



## Prescription Opioids

### Key Points

- Opioid pain relievers are used by 14.9% of the Canadian population, down from 21.6% in 2008.
- In Canada, the rate of opioid pain reliever use is highest among seniors.
- Among Canadian users of opioid pain relievers, about 2% reported abusing them, a decrease from 5% in 2012.
- There are currently no national-level data for prescription opioid-related mortality in Canada.

### Introduction

Prescription opioids are medications primarily used to treat acute and chronic pain, but they can also be used to control persistent cough or diarrhea. Another accepted medical use for prescription opioids is the treatment of opioid addiction, using methadone or buprenorphine-naloxone, under the supervision of a trained healthcare practitioner.

Pain is one of the most common reasons for seeking health care in North America. A review by Fischer and Argento<sup>1</sup> suggests that between 15% and 29% of the Canadian population experiences chronic pain, with limited access to appropriate and timely treatment: 50% have had to wait six or more months and many areas of Canada do not have any specialist pain treatment services. Although prescription opioids are one of several approaches to addressing chronic pain, they can also result in addiction and overdose death.

The misuse or non-medical use of prescription opioids has traditionally been defined as use by people other than those to whom the medication is prescribed or use in a manner or for a purpose contrary to what is intended. Such misuse includes borrowing or stealing medications from friends or relatives, deliberately using higher-than-recommended doses, hoarding medications, tampering with the medication or altering the route of delivery,<sup>2</sup> and using opioids together with alcohol or other medications that have a sedating effect.

There are various ways in which prescription drugs can be acquired and misused or result in harm. These ways include obtaining a prescription from a single physician, obtaining prescriptions from multiple physicians without informing them of the other prescriptions received (“double doctoring”), prescription fraud and forgery, theft, street drug markets and Internet purchases. In a study of opioid-dependent patients admitted to the Centre for Addiction and Mental Health in Toronto, 37% reported receiving opioids solely from physician prescriptions, 26% from both a prescription and “the street,” and 21% from the street.<sup>3</sup>

Opioids are commonly referred to as “pain killers” or “narcotics” and have a variety of generic, trade and street names. Table 1 lists examples of prescription opioids currently marketed in Canada. However, prescription opioids not currently marketed in Canada might be diverted into the country.



Prescription opioids are available in various forms in Canada, including tablets, capsules, syrups, solutions, liquid form for injection, skin patches, transmucosal preparations, suppositories and nasal sprays. Formulations available outside of Canada include suckers to take by mouth.

**Table 1. Common generic, trade and street names for opioids**

| Generic name           | Trade name (examples)                   | Street names                       |
|------------------------|---|------------------------------------|
| Buprenorphine          | BuTrans®                                | Bupe, bute                         |
| Buprenorphine-naloxone | Suboxone®                               | Subby, bupe, sobos                 |
| Codeine                | Tylenol®2,3,4 (codeine + acetaminophen) | Cody, captain cody, T1, T2, T3, T4 |
| Fentanyl               | Abstral®, Duragesic®, Onsolis®          | Patch, sticky, sticker             |
| Hydrocodone            | Tussionex®, Vicoprofen®                 | Hydro, vike                        |
| Hydromorphone          | Dilaudid®                               | Juice, dillies, dust               |
| Meperidine             | Demerol®                                | Demmies                            |
| Methadone              | Methadose®, Metadol®                    | Meth, drink, done                  |
| Morphine               | Doloral®, Statex®, M.O.S.®              | M, morph, red rockets              |
| Oxycodone              | OxyNEO®, Percocet®, Oxycocet® Percodan® | Oxy, hillbilly heroin, percs       |
| Pentazocine            | Talwin©                                 | Ts                                 |
| Tapentadol             | Nucynta®                                | Unknown                            |
| Tramadol               | Ultram® Tramacet® Tridural® Durela®     | Chill pills, ultras                |

**Note:** OxyContin® is no longer marketed in Canada and was replaced with OxyNEO®. Generic controlled-release oxycodone was approved by Health Canada. Oxymorphone (Opana®) has been approved by Health Canada, but is currently not marketed in Canada.

