



Prescription Opioid Trends in Canada

An independent IQVIA report on measuring and understanding the use of prescription opioids dispensed from 2019 to 2022

Introduction

Opioids are a group of psychoactive medications commonly used for the treatment of moderate to severe pain associated with acute and chronic medical conditions or as treatments for opioid dependence. The medication, use as a single product or in combination with others, has an important role to play in drug treatment, but only if used in a way that is both safe and effective. In addition to their analgesic properties, opioids have the potential to cause physical and psychological dependence, and are recognized as drugs used by drug addicts.

All those who study and deliver health care and set the policy and standards of care that inform the treatment for opioid overuse are challenged to strike the right balance between reducing human suffering and minimizing the equally painful sequelae of opioid dependence. There is no easy way to determine this balance, but the available data could inform the way forward for practitioners, researchers, educators, and policy-makers, ultimately for the betterment of the patient's health.

Our focus at IQVIA is to help optimize health by considering evidence-based data and insights to better inform decision-makers in this critical area, with the utmost respect for privacy and information security. This report compares changes in Canada-wide trends in opioid prescriptions dispensed in community pharmacies (excluding hospitals) between 2019, the year before the coronavirus pandemic, and pandemic years 2020, 2021, and 2022. In addition, demographic indicators by province or region illustrate the progress made and the ongoing concerns. See page 14 for limitations to using IQVIA data.

The statistics and analysis presented in this report come from the IQVIA Dashboard, developed in collaboration with the IQVIA Advisory Boards for the Advancement of Health. The Boards, made up of influential stakeholders in health care and data management from Quebec and Ontario, serve to promote responsible access and use of health data to shed light on some of the most challenging health issues facing Canadians.

The Boards' driving belief is the concept of a connected health care system—one that leverages efficient and ethical data sharing from all available sources—to help stakeholders make informed decisions. One of the Boards' main goals is to make the Health Insights Dashboard accessible to key stakeholders (governments, politicians, professional orders, physicians, organizations) to demonstrate the added value of using health data by regularly providing them with relevant information and drawing their attention to certain facts.

This report was produced independently by IQVIA Canada as a public service, without industry or government funding. IQVIA complies with all legislation relating to the protection of personal health information, and IQVIA does not collect any data on prescription drugs that can identify a patient or that can be used for this purpose.

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National Opioid Utilization Highlights

The epidemic of opioid use has preoccupied the country for more than a decade. The September 2023 report from the Public Health Agency of Canada (PHAC)* counts 38 514 deaths apparently related to opioid intoxication between January 2016 and March 2023, an average of 17 deaths per day. In the COVID-19 pre-pandemic year of 2019, the number of deaths per day was 10. Between January and March 2023, PHAC recorded 1 904 deaths related to opioid intoxication, an average of 21 deaths per day, most of which (90%) occurred in British Columbia, Alberta and Ontario.

While the human toll of the opioid epidemic is being addressed differently across the country, efforts to manage the prescription of opioids and support medication regimes are showing measurable results in many provinces, even if some hot spots remain. This is IQVIA's third report on prescribing opioids in Canada, covering 2019, 2020, 2021, and 2022.

For Canada as a whole, the prevalence rate is relatively stable, except for 2020 (11.4%), which is 1.1% lower than in 2019. This may be explained by a general decline in medical consultations in Canada** during the first wave of the pandemic compared to 2019, the pre-pandemic year.

The proportion of the total Canadian population that received at least one opioid prescription from a community pharmacy decreased from 12.5% in 2019 to 11.9% in 2022. This represents an average of approximately 8 prescriptions per individual for each of the four years observed.

General statistics on opioid use in Canada

	PREVALENCE	INDIVIDUALS WHO HAVE USED OPIOIDS	OPIOID PRESCRIPTIONS DISPENSED	AVE. RX/INDIVIDUAL
2022	11.9%	4,694,346	37,001,481	7.9
2021	12.1%	4,638,053	37,194,748	8.0
2020	11.4 %	4,332,957	36,766,194	8.5
2019	12.5 %	4,696,550	38,505,016	8.2

* <https://health-infobase.canada.ca/substance-related-harms/opioids-stimulants>

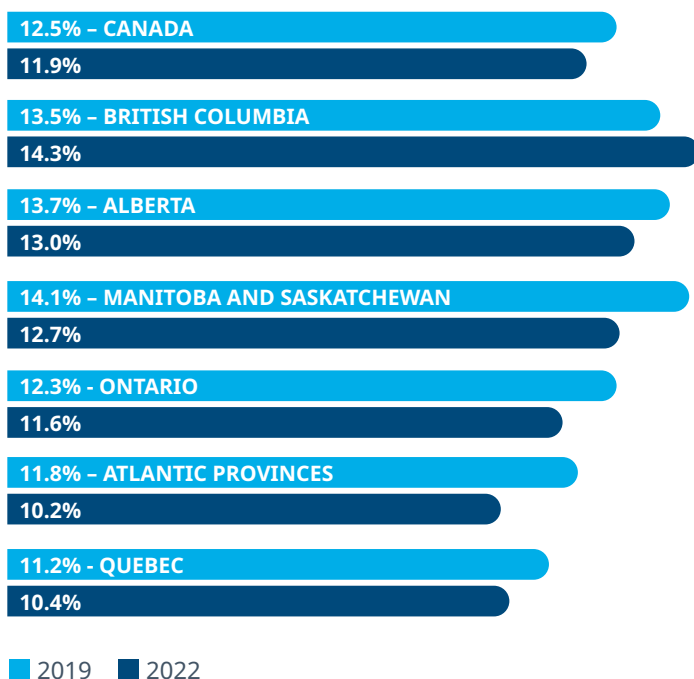
** <https://www.cihi.ca/en/covid-19-resources/impact-of-covid-19-on-canadas-health-care-systems/physician-services>

