

Alcohol and other Drug Use

A Toronto Research Summary

Issue No. 1: Youth

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Introduction

This is the first in a series of research summaries prepared by Toronto Public Health about alcohol and other drug use in Toronto. Its purpose is to provide current data and information about substance use in Toronto from a range of government, institutional and community-based sources. This issue looks at substance use among youth, specifically students in Grades 7–12, homeless youth aged 16–24, and youth in the dance music community. Information is provided on the prevalence of alcohol and other drug use, risks associated with particular substances and patterns of use, and youth participation in substance use treatment programs.

Patterns of substance use by Toronto youth are similar to youth in other communities. Generally speaking, alcohol and other drug use increases through the teen years and peaks in the mid-late twenties. As youth grow older and take on adult responsibilities, such as full-time work or having a family, their use of alcohol and other drugs decreases¹⁹.



Highlights

Details on substance use by youth in Toronto are described throughout this report; highlights are as follows:

- Youth use alcohol more frequently and with more harmful consequences than any other drug. It is mostly older youth who are drinking, and dangerous patterns of use include binge drinking, pre-drinking in advance of going out, hazardous drinking, and drinking and driving.
- After alcohol, cannabis is the most commonly used drug among youth.
- While alcohol and other drug use typically increases with age, solvents are the exception, peaking in Grades 7 and 8. Solvent use is higher among Toronto students than elsewhere in the province.
- Recreational use of prescription opioids by youth has increased, particularly among young women.
- Street-involved and homeless youth use alcohol and other drugs at much higher rates than other youth, and with more risks, such as injection drug use and drug combinations.
- The most commonly used drugs for which youth seek treatment are alcohol and cannabis.
- The content of unregulated illicit drugs is always uncertain and potentially dangerous for both youth and adults. Recently, cocaine contaminated with levamisole (a veterinary dewormer) has caused incidents of severe illness in Toronto.

Alcohol

Alcohol is a depressant drug. Youth use alcohol more frequently and experience more resulting harms than with any other drug. The amount of alcohol consumed and the circumstances in which



youth drink can put them at significant risk of harm. The 2009 Ontario Student Drug Use and Health Survey (OSDUHS) found that almost half (45%) of Toronto students in Grades 7–12 drank alcohol in the past year, usually on special occasions (22%)²⁰. Among these students, 16% reported binge drinking

(more than five drinks on one occasion). However, this behaviour occurred mainly among older students. In Grade 12 alone, 49% of students in this study reported binge drinking.

In the OSDUHS report, 12% of Toronto students reported “hazardous drinking”, which is defined as patterns of drinking that will likely cause harms to health, either currently or in the future²⁰. The number of Grade 12 students who report hazardous drinking has increased significantly over the last 10 years, from 28% in 1999 to 42% in 2009. For some students, their drinking is having an impact on their mental health as both hazardous drinking and elevated psychological distress (symptoms of anxiety and depression) were reported by 11% of female students, and 6% of male students²⁰.

The OSDUHS 2009 report also finds that youth who begin using drugs at an early age (i.e., before age 13 or 14) are more likely to develop a substance use dependence and other problems later in life²⁰. In this study, the average age that students reported having their first drink was 13, with a first instance of drunkenness at age 14. Youth who are homeless/street-involved also report using alcohol for the first time at an early age; on average at age 13². However, the rates of alcohol use among street youth tend to be higher than for other youth. In two Toronto studies, alcohol use was reported by 71% to 91% of homeless youth surveyed^{16,2}. Rates of alcohol use have been found to be even higher among youth in the dance music community (at clubs and parties). In a recent study, 98% of youth reported using alcohol, 46% of whom were under 19 years of age⁵.

Although fewer Ontarians drink and drive than they did 10 years ago, research shows that youth aged 18–29 drink and drive at higher rates than any other age group¹⁷.