## Effects of Prescription Opioid Use

Opioids can reduce pain and improve function. Opioids can also produce a feeling of well-being or euphoria (“high”). At sufficiently high doses, opioids cause drowsiness, coma and death. Other physical effects are constricted pupils, a slight decrease in respiratory rate, nausea, vomiting, constipation, loss of appetite, and sweating. Opioids can also cause increased risk of sleep apnea, mood changes, decreased sex hormone levels resulting in decreased interest in sex and menstrual irregularities, physical dependence and addiction. Regular use of large quantities of opioids during pregnancy increases the risk of premature delivery and withdrawal in the infant. In those people who crush and inject oral opioids, certain filler chemicals in the pills can permanently damage veins and organs. Sharing needles or injecting with previously used needles greatly increases the risk of getting certain infections (e.g., HIV, hepatitis C).

Long-term use can lead to the development of tolerance, which serves to reduce the effects of the drug and prompts users to increase the dose to reinstate the desired effects. The potential for dependence and addiction increases with repeated use of higher doses.

Long-term regular use of these drugs should be reduced gradually with medical supervision. People who are physically dependent on opioids will experience withdrawal symptoms if they stop using the drug abruptly. The severity of withdrawal symptoms depends on the type of medication used, the amount used, the duration of use and how abruptly the drug was discontinued. Withdrawal symptoms can include agitation, insomnia, muscle aches, abdominal cramping, diarrhea and vomiting.



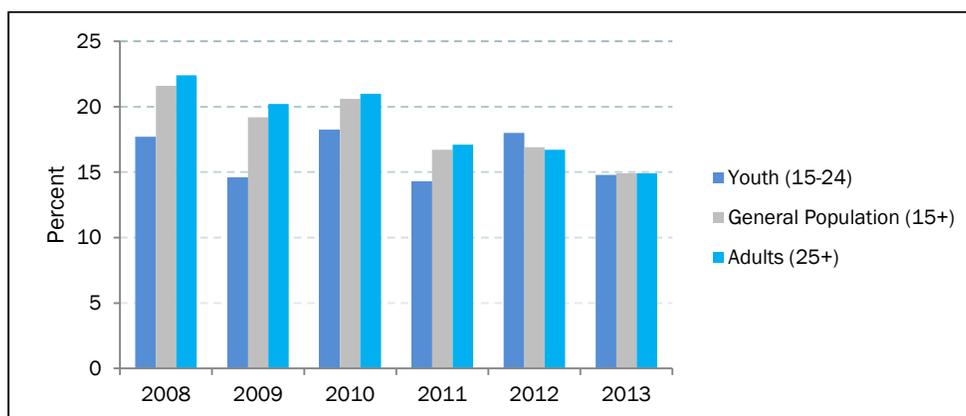
## Legal Status of Prescription Opioids in Canada

Prescription opioids are classified as Schedule I drugs under the *Controlled Drugs and Substances Act* (CDSA). Their use is legal when they are prescribed by licenced practitioners and used by the person for whom they are prescribed. Illegal possession of opioids and “double doctoring” (i.e., obtaining a prescription from more than one practitioner without telling the prescribing practitioner about other prescriptions received in the past 30 days) can result in seven years’ imprisonment. Trafficking, importing, exporting or producing opioids can result in life imprisonment.<sup>4</sup>

## Past-Year Use of Prescription Opioids in Canada

- **General population (age 15+):** According to the 2013 Canadian Tobacco, Alcohol and Drugs Survey (CTADS),<sup>5</sup> the rate of past-year use of opioid pain relievers among the general population was 14.9%, down from 21.6% in 2008. Because of methodological differences between the Canadian Alcohol and Drug Use Monitoring Survey (CADUMS)<sup>6</sup> and CTADS, comparisons of prevalence estimates between CADUMS (2008–2012) and CTADS (2013) data should be made with caution.
- **Youth (age 15–24):** In 2013, the rate of past-year use of opioid pain relievers among youth aged 15–24 (14.8%) did not differ from that of adults aged 25 and over (14.9%).<sup>5</sup> Among youth aged 15–19, the rate of past-year opioid pain reliever use was 13.6%; the corresponding rate was 15.9% for young adults aged 20–24.<sup>5</sup>
- **Adults (age 25+):** The rate of opioid pain reliever use among Canadian adults was 14.9% in 2013.<sup>5</sup> The use of opioid pain reliever medications among adults has decreased substantially from 2008, when 22.4% reported using such medications.<sup>6</sup>
- **Seniors (age 65+):** The rate of opioid pain reliever use among Canadian seniors was 16.2% in 2013.<sup>5</sup>
- **Gender:** Data from the 2013 CTADS indicates that the past-year prevalence of use of opioid pain relievers was slightly higher among females (15.7%) compared to males (14.0%).<sup>5</sup>