Provincial Prevalence Trends

Decrease in prevalence rates between 2019 and 2022

Prevalence rates decreased between 2019 and 2022 in all Canadian provinces except British Columbia, which saw an increase of almost 1% to reach 14.3% in 2022. Quebec had the lowest prevalence rate in 2022 at 10.4%.

Prevalence of opioid dispensing by province

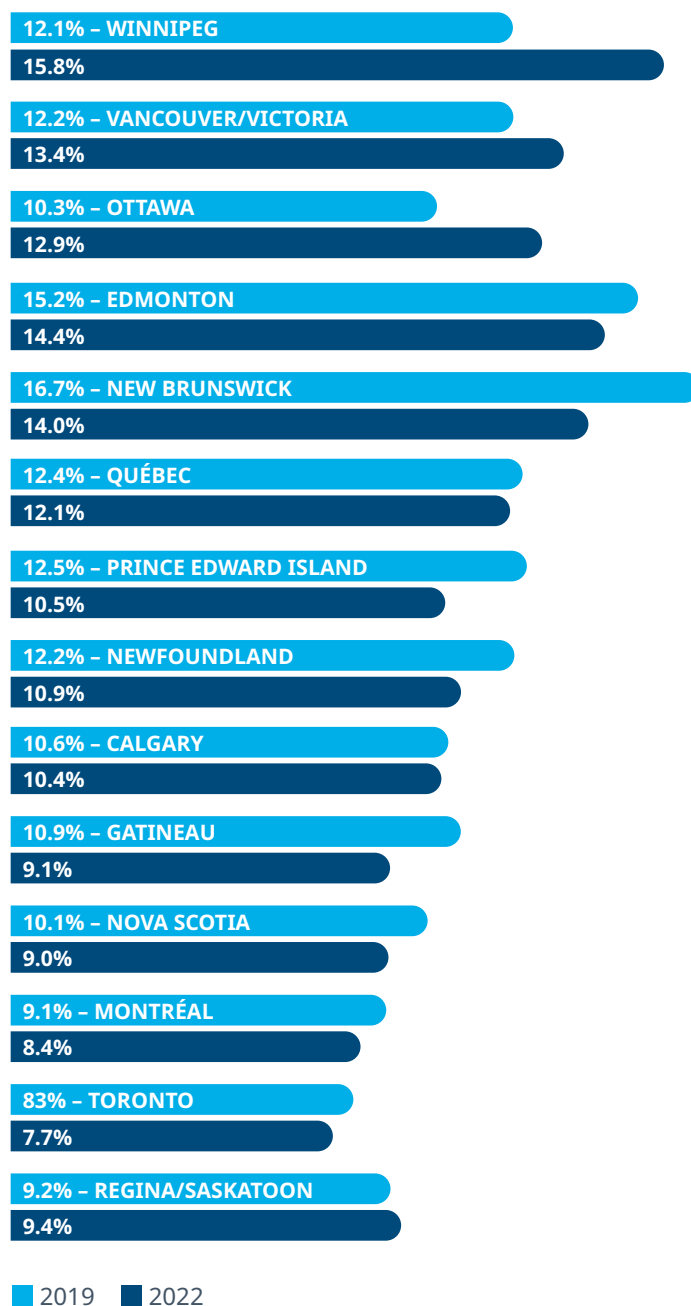


■ 2019 ■ 2022

Prevalence of opioid dispensing in major Canadian regions

Between 2019 and 2022, most major Canadian regions saw a decrease in opioid dispensing prevalence, with the exception of increases in Winnipeg (3.7%), Ottawa (2.6%), and Vancouver/Victoria (1.2%).

Prevalence of opioid dispensing in major Canadian regions



■ 2019 ■ 2022

Demographic Analysis

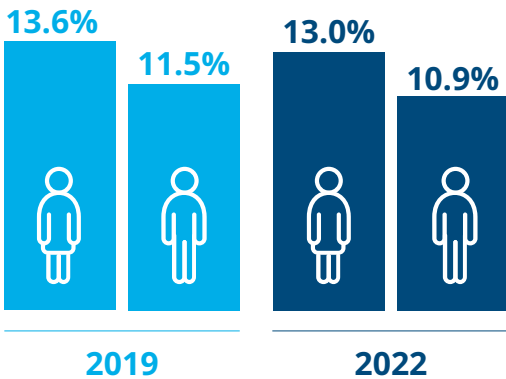


In 2022, about 1 in 8 people in Canada received at least one prescription for opioids from a community pharmacy—a number estimated at nearly 4.7 million Canadians nationwide.

