

Cocaine

Key Points

- The prevalence of cocaine use was 2.0% among people living in Canada (aged 15 years and older) in 2019.
- Among those aged 20–24, the prevalence of cocaine use was 9.0% in 2019, a three-fold increase from 3.3% in 2013.
- About 7% of postsecondary students (aged 17 to 25 years) reported using cocaine in 2019–2020.
- Older adults (aged 65 years and older) have the lowest rate of cocaine use among all people living in Canada (0.2%) in 2019.
- Increased availability of cocaine in the illegal drug supply and polysubstance use (e.g., co-use of cocaine with opioids) are contributing to increased rates of cocaine-related deaths in Canada.
- Cocaine contributes to the second-highest criminal justice costs of any substance in Canada after

Introduction

Cocaine is derived from the coca shrub grown primarily in South America. Extracting cocaine from the coca plant involves soaking the coca leaves in chemical solvents and crushing the leaves to form a paste. This paste is then treated with oxidizing agents and acids to create cocaine hydrochloride, commonly referred to as cocaine.¹

Cocaine is a white powder that is often mixed with substances similar in appearance, such as corn starch. This powder can be taken through the nose by snorting, or it can be dissolved and injected.² Commonly used street names for cocaine include coke, coca, coco, snow, Charlie, dust, snowflake and powder.³

Freebase cocaine is made when the hydrochloride is removed from cocaine hydrochloride. This is done to create a smokeable form of cocaine. The technique for producing freebase cocaine can be very hazardous.¹

A more common and less hazardous way to create smokable cocaine is to dissolve it in a mixture of water and baking soda to form whitish, opaque crystals. These crystals are commonly referred to as crack or rock as the crystals look like rocks.⁴ When the crack rock is heated, it makes a crackling sound, thus the term crack.³ Crack or freebase cocaine can be smoked or dissolved and injected.

Using other drugs with cocaine,* particularly opioids, either at the same time (speedballs) or consecutively, is associated with an increased risk of overdose.^{5,6} Increased use of cocaine among

* Unless otherwise specified, the use of the term cocaine in the remainder of this document also includes crack.



people who use drugs is contributing to the ongoing overdose crisis in Canada.⁷ A large proportion of cocaine-related poisoning deaths involve at least one other substance, often an opioid.⁵

Effects of Cocaine

Short-Term Effects

Cocaine use can cause a state of euphoria accompanied by a large burst of energy (called the rush, flash or high). If cocaine is injected or smoked, the extremely intense effect is felt within seconds and only lasts five to 10 minutes. If cocaine is snorted, the effect is less intense but lasts between 15 and 30 minutes.¹ Other effects include increased energy and alertness, increased body temperature, increased heart rate and blood pressure,^{8,9} agitation, paranoia, suppressed appetite, muscle spasms, stroke, fainting and overdose. An overdose can involve chest pain, arrhythmia, confusion, convulsions, respiratory depression, coma or death.⁸

Long-Term Effects

Longer-term effects of cocaine use are sleep disturbance, weight loss, tolerance to the drug, depression, cardiovascular problems,^{9,10} nasal damage (through snorting), kidney failure,⁹ throat and bronchial damage (through crack smoking),¹¹ headaches, hallucinations, seizure, and attention and memory disruptions. Maternal use of cocaine during pregnancy can result in low birth weight (and related long-term health complications) in newborns.^{12,13} Injecting cocaine is associated with an increased risk for human immunodeficiency virus (HIV) and hepatitis C virus (HCV).¹⁴ Smoking crack may be independently associated with HIV and HCV infections.¹⁵⁻¹⁷

Legal Status of Cocaine in Canada

Cocaine is a Schedule I drug under the Canadian [Controlled Drugs and Substances Act](#). Possession of the drug can result in seven years' imprisonment, while trafficking and production of the drug can result in life imprisonment. Driving while impaired by cocaine is also a criminal offence under the [Criminal Code](#) of Canada, as is refusing to comply with police officers' demand for drug tests; penalties for those convicted are equivalent to those for alcohol impairment.

