







**CCENDU Bulletin, December 2022** 

# **CCENDU Bulletin**

### An Update on Stimulant Use and Related Harms in Canada and the United States

# Background

The Canadian Community Epidemiology Network on Drug Use (CCENDU) is a pan-Canadian network of community partners co-ordinated by the Canadian Centre on Substance Use and Addiction (CCSA). The network has sites in British Columbia, Manitoba, Thunder Bay, Toronto, Quebec, Nova Scotia, and Newfoundland and Labrador. Each site collects and shares information on substance-related trends from local data sources. CCENDU collates this information to assess risk at the national level and, if warranted, issues alerts and bulletins to advise stakeholders (policy makers, healthcare practitioners, first responders, treatment providers, people who use drugs, law enforcement officials and others) about drug-related health threats and what can be done to prevent and reduce harms.

In April 2019, CCENDU published a bulletin on changes in stimulant use and related harms, which focused on methamphetamine and cocaine\* based on data collected by CCENDU sites in November 2018: <u>Changes in Stimulant Use and Related Harms</u>: Focus on Methamphetamine and Cocaine.<sup>1</sup> The bulletin defined stimulant-related harm as including treatment for problematic use, stimulant-related hospitalizations and emergency department visits and stimulant-related deaths. All CCENDU sites at the time reported increases in these harms, particularly in the West and Toronto. The bulletin also pointed to drivers of harms beyond direct pharmacological effects, such as adulterants in the unregulated drug supply, marginalization, stigmatization and motivations for use, including performance enhancement, increased confidence or sociability and enhancement of sexual activities.

CCENDU revisits these indicators in this bulletin to determine whether the trends previously reported by CCENDU have continued or changed and to provide an update on our understanding and ability to address these factors.

In addition, since the 2019 bulletin, new issues have emerged that further contribute to the changing landscape of stimulant-related risks and harms:

- The COVID-19 pandemic hit Canada and the United States in March 2020, affecting people's health and habits (e.g., substance use as a means of coping with stress) as well as disrupting the drug supply and access to supports and services, particularly in the beginning.<sup>2</sup>
- Polysubstance use has increased significantly in Canada and the United States,<sup>3-9</sup> with a high proportion of substance-related deaths involving some combination of opioids, stimulants and benzodiazepines, particularly since the COVID-19 pandemic started. This reflects both unintentional polysubstance use through the increasingly toxic unregulated drug supply and intentional use of stimulants, particularly with opioids.<sup>4,8,10</sup>

<sup>\*</sup> Unless otherwise specified, cocaine refers to both powder and crack cocaine.

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- Methamphetamine manufacture has changed across Canada and the United States with the rise of the phenyl-2-propanone (P2P) method for methamphetamine manufacture.<sup>†11-14</sup> There is speculation and limited evidence that these changes have accelerated mental health deterioration among people who use methamphetamine.<sup>15-19</sup>
- There are increasing reports of methamphetamine-induced psychosis and violence related to stimulant use, increasing the burden on EDs and harm reduction services.<sup>20-21</sup>
- Supervised consumption initiatives have advanced, but many do not adequately address stimulant use as services rarely have options for drug inhalation, which is the preferred method of use for most stimulants.<sup>13,22</sup>
- Similarly, safer supply and agonist treatment initiatives have advanced, but there are few safer supply or agonist treatment options for stimulant use.

This bulletin explores the role of, and responses to, these new factors.

Moreover, CCENDU has started collaborating more closely with the National Drug Early Warning System (<u>NDEWS</u>) in the United States. By harmonizing insights from CCENDU and NDEWS' data collection and surveillance efforts, we are now able to paint a broader picture and understand broader trends than what was presented in the 2019 bulletin.

This bulletin presents an update on the harms and local responses identified by CCENDU in 2019 and expands the scope to the United States for a broader view. This bulletin presents:

- 1. National data trends since November 2018 in Canada and the United States;
- Local reports on risks, harms and responses from CCENDU sites in Canada and NDEWS sites in the United States;
- 3. Discussion and next steps; and
- 4. Resources.

# Stimulant Use Patterns and Harms in Canada and the United States

#### **Updated Canadian Data Trends**

#### **Stimulant Use Patterns in Canada**

National survey data from 2019 indicated that past-year cocaine use among young adults aged 20-24 years was 9.0% overall, ranging from 2.9% in British Columbia to 14.7% in the Atlantic provinces and an increase from 6.2% overall in 2017.<sup>23</sup> Otherwise national survey data suggest that cocaine and methamphetamine use in the general population is relatively stable and low (2.0% for cocaine and 0.5% for methamphetamine).

However, national surveys tend to underrepresent those at highest risk of stimulant-related harms. Data show much higher rates of stimulant use among people who use drugs, especially people who

<sup>&</sup>lt;sup>+</sup> P2P methamphetamine refers to various ways in which phenyl-2-propanone (P2P) can be converted to methamphetamine. This method uses many different readily available but toxic chemicals, including cyanide, lye, mercury, sulfuric acid, hydrochloric acid and nitrostyrene. Evidence suggests that the modern P2P method produces a molecular version of methamphetamine that produces three to five times the central nervous system activity and duration than previous P2P methods and methods using the precursors, pseudoephedrine and ephedrine.



use opioids.<sup>3-8</sup> In a study of 1,526 people accessing harm reduction services across Canada in 2019–2021,<sup>24</sup> cocaine and methamphetamine were the most common substances reported used in the previous three days, with cocaine and crack most common in Central and Eastern Canada and methamphetamine and amphetamine most common in the West (consistent with data reported in 2019).<sup>1</sup> Overall, cocaine or crack use in the previous three days was reported by 60% of participants and methamphetamine use by 51% of participants. When participants were asked which they **preferred**, methamphetamine was the preferred stimulant across sites (Figure 1).



Figure 1. Self-reported preferences of stimulants among 1,526 people accessing harm reduction services in 2019–2021

Of note, 55% of participants in this study reported using both opioids and stimulants in the previous three days, and most reported smoking stimulants, compared with other methods of use.

In addition, a recent study of people who use methamphetamine in Vancouver provides more nuanced insights into motivations for use than what was reported in the 2019 bulletin.<sup>25</sup> The study highlighted five distinct subgroups who use methamphetamine: those who have street-based sources of income (31.6%), those in opioid agonist treatment (22.3%), women engaged in sex work and who use opioids (21.4%), those who primarily use stimulants (15.7%), and men who have sex with men (9.0%).

#### **Stimulant-Related Costs and Harms in Canada**

In 2020 (most recent data available), total costs associated with cocaine use were C\$4.16 billion – a 30% increase from 2014 (last year reported in the 2019 bulletin).<sup>26</sup> This includes a 15% increase in healthcare costs<sup>‡</sup> (Figure 2), in contrast to the decrease in cocaine-related healthcare costs observed in 2007–2014.<sup>1</sup> For other stimulants including methamphetamine, total costs were C\$3.06 billion in 2020, a 67% increase from 2014. This includes an 86% increase in healthcare costs. Recent evidence suggests that rising rates of in-patient hospitalizations and ED visits may be attributable to amphetamine-related psychotic disorders.<sup>21</sup>

<sup>\*</sup> Healthcare costs include inpatient hospitalizations, emergency department visits, specialized treatment events, physician time and other direct healthcare costs. Excludes costs related to hospitalizations, day surgeries, and paramedic services in Quebec.



Figure 2. Selected healthcare costs (in millions of dollars) attributable to cocaine and other stimulants, including methamphetamine in Canada, 2007–2020

Note: Excludes costs related to hospitalizations, day surgeries and paramedic services in Quebec.

