Drug Use Among Ontario Students 1977-2011

OSDUHS Highlights

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Ontario Student Drug Use and Health Survey

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No. 33

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A Pan American Health Organization / World Health Organization Collaborating Centre
Fully affiliated with the University of Toronto

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We also owe a debt of gratitude to a pioneer. Indeed, we would not be in the enviable position of having such rich historical data without the work and foresight of Reginald G. Smart.

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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, and risk behaviours, as well as identifying risk and protective factors. The OSDUHS, now spanning over 34 years, is the longest ongoing study of a youthful population in Canada, and one of the longest in the world.

In this Highlights Report, we summarize the extent and patterns of tobacco, alcohol, and other drug use among Ontario students in grades 7 through 12. The findings are based on the 18th cycle of the OSDUHS. 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 (1999–2011)**, and the second is used to assess **long-term trends (1977–2011)**.

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

Some mains objectives of the OSDUHS are to provide timely data regarding:

- alcohol and other drug use by students in grades 7–12, and trends in use since 1977;
- the nature of, and trends in, harms related to alcohol and drug use; and
- attitudes and beliefs about alcohol and other drug use.

The 2011 OSDUHS included **new or re-introduced material**[1] addressing:

- use of smokeless tobacco;
- use of Gravol to "get high";
- use of newly-emerging drugs: doda, mephedrone, and BZP pills;
- use of high-energy caffeine drinks;
- source of alcohol;
- driving a snowmobile, motor boat, Sea-Doo, or all-terrain vehicle after drinking alcohol;
- driving after using a prescription opioid drug;
- perceived availability of prescription opioid drugs without visiting a doctor; and
- recall of alcohol/drug prevention activities at school.

A more comprehensive analysis of 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, 1977-2011: Detailed OSDUHS Findings* (available in PDF at www.camh.net/research/osdus.html). The OSDUHS also covers an array of mental and physical health topics, and these results will be published in the companion mental health and well-being report in the summer of 2012.

History of the OSDUHS

The OSDUHS is the longest ongoing survey of elementary and secondary school students in Canada. In **1967**, several Toronto school boards approached the former Addiction Research Foundation (now CAMH) for assistance in determining the extent of drug use among their students. Under the direction of Dr. Reginald Smart, four biennial surveys from 1968–1974 monitored drug use among Toronto students in grades 7, 9, 11 and 13.

In **1977**, the study extended to students across Ontario. In **1999**, the OSDUHS was again expanded to include students in grades 7 through to 13 (OAC). In **2003**, 13th-graders were removed from the sampling plan (because this grade was eliminated by the province of Ontario), and the number of classes surveyed in secondary schools was increased.

During the past three decades, the OSDUHS has surveyed thousands of students and, to date, almost 100,000 students in Ontario have participated. The study's history is underscored by noting that most of the 12th-graders interviewed in 1977 are now in their 50s. Since its inception, the OSDUHS has not only produced numerous scientific publications on an array of adolescent health issues, but has evolved into one of the most important school surveys globally.

All OSDUHS surveys since 1977 were institutionally funded with support from the Ontario Ministry of Health and Long-Term Care.

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

Method

Sampling Design

The target population is 7th- to 12th-graders enrolled in publicly-funded schools in Ontario. It excludes those enrolled in private schools or home-schooled, those institutionalized for correctional or health reasons, those schooled on native reserves, military bases, or in the remote northern region of Ontario. These excluded groups represent a small proportion of the Ontario adolescent population (about 7%). The 2011 OSDUHS employed a stratified (region by school level), two-stage (school, class) cluster sample design, and over-sampled schools in northern Ontario and in five public health regions. Since 1981, this survey has been administered in schools by staff at the Institute for Social Research (ISR), York University.

School Selection (Stage 1)

The 2011 OSDUHS school sample selection occurred as follows:

a) Schools were drawn from Ontario's Ministry of Education and Training's 2007/2008 enrolment database (most recently available at the time), and were stratified according to the nine design regions.

b) Within each of the nine regional strata, a random selection of schools was chosen, separately for elementary/middle schools and secondary schools. Schools were selected with probability proportional to enrolment size (meaning that larger schools had a greater probability of being selected).

c) If a selected school could not participate, or if it had closed, a replacement school from the same stratum was randomly selected.

Class Selection (Stage 2)

Within each school, one class per grade was randomly selected 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 was unable to participate, a replacement class from the same school and same grade was randomly re-selected, time permitting. Classes excluded as 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 were eligible to participate.

Procedures

The 2011 OSDUHS protocol was approved by the Research Ethics Boards at CAMH, and York University, as well as 27 school board research review committees.

All participating schools were provided with copies of the active parental consent form. 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). Only those students who returned a signed consent form could participate. The survey was administered by trained ISR field staff in the classrooms between October 2010 and June 2011. Participation was voluntary and anonymous. All students recorded their responses directly on the questionnaires, and were instructed not to write their names anywhere on the form. The average completion time was 30 minutes.

Sample

The final sample size in 2011 was 9,288 students in grades 7–12 (62% of eligible students in participating schools) from 40 school boards, 181 schools, and 581 classes. This sample represents about 1,009,900 Ontario students in grades 7–12. All survey estimates were weighted, and variance and statistical tests were corrected for the sampling design.

Survey Design Regions

This report describes regional differences according to the following four regions: 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 2011

Past Year Drug Use

By far, the most commonly used drug is alcohol, with 54.9% of students reporting use (excluding just a sip to try it) during the 12 months before the survey. Cannabis is the most common illicit drug, with 22.0% reporting past year use. The non-medical (NM) use of prescription opioid pain relievers, such as codeine, Percocet, Percodan, Demerol, or Tylenol #3 ranks after cannabis at 14.0%. Cigarettes rank next, with 8.7% reporting smoking cigarettes during the past year.

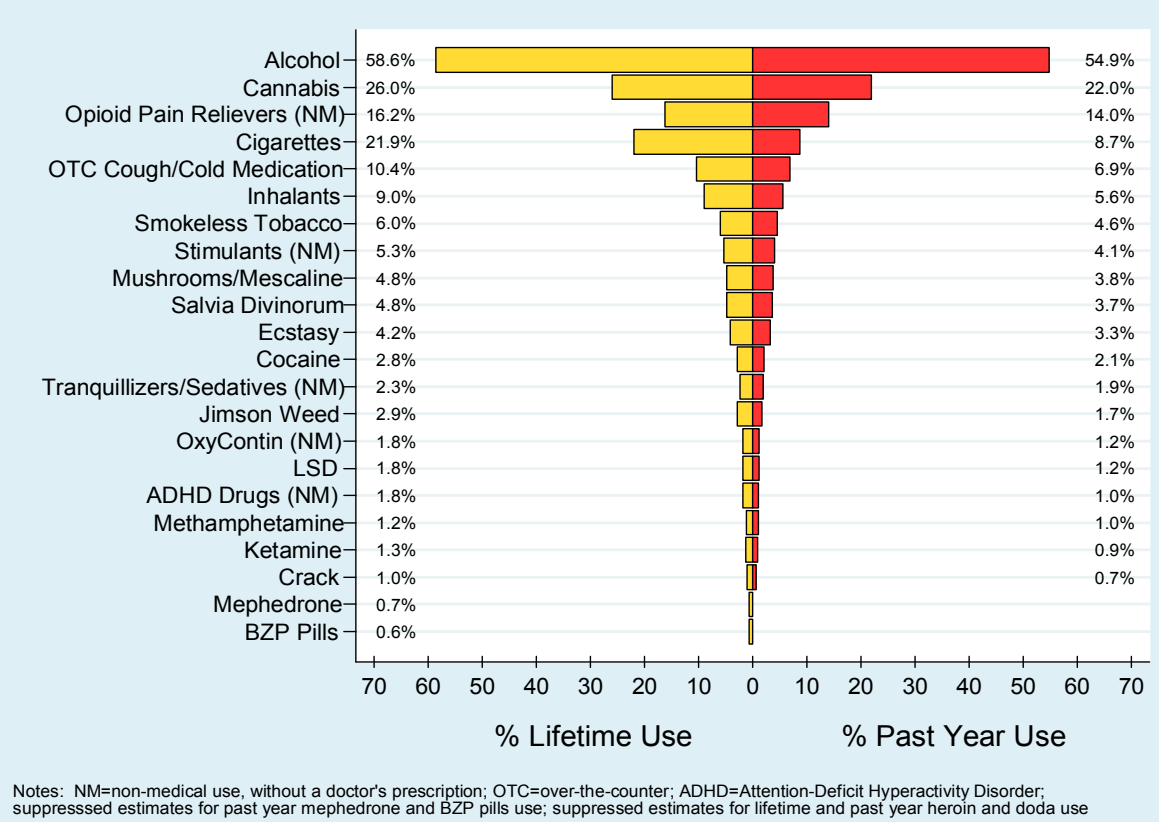
Past year use of inhalants, psilocybin ("mushrooms"), stimulants (NM), and over-the-counter cough and cold medication with dextromethorphan (e.g., Robitussin DM) is reported by about 4% to 7% of students. Use of certain drugs, namely heroin, doda (an opiate), BZP pills (benzylpiperazine), and mephedrone, is extremely rare, as their past year prevalence estimates fall below 0.5%.

About one-in-six (16.7%) students report using at least one prescription drug non-medically (without a doctor's prescription) during the past year. Over one-third (37.4%) of students report using any drug, other than tobacco or alcohol, during the past year.

Lifetime Drug Use

Estimates for lifetime drug use show that alcohol, cannabis, and tobacco are the three most common drugs students have ever tried. About 59% of students have ever consumed alcohol (more than just a sip), over one-quarter (26%) have ever used cannabis, and 22% have smoked cigarettes. About one-sixth (16.2%) have used prescription opioid pain relievers (e.g., codeine, Percocet, Percodan, Demerol, Tylenol #3) non-medically in their lifetime. About one-in-ten have used over-the-counter cough or cold medication recreationally in their lifetime. The remaining drugs were used by less than 10% of students in their lifetime.

