

Drug Use Among Ontario Students

OSDUHS Highlights

1977- 2013



camh
Centre for Addiction and Mental Health
Centre de toxicomanie et de santé mentale

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Ontario Student Drug Use
and Health Survey

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A Pan American Health Organization / World Health Organization Collaborating Centre
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Introduction

The purpose of the *Ontario Student Drug Use and Health Survey* (OSDUHS) is to examine epidemiological trends in student drug use, mental health, physical health, gambling, and other risk behaviours, as well as identifying risk and protective factors. The OSDUHS, now spanning over 37 years, is the longest ongoing surveillance program of alcohol and other drug use, and other health related behaviours among adolescent students in Canada, and one of the longest in the world.

In this Highlights Report, we summarize the prevalence and patterns of tobacco, alcohol, and other drug use among Ontario students in grades 7 through 12 in 2013. We also provide data on trends occurring every two years since 1977. Trend results are provided for two analytical groups of students: those in grades 7 through 12, and those in grades 7, 9, and 11 only. The first group is used to assess current drug use and **recent trends (1999–2013)**, and the second is used to assess **long-term trends (1977–2013)**.

Repeated cross-sectional surveys such as the OSDUHS contribute to an understanding of the past, present, and potential future patterns of alcohol and other drug use and misuse in the adolescent population, the harms stemming from such use, and the associated contextual, social, and demographic risk and protective factors.

Some drug-related surveillance objectives of the OSDUHS are to provide trustworthy and timely data regarding:

- current alcohol, tobacco, and other drug use by students, and trends in use since 1977;
- early initiation of use and trends over time;
- the nature of, and trends in, harms associated with alcohol and other drug use and misuse;
- trends in driving after consuming alcohol and cannabis;
- exposure to alcohol and other drug use at school;

- exposure to education about alcohol and other drug use at school; and
- attitudes and beliefs about alcohol and other drug use.

The 2013 OSDUHS included **newly introduced material**¹ addressing:

- use of a waterpipe (“hookah”);
- use of electronic cigarettes;
- use of alcohol mixed with an energy drink;
- playing drinking games;
- use of synthetic cannabis (“spice”);
- use of cannabis and alcohol on the same occasion;
- use of methoxetamine (a new synthetic drug);
- nonmedical use of modafinil (a prescription stay-awake drug); and
- the perceived risk of harm associated with smoking a waterpipe regularly, and with the nonmedical use of a prescription opioid pain reliever.

A more comprehensive report on the survey’s drug use findings, as well as a complete description of methodology, can be found in the detailed report entitled *Drug Use Among Ontario Students, 1977-2013: Detailed OSDUHS Findings* (available in PDF at www.camh.ca/research/osduhs.aspx). The OSDUHS also covers an array of mental and physical health indicators and other risk behaviours, and these results will be published in the companion mental health and well-being report in the summer of 2014.

¹ Please see the detailed drug use report for results of all new material.

Methods

Sampling Design

The survey's target population – the population we are attempting to draw conclusions about – comprised all 7th to 12th graders enrolled in Ontario's four publicly funded school systems (i.e., English language public, English language Catholic, French language public, and French language Catholic). Students excluded from the survey's target population were those enrolled in private schools, those who were home-schooled, those institutionalized for correctional or health reasons, those schooled on First Nations reserves, military bases, or in the remote northern region of Ontario. These excluded groups represent a small proportion of the Ontario student population (about 8%). Therefore, although our target population represents students, it captures the vast majority (92%) of Ontario children and adolescents aged 12–18 years.

The 2013 OSDUHS employed a stratified (region by school level), two-stage (school, class) cluster sample design, and oversampled schools in northern Ontario and in seven public health regions.²

School Selection (Stage 1)

The 2013 OSDUHS school sample selection occurred as follows:

- a) Schools were selected from Ontario's Ministry of Education's 2009/2010 enrolment database (most recently available at the time).
- b) Within each of the region-by-school level strata, a probability proportionate-to-size (PPS) selection of schools was drawn (i.e., larger schools had a greater probability of being selected).

² Since 1981, the Institute for Social Research (ISR) at York University has assisted with the survey design, selected the sample, and administered the survey in schools on behalf of CAMH.

- c) If a selected school declined to participate, or if it had closed, a replacement school from the same stratum was randomly selected.

Class Selection (Stage 2)

Within each recruited school, a grade-stratified list of all eligible classes was used to randomly sub-sample one class per grade with equal probability. In elementary/middle schools, two classes were randomly selected – one 7th-grade and one 8th-grade. In secondary schools, four classes were randomly selected, one in each grade between 9 and 12 from either a list of classes in a required subject (e.g., English), or a required period (e.g., homeroom).

If a selected class could not participate, a replacement class from the same school and same grade was randomly re-selected, time permitting. Classes excluded as being out of scope were special education classes, English as a Second Language (ESL) classes, and classes with fewer than five students. All students in the selected classes who provided a signed consent form were eligible to participate.

Procedures

The 2013 OSDUHS protocol was approved by the Research Ethics Boards at CAMH, and York University, as well as 29 school board research review committees.

All participating schools were provided with active parental consent forms, which were available in six languages (English, French, Spanish, Portuguese, Russian, and Mandarin). Well in advance of the survey date, each school distributed the consent forms to students, who, in turn, sought the signature of one parent/guardian if they were under age 18 (students aged 18 and older did not require parental consent). Students themselves were also required to provide a signature of assent. Those who did not return a dual-signed consent form

on or before the survey date were not allowed to participate.

The survey was administered by trained ISR field staff in the classrooms between November 2012 and June 2013. Students were reminded that participation was voluntary and anonymous, and were instructed not to write their names on the questionnaires. They were also instructed to skip any question they did not understand, rather than risk disclosure by asking for assistance. Students wrote their answers directly on the questionnaire. The ISR field staff collected all questionnaires after the survey.

The OSDUHS Questionnaire

In addition to alcohol and other drug use, the OSDUHS questionnaire covers an array of topics related to mental and physical well-being. The general outline of the topics covered in the survey is as follows: demographics, family and school life, alcohol, tobacco, and other drug use, beliefs and attitudes about substance use, vehicle-related questions, mental health indicators (e.g., suicidality, symptoms of anxiety and depression), physical health indicators (e.g., physical activity, healthy weight and diet, injuries), bullying, gambling and gambling problems, video game playing problems, aggressive and other problem behaviours.

To include as many topics as possible in a fixed class period, while minimizing the burden on students, we employed four versions of the questionnaire, depending on school level. As in past cycles, we used split ballot modularized questionnaires whose item content was distributed according to questionnaire form (Form A vs. Form B). However, in 2013 we reduced the number of questions in these forms for students in elementary schools (i.e., the 7th and 8th graders). That is, elementary school students (grades 7 and 8) completed shorter questionnaires (a shorter Form A and a shorter Form B) than the secondary school students (grades 9–12). The elementary school questionnaires excluded the following topics: the use of cocaine, crack, heroin, methamphetamine, hallucinogens, club drugs

and new synthetic drugs, prescription tranquilizers, drug use problem screeners, gambling problem screener, and driving-related behaviours. About half of the items in each form were designated as core, that is, items common to all four forms (and thus answered by all students). A French version of Form A (ES and SS) was used in French-language schools. The 2013 questionnaires are available at www.camh.ca/research/osduhs.aspx.

Final Sample

The final sample size in 2013 was 10,272 students in grades 7–12 (63% of eligible students) from 671 classes in 198 schools in 42 school boards. This sample represents about 982,100 students in grades 7–12 in Ontario's publicly funded schools. All survey estimates were weighted, and variance and statistical tests were corrected for the sampling design.

This report provides drug use findings according to sex, grade, and region. The following four design-based regions are used: City of **Toronto**; **Northern** Ontario (Parry Sound District, Nipissing District and farther north); **Western** Ontario (Peel District, Dufferin County and farther west); and **Eastern** Ontario (Simcoe County, York County and farther east).

Results

Overview of Drug Use in 2013

Past Year Drug Use

As seen in Figure 1, the most commonly used drug by far is alcohol, with half (49.5%) of students in grades 7 through 12 reporting use (excluding just a sip to try it) during the 12 months before the survey. Consumption of highly-caffeinated energy drinks is also quite prevalent, as 39.7% of students report past year use. Cannabis is the most commonly used illicit drug, with 23.0% reporting past year use, followed by the nonmedical (NM) use of prescription opioid pain relievers, such as codeine, Percocet, Percodan, Demerol, or Tylenol #3 (12.4%). Over-the-counter (OTC) cough/cold medication with dextromethorphan (e.g., Robitussin DM) ranks high, with 9.7% of students in grades 7–12 reporting misuse during the past year.

Questions about the use of certain illicit drugs were asked of secondary students only (grades 9–12). Among this subset of illicit drugs, psilocybin (“mushrooms”) ranks highest with about 3.7% of secondary students reporting use in the past year, followed by ecstasy at 3.3%. Use of heroin, ketamine, BZP pills (benzylpiperazine), and mephedrone (“bath salts”) is extremely rare, as their past year prevalence estimates fall below 0.5%.

About one-in-six (15.2%) secondary students (grades 9–12) report using at least one prescription drug nonmedically (without a doctor’s prescription) during the past year. Well over one-third (40.0%) of secondary students report using any drug, other than tobacco or alcohol, during the past year.

Figure 2 shows the past year prevalence estimates for elementary students (grades 7 and 8) and secondary students separately. Not only do younger students have lower prevalence estimates than older students, the drug ranking differs slightly as well.

Lifetime Drug Use

Estimates for lifetime use show that alcohol, cannabis, and tobacco are the three most common drugs students in grades 7–12 have ever used. About 52.4% of students have ever consumed alcohol (more than just a sip), over one-quarter (26.6%) have ever used cannabis, and 20.0% have smoked cigarettes. About 14.9% have used prescription opioid pain relievers (e.g., codeine, Percocet, Percodan, Demerol, Tylenol #3) nonmedically in their lifetime. About one-in-eight (12.7%) students have ever used OTC cough/cold medication recreationally, and a similar proportion (11.2%) report ever using a waterpipe (hookah). The remaining drugs were used by less than 10% of students during their lifetime.

Figure 1.
Percentage Reporting Lifetime and Past Year Drug Use, 2013 OSDUHS

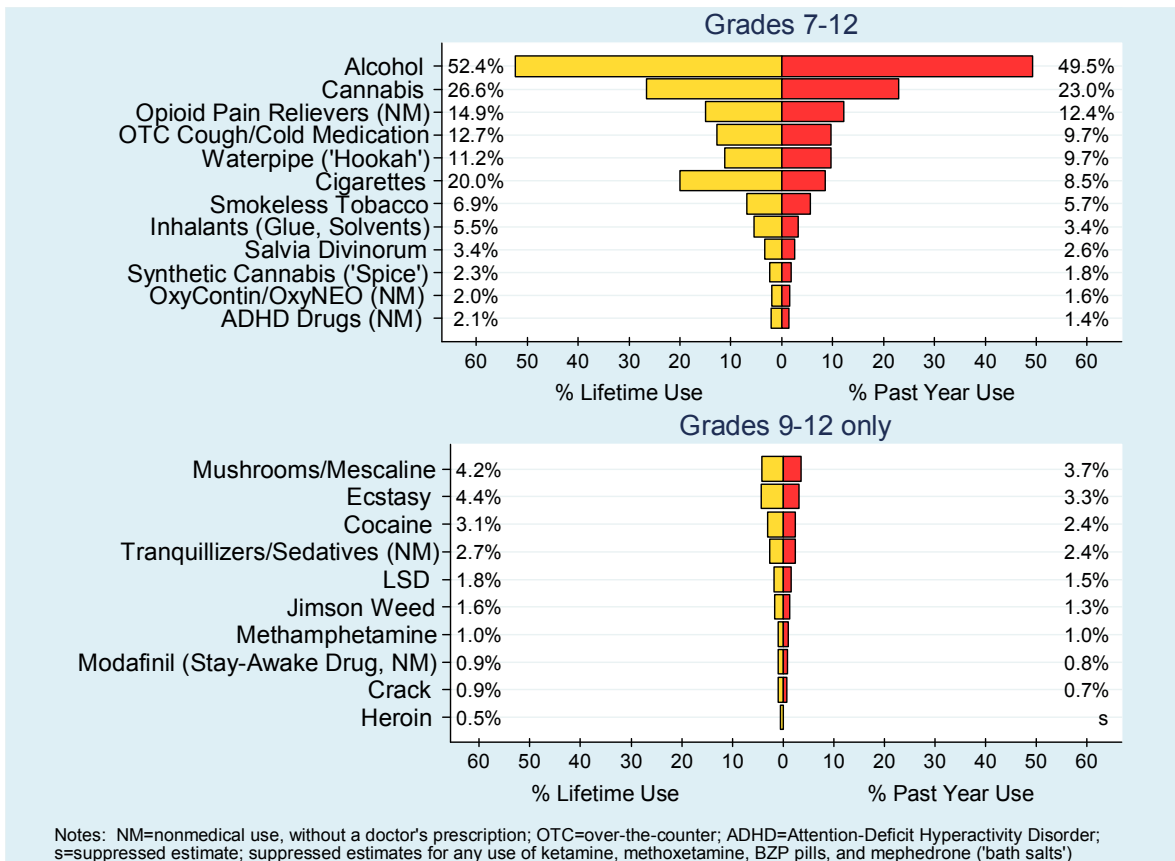


Figure 2.
Percentage Reporting Past Year Drug Use by Grade Level, 2013 OSDUHS

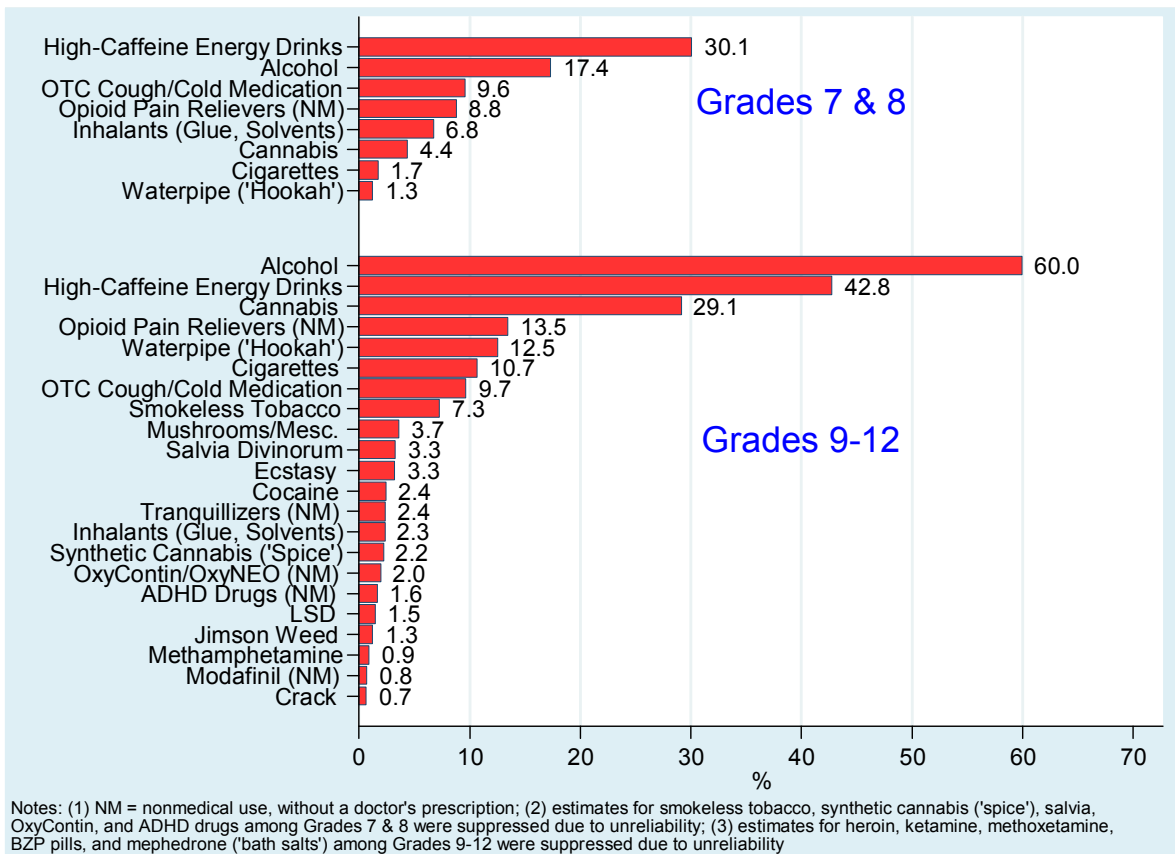


Table 1. Percentage Reporting Past Year Drug Use by Sex, Grade, and Region, 2013 OSDUHS (n = 10,272)

	Total %	Est. #	Males	Females	G7	G8	G9	G10	G11	G12	Toronto	North West	East
Drug Use Among Grades 7–12													
Alcohol	49.5	483,900	49.8	49.1	9.9	24.6	37.1	53.5	67.9	74.4 *	41.5	58.9	47.5 55.6 *
High-Caffeine Energy Drinks	39.7	382,500	45.9	33.1 *	26.4	33.6	36.6	40.0	41.7	49.9 *	34.7	42.2	40.5 41.1
Cannabis	23.0	225,600	25.3	20.6 *	1.7	7.0	14.6	24.5	33.5	39.2 *	22.9	23.1	21.8 25.1
Binge Drinking (5+ Drinks Past Month)	19.8	193,400	21.3	18.3	s	3.7	8.5	18.1	29.5	39.2 *	14.1	27.6	18.7 23.5 *
Opioid Pain Relievers (NM)	12.4	120,100	12.8	12.0	8.8	8.9	11.8	13.0	12.1	16.1 *	14.6	7.2	13.1 10.9 *
OTC Cough/Cold Medication	9.7	94,100	10.7	8.6 *	9.1	10.2	10.1	9.5	8.5	10.6	9.7	7.6	9.6 10.3
Waterpipe (“Hookah”)	9.7	88,400	11.5	7.9 *	s	s	4.3	8.5	15.1	18.8 *	7.0	9.3	8.9 13.1
Cigarettes	8.5	83,100	9.6	7.3	s	s	3.3	9.1	12.9	15.4 *	9.9	7.9	7.8 8.9
Smokeless (Chewing) Tobacco	5.7	51,800	9.0	2.2 *	s	s	4.0	6.3	9.2	8.7 *	s	s	5.9 7.0
Inhalants (Glue or Solvents)	3.4	31,300	2.8	4.1	5.9	7.6	3.0	s	2.6	s *	4.0	s	3.9 2.6
Salvia Divinorum	2.6	23,400	3.6	1.5 *	s	s	s	2.7	4.3	4.4 *	s	s	2.2 3.3
Synthetic Cannabis (“Spice,” “K2”)	1.8	17,300	1.9	1.7	s	s	s	2.6	2.3	s *	s	s	s 1.6
OxyContin/OxyNEO (NM)	1.6	15,500	1.9	1.3	s	s	s	s	1.8	2.7 *	s	s	2.0 1.2
ADHD Drugs (NM)	1.4	13,500	1.9	0.9 *	s	s	s	1.6	1.4	2.4 *	s	s	1.4 1.3
Drug Use Among Grades 9–12[†]													
Mushrooms (Psilocybin) or Mescaline	3.7	27,000	5.3	2.0 *	--	--	s	2.9	4.5	5.3 *	s	s	4.0 3.2
Ecstasy (MDMA)	3.3	24,200	3.9	2.6	--	--	s	2.7	3.1	5.6 *	s	2.6	3.2 3.7
Cocaine	2.4	17,800	2.9	2.0	--	--	s	2.0	1.9	3.7	s	s	2.6 2.4
Tranquillizers/Sedatives (NM)	2.4	17,400	2.6	2.2	--	--	1.3	2.4	2.0	3.4	s	s	3.1 1.8
LSD	1.5	10,600	1.9	0.9	--	--	s	s	1.4	1.9	s	s	1.4 1.6
Jimson Weed	1.3	8,800	s	s	--	--	s	s	s	s	s	s	s s
Methamphetamine (incl. Crystal Meth.)	1.0	7,000	1.4	s *	--	--	s	s	s	1.7 *	s	s	s s
Modafinil (Stay-Awake Prescr. Drug; NM)	0.8	5,500	s	s	--	--	s	s	s	s	s	s	s s
Crack	0.7	5,100	0.9	0.5	--	--	s	s	s	s	s	s	0.7 0.8
Any NM Use of a Prescription Drug	15.2	112,300	16.1	14.2	--	--	13.0	13.8	13.8	18.8 *	19.2	9.4	16.1 12.9 *
Any Drug Use Excluding Cannabis	24.3	166,900	25.2	23.4	--	--	17.2	22.5	24.8	29.9 *	26.8	16.9	25.8 21.9
Any Drug Use Including Cannabis	40.0	274,800	41.2	38.8	--	--	24.9	35.7	42.9	51.0 *	43.7	36.0	39.7 38.9

Notes: [†] not asked of grades 7 and 8 students; the estimated number was derived using survey weights and is based on a population of approximately 982,100 students in grades 7-12 in Ontario’s publicly funded schools; * indicates a statistically significant sex, grade, or region difference (p<.05), not controlling for other factors; s=estimate suppressed due to unreliability; estimate for alcohol excludes “a sip”; estimate for cigarettes excludes smoking a few puffs; OTC=over-the-counter drug used to “get high”; NM=nonmedical use, without a doctor’s prescription; “Any NM Use of a Prescription Drug” refers to nonmedical use of opioids, ADHD drugs, or tranquilizers/sedatives; “Any Drug Use Including Cannabis” refers to use of any one of 22 drugs (excludes alcohol, tobacco, and high-caffeine energy drinks); estimates for heroin, ketamine, methoxetamine, BZP pills, and mephedrone (“bath salts”) were suppressed due to unreliability (extremely low values).