Other costs attributable to stimulants include lost productivity costs, which increased 81% for cocaine and 110% for other stimulants including methamphetamine; and criminal justice costs, which increased 14% for cocaine and 32% for other stimulants including methamphetamine between 2014 and 2020.<sup>26</sup> For more detailed information on stimulant-related costs by CCENDU site, see Appendix A.

More recent data show the added burden associated with the COVID-19 pandemic.<sup>27</sup> From March 2020 to June 2021, cocaine-related hospitalizations increased by up to 26% (in Yukon), while those caused by other stimulants including methamphetamine increased by up to 118% (in the Northwest Territories). Similarly, cocaine-related ED visits increased by up to 53% (in Prince Edward Island), while those caused by other stimulants including methamphetamine increased by up to 152% (in British Columbia).

Stimulant-related mortality has become a significant issue in recent years, particularly in relation to opioid toxicity deaths, which climbed to 20.7 deaths per 100,000 in 2021.<sup>28</sup> Since 2018, when national data collection on stimulant-related deaths started, more than half of opioid toxicity deaths also involved stimulants (Table 1). Almost all stimulant toxicity deaths were accidental, and data available at time of writing for 2022 (from January to March) show that 85% of accidental stimulant toxicity deaths involved an opioid.

	2018	2019	2020	2021	2022ª
Percentage of opioid deaths involving stimulants	56	55	62	60	43
Percentage of stimulant deaths involving cocaine	70	65	66	64	61
Percentage of stimulant deaths involving methamphetamine	44	46	51	53	52
Percentage of stimulant deaths involving other stimulants	7	7	13	9	5

Table 1. Summary of apparent toxicity deaths involving stimulants in Canada, 2018 to 2022 (January to March)

Note. Data for percentage of opioid deaths involving stimulants is based on data from all provinces and territories. Data for percentage of stimulant deaths is based on available information from five to eight provinces or territories, depending on the reporting year.<sup>28</sup> <sup>a</sup> January to March data only



#### **National Drug Supply Indicators**

Drug supply indicators from wastewater, Health Canada's Drug Analysis Service (DAS), drug checking and urinalysis point to increased presence of stimulants, but this varies over time and by region.

**Wastewater data** show patterns of use shifted during the COVID-19 pandemic.<sup>29</sup> Vancouver, Edmonton and Toronto had a surge in methamphetamine in the wastewater in April to June 2020 before levels dropped back to what they were during the same time in 2019. There was no COVIDrelated surge for methamphetamine in Montreal and Halifax. Cocaine levels<sup>§</sup> had a similar COVID surge in some cities (e.g., Edmonton) but decreased levels in others (e.g., Montreal, Halifax). This may in part reflect impacts of disruption and changes in the drug supply across Canada.

**DAS** analyzes the contents of drugs seized by law enforcement and lists all substances detected in a sample. Detection of cocaine and methamphetamine in samples analyzed by DAS increased significantly between 2014 and 2019 (20% for cocaine and 144% for methamphetamine).<sup>30</sup> Since 2018, the frequency of cocaine and methamphetamine detection appears to have stabilized, with some regional variability. Methamphetamine is generally more predominant in the Prairies and Quebec, while cocaine is more predominant in Ontario, the Atlantic provinces and the territories (Figure 3). In British Columbia, the frequency of cocaine and methamphetamyl in most regions, except in British Columbia and Ontario (Figure 3). Summary reports of drugs analyzed by DAS are updated periodically and are available at <u>Drug Analysis Service, Analyzed Drug Report</u>.

# Figure 3. Percentage of DAS samples containing cocaine, methamphetamine or fentanyl by region, January 2018 to August 2022



#### Detected: - Cocaine - Meth - Fentanyl

The 2019 bulletin discussed the additional harms from the lack of quality control in the unregulated market.<sup>1</sup> More recent data have shown a significant increase in adulterants, fuelling an increasingly toxic drug supply. DAS data show that between January 2019 and August 2022, fentanyl and related

<sup>§</sup> Based on benzoylecgonine levels (the main metabolite excreted after cocaine consumption).

analogues were detected in 3.2% of samples that contained cocaine, methamphetamine or both, compared to 2% reported in the 2019 bulletin. This co-occurrence was the highest in British Columbia (7.9% of samples containing cocaine, methamphetamine or both also contained fentanyl, analogues or both), Manitoba (4.7%) and Ontario (4.5%). Appendix B presents further information on the presence of cocaine and methamphetamine in samples analyzed from April 2018 to August 2022 and co-occurrence with fentanyl and other substances.

**Drug checking and urinalysis** provide additional information on contamination in the unregulated drug supply by measuring the difference between what substances people expect to consume and what their drugs actually contain. Drug checking tests samples of drugs for their contents. There is no national database for drug checking data, but results from individual services are described in some of the CCENDU site reports below.

A second way to examine the mismatch between expected and actual drug contents is comparing what drugs people report having used in the previous three days to what substances are actually detected in their urine. A study using this method found that the stimulants that participants expected they consumed were generally present (i.e., detected in urine when participants reported use), but unexpected stimulant use (i.e., detected when not reported used) was found across all study sites.<sup>24</sup> Methamphetamine or amphetamine use was more often unexpected than cocaine or crack use. Figure 4 shows the percentage of participants at different study sites who had stimulants detected in their urine, broken down by expectation of having consumed that stimulant.





Note: The total height of each bar indicates the percentage of participants who had each stimulant detected in their urine. Detection is divided into expected (i.e., detected and also reported used in the previous three days) and unexpected (i.e., detected but not reported used).

#### National Situation in the United States

#### **Stimulant Use and Supply Indicators in the United States**

Patterns in the United States parallel those observed in Canada. Although American national survey data indicate that past-year cocaine and methamphetamine use in the general population was low (e.g., 1.9% for cocaine and 0.9% for methamphetamine in 2020),<sup>31</sup> there was a rise in stimulant availability, risks and harms. Quantities of methamphetamine seized in the United States reached a record high in 2020,<sup>13</sup> and the National Forensic Laboratory Information System (NFLIS), which analyzes substances secured from law enforcement (similar to DAS), reported that 31% of all substances submitted in 2021 were identified as methamphetamine and 13% were identified as cocaine.<sup>32</sup> For comparison, 13% were identified as cannabis and 12% as fentanyl. In 2021,



methamphetamine was reported most frequently by laboratories in the American West and Midwest, while cocaine was reported most frequently by laboratories in the Northeast and South.

#### **Stimulant-Related Harms in the United States**

The United States has also seen increases in toxicity deaths caused by stimulants, particularly since the start of the COVID-19 pandemic.<sup>33-34</sup> Psychostimulant-related deaths have been increasing at a faster rate than those involving cocaine.<sup>13,33,35-37</sup> Between January 2015 and May 2022, the number of drug toxicity deaths involving cocaine increased by 4.5-fold, from 5,496 to 24,898, while the number involving other psychostimulants (including methamphetamine) increased 7.5-fold from 4,402 to 33,080 (Figure 5).<sup>35</sup> Since 2017, this increase has been driven by deaths involving combined use of stimulants and synthetic opioids.<sup>13,36</sup> Deaths involving methamphetamine without synthetic opioids are also on the rise, while deaths involving cocaine without synthetic opioids have declined since 2017.<sup>13</sup>

#### Figure 5. Provisional counts per month of drug toxicity deaths involving stimulants, by type of stimulant: United States, January 2015 to May 2022



Notes: Provisional drug toxicity death counts are based on death records received and processed by the National Center for Health Statistics as of a specified cut-off date.<sup>35</sup> Provisional death data are often incomplete, and the degree of completeness varies by jurisdiction and the reporting period. Therefore, the counts of deaths are underestimated relative to final data and are subject to change. National provisional estimates include deaths in 50 states and the District of Columbia. The "Other psychostimulants" category includes methamphetamine, amphetamine and methylphenidate. Deaths may involve more than one drug.