PEOPLE WHO WERE DISPENSED OPIOIDS* BY REGION - CANADA 2022		
REGION	Prevalence	# Per Capita
AB	13.0%	1 in 8
BC	14.3%	1 in 7
MB/SK	12.7%	1 in 8
ATL. P.	10.2%	1 in 9
ON	11.6%	1 in 8
QC	10.4%	1 in 9
CANADA	11.9%	1 in 8

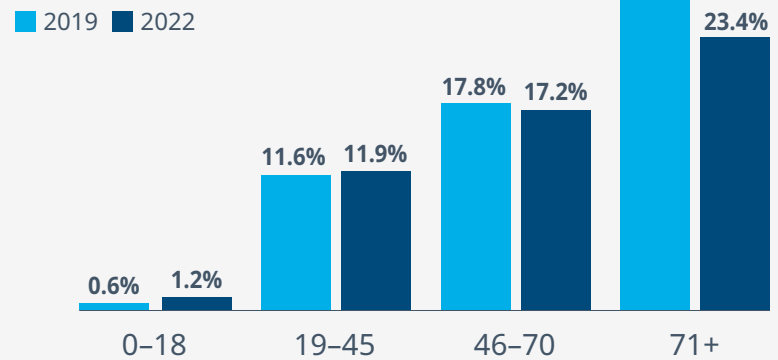
* People who were dispensed at least one opioid prescription in community pharmacies.

Prevalence of opioid dispensing by gender - Canada

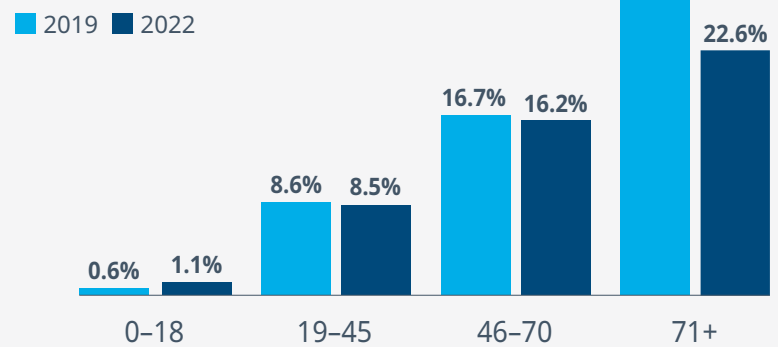


In Canada, the prevalence rate between 2019 and 2022 fell from 13.6% to 13% for women and from 11.5% to 10.9% for men.

Prevalence of opioid dispensing in females, by age group - Canada

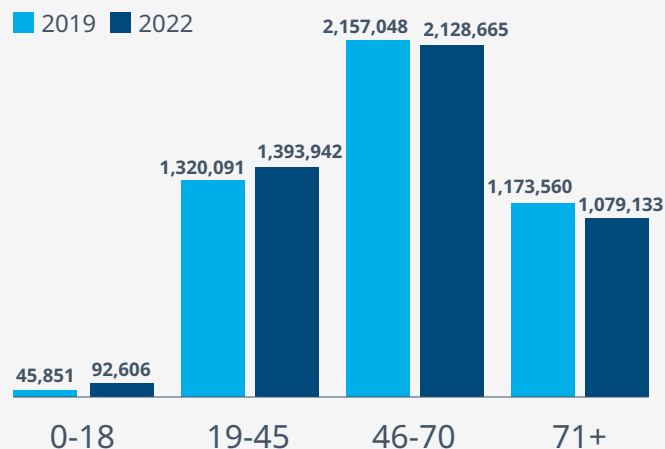


Prevalence of opioid dispensing in males, by age group - Canada



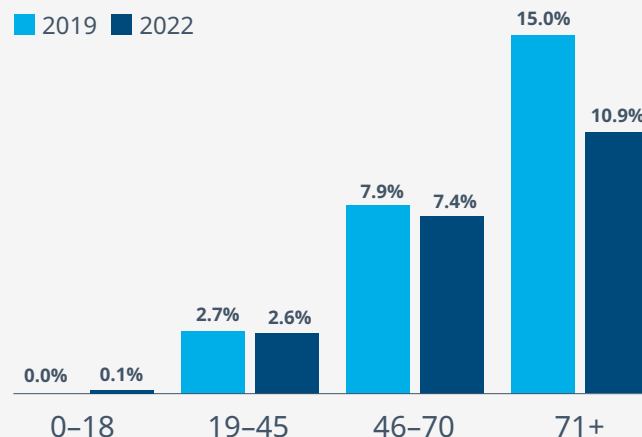
Between 2019 and 2022, the prevalence rate by age group for both women and men was relatively stable, except in the 71+ age group, where a clear decrease of 6.8% for women and 7.8% for men was observed in 2022.