**Figure 1. Prevalence of self-reported opioid pain reliever use among Canadians by age category**



Source: CTADS 2013,<sup>5</sup> CADUMS 2008–2012<sup>6</sup>

Note: Because of methodological differences between CADUMS and CTADS, comparisons of prevalence estimates between CADUMS (2008–2012) and CTADS (2013) data should be made with caution. Several of the prevalence estimates included in this summary are qualified because of high sampling variability and should be interpreted with caution.



## Past-Year Use among High-Risk Populations

Health Canada's Monitoring of Alcohol and Drug Use among High-Risk Populations Study (HRPS)<sup>7</sup> investigated drug use in seven Canadian cities in three different high-risk groups: recreational drug users, street-entrenched adult drug users and street-involved youth drug users.\* The 2013 survey results for past-year use of hydromorphone, morphine, oxycodone and codeine are shown in Figures 2 and 3.<sup>7</sup> Note that the data includes both prescription and illegal sources for these drugs. Data on methadone is available in the reference reports but not shown below since some survey respondents were on methadone maintenance therapy. Similarly, data on heroin is available in the reports but not shown below since the focus here is prescription drugs.

Among the 2013 sample of street-entrenched adult drug users, past-year use of hydromorphone, morphine, oxycodone and codeine ranged from 8.8% to 65.8% across all cities except Winnipeg (Figure 2). Although past-year use of codeine was high in Winnipeg (50%), use of the other opioids was very low (0% or data suppressed due to low numbers).

Of note, the past-year use of Ts and Rs<sup>†</sup> in Winnipeg and Regina was 25% and 32.5%, respectively (data not shown). For other cities and in the other high-risk populations studied there was either no past-year use of Ts and Rs or the data were suppressed due to low numbers.

In the 2013 sample of street-involved youth drug users, past-year use of all four opioids (hydromorphone, morphine, oxycodone and codeine) was found only in Halifax and Vancouver with rates ranging from 20.0% to 73.1%. In Calgary, 16.3% to 40.5% of street-involved youth had reported using morphine, oxycodone or codeine during the past 12 months. There was no past-year use of the four opioids in Montreal. In the other cities, past year use of these opioids was variable (Figure 3).

The rates of past-year use of hydromorphone, morphine, oxycodone and codeine were very low among the 2013 sample of recreational drug users and so the specific data estimates for these drugs have been suppressed.

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\* **Recreational drug users** include individuals of legal drinking age in their provinces who were recruited at an event-specific site (e.g., rave, warehouse party) or a permanent night club site. To be included in the study, they had to have used at least one drug (excluding alcohol and tobacco) at least once in each of the last six months prior to each of the interviews. Proof of age was not asked at the time of recruitment and some respondents younger than the legal drinking age participated in the study.

**Street-entrenched adult drug users** include individuals 19 years of age or older with no permanent shelter. To be included in the study, they had to have used at least one drug (excluding alcohol and tobacco) at least once in each of the last six months prior to each of the interviews.