# Local Reports from CCENDU Sites

CCENDU is a pan-Canadian, sentinel surveillance network led by CCSA, with members from British Columbia, Manitoba, Thunder Bay, Toronto, Quebec, Nova Scotia, and Newfoundland and Labrador. A request for information about harms associated with stimulants that have emerged since publication of the 2019 bulletin was distributed to CCENDU members in August 2022. As with past requests of this nature, CCENDU sites were asked to provide whatever data they had access to.

#### British Columbia

Stimulant (particularly methamphetamine) use has become increasingly prevalent in British Columbia over the past decade. Among 537 respondents to the 2021 BC Harm Reduction Client Survey,<sup>38</sup> 71.7% reported using crystal methamphetamine or methamphetamine in the previous

three days, compared with 69% in the 2018 survey. As well, 26.1% reported using crack cocaine, and 18.4% reported using cocaine. Crack and cocaine use reported in the Harm Reduction Client Survey have declined since 2012, while crystal meth use has increased four-fold during the same period.

Data from drug checking services in British Columbia show that stimulants comprise a higher proportion of total samples brought for testing. The proportion of stimulant samples that test positive for fentanyl has increased since 2019. Among all drug analysis data sources, fentanyl positivity was higher among methamphetamine-positive samples than in cocaine-positive samples. For example, the BC Centre on Substance Use (BCCSU), which partners with 14 frontline drug checking services across British Columbia, reported that stimulants rose from 3% of all samples tested in 2018 to 12% in 2022. The proportion of all stimulant samples that contained fentanyl was 1% in 2018 and has held steady at 2% from 2019 to 2022.<sup>39</sup> In 2022, 5% of samples expected to be methamphetamine were positive for fentanyl, while 1% of cocaine and 5% of crack cocaine was positive for fentanyl.<sup>39</sup> Similarly, Vancouver Island Drug Checking reported that among samples submitted in 2021, 17.5% contained cocaine and 6.5% contained methamphetamine.<sup>40</sup> Among these samples, 1.4% of cocaine-positive samples and 3.7% of methamphetamine-positive samples also tested positive for fentanyl.<sup>40</sup>

Data from DAS (see Appendix B) are consistent with these findings. Among samples received for analysis between April 2018 and August 2022, 23% and 21% contained cocaine and methamphetamine, respectively (also see Figure 3). Among cocaine-positive samples received by DAS during this time, between 2% and 14% also contained fentanyl, averaging about 7%. Among methamphetamine-positive samples, between 4% and 24% also contained fentanyl, averaging about 11%.

Stimulants were the second-most common drug type detected in post-mortem toxicology, second only to fentanyl. Between July 2020 and July 2022, 67% to 79% of deceased had stimulants detected in expedited toxicology.<sup>41</sup> Between 84% and 95% of these deceased had fentanyl detected in post-mortem toxicology. Co-occurrence of stimulants and fentanyl is therefore high.<sup>41</sup>

#### **Local Responses**

- To ensure safer smoking and inhalation practices, Harm Reduction Services distribute safer inhalation supplies to reduce equipment sharing and contraction of infections such as HIV or hepatitis C. The provincial harm reduction program began distributing tube glass, bowl pipes and foils in October 2020. As of August 2022, more than 7.5 million pieces of tube glass, 13 million foils and nearly 3 million bowl pipes have been distributed provincially. Pushsticks, screens and tubing distribution, which started in 2008, has reached almost 1.5 million pushsticks, more than 900,000 screens and almost 6,000 units of tubing distributed in 2021 alone.
- As of July 2022, there were 13 overdose prevention sites and supervised consumption sites offering inhalation services and reporting visits to the BCCDC.<sup>42</sup> Provincially, inhalation visits have increased since November 2021, peaking at more than 18,000 visits in July 2022.<sup>42</sup>
- Between March 2020 and August 2022, 14,273 clients have received prescribed safer supplies (PSS). Of those, 1,770 clients (12.4% of all PSS clients) also received stimulants (data pending publication).
- Drug checking services are available across British Columbia at no charge, with distributed models (including mail-in models) being piloted to increase access to services.



#### **Prairies**

According to the Manitoba CCENDU site, amphetamines remain the second-most common substance (after alcohol) at the Addictions Foundation of Manitoba and Shared Health. In 2021, the Winnipeg Fire and Paramedic Service listed methamphetamine as a "chief complaint" on 1,818 substance-related paramedic responses — an increase from 436 in 2016.

Anecdotal data reported by the Manitoba site also suggest that the health of people who use methamphetamine is deteriorating more quickly, suggesting there may be something different about the meth being used. This observation was echoed by a data source in Alberta, which reported similar concerns about the deterioration of clients accessing support programs. These observations suggest changes in the composition of methamphetamine entering Manitoba and Alberta.

#### Ontario

#### **Thunder Bay**

Overall, there was a large increase in opioid toxicity deaths involving stimulants from 2020 to 2021 in Thunder Bay. Cocaine contributed to 103 opioid toxicity deaths (of those, 98 fentanyl toxicity deaths) between 2018 and 2021. Among these, 68 occurred in 2021, constituting 56% of all opioid toxicity deaths that year, compared with 16 (26%) in 2020, 6 (16%) in 2019 and 13 (32%) in 2018. Similarly, methamphetamine contributed to 18 opioid toxicity deaths (of those, 17 fentanyl toxicity deaths) between 2018 and 2021. Among these, 13 occurred in 2021, constituting 11% of all opioid toxicity deaths that year, compared with 1 (2%) in 2020, 2 (5%) in 2019 and 2 (5%) in 2018. Stimulant toxicity deaths in the absence of opioids were less common. The municipality saw two stimulant toxicity deaths not involving opioids in 2021; both were attributed to cocaine toxicity.

#### Toronto

According to a supervised consumption service in Toronto, stimulants were injected in 7% of visits between Aug. 1, 2021, and July 31, 2022. Substances categorized as stimulants include amphetamine, cocaine, crack cocaine, methamphetamine (both crystal meth and speed) and other unspecified stimulants.

The number of ED visits where one of the diagnoses was associated with stimulants has been increasing over the past 10 years, with the largest increase in 2017. The number of hospitalizations where one of the diagnoses was associated with stimulants saw increases in 2017 and 2020. At the same time, the proportion of ED visits and hospitalizations where stimulant poisoning was the main diagnosis has been decreasing, from 71% in 2012 to 56% in 2021 for ED visits and from 58% in 2018 to 40% in 2021 for hospitalizations.<sup>43-44</sup>

The number of deaths due to stimulant toxicity in Toronto increased from 204 in 2019 to 435 in 2020 (a 113% increase). Among these, the number of deaths excluding those where opioids also contributed increased from 56 in 2019 to 85 in 2020 (a 52% increase).<sup>45</sup> The percentage of deaths due to stimulant toxicity with opioid involvement increased from 68% in 2018 to 80% in 2020. Cocaine continued to be the nonopioid substance involved in the most opioid toxicity deaths, contributing to 47% of accidental opioid toxicity deaths in 2021. There was also an increase in the percentage of accidental opioid toxicity deaths involving methamphetamine, from 15% in 2018 to 34% in 2021.