Number of individuals for which at least one opioid prescription was dispensed, by age group



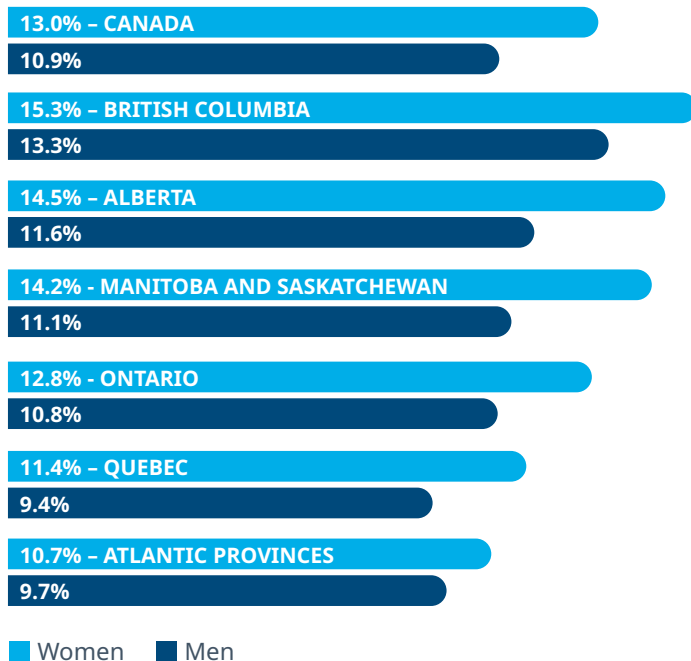
In Canada, for the four years observed, the 46-70 age group had the highest number of opioid users.

Prevalence of opioid dispensing by age group for a treatment period greater than 6 months in Canada



In Canada, for a duration of treatment greater than 6 months, the 71+ age group had the highest prevalence rate. However, for this same age group, there is a significant decrease in prevalence, from 15% in 2019 to 10.9% in 2022.

Prevalence of opioid dispensing by gender, by province - 2022



In 2022, the prevalence among women in every province was consistently higher than that of men, peaking at 15.3% in British Columbia.

Prevalence of opioid dispensing by gender, by province, and by age group, 2022

PROVINCE	WOMEN			MEN		
	19-45	46-70	71+	19-45	46-70	71+
AB	13.7%	21.4%	28.2%	9.3%	19.1%	26.4%
BC	13.6%	19.8%	26.6%	10.4%	19.2%	25.7%
ON	11.0%	16.9%	25.1%	8.0%	16.2%	24.2%
MB/SK	14.2%	20.4%	25.0%	9.2%	18.3%	23.2%
ATL. P.	9.0%	13.2%	18.8%	7.7%	13.2%	18.0%
QC	11.2%	14.5%	18.4%	7.6%	13.3%	18.2%

In 2022, women aged 71 and over in Alberta had the highest prevalence in Canada, at 28.2%. It should be noted that between 2019 and 2022, the prevalence rate in the 71+ age group declined steadily in each province, for both men and women.

Opioid use by dosage

Morphine milligram equivalent¹ (MME) is a standardized method for measuring opioid doses. It reflects the strength of an opioid.

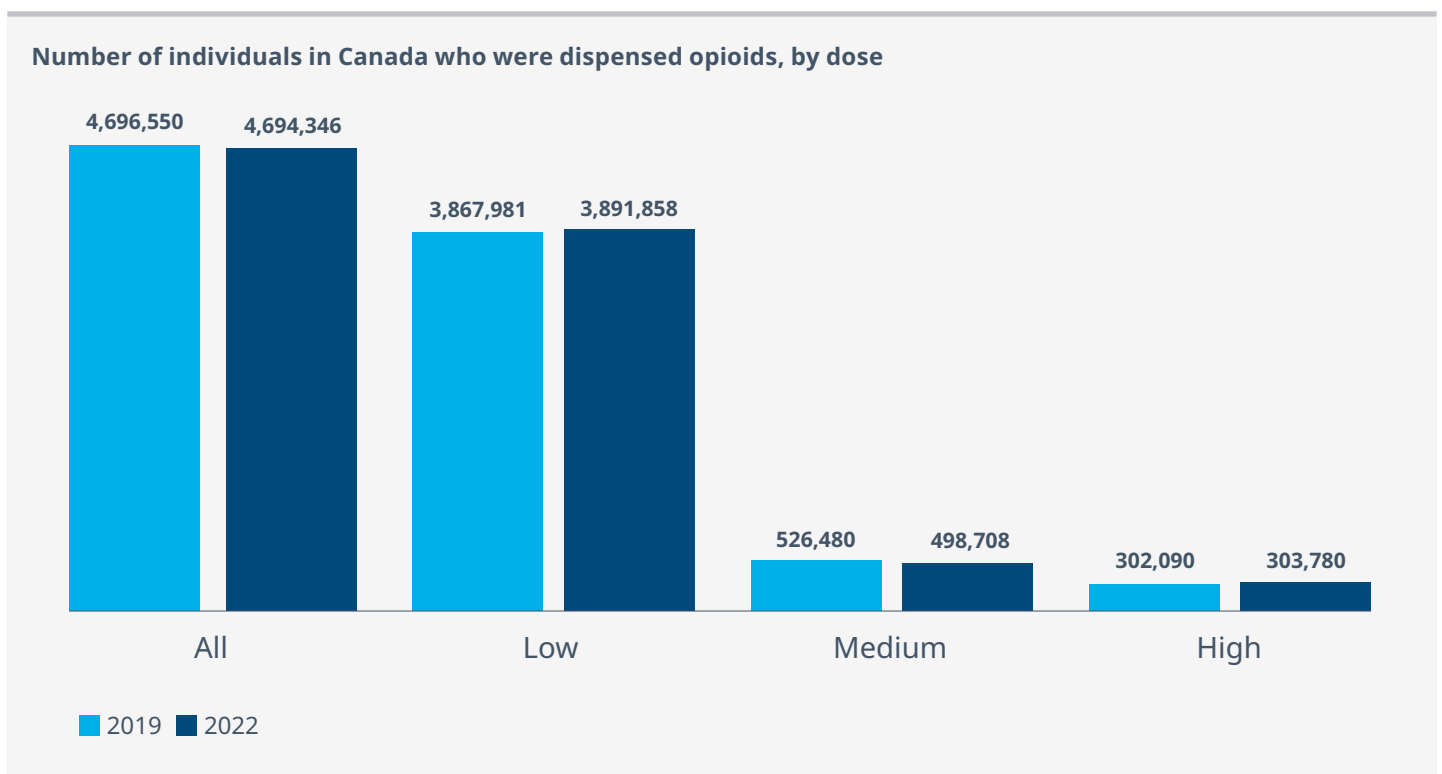
Low: Average MME daily dose per patient > 50 (+ blanc)