In the 2009 OSDUHS report, drinking and driving was reported by 7% of Grade 7–12 students in Toronto, which, although lower than the rest of Ontario, is still a concern²⁰. In addition, 19% of students in this study reported being a passenger in a vehicle where the driver had been drinking.



Half of Grade 12 students in Toronto that use alcohol report binge drinking²⁰.

Pre-drinking

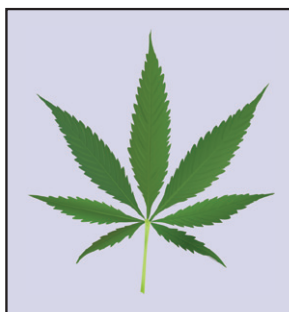
An issue of concern for youth is pre-drinking, which is drinking (sometimes heavily), before going out to a bar, club, or other social event. Youth cite several reasons for pre-drinking including, to avoid paying high prices for drinks as well as to “get drunk” before going out²⁵. There is also an important social aspect of pre-drinking as youth get together to socialize before going into loud nightclub environments that limit this type of interaction²⁵.

The negative consequences of pre-drinking result from consuming large amounts of alcohol in a short period of time. If a person goes on to drink in the bar or club, their overall consumption over the evening can be significant and lead to illness, blackouts, aggression and violence.

Pre-drinkers have been found to be 2.5 times more likely than non-pre-drinkers to report involvement in a fight²⁵.

Cannabis

Cannabis is a depressant drug that includes marijuana, hashish and hash oil. Cannabis is the most frequently used illicit drug among Toronto students with 20% of Grade 7–12 students reporting use²⁰. Almost all of students using cannabis in this study also drank alcohol; only 0.5% of students reported cannabis use alone. Cannabis is also the most frequently used illicit drug among homeless/street-involved youth (aged 16–24) in Toronto, at rates ranging from 73% to 83%^{16,2}. In addition, most of the youth surveyed in Toronto's dance music community (94%) reported having tried marijuana⁵.



Of concern, the OSDUHS research found that 11% of Toronto students reported using cannabis and driving²⁰. While drinking and driving is a commonly understood issue, more focus is needed, for both youth and adults, on the dangers of using any drug while driving. Cannabis has been found to impair a drivers' ability to maintain road position and speed, their reaction time, and is linked to an increased risk of collision⁴.

Prescription opioids

Opioids are synthetic depressant drugs that are prescribed for pain relief (e.g., Oxycontin and Fentanyl). The use of these drugs by youth for non-medical purposes is increasing. Close to one fifth (17%) of Toronto students reported the recreational use of these drugs at least once in the past year²⁰. When asked where youth were getting these drugs, three-quarters (72%) reported getting them from home. Rates of non-medical prescription opioid drug use as well as over-the-counter cough/cold medications by youth are significantly higher than for any 'street' or 'club' drug (except cannabis)²⁰.

More young women than men seem to be using prescription pain relief drugs recreationally. The OSDUHS study found that 20% of female students in Ontario used pain pills compared with 16% of males²⁰.



In a study of street-involved youth, young women reported much higher rates of prescription opioid use than their male counterparts; almost double for oxycodone (63% female, 36% male) and Tylenol with codeine (50% female, 28% male), and over five times higher for Fentanyl (50% female, 8% male)². Among youth in the dance/club community, one study found 72% of youth using prescribed opioids such as codeine or oxycodone⁵.

In 2009, a rise in accidental deaths in Ontario was linked to the use of these prescription drugs, particularly long-acting oxycodone⁹.

Most prescription pills used by youth come from their parents' medicine cabinet.

Heroin

Heroin is an opiate depressant drug derived from morphine. Heroin use is rare among Ontario students with less than 0.7% of students in Grades 7–12 reporting ever having used heroin²⁰. However, for homeless/street-involved youth, rates of heroin use are much higher. In a Toronto study of homeless youth, 5% reported using heroin¹⁶. Another Toronto study focused on homeless youth who use drugs found much higher rates, with 30% of young men and 21% of young women reporting heroin use². In a study on youth in the dance/party scene, 9% had tried heroin⁵.