Toronto's drug checking service tested 1,188 samples expected to be cocaine, crack cocaine or methamphetamine between October 2019 and July 2022. Methamphetamine was consistently found to be the least contaminated expected drug, with more than 75% of samples containing only methamphetamine. The service also found that since 2020, the contamination of cocaine had

decreased, with 77% of expected cocaine substances containing only cocaine between January and July 2022, compared with 45% in 2020. Phenacetin<sup>II</sup> and levamisole<sup>II</sup> are noteworthy contaminants found in cocaine and crack cocaine most often.

#### Local Responses

- Harm reduction programs provide safer drug use education and safer use supplies, including crack and methamphetamine smoking pipes. Some agencies provide training and education about preventing and responding to stimulant overdoses.
- <u>Toronto's drug checking service</u> collects samples of drugs at five harm reduction agencies and communicates analysis results to the public.
- St. Stephen's Community House has a <u>Crystal Methamphetamine Strategy</u> and offers several support programs. These include a Chill & Spill support group, a bike repair group, a peer training program and a crystal meth crisis response e-learning series.
- The AIDS Committee of Toronto and the 519 provide a range of supports related to crystal meth and other drug use to provide information and resources for gay, bisexual and queer men and the people who support them. In September 2022, the Gay Men's Sexual Health Alliance launched an educational campaign and suite of resources for service providers to address the needs of communities who <u>Party and Play</u>, including those who use crystal methamphetamine.

#### Quebec

Drug toxicity deaths related to stimulants have increased in the province of Quebec, from 99 accidental deaths related to stimulants in 2016 to 180 in 2020. This trend is observed for cocaine and other stimulants. Despite this increasing trend, the province has one of the lowest rates of stimulant toxicity deaths in Canada. The proportion of toxicity deaths related to cocaine representing between 53% and 70% of all stimulant-related deaths between 2015 and 2020.<sup>46</sup>

A survey of people who use drugs was conducted across several regions of Quebec in 2021. It showed that 11% of participants had accidentally overdosed using stimulants in the previous six months, and 18% had witnessed an accidental overdose of a person using stimulants during the same period.<sup>47</sup>

The same study asked people what drugs they had used in the previous three days and also tested their urine. Six of the 10 most frequently reported substances were stimulants, mainly speed, crack and cocaine. They were also the preferred substances used in the previous six months. Laboratory analyses showed that stimulants were found in 94% of the 655 urine samples tested, mainly methamphetamine and cocaine. Use of speed was reported by 51% of respondents. Of those participants, 94% had methamphetamine in their urine and almost none had amphetamine, suggesting that speed is generally methamphetamine. Cocaine use (including crack and freebase) was reported by 59% of the participants. It was detected in the urine of 91% of those who reported having used it. Methamphetamine and crystal meth use were reported by 15% and 14% of participants, respectively. Crack and crystal meth were reported more frequently in the greater Montreal region. (Also see Figures 1 and 4.)

<sup>&</sup>lt;sup>II</sup> A pain-relieving, fever-reducing medication, phenacetin was removed from the Canadian market in the 1970s for its association with kidney and bladder cancers

<sup>&</sup>lt;sup>¶</sup> A medication used to treat worm infections in animals, levamisole was removed from the Canadian market in the early 2000s because it has been associated with skin sores and a reduction of infection-fighting white blood cells.

Drug checking data from GRIP (Groupe de recherche et d'intervention psychosociale, a mobile service in Montreal) corroborate these patterns. Among 523 samples analyzed between October 2021 and October 2022, more than a third (39%, n = 205) were expected to be stimulants. Among these, more than half (59%, n = 121) were expected to be cocaine, with the remainder expected to be speed (45 samples), crystal meth (20 samples), crack (17 samples), Ritalin® (one sample) and Vyvanse® (one sample). Most of the cocaine and crack samples (134/138) contained the expected substance, as well as common cutting agents. Among the 45 speed samples, 35 contained methamphetamine and none contained amphetamine. Among the 20 crystal meth samples, 19 contained methamphetamine; one of these samples tested positive for fentanyl and one tested positive for ketamine. Given the demographic of clients (primarily people attending raves and events), GRIP also tested a large number (n = 159) of samples expected to be MDMA (3-4 methylenedioxy-methamphetamine or ecstasy). Although fentanyl was not detected in any of these samples, 29 samples contained MDA (methylenedioxy-amphetamine) instead of MDMA, two contained cocaine, four contained cathinones\*\* and one had added ketamine.

#### **Local Responses**

- The epidemiological investigation on opioid overdoses started by the provincial public health director in 2017 has been extended in June 2022 to include all substances involved in drug toxicity deaths in addition to opioids, particularly stimulants.
- The drug use survey and urinalysis study will be continued in Quebec in 2022 and 2023, and will allow for a better picture of stimulant use and harms in the province.
- Across the province, harm reduction services at more than 1,200 sites distribute sterile injection and inhalation equipment (e.g., syringes, crack pipes).
- Naloxone is available for free to any citizen aged 14 years and older, including people who use stimulants because all street drugs may be adulterated with fentanyl or other opioids. It is available in all community pharmacies and many community organizations in the province.
- Ten overdose prevention sites or supervised consumption sites are available across the province, some of which also offer drug checking services. Drug checking is expanding in many regions of Quebec, including mobile services like GRIP and fixed sites like Checkpoint in Montreal.
- The Institut universitaire sur les dépendances of the Centres intégrés universitaires de santé et de services sociaux (CIUSSS) du Centre-Sud-de-l'Île-de-Montréal issued <u>clinical guidance</u> for prescribers who want to prescribe safer supply for people who use drugs, including stimulants, in the context of the COVID-19 pandemic in 2020.

#### Nova Scotia

Stimulant use, particularly cocaine and crack, has been increasing over the last several years. Based on information from adult in-patient hospitalizations, among stimulant-related charges, cocaine remains the most common stimulant used. The percentage of discharges for stimulants as the most responsible diagnosis has nearly quadrupled to 11% in mid 2022 from 3% in 2015, with cocaine representing most these discharges. During the same period, the volume of hospital discharges

<sup>\*\*</sup> Cathinones are a class of synthetic psychostimulants, sometimes called bath salts, that are sometimes sold as substitutes for other stimulants, such as methamphetamine and cocaine.

where stimulants were reported as either most responsible or additional diagnoses increased from 7% in 2015 to 14% by mid 2022.

Treatment data continues to show that crack cocaine was most often reported by individuals seeking treatment in the Halifax area, Eastern Shore and West Hants, while cocaine powder was most often reported by individuals seeking treatment in other parts of the province.

Substance-related fatalities in Nova Scotia show similar trends. In 2015, there were 13 fatalities for cocaine and other stimulants (rate of 1.4 per 100,000 population), 12 of which had cocaine as the primary drug type. This rate has been steadily increasing each year. As of 2021, there have been 33 fatalities due to stimulants (rate of 3.3 per 100,000 population), with 30 due to cocaine.

A survey and urinalysis conducted in Nova Scotia asked people who use drugs what they had used in the previous three days and tested their urine. That study showed that cocaine, crack or both were the most reported and detected substances in 2021.<sup>24</sup> Among respondents, 78.5% reported use of cocaine and 11.8% reported use of methamphetamine, amphetamine or both. Unexpected use of cocaine (i.e., cocaine detected in their urine but not reported used) was low at 8.5%, while unexpected use of methamphetamine or both was 100%. The latter should be interpreted with caution given that unexpected methamphetamine, amphetamine or both was detected among less than five participants.