Figure 1.
Percentage Reporting Lifetime and Past Year Drug Use, 2011 OSDUHS (Grades 7–12)



Notes: NM=non-medical use, without a doctor's prescription; OTC=over-the-counter; ADHD=Attention-Deficit Hyperactivity Disorder; suppresssed estimates for past year mephedrone and BZP pills use; suppressed estimates for lifetime and past year heroin and doda use

Table 1. Percentage Reporting Past Year Drug Use by Sex, Grade, and Region, 2011 OSDUHS (Grades 7–12)

	Total	Est. #	Males	Females		G7	G8	G9	G10	G11	G12		Toronto	North	West	East	
Alcohol	**54.9**	**551,400**	54.6	55.1		17.4	26.4	50.5	59.6	73.5	78.4	*	47.2	59.5	55.7	56.8	*
High-Caffeine Energy Drinks	**49.5**	**481,700**	52.2	46.5		34.1	41.8	48.6	49.0	56.2	58.5	*	37.9	53.7	54.9	48.0	*
Binge Drinking	**22.3**	**223,500**	22.7	21.8		1.1	4.1	13.7	24.4	35.3	39.7	*	15.4	30.1	21.8	25.0	*
Cannabis	**22.0**	**221,900**	23.0	21.0		2.4	5.9	11.9	25.5	36.8	36.4	*	18.6	29.8	20.8	24.2	*
Opioid Pain Relievers (NM)	**14.0**	**140,100**	12.9	15.2		8.5	10.9	13.0	14.9	18.0	16.0	*	12.8	13.2	15.2	13.1	
Cigarettes	**8.7**	**88,000**	9.3	8.2		s	2.8	3.7	10.3	14.5	14.4	*	8.9	15.6	7.9	8.8	*
OTC Cough/Cold Medication	**6.9**	**68,600**	8.0	5.7	*	3.1	7.5	4.5	8.9	11.7	5.5	*	8.0	3.8	7.9	5.5	
Inhalants (Glue or Solvents)	**5.6**	**55,300**	5.3	5.9		12.2	9.2	4.5	3.7	3.6	s	*	6.8	3.4	6.5	4.2	
Smokeless Tobacco	**4.6**	**46,500**	7.5	1.6	*	s	1.3	1.4	7.8	7.2	6.9	*	4.3	6.2	3.6	6.0	*
Stimulants (NM)	**4.1**	**41,000**	3.0	5.3	*	s	2.5	3.3	4.0	7.7	4.5	*	2.8	5.3	4.0	4.6	
Mushrooms (Psilocybin) or Mescaline	**3.8**	**38,500**	5.0	2.6	*	s	1.1	1.6	3.5	8.0	6.3	*	2.7	6.4	4.3	3.4	
Salvia Divinorum	**3.7**	**36,600**	5.1	2.1	*	s	s	3.1	5.0	5.2	6.2	*	S	4.9	3.0	5.0	
Ecstasy	**3.3**	**33,400**	3.5	3.2		s	s	s	2.7	7.9	4.6	*	2.3	4.3	3.5	3.4	
Cocaine	**2.1**	**20,700**	2.5	1.6		s	s	s	s	4.9	2.5	*	1.3	4.1	2.5	1.6	*
Tranquillizers/Sedatives (NM)	**1.9**	**19,400**	1.8	2.1		s	s	0.7	s	3.2	2.3	*	1.5	1.4	2.3	1.8	
Jimson Weed	**1.7**	**17,200**	2.2	1.2	*	s	s	s	2.8	2.8	1.2		1.4	3.1	s	1.9	
OxyContin (NM)	**1.2**	**12,500**	1.5	1.0		s	s	s	s	2.9	1.6	*	s	1.4	1.1	1.7	
LSD	**1.2**	**12,300**	1.8	0.6	*	s	s	s	1.1	2.8	1.1	*	1.3	1.8	s	1.3	
Methamphetamine (incl. Crystal Meth.)	**1.0**	**9,800**	1.2	0.8		s	s	s	s	s	s		s	1.3	s	0.7	
ADHD Drugs (NM)	**1.0**	**9,700**	1.2	0.7		s	s	s	s	s	s		s	1.3	s	1.4	
Ketamine	**0.9**	**9,100**	1.4	s	*	s	s	s	s	s	s		s	s	s	0.9	
Crack	**0.7**	**6,900**	0.9	s		s	s	s	s	s	s		s	s	s	0.7	
Any NM Use of a Prescription Drug	**16.7**	**168,800**	15.1	18.5	*	9.6	12.5	15.0	18.0	23.0	18.8	*	14.3	15.8	18.3	16.0	
Any Illicit Drug Use, incl. NM Prescr. Drug	**37.4**	**372,200**	37.7	37.0		21.3	23.2	30.7	43.5	51.4	45.6	*	34.5	37.8	38.9	36.8	

Notes: estimates for heroin, doda, BZP pills, mephedrone, and over-the-counter Gravol were suppressed; the estimated number is derived using survey weights and is based on a population of approximately 1,009,900 students in grades 7–12; binge drinking (5+ drinks on one occasion) refers to the past 4 weeks; NM=non-medical use, without a doctor's prescription; OTC=over-the-counter drug used for non-medical purposes or to "get high"; "Any NM Use of a Prescription Drug" refers to non-medical use of any one of the following classes of prescription drugs: opioids, ADHD drugs, other stimulants, or tranquillizers/sedatives; "Any Illicit Drug Use, incl. NM Prescription Drug" refers to use of any one of 22 drugs (excludes alcohol, tobacco, and high-caffeine energy drinks); s=estimate suppressed due to unreliability; * indicates a statistically significant sex difference, or grade differences (p<.05), *not* controlling for other factors.

Source: OSDUHS, Centre for Addiction & Mental Health

Drug Use in 2011 versus 2009 (Grades 7–12)

Among the total sample of students, no drug showed an increase in use between the previous survey in 2009 and the 2011 survey. Five drug use measures showed significant decreases between 2009 and 2011:

- cannabis (from 25.6% to 22.0%)
- cigarettes (from 11.7% to 8.7%)
- opioid pain relievers (NM) (from 17.8% to 14.0%)
- any non-medical prescription drug use (from 20.3% to 16.7%)
- any use of at least one of 10 illicit drugs (including cannabis) measured over time (from 28.0% to 24.8%).

Overview of 1999–2011 Trends (Grades 7–12)

Among the total sample of students, there have been many significant changes in past year drug use between 1999 and 2011, all of which have been decreases:

- alcohol: from 66.0% to 54.9%
- binge drinking: from 27.6% to 22.3%
- cannabis: from 28.0% to 22.0%
- opioid pain rel. (NM): from 20.6% (2007) to 14.0%
- cigarettes: from 28.4% to 8.7%
- inhalants: from 8.9% to 5.6%
- stimulants (NM): from 7.3% to 4.1%
- mushrooms/mesc.: from 12.8% to 3.8%
- ecstasy: from 6.0% (2001) to 3.3%
- cocaine: from 3.4% to 2.1%
- LSD: from 6.8% to 1.2%
- methamphetamine: from 5.1% to 1.0%
- ketamine: from 2.2% (2003) to 0.9%
- crack: from 2.5% to 0.7%
- heroin: from 1.9% to <1%.

Any use of at least one of 10 illicit drugs (including cannabis) measured over time, significantly decreased between 1999 and 2011 (from 31.7% to 24.8%).

A similar measure to that above, but excluding cannabis, also significantly decreased between 1999 and 2011 (from 20.0% to 9.9%).

Subgroup Changes, 1999-2011

With the exception of non-medical OxyContin use (which is higher in 2011 compared with the 2005 estimate among Eastern Ontario students), the subgroup changes within the period from 1999 to 2011 show decreases in use.

- Sex: Relative to the previous survey in 2009, use of cigarettes, alcohol, and cannabis among males has significantly declined in 2011. Between 2009 and 2011, females show a significant decline in their use of LSD and in their use of non-medical use of prescription opioid drugs. Both sexes show many decreases in drug use in 2011 compared with their respective 1999 estimates (see Table A3).

- Grade: All grades show decreases in drug use during the period between 1999 and 2011 (see Table A3).

- Region: Each of the four regions (Toronto, Northern Ontario, Western Ontario, Eastern Ontario) show many decreases in drug use during the period between 1999 and 2011 (see Table A3).

Overview of Long-Term Trends, 1977–2011 (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. Trends in past year use of drugs monitored since 1977 show a common pattern: 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 trends can be further characterized into the following five patterns:

- The first pattern (Figure 2) displays the past year use of cigarettes and LSD. Prevalence for these drugs has now reached, or very recently reached, an all-time low.

- The second pattern (Figure 3) shows that prevalence in 2011 is significantly lower compared with the peaks found in the late 1970s and late 1990s (and 2003 for tranquillizers/ sedatives), and current use is similar to the lows evident in the early 1990s. This pattern is evident for alcohol, binge drinking, cocaine, methamphetamine, stimulants (NM), and tranquillizers/sedatives (NM).

- The third pattern (Figure 4) is similar to the second pattern, with one important difference: current use is significantly higher compared with the low levels of use evident in the early 1990s. This is evident for cannabis and inhalants.

- The fourth pattern (Figure 5) shows a peak in prevalence during the late 1990s or early 2000s, a decline during the 2000s, and has stabilized in recent years. This is evident for mushrooms/mescaline, ecstasy, and crack.

- The fifth pattern (not shown) applies to heroin use, which has been very low and stable for decades.