Cocaine Use in Canada

Self-Reported Use in the Previous Year

- **General population (aged 15 years and older):** According to data from the 2019 Canadian Alcohol and Drugs Survey (CADS), the prevalence of cocaine use among the general population was 2.0% (605,000), relatively unchanged from 2017 (2.5%)[†], but a significant increase from both 2013 and 2015 (0.9%[†] and 1.2%, respectively) (Figure 1).¹⁸⁻²¹
- **Youth and young adults (age 15–24 years):** The prevalence of cocaine use among youth aged 15–19 years old decreased to 0.6% in 2019[†] compared with 2.1% in 2015 and 1.6% in 2017[†].¹⁹⁻²¹ However, the prevalence of cocaine use among young adults aged 20–24 years old increased significantly to 9.0%[†] in 2019 from 3.3%[†] in 2013 (Figure 1).^{18,21}
- **Students (grades 7–12):** According to the Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS), the prevalence of cocaine use among youth in grades 7–12 was 2.2% in 2018–2019, unchanged from 2016–2017 (2.3%).^{22,23} Males (2.6%) were more likely than females (1.7%) to

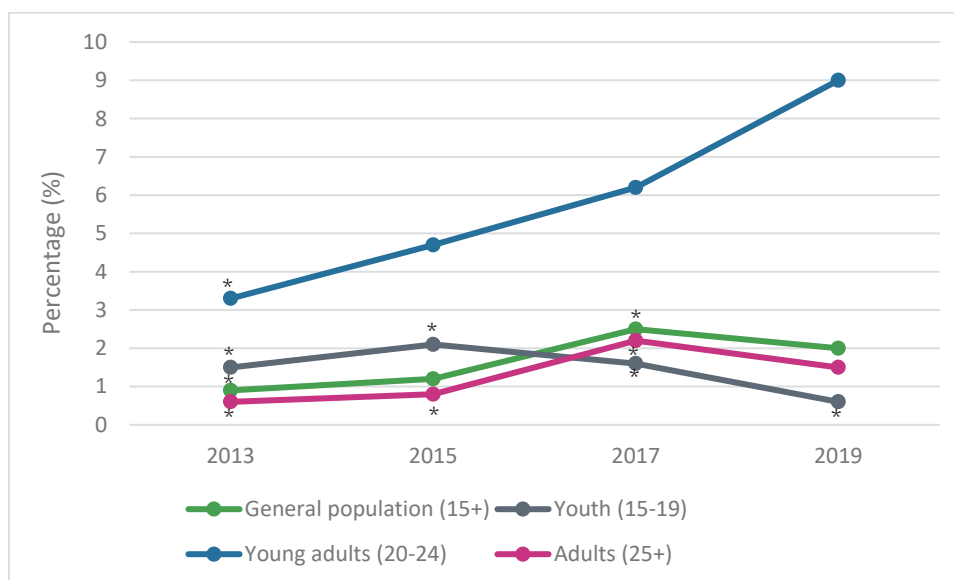
[†] Moderate sampling variability, interpret with caution.



report using cocaine, and grade 10–12 students (3.4%) were more likely than grade 7–9 students (0.9%) to report using cocaine (Figure 2).²²

- **Postsecondary students (age 17–25 years):** Data from the 2019–2020 Canadian Postsecondary Education Alcohol and Drug use Survey show that 7.4% of postsecondary students (8.5% of males and 6.3% of females) had used cocaine in the past 12 months.²⁴
- **Adults (age 25 years and older):** About 1.5% of adults aged 25 years and older living in Canada reported previous-year cocaine use, according to the 2019 CADS, a decrease from 2.2% in 2017 (Figure 1).^{20,21}
- **Older adults (age 65 years and older):** Older adults aged 65 years and older have the lowest rate of previous-year cocaine use at 0.2% in 2019.²¹

Figure 1: Prevalence of self-reported previous-year cocaine use among people living in Canada by year and age group