Cocaine

Cocaine, including crack cocaine, is a stimulant drug. Cocaine use among Toronto students is low, which is consistent with students in other Ontario communities. In Toronto, only 2% of Grade 7–12 students reported using powder cocaine, and 1% used crack cocaine²⁰. Cocaine use is much higher among Toronto’s homeless/street-involved youth with one study finding 24%

of youth reported using powder cocaine, and 11% crack cocaine¹⁶.

Another study found use of both powder and crack cocaine by almost three-quarters of those surveyed, with 68–69% of young men, and 71–74% of young women using these drugs in the six months previous to the study². Among youth in the dance music/party scene, 71% had tried cocaine, and 11% had tried crack cocaine⁵.

Levamisole in cocaine

A current issue of concern for people of all ages is cocaine contaminated by levamisole, which is a veterinary deworming drug. Illicit drugs are unregulated and as such they may contain toxic ingredients.

Recently, Toronto hospitals began seeing people with severe illness caused by cocaine contaminated with levamisole. This contaminated cocaine has caused debilitating and potentially fatal, skin and lung infections. Toronto Public Health has issued community and medical alerts to raise awareness of this issue. If someone has used cocaine and develops a fever, skin patches/abscesses/ bruising, or a lung infection, they are advised to seek emergency medical help immediately, and to inform the doctor they have used cocaine.



Amphetamines

Amphetamines, or ‘speed’, are stimulants available both as prescription drugs (e.g., Dexedrine and Adderall) and illicit drugs (e.g., methamphetamine). Amphetamines and methamphetamines are available in various forms. In recent years, concern has been raised in the media about the crystal form of

methamphetamine to the extent that the term ‘crystal meth’ has come to mean any form of methamphetamine^{1,22}. Despite the media and political focus on crystal meth, it is important to

Mephedrone (also known as max volume, m-cat or bubbles) is an illegal stimulant that has recently come to Canada, and is used by some people in the dance/party scene. It is similar to amphetamines, and sold online as plant food. As yet, little is known about this drug.

note that methamphetamine use is rare among youth. In the 2009 OSDUHS research, the use of methamphetamines or speed was reported by only 1% of Toronto students²⁰. Further, the recreational use of amphetamines, such as Adderall or Dexedrine, was low among Toronto students at 3%.

In contrast, rates of amphetamine use are higher among homeless/street-involved youth. One Toronto study found that 16% of homeless youth used amphetamines¹⁶. Other research has found amphetamine use by 15% of young men and 13% of young women who were homeless². The use of methamphetamine was much higher among this group, reported by nearly half of young men (47%) and a third of young women (38%)². Almost half of youth in a survey of the Toronto dance music community (48%) reported trying methamphetamine, in addition to other amphetamines such as Dexedrine (34%) and Adderall (34%)⁵.

Hallucinogens

Hallucinogens (e.g., ketamine, PCP and LSD) are chemical drugs that change perceptions and emotions, resulting in people seeing, hearing or sensing things that do not exist or are distorted¹⁰. Use of hallucinogens is rare among youth with only 2% of Toronto students reporting use of LSD, and 3% reporting use of 'other hallucinogens'²⁰. In addition, only 2% of Ontario students reported ketamine use, and less than one percent (0.8%) used PCP.

The use of hallucinogenic drugs is more common among youth who are homeless/street-involved or who are in the dance music/party community. For example, a Toronto study of homeless youth using drugs reported ketamine use by 46% of male youth and 50% of female youth². In the same research, LSD was used by 28% of males and 33% of females, and PCP was used by 12% of young men, and 8% of young women. Among youth in the dance music community, use of hallucinogens was more widely reported, with 79% of youth having tried magic mushrooms, 70% having tried ketamine, and 68% having tried LSD⁵.