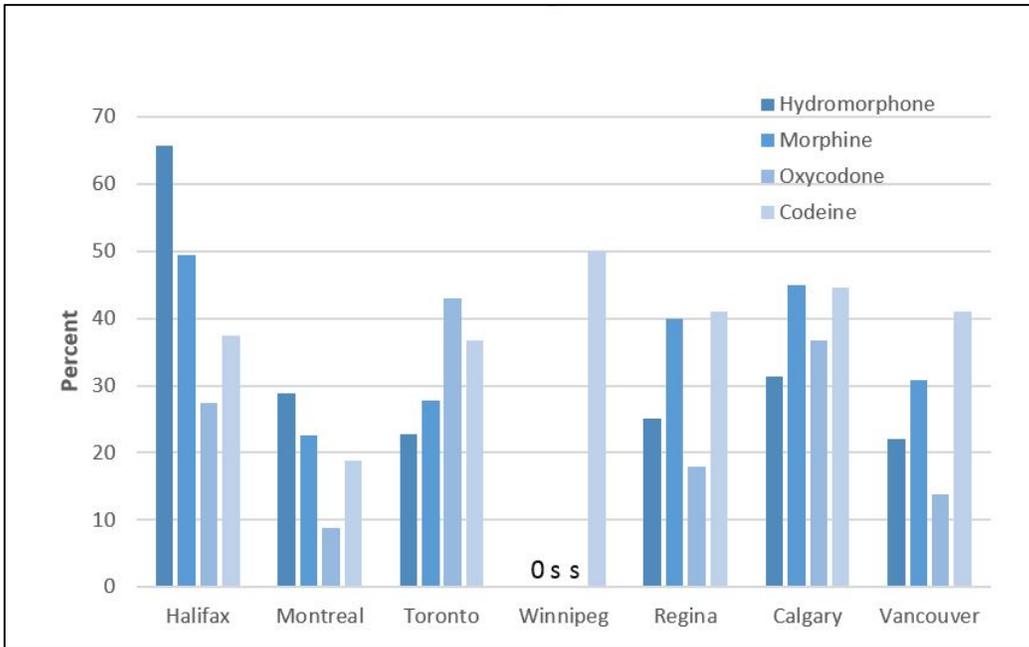
**Street-involved youth drug users** include individuals 15–24 years of age who might be experiencing total homelessness; have temporary, but not permanent, shelter; use services oriented to street youth; or were identified by local stakeholders as "street-involved." To be included in the study, they had to have used at least one drug (excluding alcohol and tobacco) at least once in each of the last six months prior to each of the interviews.

Note that there is overlap in the age range of the two street populations because most youth services are provided to clients up to the age of 24 years. Respondents aged 19–24 were considered to be adults or youth depending on the site where they were recruited.

† T and R refers to a combination of Talwin® (pentazocine, an opioid) and Ritalin® (methylphenidate), which are mixed and injected together.

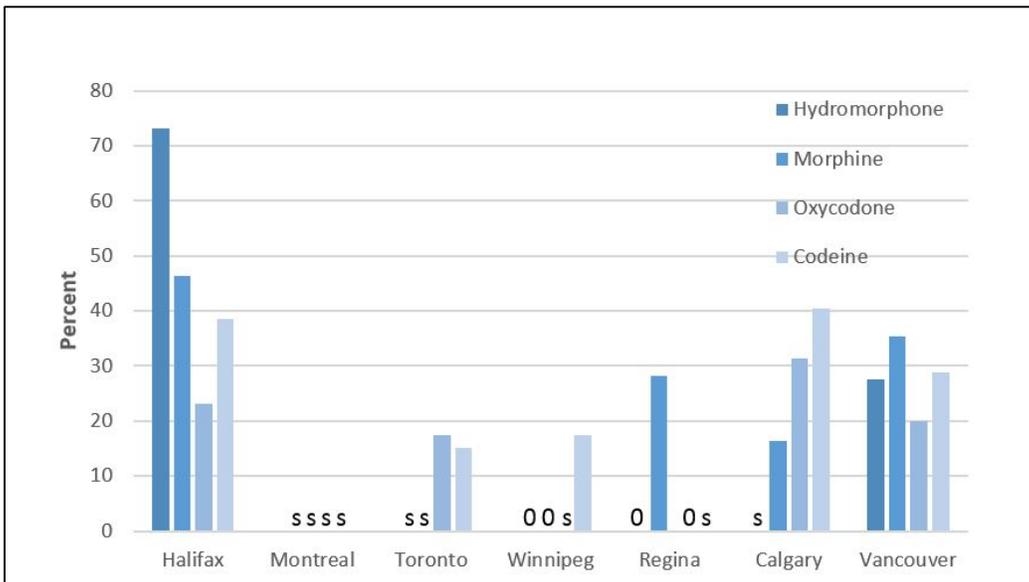


Figure 2. Past year use of opioids in street-entrenched adult drug users (2013)