Source: OSDUHS, Centre for Addiction & Mental Health

Drug Use in 2013 vs. 2011

Of the 22 drugs monitored in both the 2011 and 2013 surveys, no drug shows a statistically significant increase in past year prevalence among the total sample of students. However, three drugs show a significant **decrease** in past year prevalence among grades 7–12 between these two years:

- alcohol significantly decreased between 2011 and 2013 (from 54.9% to 49.5%);
- high-caffeine energy drinks (from 49.5% to 39.7%); and
- inhalants (from 5.6% to 3.4%).

No other drug showed a statistically significant change in past year prevalence between 2011 and 2013.

Overview of 1999–2013 Trends

Past year use of one drug shows a significant **increase** in recent years among the total sample of grades 7–12. The use of over-the-counter cough/cold medication containing dextromethorphan to “get high” is significantly higher in 2013 (9.7%) compared with the 2009 estimate (7.2%), the first year this drug was monitored. Although the 2013 estimate is numerically higher than the 2011 estimate (6.9%), this difference did not reach statistical significance due to a wider confidence interval in 2011.

Most drugs monitored in the OSDUHS have shown decreases in prevalence during the past decade or so (see Table A2). Specifically, there are 13 drugs that show **decreases** in past year use since about 1999.

Drugs that decreased among grades 7–12:

- cigarette smoking significantly decreased between 1999 and 2013 (from 28.4% to 8.5%)
- alcohol (from 66.0% to 49.5%)
- cannabis (from 28.0% to 23.0%)
- inhalants (from 8.9% to 3.4%)
- opioid pain relievers (nonmedical use decreased from 20.6% in 2007 to 12.4%).

Drugs that decreased among grades 9–12 only:

- LSD (from 8.8% in 1999 to 1.5% in 2013)
- mushrooms/mescaline (from 17.1% to 3.7%)
- methamphetamine (from 6.3% to 1.0%)
- cocaine (from 5.7% in 2003 to 2.4%)
- crack (from 3.2% to 0.7%)
- heroin (from 2.1% to < 0.5%)
- ecstasy (from 7.9% in 2001 to 3.3%)
- ketamine (from 2.9% in 2003 to < 0.5%)
- an index measuring any drug use of nine drugs, including cannabis, monitored since 1999 significantly decreased from 39.2% to 30.7%
- a second index similar to that above, but excluding cannabis, decreased from 22.8% in 1999 to 7.9% in 2013
- an index measuring the nonmedical use of any prescription drug decreased from 23.5% in 2007 to 15.2% in 2013.

Subgroup Changes, 1999–2013

With the exception of OTC cough/cold medication used to “get high” (which increased among males, students in grades 7, 9, and 12, and students in Eastern Ontario), the changes within subgroups during the period from 1999 to 2013 indicate decreases in past year use.

- **Sex:** Between 2011 and 2013, only the use of inhalants significantly declined among males. Between 2011 and 2011, females show a significant decline in their use of high-caffeine energy drinks and in their use of nonmedical use of prescription opioid drugs. Both sexes show many decreases in drug use in 2013 compared with their respective 1999 estimates (see Table A3).
- **Grade:** All grades show decreases in drug use during the period between 1999 and 2013 (see Table A3).
- **Region:** Each of the four regions (Toronto, Northern Ontario, Western Ontario, and Eastern Ontario) show many decreases in drug use during the period between 1999 and 2013 (see Table A3).

Overview of Long-Term Trends, 1977–2013 (Grades 7, 9, 11 only)

Long-term trend estimates of past year drug use for grades 7, 9, and 11 are shown in Table A4. The long-term trends are limited to these three grades because only these grades were included in the surveys prior to 1999. Many past year prevalence estimates for drugs monitored since 1977 show a common pattern of use: a peak in the late 1970s, a decline in use during the late 1980s or early 1990s, a second peak in the late 1990s or early 2000s, followed by another decline. The long-term changes can be further categorized into the following five patterns:

- The first pattern (Figure 3) displays the past year use of cigarettes, alcohol, LSD, and methamphetamine. Prevalence for these drugs has now reached, or very recently reached, an all-time low.
- The second pattern (Figure 4) shows that prevalence in 2013 is significantly lower than

the peaks seen in the late 1970s and late 1990s (2003 for cocaine), and current use is similar to the low levels seen in the early 1990s. This pattern is evident for binge drinking, inhalants, mushrooms/mescaline, and cocaine.

- The third pattern (Figure 5) is similar to the second pattern described above, with one important difference: current use is significantly *higher* compared with the low levels of use seen in the early 1990s. This pattern is evident for cannabis.
- The fourth pattern (Figure 6) shows only one peak in the late 1990s or early 2000s (or the late 1970s for tranquilizers), a decline during the 2000s, and stability in recent years. This pattern is evident for ecstasy, crack, and tranquilizers/sedatives (NM).
- The fifth pattern (Figure 7) applies to heroin use, which has been very low and stable for decades.

Figure 3.
Pattern 1: Long-Term Drug Use Trends, 1977–2013 OSDUHS

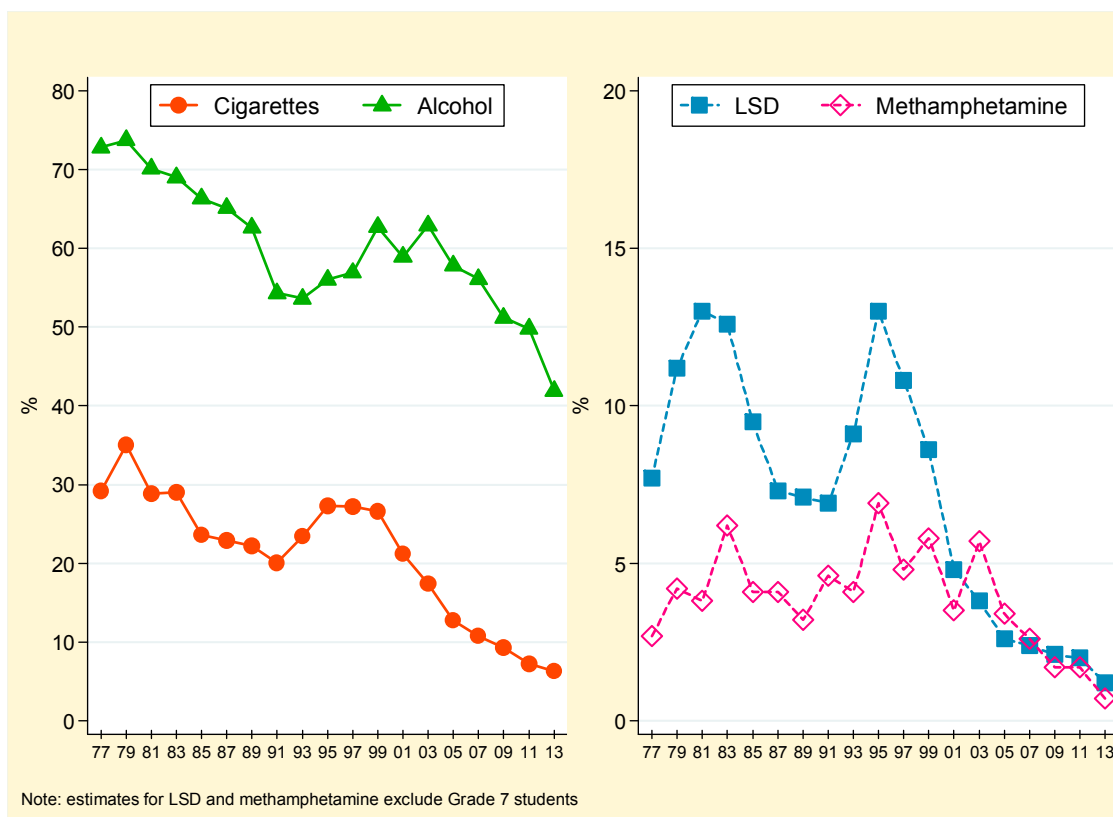


Figure 4.
Pattern 2: Long-Term Drug Use Trends, 1977–2013 OSDUHS

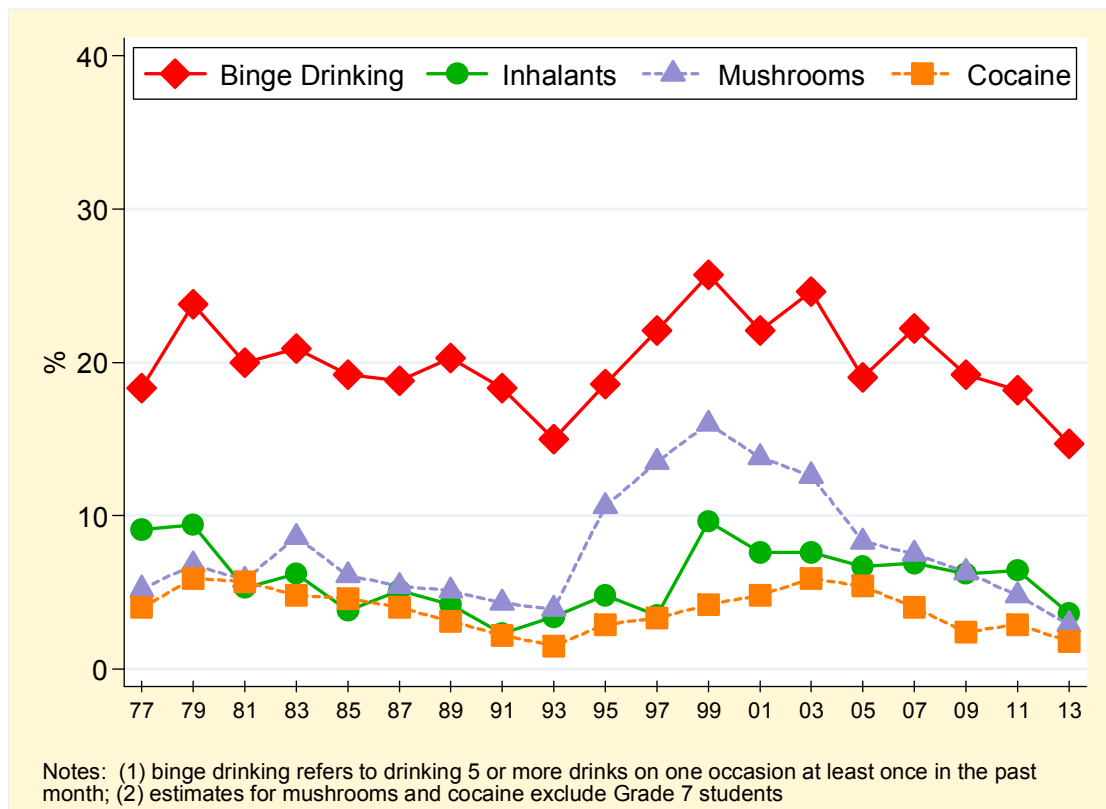


Figure 5.
Pattern 3: Long-Term Drug Use Trends, 1977–2013 OSDUHS

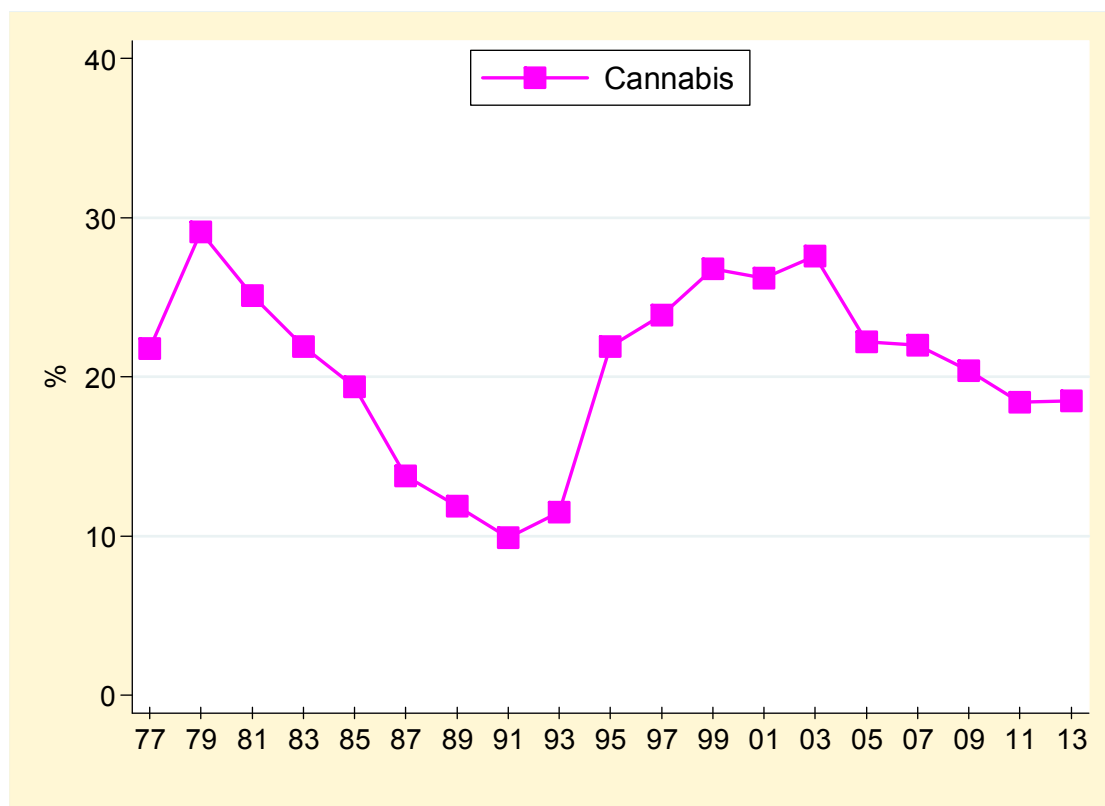


Figure 6.
Pattern 4: Long-Term Drug Use Trends, 1977–2013 OSDUHS

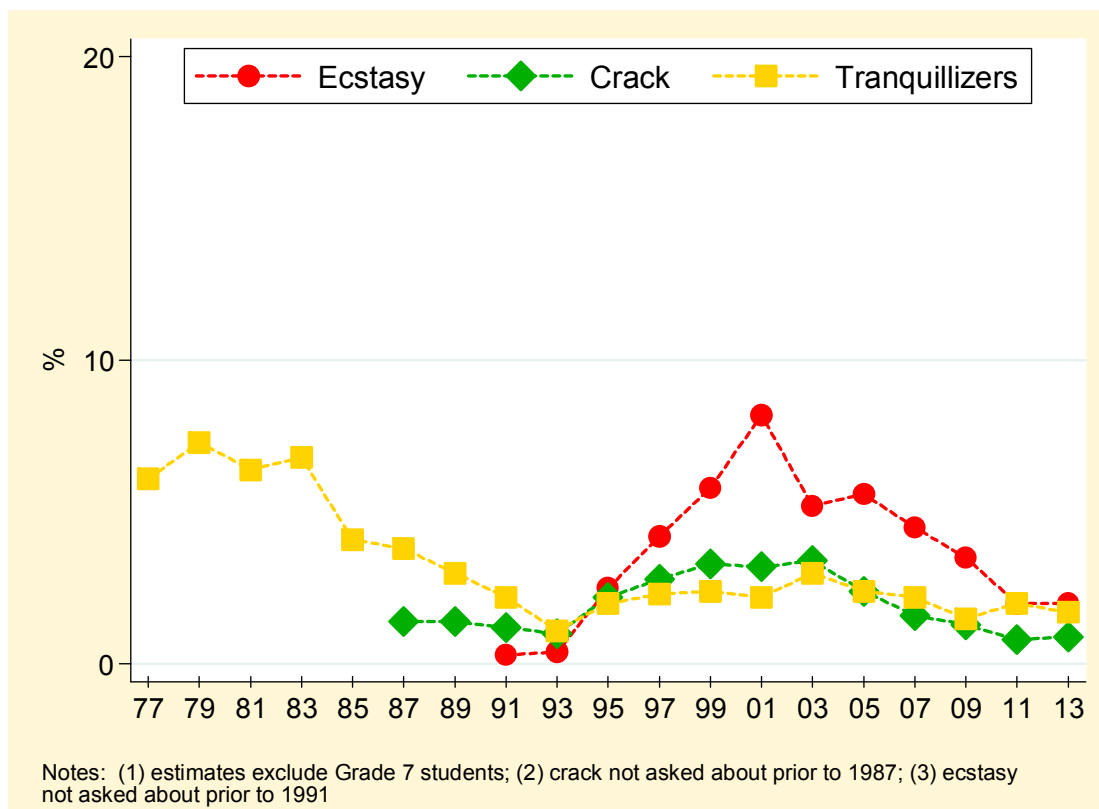
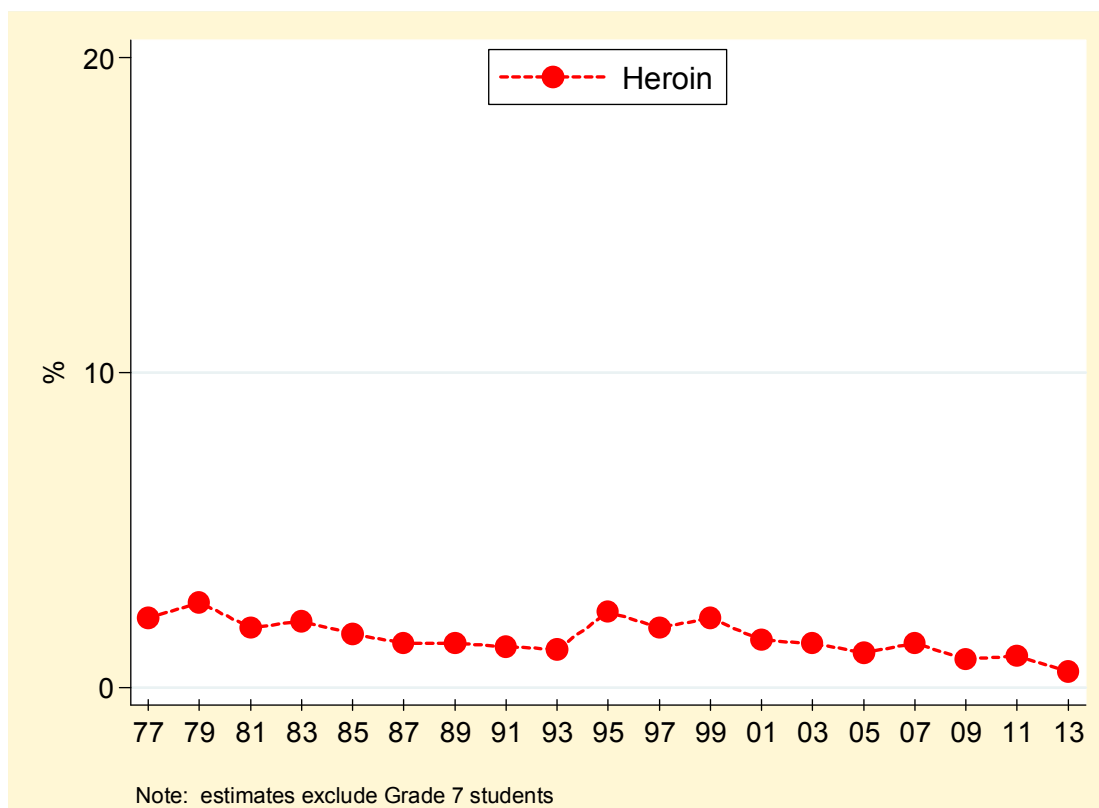


Figure 7.
Pattern 5: Long-Term Drug Use Trends, 1977–2013 OSDUHS



Tobacco

Cigarettes

- About 8.5% of all students in grades 7-12 report smoking cigarettes in the past year. This estimate includes daily and occasional smoking, but excludes those who tried a few puffs of a cigarette. The percentage of 8.5% represents about 83,100 students in Ontario.
- The prevalence of smoking does not significantly differ between males (9.6%) and females (7.3%).
- The prevalence of smoking is extremely low (suppressed estimates) among students in grades 7 and 8. About 3% of 9th graders smoke cigarettes and the prevalence significantly increases with grade, reaching 15.4% among 12th graders.
- Smoking does not significantly among the four regions of the province.