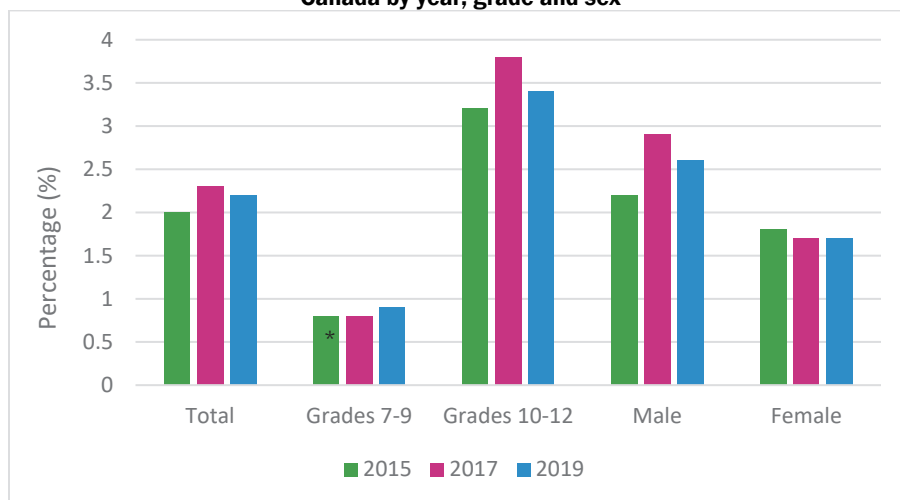


Source: CTADS 2013,¹⁸ 2015¹⁹ and 2017,²⁰ and CADS 2019²¹

Note: Data identified with an asterisk (*) should be interpreted with caution due to moderate sampling variability.



Figure 2. Prevalence of self-reported previous-year cocaine among students living in Canada by year, grade and sex

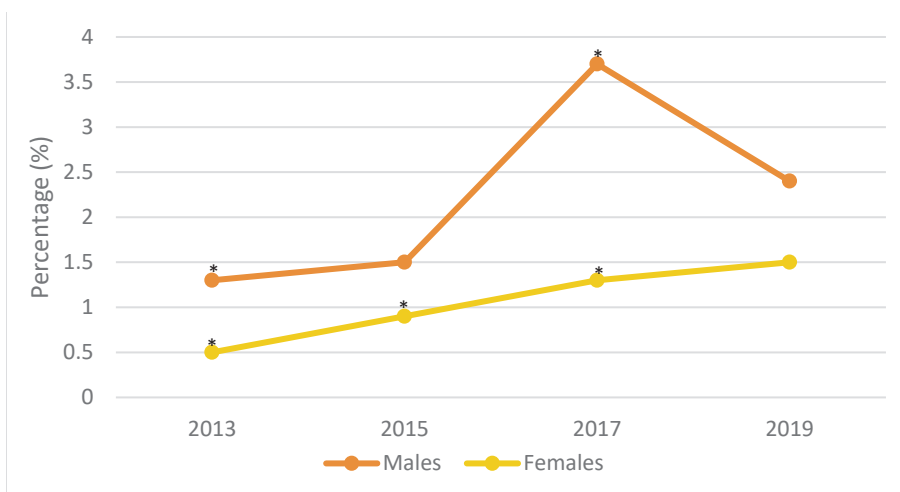


Source: CSTADS 2015,²⁵ 2017²³ and 2019²²

Note: Data identified with an asterisk (*) should be interpreted with caution due to moderate sampling variability.

- **Sex (age 15 years and older):** Data from the 2019 CADS indicated that the previous-year prevalence of cocaine use was higher among males (2.4%) compared with females (1.5%).²¹ This represents a decrease from 2017 for males (3.7%) and no significant change from 2017 for females (1.3%[‡]) (Figure 3).²⁰
- **Provincial differences:** In 2019, CADS data indicated the range of cocaine use across provinces varied between 0.8% in British Columbia (the lowest) and 2.6% in Alberta (the highest).²¹

Figure 3. Prevalence of self-reported previous-year cocaine use among people living in Canada by year and sex



Source: CTADS 2013,¹⁸ 2015¹⁹ and 2017,²⁰ and CADS 2019²¹

Note: Data identified with an asterisk (*) should be interpreted with caution due to moderate sampling variability.