Abbreviations: S = data was suppressed when the number of respondents was between 1 and 5. 0 = no drug use  
Source: Monitoring of Alcohol and Drug Use among High-Risk Populations Study (HRPS), 2012-2013<sup>7</sup>

Figure 3. Past year use of opioids in street-involved youth drug users (2013)



Abbreviations: S = data was suppressed when the number of respondents was between 1 and 5. 0 = no drug use  
Source: Monitoring of Alcohol and Drug Use among High-Risk Populations Study (HRPS), 2012-2013<sup>7</sup>



## Past-Year Misuse of Prescription Opioids

### *Past-Year Prevalence of Misuse in Canada*

- **General Population (aged 15+):** Data from the 2013 CTADS<sup>5</sup> revealed that among users of opioid pain relievers, 2.3% (99,000 Canadians representing 0.3% of the total population) reported abusing them, a decrease from 2012 (5% of users or 0.9% of the total population). Because of methodological differences between CADUMS and CTADS, comparisons of prevalence estimates between CADUMS (2008–2012) and CTADS (2013) data should be made with caution.
- **Youth:** According to the 2013 CTADS, the rate of abuse of pain relievers (includes to get high) among youth (aged 15–19) who used opioids was 5.8% (16,000), while the rate of abuse among young adult (aged 20–24) opioid users was suppressed due to high sampling variability.<sup>5</sup>
- **Students:** In the 2012–2013 Youth Smoking Survey, 1.5% of Canadian students in grades 7 to 9 and 2.5% of students in grades 10 to 12 reported past-year use of pain relievers to get high and not for medical purposes.<sup>8</sup>
  - Data from the spring 2013 National College Health Assessment Survey, which is drawn from a convenience sample of 32 post-secondary institutions in Canada and therefore not representative of all post-secondary students in Canada, indicated that 6.4% of post-secondary students had used prescription pain relievers that were not prescribed to them in the past 12 months.<sup>9</sup>
  - The 2013 Ontario Student Drug Use and Health Survey reported that 12.4% of students in grades 7 to 12 had used a prescription opioid pain reliever for non-medical purposes.<sup>10</sup>
- **First Nations:** Among First Nations individuals aged 18 and older living on-reserve or in northern First Nations communities across Canada, 4.7% reported past-year use of illicit (heroin) or prescription opioids, including morphine, methadone and codeine, without a prescription in 2008–2010.<sup>11</sup> Among First Nations youth aged 12–17 years, 1.3% reported using illicit or prescription opioids without a prescription during the previous 12 months.<sup>9</sup>

### *Past-Year Prevalence of Misuse Internationally*

- **United States:** In 2013, the past-year prevalence of non-medical use of prescription pain relievers was 4.2% among those aged 12 and older.<sup>12</sup>
- **Australia:** Data from 2013 show that 3.3% of those aged 14 and older reported misusing prescription or over-the-counter pain relievers and analgesics<sup>‡</sup> in the previous 12 months.<sup>13</sup>

## Prescription Opioid-related Harms

### *Emergency Room Visits*

From 2005–2006 to 2010–2011, there was an almost 250% increase in the number of emergency room (ER) visits in Ontario related to narcotics withdrawal, overdose, intoxication, psychosis, harmful

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<sup>‡</sup>Prescription pain relievers and analgesics include prescription-only codeine combinations, oxycodone, pethidine or fentanyl, and other prescription pain relievers and analgesics. Over-the-counter pain relievers and analgesics include paracetamol, aspirin, over-the-counter codeine combinations, and other over-the-counter pain relievers and analgesics.



use and other related diagnoses.<sup>14</sup> Rates of ER visits for opioid-related mental and behavioural disorders also increased in Ontario between 2008–2009 and 2010–2011.<sup>15</sup>