Figure 2. Pattern 1: Long-Term Drug Use Trends, 1977-2011 OSDUHS

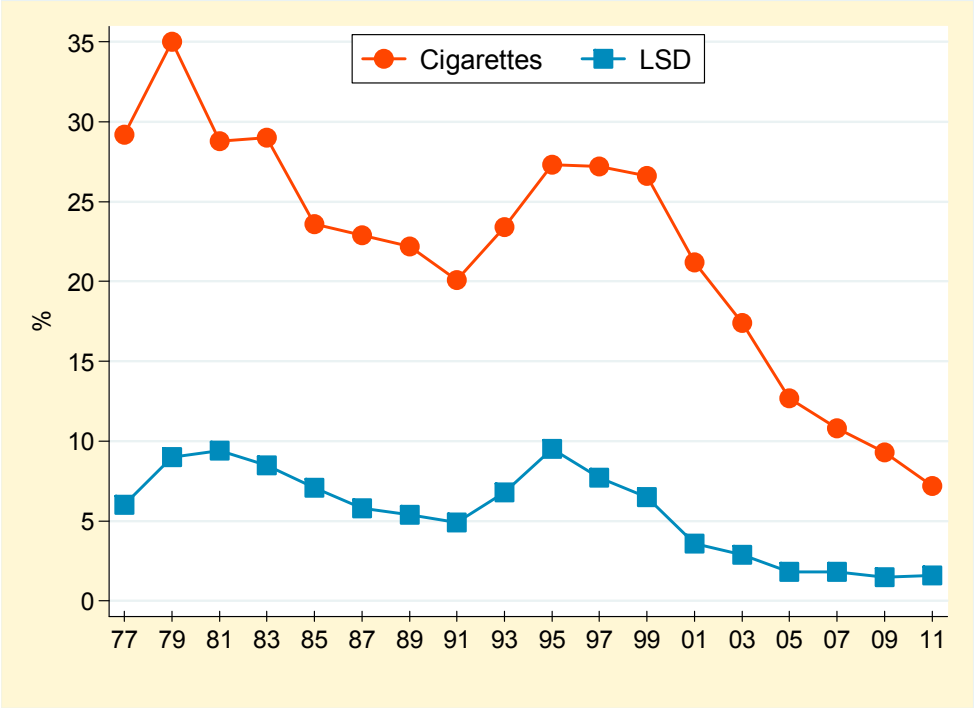


Figure 3. Pattern 2: Long-Term Drug Use Trends, 1977-2011 OSDUHS

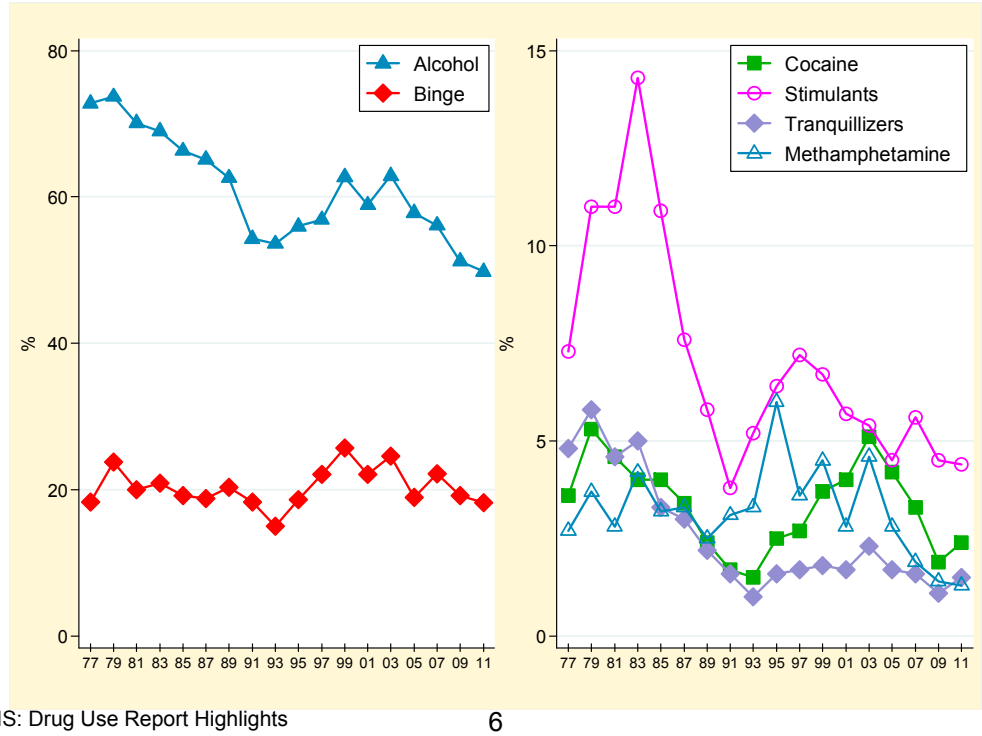


Figure 4. Pattern 3: Long-Term Drug Use Trends, 1977-2011 OSDUHS

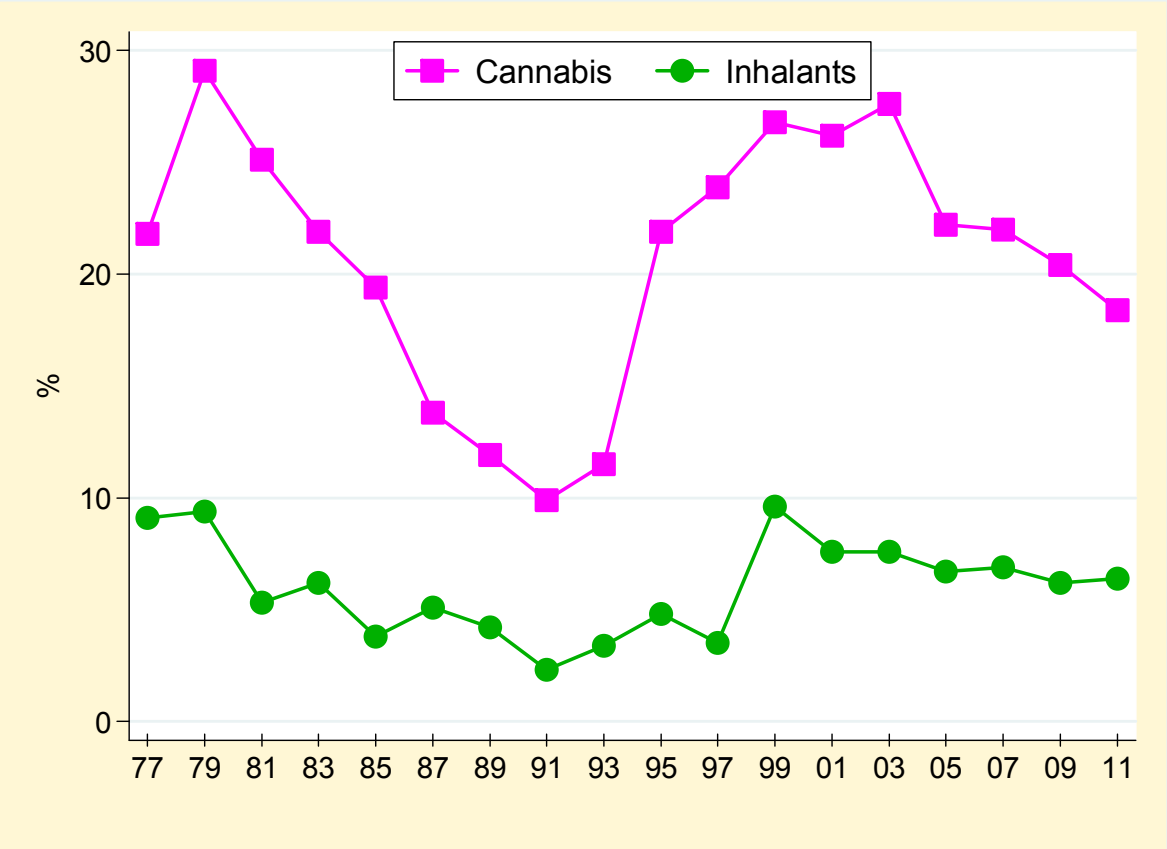
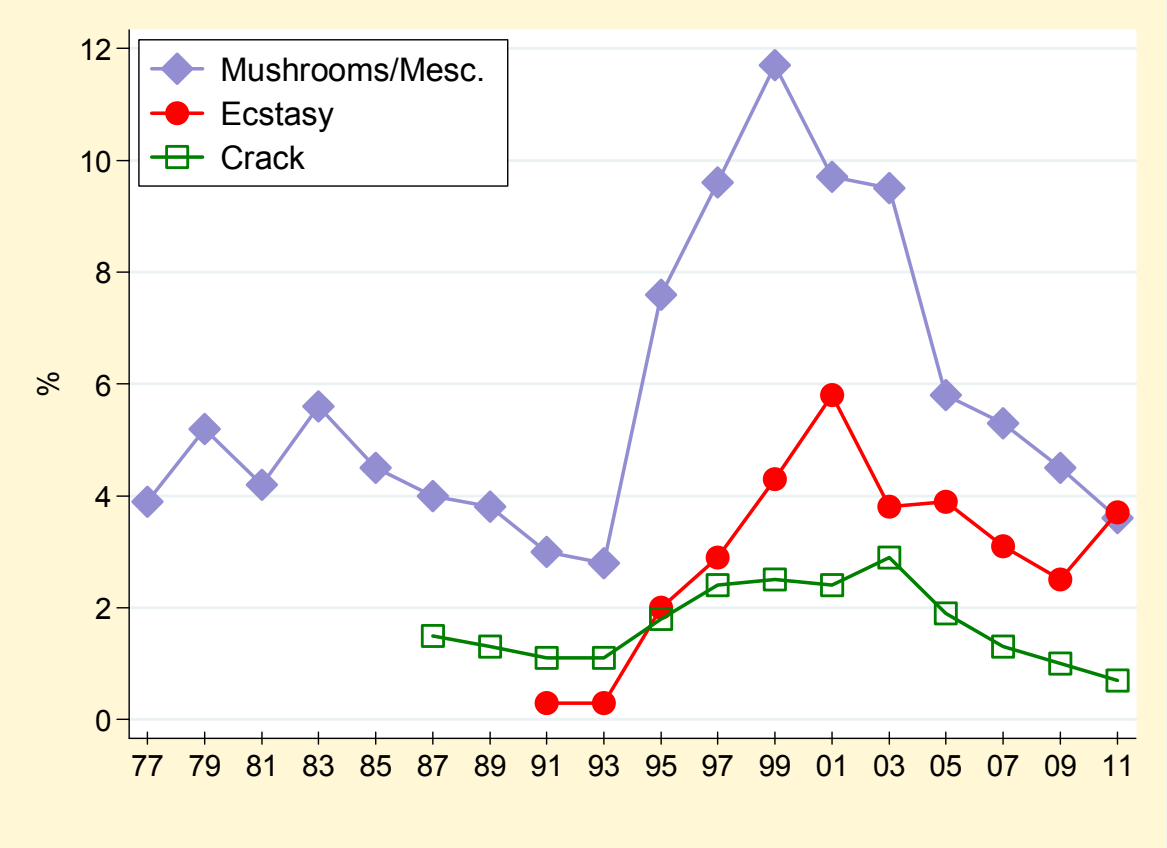


Figure 5. Pattern 4: Long-Term Drug Use Trends, 1977-2011 OSDUHS



Tobacco

Past Year Cigarette Smoking

- About 9% (95% CI: 8%-10%)[2] of students report smoking in the past year. This represents about 88,000 students in grades 7 through 12 across Ontario.
- Males (9%) and females (8%) are equally likely to smoke cigarettes.
- Smoking significantly increases with grade, from less than 3% of 7th- and 8th-graders up to about 14% of 11th- and 12th-graders.
- Smoking significantly differs by region, with students in the North region (16%) most likely to smoke compared with students in the other three regions (about 7% to 8%).