[‡] Moderate sampling variability, interpret with caution.

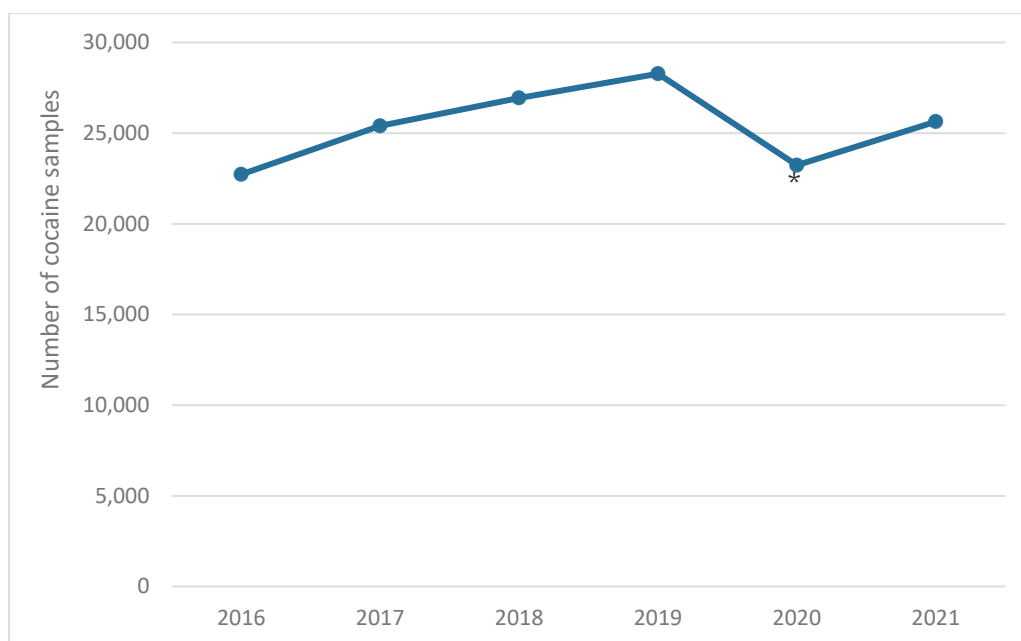


Seizures in Canada

Drug seizure data provide a supply-related indicator of the availability of drugs in the illegal market.

- **National:** The United Nations Office on Drugs and Crime (UNODC) reported that in 2019 about 4,827 kg of cocaine was seized in Canada by law enforcement, almost a three-fold increase compared to 2018 (1,676 kg).²⁶
- **Drug Analysis Service:** The service analyzes suspected illegal drugs seized by Canadian law enforcement agencies. The drugs analyzed do not represent the total number of substances seized by law enforcement and should not be used to estimate the number or types of drugs available on the street. A single sample can contain more than one substance. Results indicate that the number of drug samples containing cocaine increased from 22,727 in 2016 to 25,638 in 2021 (Figure 4). In 2021, cocaine was the most frequently identified controlled substance and about 23% of all samples in 2021 contained cocaine.²⁷
- **Provincial differences:** Detection of cocaine was not the same across Canada. Results from the Drug Analysis Service indicated that the highest number of samples of cocaine identified in 2021 was in Ontario (10,338 samples), Quebec (6,298 samples), British Columbia (3,394 samples) and Alberta (2,594 samples).²⁷

Figure 4. Number of cocaine samples identified in Canada (2016–2021)