Medium: Average MME daily dose per patient 50 <= 90

High: Average MME daily dose per patient > 90 (+blanc)

Opioid users across Canada and in all provinces overwhelmingly obtained their opioids at low doses, i.e., less than 50 MME per day, in all years observed.

For all doses (low, medium and high), the number of individuals dispensed opioids in Canada remained relatively stable between 2019 and 2022.

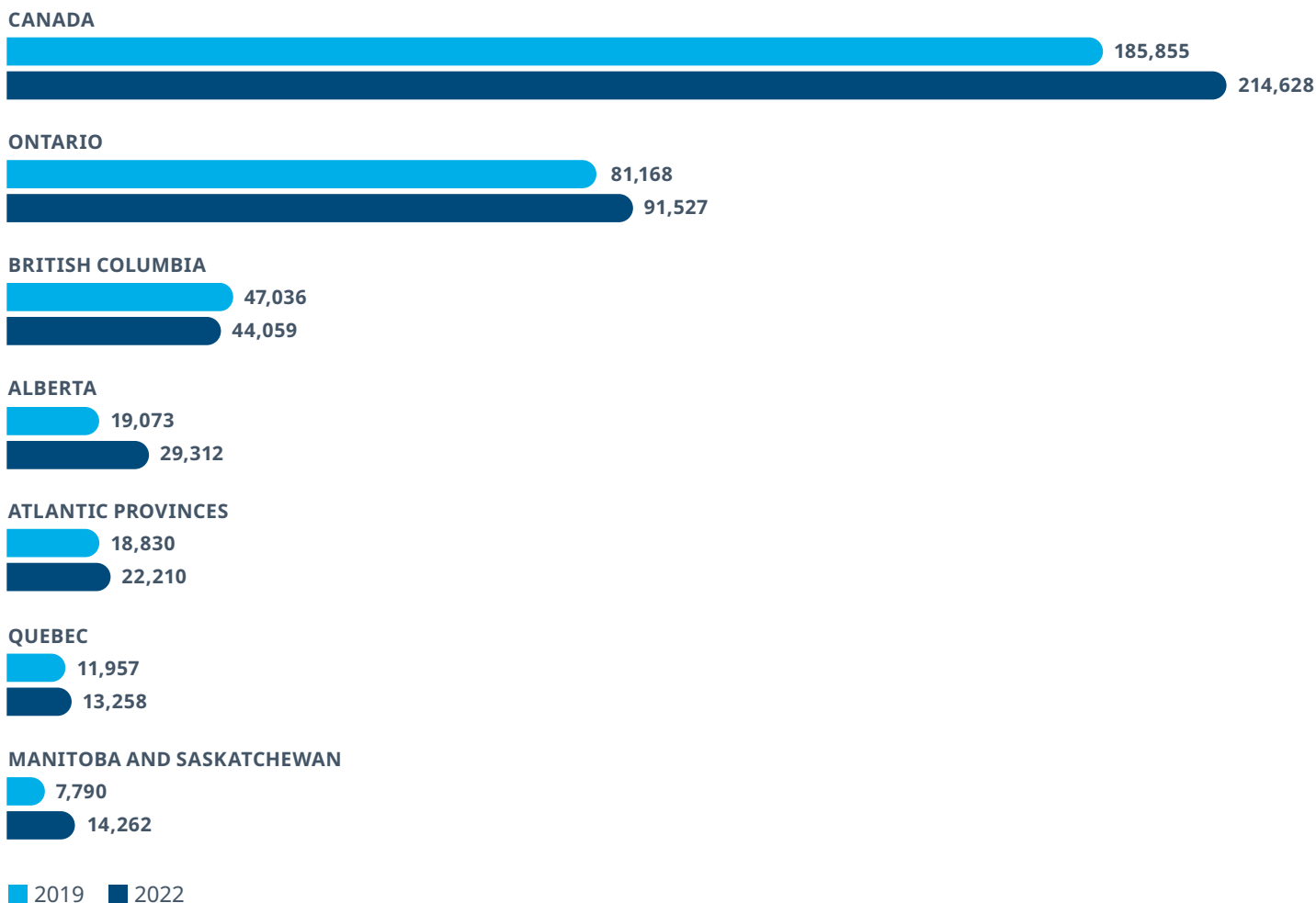


1. <https://www.cihi.ca/sites/default/files/document/measuring-prescription-opioid-use-dec2018-en.pdf>