Daily Smoking

- About 4% (95% CI: 3%–5%) of students smoke one or more cigarettes on a daily basis. This percentage represents about 38,900 students in Ontario.
- Daily smoking significantly differs between males (5%) and females (3%).
- Daily smoking is significantly related to grade level, with the highest proportions among students in grades 10 through 12 (at about 6%).
- There are significant differences among the regions, with students in the North (8%) most likely to smoke daily compared with students in the other three regions (about 3% to 4%).

Smokeless Tobacco

For the first time in 2011, students were asked about their use of smokeless tobacco during the past 12 months. Smokeless tobacco, also known as chewing tobacco or snuff, is tobacco that is used orally and is not burned.

- Among all students, 5% (95% CI: 4%-6%) report using smokeless tobacco in the past year. This estimate represents about 46,500 students in Ontario.
- Males (8%) are significantly more likely than females (2%) to use smokeless tobacco.
- There is significant grade variation, showing students in grades 10–12 more likely to use than younger students (about 7% vs. 1%, respectively).
- There are significant regional differences, with students in the North and East regions (about 6%) most likely to use.

Contraband Cigarette Smoking

We asked students whether they had smoked any contraband cigarettes originating from native reserves during the 12 months preceding the survey. These cigarettes usually come in clear plastic bags, although some are professionally packaged with standard health warnings.

- Among all students, 4% (95% CI: 3%- 5%) report smoking contraband cigarettes during the past year. This percentage represents about 37,600 students in Ontario. Among past year smokers, 40% (95% CI: 30%-51%) report smoking contraband cigarettes.
- Males (4%) and females (4%) are equally likely to report smoking contraband cigarettes.
- There are significant grade differences, with reports of smoking contraband cigarettes highest among 11th-graders (8%).
- There are no statistically significant differences among the four regions.

[2] CI refers to the confidence interval around an estimate. 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.

Alcohol

Past Year Alcohol Use

- Overall, 55% (95% CI: 52%-58%) of students report drinking alcohol (more than just sips) during the 12 months before the survey. This represents about 551,400 students in grades 7 through 12 in Ontario.
- The prevalence of drinking does not significantly differ between males (55%) and females (55%).
- Drinking significantly increases with grade. Rates climb by ten or more percentage points with each grade level, between grades 7 and 11 (from 17% to 74%). The prevalence climbs again slightly in 12th-grade to 78%.
- Rates of drinking significantly differ by region. Toronto students (47%) are the least likely to drink, while Northern students are the most likely (60%). Students in the West (56%) and East (57%) regions fall in between.

Binge Drinking (Past Month)

- Overall, 22% (95% CI: 21%-24%) of students report binge drinking at least once during the 4 weeks before the survey. This percentage represents about 223,500 students in grades 7 through 12.
- Binge drinking does not significantly differ between males (23%) and females (22%).
- Binge drinking increases significantly with grade. It is lowest among 7th-graders (1%) and climbs to a high of 40% among 12th-graders.
- Toronto students (15%) are the least likely to report binge drinking, whereas Northern students (30%) are the most likely. Students in the West (22%) and East (25%) fall in between.

Drunkenness (Past Month)

- Overall, 20% (95% CI: 19%-21%) report becoming drunk at least once during the 4 weeks before the survey (about 200,100 students).
- Reported drunkenness is not significantly different between males and females (both at 20%).
- Drunkenness is lowest among 7th-graders (2%) and peaks in grade 12 (34%).
- Toronto students (13%) are the least likely to report becoming drunk in the past month, whereas Northern students (26%) are the most likely. Students in the West (19%) and East (23%) fall in between.

Hazardous or Harmful Drinking

The World Health Organization's "Alcohol Use Disorders Identification Test" (*AUDIT*) was used to detect hazardous or harmful drinking. 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).

- Overall, 18% (95% CI: 16%-20%) of students in grades 7 through 12 report drinking at a hazardous or harmful level. This represents about 175,600 students in Ontario.
- Males (18%) and females (18%) are equally likely to drink hazardously/harmfully.
- As grade increases, so does the likelihood of hazardous/harmful drinking, peaking in grades 11 and 12 at about 30%.
- Toronto students (13%) are the least likely to drink hazardously/harmfully, whereas Northern students (24%) are most likely. Students in the West (17%) and East (21%) fall in between.

Cannabis

Past Year Cannabis Use

- Overall, about one-quarter (22%; 95% CI: 21%-24%) of students report using cannabis at least once during the 12 months before the survey. This represents about 221,900 students in Ontario in grades 7 through 12.
- Males (23%) and females (21%) are equally likely to use cannabis.
- Cannabis use increases with each grade level, increasing from 2% among 7th-graders to about 36% among students in grades 11 and 12.
- There are significant regional differences, with students in Toronto (19%) least likely to use, whereas students in the North (30%) are most likely. Students in the West (21%) and East (24%) fall in between.

Past Month Cannabis Use

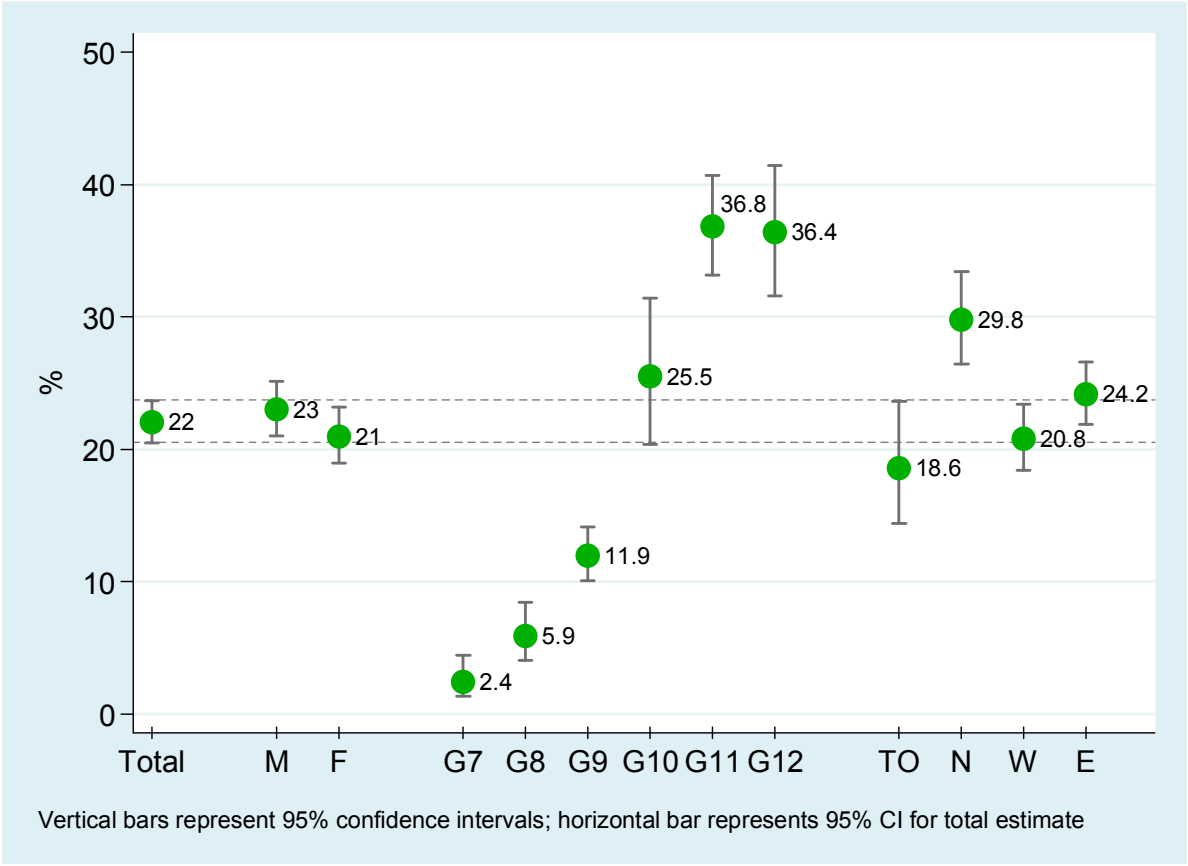
- During the 4 weeks before the survey, 13% (95% CI: 11%-16%) of students used cannabis. About 2% of students used cannabis on a daily basis – representing roughly 23,300 students in Ontario.

Cannabis Dependence

To estimate the percentage of students who may have a cannabis dependence problem (e.g., symptoms of loss of control and withdrawal), the OSDUHS included the *Severity of Dependence Scale* (SDS).

- About 2% (95% CI: 1%-3%) of all students in grades 7 through 12 report symptoms of cannabis dependence. Among only past year cannabis users, 10% may have a problem.

Figure 6. Past Year Cannabis Use by Sex, Grade, and Region, 2011 OSDUHS



Vertical bars represent 95% confidence intervals; horizontal bar represents 95% CI for total estimate

Non-Medical Use of Prescription Drugs and Over-the-Counter Medication

Past Year Non-Medical 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, 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 14% (95% CI: 13%-15%) of students report using a prescription opioid pain reliever non-medically during the year before the survey. This estimate represents about 140,100 students in grades 7 through 12.
- There is no significant difference in non-medical opioid use between males (13%) and females (15%).
- There is significant grade variation, with use increasing steadily with grade level, peaking among 11th-graders (18%).
- Use does not significantly differ by region.

Past Year Non-Medical 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% (95% CI: 0.7%-1.3%) of students report using an ADHD drug for non-medical purposes. This represents about 9,700 Ontario students.
- There are no significant differences in use according to sex, grade, or region.

Past Year Non-Medical Use of Other Stimulants

- The non-medical use of stimulants (e.g., diet pills) is reported by 4% (95% CI: 3%-5%) of students (representing about 41,000 students).
- Females (5%) are significantly more likely to use stimulants than males (3%).
- Stimulant use is significantly associated with grade, peaking in grade 11 at 8%.
- Use does not significantly differ by region.