Smokeless (Chewing) Tobacco

Smokeless tobacco, also known as chewing tobacco, dipping tobacco, or snuff, is tobacco that is used orally and is not burned.

- About 5.7% report using smokeless tobacco in the past year. This estimate represents about 51,800 students in grades 7–12 in Ontario.
- Males (9.0%) are significantly more likely than females (2.2%) to use.
- Students in grades 11 and 2 are most likely to use (about 9%) smokeless tobacco.
- There are no significant differences among the four regions.

Waterpipe (“Hookah”)

A waterpipe (also called a “hookah” or “shisha”) is used to smoke a special form of tobacco that is available in a variety of flavours. A waterpipe is typically used in groups with the mouthpiece passed from person to person. Waterpipe smoking delivers the addictive drug nicotine and these smokers are at risk for the same diseases as those caused by cigarette smoking.

- Among students in grades 7–12, 9.7% used a waterpipe at least once in the past year. This estimate represents about 88,400 students in Ontario.
- Males (11.5%) are significantly more likely than females (7.9%) to use a waterpipe.
- The likelihood of using a waterpipe significantly increases with grade, peaking at 18.8% in 12th grade.
- There are no significant differences among the four regions.

Electronic Cigarettes (Grades 9–12)

An electronic cigarette (e-cigarette) is a battery-powered cigarette-shaped canister used to simulate the sensation of smoking. A liquid-filled cartridge is heated and releases vapour when inhaled. The vapour resembles smoke. Some e-cigarettes contain nicotine, and some are flavoured. We asked students in grades 9–12 whether they have ever tried an e-cigarette.

- Among students in grades 9–12, 14.6% report using an e-cigarette in their lifetime. This represents about 99,800 students in Ontario. Specifically, 4.1% used an e-cigarette with nicotine, and 10.5% used an e-cigarette without nicotine.
- Males (18.6%) are significantly more likely than females (10.3%) to report ever using an e-cigarette.

Alcohol

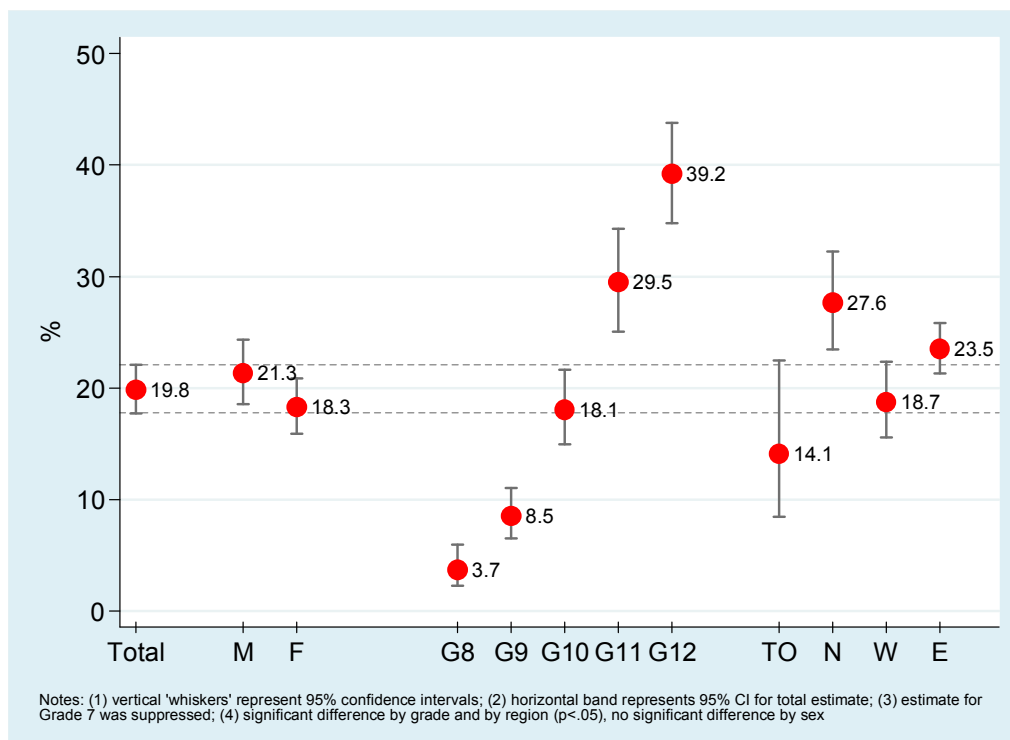
Any Alcohol Use

- Half (49.5%) of all students report drinking alcohol during the 12 months before the survey. This estimate excludes those who only had a sip, but does include those who drank only on a special occasion. The percentage of 49.5% represents about 483,900 students in grades 7–12 in Ontario.
- Males (49.8%) and females (49.1%) are equally likely to drink.
- Drinking significantly increases with grade: rates climb by ten or more percentage points with each grade level between grades 7 and 11 (from 9.9% to 67.9%). The prevalence climbs again slightly in 12th grade to 74.4%.
- Drinking significantly differ by region. Toronto students (41.5%) are least likely to drink, while Northern students are the most likely (58.9%). Students in the West and East regions fall in between.

Binge Drinking

- As seen in Figure 8, one-fifth (19.8%) of students report binge drinking (defined as having 5 or more drinks on one occasion) at least once during the four weeks before the survey. This percentage represents about 193,400 students in grades 7 through 12 in Ontario.
- Binge drinking does not significantly differ between males (21.3%) and females (18.3%).
- Binge drinking is lowest among 7th graders (suppressed estimate) and the prevalence increases with each grade, to a high of 39.2% among 12th graders.
- Toronto students (14.1%) least likely to report binge drinking and Northern students (27.6%) most likely. Students in the West and East regions fall in between.

Figure 8.
Past Month Binge Drinking by Sex, Grade, and Region, 2013 OSDUHS



Drunkenness

- Overall, 17.6% report getting drunk at least once during the four weeks before the survey (about 172,000 students in grades 7–12 in Ontario).
- Reported drunkenness does not significantly differ between males (17.9%) and females (17.3%).
- Drunkenness is lowest among 7th graders (suppressed estimate) and climbs with each grade, to a high of 33.3% among 12th graders.
- There are no significant differences among the four regions.

Hazardous or Harmful Drinking

The World Health Organization's "Alcohol Use Disorders Identification Test" (*AUDIT*) was used to identify hazardous or harmful drinking during the past 12 month period. Hazardous drinking refers to a pattern of drinking that increases the likelihood of future medical and physical problems (e.g., dependence), and harmful drinking refers to a pattern of drinking that is already causing damage to one's health (e.g., alcohol-related injuries).

- Among all students, 15.7% indicate hazardous/harmful drinking. This represents about 158,700 students in grades 7 through 12 in Ontario.
- Males (16.3%) and females (15.0%) are equally likely to drink hazardously or harmfully.
- The likelihood of hazardous/harmful drinking significantly increases with grade, ranging from very low levels among grades 7 and 8 to a high of 32.2% among 12th graders.
- There is significant variation among the regions, with students in the North and the East most likely to report hazardous/harmful drinking (about 19%), whereas students in Toronto and the West are less likely (about 13%).

Alcohol Mixed with an Energy Drink

- The percentage of students who report drinking alcohol mixed with an energy drink (e.g., Rock Star + vodka, Red Bull mixed with alcohol) at least once in the past year is 15.9%. This estimate represents about 145,500 students in Ontario in grades 7–12.
- There is no significant difference between males (17.5%) and females (14.3%).
- Drinking alcohol with an energy drink significantly increases with grade, from a low of 3.2% among 7th graders to a high of 28.0% among 12th graders.
- There are no significant regional differences.

Playing Drinking Games (Grades 9–12)

Drinking games are games in which players drink alcohol quickly with the purpose of getting drunk. Examples of such games include Beer Pong, Flip Cup, and Power Hour. We asked students in grades 9–12 whether they played drinking games during the four weeks before the survey.

- Almost one-quarter (23.3%) of secondary students report playing a drinking game in the past month. This estimate represents about 157,600 students in grades 9–12 in Ontario.
- There is no significant difference between males (24.7%) and females (21.7%).
- Playing drinking games significantly increases with grade, with a substantial jump between 10th grade (13.9%) and 11th grade (30.9%), and remaining stable in 12th grade (34.3%).
- Compared with the other three regions, students in Toronto are significantly less likely to play drinking games (about 25%–30% vs. 13.3%, respectively).

Cannabis

Past Year Cannabis Use

- As seen in Figure 9, 23.0% of students report using cannabis at least once during the 12 months before the survey. This percentage represents about 225,600 students in grades 7–12 in Ontario.
- Males (25.3%) are significantly more likely than females (20.6%) to use cannabis.
- Cannabis use significantly increases with grade, from 1.7% among 7th graders to 39.2% among 12th graders.
- There are no significant differences among the four regions.

Daily Cannabis Use

- Among students in grades 7–12, 2.7% report using cannabis daily during the four weeks before the survey. This represents about 25,800 Ontario students. Daily cannabis use is more prevalent among males (3.6%) than females (1.3%), and among 12th graders (5.1%). There are no significant differences in daily cannabis use among the four regions.

Cannabis Dependence (Grades 9–12)

The OSDUHS included the *Severity of Dependence Scale* (SDS) to estimate the percentage of students in grades 9 through 12 who may have a cannabis dependence problem (e.g., symptoms of loss of control and withdrawal).

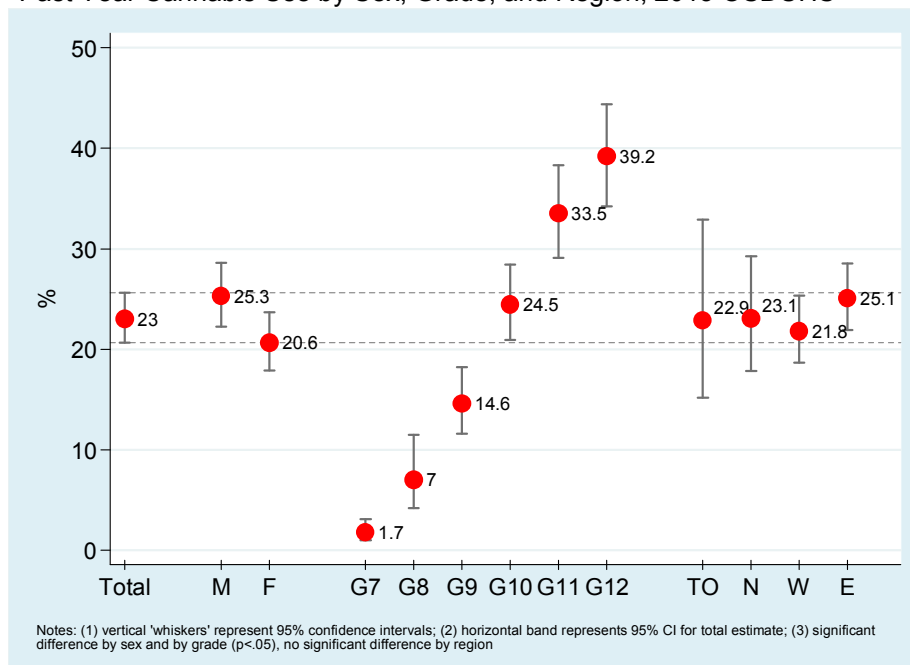
- About 2.7% of students in grades 9–12 report symptoms of cannabis dependence (representing about 20,900 Ontario secondary students). Males (2.8%) and females (2.5%) are equally likely to report dependence symptoms.

Synthetic Cannabis (“Spice”)

Synthetic cannabis (also known as “spice,” “K2,” or “K3”) refers to a wide variety of herbal mixtures that contain plant material, preservatives, fragrance, and chemicals that fall into the cannabinoid family. Synthetic cannabis is marketed as a “safe,” legal alternative to cannabis, but is illegal in Canada because of the synthetic cannabinoid compounds.

- Overall, 1.8% of students in grades 7–12 report using synthetic cannabis. This estimate represents about 17,300 students in Ontario.

Figure 9.
Past Year Cannabis Use by Sex, Grade, and Region, 2013 OSDUHS



Nonmedical Use of Prescription Drugs and Over-the-Counter Drugs

Nonmedical Use of Opioid Pain Relievers

Students were asked about their use of any prescription opioid “pain relief pill” (as a drug class) such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin/OxyNEO, or codeine, without a doctor’s prescription. In addition to suppressing pain, these drugs may also cause a relaxed or euphoric feeling. Opioids can be dangerous when used without medical supervision.

- About 12.4% of students in grades 7–12 report using a prescription opioid pain reliever nonmedically at least once during the 12 months before the survey. This estimate represents about 120,100 Ontario students.
- There is no significant difference in nonmedical opioid use between males (12.8%) and females (12.0%).
- There is significant grade variation showing that use increases steadily with grade, peaking in 12th grade at 16.1%.
- Use significantly differs by region, with students in the North (7.2%) least likely to use and students in Toronto and the West most likely (about 13%-15%).

Nonmedical Use of ADHD Drugs

Ritalin and Concerta (methylphenidate), Adderall and Dexedrine (dextroamphetamine) are stimulant drugs used to treat Attention Deficit/Hyperactivity Disorder (ADHD) in children. However, some people abuse these drugs for various purposes including appetite suppression, wakefulness, increased focus, and euphoria. Students were asked about the use of these drugs (as a drug class) in the past year without a doctor’s prescription.

- About 1.4% report using an ADHD drug for nonmedical purposes at least once in the past 12 months. This represents about 13,500 Ontario students in grades 7 through 12.

- Males (1.9%) are significantly more likely than females (0.9%) to report the nonmedical use of an ADHD drug.
- There are significant grade differences, with 12th graders most likely to use (2.4%).
- There are no significant regional differences.

Over-the-Counter (OTC) Cough/Cold Medication Used to “Get High”

The OSDUHS asked students about using OTC cough or cold medication that contains the drug dextromethorphan (DXM) in order to “get high.” When abused, DXM takes on qualities of a dissociative drug such as ketamine, producing feelings of detachment and distorting perceptions of sight and sound and impairing motor coordination.

- One-in-ten (9.7%) students report using an OTC cough/cold medication to “get high” at least once in the past year. This estimate represents about 94,100 students in Ontario.
- Males (10.7%) are significantly more likely than females (8.6%) to use.
- Use does not significantly differ by grade or by region.

High-Caffeine Energy Drinks

- About 39.7% of students in grades 7 through 12 report drinking an energy drink at least once in the past year. This estimate represents about 382,500 Ontario students.
- Males (45.9%) are more likely than females (33.15) to report drinking an energy drink in the past year.
- Energy drink use significantly increases with grade, from 26.4% among 7th graders to 49.9% among 12th graders.
- There are no significant differences among the four regions.

Any Drug Use (Grades 9–12)

Any Drug Use Including Cannabis

Here we present a composite index that measures past year use of at least one of the following 22 drugs asked about in the 2013 survey: cannabis, synthetic cannabis, inhalants, LSD, mushrooms/mescaline, jimson weed, salvia divinorum, cocaine, crack, methamphetamine, heroin, ecstasy, ketamine, methoxetamine, BZP pills, mephedrone (“bath salts”), tranquilizers/sedatives (NM), modafinil (NM), OxyContin/OxyNEO (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication. Excluded from this index are tobacco, alcohol, and high-caffeine energy drinks. These results are among grades 9 through 12 only, and are presented in Figure 10.

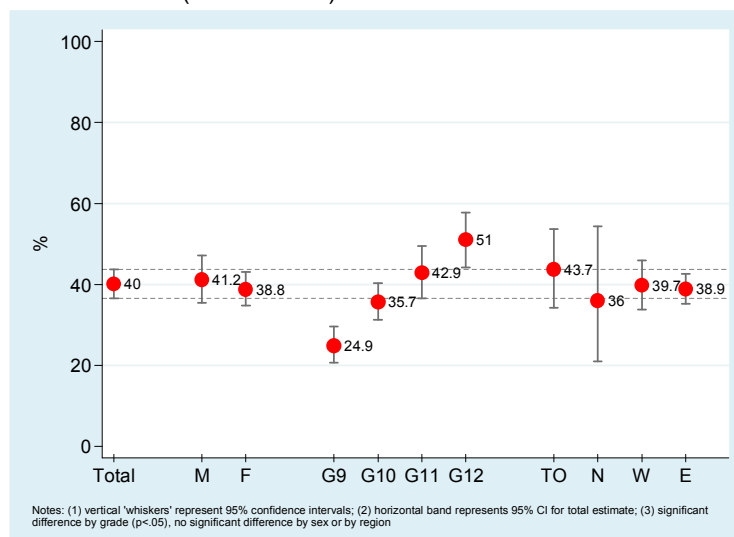
- About 40.0% report using at least one drug in the past year. This estimate represents about 274,800 secondary students in Ontario.
- Males (41.2%) and females (38.8%) are equally likely to report using at least one drug.
- Drug use significantly increases with grade, from 24.9% of 9th graders to 51.0% of 12th graders.
- There are no significant regional differences.

Any Nonmedical Prescription Drug Use

Here we look at the nonmedical use of at least one of the following prescription drug classes once or more during the past 12 months: opioid pain relievers, ADHD drugs, or tranquilizers/sedatives. Nonmedical use is defined as use without one’s own prescription. These results are among grades 9 through 12 only.

- Among secondary students, 15.2% report using a prescription drug nonmedically in the past year. This estimate represents about 112,300 Ontario students.
- There is no significant difference between males (16.1%) and females (14.2%).
- There is significant grade variation, with 12th graders (18.8%) most likely to use a prescription drug nonmedically at least once in the past year.
- There are significant differences among the regions, showing that Toronto students (19.2%) are most likely to use while Northern students are least likely (9.4%).

Figure 10.
Any Drug Use in the Past Year by Sex, Grade, and Region,
2013 OSDUHS (Grades 9–12)



Multiple Drug Use: Cigarettes, Alcohol, Cannabis, and Other Drugs (Grades 9–12)

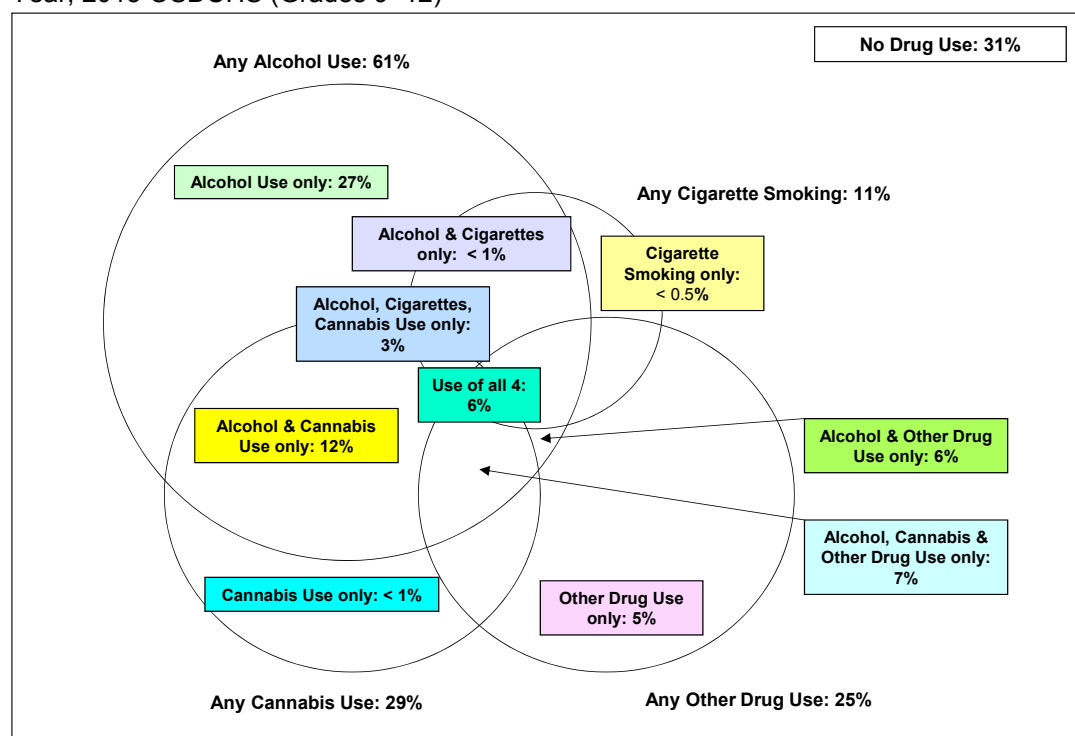
Figure 11 presents the overlap of past year use of all drugs (excluding high-caffeine energy drinks) asked about in the 2013 survey. As seen in the figure, most secondary students use alcohol either exclusively, or in addition to other drugs.

- Just over one-quarter (27%) of secondary students use only alcohol and no other drug; about 12% use only alcohol and cannabis; and about 7% use alcohol, cannabis, and another drug.
- Negligible proportions (below 1%) of students smoke cigarettes exclusively or use cannabis exclusively.
- About 6% – an estimated 37,700 secondary students in Ontario – smoke cigarettes, use alcohol, cannabis, and at least one other drug.

