



Drug Checking¹

What Drug Checking Is

Drug checking is a service that tests drugs from the unregulated supply for their contents. This is important because unlike products that are labelled with known contents and dosages (e.g., food, medication), drugs from the unregulated supply often contain unexpected added substances that people who use drugs (PWUD) do not know are there or do not intend to use (Canadian Centre on Substance Use and Addiction, 2020). Even expected substances in drugs can be present in unknown amounts, resulting in different effects than what the individual was anticipating, including overdose (Canadian Centre on Substance Use and Addiction, 2020).

The purpose of drug checking is to gather and communicate information about the contents of the unregulated drug supply. It is not the same as drug testing, a practice for compliance or punitive purposes that analyzes samples from the body (e.g., hair, urine, blood) to determine if drugs are present.

In Canada, drug checking services are most often provided by community-based organizations and are integrated into settings that offer health and social supports, as well as through mobile sites and at music festivals (Hutchison et al., 2023; Sage et al., 2022). This makes drug checking accessible to people across the substance use health spectrum and across demographic groups, from young people attending a party or music festival to people with a substance use disorder, since unexpected substances can impact anyone who accesses drugs from the unregulated supply, regardless of how often they use or their circumstances.

Drug checking is not a new concept. It has existed for more than 50 years globally (Maghsoudi et al., 2022). In 2017, 31 drug checking services were identified across 20 countries (Barratt et al., 2018). Across Canada, the number of drug checking services has

¹ This document is part of a series of evidence briefs the Canadian Centre on Substance Use and Addiction has created to help people and communities understand and contextualize complex health solutions and the resources intended to address people's substance use health and wellness. Please also check out our briefs on opioid agonist therapy (Canadian Centre on Substance Use and Addiction, 2024a) and supervised consumption sites (Canadian Centre on Substance Use and Addiction, 2024b). The research findings in this document are primarily based on a review of academic and grey literature from 2017 to 2024. Earlier studies were included when more recent research was unavailable. The focus was on evidence review articles and related Canadian resources. International studies were included when Canadian literature was not available.



grown rapidly in response to the drug toxicity crisis (Hutchison et al., 2023; Maghsoudi et al., 2022). An environmental scan conducted by CCSA in 2023 captured 30 drug checking services across eight provinces and territories.

What Drug Checking Does

Drug checking provides critical information on the contents found within drug samples. This information can help PWUD understand exactly what is in their drug or drugs, so they can make informed decisions about their use and reduce their risk of overdose (Moran et al., 2024; Ondocsin et al., 2023). Drug checking results can also help clinicians and other service providers tailor their care for PWUD, enabling the service providers to better respond to overdoses, and provide valuable information on current drug trends to the community at large, assisting with prevention of substance-related harms. This is explained in more detail in the sections below.

Drug checking can take different forms – from test strips that check for the presence of an unwanted substance in a sample (e.g., fentanyl), to highly sensitive laboratory equipment that can provide a breakdown of the concentration of present substances (Sage et al., 2022). Many drug checking services combine multiple technologies to get the most comprehensive information (Giulini et al., 2022; Gozdziński et al., 2023).

How Drug Checking Benefits People

Reduces Substance Use Risks

Just as we use information about weather conditions or air quality to make decisions about our exposure to risk (e.g., bring an umbrella, wear sunscreen, stay indoors), drug checking services help PWUD make decisions that support their substance use health goals (Moran et al., 2024; Ondocsin et al., 2023). This includes taking extra precautions to reduce any potential harms associated with consuming their drugs, including overdose.

People who use drug checking services are more likely to report their intention to change their drug use if their sample contained an unexpected substance (Maghsoudi et al., 2022; McDonald et al., 2023; Ondocsin et al., 2023; Valente et al., 2019). Such changes may include modifying use (e.g., using less) or not using at all (Valente et al., 2019; Valente et al., 2022), discarding drugs, changing sources or engaging in other harm reduction practices such as visiting a supervised consumption site or carrying naloxone (Ondocsin et al., 2023), all of which can reduce risk of overdose.