#### **Local Responses**

• Since April 2017, the Nova Scotia take-home naloxone program provides naloxone training and free take-home kits to Nova Scotians at risk of or most likely to witness or respond to a toxic opioid overdose. The kits are distributed through EDs, withdrawal management services, opioid treatment replacement programs, harm reduction organizations and community pharmacies. The program is a response to the increasing risk that stimulants could be adulterated with fentanyl or other opioids. As of mid 2022, there were more than 288 community pharmacies participating across the province.

#### Newfoundland and Labrador

Over the past decade, stimulant use has become increasingly prevalent in Newfoundland and Labrador. The prevalence of cocaine use in 2019 was 2.1% and has significantly increased among those aged 20 to 24 years.<sup>23</sup>

DAS data suggest a far higher availability of cocaine than methamphetamine in Newfoundland and Labrador (see Table 3 in Appendix B for further information). Between January and August 2022, 29% (n = 123) of all DAS samples contained cocaine (a decrease from 36% in 2018), whereas 9% (n = 37) contained methamphetamine (an increase from only 1.5% (n = 3) in 2018).

Data provided by the Office of the Chief Medical Examiner of Newfoundland and Labrador<sup>48</sup> showed that deaths involving stimulants without opioids decreased from 2019 to 2021, while deaths involving stimulants and opioids increased. Anecdotal information, treatment data and hospitalization information suggest that the health and safety concerns for both cocaine and methamphetamine have continued to increase in Newfoundland and Labrador, with the harms of cocaine increasing at a higher rate.

According to the Provincial Mental Health and Addictions Dashboard (October 2022),<sup>49</sup> stimulants were the second-most common substance (alcohol was first) reported by individuals seeking treatment. Cocaine was the most commonly used stimulant reported by individuals. Referrals for services have continued to increase since 2019, with higher increases recognized in the Eastern Health Region of the province.



#### **Local Responses**

- Harm reduction programs provide safer drug use education and supplies. Several organizations provide training and education about preventing and responding to stimulant toxicity.
- Because there have been reported cases of adulterated cocaine containing fentanyl, various services and community organizations are now offering naloxone kits and discussing this risk with people who use stimulants.

### **Reports from NDEWS Sites**

The National Drug Early Warning System (NDEWS) is a monitoring and early warning network for emerging drugs in the United States, funded by the National Institute on Drug Abuse (NIDA).

Through their <u>Rapid Street Reporting (RSR)</u> project, NDEWS surveys participants in public spaces (e.g., parks, night clubs, town squares, sidewalks, music venues, grocery stores, museums) about their substance use. Eleven RSR sites collected data from 2,612 participants between November 2021 and September 2022. RSR sites included: San Francisco, Calif.; San Diego, Calif.; Tampa, Fla.; Gainesville, Fla.; Atlanta, Ga.; Seattle, Wash.; New York, N.Y.; Lexington, Ky.; St. Louis, Mo.; Philadelphia, Pa.; and Washington, DC.

Self-reported previous 12-month stimulant use among participants was 10.9% for cocaine (n = 284) and 8.0% for methamphetamine (n = 210).<sup>††</sup> On average, participants who reported using cocaine were 34.6 years old and had 14.4 years of education, while those who reported using methamphetamine were 41.2 years old and had 12.9 years of education. (See Figure 6 for more demographics.)

<sup>&</sup>lt;sup>††</sup> The methamphetamine question changed partway through data collection, asking about "methamphetamine/crystal" before February 2022 (endorsed by n = 14) and "methamphetamine/crystal/speed" after (endorsed by n = 196).

# Figure 6. Demographics of Rapid Street Reporting participants reporting cocaine or methamphetamine use in the previous year, November 2021 to September 2022 (2,612 participants at 11 sites)



NDEWS Coordinating Center also monitors <u>substance-related 911 EMS dispatches</u> in more than 40 U.S. states using biospatial.io.<sup>50</sup> Between January 2017 and October 2022, there were 577,566 methamphetamine-related 911 responses, including 111,387 between Jan. 1 and Oct. 27, 2022. Dispatches were most common for people who were white (53.8%), male (66.7%) and 30–39 years old (34.3%) (Appendix C). Between January 2017 and October 2022, methamphetamine-related dispatches increased across all regions of the United States, particularly in the West (Figure 7).



Figure 7. Methamphetamine-related 911 dispatches in the United States, Jan. 1, 2017, to Oct. 27, 2022

Finally, through its <u>Web Monitoring Team</u>, NDEWS monitors online mentions of psychoactive substances on Reddit, a social media platform with more than 430 million active users worldwide. Validation on historical trends reveals that detection of novel psychoactive substances (NPS) in drug subreddit discussion is predictive of subsequent emergence in toxicology data and other real-world signals. In fall 2021 and spring 2022 across 80 drug-related subreddits, the terms ephedrine, pseudoephedrine and P2P (precursor drugs used in methamphetamine production) saw concurrently elevated discussion levels (Figure 8), suggesting new interest in forms and effects of methamphetamine produced through differing synthesis pathways.<sup>51</sup>







# **Discussion & Next Steps**

This bulletin summarizes the diverse responses from provincial, territorial and American partners to the continued increase in stimulant availability and harms, particularly cocaine and methamphetamine. Although responses vary across Canada and the United States, several consistent trends emerged that can help inform prevention and harm reduction efforts. These trends include the following:

- Indicators for risks and harms tend to be higher for cocaine, but methamphetamine risks and harms are increasing at a faster rate. This includes a steeper rise in methamphetamine detection in seized drugs, methamphetamine-related deaths (both with and without opioids) and methamphetamine-related total costs (although healthcare-specific costs are higher for methamphetamine than cocaine). Stimulant-related deaths are more often attributed to cocaine in Canada and methamphetamine in the United States.
- Cocaine is the preferred stimulant among the general population, particularly younger adults. Methamphetamine appears to be the preferred stimulant among people who use drugs, whose preferences are generally not captured by national surveys.
- Polysubstance use is a significant concern in Canada and the United States. Synthetic opioids from the unregulated drug supply, including fentanyl in particular, are a central driver of

poisonings involving methamphetamine and cocaine.<sup>28,33,36,41-42,45-46,52-53</sup> While some prefer to use opioids and stimulants together, not all polysubstance use is intentional and may point to unknown adulteration of stimulants with fentanyl, benzodiazepines and other substances.

- Among drug supply data sources (e.g., drug checking, DAS, urinalysis), fentanyl was found more often with methamphetamine than cocaine. Contamination of methamphetamine with fentanyl is the highest in the Canadian West and may reflect an increased demand and availability of fentanyl there.
- Regional differences in stimulant use and availability are largely consistent with what was reported in 2018. Methamphetamine demand and availability is higher in the West while cocaine demand and availability are higher in the East, although there are some cases in both Canada and the United States where methamphetamine is more prevalent in regions that are not in the West and cocaine is more prevalent in regions that are not in the East (e.g., methamphetamine in Quebec, cocaine in the American South).