Opioid Dependence Treatments

Frequently dispensed daily, methadone and buprenorphine/naloxone are the medications most often used to treat opioid dependence, although methadone is also used to treat pain in a small proportion of the prescriptions analyzed. At the national level, the number of individuals who have had access to opioids to treat dependence between 2019 and 2022 has increased by 15%. At the provincial level, we see marked fluctuations in the number of users over the same period, with an increase of 83% in Manitoba/Saskatchewan and 54% in Alberta. Meanwhile, British Columbia recorded a decrease of 6%.

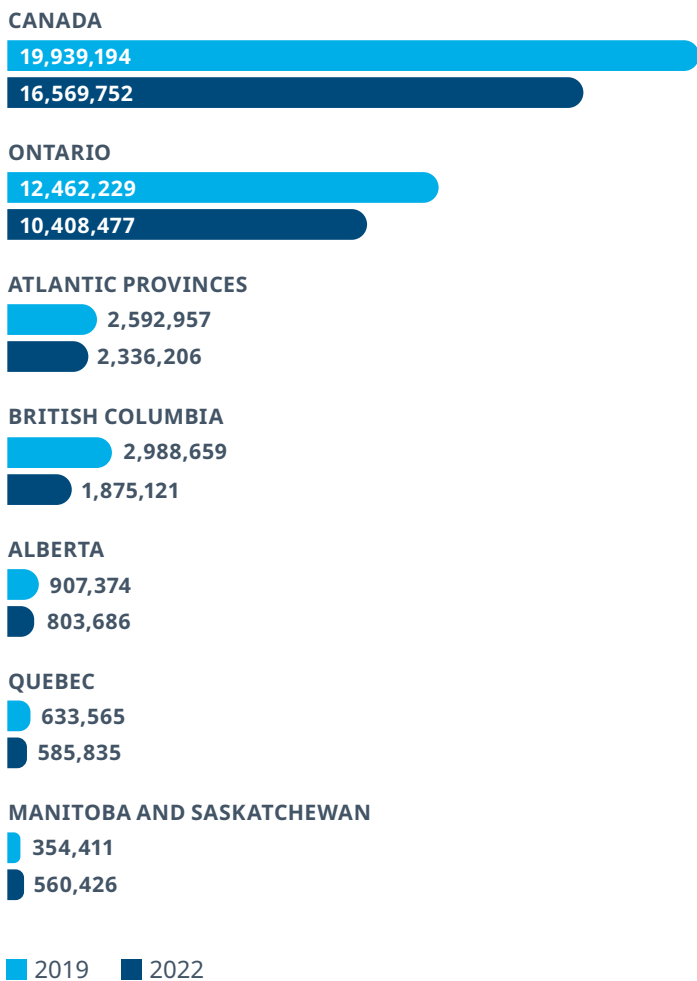
Increase in number of individuals dispensed opioids for dependence treatment between 2019 and 2022*



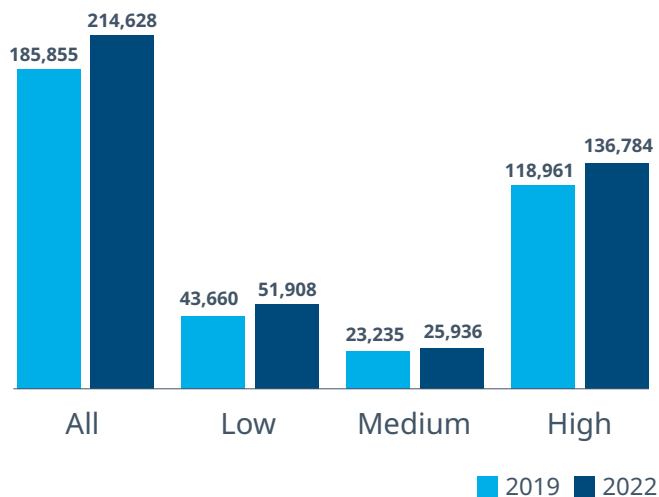
* Corresponds to the number of methadone and buprenorphine/naloxone users. Methadone is also used for pain relief to a limited extent.

In Canada as a whole, between 2019 and 2022, there was a decrease in the number of prescriptions for methadone and buprenorphine/naloxone, which are used mainly for the treatment of dependence, whereas in Manitoba and Saskatchewan there was an increase from 354,411 to 560,426 prescriptions. In 2022, Ontario alone accounted for 63% of prescriptions dispensed in Canada for the treatment of dependence, of which around 70% of methadone prescriptions were dispensed daily. Some provinces have implemented programs to treat opioid dependence, including Ontario with a daily prescription program supported by the Ontario government², hence the high number of prescriptions. This may be an indicator of the impact of programs set up to combat addiction.