Past Year Non-Medical Use of Over-the-Counter Cough/Cold Medication

- About 7% (95% CI: 6%-9%) of students report using over-the-counter cough/cold medication that contains the drug dextromethorphan (DXM) in order to "get high". This represents about 68,600 students in grades 7 to 12.
- Males (8%) are significantly more likely than females (6%) to use over-the-counter cough/cold medication to get high.
- There is significant grade variation, with use increasing from 3% among 7th-graders up to about 12% among 11th-graders, and then drops to 6% among 12th-graders.
- Use does not significantly differ by region.

Past Year Use of High-Caffeine Energy Drinks

For the first time in 2011, students were asked about their use of highly-caffeinated energy drinks (such as Red Bull, Rockstar, Full Throttle, Monster).

- About 50% (95% CI: 46%-53%) of students in grades 7 through 12 report drinking an energy drink at least once in the past year. This estimate represents about 481,700 students.
- Males (52%) and females (47%) are equally likely to consume energy drinks, and the likelihood of use increases as grade increases.
- Toronto students (38%) are the least likely to consume energy drinks, and students in the North (54%) and West (55%) are most likely.

Any Illicit Drug Use in the Past Year

Any Illicit Drug Use, including Non-Medical Prescription Drug Use

Here, we present a composite index which measures past year use of at least one of the following 22 drugs asked about in the 2011 survey: cannabis, inhalants, LSD, mushrooms/mescaline, cocaine, crack, methamphetamine, heroin, doda, ecstasy, ketamine, jimson weed, salvia divinorum, BZP pills, mephedrone, stimulants (NM), tranquillizers/sedatives (NM), OxyContin (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), over-the-counter cough/cold medication (to "get high"), and Gravol (to "get high"). Excluded from this index are tobacco, alcohol, and high-caffeine energy drinks.

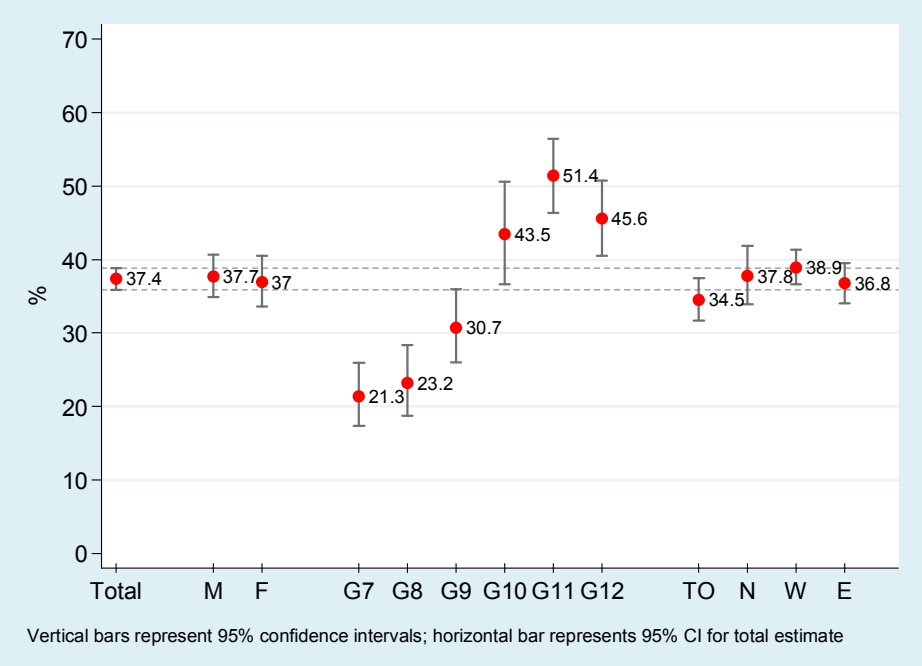
- Among the total sample, 37% (95% CI: 36%-39%) report using at least one illicit drug in the past year. This estimate represents about 372,200 Ontario students.
- Males (38%) and females (37%) are equally likely to report the use of at least one drug.
- Any illicit drug use significantly increases between 7th-grade (21%) and 11th-grade (51%), and drops slightly in 12th-grade (46%).
- There are no significant differences among the four regions.

Any Non-Medical Prescription Drug Use

Here, we look at the non-medical use of at least one of the following five prescription drugs or drug classes once or more often in the past year: OxyContin, other opioid pain relievers, ADHD drugs, other stimulants, tranquillizers/sedatives. (Non-medical use is defined as use without a doctor's prescription).

- Among the total sample, 17% (95% CI: 15%-18%) report using at least one prescription drug non-medically in the past year. This estimate represents about 168,800 Ontario students in grades 7 through 12.
- Females (19%) are more likely than males (15%) to report using at least one prescription drug non-medically.
- There is significant grade variation, with use increasing between 7th-grade (10%) and 11th-grade (23%), and then dropping slightly in 12th-grade (19%).
- There are no significant differences among the four regions.

Figure 7. Any Illicit Drug Use (including Non-Medical Prescription Drug Use) in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



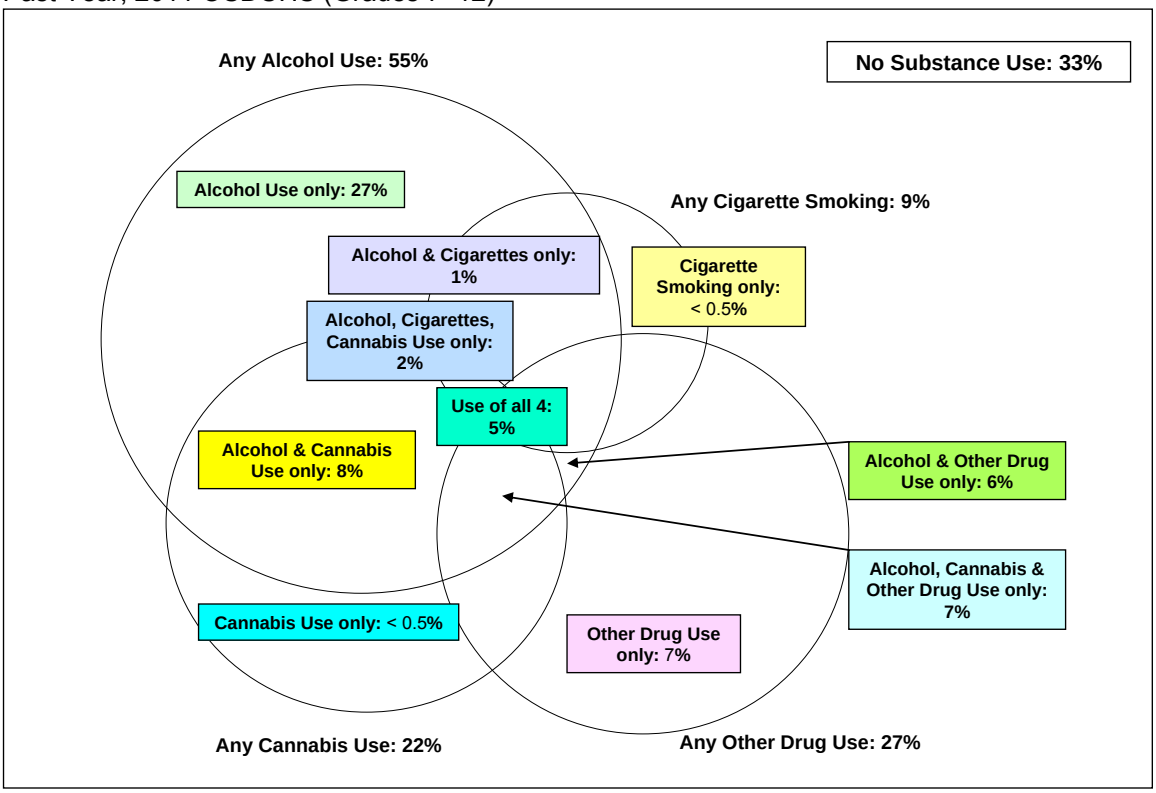
Multiple Substance Use: Cigarettes, Alcohol, Cannabis, and Other Drugs

- Figure 8 presents the overlap of past year use of all substances asked about in the 2011 survey (excluding energy drinks). As seen in the figure, most students use alcohol either exclusively, or in addition to other substances.
- Just over one-quarter (27%) of students use only alcohol and no other substance. About 8% of students use only alcohol and cannabis. About 7% use alcohol, cannabis, and another drug.
- Negligible proportions (below 0.5%) of students smoke cigarettes or use cannabis exclusively.
- Roughly 5% of students – an estimated 51,300 in Ontario – smoke cigarettes, use alcohol, cannabis, and *at least* one other drug.

No Substance Use in the Past Year

- One-third (33%) of students in grades 7 through 12 report using no substance at all during the past year – this includes alcohol and cigarettes (but excludes energy drinks).
- Males (32%) and females (33%) are equally likely to report no substance use.
- Past year abstinence significantly decreases with grade, from 57% of 7th-graders to 16% of 12th-graders.
- There are no significant differences among the four regions.

Figure 8. The Overlap of Cigarette Smoking, Alcohol, Cannabis, and Other Drug Use in the Past Year, 2011 OSDUHS (Grades 7–12)



Notes: (1) based on a random half sample of students (N=4,472); (2) "Other Drug Use" refers to use of at least one of 21 drugs: inhalants, LSD, mushrooms/mescaline, jimson weed, salvia divinorum, methamphetamine, cocaine, crack, heroin, doda, ecstasy, ketamine, BZP pills, mephedrone, stimulants (NM), tranquillizers/sedatives (NM), OxyContin (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), over-the-counter cough/cold medication, Gravol; (3) not all combinations are presented.

New Users and Early Initiation

New Users

- Among all students, 6% smoked cigarettes for the first time during the 12 months before the survey. This estimate represents about 61,200 students in Ontario. About 17% of students drank alcohol for the first time (representing about 169,100 students). Roughly 8% used cannabis (76,600 students), and 3% used another illicit drug for the first time (31,800 students).

Early Initiation Among 7th-Graders, 1981–2011

- There is a trend of decreasing early initiation of cigarette smoking, with fewer 7th-graders today reporting smoking at an early age. Less than 2% of 7th-graders in 2011 reported smoking their first cigarette by 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, 13% of 7th-graders in 2011 drank alcohol by 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. In 2011, the estimate is lower at 2%.

Average Age of Initiation for Smoking, Drinking, and Cannabis Use, 1981–2011

Here we present the average age of initiation for smoking, drinking, and cannabis use among grade 11 users (ages 16-17).