Ecstasy

The chemical called ecstasy (MDMA) is both an amphetamine and a hallucinogen. Only 2% of Toronto students reported having used ecstasy according to the 2009 OSDUHS study²⁰. Ecstasy use is more common among homeless youth with one Toronto study finding 34% of youth using hallucinogens, mainly ecstasy¹⁶. Another Toronto study found even higher rates, with 69% of men and 63% of women reporting ecstasy use². Among

youth in the dance music community, 84% reported trying MDMA⁵.

As with any unregulated drug, ecstasy may contain unknown ingredients, and little or no MDMA. In a Health



Canada report analysing drugs sold as ecstasy in Quebec, only 23% were found to contain pure MDMA while 22% contained only methamphetamine but were being marketed as MDMA¹⁴.

The report concludes that "for close to 30% of the tablets containing a combination of methamphetamine and MDMA and sold as ecstasy, methamphetamine was the only drug present in a sufficient concentration to produce an effect."

A Quebec study looked at drugs sold as ecstasy. Just 23% were MDMA only; 22% contained methamphetamine only.

GHB

GHB is a chemical depressant that slows down brain and body activity, most common as a colourless, odourless liquid⁶. Use of GHB is rare among youth, with only 0.5% of Ontario students reporting use²⁰. Rates of use are much higher among youth who are homeless and or otherwise street-involved, with one Toronto study citing use by 25% of young men and 8% of young women surveyed². Among youth in the dance/club community, 34% reported having ever tried GHB⁵. While GHB is used as a recreational drug, it is also known as a 'date rape' drug because it is undetectable when added to drinks and can cause drowsiness and memory loss. Victims of this form of date rape are often unable to resist their attacker because of the effects of the drug or to recall a sexual assault after it has occurred.

Solvents and glue

Solvents are toxic chemicals that, along with glue, can be inhaled. These chemicals are found in common household products such as nail polish remover, paint thinner, and gasoline. These toxins can cause harms ranging from damage to the brain, nerves, organs, bones and blood, to the loss of motor control, to death from heart failure or from suffocation⁷. The OSDUHS study highlights that solvents are the only substance that youth use less frequently as they grow older²⁰.

Solvents and glue are mainly used by younger students, in Grades 7–8. Solvent use is higher among Toronto students than elsewhere in the province.

Solvent use peaks in Grades 7 and 8 and declines from there²⁰. Toronto students reported higher rates than elsewhere in the province, with 8% of students inhaling solvents and 4% sniffing glue.

Multiple or ‘poly drug’ use

Serious health problems can result from different drugs being taken together, depending on the types of drugs taken and the amounts used. Alcohol is the most commonly used drug and can be dangerous when combined with other drugs. For example, alcohol and cocaine react together in the body to produce a toxic substance called cocaethylene, which causes heart and liver problems and increases the risk of overdose³. Stimulants and depressants taken together can be fatal; “The stimulant raises one’s pulse but its effects generally wear off more quickly than depressants, which in turn slow down the heart. As a result, the user may experience a delayed overdose (i.e., respiratory depression) when the stimulant wears off and the full effects of the depressant are felt in isolation”².

Poly drug use is common among homeless/street-involved youth. In a Toronto study of homeless youth using drugs, 91% of participants used alcohol in combination with other drugs². One-fifth of these youth reported using stimulants and depressants together, for example, using methamphetamine with ketamine (22%) or GHB (17%), or using heroin with powder or crack cocaine (14 and 15%). Among high school students, the use of multiple drugs is low with 6% of Ontario students reporting use of alcohol, cannabis or other drugs²⁰. However, it is unknown if these drugs were used in combination.



Injection drug use

Injection drug use is more common among youth who are homeless or street-involved than among other youth. One Toronto study found that 33% of youth surveyed had injected drugs in the previous six months, and 18% of this group had injected two to three times a day². In a study of youth in the dance music/party community, 9% reported ever injected drugs⁵. In contrast, injection drug use was reported by less than one percent of Ontario students in the OSDHUS study; down from 3% in 1999²⁰.

