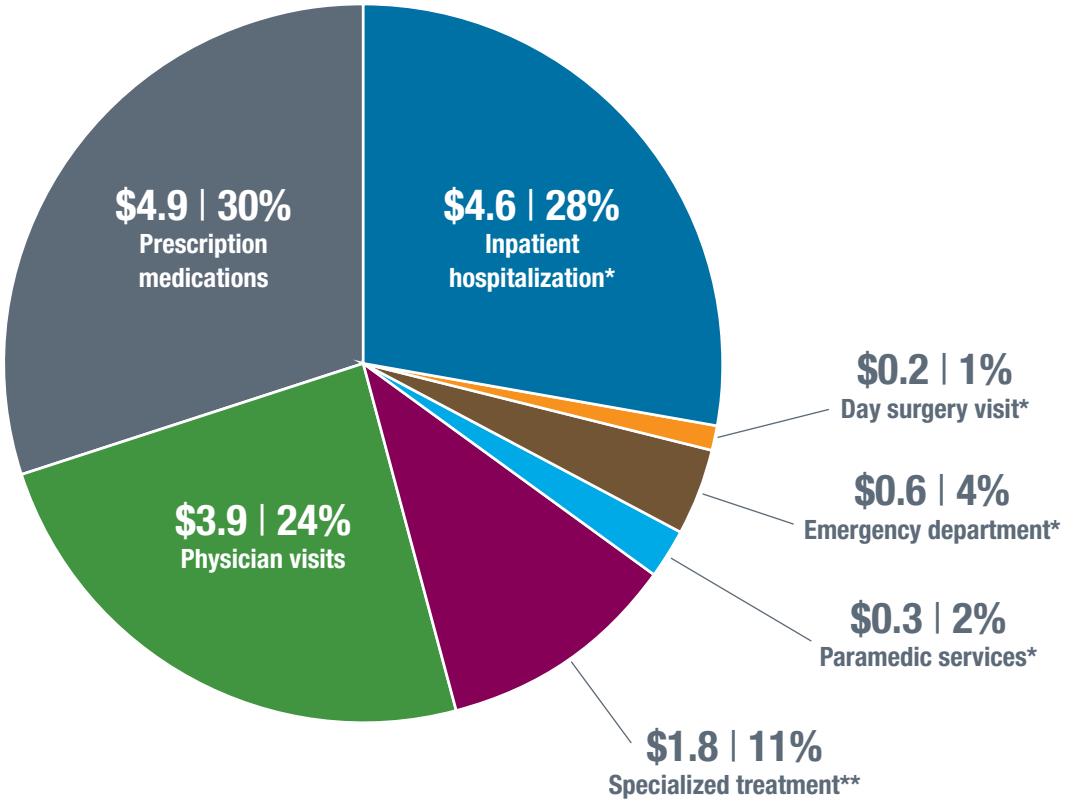
Figure 1. Costs (in billions) of healthcare attributable to SU in Canada by substance, 2024



Variable	Alcohol	Tobacco	Cannabis	Opioids	Other CNS depressants	Cocaine	Other CNS stimulants	Other substances
Cost (billions)	$7.8	$6.8	$0.3	$0.7	$0.2	$0.2	$0.4	$0.02
Percentage of total	47.6%	41.3%	1.7%	4.4%	1.1%	1.3%	2.4%	0.1%

Note: These estimates do not include costs associated with inpatient hospitalizations, day surgeries, emergency department visits and paramedic services in Quebec.

Figure 2. Costs (in billions) of healthcare attributable to SU in Canada by cost category, 2024



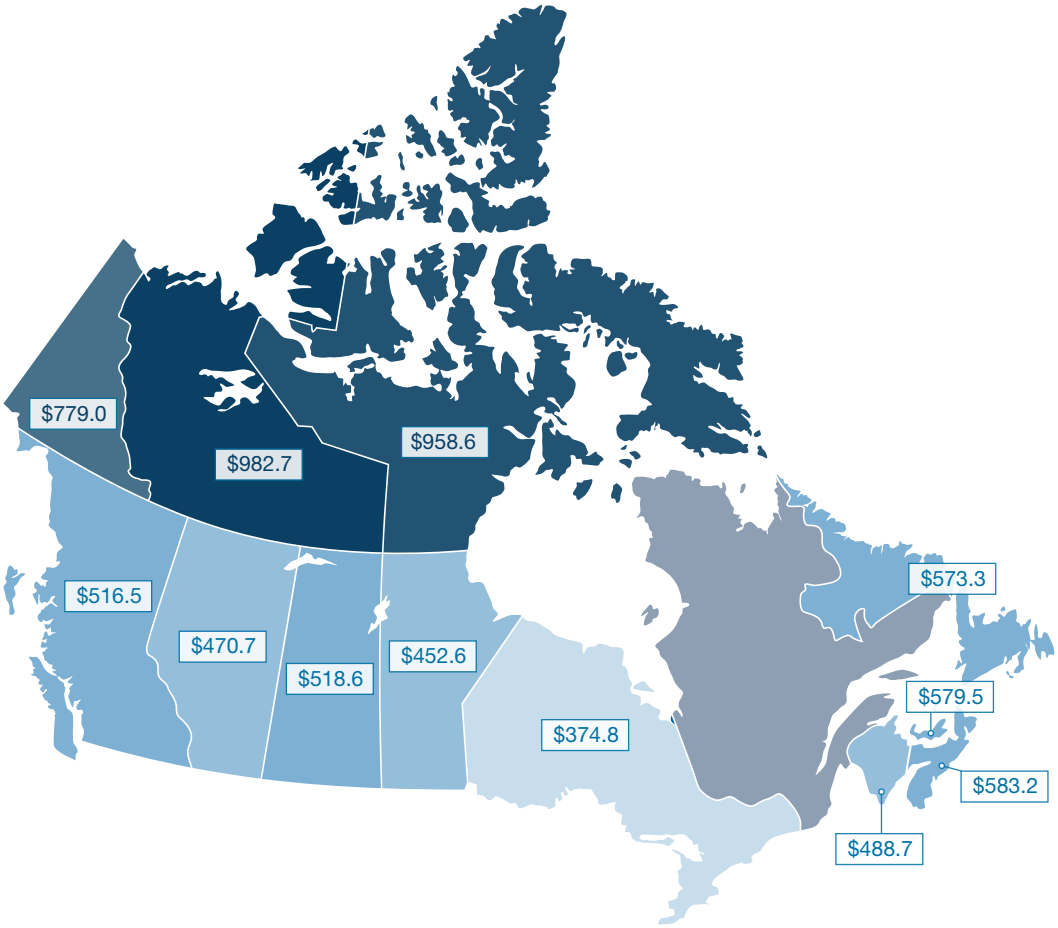
*Due to data limitations, Quebec is not included.
**Residential and non-residential services