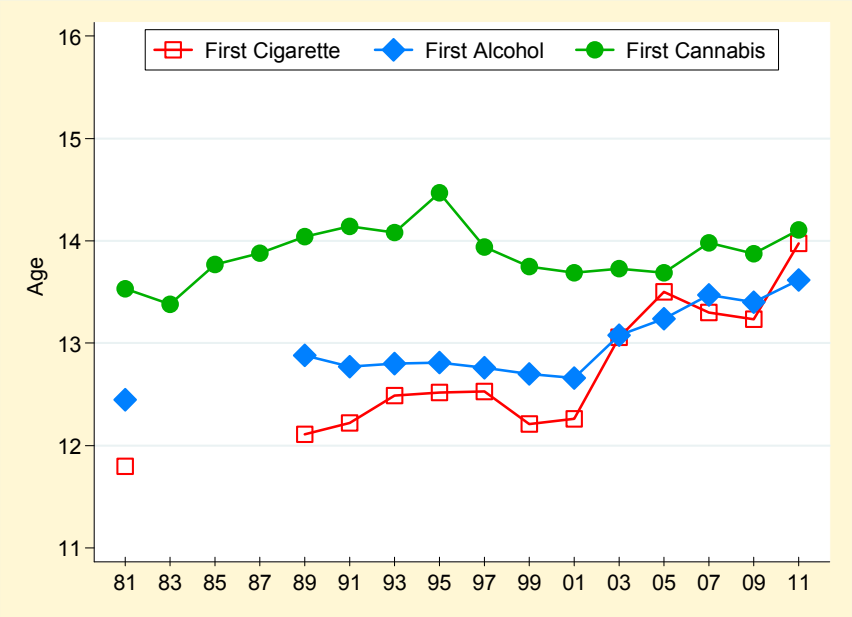
- In 2011, the average age of first use of cigarettes (smoking one whole cigarette) among grade 11 smokers was 14 years. The average age of first drink of alcohol among grade 11 drinkers was 14 years, and the average age of first drunkenness among 11th-grade drinkers was 14 years. The average age of first cannabis use among grade 11 users was 14 years.

- The average initiation age for smoking increased between 1981 and 1995, decreased slightly in the late 1990s, and has increased considerably over the past decade.

- The average initiation age for drinking was stable over the 1990s, and has increased over the past decade.

- The average age of initiation for cannabis use has not changed dramatically during the study period, hovering around 14 years of age. However, the current average age is somewhat higher than the estimates found decades ago in 1981 and 1983.

Figure 9. Mean Age of First Cigarette Among 11th-Grade Smokers, First Alcoholic Drink Among 11th-Grade Drinkers, and First Cannabis Use Among 11th-Grade Users, 1981–2011 OSDUHS



Consequences and Harms

Driving a Motor Vehicle after Drinking Alcohol

- In 2011, 7% (95% CI: 5%-10%) 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 one time during the past 12 months. This percentage represents about 21,500 adolescent drivers in grades 10 through 12.
- Male and female drivers are equally likely to report drinking and driving.
- There are no significant differences among the grades, or among the four regions.

Operating a Snowmobile, Motor Boat, Sea-Doo, or ATV after Drinking Alcohol

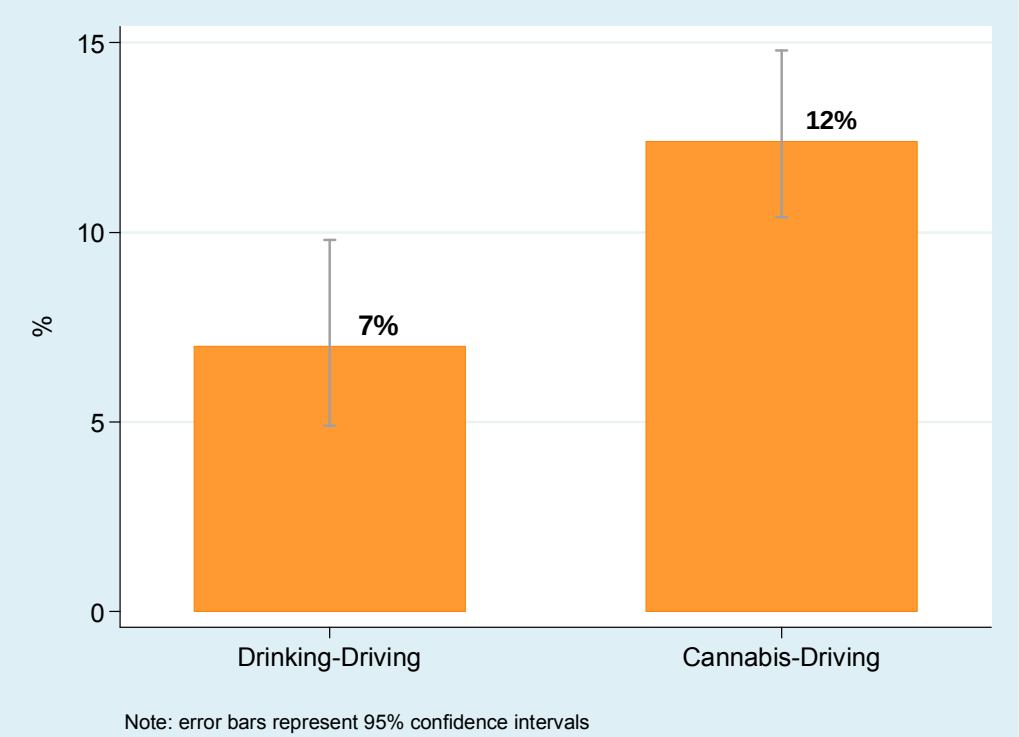
For the first time in 2011, students were asked if they drove a snowmobile, motor boat, Sea-Doo, or all terrain vehicle (ATV) after drinking alcohol. We present the results among students in grades 10 through 12 only.

- Among students in grades 10 through 12, 7% (95% CI: 5%-9%) report operating a snowmobile, motor boat, Sea-Doo, or an ATV within an hour of drinking two or more alcoholic drinks at least one time during the past 12 months. This estimate represents about 37,700 Ontario students in grades 10–12.
- There are no significant differences according to sex, grade, or region.

Driving a Motor Vehicle after Using Cannabis

- In 2011, 12% (95% CI: 10%-15%) of drivers in grades 10 through 12 with a G-Class licence report driving after using cannabis. This percentage represents about 38,300 adolescent drivers in Ontario.
- Male drivers are significantly more likely than female drivers to use cannabis and drive (15% vs. 9%, respectively).
- There are no significant differences among the grades, or among the four regions.

Figure 10. Percentage of 10th- to 12th-Grade Drivers Reporting Driving a Motor Vehicle after Drinking Alcohol and after Using Cannabis (at Least Once) in the Past Year, 2011 OSDUHS



Been a Passenger with a Driver Who Had Been Using Alcohol or Drugs

- The 2011 survey found that 24% (95% CI: 22%-26%) of students had been a passenger in a vehicle, at least once in the past year, with a driver who had been drinking. This percentage represents roughly 241,500 students in Ontario. About 16% (95% CI: 14%-17%) of students rode with a driver who had been using drugs at least once in the past year. This estimate represents 155,600 students in Ontario.
- Females (28%) are more likely than males (21%) to ride with a driver who had been drinking alcohol. No significant sex difference was found for riding with a driver who had been using drugs.
- Riding in a vehicle with an intoxicated driver (either by alcohol or drugs) increases significantly with grade level. For example, almost one-third of 12th-graders report these behaviours.
- There are no significant regional differences regarding riding with someone who was drinking alcohol. However, there were significant differences regarding riding with a driver who had been using drugs, with Toronto students (11%) least likely, and Northern students (21%) most likely, to report this behaviour.

Drug Use Problem

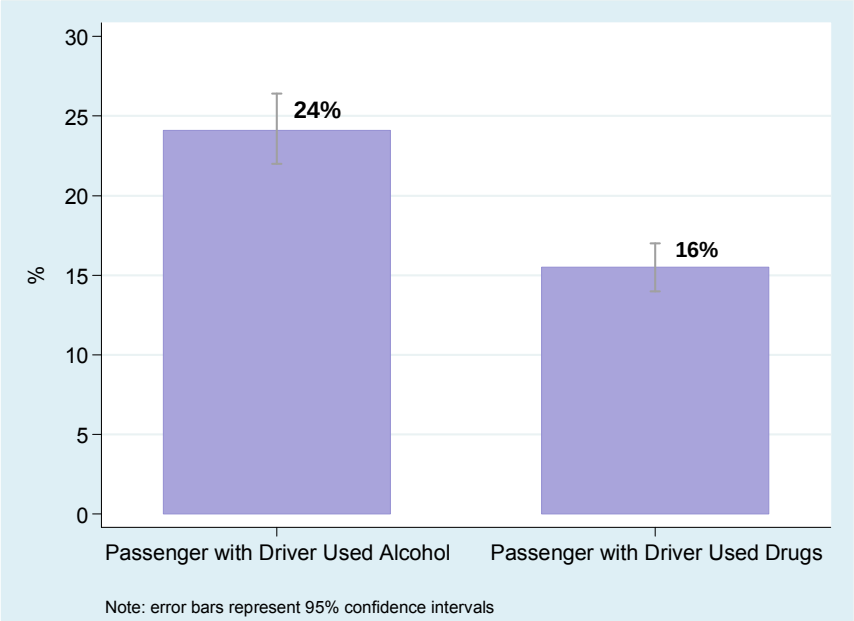
The 2011 survey included the six-item "CRAFFT" screen to gauge drug use problems experienced by students. A total of two or more problems is used to identify adolescents who may have a drug use problem which requires treatment.

- About 13% (95% CI: 11%-15%) of students may have a drug use problem. This percentage represents around 130,200 Ontario students in grades 7 through 12.
- Males (14%) are significantly more likely than females (12%) to be at risk for a drug use problem.
- There is significant grade variation. The likelihood of a drug use problem is lowest among 8th-graders (3%) and highest among 12th-graders (22%).
- There are no significant regional differences.

Alcohol and Other Drug Treatment

- In 2011, 1% (95% CI: 0.6%-1.3%) of students report that they had received treatment for their alcohol and/or drug use. This estimate represents about 8,900 Ontario students in grades 7 through 12.