Injection drug use carries significant risks, including the spread of HIV, hepatitis C and other blood-borne diseases that can be transmitted through the sharing of injecting supplies (e.g., needles, syringes, water)¹⁸. Abscesses and other vein injuries are also a common result of injecting drugs and the risk of overdose significantly increases when drugs are injected¹¹.

Homelessness and substance use

People who are homeless or otherwise street-involved have more health problems and higher rates of illness and substance use than people who are in stable living situations. The relationship between substance use and homelessness is complex. For some youth, substance use may be a cause of their homelessness²³. In a recent study, 12% of Toronto street youth reported that their substance use was the main cause of their homelessness although other factors such as loss of housing, family conflict, etc. also played a role. However, youth also use alcohol and other drugs to cope with the pressures of being homeless².

The longer someone has been on the street, the more likely they are to report drug use as a reason for connecting to other street youth^{26,2}. The social networks formed by youth on the street and in shelters are vital for the

sense of community they provide, however, it is through these same connections that youth are introduced to different types of substance use. Even after finding housing, youth keep these social connections².

The longer a young person is homeless, the more likely they are to report alcohol and other drugs as a basis for social networks.

Toronto youth in substance use treatment programs

While most youth will experiment with alcohol or other drugs, the majority will not go on to develop a substance use problem²³. There are some youth, however, who are at greater risk of developing issues including youth who are homeless or street-involved²⁴. For young people struggling with problematic drug use, timely access to appropriate and effective treatment services is critical.

The Drug and Alcohol Treatment Information System (DATIS) at the Centre for Addiction and Mental Health compiles and reports information about the use of treatment services in Ontario⁸. In 2008/09, DATIS recorded a total of 1,786 admissions by Toronto youth (aged 24 and under) into treatment services. Some of these youth were admitted more than once, therefore, the total number of unique individuals admitted was 1,354 of which 60% were male and 40% were female. The most common drugs for which youth sought treatment were alcohol and cannabis, noted in just over half of Toronto youth admissions.

A full list of the substances that youth reported as problematic is shown in Table 1 on the next page.

The majority of referrals to treatment services were made by youth themselves (28%). Other referral sources included the withdrawal management (detox) Central Access telephone line (20%), family and/or friends (15%), education/training programs (8%), medical services (4%), and the legal system (4%). Referrals were also made from within the treatment system, from one type of program to another (11%). Most of the treatment programs that youth attended were located in the Toronto-Central Local Health Integration Network (LHIN) area (87%). A further 5% of youth used services in the Central LHIN, and 4% in the Central East LHIN, both of which have a partial boundary in the city of Toronto.

The treatment system includes many types of services, from initial assessment/planning to day and community programs to residential services. Toronto youth attended a range of programs, mostly on a day/outpatient basis. Most youth admissions were to four types of services: initial assessment and treatment planning (27%), community treatment programs (28%), residential withdrawal management services (17%), and case management supports (16%)*. Youth may have used multiple services during a single admission.

Youth reported an average of two 'problem substances' at admission. Alcohol and cannabis are the main drugs for which youth seek treatment⁸.

*Community treatment programs: These 1–2 hour sessions are either in groups or individually, typically weekly or less often. Residential withdrawal management (level two): The client stays onsite for help withdrawing from alcohol and/or other drugs. Staffing levels are sufficient to help with specialized needs such as methadone. No medical services are provided. Case management services: The client is connected with a worker to help on a one-on-one basis, providing ongoing assessment and individual supports.

Toronto lacks residential youth treatment

Toronto does not have any youth-specific residential treatment programs. As a result, youth must use adult residential services or travel outside of Toronto. Research supports the separation of youth and adult treatment services, in part because youth are dealing with issues that are very different from adults¹². While outpatient programs are effective for many youth, a continuum of options including residential treatment should be available. Residential treatment programs are particularly important for youth with complex needs, such as lack of a secure living environment, family support, or a history of neglect/abuse.