Improves Clinical Care

Drug checking results can enable delivery of more effective and tailored supports, including in the case of an adverse event (e.g., overdose or withdrawal), if shared with first responders and other healthcare professionals and care providers. Drug checking has key impacts on clinical care such as informing care plans and medication choices among clinicians and nursing professionals, informing toxicology labs about drugs to screen for, and allowing



clinical professionals to warn their patients about risks and recommend steps to avoid them (McDonald et al., 2023).

Increases Access to Health and Social Services

Drug checking services help people get access to health, mental health, and substance use health services and supports they might need. Through non-judgmental and non-stigmatizing interactions, drug checking services can facilitate trust and connection to resources offered by the organization and the broader healthcare system (McDonald et al., 2023; Ondocsin et al., 2023).

As a result, drug checking has connected individuals to other substance use health supports such as harm reduction and treatment (e.g., counselling, medication therapy, withdrawal management, bed-based and in-patient treatment), medical care (e.g., sexual healthcare, care for HIV, hepatitis C and sexually transmitted infections), and referrals to other services such as housing assistance (Barratt et al., 2018; Ondocsin et al., 2023).

Toronto's Drug Checking Service reported that drug checking was the first harm reduction service many of their service users had accessed, making drug checking a "gateway to referrals to treatment and other drug-related, health, and social services" (McDonald et al., 2023).

How Drug Checking Benefits Communities

Helps Monitor Drug-Related Trends and Inform Public Health and Safety Decisions

Many drug checking services aggregate data and communicate trends to facilitate evidence-informed policy and program decisions. In this way, drug checking can be a powerful tool for monitoring changes to the ever-evolving drug supply in real time and rapidly disseminating this information, thereby strengthening existing public health and public safety approaches and increasing the comprehensiveness of the response to the overdose crisis (Larweh & Nestadt, 2024; McDonald et al., 2023).

Drug checking data are used by health and social services to inform and improve their programs and the care they provide to PWUD (McDonald et al., 2023; Moran et al., 2024). They are also used by law enforcement to tailor responses, and by public health units and health authorities to alert the public, including youth. What's more, these data are also included in alerts and bulletins published by CCSA to raise awareness of emerging trends and to share learnings nation-wide (Canadian Centre on Substance Use and Addiction, 2020; 2023). Finally, information on drug checking service use can also assess demand for services and inform needs-based planning for services and supports (McDonald et al., 2023; Moran et al., 2024; Wallace et al., 2021).



Reduces Costs and Saves Money

Drug checking services reduce the number of overdoses and other drug-related harms, ultimately saving public monies from being spent on emergency service calls, emergency department visits and hospitalizations (Yeung et al., 2023).

In general, services such as drug checking that reduce the harms associated with substance use have been found to be cost-effective both in the short and long term (Keen & Weston, 2021), and their impact on reducing costs is even greater when multiple services and supports are integrated (Wilson et al., 2015) as is common practice for drug checking to be connected to other services (Hutchison et al., 2023; Sage et al., 2022; Yeung et al., 2023).

Ultimately, increasing and integrating services can save lives, reduce costs to municipalities and improve overall public safety.

Addressing Public Concerns About Drug Checking

Drug Checking Services Do Not Provide Drugs to People

Drug checking services do not provide the drugs to be tested, but test small samples submitted by individuals (Sage et al., 2022).

Drug Checking Does Not Encourage or Perpetuate Drug Use

Drug checking services are designed to empower people who *already* use drugs to do so in a way that reduces harm. It neither encourages consumption, nor leads to an increase in consumption (Brunt, 2017; Hollett & Gately, 2019; Hungerbuehler et al., 2011; Murphy et al., 2021). In fact, some people will decide to not use their drugs once they learn what is in them (McDonald et al., 2023; Valente et al., 2019; 2022).

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About CCSA

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