Abstinence in the Past Year (Grades 7–12)

- Over one-third (37.2%) of students in grades 7 through 12 report using no drug at all during the past year – this includes alcohol and tobacco. This percentage represents about 340,600 students in Ontario.
- Females (39.6%) are significantly more likely than males (35.0%) to abstain from drugs, including alcohol and tobacco.
- Past year abstinence significantly decreases with grade, from 69.5% of 7th graders to 16.5% of 12th graders.
- There are no significant differences among the four regions.

Figure 11.
The Overlap of Cigarette Smoking, Alcohol, Cannabis, and Other Drug Use in the Past Year, 2013 OSDUHS (Grades 9–12)



Notes: (1) based on a random half sample of secondary students ($n=2,895$); (2) "Other Drug Use" refers to use of at least one of 21 drugs: synthetic cannabis ("spice"), inhalants, LSD, mushrooms/mescaline, jimson weed, salvia divinorum, cocaine, crack, methamphetamine, heroin, ecstasy, ketamine, methoxetamine, BZP pills, mephedrone ("bath salts"), tranquilizers/sedatives (NM), modafinil (NM), OxyContin/OxyNEO (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication; (3) not all combinations are presented, therefore the percentages shown do not total to 100%.

New Users and Early Initiation

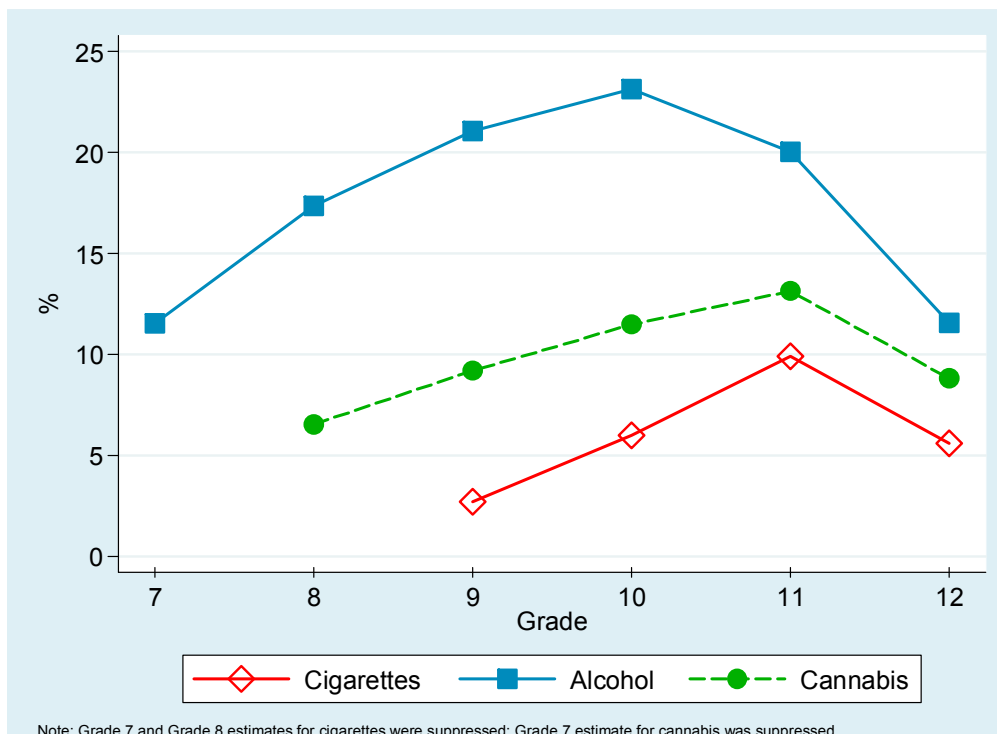
New Users

- Among all students, 5.3% smoked a whole cigarette for the first time during the 12 months before the survey. This estimate represents about 47,900 students in Ontario. As seen in Figure 12, there is significant grade variation in first-time use of cigarettes in the past year, with the highest level among 11th graders (9.9%).
- About 17.3% of students tried alcohol for the first time (representing about 156,600 students). First use of alcohol increases steadily between grades 7 and 10, decreases slightly in grade 11, and again in grade 12.
- About 8.8% of students tried cannabis (about 80,400 students) for the first time. Grade is significantly associated with incidence of cannabis use, showing that incidence increases steadily between grades 7 and 11, and then decreases in grade 12.

Early Initiation Among 7th Graders, 1981–2013

- Early initiation of cigarette smoking shows a downward trend over time, with fewer 7th graders today reporting smoking at an early age compared with 7th graders decades ago. Most notably, less than 2% of 7th graders in 2013 reported smoking their first whole cigarette before the end of grade 6 (ages 11–12), compared with 9% in 2003, 27% in 1997, and 41% in 1981.
- Early initiation of alcohol use also decreased over time. For example, about 13% of 7th graders in 2013 used alcohol before the end of grade 6 compared with 31% in 2007, 42% in 2003, and 50% in 1981.
- Early initiation of cannabis use – defined as using for the first time before the end of grade 7 (ages 12–13) – was at 9% in 1981. Early use decreased by 1993 (3.5%), increased again in 1997 and remained elevated until 2003 (8%). In 2013, the estimate is lower at 2%.

Figure 12.
Percentage of Students Reporting First-Time Use of the Drug in the Past Year
by Grade, 2013 OSDUHS



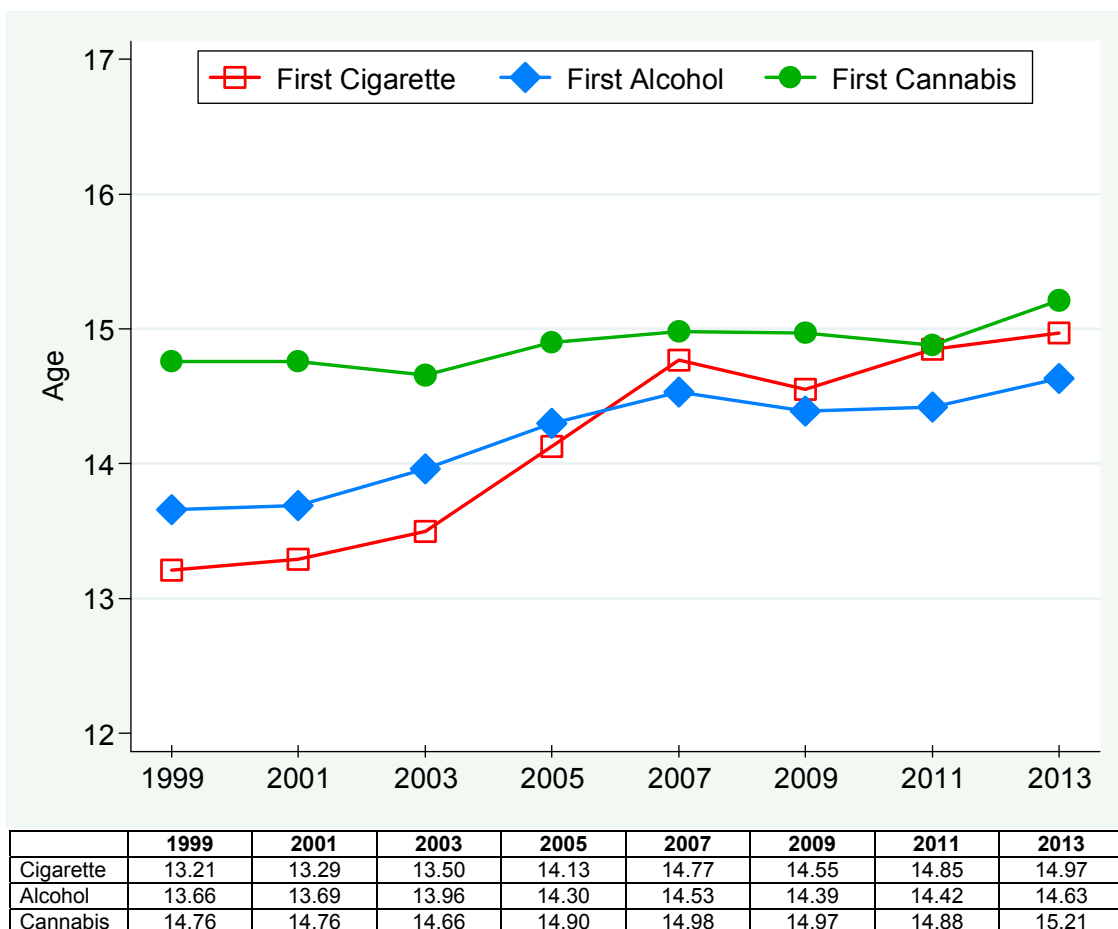
Average Age at Initiation of Smoking, Drinking, and Cannabis Use, 1999–2013

Here we present the average age at initiation for cigarette, alcohol, and cannabis use among grade 12 users (ages 17–18). We select 12th graders because this is the oldest grade in the study and therefore this group is nearing the end of adolescence. We restrict our analysis to past year users because our focus is on ongoing use rather than experimental behaviour.

- As seen in Figure 13, in 2013 the average age at first cigarette smoking (smoking one whole cigarette) among grade 12 smokers was age 15. The average age at first alcoholic drink among grade 12 drinkers was 14.6 years, and the average age at first drunkenness among grade 12 drinkers was 15.3 years. The average age at first cannabis use among grade 12 users was 15.2 years.

- The average initiation age for smoking has increased considerably since 1999.
- The average initiation age for drinking has also increased since 1999.
- The average initiation age for cannabis use has not significantly changed since 1999.

Figure 13.
Average Age at First Cigarette Among 12th-Grade Smokers, First Alcoholic Drink Among 12th-Grade Drinkers, and First Cannabis Use Among 12th-Grade Users, 1999–2013 OSDUHS



Consequences and Harms

Been a Passenger with a Driver Who Had Been Using Alcohol or Drugs (Grades 7–12)

- The 2013 survey found that about 17.8% of students rode in a vehicle at least once in the past year with a driver who had been drinking. This represents roughly 173,500 students in Ontario. About 13.8% of students rode with a driver who had been using drugs at least once in the past year. This estimate represents 135,200 students in Ontario.
- Males and females are equally likely to ride with a driver who was drinking. Males are significantly more likely than females to ride with a driver who had been using drugs (15.2% vs. 12.4%, respectively).
- The likelihood of riding in a vehicle with a driver who had been drinking or using drugs significantly increases with grade level. For example, about one-quarter of 12th graders report these behaviours.
- There are no significant regional differences regarding the likelihood of riding with a driver who had been drinking. However, there were significant differences regarding riding with a driver who had been using drugs. Toronto students (9.9%) are least likely, and Northern and Eastern students (about 16%) are most likely to report this behaviour.

Operating a Snowmobile, Motor Boat, Sea-Doo, or ATV After Drinking Alcohol (Grades 10–12)

All students were asked if they operated a snowmobile, motor boat, Sea-doo, or all-terrain vehicle (ATV) after drinking alcohol. We present the results among students in grades 10 through 12 only.

- Among students in grades 10–12, 5.1% report operating a snowmobile, motor boat, Sea-doo, or an ATV within an hour of drinking one or

more alcoholic drinks at least once during the past 12 months. This estimate represents about 29,400 Ontario students in grades 10–12.

- Males (7.1%) are significantly more likely than females (3.0%) to engage in this behaviour.
- There are no statistically significant differences among the grades.
- There is significant regional variation, showing that students in the North (12.2%) are more likely to engage in this behaviour compared with students in the other regions (about 5%).

Driving a Motor Vehicle After Drinking Alcohol (Drivers in Grades 10–12)

- In 2013, 4.0% of drivers in grades 10 through 12 with a G-Class licence report driving within an hour after consuming two or more alcoholic drinks at least once during the past 12 months. This percentage represents about 12,700 adolescent drivers in Ontario.
- There are no significant differences according to sex, grade, or region.

Driving a Motor Vehicle After Using Cannabis (Drivers in Grades 10–12)

- In 2013, 9.7% of drivers in grades 10 through 12 with a G-Class licence report driving after using cannabis at least once during the past 12 months. This percentage represents about 31,500 adolescent drivers in Ontario.
- Male drivers are significantly more likely than female drivers to use cannabis and drive (13.0% vs. 5.8%, respectively).
- There are no significant differences among the grades, or among the four regions.

Figure 14.
Percentage of Students in Grades 7–12 Reporting Riding in a Vehicle with a Driver Who Had Been Drinking Alcohol and Riding in a Vehicle with a Driver Who Had Been Using Drugs (at Least Once in the Past Year), 2013 OSDUHS

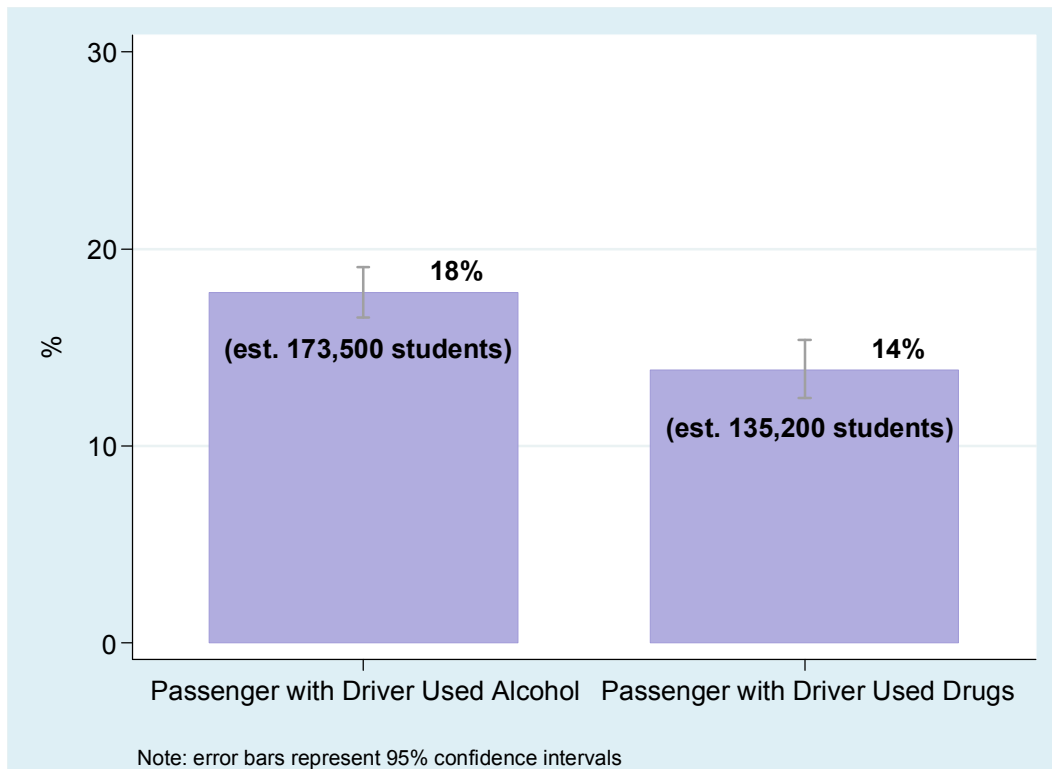
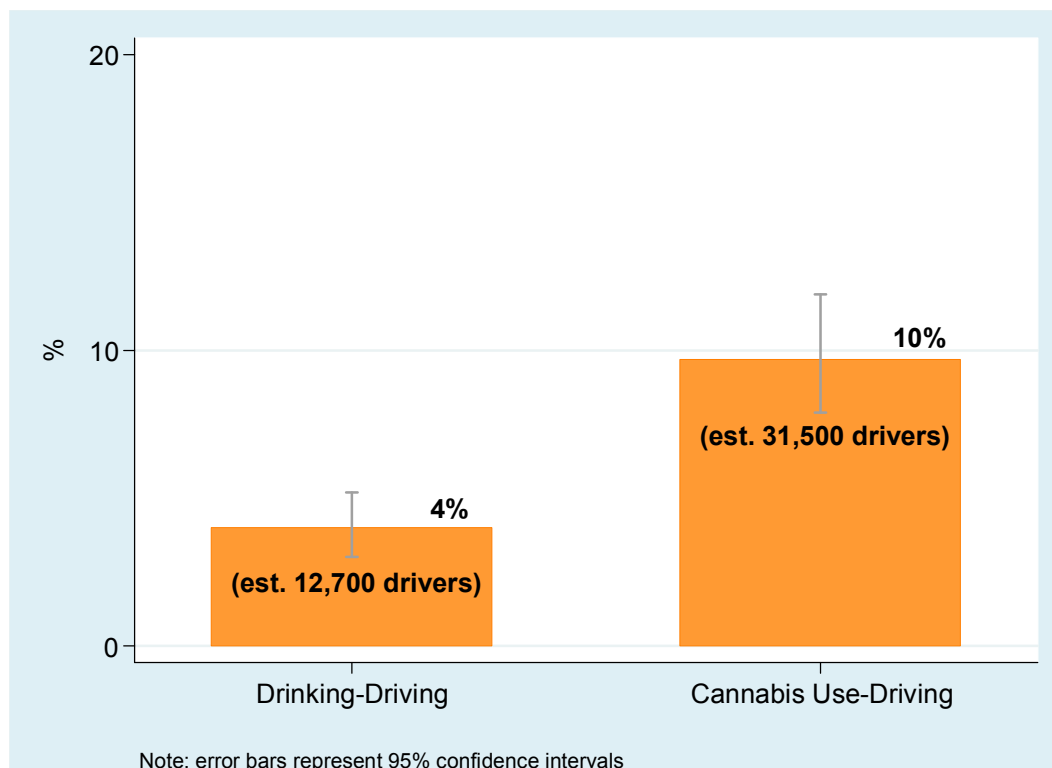


Figure 15.
Percentage of Drivers in Grades 10–12 Reporting Driving a Motor Vehicle After Drinking Alcohol and After Using Cannabis (at Least Once in the Past Year), 2013 OSDUHS



Drug Use Problem (Grades 9–12)

The 2013 survey included the six-item “CRAFFT” screener to measure drug use problems experienced by secondary students (see Table 2). A score of two or more problems of six is used to identify adolescents who may have a drug use problem that requires treatment.

- Overall, 16.8% of secondary students report at least two of the six CRAFFT symptoms, and, therefore, meet the criterion for a drug use problem. This percentage represents about 132,700 Ontario students in grades 9–12.
- Males are significantly more likely than females to meet the criterion for a drug use problem (19.2% vs. 14.3%, respectively).
- There is significant grade variation. The likelihood of a drug use problem is lowest among 9th graders (7.5%) and highest among 12th graders (24.0%).
- There are no significant regional differences.

Alcohol and Other Drug Treatment (Grades 9–12)

- In 2013, 1.2% of students report that they had received treatment for their alcohol and/or drug use. This estimate represents about 8,400 Ontario students in grades 9 through 12.

Table 2.
Percentage of Students in Grades 9–12 Reporting Drug Use Problems Experienced in the Past Year, 2013 OSDUHS

CRAFFT Screener Item	% “yes” among the total sample
“In the last 12 months....”	
1. did you ride in a car or other vehicle driven by someone who had been using drugs	19.0
2. did you use drugs to relax, feel better about yourself, or fit in?	17.6
3. did you use drugs while you were by yourself (alone)?	11.4
4. did you forget things you did while using drugs?	8.5
5. did your family or friends tell you that you should cut down on your use of drugs?	5.5
6. did you get into trouble while using drugs?	4.2
% CRAFFT 2+ Score	16.8
(95% CI)	(14.5-19.4)

Notes: (1) those responding “yes” to 2 or more problems on the CRAFFT screener may have a drug use problem that requires treatment; (2) based on a random half sample of secondary students ($n=3,264$).

Source: OSDUHS, Centre for Addiction & Mental Health

Attitudes and Perceptions

Perceptions of Risk of Harm and Disapproval

- As seen in Figure 16, among the drug behaviours surveyed, students in grades 7 and 8 believe that the greatest risk of harm is associated with regular marijuana use, followed by using a prescription opioid nonmedically (NM). Students in grades 9–12 believe the greatest risk is associated with NM prescription opioid use, followed closely by trying cocaine. Among all students, trying marijuana ranks last in terms of perceived harm.
- As seen in Figure 17, a majority of students in grades 7 and 8 strongly disapprove of someone using marijuana regularly and trying marijuana. A majority of students in grades 9–12 strongly disapprove of someone trying ecstasy and cocaine.

Drug Availability

- As seen in Figure 18, the three drugs that are most readily available to students are alcohol, cigarettes, and cannabis. Two-thirds to three-quarters of secondary school students report that these drugs would be “easy” or “very easy” to obtain.