Upon their discharge from treatment services, Toronto youth were referred to a range of programs and supports both within the treatment service system and to external community services**. Youth were referred to residential treatment services (13%), self-help groups such as Alcoholics Anonymous (13%), and community-based treatment services (10%). The remaining referrals were to diverse health and social services and supports. For many youth, no referrals were made at discharge, however, the reasons for this are not available.

Table 1

Presenting Problem Substances* (open admissions 2008–9)						
	Male (N=1050)		Female (N=736)		Total (N=1786)	
	N	%	N	%	N	%
Alcohol	555	53	369	50	924	52
Cannabis	644	61	330	45	974	55
Cocaine	203	19	185	25	388	22
Crack cocaine	206	20	193	26	399	22
Amphetamines and other stimulants (excluding methamphetamines)	31	3	28	4	59	3
Methamphetamines (including crystal methamphetamine)	50	5	26	4	76	4
Benzodiazepines	29	3	25	3	54	3
Barbiturates	0	0	0	0	0	0
Heroin/opium	59	6	45	6	104	6
Prescription opioids	85	8	78	11	163	9
Over-the-counter codeine preparations	18	2	14	2	32	2
Hallucinogens	34	3	36	5	70	4
Ecstasy	74	7	61	8	135	8
Glue and other inhalants	3	0	3	0	6	0
Other psychoactive drugs	10	1	18	2	28	2
Steroids	1	0	0	0	1	0
Undifferentiated	2	0	1	0	3	0
Unknown	43	4	25	3	68	4
None	24	2	29	4	53	3

**It is important to note that the discharge numbers are low due to the way the DATIS system counts outgoing referrals. If multiple referrals are made within the same category, DATIS counts them as one referral.

Key sources

Students: Since 1977, the Centre for Addiction and Mental Health (CAMH) has surveyed Ontario students in Grades 7–12 about their substance use in the Ontario Student Drug Use and Health Survey (OSDUHS). Toronto-specific data was used for this report. Where no Toronto data was available, Ontario data was used. OSDUHS reports can be found at:

<http://www.camh.net/Research/osdus.html>.

Street youth: In the Youth Pathways Project (YPP), researchers surveyed 150 Toronto homeless youth about diverse issues related to their quality of life, including substance use. The 2009 report used for this report was published in the International Journal of Social Inquiry at:

<http://www.socialinquiry.org/articles/IJSI-V2N22009-007.pdf>.

Street youth using substances/injecting: The Shout Clinic provides health services to street-involved and homeless youth aged 16–24 in Toronto. In 2009, the Shout Clinic surveyed street youth who use drugs about their health status and needs. The Shout Clinic Harm Reduction Report (2010), *Drugs, Homelessness and Health: Homeless Youth Speak Out About Harm Reduction* can be found at: http://www.wellesleyinstitute.com/research/affordable_housing_research/drugs-homelessness-health-homeless-youth-speak-out-about-harm-reduction/.

Substance use treatment services: The Drug and Alcohol Treatment Information System (DATIS) operates from CAMH, and compiles information about the use of treatment services in Ontario. DATIS provided information for this report on the use of treatment services by youth aged 15–24 whose residence was Toronto in 2008–9. DATIS reports are available at:

<http://www.datis.ca/reportsandstatistics.php>.

Youth in the dance music/party scene: TRIP! is a youth-led project operating out of the Queen West Community Health Centre providing safer sex and drug use information and tools for former and current drug users from Toronto's dance music community. TRIP! provided information for this report from their 2009 Holiday Survey. More information can be found at:

<http://www.tripproject.ca/trip/>.



This report was produced by the Toronto Drug Strategy Secretariat in Toronto Public Health.

For more information go to www.toronto.ca/health/drugstrategy.

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