Based on these patterns, CCENDU suggests the following policy and practice responses. While not all suggestions are specific to stimulants, we believe that together they form a comprehensive response to stimulant-related risks and harms. CCENDU suggestions include:

- Ensuring that the continuum of substance use services and supports addresses polysubstance use, including the concurrent use of opioids and stimulants;
- Scaling up and creating sustainability for harm reduction and safer supply initiatives that address the unpredictable toxic drug supply, including provision of safer use supplies for stimulants and raising awareness of the toxic supply among key demographics;
- Creating guidance on enabling safe consumption sites that offer inhalation programs (sharing of best practices from British Columbia);
- Educating service providers and developing strategies and best practices to improve the safety of people who use methamphetamine and staff who work with them, given the increased risk of violence compared to other substances. There are increasing reports of methamphetamine-induced psychosis and violence related to stimulant use, increasing the burden on EDs and harm reduction services;<sup>20,21</sup>
- Considering innovative policy responses, including decriminalization of possession of drugs for personal use, to avoid adaptations in manufacturing processes that can result in more toxic products as well as health and social harms tied to criminal justice involvement; and
- Evaluating policy changes in British Columbia that will decriminalize the possession of substances, including stimulants, for personal use starting in January 2023 to determine the risks and benefits of such approaches.

In addition, many of the recommendations listed in the 2019 CCENDU bulletin<sup>1</sup> and the 2019 report of the Standing Committee on Health<sup>54</sup> continue to hold true. These include:

- Continuing investment in the collection and dissemination of high quality, timely data on substance use through the continued development of a national observatory and support for CCENDU. This will help determine where to target efforts to reduce harms.
- Establishing housing and social supports, and improving access to supportive housing to decrease stimulant use that is motivated by unstable housing conditions (e.g., staying awake to guard belongings).<sup>25,55-56</sup>



- Increasing the focus on marginalized communities as the drug toxicity crisis has a disproportionate impact on such groups, particularly Indigenous communities;<sup>57</sup>
- Increasing awareness of early life trauma as an upstream determinant of later substance use and developing tools and interventions that build resilience in children, youth and communities.

#### Resources

- Canada-U.S. Joint White Paper: <u>Substance Use And Harms During The COVID-19 Pandemic And</u> <u>Approaches to Federal Surveillance and Response</u>
- Methamphetamine: An Overview of Trends in Canada, Its Role in the Drug Poisoning Crisis and Other Health Issues (CATIE) –
- <u>Methamphetamine and Related Psychostimulant Use: End-of-Grant Workshop What We Heard</u> <u>Report (Canadian Institutes of Health Research)</u>
- Impacts of Methamphetamine Abuse in Canada: Report of the Standing Committee on Health (House of Commons)
- Opioid- and Stimulant-related Harms in Canada (Public Health Infobase)
- Party and Play (Gay Men's Sexual Health Alliance)
- <u>Creating a Safer Downtown for All: Improving Services for People Who Use Drugs in Ottawa</u> (Sandy Hill Community Health Centre)
- BC Coroners Service <u>Death Review Panel: A Review of Illicit Drug Toxicity Deaths: Report to the</u> <u>Chief Coroner of British Columbia</u>
- <u>Safe Supply Concept Document (Canadian Association of People who Use Drugs)</u>
- <u>Community Urinalysis and Self-Report Project: Cross-Canada Report on the Use of Drugs from the Unregulated Supply, 2019-2021 Data (Canadian Centre on Substance Use and Addiction)</u>

CCENDU will continue to monitor stimulants in the unregulated drug supply in Canada. If you have any questions, comments, information to contribute or corrections to the information contained in this bulletin, or you wish to subscribe and receive updates as new information becomes available, please email <u>CCENDU@ccsa.ca</u>.

For more information on CCENDU and to review previous CCENDU Alerts and Bulletins, please visit <u>www.ccsa.ca/CCENDU</u>.

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# **Appendix A**

#### *Costs Attributable to Cocaine and Other Central Nervous System Stimulant Use in Canada (2015–2017)*

Table 1. Cocaine and other CNS stimulant (including methamphetamine) costs, in millions of Canadian dollars, by cost category, region, and year (2015-2017).<sup>23</sup>

Region	Costs	2015 Cocaine	2015 Other stimulants	2016 Cocaine	2016 Other stimulants	2017 Cocaine	2017 Other stimulants	Percentage increase in cocaine, 2015-2017	Percentage increase in other stimulants, 2015–2017
British Columbia	Healthcare	43.1	96.6	38.8	96.9	39.9	103.2	-7.3	6.9
British Columbia	Lost Productivity	158.3	173.1	206.6	168.2	220.4	173.5	39.2	0.2
British Columbia	Criminal Justice	263.4	97.3	270.8	99.3	273.1	105.1	3.7	8.0
British Columbia	Total	51.9	25.9	37.0	16.5	32.1	20.0	-38.2	-23.0
Manitoba	Healthcare	7.9	8.2	9.0	11.6	8.7	15.2	10.6	86.1
Manitoba	Lost Productivity	46.4	40.5	51.2	40.5	47.2	40.2	1.6	-0.7
Manitoba	Criminal Justice	130.8	33.3	127.4	34.3	126.4	36.6	-3.3	10.0
Manitoba	Total	195.3	92.8	198.8	97.3	192.7	102.2	-1.3	10.1
Ontario	Healthcare	36.7	34.5	45.3	44.7	51.4	44.7	40.1	29.5
Ontario	Lost Productivity	232.0	219.8	270.7	281.9	394.3	238.0	70.0	8.3
Ontario	Criminal Justice	862.1	277.4	878.5	276.6	887.9	285.4	3.0	2.9
Ontario	Total	1,186.9	596.3	1,255.3	684.6	1,401.6	639.0	18.1	7.2
Quebec	Healthcare	14.7	14.0	18.1	18.3	19.5	18.2	32.7	30.2
Quebec	Lost Productivity	149.5	198.3	144.1	245.3	172.2	226.5	15.2	14.2
Quebec	Criminal Justice	396.4	161.6	387.9	167.4	401.4	171.2	1.3	5.9
Quebec	Total	588.6	422.8	578.6	492.7	622.6	489.5	5.8	15.8
Nova Scotia	Healthcare	4.3	3.1	5.7	3.7	6.2	3.6	44.4	17.4
Nova Scotia	Lost Productivity	18.3	25.7	23.3	22.1	20.0	23.8	9.5	-7.6
Nova Scotia	Criminal Justice	53.0	15.6	55.2	15.8	59.1	16.6	11.3	6.1
Nova Scotia	Total	78.3	48.1	87.4	45.6	88.4	46.8	12.9	-2.8



Newfoundland & Labrador	Healthcare	2.7	1.3	3.6	1.6	3.8	1.3	37.4	-0.5
Newfoundland & Labrador	Lost Productivity	22.2	14.5	23.4	12.3	17.5	15.1	-21.3	3.8
Newfoundland & Labrador	Criminal Justice	25.5	8.4	27.5	8.5	30.0	8.8	17.9	4.3
Newfoundland & Labrador	Total	51.9	25.9	37.0	16.5	32.1	20.0	-38.2	-23.0

**Source:** 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. <u>https://csuch.ca/publications/CSUCH-Canadian-Substance-Use-Costs-Harms-Report-2020-en.pdf</u>

Note: Estimates up to 2020 will be provided in a forthcoming publication. Healthcare costs for Quebec do not include hospitalization, day surgery, emergency department visits or paramedic services costs.