Figure 16.
Percentage of Students Who Perceive “Great Risk” of Harm Associated with Drug Use by Grade Level, 2013 OSDUHS

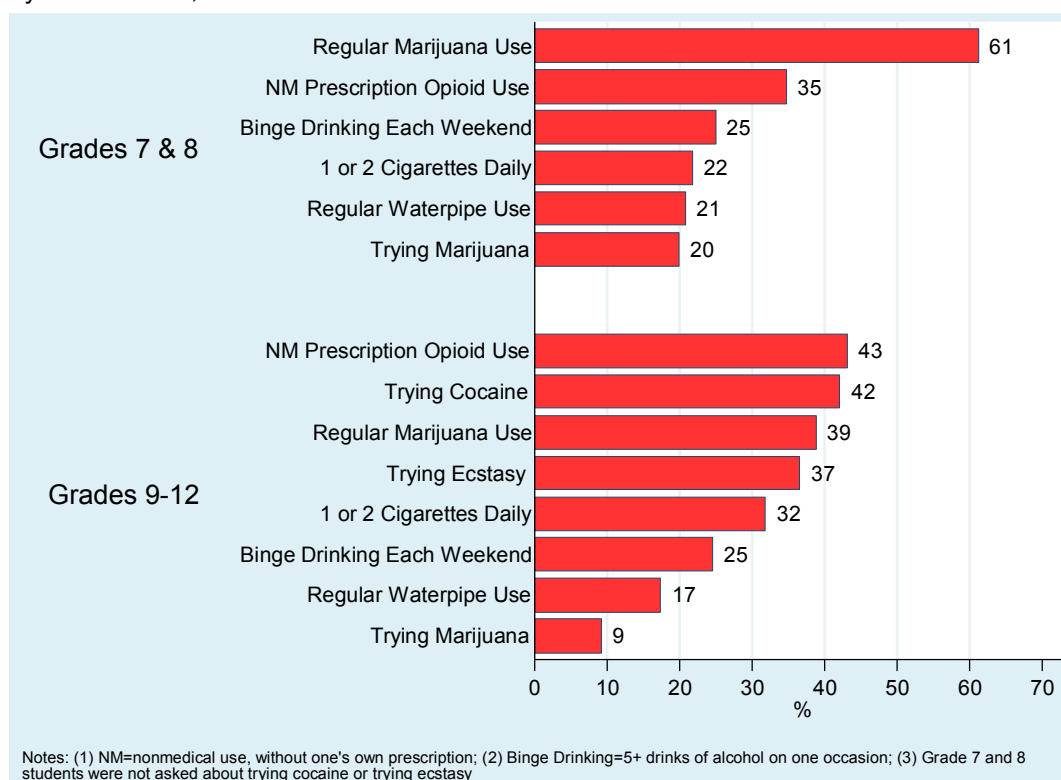


Figure 17.
Percentage of Students Who “Strongly Disapprove” of Drug Use by Grade Level,
2013 OSDUHS

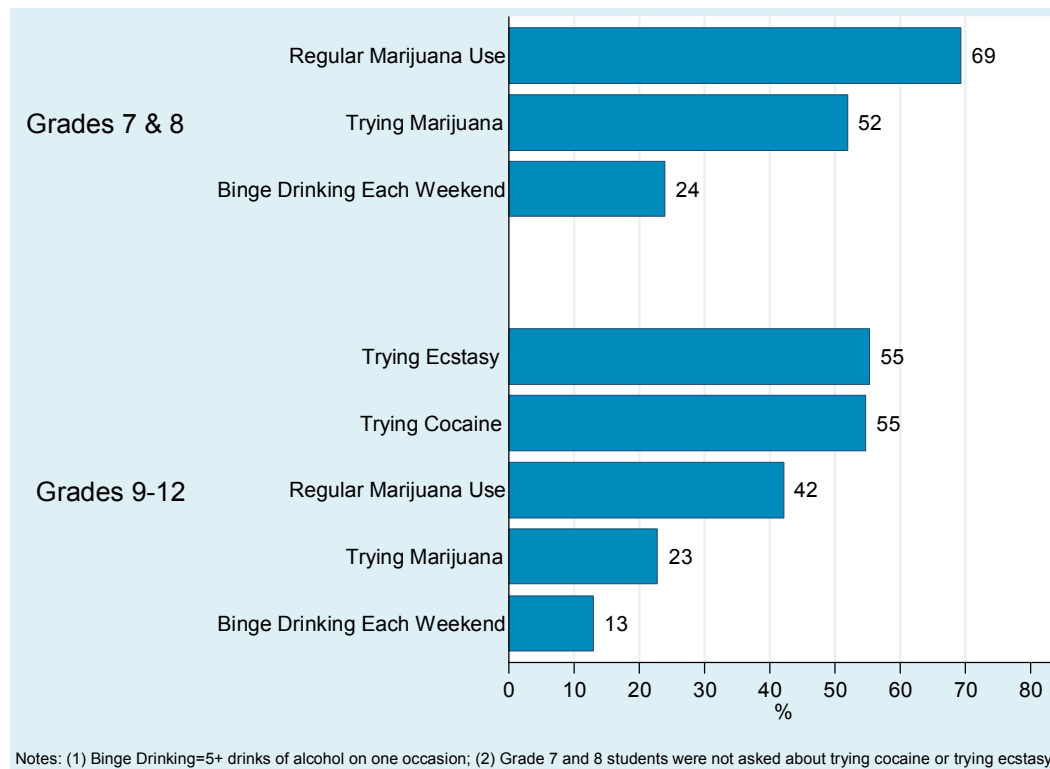
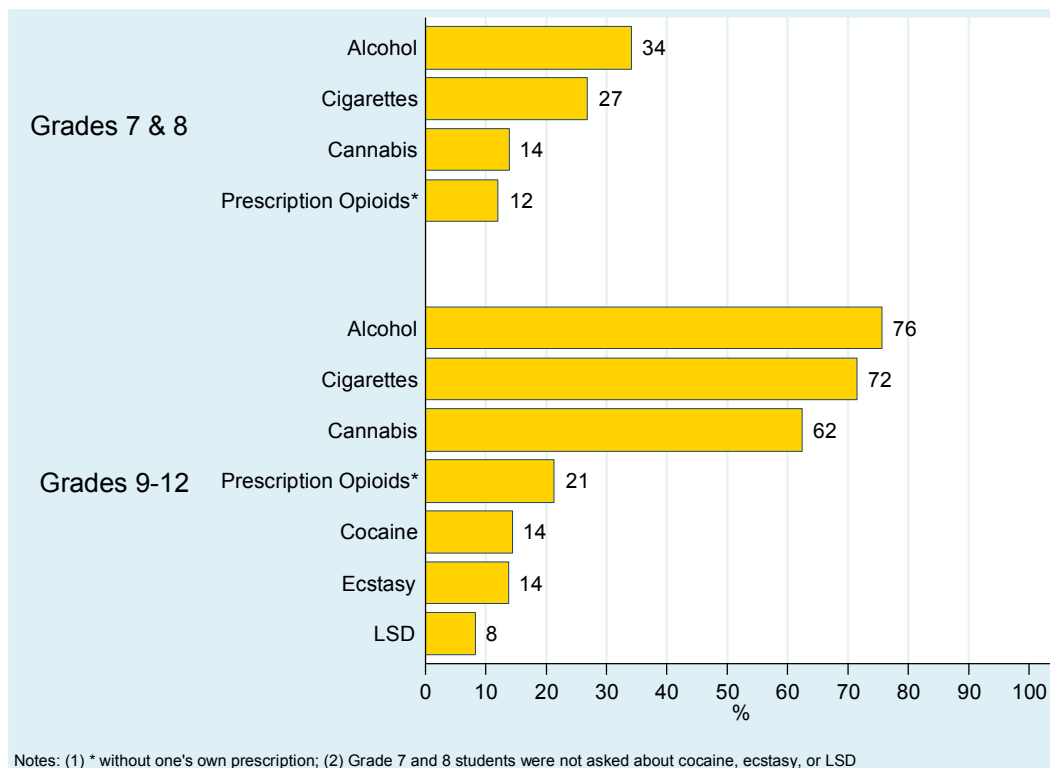


Figure 18.
Percentage of Students Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug
by Grade Level, 2013 OSDUHS



School and Neighbourhood

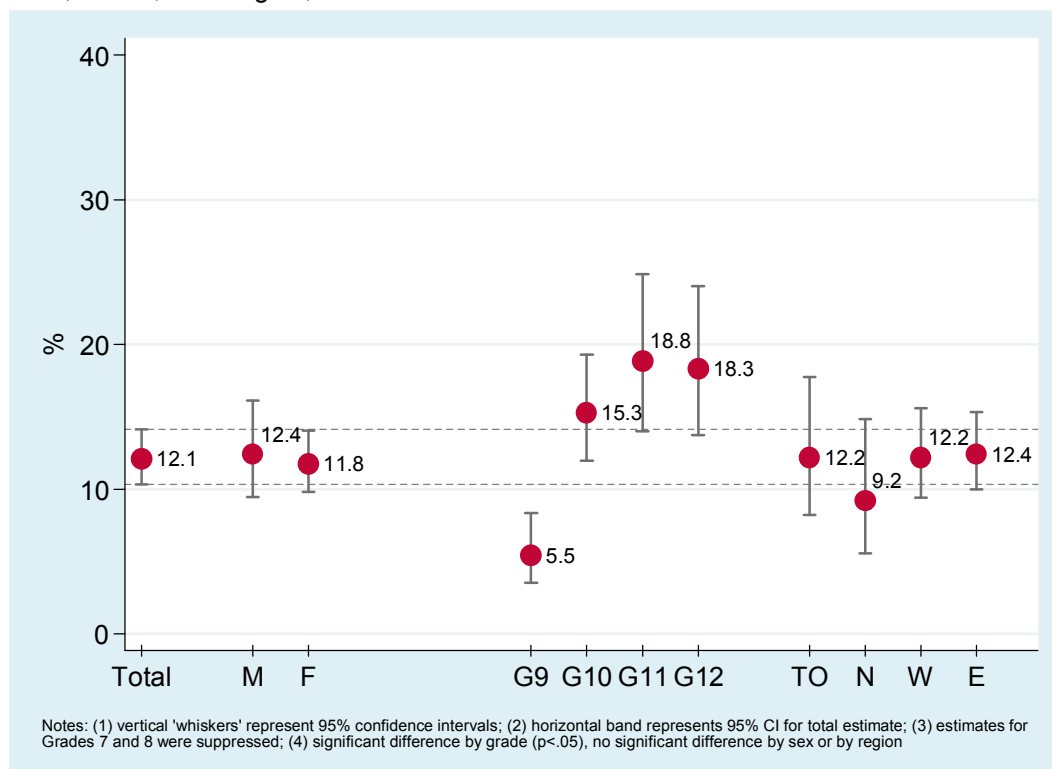
Intoxication at School

- As seen in Figure 19, 12.1% report that they were intoxicated at school at least once during the 12 months before the survey. This percentage represents about 109,700 Ontario students in grades 7 through 12.
- Males and females are equally likely to report being drunk or high at school.
- Students in grades 11 and 12 (about 18%) are significantly more likely than students in the lower grades to report being intoxicated at school.
- There are no significant differences among the four regions.

Getting Drugs at School

- Among all students, 18.5% report that they had been offered, sold, or given a drug at school during the 12 months before the survey. This percentage represents about 167,600 Ontario students in grades 7 through 12.
- Males are significantly more likely than females to report having been offered, sold, or given a drug at school (22.2% vs. 14.6%, respectively).
- With increasing grade, students are more likely to be offered, sold, or given a drug, peaking in grade 11 at 26.8%.
- There are no significant differences among the four regions.

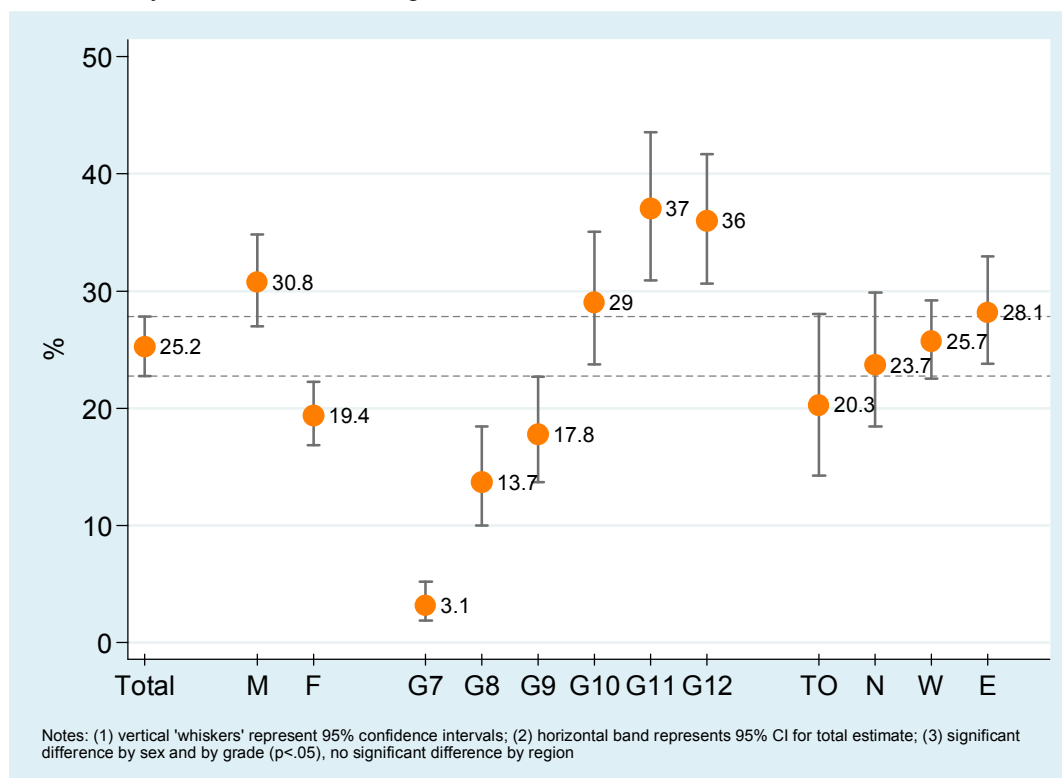
Figure 19.
Percentage of Students Reporting Getting Drunk or High at School in the Past Year by Sex, Grade, and Region, 2013 OSDUHS



Exposure to Drug Selling

- As seen in Figure 20, one-quarter (25.2%) of students report that someone had tried to sell them drugs during the past year. This estimate represents about 228,700 students in grades 7 through 12 in Ontario.
- Males and older students are more likely to report that someone tried to sell drugs to them. There are no significant differences among the four regions.
- Just over one-fifth (21.1%) of students – an estimated 191,400 in Ontario – report seeing someone selling drugs in their own neighbourhood in the past year.
- There is no significant difference between males and females regarding witnessing drug selling in the neighbourhood. Older students are more likely to witness drug selling. There are no significant differences among the four regions regarding witnessing drug selling in the neighbourhood.

Figure 20.
Percentage of Students Reporting that Someone Had Tried to Sell Them Drugs in the Past Year by Sex, Grade, and Region, 2013 OSDUHS



Overview of Drug Use in the Ontario Local Health Integration Networks (LHIN) Areas

In 2006, the province designated 14 geographic areas each to function as health systems that plan, integrate, and fund local health services. These areas are called Local Health Integration Networks or LHINs (see <http://www.lhins.on.ca>). This section provides the 2013 estimates for most drug use measures **among secondary school students only (grades 9 through 12)** according to the LHINs. Students in grade 7 and 8 were excluded from the analysis because of a considerable imbalance of the number of elementary/middle schools across the LHINs. For the present analysis, students were assigned to LHINs using the six-digit postal code of the school. Due to small sample sizes, some adjacent LHINs were merged. The ten LHIN areas presented here are:

- Erie St. Clair & South West (merged)
- Waterloo Wellington
- Hamilton Niagara Haldimand Brant
- Central West
- Mississauga Halton
- Toronto Central & Central (merged)
- Central East & North Simcoe Muskoka (merged)
- South East
- Champlain
- North East & North West (merged)

Table 3. Percentage of Secondary School Students (**Grades 9–12**) Reporting Drug Use in the Past Year and Other Selected Indicators, by Local Health Integration Network (LHIN) Areas, 2013 OSDUHS

	Erie St. Clair + South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central + Central	Central East + North Simcoe Muskoka	South East	Champlain	North East + North West	Ontario
<i>(Student n=)</i>	<i>(239)</i>	<i>(221)</i>	<i>(301)</i>	<i>(726)</i>	<i>(781)</i>	<i>(1,305)</i>	<i>(832)</i>	<i>(247)</i>	<i>(833)</i>	<i>(674)</i>	<i>(6,159)</i>
<i>(School n=)</i>	<i>(5)</i>	<i>(4)</i>	<i>(5)</i>	<i>(12)</i>	<i>(11)</i>	<i>(22)</i>	<i>(16)</i>	<i>(5)</i>	<i>(13)</i>	<i>(16)</i>	<i>(109)</i>
Cigarettes (95% CI)	11.8 (8.1-17.0)	9.0 (6.2-13.0)	9.3 (5.0-16.6)	14.4 (8.9-22.5)	7.5 (4.9-11.4)	13.7 (9.2-20.1)	8.7 (6.1-12.4)	11.0 (8.0-15.0)	10.5 (7.6-14.4)	9.6 (6.8-13.2)	10.7 (9.1-12.6)
Smokeless (Chewing) Tobacco	†	8.9 (4.4-16.9)	10.2 (6.6-15.3)	†	†	6.0 (3.6-10.0)	6.6 (3.8-11.4)	†	9.1 (5.6-14.7)	†	7.3 (5.9-9.0)
Waterpipe (“Hookah”)	7.5 (4.5-12.4)	7.5 (4.1-13.3)	15.3 (9.0-24.8)	14.2 (8.6-22.6)	14.3 (11.1-18.2)	14.8 (9.6-22.0)	12.1 (9.1-16.0)	11.1 (6.5-18.2)	12.2 (8.4-17.6)	11.6 (6.4-20.2)	12.5 (10.6-14.8)
Electronic Cigarettes (Lifetime Use)	20.2* (15.2-26.2)	†	10.2 (5.3-18.8)	15.6 (9.0-25.6)	8.4** (5.7-12.3)	16.0 (13.0-19.5)	9.9 (5.8-16.6)	13.5 (7.3-23.5)	19.7* (15.6-24.7)	17.4 (9.9-28.9)	14.6 (12.3-17.3)
Alcohol	64.3 (51.0-75.6)	63.5 (47.3-77.1)	63.7 (59.3-67.9)	50.2* (41.1-59.2)	48.9** (41.0-56.8)	54.7 (44.5-64.5)	61.2 (50.3-71.1)	64.9 (58.2-71.1)	63.1 (55.8-69.9)	72.5** (65.7-78.4)	60.0 (56.6-63.3)
Alcohol Mixed with an Energy Drink	17.6 (12.3-24.5)	18.4 (10.9-29.3)	21.2 (11.6-35.5)	21.1 (15.1-28.6)	14.0 (9.4-20.3)	16.2 (10.3-24.7)	18.4 (14.2-23.6)	20.5 (10.4-36.5)	28.0** (22.6-34.1)	18.7 (13.4-25.6)	19.2 (16.5-22.1)
Binge Drinking (Past Month)	28.7 (24.6-33.2)	28.1 (18.1-40.8)	28.7 (20.9-38.1)	20.5 (13.6-29.7)	14.9** (11.4-19.2)	19.8 (13.4-28.3)	25.6 (19.7-32.7)	29.5 (22.0-38.2)	29.2 (24.9-33.8)	37.0** (32.2-42.2)	25.4 (23.1-27.9)
Drunkenness (Past Month)	25.7 (21.0-31.0)	27.0 (16.5-41.0)	25.4 (17.3-35.5)	17.9 (12.1-25.5)	12.0** (8.6-16.5)	18.3 (11.2-28.4)	23.1 (18.0-29.1)	27.0 (21.8-33.0)	26.6* (23.2-30.4)	29.2** (26.2-32.3)	22.7 (20.4-25.3)
Cannabis	25.7 (19.6-32.8)	28.9 (22.0-37.1)	33.9 (23.8-45.6)	30.5 (21.5-41.2)	20.5** (17.0-24.6)	29.0 (20.2-39.7)	29.9 (23.8-36.8)	25.4 (21.6-29.7)	30.4 (23.9-37.9)	30.8 (24.3-38.3)	29.2 (26.2-32.2)
Cannabis and Alcohol (Same Occasion)	16.7 (9.1-28.6)	20.2 (13.5-29.1)	24.2 (14.7-37.2)	19.7 (15.4-24.9)	13.1* (8.9-18.9)	17.9 (9.0-32.5)	23.1 (16.4-31.3)	27.1 (19.2-36.8)	25.4 (19.0-33.1)	20.1 (12.4-31.0)	20.5 (17.4-24.1)
Cocaine	2.1 (1.5-2.9)	†	†	†	1.3 (0.7-2.4)	2.5 (1.4-4.2)	2.2 (1.2-3.7)	3.7 (2.3-5.9)	2.0 (1.0-4.0)	†	2.4 (1.7-3.4)
Opioid Pain Relievers (NM)	11.2 (7.7-16.1)	12.2 (8.9-16.4)	15.6 (12.5-19.3)	16.5** (14.1-19.2)	15.5 (10.9-21.5)	15.6* (12.8-19.0)	14.3 (9.8-20.4)	10.5 (6.3-17.1)	10.0 (6.1-15.9)	8.6** (6.5-11.4)	13.5 (12.1-15.0)
Tranquillizers (NM)	4.6** (2.8-7.6)	1.9 (1.0-3.4)	†	†	2.1 (1.4-3.2)	1.4 (0.8-2.6)	†	†	2.1 (1.3-3.4)	†	2.4 (1.8-3.2)
OTC Cough/Cold Medication (NM)	†	4.4** (3.1-6.3)	9.7 (6.5-14.5)	10.4 (7.7-14.0)	9.7 (7.7-12.3)	10.2 (7.7-13.3)	11.0 (8.4-14.2)	†	†	8.3 (4.4-14.8)	9.7 (7.9-11.8)
High-Caffeine Energy Drinks	43.4 (35.9-51.2)	45.6 (43.7-47.4)	48.0 (37.9-58.2)	43.9 (36.6-51.5)	34.9** (30.4-39.8)	38.7** (36.6-40.8)	40.5 (34.0-47.3)	43.6 (30.3-57.9)	46.8 (43.3-50.3)	45.5 (37.2-54.1)	42.8 (40.6-45.1)
Any NM Prescription Drug Use	15.4 (11.7-20.0)	12.9 (9.8-16.8)	17.6 (13.7-22.2)	18.5** (15.5-22.0)	16.5 (11.8-22.6)	16.8 (13.7-20.3)	15.6 (11.3-21.1)	11.0 (6.8-17.2)	12.1 (8.3-17.3)	9.4** (7.6-11.6)	15.2 (13.8-16.7)
Any Drug Use Including Cannabis	35.2 (18.1-57.3)	34.4 (30.4-38.8)	42.8 (32.9-53.3)	48.1 (35.8-60.7)	36.9 (29.1-45.4)	41.5 (33.3-50.2)	41.0 (33.6-48.7)	37.5 (27.2-49.1)	38.8 (33.9-44.0)	36.0 (21.0-54.3)	40.0 (36.5-43.7)