**Table 2. ER visits for mental and behavioural disorders due to opioids in Ontario by region**

| Region                | 2008–2009 ER Visits          | 2010–2011 ER Visits          |
|-----------------------|------------------------------|------------------------------|
| All of Ontario        | 2.6 for every 10,000 people  | 3.7 for every 10,000 people  |
| Northern Ontario only | 9.2 for every 10,000 people  | 22.9 for every 10,000 people |
| First Nations         | 12.1 for every 10,000 people | 55 for every 10,000 people   |

Over the period from 2003 to 2011, adult drivers (18–64 years) in Ontario who were dispensed moderate to high doses of opioids were 21% to 42% more likely to have an emergency department visit related to road trauma compared to drivers who were taking lower doses of these drugs.<sup>16</sup>

### Neonatal Abstinence Syndrome

In Canada, 3.8 infants out of 1,000 births were born to mothers who used opioids during pregnancy and displayed a recognizable set of withdrawal symptoms that together are called neonatal abstinence syndrome (NAS).<sup>17</sup>

In Ontario, the rate of NAS increased from 0.9 to 5.1 per 1,000 live births from 2002–2003 to 2011–2012, a fourfold increase in prevalence over this ten year period.<sup>18</sup> Another study showed that the incidence of NAS increased 15-fold from 0.28 to 4.29 per 1,000 live births over the 19-year period from 1992 to 2011.<sup>19</sup> In a sub-study of mothers who were public drug plan beneficiaries, 67% received an opioid prescription in the 100 days preceding delivery, including 53.3% who received methadone.<sup>19</sup>

### Opioid-related Deaths

There are currently no national-level data available for prescription opioid-related mortality in Canada. Provincial data is available from Alberta, British Columbia and Ontario.

- **Alberta:** In Alberta, deaths attributable to poisoning from narcotics or psychodysleptics (i.e., hallucinogenic drugs) accounted for the second-highest prescription drug-related death rate (3.8 per 100,000) between 2003 and 2006.<sup>20</sup>
- **British Columbia:** Between 2005 and 2009, there were 815 deaths related to fentanyl, hydromorphone, morphine and oxycodone in British Columbia.<sup>21</sup>
- **Ontario:** Data from the Office of the Chief Coroner show that opioid-related deaths in Ontario increased dramatically from 2004 through 2011. In particular, deaths related to oxycodone increased from less than 60 in 2004 to 160 in 2011. Deaths related to fentanyl also increased substantially over this period.<sup>22</sup>

The overall rate of opioid-related mortality increased by 242% between 1991 (12.2 per 1,000,000) and 2010 (41.6 per 1,000,000).<sup>22</sup> In 2010, 12.1% of all deaths among those aged 25–34 years in Ontario were opioid-related, an increase from 5.5% in 2001.<sup>23</sup>

Among Ontario public drug plan beneficiaries who were prescribed an opioid for non-malignant pain between 1997 and 2006, an average daily dose of 200 mg or more of morphine (or equivalent) was found to be associated with a nearly three-fold increase in the risk of opioid-related mortality compared to low daily doses.<sup>24</sup>



## Treatment for Opioid Addiction

While all federal, provincial and territorial agencies collect data on their own treatment systems, there are currently no national-level data available for prescription drug-related treatment in Canada. The only publicly available data comes from Ontario, in which prescription opioid-related admissions to substance use treatment programs doubled from 2004 to 2009.<sup>25</sup> In 2005–2006, prescription opioids were identified as the presenting problem substance by 10.6% of individuals seeking addiction treatment in that province. By 2012–2013, the numbers had increased to 18.2%.<sup>26</sup>

## Additional Resources

- [First Do No Harm: Responding to Canada's Prescription Drug Crisis](#)
- [Opioids, Driving and Implications for Youth \(Topic Summary\)](#)



The Canadian Centre on Substance Abuse changes lives by bringing people and knowledge together to reduce the harm of alcohol and other drugs on society. We partner with public, private and non-governmental organizations to improve the health and safety of Canadians.

CCSA activities and products are made possible through a financial contribution from Health Canada. The views of CCSA do not necessarily represent the views of the Government of Canada.



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