Figure 11. Percentage of All Students 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), 2011 OSDUHS



Attitudes and Perceptions

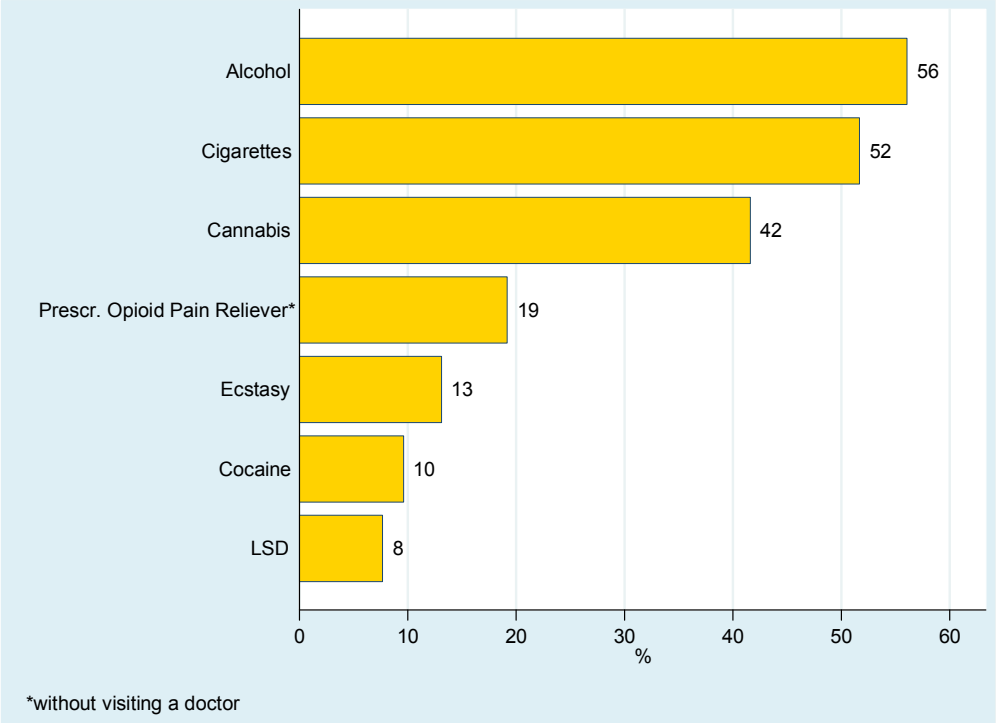
Perceptions of Risk of Harm and Disapproval

- Among the drug behaviours surveyed, students feel that the greatest risk of harm is associated with regular marijuana use (56%), followed by trying cocaine (41%), trying ecstasy (39%), daily smoking (32%), binge drinking each weekend (26%), and trying marijuana (18%).
- Perceptions of risk significantly increase with grade regarding trying cocaine, trying ecstasy, and daily smoking, but decrease with grade regarding marijuana use (trying and regular use) and binge drinking each weekend.
- The majority of students strongly disapprove of someone using marijuana regularly (56%), trying cocaine (54%), and trying ecstasy (54%). About one-third (34%) strongly disapprove of trying marijuana.
- During the past decade, there has been an increase in the perception of great risk of harm associated with trying cocaine, ecstasy, and daily smoking. Strong disapproval of trying marijuana, cocaine, and ecstasy is also significantly higher in 2011 compared with estimates seen in the past.

Drug Availability

- As seen in Figure 12, in 2011 the perception of easy availability is highest for alcohol (56%), followed by cigarettes (52%), cannabis (42%), a prescription opioid pain reliever without visiting a doctor (19%), ecstasy (13%), cocaine (10%), and LSD (8%).
- Not surprisingly, as grade level increases, students are more likely to report that these drugs are easy to obtain.
- The perceived availability of alcohol, cannabis, cocaine, LSD, ecstasy, and cigarettes has significantly decreased over the past decade.

Figure 12. Percentage of Students Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug, 2011 OSDUHS (Grades 7–12)



School and Neighbourhood Factors

Intoxication at School

The OSDUHS asked students about being intoxicated at school. The question was "*In the last 12 months, how many times (if ever) have you been drunk or high at school?*"

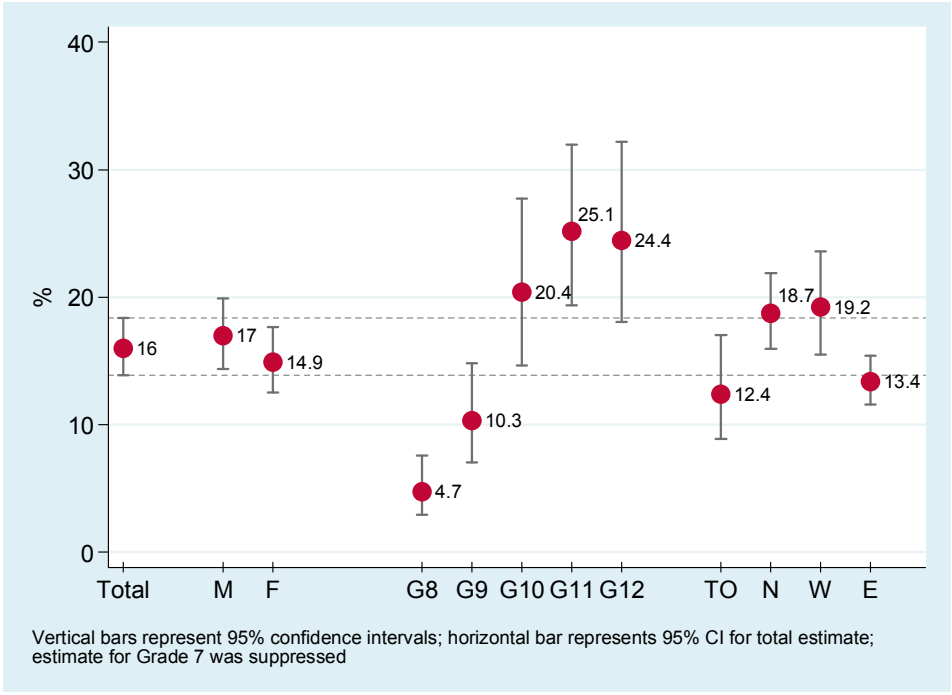
- As seen in Figure 13, 16% (95% CI: 14%-18%) of all students report that they were intoxicated at school at least once during the 12 months before the survey. This percentage represents about 157,300 Ontario students.
- Males (17%) are significantly more likely than females (15%) to report getting drunk or high at school.
- Students in grades 10, 11, and 12 (20%-25%) are most likely to report getting drunk or high at school.
- Students in the North (19%) and the West (19%) are most likely to report being intoxicated at school in the past year.

Getting Drugs at School

Students were also asked whether they had been offered, sold, or given drugs at school. The question used was *"In the last 12 months, has anyone offered, sold, or given you an illegal drug on school property?*"

- Among all students, 20% (95% CI: 19%-22%) report that they had been offered, sold, or given a drug at school in the 12 months before the survey. This percentage represents about 200,100 Ontario students.
- Males are more likely than females to have been offered, sold, or given a drug at school (24% vs. 17%, respectively).
- With increasing grade, students are more likely to be offered, sold, or given a drug at school, peaking in grade 11 at 31%.
- There are no significant differences among the regions.

Figure 13. Percentage of Students Reporting Getting Drunk or High at School During the Past Year by Sex, Grade, and Region, 2011 OSDUHS



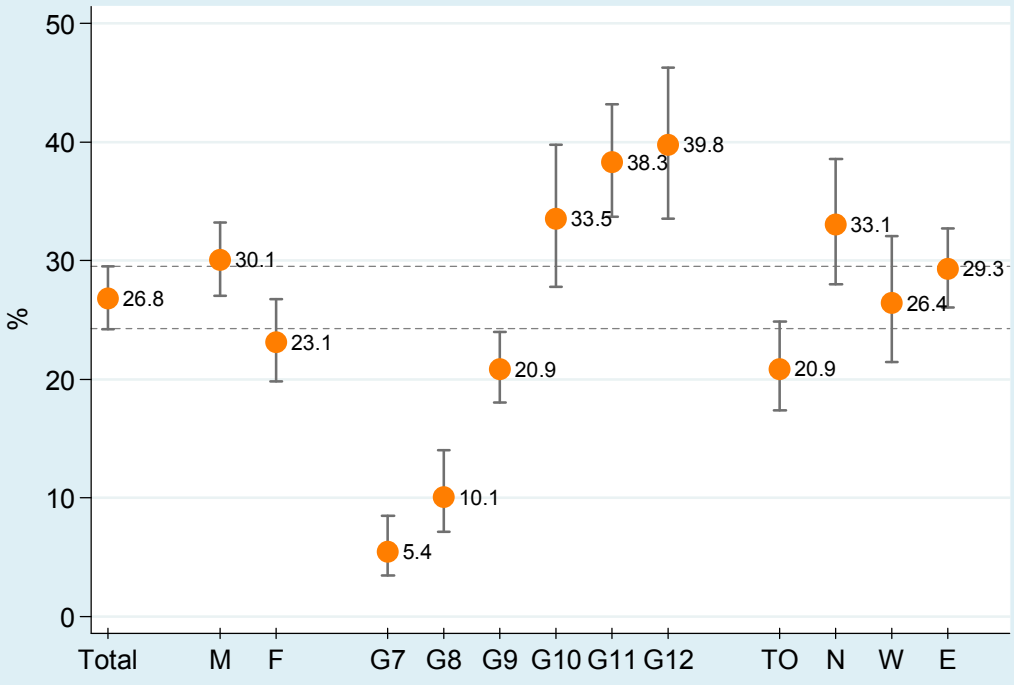
Vertical bars represent 95% confidence intervals; horizontal bar represents 95% CI for total estimate; estimate for Grade 7 was suppressed

Exposure to Drug Selling

Students were asked whether anyone had tried to sell drugs to them anywhere during the past 12 months, and whether or not they had seen drug selling in their own neighbourhood.

- Over one-quarter (27%, 95% CI: 24%-30%) of students report that someone had tried to sell them drugs in the past year. This percentage represents about 262,300 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.
- Among the four regions, Toronto students are significantly less likely to report that someone tried to sell drugs to them compared with students in the other regions.
- Over one-quarter (26%, 95% CI: 24%-28%) of students report witnessing drug selling in their own neighbourhood at least once in the past year. This percentage represents about 254,900 students in grades 7 through 12 in Ontario.
- 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 (e.g., 40% of 12th-graders).
- Among the four regions, Toronto students (19%) are significantly less likely to report witnessing drug selling in their neighbourhood compared with students in the other regions (about 26%-29%).