(continued)

	Erie St. Clair + South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central + Central	Central East + North Simcoe Muskoka	South East	Champlain	North East + North West	Ontario
<i>(Student n=)</i>	<i>(239)</i>	<i>(221)</i>	<i>(301)</i>	<i>(726)</i>	<i>(781)</i>	<i>(1,305)</i>	<i>(832)</i>	<i>(247)</i>	<i>(833)</i>	<i>(674)</i>	<i>(6,159)</i>
<i>(School n=)</i>	<i>(5)</i>	<i>(4)</i>	<i>(5)</i>	<i>(12)</i>	<i>(11)</i>	<i>(22)</i>	<i>(16)</i>	<i>(5)</i>	<i>(13)</i>	<i>(16)</i>	<i>(109)</i>
Any Drug Use Excluding Cannabis	17.5 (9.5-29.8)	16.7* (12.0-22.8)	31.3* (23.0-40.9)	36.3* (23.8-50.9)	26.1 (19.0-34.8)	25.8 (20.4-32.2)	23.3 (17.4-30.3)	18.8* (15.7-22.2)	20.4 (17.1-24.0)	16.9 (10.2-26.8)	24.3 (21.3-27.6)
Hazardous/Harmful Drinking (AUDIT)	21.1 (16.3-26.7)	18.3 (10.8-29.3)	19.9 (14.0-27.5)	14.6 (8.5-24.0)	10.8** (8.5-13.5)	19.3 (14.6-25.0)	25.7* (19.6-32.8)	21.7 (13.9-32.3)	20.0 (15.2-25.9)	25.6** (21.2-30.6)	20.0 (18.0-22.2)
Drug Use Problem (CRAFT)	19.6 (15.2-24.9)	16.1 (10.1-24.7)	23.2 (14.0-35.8)	19.8 (12.5-29.9)	11.6 (7.6-17.2)	13.8 (8.1-22.7)	15.9 (10.9-22.7)	12.9 (9.7-17.0)	15.7 (10.6-22.7)	17.1 (13.5-21.4)	16.8 (14.5-19.4)
Passenger/Alcohol	23.3 (18.1-29.5)	18.6 (13.8-24.8)	18.8 (13.3-25.9)	24.8* (21.1-28.9)	19.0 (16.3-22.0)	19.8 (16.9-23.2)	21.6 (18.0-25.5)	23.2 (17.9-29.4)	17.4* (15.3-19.8)	16.6 (13.0-21.1)	20.1 (18.6-21.7)
Passenger/Drugs	17.6 (13.2-23.0)	14.3 (9.9-20.3)	20.4 (12.4-31.8)	16.6 (12.8-21.4)	17.0 (14.1-20.2)	13.2* (9.7-17.7)	17.1 (13.5-21.5)	19.6 (13.2-28.0)	20.6 (17.0-24.7)	20.3 (17.1-23.9)	17.2 (15.5-19.1)
Drinking-Snowmobile/Motorboat/ATV (G10-12)	†	†	6.7 (4.3-10.4)	†	†	2.4 (1.2-4.6)	5.9 (4.7-7.3)	†	4.2 (2.7-6.6)	12.2* (8.5-17.2)	5.1 (4.1-6.3)
Cannabis-Driving (Drivers Grades 10-12)	†	7.2 (4.7-10.7)	11.2 (6.6-18.2)	12.8 (7.9-20.0)	6.6 (4.0-10.6)	6.7 (4.2-10.6)	10.2 (7.6-13.6)	†	12.5 (10.0-15.4)	7.2 (3.9-12.8)	9.7 (7.9-11.9)
Intoxicated at School	15.5 (11.3-20.8)	11.4* (9.0-14.2)	17.5 (11.1-26.5)	23.0 (13.3-36.7)	9.6 (5.4-16.6)	15.6 (10.7-22.1)	15.1 (11.1-20.2)	18.2 (11.2-28.2)	12.7 (7.6-20.6)	10.9 (6.2-18.6)	15.0 (12.8-17.6)
Was Given/Offered/Sold a Drug at School	24.8 (14.8-38.6)	19.2 (13.5-26.6)	18.7 (11.8-28.5)	32.6** (24.7-41.7)	22.2 (18.8-26.1)	26.1 (20.6-32.5)	19.9 (13.8-27.8)	19.3 (12.3-29.1)	27.7 (21.0-35.5)	14.6 (8.3-24.4)	23.1 (20.3-26.3)
Was Offered/Sold a Drug Anywhere	29.5 (22.5-37.6)	28.5 (24.2-33.4)	37.9* (30.1-46.5)	35.3 (27.5-43.9)	25.6* (22.3-29.2)	31.7 (25.4-38.6)	24.8 (18.7-32.2)	29.0 (17.4-44.3)	36.0 (29.6-42.9)	28.5 (22.1-35.9)	30.8 (28.0-33.8)
Seen Drug Selling in Neighbourhood	23.9 (15.2-35.6)	18.6 (13.5-25.2)	25.6 (18.8-33.7)	29.9** (27.9-31.9)	21.8 (18.4-25.6)	28.4* (24.2-32.9)	27.6 (21.8-34.4)	20.3 (12.7-30.8)	23.5 (16.2-32.7)	19.0 (14.6-24.4)	25.2 (23.0-27.6)
Easy or Very Easy to Get Cigarettes	80.4 (60.8-91.6)	74.2 (69.2-78.5)	67.6 (62.4-72.5)	71.2 (65.2-76.6)	61.5** (57.0-65.8)	72.3 (67.0-77.0)	70.1 (59.1-79.2)	75.2 (69.6-80.1)	74.5 (61.3-84.3)	73.2 (60.0-73.2)	71.6 (68.5-74.5)
Easy or Very Easy to Get Alcohol	89.2 (75.2-95.7)	77.2 (66.6-85.2)	78.7 (74.1-82.7)	72.5* (68.1-76.5)	68.9** (61.8-75.2)	70.9* (65.0-76.2)	72.0 (64.4-78.5)	83.2 (71.4-90.8)	83.2 (67.5-92.2)	75.7 (72.9-78.3)	75.7 (73.0-78.2)
Easy or Very Easy to Get Cannabis	71.3 (53.6-84.2)	63.2 (50.9-74.0)	69.3 (61.2-76.3)	63.4 (56.8-69.5)	52.8** (47.4-58.1)	61.4 (55.8-66.6)	59.1 (52.6-65.3)	58.0 (41.6-72.8)	64.6 (58.2-70.5)	56.0 (49.7-62.1)	62.4 (59.5-65.3)

Notes: (1) due to small sample sizes, the Erie St. Clair and the South West LHINs were merged, the Toronto Central and Central LHINs were merged, the Central East and North Simcoe Muskoka LHINs were merged, and the North West and the North East LHINs were merged; (2) binge drinking is defined as drinking 5 or more drinks on one occasion; (3) NM=nonmedical use, without a doctor's prescription; (4) "Any NM Use of a Prescription Drug" refers to the nonmedical use of any one of the following classes of prescription drugs: OxyContin/OxyNEO and other opioids, ADHD drugs, or tranquilizers/sedatives; (5) "Any Drug Use Including Cannabis" refers to the past year use of any one of the 22 drugs asked about in the survey (excludes tobacco, alcohol, and energy drinks); (6) "Passenger/Alcohol" refers to being a passenger in a vehicle with a driver who had been drinking alcohol; (7) "Passenger/Drugs" refers to being a passenger in a vehicle with a driver who had been using drugs; (8) estimates for daily cigarette smoking, synthetic cannabis, inhalants, salvia, mushrooms, jimson weed, methamphetamine, crack, heroin, ecstasy, ketamine, methoxetamine, BZP pills, mephedrone ("bath salts"), modafinil, cannabis dependence, and drinking and driving are not presented due to numerous suppressed estimates; (9) entries in brackets are 95% confidence intervals; (10) † estimate suppressed due to unreliability; (11) *p<.05, **p<.01 significant difference, LHIN area vs. Ontario.

Source: OSDUHS, Centre for Addiction & Mental Health

Overview of Drug Use in the Greater Toronto Area (GTA)

In this section, we present estimates of tobacco, alcohol, and other drug use among students from schools in the Greater Toronto Area (GTA) and comparisons with the province as a whole. The GTA encompasses the City of Toronto, Durham Region, York Region, Peel Region, and Halton Region.

Table 4. Percentage of Students in the Greater Toronto Area (GTA) Reporting Past Year Drug Use, 2011 and 2013 OSDUHS

Past Year Drug Use	2011 GTA % (95% CI) (n=3,726)	2013 GTA % (95% CI) (n=4,806)	2013 Ontario % (95% CI) (n=10,272)
AMONG GRADES 7–12			
Cigarette Smoking	9.2 (7.3-11.4)	8.3 (6.2-10.9)	8.5 (7.2-9.9)
Daily Cigarette Smoking	4.1 (3.1-5.3)	2.9 (1.8-4.6)	3.4 (2.6-4.6)
Smokeless (Chewing) Tobacco	4.3 (3.1-5.9)	4.8 (3.4-6.8)	5.7 (4.6-7.0)
Waterpipe (“Hookah”)	--	10.6 (8.3-13.5)	9.7 (8.2-11.5)
Alcohol	49.6 (44.5-54.7)	43.6 (38.3-49.0)	* 49.5 (46.4-52.5)
Alcohol mixed with an Energy Drink	--	14.5 (11.3-18.4)	15.9 (13.8-18.3)
Binge Drinking (past month)	18.9 (15.5-22.8)	15.6 (12.4-19.5)	* 19.8 (17.8-22.1)
Drunkenness (past month)	16.1 (13.4-19.2)	14.2 (10.8-18.4)	* 17.6 (15.6-19.9)
Cannabis	19.7 (16.6-23.2)	21.8 (17.7-26.5)	23.0 (20.7-25.6)
Cannabis and Alcohol (same occasion)	--	14.7 (10.7-19.9)	16.0 (13.5-18.8)
Synthetic Cannabis (“Spice” or “K2”)	--	2.3 (1.3-3.9)	1.8 (1.2-2.6)
Inhalants (Glue or Solvents)	6.7 (5.2-8.4)	4.6 (3.5-6.1)	* 3.4 (2.7-4.5)
Salvia Divinorum	2.5 (1.7-3.6)	2.8 (1.6-4.7)	2.6 (1.7-3.8)
OTC Cough/Cold Medication	6.9 (5.7-8.4)	10.1 (8.7-11.6)	9.7 (8.2-11.4)
High-Caffeine Energy Drinks	42.9 (39.0-47.0)	36.7 (33.4-40.1)	* 39.7 (37.8-41.7)
OxyContin/OxyNEO (NM)	1.0 (0.6-1.5)	1.1 (0.7-2.0)	1.6 (1.2-2.1)
Opioid Pain Relievers (NM)	14.5 (12.5-16.8)	14.2 (12.3-16.2)	* 12.4 (11.2-13.6)
ADHD Drugs (NM)	0.6 (0.4-1.0)	1.2 (0.7-1.9)	1.4 (1.0-2.0)
AMONG GRADES 9–12 ONLY			
LSD	2.1 (1.3-3.2)	1.7 (1.1-2.8)	1.5 (1.0-2.1)
Mushrooms/Mescaline	4.1 (2.6-6.6)	3.5 (2.1-5.9)	3.7 (2.7-5.1)
Methamphetamine (includes Crystal Meth.)	0.9 (0.5-1.4)	0.5 (0.3-0.9)	* 1.0 (0.6-1.5)
Cocaine	1.9 (1.3-2.7)	2.3 (1.6-3.2)	2.4 (1.7-3.4)
Crack	1.3 (0.7-2.3)	0.6 (0.3-1.1)	0.7 (0.5-1.1)
Ecstasy (MDMA)	3.6 (2.2-5.8)	2.9 (1.8-4.6)	3.3 (2.4-4.6)
Tranquillizers/Sedatives (NM)	2.4 (1.8-3.3)	2.0 (1.3-3.0)	2.4 (1.8-3.2)
Electronic Cigarettes (lifetime use)	--	12.2 (9.8-15.0)	* 14.6 (12.3-17.3)
Any NM Use of a Prescription Drug	17.3 (14.8-20.1)	17.5 (15.3-20.0)	* 15.2 (13.8-16.7)
Any Drug Use Including Cannabis	--	42.4 (37.8-47.1)	40.0 (36.5-43.7)
Any Drug Use Excluding Cannabis	--	27.4 (23.7-31.4)	24.3 (21.3-27.6)

Notes: (1) NM=nonmedical use, without a doctor’s prescription; (2) ADHD=Attention-Deficit Hyperactivity Disorder; (3) “Any NM Use of a Prescription Drug” refers to nonmedical use of any one of the following prescription drugs or drug classes: OxyContin/OxyNEO, other opioids, ADHD drugs, or tranquillizers/sedatives; (4) “Any Drug Including Cannabis” refers to the use of any one of 22 drugs asked about in the 2013 survey (excludes alcohol, tobacco, and high-caffeine energy drinks); (5) jimson weed, heroin, ketamine, methoxetamine, BZP pills, mephedrone (“bath salts”), and modafinil are not presented due to suppressed estimates; (6) * 2013 GTA estimate differs from the 2013 Ontario estimate, $p < .05$ (not controlling for other factors).

Source: OSDUHS, Centre for Addiction & Mental Health

Summary and Discussion

The Public Health Approach Toward Drug Use

Tobacco, alcohol, and illicit drug use are leading causes of morbidity and mortality, both during adolescence and in adulthood. The OSDUHS performs several public health functions: identifying the extent of drug use in the mainstream student population; identifying its timing and pattern during adolescence; identifying risk and protective factors; and tracking changes in drug use over time. Since 1977, the OSDUHS has been providing a knowledge base for designing and targeting preventive and health promotion programs, informing public health policy, and disseminating information to the general public.

Encouraging Findings

This report presented findings about the past year use of alcohol, tobacco, illicit drugs, and the nonmedical (NM) use of prescription drugs, and changes since 1977. There are many encouraging findings from the 2013 OSDUHS. We have ordered these findings according to their public health importance.

■ **Cigarettes:** The vast majority of students in Ontario do not smoke cigarettes. The past year prevalence of cigarette smoking began to decline dramatically during the 2000s, reached its lowest point in 2011, and remained stable in 2013. Not surprisingly, negative perceptions about smoking have also hardened over time. The perceived risk of harm associated with smoking one or two cigarettes daily is currently higher than it was a decade ago.

■ **Alcohol:** Past year drinking declined between 2011 and 2013, reaching a historical low. In fact, drinking has been on the decline during the past decade. The magnitude of the decline has been even greater over the long-term, since the late 1970s when roughly three-quarters of students drank. More importantly,

binge drinking (five or more drinks on one occasion) is significantly lower today compared with elevated levels evident during the two peak periods seen in the late 1970s and the late 1990s.

■ The past year use of **inhalants (glue or solvents)** significantly declined between 2011 and 2013, continuing on a downward trend that began over a decade ago. The current level of use resembles the historic lows seen in the early 1990s.

■ The past year use of highly **caffeinated energy drinks** (such as Red Bull, Monster, Rock Star, Amp) showed a significant decline between 2011 and 2013.

■ While the **nonmedical use of prescription opioid pain relievers** (e.g., Percocet, Percodan, Tylenol #3, OxyContin) in the past year remained stable between 2011 and 2013, the level has substantially declined since 2007, the first year of monitoring.

■ **Driving after drinking alcohol** among licensed students significantly declined between 2011 and 2013, continuing a decline that began in 2009. Further, the current rate is markedly lower than rates evident in the late 1970s and early 1980s. It is worth noting here that the declines in drinking and driving seen in the last two surveys follow the introduction of several new initiatives designed to prevent impaired driving in Ontario, including requiring a 0 Blood Alcohol Content (BAC) among all drivers up to age 21, and increasing the sanctions for drivers who are apprehended with BACs in the “warn range” (.05% to .08%).

■ **Driving after cannabis use** among licensed students is also lower in 2013 compared with estimates from a decade ago.

■ The percentage of all students reporting **riding in a vehicle with a driver who was drinking alcohol**, and the percentage **riding in**

a vehicle with a driver who was using drugs significantly decreased during the past decade.

- Over one-third of students **used no drug** in the past year, including alcohol and cigarettes. This proportion is significantly higher than the estimates from about a decade ago and substantially higher than the estimates from the late 1970s and early 1980s, when only about 20% to 25% of students were abstinent during the past year.

- The **age of initiation** for drinking alcohol, smoking cigarettes, and using cannabis has not declined. In other words, students today are not trying these substances at younger ages than did their counterparts from years ago. Looking over the past decade, our data show that smoking initiation and drinking initiation are actually occurring later in adolescence. Beginning use at a later age predicts fewer substance-related problems later on in life.

- Despite media attention given to **methamphetamine** (including crystal methamphetamine) use in various populations, there is no evidence that this drug has measurably diffused into the student population. In fact, past year use of methamphetamine has significantly decreased since 1999.

- One function of the OSDUHS is to track the **emergence of new drugs** in the Ontario student population. For example, in recent years we have seen the emergence of nonmedical use of prescription opioids and salvia divinorum. Starting in 2011, the OSDUHS asked students about the use of **BZP (benzylpiperazine) pills** and **mephedrone** (4-methylmethcathinone, more commonly known as “bath salts”). The 2013 survey also asked about **synthetic cannabis** (“spice” or “K2”) and **methoxetamine** (a synthetic ketamine analog more commonly known as “MXE” or “mket”). All of these are relatively new synthetic drugs available for purchase over the internet and are dangerous because of their unknown chemical compounds. These drugs have appeared in other countries, but only anecdotal evidence exists for use in

Canada. The 2013 survey shows that, of these drugs, only synthetic cannabis (“spice”) appears to have surfaced among Ontario students as about 2% of students report past year use. The prevalence estimates for methoxetamine (“MXE”), BZP pills, and mephedrone (“bath salts”) were suppressed due to negligible estimates. This suggests that these three drugs have not measurably diffused into the mainstream student population at this time. However, we must remain cautious. When the OSDUHS first began monitoring ecstasy use in 1991, the past year prevalence estimate was suppressed due to very low numbers. A decade later, ecstasy use among Ontario students hit an all-time high. Therefore, ongoing monitoring of these drugs is warranted to observe if they eventually increase in popularity.

- Past year use of almost all illicit drugs monitored is lower in 2013 compared with estimates from a decade or so ago. The use of **cannabis, LSD, mushrooms/mescaline, cocaine, crack, heroin, ecstasy, and ketamine** has decreased. The use of **any drug including and excluding cannabis** has also decreased.

- The **perceived availability of cocaine, LSD, and ecstasy** has significantly decreased over the past decade. Thus, these drugs are seen as more difficult to obtain than in the past.

- The perceptions of **risk of harm** and the **disapproval of trying cocaine** are higher in 2013 than estimates seen a decade ago. Thus, students today seem to be more aware of the potential for physical harm cocaine can cause.

- Reported **intoxication at school** significantly declined between 2011 and 2013, and is currently lower than estimates seen a few years ago. **Drug availability at school** is also currently lower than estimates seen a few years ago.