Source: Drug Analysis Service 2021²⁷

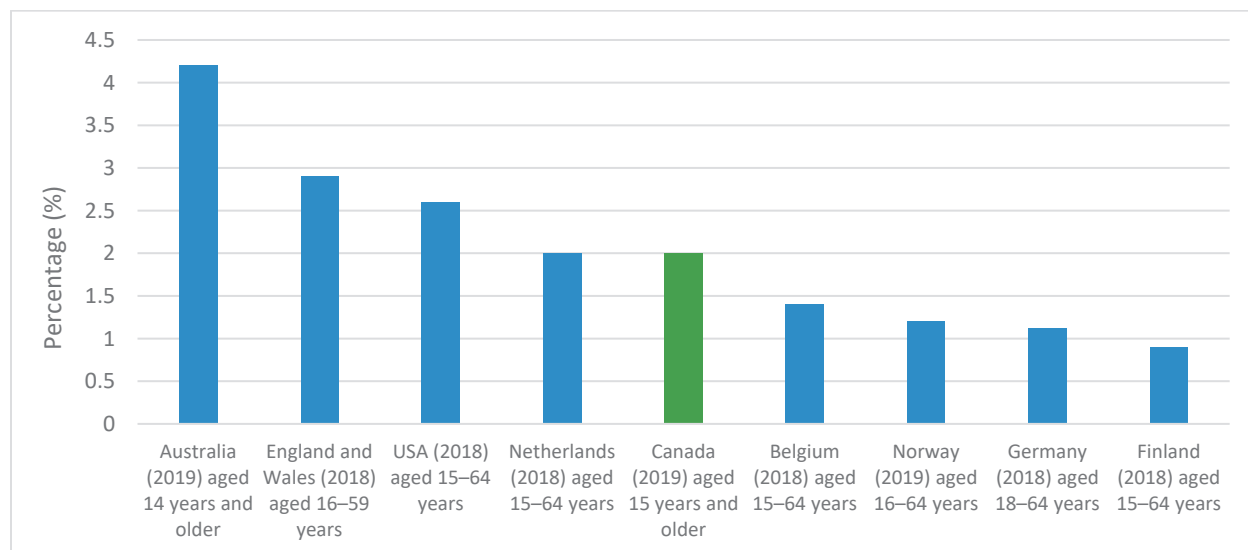
* The decrease in 2020 reflected COVID-19 impacts on the number of cocaine samples that were submitted for analysis. The number of samples received also dropped in this year (a 10% decrease over the same period the previous year).

Previous-Year Non-Medical Use Internationally

According to the UNODC, the annual prevalence of cocaine use among the general population in Canada (age 15 years and older) in 2019 was 2%, which is in the middle of the range of other selected Western countries (Figure 5).²⁸



Figure 5. Prevalence of self-reported previous-year cocaine use among the general population by country, year and age group



Source: UNODC 2021²⁸

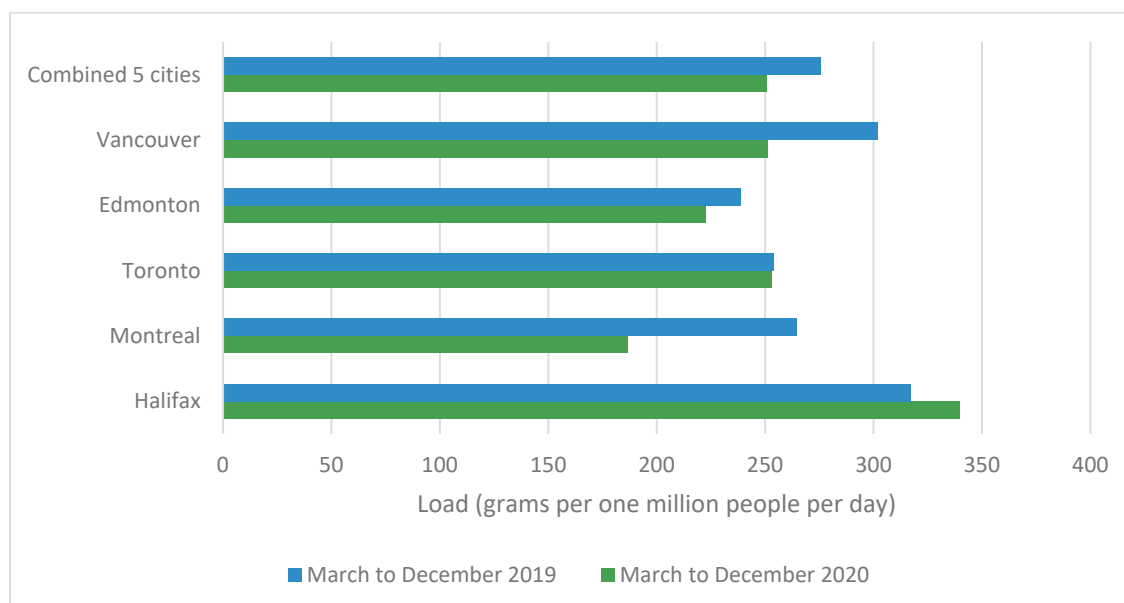
Note: International prevalence rates are not directly comparable due to variations in survey dates and population age ranges.