Estimated annual per-person costs by province or territory largely follow a reverse gradient with population size: the smaller the population, the higher the costs. Direct comparisons can be made using the data in Figure 3, which presents estimated healthcare costs attributable to SU per person. These estimates show that for all of Canada (excluding Quebec), healthcare costs attributable to SU were $440 per person in 2024.[1] Per-person costs were highest in the territories and relatively high in Atlantic Canada.

Note: Meaningful per-person costs for Quebec could not be calculated. A rough calculation based on Ontario per-person costs and data available from Quebec suggests that the national per-person costs are likely conservative by about 8.8%. Furthermore, in-patient hospitalizations and associated costs for Ontario and Manitoba are underestimated because certain mental health- and addiction-related hospitalizations were not captured. Specifically, we were unable to include hospitalizations recorded in the Ontario Mental Health Recording System.

[1] These per-person healthcare costs do not include the costs or population of Quebec. Only some healthcare-related data were available for Quebec.

Figure 3. Map showing per-person costs of healthcare related to SU in Canada by province and territory (except Quebec), 2024



An estimated 694 hospitalizations per 100,000 population in 2024 were attributable to SU (Figure 4, Table 2). Tobacco and alcohol accounted for the majority of these hospitalizations, with rates of 337 per 100,000 (48.6% of the total) and 293 per 100,000 (42.2%), respectively (Figure 5, Table 2). Together, these two substances accounted for more than 90% of hospitalizations attributable to SU, mirroring their dominant contribution to healthcare costs. Opioid-attributable hospitalizations were estimated to have the next highest hospitalization rate, at 25 per 100,000 population.

Hospitalization rates attributable to most substances declined between 2017and 2024, although trends varied and several categories showed short-term increases during the COVID-19 period and in subsequent years. The largest relative decrease was for other substances, which decreased by 55% (from 1.4 to 0.6 per 100,000), followed by other CNS depressants, which decreased by 30% (from 11 to 7 per 100,000). Cannabis (from 12 to 10 per 100,000) and cocaine (from 9 to 7 per 100,000) each also decreased by more than 20% across the study period.

In contrast, opioid-related hospitalizations were more variable over time. Rates declined to 21 per 100,000 in 2019, followed by increases during the pandemic period, reaching peaks of 28 per 100,000 in 2021 and again in 2023, before declining to 25 per 100,000 in 2024. This represents an overall increase of approximately 19% since 2019.

Figure 4. Rate of hospitalizations per 100,000 population in Canada (excluding Quebec) attributable to SU, 2017–2024 by type of substance, excluding alcohol and tobacco