Number of opioid prescriptions dispensed for dependence treatment between 2019 and 2022*



Number of individuals in Canada who were dispensed opioids for the treatment of dependence, by dosage



In Canada, the number of opioid users for the treatment of dependence over the four years analyzed increased slightly each year, with 64% of individuals (136,784) receiving high-dose prescriptions in 2022.

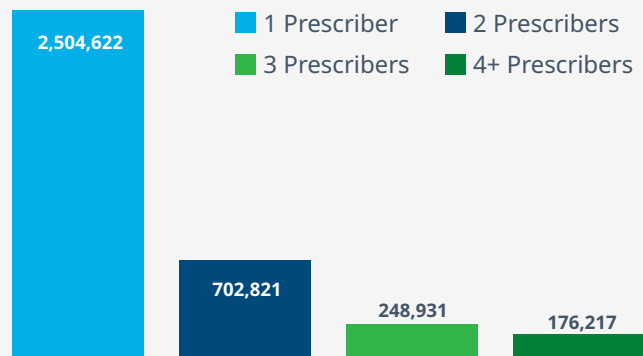
2. Chief Administrator's Notice: Ontario Drug Benefit Methadone Maintenance Treatment Reimbursement Policy (gov.on.ca)

* Corresponds to the number of methadone and buprenorphine/naloxone users. Methadone is also used for pain relief to a limited extent.

Prescriber Analysis*

In 2022, 2,504,622 individuals received their opioid prescriptions from a single prescriber*, for an average of 5 prescriptions or 207 units per user (1 unit = 1 tablet or 1 oral solution). As for the 176,217 users who received their opioid prescriptions from 4 or more prescribers, they received an average of 32 prescriptions, or 1,298 units.

Individuals who obtained their opioid prescriptions from 1, 2, 3 or 4+ prescribers* - 2022



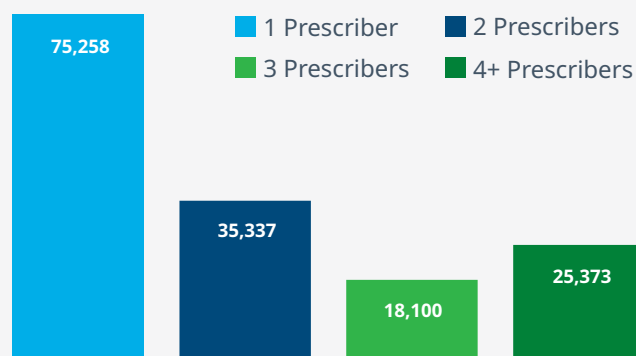
Average number of prescriptions and units per opioid user by number of prescribers* - 2022

Individual prescribers	Average number of prescriptions/user	Average units/user
1 Prescriber	5	207
2 Prescribers	10	459
3 Prescribers	16	704
4+ Prescribers	32	1,298

Prescriber Analysis* - Dependence

In 2022, 75,258 individuals received their opioid prescriptions to treat **dependence** from a single prescriber*, for an average of 52 prescriptions, or 1,826 units per user. As for the 25,373 users who received their opioid prescriptions from 4 or more prescribers, they received an average of 111 prescriptions, or 4,022 units. The number of opioid units appears high (1 unit = 1 tablet or 1 oral solution).

Individuals who received their opioids to treat dependence through 1, 2, 3 or 4+ prescribers* - 2022



Average number of prescriptions and units per opioid user to treat dependence, by number of prescribers* - 2022

Individual prescribers	Average number of prescriptions/user	Average units/user
1 Prescriber	52	1,826
2 Prescribers	69	2,524
3 Prescribers	81	2,997
4+ Prescribers	111	4,022

* Prescribers' prescription data is not available for Newfoundland and Labrador, Prince Edward Island, Manitoba, and British Columbia, and are therefore not included in the calculations.

Recommendations for Health Stakeholders

All who study and deliver health care and set the policies and standards of care that guide treatment for opioid overuse must persist in finding solutions. At IQVIA, our goal is to help improve care by providing decision-makers, researchers, and educators working in this field with essential, current, and evidence-based data.

Using this information, stakeholders could:

- systematically review national and provincial data from all sources on prescriptions for opioids and other drugs with high potential for overuse, to determine current and emerging trends that may impact care providers, patients, governments, or regulatory authorities;
- monitor and assess prescribing trends, which may vary considerably between provinces, and evaluate the impact of programs put in place;
- pay particular attention to provinces or regions where opioid consumption is increasing the most, and develop an awareness-raising and training strategy for the professionals concerned;
- evaluate prescribing trends for other pain medication.

Risk management interventions to consider could include post-market surveillance, education programs for health care professionals and patients, restrictions on who can prescribe and dispense drugs, refill limitations, and informed patient consent agreements. To treat pain, pharmaceutical companies are researching non-opioid therapies and digital therapeutic devices that are effective and less addictive.