Wastewater-Based Estimates of Cocaine

A pilot study by Statistics Canada collected and tested wastewater in five major Canadian cities (that is, Halifax, Montreal, Toronto, Edmonton and Vancouver) to estimate the extent of drug use in different cities across Canada and to track trends over time. Cocaine levels can be estimated in wastewater by detecting benzoylecgonine, the main metabolite of cocaine that is tested for in most cocaine urine drug screens and is stable in wastewater. The average cocaine level in the five cities was 251 g per million people per day between March and December 2020, a 9% decrease from 276 g between March and December 2019. The 2020 average cocaine level in Halifax wastewater was the highest, about two times higher than in Montreal wastewater, which was the lowest (Figure 6).²⁹



Figure 6. Wastewater-based estimates of cocaine in Canada (2019 and 2020)



Source: Statistics Canada (2021)²⁹

Prevalence Among Individuals Accessing Treatment and Harm Reduction Services

According to 2016–2018 data from the National Treatment Indicators report, cocaine was the second most frequently reported problem substance (after alcohol) among individuals accessing publicly funded, community-based treatment services in Canada. About 30% of individuals accessing these treatment services reported cocaine as a problem substance in 2016–2017 and 2017–2018.³⁰

The Community Urinalysis and Self-Report Project (CUSP) surveys people accessing harm reduction services about their recent drug use (reported) and compares that data with urine toxicology results (detected) in seven jurisdictions across Canada[§]. Standardized data from spring 2019 to spring 2021 at 49 harm reduction sites showed that cocaine use was most commonly used in Central and Eastern Canada^{||} (71.4% to 80.4% reported and 76.2% to 80.0% detected). The detected level of cocaine use by urine drug screens is slightly higher than reported cocaine use because of the unpredictability of the illegal drug supply.³¹

Harms Associated with Use

Combinations of opioids, cocaine and other central nervous system stimulants (such as methamphetamine) were associated with the most common unintentional deaths from polysubstance[¶] use for males and females in 2017.⁵

[§] Jurisdictions included British Columbia (multiple sites), Edmonton (Alberta), Manitoba (multiple sites), Thunder Bay (Ontario), Montreal and Laval (Quebec), and Halifax (Nova Scotia).

^{||} Central Canada included Montreal, Laval and Thunder Bay, while Eastern Canada included Halifax.

[¶] A poisoning death is an acute toxicity death resulting from the direct effects of consuming a substance. It is considered a polysubstance poisoning death when two or more substances have contributed to the death.



Hospitalization

Data collected by the Canadian Institute for Health Information between March 2020 and June 2021 indicated that 5% of all hospital stays for substance use harm in Canada (excluding Quebec) were due to cocaine use. Ontario and British Columbia had the highest rates of hospital stays for cocaine use (40% and 24%, respectively), while Nunavut, Prince Edward Island and Yukon had the lowest rates (less than 1% each). More than half of people living in Canada who stayed in the hospital due to cocaine use (59%) were between the ages of 20 and 39 years. Males had much higher rates of hospital stays for cocaine use compared with females (62% and 38%, respectively).³²

Mortality

Data from six provinces[#] indicate that there were 2,744 poisoning deaths (overdoses) caused by stimulants in 2020 and 1,736 caused by stimulants between January and September 2021 (excluding Manitoba)^{**}. Of all the accidental opioid-related poisoning deaths in 2021 (January-September), 63% involved cocaine, while 53% involved methamphetamine.³³