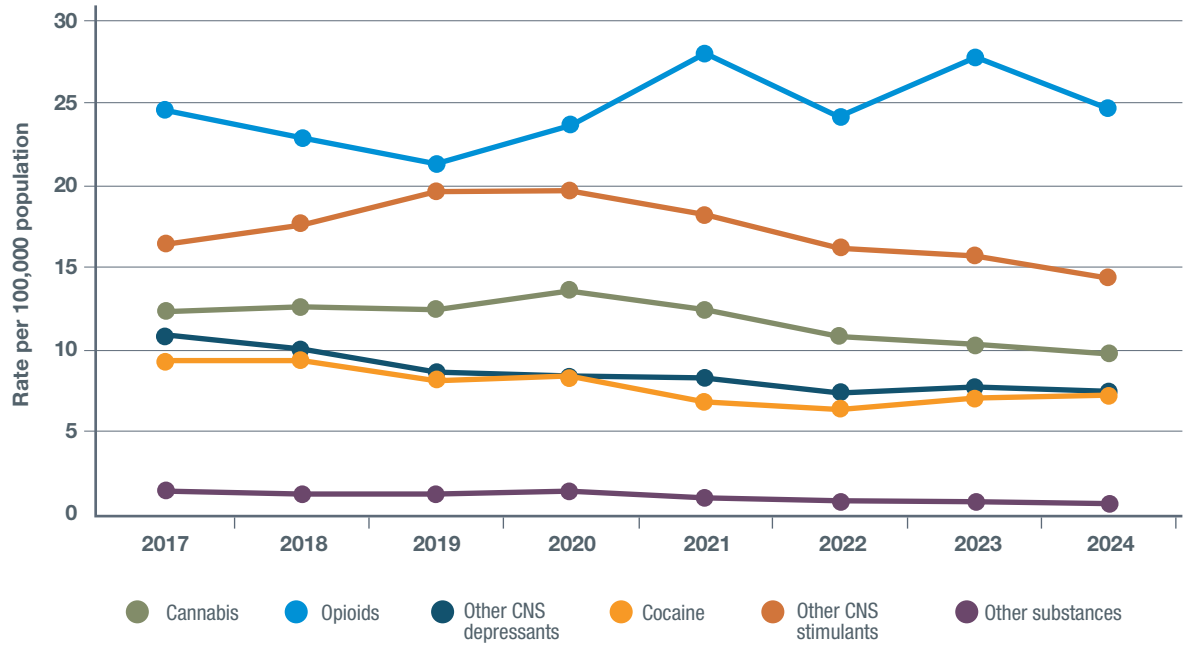


Figure 5. Rate of hospitalizations per 100,000 population in Canada (excluding Quebec) attributable to alcohol and tobacco use, 2017–2024

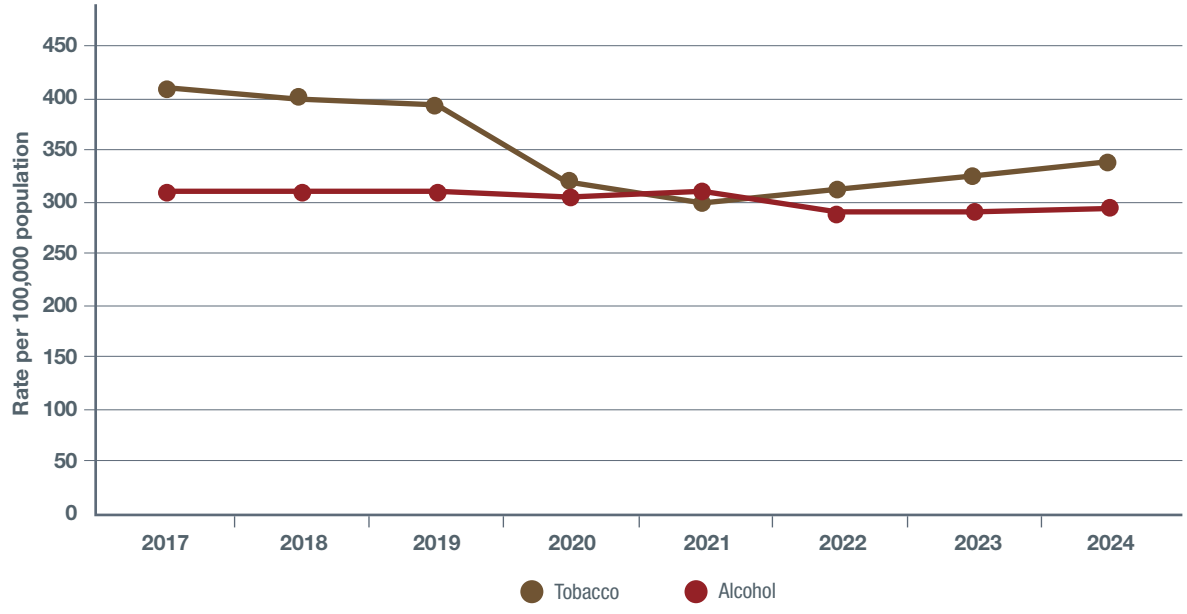


Table 2. Rate of hospitalizations per 100,000 population in Canada (excluding Quebec) attributable to SU, 2017–2024 by type of substance

Substance	2017	2018	2019	2020	2021	2022	2023	2024
Alcohol	310	309	308	303	313	291	292	293
Tobacco	410	402	389	317	296	309	325	337
Cannabis	12	13	12	14	12	11	10	10
Opioids	24	23	21	24	28	24	28	25
Other CNS depressants	11	10	9	8	8	7	8	7
Cocaine	9	9	8	8	7	6	7	7
Other CNS stimulants	16	18	19	19	18	16	16	14
Other substances	1.4	1.2	1.1	1.2	0.9	0.7	0.7	0.6
Total	794	785	768	694	683	665	686	694

Some hospitalizations are wholly attributable to SU. However, these represent only a subset of the total burden, as many hospitalizations arise from conditions partially attributable to SU. These include conditions that, by definition, can only occur as a direct result of SU. For example, all hospitalizations associated with an ICD code of "mental and behavioural disorders attributed to the use of alcohol"[2] are caused by alcohol use. Table 3 presents hospitalization rates per 100,000 population wholly attributable to SU by substance from 2017 to 2024. In 2024, alcohol accounted for about 70 hospitalizations per 100,000 population, representing approximately 60% of all hospitalizations wholly attributable to SU. This was followed by opioids, at approximately 20 hospitalizations per 100,000 population (about 17% of all hospitalizations fully attributable to SU).