In the battle against opioid overuse, it is important to remember that improving human health and well-being applies equally to those with severe and intractable pain. Through the intelligent, individualized application of improved standards of care and the development of alternative pain management approaches, it would be possible to alleviate the public health crisis while addressing the individual crisis of those suffering with pain.

Further research is needed to understand the drivers of these findings, and to evaluate the impact of the release of Canadian and provincial guidelines and programs on future opioid treatment patterns. IQVIA is well positioned to assist federal and provincial governments, policy-makers, health care professionals, researchers, and educators by informing them of prescribing trends for drugs that are currently under scrutiny.

Methodology and IQVIA Databases Consulted

The statistics and analysis presented in this report were drawn from the IQVIA Dashboard on opioid prescriptions dispensed to the Canadian population. Trends for the years 2019, 2020, 2021 and 2022 were compared.

The dashboard is designed to answer three basic questions: how many prescriptions, for how many users, and by which prescriber specialty. Other types of information are accessible under the various dashboard tabs, including prevalence rates, number of users by region, gender, age group, and reason for use (pain and dependence). Population data from Statistics Canada³ was used to calculate proportions and rates.

The data collected for this dashboard is fully anonymized, comes exclusively from opioid prescriptions dispensed by a panel of community pharmacies, and represents approximately 80% of all opioid prescriptions dispensed in Canada (new Rx and refills). Estimation algorithms were used to assess the missing 20%, thus obtaining a complete picture of opioid dispensing and allowing a representative analysis. Consistent application of the same estimation algorithms provides a reliable representation of trends and changes in opioid use over time. All forms and strengths were considered, except for injections, suppositories, and intranasal.

List of molecules included in the analysis

CLASS	MOLECULE
Opioid agonists	Codeine
	Hydromorphone
	Morphine
	Oxycodone
	Fentanyl
	Meperidine
	Methadone (pain)
Opioid partial/ mixed agonists	Methadone (dependence)
	Tramadol
	Pentazocine
	Buprenorphine (pain)
Buprenorphine (dependence)	

The key indicators presented in this report in graphic form correspond to the 12 months of 2019, 2020, 2021, and 2022.

The geographic territories include:

- Canada
 - Alberta
 - British Columbia
 - Manitoba and Saskatchewan combined
 - Ontario
 - Atlantic provinces combined (4)
 - Quebec
- Total population: The number of individuals estimated by Statistics Canada that serves as the denominator for the calculation of prevalence.
 - Users: number of individuals dispensed at least one opioid prescription.
 - Prevalence: Number of users divided by the total population.
 - Prescriptions: number of opioid prescriptions dispensed by community pharmacies.
 - Prescribers: Number of prescribers who prescribed at least one opioid prescription dispensed in a community pharmacy.
 - Prescription data from prescribers in Newfoundland and Labrador, Prince Edward Island, Manitoba, and British Columbia was not considered since it was not available.

3. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/dt-td/Index-eng.cfm?LANG=E&SUB=98P1001&SR=0&RPP=10&SORT=date>

Limitations

There are limitations to the use of IQVIA data, which does not include information on:

- Prescriptions written but never dispensed
- Prescriptions dispensed in hospitals and prisons
- Medications not taken by patients
- Diagnoses for which prescriptions were dispensed
- Clinical indication or morbidity

This report does not take into account the use of illicit opioids, nor the effects of possible disruptions from the COVID-19 pandemic.

This report is based on the following IQVIA data services:

IQVIA Geographic Prescription Monitoring (GPM)

GPM provides the most comprehensive and reliable source of retail prescription activity in Canada. This tool measures the volume of prescription medications dispensed to patients by community pharmacies. It provides geographic data on the total number of prescriptions, units dispensed, and prescription costs for different therapeutic classes.

IQVIA Longitudinal Prescription Data

IQVIA Longitudinal Prescription Data (LRx) is a patient prescription data set based on data collected from community pharmacies. It enables the longitudinal tracking of patient prescription activity.

IQVIA Prescriber-Level Data

IQVIA prescriber-level data provides an estimate of aggregate prescription and market share data. A statistical process (projection methodology) estimates prescription volumes for all prescribers from pharmacies in six provinces: Alberta, Saskatchewan, Ontario, Quebec, New Brunswick, and Nova Scotia. To comply with the most stringent requirements for the disclosure of prescriber-level data, the estimated data is aggregated in such a way as to mask the actual prescribing statistics of each individual prescriber.

About IQVIA

With approximately 87,000 employees and operations in over 100 countries, IQVIA is a global leader in using data, technology, advanced analytics, and human expertise to help customers advance healthcare and improve human health. Together with the companies we serve, we are enabling a more modern, more effective and more efficient healthcare system, and creating breakthrough solutions that transform business and patient outcomes.

For more than 60 years, IQVIA Canada has answered essential questions from governments, university researchers, decision-makers, and public health institutions seeking to know more about diseases, develop policies, and improve public welfare.

IQVIA is a global leader in protecting individual patient privacy. The company uses a wide variety of privacy-enhancing technologies and safeguards to protect individual privacy while generating and analyzing information on a scale that helps healthcare stakeholders identify disease patterns and correlate them with the treatment path and therapy needed for better outcomes.



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