# **Appendix B**

#### Analysis of Data Provided by Health Canada's Drug Analysis Service About Cocaine and Methamphetamine Presence and Co-occurring Substances in Submitted Samples

Health Canada's Drug Analysis Service (DAS) is responsible for testing suspected controlled substances that are seized by law enforcement agencies. DAS asks that exhibits (samples) be submitted only when verification of the actual substances is required for court or other purposes. For each exhibit, the test results are entered into the Laboratory Information Management System (LIMS), which captures information such as the date that the exhibit was submitted to the laboratory, the substances found in the exhibit and law enforcement detachment location. It is common for multiple exhibits to be submitted from the same seizure and for multiple results (more than one substance found) to be entered in the LIMS for the same exhibit. LIMS data allows reporting of the number and type of exhibits received by DAS for analysis. Exhibits analyzed by DAS likely represent a subset of the substances seized by law enforcement agencies, which would also be a subset of the substances found on the unregulated market.

The following describes the presence of cocaine and methamphetamine in DAS data from January 2018 to August 2022. There are some small discrepancies in sample sizes presented here as compared to publicly available DAS dashboard data.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2018	2,329	2,070	2,405	1,957	2,283	2,138	2,263	2,674	1,821	2,219	3,108	1,678	26,945
	(20.5)	(19.8)	(22.3)	(22.0)	(22.2)	(21.8)	(21.8)	(24.6)	(22.5)	(18.0)	(29.2)	(21.8)	(22.2)
2019	2,613	2,447	2,305	2,391	2,636	2,225	2,292	2,206	2,120	2,590	2,306	2,330	28,461
	(25.4)	(28.7)	(24.2)	(27.5)	(24.8)	(25.3)	(25.4)	(24.6)	(26.3)	(26.4)	(26.9)	(27.6)	(26.0)
2020	2,188	1,969	1,465	384	797	1,282	2,087	2,048	2,510	2,992	2,569	2,944	23,235
	(26.0)	(27.0)	(25.4)	(25.1)	(22.0)	(21.7)	(21.8)	(22.4)	(23.0)	(23.8)	(23.9)	(24.5)	(23.8)
2021	1,959	2,111	1,444	2,104	1,789	1,837	1,795	2,013	2,254	2,578	2,528	3,228	25,640
	(23.3)	(23.5)	(17.1)	(24.7)	(22.8)	(23.5)	(22.9)	(27.6)	(26.5)	(27.0)	(27.5)	(26.7)	(24.5)
2022	2,105 (21.0)	3,020 (26.5)	3,190 (27.5)	2,291 (25.7)	2,236 (27.6)	1,717 (22.7)	2,073, (32.3)	2,389 (27.1)	_	_	_	_	19,016 (26.1)

#### Samples Containing Cocaine and Methamphetamine

Table 1. Count (n) of DAS samples containing cocaine, and percentage (%) of samples containing cocaine among all DAS samples that month, 2018-2022, by month reported to client.

Data not available



Table 2. Count (*n*) of DAS samples containing methamphetamine, and percentage (%) of samples containing methamphetamine among all DAS samples that month, 2018-2022, by month reported to client.

Year	January,	February,	March,	April,	May,	June,	July,	August,	September,	October,	November,	December,	Total,
	<i>n</i> (%)	n (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	n (%)	n (%)	n (%)	n(%)	n (%)	n (%)	<i>n</i> (%)
2018	1,981	2,113	2,023	1,907	2,195	1,998	2,119	2,361	1,747	2,351	2,474	2,112	25,381
	(17.5)	(20.2)	(18.8)	(21.5)	(21.4)	(20.4)	(20.4)	(21.7)	(21.5)	(19.1)	(23.2)	(27.5)	(20.9)
2019	2,953	2,273	2,451	2,178	2,808	2,223	2,363	2,273	2,186	2,698	2,238	2,261	28,905
	(28.7)	(26.7)	(25.7)	(25.1)	(26.4)	(25.3)	(26.2)	(25.3)	(27.1)	(27.5)	(26.1)	(26.8)	(26.4)
2020	2,034	1,949	1,462	386	1,009	1,420	3,096	2,483	2,734	2,827	2,751	2,733	24,884
	(24.1)	(26.8)	(25.4)	(25.2)	(27.9)	(24.0)	(32.4)	(27.2)	(25.1)	(22.5)	(25.6)	(22.8)	(25.5)
2021	2,130	2,160	1,735	1,574	1,655	1,882	1,882	1,837	2,109	2,044	2,457	3,394	24,859
	(25.3)	(24.1)	(20.6)	(18.5)	(21.1)	(24.1)	(24.0)	(25.2)	(24.8)	(21.4)	(26.7)	(28.1)	(23.8)
2022	2,142 (21.4)	1,947 (17.1)	2,572 (22.1)	2,065 (23.2)	1,932 (23.9)	2,119 (28.1)	1,506 (23.5)	2,474 (28.1)					16,756 (23.0)

- Data not available



	2018 Cocaine	2018 Meth	2019 Cocaine	2019 Meth	2020 Cocaine	2020 Meth	2021 Cocaine	2021 Meth	2022a	2022a Meth
Region-	<i>n</i> . (%)	n. (%)	<i>n</i> . (%)	n. (%)						
British	3,932	3,184	3,544	3,593	3,307	3,457	3,395	2,745	2,102	1,640
Columbia	(26.1)	(21.1)	(24.9)	(25.3)	(22.2)	(23.2)	(24.4)	(19.7)	(23.3)	(18.2)
Prairie	5,305	5511	4,812	6,423	4,030	5504	4,252	5,242	2,590	3,107
Provinces	(26.3)	(27.3)	(26.5)	(35.3)	(25.0)	(34.1)	(25.5)	(31.4)	(25.0)	(30.0)
Alberta	3,716	4,182	3,194	5,155	2,465	4242	2,594	4,103	1,541	234
	(24.5)	(27.6)	(22.7)	(36.7)	(20.7)	(35.7)	(20.7)	(32.8)	(20.1)	(30.6)
Saskatchewan	505	495	609	584	568	605	651	545	332	277
	(28.5)	(28.0)	(33.4)	(32.0)	(29.9)	(31.8)	(34.5)	(28.9)	(35.6)	(29.7)
Manitoba	1,084	834	1,009	684	997	657	1,007	594	717	487
	(33.1)	(25.5)	(43.6)	(29.6)	(42.9)	(28.3)	(43.7)	(25.8)	(40.7)	(27.6)
Ontario	9,481	5,931	11,096	7,678	9,076	6,889	10,338	7,307	7,572	5,089
	(24.2)	(15.1)	(30.4)	(21.1)	(28.0)	(21.3)	(26.5)	(18.7)	(28.2)	(18.9)
Quebec	7,005	10,071	7,990	10,580	5,730	8,163	6,299	8,740	5,783	6213
	(16.8)	(24.2)	(21.8)	(28.9)	(19.0)	(27.1)	(20.4)	(28.3)	(25.0)	(26.9)
Atlantic	1,087	682	879	630	973	870	1,190	815	886	703
Provinces	(20.8)	(13.0)	(24.0)	(17.2)	(26.4)	(23.6)	(32.3)	(22.1)	(32.3)	(21.5)
New	201	471	216	451	297	664	355	618	263	542
Brunswick	(10.4)	(24.3)	(17.2)	(35.8)	(16.5)	(36.8)	(19.7)	(34.3)	(15.0)	(30.8)
Nova Scotia	704	158	497	111	461	121	587	122	446	77
	(25.5)	(5.7)	(29.6)	(6.6)	(36.6)	(9.6)	(45.6)	(9.5)	(47.7)	(8.2)
Prince Edward	44	47	45	64	73	74	64	60	54	47
Island	(31.2)	(33.3)	(30.0)	(42.7)	(37.6)	(38.1)	(29.4)	(27.5)	(33.3)	(29.0)
Newfoundland	138	6	121	4	142	11	184	15	123	37
and Labrador	(35.6)	(1.5)	(21.4)	(0.7)	(33.2)	(2.6)	(48.3)	(3.9)	(29.4)	(8.9)
Territories	135	2	140	1	119	1	166	10	83	4
	(61.9)	(0.9)	(75.7)	(0.5)	(55.3)	(0.5)	(64.3)	(3.9)	(61.0)	(2.9)
Nunavut	1	1	2	0	4	0	0	8	0	4
	(6.7)	(6.7)	(14.3)		(25.0)			(80.0)		(66.7)
Northwest	93	0	58	1	33	1	72	0	57	0
Territories	(80.2)		(82.9)	(1.4)	(50.8)	(1.5)	(74.2)		(86.4)	
Yukon	41	1	80	0	82	0	94	2	26	0
	(47.1)	(1.1)	(79.2)		(61.2)		(62.3)	(1.3)	(40.6)	
Canada	26,945	25,381	28,461	28,905	23,235	24,884	25,640	24,859	19,016	16,756
	(22.2)	(20.9)	(26.0)	(26.4)	(23.8)	(25.5)	(24.5)	(23.8)	(26.1)	(23.0)