Trends in hospitalization rates wholly attributable to SU varied across substances between 2017 and 2024. Rates attributable to opioids showed the largest increase (22%, from 16.6 to 20.3 per 100,000), followed by cannabis (14%, from 4.7 to 5.4 per 100,000) and cocaine (13%, from 4.6 to 5.2 per 100,000). However, in contrast, hospitalization rates wholly attributable to other illicit substances and other CNS depressants decreased by more than 30% (from 0.5 to 0.3 per 100,000 and from 7.9 to 5.4 per 100,000, respectively).

[2] When patients are discharged from hospitals in Canada, they are assigned a code indicating the main reason for their hospital stay. The coding systems used differ depending on the database. The Discharge Abstract Database and Hospital Morbidity Database use the Canadian enhancement of the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10-CA; Canadian Institute for Health Information, n.d.) to code the diagnosis of hospital stays.

Table 3. Rate of hospitalizations wholly attributable to SU per 100,000 population in Canada, 2017–2024

Substance	2017	2018	2019	2020	2021	2022	2023	2024
Alcohol	65.4	67.1	68.9	75.0	77.8	68.9	71.9	70.7
Cannabis	4.7	5.2	5.5	6.3	6.8	6.0	5.5	5.4
Opioids	16.6	16.0	14.8	17.3	22.4	19.3	23.1	20.3
Other CNS depressants	7.9	7.3	6.2	6.0	6.1	5.4	5.4	5.4
Cocaine	4.6	4.7	4.1	4.4	4.2	4.1	4.9	5.2
Other CNS stimulants	10.0	11.2	12.9	12.8	12.6	11.4	11.2	10.2
Other illicit substances	0.5	0.4	0.3	0.5	0.4	0.4	0.3	0.3
Total	109.6	111.9	112.7	122.3	130.2	115.3	122.3	117.4

Canada's overall per-person healthcare costs attributable to SU decreased 2.3% from $406 in 2017 to $396 in 2024. Despite the overall decline, the largest proportional increases in per-person costs were associated with the use of:

- Opioids, for which costs increased 27.1% from $13.6 to $17.3 (Figures 6 and 8, Table 4);
- Other CNS stimulants, for which per-person costs increased 10.8% from $8.8 to $9.7 (Figures 6 and 8, Table 4);
- Alcohol, for which costs increased 5.5% from $179 to $189 (Figures 7 and 8, Table 4).

Per-person healthcare costs attributable to cannabis use increased by 18% from $7.2 in 2017 to $8.5 in 2020, followed by a decline and relative stabilization at approximately $7 from 2021 onward.

Per-person healthcare costs associated with use of some substance categories decreased between 2017 and 2024. Costs due to use of other substances decreased 39.4% from $0.7 to $0.5, and costs due to use of other CNS depressants decreased 19.6% from $5.5 to $4.4. Additionally. per-person healthcare costs due to tobacco use decreased by 18.1% from $186 in 2017 to $161 in 2021, followed by a 7.5% increase between 2022 and 2024, returning to pre-pandemic levels (Figures 6 and 8; refer to Table 4).

Figure 6. Per-person healthcare costs related to SU in Canada by substance, 2017–2024, excluding alcohol and tobacco

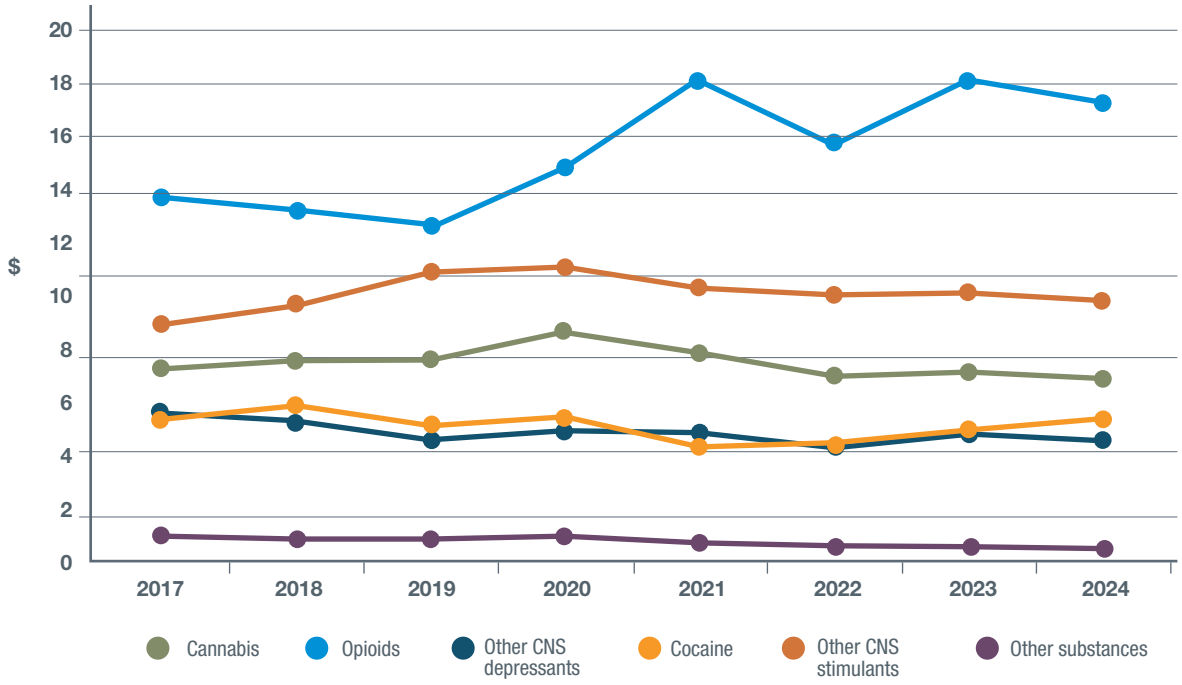


Figure 7. Per-person healthcare costs related to alcohol and tobacco use in Canada, 2017–2024