Some Public Health Concerns

The following findings should be viewed as public health concerns. We begin with tobacco and alcohol because these legal drugs are responsible for greater harm to the physical and social well-being of youth, as well as to the population as a whole, compared with illicit drugs.

- **Cigarette smoking** is the greatest public health issue impinging on a population's health, as it is the leading preventable cause of disease. Although student smoking has substantially declined over time, there is still a significant proportion – about one-in-ten (9%) – that smoke cigarettes (about 83,100 students in Ontario). The consistent decline in smoking seen over the past decade appears to have levelled off in 2013. Also worrisome is that the perceived availability of cigarettes significantly increased between 2011 and 2013, suggesting that they are easier to obtain.

- For the first time in 2013, the OSDUHS asked about past year use of a **waterpipe** (“hookah” or “shisha”) which is a large apparatus typically used to smoke flavoured tobacco in a group setting. We found that about one-in-ten (10%) students in grades 7–12 use a waterpipe (an estimated 88,400 in Ontario). Waterpipe smoking is linked to health risks and diseases similar to cigarette smoking, and infectious diseases may be transmitted due to the sharing of the mouthpiece.

- Lifetime use of **electronic cigarettes** (e-cigarettes) was also new to the survey in 2013, asked of secondary students only. E-cigarettes are battery-operated devices that look like cigarettes designed to deliver nicotine and/or other chemicals to the lungs without burning tobacco. A vapour or mist is inhaled to simulate the act of smoking. Little is known yet about the health implications of using e-cigarettes, with or without nicotine. About one-in-seven secondary students (15% or an estimated 99,800 in Ontario) have smoked an e-cigarette in their lifetime. Specifically, 4% reported smoking an

e-cigarette with nicotine, and 11% reported smoking an e-cigarette without nicotine.

- About 6% of students (an estimated 51,800 in Ontario) report using **smokeless tobacco**, also known as chewing tobacco, dipping tobacco, or snuff, and among males the prevalence approaches that of cigarette smoking.

- **Alcohol** is the substance most widely used by Ontario students. Despite the recent decline, half (50%) of all students drink alcohol, and this increases to 74% in 12th grade. **Binge drinking** remains at an elevated level, as about one-in-five students (20% or an estimated 193,400 in Ontario) report drinking five or more drinks on the same occasion at least once in the past month. About 39% of 12th graders report binge drinking.

- About one-in-six students (16%) **drink hazardously/harmfully**, meaning that their drinking puts them at risk for current or future physical and social problems. One-in-five (18%) students could not remember what happened when they were drinking on at least one occasion in the past year, and 8% report being injured or injuring someone in the past year as a result of their drinking.

- **Vehicles:** Despite long-term declines in drinking and driving, there are still about 4% of licensed students in grades 10 through 12 who report drinking and driving at least once in the past year (an estimated 12,700 in Ontario). A higher percentage (10%) of licensed students report driving after using cannabis (an estimated 31,500). About 18% of all students report being a passenger with a driver who had been drinking, and 14% rode with a driver who had been using drugs. Especially worrisome is that the likelihood of being a passenger with an intoxicated driver (from either alcohol or cannabis) increases significantly with grade (e.g., about one-quarter of 12th graders report these behaviours). All these behaviours increase the risk of unintentional injuries – the leading cause of death among young people. An important message from these data is that crash risk is not restricted to drivers.

■ The only drug to show an increase in recent years is over-the-counter (OTC) **cough/cold medication with dextromethorphan** (used to “get high”). In 2013, one-in-ten (10%) students in grades 7–12 used a cough/cold medication to “get high” (an estimated 94,100 in Ontario). This prevalence estimate is significantly higher than the estimate of 7% found in the 2009 survey, the first year of monitoring. Cough/cold medications are among the most commonly used drugs, following alcohol, caffeinated energy drinks, cannabis, and prescription opioids.

■ **Cannabis** is the most common illegal drug used by students. Almost one-quarter (23%) of students in grades 7–12 use cannabis (an estimated 225,600 in Ontario). Although the prevalence has declined during the last decade and is currently lower than the two historical peak periods, no further decline was evident in 2013. Further, there was a significant decrease between 2011 and 2013 in the perceived risk of harm from using cannabis either experimentally or regularly, as well as a corresponding decrease in the disapproval of use. Cannabis may be getting easier to obtain, as there was a significant increase in the perceived availability between 2011 and 2013.

■ Roughly 3% of secondary students (10% of past year cannabis users) report symptoms of **cannabis dependence**, characterized by loss of control and withdrawal. About 3% of students (an estimated 25,800 in Ontario) use **cannabis daily**. Short-term problems from regular cannabis use include memory impairment, reduced attention and motivation, which negatively affect school and family life. Frequent or heavy cannabis use during adolescence is also worrisome due to potential long-term consequences. Research has shown a link to respiratory illnesses, cancers, neuropsychological impairment, depression, and anxiety in adulthood. Further, research is accumulating that suggests an association between heavy or early cannabis use and the onset of psychotic symptoms in individuals who possess an underlying vulnerability to psychosis.

■ One-in-eight (12%) students report using a **prescription opioid pain reliever** without their own prescription at least once in the past year (representing about 120,100 in Ontario). The nonmedical use of this class of drugs, which includes Tylenol #3, codeine, Percocet, Percodan, and Demerol, ranks just after cannabis use. Opioids can be dangerous when used without medical supervision because if taken with other depressant drugs (e.g., alcohol) they can slow one’s breathing. Even one single large dose can cause severe slowing of one’s breathing and possibly death. Chronic abuse of opioids can lead to addiction.

■ About 2% (an estimated 17,300) of students in grades 7–12 used **synthetic cannabis** in the past year. Synthetic cannabis, which is sold under many names such as “**spice**,” “**K2**,” “**K3**,” “**black mamba**,” or “**legal weed**,” refers to a wide variety of herbal mixtures that contain plant material, preservatives, fragrance, and synthetic cannabinoid compounds. Synthetic cannabis is illegal in Canada, yet wrongly perceived as a “safe” alternative to cannabis. There are over 100 types of synthetic cannabinoids (and new derivatives are continuously emerging), each with differing potency. The short-term effects can vary greatly from euphoria and altered perceptions to extreme anxiety, paranoia, and the long-term effects are unknown.

■ Over one-third (40%) of secondary students report past year use of **at least one drug**, including a prescription drug or an OTC drug used for nonmedical purposes. The proportion increases with grade, reaching 51% by grade 12. If we remove cannabis, prescription drugs, and OTC drugs from this summated measure, the proportion reporting any other drug use is much lower. Thus, students today are more likely to use cannabis, prescription drugs, and OTC drugs nonmedically rather than other “street” drugs such as hallucinogens, cocaine, or ecstasy.

■ One-in-eight (12%) students report having been **drunk or high at school** and this estimate reaches about 20% among grade 11 and 12

students. One-in-five (19%) students report being **offered, sold, or given a drug at school**, and this estimate reaches 25% among grade 11 and 12 students.

- One-quarter (25%) of students report that **someone tried to sell drugs to them** (anywhere) at least once during the year before the survey. This estimate increases to almost 40% among grade 11 and 12 students, suggesting that drugs are readily available to older adolescents.

- The medical community has expressed concern about children and adolescents consuming **highly-caffeinated energy drinks**, and have called for restrictions on the labelling, sales and marketing of these beverages. Although the consumption of energy drinks does show a decline since the last survey, use remains quite high with about 40% of all students (an estimated 382,500 in Ontario) reporting past year use. One-in-eight (12% or an estimated 119,700) students report drinking an energy drink in the past week. An additional concern is the approximately 16% of students who reported drinking alcohol mixed with energy drinks in the past year. There are fears that adolescents who mix these beverages increase their risk of harm.

Overlapping Alcohol and Mental Health Problems

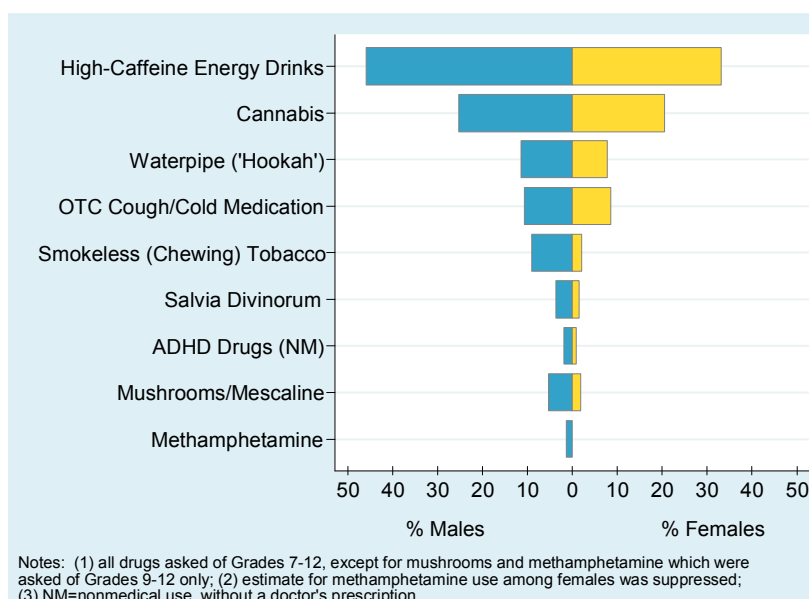
There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2013 OSDUHS shows that about 6% of all students in grades 7 through 12 (an estimated 60,800 Ontario students) report both hazardous/harmful drinking and elevated psychological distress (symptoms of anxiety and depression). This increases to 10% by 12th grade.

Important Correlates of Drug Use

The strongest correlate of drug use found in this report was **grade or age** (see Table A5 for an overview). Generally, drug use is more likely to occur with increasing grade, typically peaking in grade 11 (ages 16-17) or grade 12 (ages 17-18). The exception to this is inhalant use, which is most prevalent among 7th and 8th graders, and then declines by grade 9.

Sex is also associated with certain types of drug use. As summarized in Figure 21 below and Table A5, males are significantly more likely to use smokeless tobacco, a waterpipe, cannabis, salvia divinorum, mushrooms, methamphetamine, an ADHD drug (NM), an OTC cough/cold medication, and energy drinks. Females do not exceed males on use of any drug measured in the 2013 survey.

Figure 21.
Significant Sex Differences in Past Year Drug Use, 2013 OSDUHS



There are important differences in student drug use according to **region** of the province (see Table A5). Compared with the provincial average:

- *Toronto* students are less likely to drink alcohol and binge drink. They are more likely to use prescription opioids nonmedically and to report any nonmedical prescription drug use (which is largely due to prescription opioids).
- *Northern Ontario* students are more likely to drink alcohol and binge drink. They are less likely to use prescription opioids nonmedically and to report any nonmedical prescription drug use (which is largely due to prescription opioids).
- *Western Ontario* students are more likely to use prescription opioids nonmedically and to report any nonmedical prescription drug use (which is largely due to prescription opioids).
- *Eastern Ontario* students do not differ from the province as a whole on any drug measure.

Possibilities for Prevention

Research has shown that preventing adolescents from using drugs, including alcohol and tobacco, is difficult, and, at best, effects are usually short-lived. However, delaying the initiation of use, and preventing or minimizing harmful consequences from drug use may be more feasible goals.

Our survey shows that problem use of alcohol and drugs is not rare among youth. We also found that risk behaviours, such as binge drinking and becoming drunk, driving while intoxicated, and being a passenger with a driver who was using alcohol or drugs are not uncommon occurrences. Thus, there is a need for programs to focus on reducing these behaviours. Special efforts should be made to address the relatively high rate of driving after cannabis use among youth. In addition, messages against impaired driving need to be

expanded beyond roadways to include the operation of snowmobiles, boats, and all-terrain vehicles after drinking – as the 2013 OSDUHS found the proportion of students reporting these behaviours was sufficiently large to pose public health harms.

Our findings show that, except for cannabis, a relatively smaller percentage of youth use so-called “street” or “club” drugs such as ecstasy, cocaine, or hallucinogenic drugs (e.g., mushrooms or LSD) when compared with the percentage that use prescription drugs (e.g., opioid pain relievers) or over-the-counter cough/cold medications nonmedically. Similar changes in the “drug landscape” over the past decade have been seen in the United States. One likely explanation for this shift is that young people perceive these medications to be less harmful than “street” drugs given that they are legal and have therapeutic purposes. Any prevention program should address the use and abuse of medication to “get high” by educating youth and parents about the risks of harm associated with the nonmedical use of these drugs.

Other findings in this report suggest that the prime period for prevention programs is between grades 7 and 10 (ages 12–15), as this is the most likely time for the initiation of substance use. Behaviours such as drinking, binge drinking, and other drug use continue increasing in 12th grade, suggesting that prevention efforts should extend into the older grades as well.

Prevention efforts should include a component that targets young people’s beliefs and attitudes about drugs, specifically the risks of physical harms that can occur from use. Increases over time in the perceived risk of harm from using a substance are associated with concurrent and subsequent decreases in the rate of use, and vice versa. Our data show that attitudes and beliefs about risk of harm and disapproval are drug-specific. This, combined with the divergence in historical trajectories of past year use of the various drugs studied over time, suggests that any prevention effort should provide drug-specific information.

Finally, the OSDUHS data also suggest a relationship between the use and availability of certain drugs such as alcohol, cannabis, ecstasy, and LSD. That is, past year use and perceived availability have been decreasing in tandem over time. While prevention efforts cannot control access to drugs through peer groups, the availability and accessibility of cigarettes and alcohol can be controlled through enhanced government policies. There is strong research evidence showing that reducing access through regulations such as increased taxes, enforcing minimum drinking age laws, and reducing the number of sales outlets can reduce use among youth.

Future OSDUHS Monitoring

Cigarette, alcohol, and other drug use by young people are constantly changing, requiring ongoing monitoring and evaluation. As new drugs and new methods of use emerge, it is important to assess their use, related harms, and perceptions. Ongoing monitoring health risk behaviours such as drug use provides valuable information about determinants, changes, and co-occurrences of the behaviours. These data enable us to evaluate the effects of policies (e.g., smoking bans on school property, zero-tolerance policies), education programs, and whether health objectives are achieved. Further, scientific surveys such as the OSDUHS provide a useful tool for comparisons across different youth populations.

Important strides were made during the 1980s in reducing drug use among Ontario students, only to be followed by substantial increases in the late 1990s and early 2000s. The past decade has seen a second dip in prevalence rates for most drugs measured in the survey. Despite this progress, we should not be complacent. History has shown that the values and lifestyles of adolescents can change quickly, and so too can the character of drug use. Not only do new drugs emerge regularly, but old ones are rediscovered by a new generation of young people who may not be aware of their adverse effects. Although we cannot be certain what the near future holds for adolescent drug use, we can closely monitor

changes to ensure that programmatic responses are based not on sensationalized fears, but rather on sound scientific information.

Readers should note that there is a companion OSDUHS report entitled *The Mental Health and Well-Being of Ontario Students*, which addresses trends in other important public health issues such as mental health, bullying, physical activity, obesity, gambling, video gaming, and violence. The next release of this report will be in the summer of 2014.

Appendix Tables

Table A1. Definitions of Terms Used in the Report

Term	Definition
95% Confidence Interval (CI)	The 95% CI is interpreted as follows: the “true” population value would be expected within this range in 95 of 100 samples. Design-based CIs (presented here) also account for the characteristics of the complex sampling design.
Past Year Cigarette Use (Smokers)	Smoking at least one cigarette daily or smoking occasionally during the past 12 months. Those who smoked a few puffs or less than one cigarette in the past 12 months were not classified as smokers.
Daily Smoking	Smoking at least one whole cigarette daily during the past 12 months.
Past Year Alcohol Use (Drinkers)	Any alcohol consumed during the past 12 months. Use includes consumption on special occasions, but excludes sips.
Heavy Episodic Drinking	Two indicators are used: (1) binge drinking: drinking 5 or more drinks on the same occasion during the past 4 weeks; (2) getting drunk during the past 4 weeks.
Hazardous/Harmful Drinking	Scoring at least 8 of 40 (Likert scoring) on the World Health Organization’s <i>Alcohol Use Disorders Identification Test</i> (AUDIT) screen, which identifies the percentage drinking hazardously or harmfully. Hazardous drinking is a pattern of drinking that increases the likelihood of future physical and mental health problems, including dependence. Harmful drinking is a pattern that is already causing harms (e.g., injuries).
Past Year Drug Use (Users)	Used the drug at least once during the past 12 months. Cases that responded “don’t know what [the drug] is” were classified as nonusers and assigned to the denominator.
Frequent Drug Use	Used the drug 6 or more times during the past 12 months. Cases that responded “don’t know what [the drug] is” were classified as nonusers and assigned to the denominator.
Nonmedical Use (NM)	Used the drug without a prescription, or without a doctor’s supervision.
Any Drug Use in 2013	This binary measure indicates past year use of one or more of the following 22 drugs asked about in the 2013 survey (Form B-SS only): cannabis, synthetic cannabis, inhalants, LSD, mushrooms/mescaline, cocaine, crack, methamphetamine, heroin, ecstasy, ketamine, methoxetamine, jimson weed, salvia divinorum, BZP pills, mephedrone, tranquilizers/sedatives (NM), modafinil (NM), OxyContin/OxyNEO (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication (to “get high”). Excluded from this count are tobacco, alcohol, and high-caffeine energy drinks.
Any Drug Use (two indices for trend analyses)	To examine trends in any drug use, we use two measures based on drugs that were common to all surveys since 1977. The first measures past year use of one or more of the following nine drugs: cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, and tranquilizers/sedatives (NM). A second measure for trends in any drug use excludes cannabis from the count.
Any Nonmedical Prescription Drug Use	Nonmedical use of one or more of the following four prescription drugs or drug classes once or more often during the past 12 months: OxyContin/OxyNEO, other prescription opioid pain relievers, ADHD drugs, or tranquilizers/sedatives.
Drug Use Problem	Reporting 2 or more of the 6 items on the <i>CRAFT</i> screener, which measures a drug use problem that may require intervention (past 12 month period).
Cannabis Dependence	Scoring at least 4 of 15 (Likert scoring) on the cannabis subscale of the <i>Severity of Dependence Scale</i> (SDS). The SDS is a validated 5-item instrument used to screen for drug dependence in adolescent and general populations.
Psychological Distress	Scoring at least 22 of 50 (Likert scoring) on the <i>Kessler-10 Psychological Distress Scale</i> (K10). The K10 scale measures unspecified psychological distress (symptoms of anxiety and/or depression). A score of 22 or higher was used to indicate moderate or high distress.

Note: Please see the 2013 OSDUHS detailed drug use report for specific details and references associated with the scales and screeners used. The report is available in PDF format at: www.camh.ca/research/osduhs.aspx.