Table 3. Count (n) and percentage (%) of DAS samples containing cocaine or methamphetamine ("meth"), by province and territory, 2018-2022, by year reported to client.

Note. About 0.6% of all DAS samples analyzed and reported between April 2018 and August 2022 contained both cocaine and methamphetamine. <sup>a</sup> January to August



Detected: - Cocaine - Meth - Fentanyl

Figure 1. Counts of DAS samples (n) containing cocaine, methamphetamine, or fentanyl by region, 2018-2022\*





#### Stimulants and Co-Occurring Substances

Table 4. Count (*n*) and percentage (%) of samples containing cocaine that also contained selected co-occurring substances (methamphetamine, fentanyl, nitazenes, other opioids, non-medical benzodiazepines [NMBs] and xylazine), by year reported (2018–2022)

Year	Total samples containing cocaine	Samples with co- occurring meth, <i>n</i> (% of first column)	Samples with co- occurring fentanyl, <i>n</i> (% of first column)	Samples with co- occurring nitazenes, <i>n</i> (% of first column)	Samples with co- occurring other opioids, <i>n</i> (% of first column)	Samples with co- occurring NMBs, <i>n</i> (% of first column)	Samples with co- occurring xylazine, n (% of first column)
2018	25,381	651 (2.4)	716 (2.7)	0	267 (1.0)	5 (0.0)	1 (0.0)
2019	28,905	615 (2.2)	655 (2.3)	0	167 (0.6)	31 (0.1)	5 (0.0)
2020	24,884	634 (2.7)	750 (3.2)	4 (0.0)	101 (0.4)	49 (0.2)	5 (0.0)
2021	24,859	760 (3.0)	909 (3.5)	25 (0.1)	62 (0.2)	209 (0.8)	31 (0.1)
2022ª	16,756	503 (2.6)	570 (3.0)	33 (0.2)	30 (0.2)	154 (0.8)	29 (0.2)

Note: A sample containing cocaine can have more than one other co-occurring substance. "Nitazenes" includes any of the following: etodesnitazene, etonitazene, etonitazene, etonitazene, etonitazene, etonitazene, etonitazene, etonitazene, isotonitazene and protonitazene. "NMBs" includes any of the following: etizolam, flubromazepam, adinazolam, meclonazepam, deschloroetizolam, flualprazolam, medazepam, phenazepam, alprazolam and flubromazolam. "Other opioids" includes heroin, codeine, oxycodone and hydromorphone.

<sup>a</sup> January to August

Table 5. Count (*n*) and percentage (%) of samples containing methamphetamine ("meth") that also contained selected co-occurring substances (methamphetamine, fentanyl, nitazenes, other opioids, non-medical benzodiazepines [NMBs], and xylazine), by year reported (2018–2022)

Year	Total samples containing meth	Samples with co-occurring cocaine, <i>n</i> (% of first column)	Samples with co- occurring other stimulants, <i>n</i> (% of first column)	Samples with co- occurring fentanyl, <i>n</i> (% of first column)	Samples with co-occurring nitazenes, <i>n</i> (% of first column)	Samples with co-occurring other opioids, <i>n</i> (% of first column)	Samples with co-occurring NMBs, <i>n</i> (% of first column)	Samples with co-occurring xylazine, <i>n</i> (% of first column)
2018	25,381	651 (2.6)	319 (1.3)	556 (2.2)	0	268 (1.1)	4 (0.0)	1 (0.0)
2019	28,905	615 (2.1)	148 (0.5)	1011 (3.5)	0	312 (1.1)	54 (0.2)	8 (0.0)
2020	24,884	634 (2.5)	239 (1.0)	1179 (4.7)	9 (0.0)	258 (1.0)	179 (0.7)	14 (0.1)
2021	24859	760 (3.1)	277 (1.1)	1187 (4.8)	30 (0.1)	200 (0.8)	290 (1.2)	35 (0.1)
2022ª	16,756	503 (3.0)	225 (1.3)	755 (4.5)	42 (0.3)	164 (1.0)	248 (1.5)	50 (0.3)

Note: A sample containing methamphetamine can have more than one co-occurring substance. "Other stimulants" includes any of the following: amphetamine, MDMA, MDA and methylbenzylpiperazine. "Nitazenes" includes any of the following: etodesnitazene, etonitazene, etonitazene, metonitazene, isotonitazene and protonitazene. "Other opioids" includes any of the following: heroin, codeine, oxycodone and hydromorphone. "NMBs" includes any of the following: etizolam, clonazepam, flubromazepam, adinazolam, meclonazepam and deschloroetizolam, flualprazolam, bromazolam, norfludiazepam, alprazolam and flubromazolam.

<sup>a</sup> January to August



Table 6. Count (*n*) and percentage (%) of samples containing fentanyl that also contained cocaine, methamphetamine ("meth") or both cocaine & methamphetamine, by year reported (2018–2022).

Year	Total samples containing fentanyl	Samples with co-occurring cocaine, <i>n</i> (% of first column)	Samples with co-occurring meth, <i>n</i> (% of first column)	Samples with co-occurring cocaine and meth, <i>n</i> (% of first column)
2018	9082	716 (7.9)	556 (6.1)	186 (2.0)
2019	11,861	655 (5.5)	1,011 (8.5)	192 (1.6)
2020	13,490	750 (5.6)	1,179 (8.7)	262 (1.9)
2021	16,578	909 (5.5)	1,187 (7.2)	329 (2.0)
2022a	11,299	570 (5.0)	755 (6.7)	228 (2.0)

<sup>a</sup> January to August.

# **Appendix C**

## Demographics of Methamphetamine-Related 911 Dispatches in the United States (January 2017 – October 2022)



#### Figure 1.



# Figure 2. Methamphetamine-related 911 EMS responses by race/ethnicity January 2017 – October 2022 (n=522,318) 1.66% 0.22% 0.01% 9.47% 0.22% White Unknown Hispanic/Latino Black Native American

20.43%

# Prepared by the CCSA in partnership with the Canadian Community Epidemiology Network on Drug Use (CCENDU)

The Canadian Community Epidemiology Network on Drug Use (CCENDU) is a nation-wide network of community level partners who share information about local trends and emerging issues in substance use and exchange knowledge and tools to support more effective data collection.

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Asian

Other

Pacific Islander