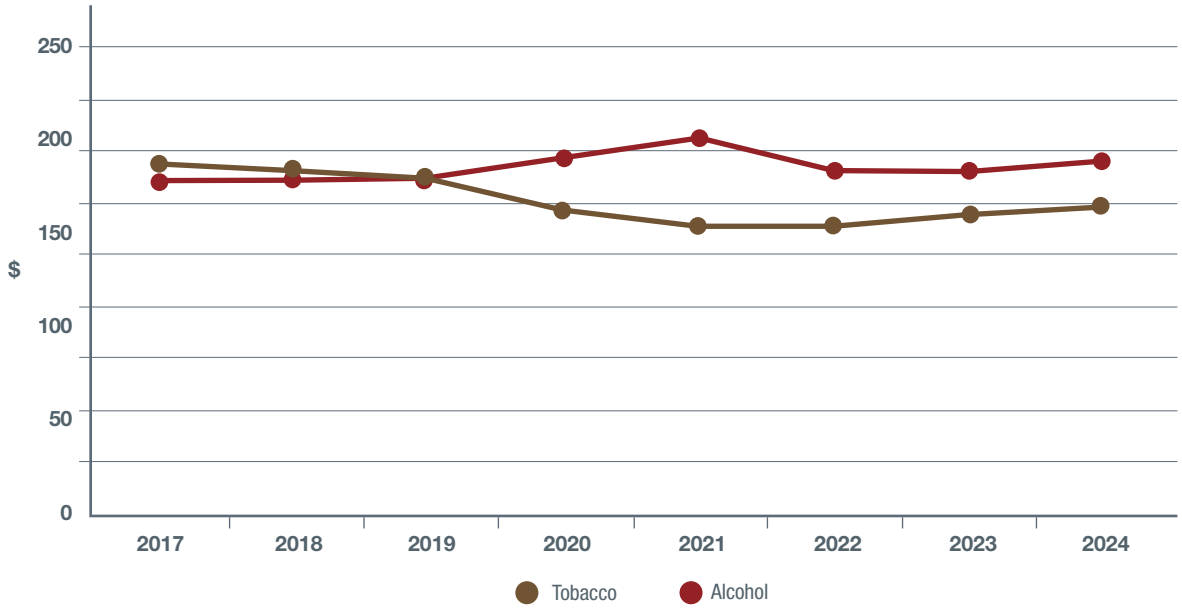


Table 4. Per-person healthcare costs related to SU in Canada, 2017–2024, by substance

Substance	2017	2018	2019	2020	2021	2022	2023	2024
Alcohol	179	179	180	191	201	184	184	189
Tobacco	186	182	178	161	152	152	159	164
Cannabis	7	7	7	9	8	7	7	7
Opioids	14	13	13	15	18	16	18	17
Other CNS depressants	5	5	4	5	5	4	5	4
Cocaine	5	6	5	5	4	4	5	5
Other CNS stimulants	9	10	11	11	10	10	10	10
Other substances	0.7	0.7	0.6	0.8	0.6	0.5	0.5	0.5
All substances	406	403	399	398	399	378	388	396

Note: These estimates do not include costs associated with in-patient hospitalizations, day surgeries and paramedic services in Quebec.