Data from several provinces also indicate that cocaine is frequently involved in overdose deaths:

- **British Columbia:** Cocaine was involved in 47% of illegal drug toxicity deaths in 2021.³⁴
- **Ontario:** During the start of the COVID-19 pandemic (March–December 2020), cocaine directly contributed to 43% of all opioid-related deaths ($n = 847$), compared with 36% before the pandemic ($n = 419$; March–December 2019).³⁵
- **Alberta:** Cocaine was directly involved in 305 poisoning deaths in 2021, an increase from 218 deaths in 2019 but a decrease from 376 deaths in 2020. In 2021, 25% of opioid-related poisoning deaths involved cocaine.³⁶
- **Nova Scotia:** Cocaine was involved in 30 out of 72 (42%) substance-related poisoning deaths in 2021.³⁷

Impaired Driving

The National Drug Driving Research Project collected data from 4,976 injured drivers treated in 15 trauma centres across Canada between January 2018 and May 2021.³⁸ That data showed that cocaine, amphetamines or both were detected in 11% of drivers. These drugs were most likely to be found in drivers ages 25 to 44 years old (15%) and males (12%, compared with 8% among females). In the Atlantic provinces, cocaine, amphetamines or both were detected in two in 10 injured drivers (21%), compared with 12% in Quebec, Saskatchewan and Alberta, and about 10% in British Columbia and Ontario.

Drivers who were injured at night were more likely to have these drugs in their system (13%) compared with those injured during the day (10%).³⁸

Criminal Justice Impacts

Statistics Canada collects information on criminal incidents reported by Canadian police services, including drug violations for illegal possession, trafficking, and production or distribution of controlled drugs and substances.³⁹ Higher rates of violations do not necessarily reflect a higher prevalence of use and will depend on several factors, including whether incidences are reported by the police and different approaches to enforcement. Between 2010 and 2020, rates of violations for

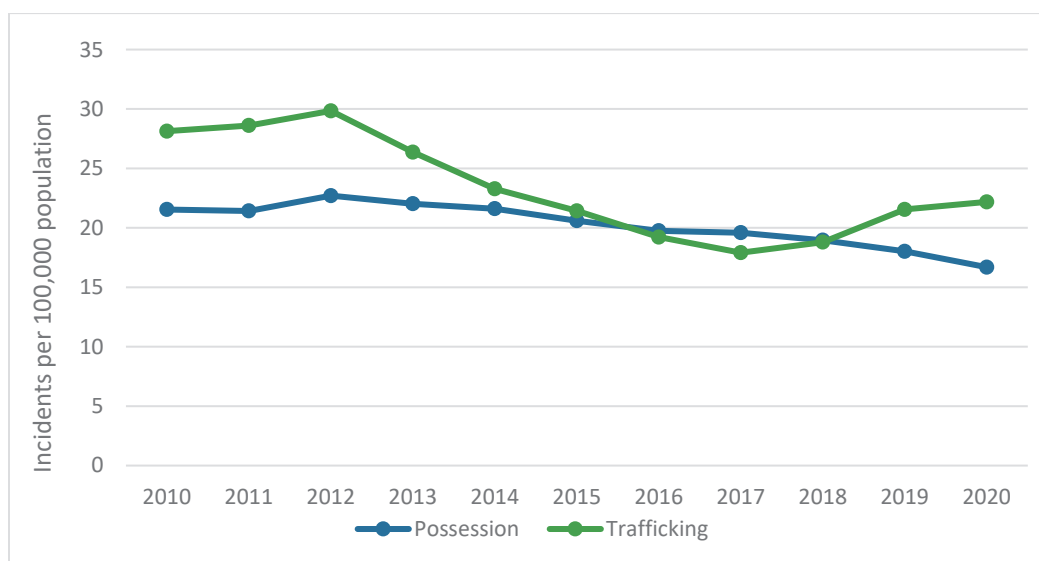
[#] Provinces included British Columbia, Saskatchewan, Manitoba, Ontario, Nova Scotia, Newfoundland and Labrador.

^{**} There was no data for Manitoba in 2021.