Table A2. Percentage Using the Drug at Least Once in the Past Year, 1999–2013 OSDUHS

	1999	2001	2003	2005	2007	2009	2011	2013
AMONG GRADES 7–12								
(n=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)
Cigarettes	28.4 (26.1-30.7)	23.1 (20.3-26.1)	19.2 (17.7-20.8)	14.4 (13.0-15.9)	11.9 (10.7-13.2)	11.7 (10.6-13.0)	8.7 (7.5-10.2)	8.5 ^b (7.2-9.9)
Smokeless (Chewing) Tobacco	—	—	—	—	—	—	4.6 (3.9-5.5)	5.7 (4.6-7.0)
Alcohol	66.0 (63.6-68.3)	63.9 (60.8-67.0)	66.2 (64.1-68.4)	62.0 (59.3-64.7)	61.2 (58.9-63.5)	58.2 (55.7-60.6)	54.9 (52.1-57.6)	49.5 ^{ab} (46.4-52.5)
Cannabis	28.0 (26.0-30.1)	28.6 (25.8-31.7)	29.6 (27.6-31.6)	26.5 (24.5-28.7)	25.6 (23.7-27.7)	25.6 (24.0-27.3)	22.0 (20.5-23.7)	23.0 ^b (20.7-25.6)
Inhalants (Glue or Solvents)	8.9 (7.7-10.2)	7.2 (6.1-8.4)	7.0 (6.1-8.2)	6.0 (5.1-7.1)	6.4 (5.3-7.8)	6.0 (5.0-7.1)	5.6 (4.5-7.0)	3.4 ^{ab} (2.7-4.5)
Salvia Divinorum	—	—	—	—	—	4.4 (3.3-5.7)	3.7 (2.8-4.8)	2.6 (1.7-3.8)
OTC Cough/Cold Medication (NM)	—	—	—	—	—	7.2 (6.1-8.5)	6.9 (5.5-8.7)	9.7 ^b (8.2-11.4)
High-Caffeine Energy Drinks	—	—	—	—	—	—	49.5 (46.3-52.7)	39.7 ^a (37.8-41.7)
OxyContin/OxyNEO (NM)	—	—	—	1.0 (0.7-1.5)	1.8 (0.3-2.4)	1.6 (1.3-2.0)	1.2 (0.9-1.7)	1.6 (1.2-2.1)
Opioid Pain Relievers (NM)	—	—	—	—	20.6 (18.9-23.5)	17.8 (16.6-18.9)	14.0 (12.8-15.3)	12.4 ^b (11.2-13.6)
ADHD Drugs (NM)	—	—	—	—	1.0 (0.7-1.5)	1.6 (1.3-2.1)	1.0 (0.7-1.3)	1.4 (1.0-2.0)
AMONG GRADES 9–12 ONLY								
(n=)	(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)
LSD	8.8 (7.2-10.7)	6.3 (5.0-7.8)	3.7 (3.0-4.5)	2.2 (1.6-3.0)	2.0 (1.4-2.8)	2.4 (1.9-3.1)	1.5 (1.0-2.2)	1.5 ^b (1.0-2.1)
Mushrooms (Psilocybin)/ Mescaline	17.1 (15.0-19.3)	15.3 (13.0-17.8)	13.2 (11.5-15.1)	9.0 (7.5-10.8)	7.6 (6.3-9.0)	6.8 (5.7-8.1)	5.0 (3.9-6.2)	3.7 ^b (2.7-5.1)
Jimson Weed	—	—	—	—	3.1 (2.3-4.3)	3.1 (2.3-4.1)	2.0 (1.1-3.5)	1.3 (0.7-2.4)
Methamphetamine (includes crystal methamphetamine)	6.3 (4.6-8.7)	5.3 (3.5-7.8)	5.5 (4.5-6.7)	3.1 (2.4-4.0)	2.3 (1.7-2.9)	2.0 (1.4-2.7)	1.2 (0.7-2.0)	1.0 ^b (0.6-1.5)
Cocaine	4.0 (3.2-5.0)	5.2 (4.1-6.6)	5.7 (4.9-6.7)	5.7 (4.8-6.8)	4.0 (3.4-4.8)	3.2 (2.5-4.0)	2.4 (1.9-3.0)	2.4 ^b (1.7-3.4)
Crack	3.2 (2.4-4.2)	2.6 (1.9-3.5)	3.1 (2.4-4.0)	2.3 (1.9-2.8)	1.2 (0.8-1.6)	1.3 (1.0-1.7)	0.8 (0.5-1.3)	0.7 ^b (0.5-1.1)
Heroin	2.1 (1.5-2.7)	1.2 (0.8-1.7)	1.5 (1.1-1.9)	0.9 (0.7-1.2)	1.0 (0.7-1.5)	0.8 (0.6-1.2)	†	† ^b
Ecstasy (MDMA)	5.3 (4.0-7.1)	7.9 (6.5-9.6)	5.5 (4.7-6.4)	6.2 (5.2-7.4)	4.7 (3.9-5.7)	4.3 (3.5-5.2)	4.4 (3.5-5.6)	3.3 (2.4-4.6)
Ketamine	—	—	2.9 (2.3-3.7)	1.6 (1.1-2.2)	1.4 (0.9-2.3)	1.9 (1.3-3.0)	1.1 (0.6-2.0)	† ^b
Tranquillizers/Sedatives (NM)	2.5 (1.9-3.3)	2.7 (1.8-3.9)	2.8 (1.2-3.4)	2.1 (1.7-2.7)	2.2 (1.7-2.8)	2.0 (1.5-2.6)	2.5 (1.9-3.3)	2.4 (1.8-3.2)
Steroids (lifetime use)	4.3 (3.3-5.4)	4.5 (3.5-5.8)	3.8 (3.0-4.7)	2.8 (2.3-3.6)	1.6 (1.1-2.4)	1.2 (0.8-1.9)	1.6 (1.1-2.4)	2.0 (1.1-3.8)
Any NM Use of a Prescription Drug	—	—	—	—	23.5 (21.5-25.6)	21.4 (20.0-22.9)	17.0 (15.3-18.9)	15.2 ^b (13.8-16.7)
Any Drug Including Cannabis	39.2 (35.9-42.6)	40.0 (36.1-44.0)	39.8 (37.3-42.3)	37.4 (35.0-40.0)	36.1 (33.5-38.8)	35.3 (33.2-37.5)	29.9 (28.0-31.9)	30.7 ^b (27.7-33.8)
Any Drug Excluding Cannabis	22.8 (20.0-25.8)	20.5 (18.3-22.9)	17.0 (15.2-19.0)	14.2 (12.5-16.1)	11.9 (10.4-13.6)	10.6 (9.4-12.0)	9.5 (8.3-10.9)	7.9 ^b (6.4-9.7)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) ^a 2013 vs. 2011 significant difference, p<.01; (4) ^b 2013 vs. 1999 significant difference, p<.01 (vs. 2001 for ecstasy; vs. 2003 for cocaine and ketamine; vs. 2007 for opioid pain relievers; vs. 2009 for OTC cough/cold medication); (5) NM = nonmedical use, without a doctor's prescription; (6) OTC = over-the-counter drug used to "get high"; (7) ADHD = Attention-Deficit Hyperactivity Disorder; (8) "Any NM Use of a Prescription Drug" refers to nonmedical use of any one of the following prescription drugs or drug classes: OxyContin/OxyNEO, other opioids, ADHD drugs, or tranquilizers/sedatives; (9) the "Any Drug" indices used for trend purposes are restricted to use of any one of the following drugs: cannabis, LSD, mushrooms, methamphetamine, cocaine, crack, heroin, ecstasy, and tranquilizers/sedatives (NM). Source: OSDUHS, Centre for Addiction & Mental Health

Table A3. Significant Changes in Past Year Drug Use by Subgroup, 2013 vs. 2011 and 2013 vs. 1999

	Cigarettes	Alcohol	Binge Drinking	Cannabis	Inhalants	LSD	Mushrooms/Mesc.	Methamphetamine	Cocaine	Crack	Heroin	Ecstasy	Ketamine	OTC Cough/Cold Medication	High-Caffeine Energy Drinks	Opioid Pain Relievers (NM)	Any NM Prescription Drug Use	Any Drug Use Excluding Cannabis
Total	▽	↓▽	▽	▽	↓▽	▽	▽	▽	▽	▽	▽	▽	▽	△	↓	▽	▽	▽
Males	▽	▽	▽	▽	↓▽	▽	▽	▽		▽	▽	▽	▽	△		▽		▽
Females	▽	▽			▽	▽	▽	▽	▽	▽		▽	▽		↓	↓▽	▽	▽
Grade 7	▽	↓▽	▽		↓▽	--	--	--	--	--	--	--	--	↑			--	--
Grade 8	▽	▽	▽	▽		--	--	--	--	--	--	--	--			▽	--	--
Grade 9	▽	↓▽	↓▽	▽	▽	▽	▽	▽	▽			▽		↑	↓	▽	▽	▽
Grade 10	▽	▽	▽	▽		▽	▽	▽	▽	▽		▽				▽	▽	▽
Grade 11	▽		▽	▽		▽	▽	▽	▽	▽		↓▽	▽		↓	↓▽	▽	▽
Grade 12	▽					▽	▽	▽					▽	↑△				▽
Toronto	▽				▽	▽			▽	▽								
North	↓▽	▽			▽	▽	▽		▽						↓	↓▽	▽	▽
West	▽	↓▽	▽	▽	▽	▽	▽	▽	▽	▽		▽	▽		↓	▽	▽	▽
East	▽				▽	▽	▽	▽	▽	▽	▽		▽	↑	↓	▽	▽	▽

Notes: (1) ↑↓ significant increase or decrease in 2013 vs. 2011, $p < .01$; (2) △▽ significant increase or decrease in 2013 vs. 1999, $p < .01$ (vs. 2003 for cocaine and ketamine, vs. 2001 for ecstasy, vs. 2009 for cough/cold medication, vs. 2007 for opioid pain relievers and Any NM Prescription Drug Use); (3) -- indicates question not asked of that grade; (4) binge drinking refers to drinking five or more alcoholic drinks on one occasion at least once in the past month; (5) NM = nonmedical use, without one's own doctor's prescription; (6) "Any Illicit Drug" indices are based on nine drugs asked about over time; (7) no significant year differences were found for salvia divinorum, jimson weed, ADHD drugs (NM), tranquilizers/sedatives (NM), therefore these drugs are not presented.

Table A4. Percentage Using the Drug at Least Once in the Past Year, 1977–2013 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013
AMONG GRADES 7, 9 & 11																			
(n=)	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)
Cigarettes	29.2 (26.7-31.8)	35.0 (32.3-37.7)	28.8 (25.4-32.5)	29.0 (25.6-32.6)	23.6 (21.1-26.2)	22.9 (21.1-24.8)	22.2 (20.3-24.2)	20.1 (18.4-22.0)	23.4 (21.8-25.2)	27.3 (25.2-29.5)	27.2 (25.4-29.0)	26.6 (23.5-30.0)	21.2 (17.7-25.2)	17.4 (15.3-19.7)	12.7 (11.1-14.5)	10.8 (9.3-12.6)	9.3 (8.0-10.9)	7.2 (6.0-8.4)	6.3 (4.9-8.0)
Alcohol	72.8 (70.4-75.1)	73.7 (71.6-75.8)	70.1 (67.7-72.3)	69.0 (66.1-71.9)	66.3 (64.7-67.9)	65.1 (63.0-67.3)	62.6 (58.8-66.3)	54.3 (51.6-57.0)	53.6 (50.4-56.6)	56.0 (53.4-58.4)	56.9 (53.3-60.4)	62.7 (59.4-66.0)	58.9 (54.1-63.5)	62.9 (60.2-64.4)	57.8 (54.9-60.5)	56.1 (53.0-59.0)	51.2 (47.9-54.4)	49.8 (44.7-54.9)	41.8 (38.1-45.7)
Cannabis	21.8 (19.5-24.3)	29.1 (26.1-32.4)	25.1 (22.2-28.2)	21.9 (19.7-24.3)	19.4 (16.4-22.9)	13.8 (10.9-17.3)	11.9 (9.7-14.4)	9.9 (8.7-11.3)	11.5 (10.7-12.4)	21.9 (18.8-25.4)	23.9 (21.9-26.0)	26.8 (23.7-30.1)	26.2 (22.1-30.8)	27.8 (25.4-30.3)	22.2 (20.1-24.5)	22.0 (19.5-24.7)	20.4 (18.4-22.6)	18.4 (16.3-20.7)	18.5 (15.9-21.5)
Inhalants (Glue or Solvents)	9.1 (8.1-10.1)	9.4 (8.3-10.5)	5.3 (4.1-6.9)	6.2 (5.5-6.9)	3.8 (3.1-4.6)	5.1 (3.9-6.8)	4.2 (3.6-5.0)	2.3 (1.6-3.2)	3.4 (2.7-4.1)	4.8 (4.1-5.6)	3.5 (3.0-4.1)	9.6 (8.0-11.4)	7.6 (6.1-9.5)	7.6 (6.4-9.0)	6.7 (5.4-8.4)	6.9 (5.2-9.0)	6.2 (4.7-7.9)	6.4 (5.1-8.1)	3.6 (2.7-4.8)
AMONG GRADES 9 & 11 ONLY																			
(n=)	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)
LSD	7.7 (6.4-9.3)	11.2 (9.4-13.3)	13.0 (10.4-16.0)	12.6 (10.7-14.8)	9.5 (7.3-12.2)	7.3 (4.8-10.8)	7.1 (4.8-10.4)	6.9 (5.6-8.3)	9.1 (7.6-10.8)	13.0 (9.5-7.4)	10.8 (9.7-12.0)	8.6 (6.4-11.5)	4.8 (3.6-6.4)	3.8 (3.0-4.8)	2.6 (1.8-3.6)	2.4 (1.7-3.5)	2.1 (1.4-3.0)	2.0 (1.1-3.4)	1.2 (0.7-1.9)
Mushrooms or Mescaline	5.2 (4.2-6.4)	6.8 (5.5-8.4)	5.8 (3.9-8.6)	8.6 (6.6-11.1)	6.1 (4.5-8.1)	5.4 (3.2-8.8)	5.1 (3.4-7.7)	4.3 (3.4-5.4)	3.9 (3.0-5.1)	10.6 (7.5-15.8)	13.5 (11.5-14.7)	16.0 (12.9-19.6)	13.8 (11.0-17.2)	12.6 (10.6-14.9)	8.3 (6.7-10.3)	7.5 (6.1-9.1)	6.3 (4.8-8.2)	4.8 (3.6-6.4)	2.9 (1.8-4.8)
Methamphetamine (incl. crystal meth)	2.7 (2.1-3.5)	4.2 (3.5-5.1)	3.8 (2.5-5.5)	6.2 (3.3-11.2)	4.1 (3.2-5.1)	4.1 (3.0-5.6)	3.2 (2.5-4.2)	4.6 (2.9-7.4)	4.1 (2.7-6.3)	6.9 (4.6-10.3)	4.8 (3.6-6.4)	5.8 (3.5-9.6)	3.4 (2.2-5.3)	5.7 (4.4-7.3)	3.4 (2.5-4.7)	2.6 (1.8-3.5)	1.7 (1.2-2.6)	† (0.4-1.4)	0.7 (0.4-1.4)
Cocaine	4.0 (3.2-5.0)	5.9 (4.8-7.2)	5.7 (4.6-7.0)	4.8 (3.4-6.8)	4.6 (3.5-6.1)	4.0 (2.6-6.0)	3.1 (2.1-4.6)	2.2 (1.5-3.1)	1.5 (0.8-2.8)	2.9 (2.3-3.7)	3.3 (2.9-3.8)	4.2 (3.0-5.7)	4.8 (3.5-6.6)	5.9 (4.8-7.2)	5.4 (4.4-6.8)	4.0 (3.2-5.1)	2.4 (1.8-3.2)	2.9 (2.0-4.1)	1.8 (1.2-2.6)
Crack	—	—	—	—	—	1.4 (0.8-2.5)	1.4 (0.7-2.5)	1.2 (0.6-2.3)	1.0 (0.5-2.0)	2.2 (1.7-2.8)	2.8 (2.1-3.7)	3.3 (2.2-4.8)	3.2 (2.3-4.4)	3.4 (2.5-4.5)	2.4 (1.8-3.1)	1.6 (1.1-2.3)	1.3 (0.8-2.1)	0.8 (0.4-1.5)	0.9 (0.5-1.7)
Heroin	2.2 (1.6-2.9)	2.7 (2.0-3.6)	1.9 (1.3-2.9)	2.1 (1.4-3.1)	1.7 (1.2-2.4)	1.4 (0.8-2.7)	1.4 (0.8-2.3)	1.3 (0.8-2.0)	1.2 (0.7-1.9)	2.4 (1.6-3.5)	1.9 (1.5-2.4)	2.2 (1.5-3.2)	1.5 (0.9-2.4)	1.4 (1.0-2.0)	1.1 (0.7-1.6)	1.4 (0.9-2.1)	0.9 (0.6-1.5)	† (0.4-1.5)	† (0.4-1.5)
Ecstasy (MDMA)	—	—	—	—	—	—	—	† (1.4-4.4)	† (1.4-4.4)	2.5 (2.3-7.5)	4.2 (4.0-8.4)	5.8 (6.5-10.2)	8.2 (4.2-6.3)	5.2 (4.4-7.2)	5.6 (3.4-5.8)	4.5 (2.7-4.7)	3.5 (3.8-6.9)	5.1 (3.8-6.9)	2.0 (1.2-3.2)
Tranquillizers (NM)	6.1 (5.0-7.4)	7.3 (6.2-8.7)	6.4 (5.3-7.7)	6.8 (5.1-9.1)	4.1 (3.1-5.3)	3.8 (2.6-5.6)	3.0 (2.5-3.6)	2.2 (1.6-3.0)	1.1 (0.6-2.3)	2.0 (1.2-3.2)	2.3 (1.8-3.0)	2.4 (1.6-3.5)	2.2 (1.3-3.7)	3.0 (2.3-3.9)	2.4 (1.7-3.2)	2.2 (1.6-3.0)	1.5 (1.1-2.0)	2.0 (1.1-3.5)	1.7 (1.2-2.4)
Steroids (lifetime)	—	—	—	—	—	—	1.5 (1.0-2.4)	1.9 (1.5-2.6)	1.9 (1.2-2.9)	1.5 (1.0-2.1)	1.5 (0.9-2.4)	3.8 (2.6-5.5)	4.0 (2.7-5.8)	3.1 (2.2-4.3)	2.3 (1.6-3.4)	1.2 (0.7-2.1)	1.2 (0.6-2.4)	1.9 (1.0-3.4)	† (0.4-1.5)
Any Drug Incl. Cannabis	32.3 (28.9-35.8)	40.9 (36.7-45.1)	36.2 (32.5-40.0)	34.7 (31.0-38.7)	28.8 (23.8-34.3)	21.3 (16.5-27.0)	20.3 (16.8-24.3)	20.0 (16.8-23.7)	20.6 (16.7-25.1)	34.8 (29.4-40.7)	36.6 (34.1-39.2)	38.2 (33.7-42.9)	38.3 (32.9-44.1)	38.1 (34.9-41.4)	32.9 (30.2-35.7)	32.1 (28.7-35.8)	29.6 (26.8-32.6)	25.4 (23.3-27.7)	25.9 (22.7-29.4)
Any Drug Excl. Cannabis	14.4 (12.6-16.4)	19.8 (17.4-22.3)	18.0 (15.9-20.4)	19.8 (16.9-23.1)	15.2 (12.4-18.5)	12.6 (9.5-16.4)	12.1 (9.8-14.8)	12.3 (9.6-15.7)	13.2 (10.2-16.9)	20.8 (15.8-26.9)	20.3 (17.7-23.1)	21.5 (17.4-26.2)	19.8 (17.0-23.1)	16.4 (14.2-18.8)	13.4 (11.5-15.5)	11.4 (9.6-13.5)	9.4 (7.8-11.4)	9.1 (7.3-11.2)	6.3 (4.8-8.2)

Notes: (1) entries in brackets are 95% confidence intervals; (2) NM = nonmedical use, without a doctor's prescription; (3) † estimate suppressed (< 0.5%); (4) the "Any Drug" indices used for trend purposes are restricted to use of any one of the following drugs: cannabis, LSD, mushrooms/mescaline, methamphetamine, heroin, cocaine, crack (except for years prior to 1987), ecstasy (except for years prior to 1991), tranquilizers/sedatives (NM).

Source: OSDUHS, Centre for Addiction & Mental Health

Table A5: Significant Subgroup Differences in Past Year Drug Use, 2013 OSDUHS

	Cigarettes	Smokeless Tobacco	Waterpipe	Alcohol	Binge Drinking	Alcohol Mixed with an Energy Drink	Cannabis	Cannabis & Alcohol	Synthetic Cannabis	Inhalants	Salvia Divinorum	Mushrooms/Mesc.	Methamphetamine	Ecstasy	OxyContin (NM)	Opioid Pain Relievers (NM)	ADHD Drug (NM)	OTC Cough/Cold Medication	High-Caffeine Energy Drinks	Any NM Prescription Drug Use	Any Drug Use Including Cannabis
Sex Effect	ns	***	**	ns	ns	ns	**	ns	ns	ns	**	***	**	ns	ns	ns	**	*	***	ns	ns
		M ↑	M ↑				M ↑				M ↑	M ↑	M ↑				M ↑	M ↑	M ↑		
Grade Effect	***	***	***	***	***	***	***	***	***	**	***	**	*	**	**	**	*	ns	**	**	***
(compared with previous grade)	8 ↑ 7	8 ↑ 7	8 ↑ 7	8 ↑ 7	8 ↑ 7	8 ↑ 7	8 ↑ 7	8 ↑ 7				--	--	--					8 ↑ 7	--	--
		9 ↑ 8		9 ↑ 8	9 ↑ 8		9 ↑ 8			9 ↓ 8											
	10 ↑ 9		10 ↑ 9	10 ↑ 9	10 ↑ 9	10 ↑ 9	10 ↑ 9	10 ↑ 9	10 ↑ 9					10 ↑ 9							10 ↑ 9
	11 ↑ 10		11 ↑ 10	11 ↑ 10	11 ↑ 10		11 ↑ 10	11 ↑ 10													
				12 ↑ 11	12 ↑ 11	12 ↑ 11							12 ↑ 11	12 ↑ 11		12 ↑ 11			12 ↑ 11	12 ↑ 11	12 ↑ 11
Region Effect	ns	ns	ns	***	***	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	***	ns	ns	ns	***	ns
(region compared with Ontario)				T ↓	T ↓											T ↑				T ↑	
				N ↑	N ↑											N ↓				N ↓	
																W ↑				W ↑	

Notes: (1) overall tests of effect are based on a univariate chi-square statistic, *p<.05, **p<.01, ***p<.001; (2) subgroup comparisons are based on *adjusted logistic regressions*; (3) -- indicates question not asked of grades 7 and 8 students; (4) ns=non-significant; (5) binge drinking refers to drinking five or more alcoholic drinks on one occasion at least once in the past month; (6) NM=nonmedical use, without one's own doctor's prescription; (7) past year use of LSD, jimson weed, cocaine, crack, heroin, ketamine, methoxetamine, BZP pills, mephedrone, tranquilizers/sedatives (NM), and modafinil (NM) showed no significant differences according to sex, grade, or region and therefore are not presented.

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