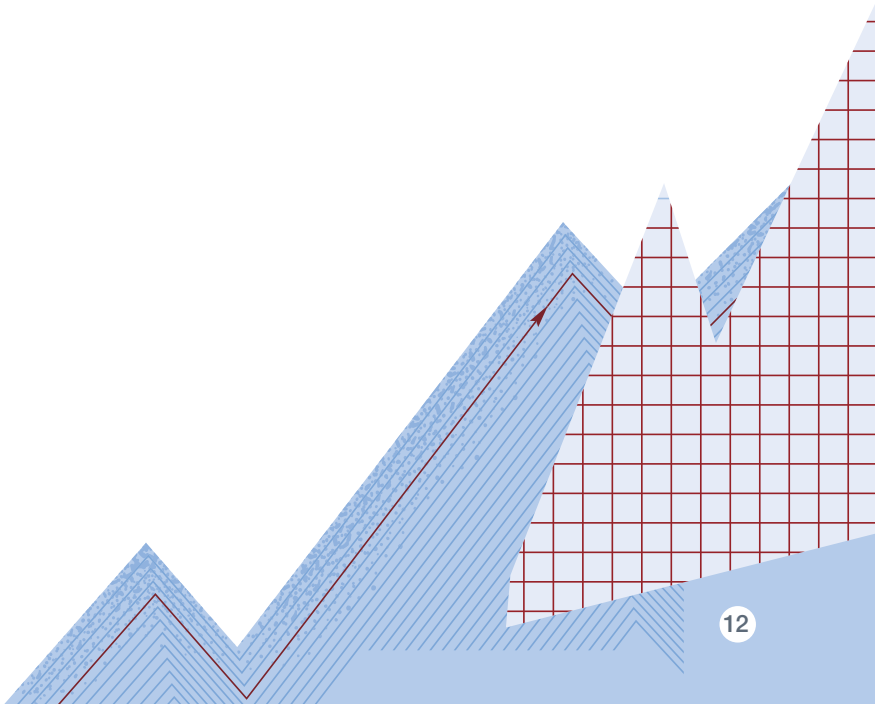
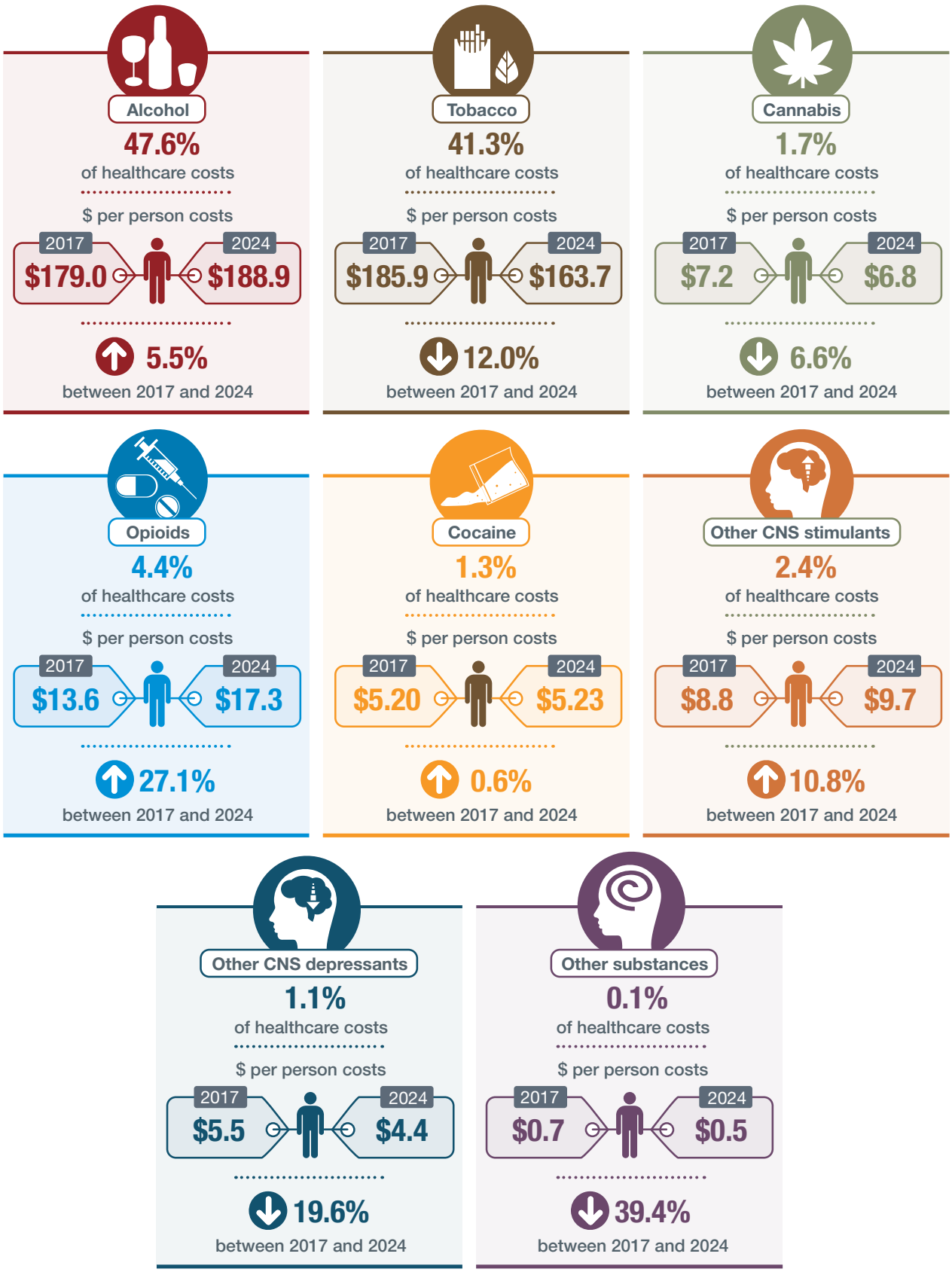


Figure 8: Comparison of per-person healthcare costs related to SU in Canada between 2017 and 2024, by substance



Limitations

The methodology we used to assess the burden of disease assumes that high-quality studies from around the world on the association between the use of substances in a population and disease and injury are universally applicable. While we used Canadian national, provincial and territorial data to assess the prevalence of broad categories of disease and injury and population prevalence of SU, we must use international assumptions about the relationship between SU and the risk of some diseases and injuries, as these data rarely exist for a single country. As is standard practice in SU epidemiology, we have relied on the latest systematic reviews and meta-analyses of the international literature to estimate these risk relationships.

The evidence base of published studies, however, is stronger in some areas than in others. In general, the published literature is stronger in relation to tobacco and alcohol use, and weaker for most other substances. To estimate in-patient hospitalizations, day surgeries, paramedic services and emergency department visits, we applied attributable fractions to record-level data. However, to estimate the costs of physician time and prescription medications, we used an attributable percentage methodology.[3] Using this method, we assume that the proportional contributions of different types of substances to healthcare costs are consistent. This approach reflects current best practices and represents the most appropriate methodology available given existing data. We will investigate this assumption and continue to refine our methodologies to improve the accuracy of our estimates.