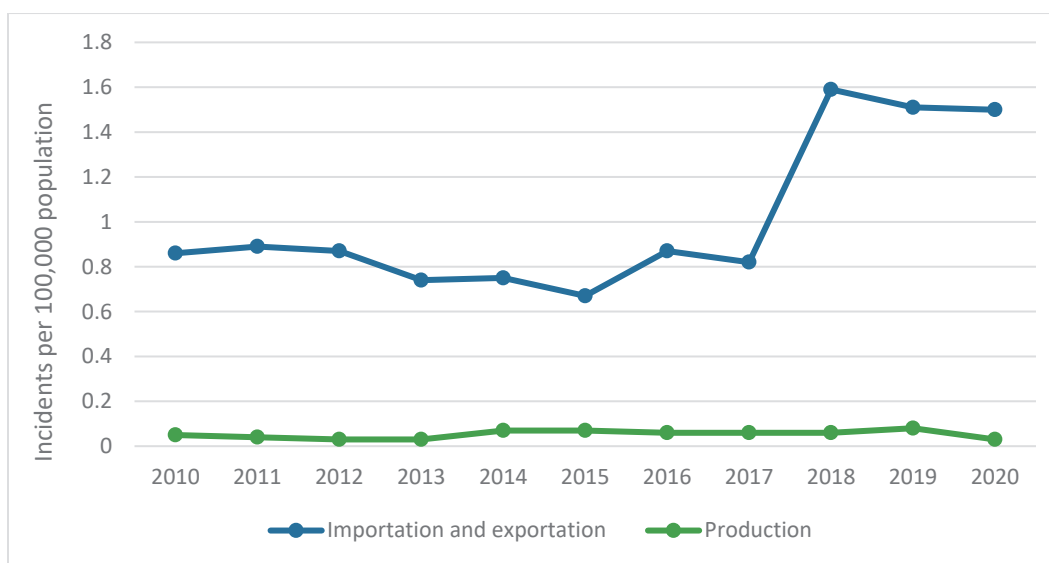
possession of cocaine decreased by 21% (from 21.5 to 17.0 per 100,000 population) and trafficking of cocaine also decreased by 21% (from 28.1 to 22.3 per 100,000 population) (Figure 7). Like other illegal drugs, the greatest proportion of drug-related offences in 2020 was due to possession of cocaine (22.18 per 100,000 population).³⁹ Between 2010 and 2020, the rates of cocaine production violations were much lower (between 0.03 and 0.05 per 100,000 population) than the rates of for importation and exportation violations, which increased by 74% (from 0.86 to 1.5 per 100,000 population) (Figure 8).³⁹

Figure 7. Cocaine possession and trafficking violations (per 100,000 population) across Canada (2010–2020)



Source: Statistics Canada, 2021³⁹

Figure 8. Cocaine importation and exportation, and production violations (per 100,000 population) across Canada (2010–2020)



Source: Statistics Canada, 2021³⁹



Costs Associated with Use

The social costs of cocaine use, including healthcare, criminal justice, lost productivity and other direct costs, were estimated to be \$3.7 billion in 2017.⁴⁰ Almost 70% of costs attributable to cocaine are from criminal justice costs. In 2017, cocaine accounted for more than a quarter of criminal justice costs associated with substance use in Canada (\$2.6 billion in total). Criminal justice costs include policing, courts and correctional services that may result from offences such as impaired driving, drug-related offences (e.g., trafficking, possession), and violent and nonviolent crimes. Per-person costs associated with cocaine increased between 2015 and 2017 by 10% from about \$92 to \$102 per year for each Canadian regardless of age.⁴⁰

Additional Resources

- [Cross-Canada Report on the Use of Drugs from the Unregulated Supply, 2019-2021 Data](#)
- [Polysubstance Use and Poisoning Deaths in Canada](#) (Report at a Glance)
- [National Treatment Indicators Report: 2016–2018 Data](#)
- [Changes in Stimulant Use and Related Harms: Focus on Methamphetamine and Cocaine](#)
- [Canadian Substance Use Costs and Harms 2015–2017](#)



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