Implications and Conclusions

SU continues to place substantial pressure on Canada's healthcare system. In 2024, healthcare costs attributable to SU reached $16.4 billion. Use of alcohol and tobacco accounted for approximately 90% of these costs. These findings underscore that the majority of healthcare expenditure related to SU is driven by widely used, legally available substances and reflects a broad range of acute and chronic conditions across the healthcare system.

Although use of opioids represents a smaller share of total healthcare costs than use of alcohol and tobacco, opioids ranked third overall at 4.4% in 2024. Opioid-attributable per-person healthcare costs increased by approximately 30% between 2017 and 2024, the largest increase among the substance categories. This increase could reflect multiple factors, including the continued toxicity and instability of the unregulated drug market and the presence of new substances in the supply (Canadian Centre on Substance Use and Addiction, 2025a), as well as potential increases in treatment and services utilization. Additionally, national trends show decreases of opioid-related harms between 2023 and 2024 (Canadian Centre on Substance Use and Addiction, 2025b). This coincides with modest declines in opioid-attributable per-person healthcare costs. These trends might reflect the combined effects of harm reduction initiatives (e.g., reduced overdose events and related hospitalizations), expanded treatment access and regional shifts in the unregulated opioid supply, although ongoing monitoring is needed to confirm whether these trends will persist (Canadian Centre on Substance Use and Addiction, 2025b; Public Health Agency of Canada, 2025).

Cannabis-related healthcare costs increased through 2020 and subsequently stabilized, with similar pattern in hospitalizations attributable to cannabis. This trend could suggest that healthcare harms associated with cannabis have plateaued following marked increases in the years leading up to and surrounding legalization of non-medical cannabis. Survey estimates of the prevalence of cannabis use show signs of stabilization in recent years, particularly in the Canadian Cannabis Survey (Health Canada, 2024). Continued monitoring is required to determine if healthcare impacts remain stable over time.

[3] Attributable percentages are equivalent to the percentage of total inpatient hospitalizations that could be attributed to SU for each province, territory and year.

Healthcare costs attributable to the use of other substances, including other CNS depressants, cocaine and other stimulants, were generally lower in total but in some cases showed meaningful proportional increases, likely reflecting shifts in SU patterns, including polysubstance use. The COVID-19 pandemic introduced additional complexity during this study period. For example, temporary declines in tobacco-attributable healthcare costs likely reflect shifts in healthcare utilization and the overlap between COVID-19-related causes of morbidity with tobacco-related causes of morbidity.

Per-person healthcare costs vary substantially across regions, with higher costs observed in the territories and Atlantic Canada. These differences likely reflect variations in geography, healthcare access and underlying health needs, and underscore the importance of regionally tailored responses.

These findings support several key implications:

1. Legally available substances including alcohol and tobacco remain the primary drivers of the burden to healthcare of SU. This fact underscores the continued need for strengthened and updated public health policies, including pricing, labelling and marketing regulations, as well as public awareness and education efforts (e.g., *Canada's Guidance on Alcohol and Health*, which emphasizes that risk increases with consumption and that lower levels of use are associated with lower risk).
2. Opioid- and stimulant-related impacts require sustained attention. Continued investment in services and supports across the continuum of care is needed to reduce substance-related harms and associated healthcare costs, particularly in the context of an increasingly toxic and polysubstance drug supply. This investment could reduce overall expenditures on substance-related harms by shifting reliance away from more costly acute care services such as hospitalizations and emergency department visits towards earlier and less resource-intensive interventions.
3. Cannabis-related impacts require continued monitoring. While healthcare costs and hospitalizations appear to have stabilized following earlier increases, continued monitoring is essential to track long-term trends, including potential harms among youth associated with high-potency products.
4. Robust monitoring and data systems are essential across all substances. Strengthening surveillance and data infrastructure will support tracking trends in healthcare costs and harms, assessing the impacts of policies and interventions, and responding to evolving patterns of SU.
5. COVID-19-related disruptions in healthcare utilization might obscure trends, indicating the need for cautious interpretation of short-term changes and continued data collection to understand longer-term impacts.

Overall, these healthcare cost estimates provide a detailed view of trends over time in the burden of SU on health systems in Canada. They serve as a baseline for assessing the impact of policies, services and supports across the continuum of care and for guiding future investments to reduce substance-related healthcare costs and harms across policy, planning and service delivery contexts.

REFERENCES

Canadian Centre on Substance Use and Addiction. (2025a). *Substance use trends in Canada*, Issue 5. https://www.ccsa.ca/sites/default/files/2025-05/CCENDU-Newsletter-Issue-5-en.pdf

Canadian Centre on Substance Use and Addiction. (2025b). *Substance use trends in Canada*, Issue 6. https://www.ccsa.ca/sites/default/files/2025-08/CCENDU-Newsletter-Issue-6-en.pdf

Canadian Institute for Health Information. (2025a). Discharge Abstract Database (DAD), 2016/17 to 2024-Q1/2024-Q4 [data file]. Ottawa, Ont.: Author.

Canadian Institute for Health Information. (2025b). Cost of a standard hospital stay [data file]. Ottawa, Ont.: Author.

Canadian Institute for Health Information. (2025c). National Ambulatory Care Reporting System (NACRS), 2016/17 to 2024-Q1/2024–Q4 [data file]. Ottawa, Ont.: Author.

Canadian Institute for Health Information. (2025d). Canadian Management Information System Database (CMDB), 2016–2017 to 2024–2024 [data file]. Ottawa, Ont.: Author.

Canadian Institute for Health Information. (2025e). National Physician Database (NPDB), 2006–2007 to 2019–2020 [data file]. Ottawa, Ont.: Author.

Canadian Institute for Health Information. (2025f). Quick stats inpatient hospitalizations, 2017–2024 [data file]. Ottawa, Ont.: Author.

Canadian Institute for Health Information. (2025g). National health expenditure trends, 2017 to 2024: Data tables — Series G [data file]. Ottawa, Ont.: Author.

Canadian Substance Use Costs and Harms Scientific Working Group. (2018). *Canadian substance use costs and harms 2007–2014*. (Prepared by the Canadian Institute for Substance Use Research and the Canadian Centre on Substance Use and Addiction.) Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://csuch.ca/assets/documents/reports/english/CSUCH-Canadian-Substance-Use-Costs-Harms-Report-2007-2014-en.pdf

Canadian Substance Use Costs and Harms Scientific Working Group. (2020). *Canadian substance use costs and harms 2015–2017*. (Prepared by the Canadian Institute for Substance Use Research and the Canadian Centre on Substance Use and Addiction.) Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://csuch.ca/assets/documents/reports/english/CSUCH-Canadian-Substance-Use-Costs-Harms-Report-2015-2017-en.pdf

Canadian Substance Use Costs and Harms Scientific Working Group. (2023). *Canadian substance use costs and harms 2007–2020*. (Prepared by the Canadian Institute for Substance Use Research and the Canadian Centre on Substance Use and Addiction.) Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. https://csuch.ca/assets/documents/reports/english/Canadian-Substance-Use-Costs-and-Harms-Report-2007-2020-en.pdf

Centers for Disease Control and Prevention. (2008). *Alcohol-Related Disease Impact (ARDI) application*. Atlanta, GA: Author. https://nccd.cdc.gov/DPH_ARDI/default/default.aspx

Ferrari, A.J., Norman, R.E., Freedman, G., Baxter, A.J., Pirkis, J.E., Harris, M.G., . . . Whiteford, H.A. (2014). The burden attributable to mental and substance use disorders as risk factors for suicide: Findings from the Global Burden of Disease Study 2010. *PLoS ONE 9*(4), e91936. https://doi.org/10.1371/journal.pone.0091936

Health Canada. (2024). *Canadian Cannabis Survey 2023: Summary*. Ottawa, Ont.: Author. https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2023-summary.html

King, B., Pechacek, T., & Mariolis, P. (2014). *Best practices for comprehensive tobacco control programs — 2014*. Atlanta, GA: National Center for Chronic Disease Prevention and Health Promotion. https://stacks.cdc.gov/view/cdc/21697/cdc_21697_DS1.pdf

Lushniak, B. D., Samet, J. M., Pechacek, T. F., Norman, L. A., & Taylor, P. A. (2014). *The health consequences of smoking — 50 years of progress*. Rockville, MD: U.S. Department of Health and Human Services. https://stacks.cdc.gov/view/cdc/21569

Public Health Agency of Canada. (2025). Decline in opioid-related deaths in Canada: Potential factors to explain the decline in opioid-related deaths in 2024 compared to 2023. Ottawa, Ont.: Author. https://health-infobase.canada.ca/substances/harms/decline-opioid-related-deaths/

Rehm, J., Baliunas, D., Brochu, S., Fischer, B., Gnam, W., Patra, J., . . . Taylor, B. (2006). *The costs of substance abuse in Canada 2002*. Ottawa, Ont.: Canadian Centre on Substance Abuse.

Sherk, A., Stockwell, T., Rehm, J., Dorocicz, J., & Shield, K. D. (2017). *InterMAHP: The International Model of Alcohol Harms and Policies: A comprehensive guide to the estimation of alcohol-attributable morbidity and mortality*. Victoria, B.C.: Canadian Institute for Substance Use Research. https://www.uvic.ca/research/centres/cisur/assets/docs/intermahp-guide.pdf

Sherk, A., Stockwell, T., Rehm, J., Dorocicz, J., Shield, K.D., & Churchill, S. (2020). The International Model of Alcohol Harms and Policies: A new model for estimating alcohol health harms with application to alcohol-attributable mortality in Canada. *Journal of Studies on Alcohol and Drugs*, *81*(3), 339–351. https://doi.org/10.15288/jsad.2020.81.339

Shield, K., Manthey, J., Rylett, M., Probst, C., Wettlaufer, A., Parry, C. D., & Rehm, J. (2020). National, regional, and global burdens of disease from 2000 to 2016 attributable to alcohol use: A comparative risk assessment study. *The Lancet: Public Health*, *5*(1), e51-e61. https://doi.org/10.1016/S2468-2667(19)30231-2

Statistics Canada. (2013). *Canadian Community Health Survey, Mental Health, 2012* [data file]. Ottawa, Ont.: Author.

Statistics Canada. (2023). *Mental Health and Access to Care Survey* (MHACS) [data file]. Ottawa, Ont.: Author.

World Health Organization. (2018). *Global status report on alcohol and health*. Geneva, Switzerland: Author. https://iris.who.int/server/api/core/bitstreams/9530de1c-1fd2-4c20-a167-ec6ba7cb00c3/content

World Health Organization. (2024). *Global status report on alcohol and health and treatment of substance use disorders*. Geneva, Switzerland: Author. https://iris.who.int/server/api/core/bitstreams/32b161e9-5683-40f5-a1c3-1c92a76d5cda/content