Figure 14. Percentage of Students Reporting that Someone Had Tried to Sell Them Drugs in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Vertical bars represent 95% confidence intervals; horizontal bar represents 95% CI for total estimate

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 2011 estimates for most drug use measures **among high 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 nine LHIN areas presented here are:

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

Table 2. 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, 2011 OSDUHS

	Erie St. Clair + Waterloo Wellington	**Hamilton Niagara Haldimand Brant**	**Central West + Mississauga Halton**	**Toronto Central**	**Central**	**Central East**	**South East + Champlain**	**North Simcoe Muskoka**	**North East + North West**	**Ontario**
(Student N)	*(222)*	*(1,354)*	*(263)*	*(332)*	*(1,230)*	*(901)*	*(800)*	*(205)*	*(1,076)*	*(6383)*
(School N)	*(3)*	*(23)*	*(4)*	*(5)*	*(17)*	*(14)*	*(13)*	*(3)*	*(21)*	*(103)*
Cigarettes (95% CI)	**9.9** (7.7-12.5)	**7.1** (4.0-12.2)	**15.4*** (12.2-19.2)	**15.6** (9.8-24.0)	**10.9** (8.0-14.7)	**9.5** (7.1-12.6)	**11.6** (8.9-15.0)	**8.2** (4.7-13.8)	**19.5**** (16.6-22.7)	**11.1** (9.2-13.3)
Daily Smoking	**6.0** (4.1-8.6)	†	**7.5**** (6.7-8.4)	†	**4.2** (2.2-7.8)	**4.3** (2.8-6.6)	†	**4.3** (2.8-8.1)	**10.2**** (6.3-16.0)	**5.0** (3.9-6.4)
Smokeless Tobacco	†	**5.0** (3.0-8.0)	†	**10.2*** (6.6-15.4)	**5.1** (3.0-8.6)	**5.8** (3.8-8.6)	**7.1** (5.1-9.8)	**9.2** (4.8-16.9)	**8.1** (6.2-10.5)	**5.9** (4.8-7.2)
Alcohol	**67.2** (62.1-71.9)	**68.2** (62.6-73.2)	**70.1** (64.2-75.4)	**63.7** (56.4-70.4)	**58.6*** (50.8-66.0)	**59.5**** (53.0-65.7)	**72.2*** (67.6-76.4)	**73.9**** (69.6-77.8)	**71.4** (64.6-77.4)	**66.7** (64.3-68.9)
Binge Drinking	**30.2** (27.7-32.7)	**27.6*** (25.8-29.4)	**30.3** (25.0-36.1)	**29.4** (21.7-38.4)	**23.4**** (19.0-28.3)	**23.2*** (16.7-31.2)	**32.9** (26.2-40.5)	**45.2**** (40.9-49.6)	**39.0**** (33.1-45.3)	**29.3** (27.3-31.4)
Drunkenness	**28.3** (25.9-30.8)	**24.6** (21.8-27.6)	**23.6** (18.5-29.7)	**25.2** (18.8-33.1)	**21.0*** (16.7-26.0)	**22.1** (16.5-29.0)	**30.3** (23.4-38.2)	**40.8**** (34.8-47.1)	**33.8**** (29.2-38.8)	**26.0** (24.2-28.0)
Cannabis	**26.7*** (25.1-28.5)	**25.8** (19.6-33.2)	**30.7** (26.0-35.8)	**32.2** (23.9-41.7)	**24.8*** (20.4-29.9)	**26.0** (20.6-32.2)	**30.0** (26.6-33.7)	**35.0*** (29.7-40.6)	**38.0**** (33.6-42.5)	**28.4** (26.1-30.9)
Inhalants	†	†	**3.7** (1.9-6.9)	†	**2.3** (1.4-3.9)	**4.1** (2.6-6.5)	**2.5** (1.7-3.7)	†	†	**3.7** (2.6-5.1)
Mushrooms/Mescaline	**4.6** (2.7-7.9)	**6.0** (3.4-10.4)	†	†	**1.7**** (1.2-2.5)	**4.1** (2.8-6.1)	**4.8** (2.9-7.8)	**5.0** (3.6-6.9)	**8.0**** (5.7-11.2)	**5.0** (3.9-6.2)
Salvia Divinorum	†	†	**2.0**** (1.3-3.0)	†	**4.6** (3.0-7.1)	**4.8** (2.7-8.5)	**6.8** (4.3-10.7)	**10.1**** (7.9-12.9)	**6.7** (3.7-11.7)	**5.0** (3.7-6.6)
Cocaine or Crack	**4.8*** (3.7-6.2)	**2.5** (1.4-4.5)	†	†	**1.2*** (0.7-2.0)	**3.2** (1.8-5.6)	**1.7** (0.9-3.3)	†	**5.1*** (3.0-8.7)	**2.6** (2.0-3.4)
Ecstasy	**7.3*** (4.6-11.5)	**3.6** (2.2-5.9)	†	†	**3.6** (2.3-5.6)	**3.9** (2.3-6.4)	**5.4** (3.2-9.2)	†	**5.6** (3.9-8.0)	**4.4** (3.5-5.6)
OxyContin (NM)	†	**0.9** (0.5-1.7)	†	†	†	**2.7** (1.4-5.0)	**1.9** (1.1-3.3)	†	**1.7** (1.1-2.8)	**1.6** (1.1-2.2)
Opioid Pain Relievers (NM)	**15.0** (13.3-17.0)	**15.9** (13.3-18.9)	**19.5** (13.0-28.2)	**12.6** (9.9-15.9)	**13.8** (11.4-16.6)	**17.8*** (15.3-20.6)	**13.3** (11.1-15.9)	**12.3** (11.7-12.8)	**15.2** (10.5-21.5)	**15.5** (14.1-17.1)
Stimulants (NM)	†	**5.3** (3.2-8.6)	**2.6*** (1.7-3.9)	**5.1** (3.4-7.6)	**4.1** (2.9-5.8)	**5.0** (3.4-7.4)	**6.7*** (4.8-9.4)	†	**6.5** (4.0-10.2)	**4.8** (3.9-6.0)
Tranquillizers (NM)	†	**3.6*** (2.1-6.1)	**3.0** (1.7-5.4)	†	**1.8** (1.1-2.9)	**2.2** (1.4-3.3)	**3.3*** (2.0-5.6)	†	**1.8** (1.2-2.8)	**2.5** (1.9-3.3)
OTC Cough/Cold Medication (NM)	†	**11.3**** (7.5-16.8)	**6.0** (3.7-9.6)	**6.8** (5.2-8.8)	**7.4** (5.1-10.6)	**8.0** (5.5-11.4)	**4.1** (2.6-6.5)	†	**4.0** (2.2-7.0)	**7.5** (5.7-9.8)
Any NM Prescription Drug Use	**18.3** (15.2-22.0)	**20.8** (16.0-26.7)	**20.7** (14.3-28.9)	**15.8** (13.5-18.3)	**16.7** (14.5-19.2)	**19.8** (17.5-22.3)	**17.9** (15.2-21.0)	**13.5*** (11.6-15.5)	**18.3** (13.2-24.8)	**18.7** (16.8-20.8)

(Continued…)

	Erie St. Clair + Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West + Mississauga Halton	Toronto Central	Central	Central East	South East + Champlain	North Simcoe Muskoka	North East + North West	Ontario
(Student N)	*(222)*	*(1,354)*	*(263)*	*(332)*	*(1,230)*	*(901)*	*(800)*	*(205)*	*(1,076)*	*(6383)*
(School N)	*(3)*	*(23)*	*(4)*	*(5)*	*(17)*	*(14)*	*(13)*	*(3)*	*(21)*	*(103)*
Any Illicit Drug, incl. NM Prescription Drug	**47.4** (40.0-54.8)	**43.6** (39.1-48.3)	**47.2** (43.7-50.7)	**42.4** (36.8-48.3)	**38.5*** (34.5-42.7)	**42.0** (37.4-46.8)	**40.5** (35.5-45.6)	**42.8** (32.1-54.2)	**44.9** (39.9-50.0)	**43.0** (41.2-44.8)
High-Caffeine Energy Drinks	**58.5*** (53.2-63.5)	**63.8**** (60.1-67.2)	**52.6** (41.3-63.7)	**39.5**** (30.2-49.5)	**41.2**** (36.8-45.8)	**50.6** (44.2-56.9)	**56.4** (49.0-63.4)	**50.6** (48.1-53.1)	**58.1*** (53.8-62.4)	**53.6** (49.9-57.2)
Hazardous/Harmful Drinking (AUDIT)	**23.0** (19.2-27.4)	**20.4** (13.8-29.2)	**23.9** (15.2-35.4)	**24.0** (14.8-36.5)	**18.9*** (14.5-24.1)	**20.8** (14.6-28.7)	**29.1** (23.1-35.9)	**33.2** (21.3-47.7)	**31.1*** (26.3-36.2)	**23.4** (20.5-26.6)
Cannabis Dependence (SDS)	†	†	†	**2.2** (1.4-3.5)	†	**3.0** (1.6-5.6)	**4.2** (2.4-7.4)	†	**4.1** (2.4-6.7)	**2.7** (1.8-4.3)
Drug Use Problem (CRAFFT)	**14.2** (11.9-16.8)	**12.0** (6.3-21.8)	**24.3** (13.3-40.3)	**18.8** (15.8-22.1)	**13.6*** (11.5-16.0)	**16.0** (11.7-21.6)	**15.5** (9.8-23.6)	**18.5** (16.6-20.6)	**23.0*** (17.7-29.3)	**16.3** (13.2-20.0)
Passenger/Alcohol	**30.6** (27.0-34.4)	**30.6** (24.1-37.9)	**22.9**** (21.2-24.6)	**25.4** (18.6-33.8)	**23.1**** (20.4-26.0)	**25.8** (22.6-29.4)	**31.5** (25.1-38.7)	**27.8** (22.5-33.9)	**28.6** (26.3-31.1)	**27.5** (25.0-30.1)
Passenger/Drugs	**26.4**** (24.6-28.3)	**17.6** (14.1-21.7)	**22.9** (15.9-31.8)	**17.9** (12.8-24.4)	**15.2**** (12.1-18.9)	**18.7** (15.2-22.7)	**19.8** (14.2-26.8)	**20.0** (17.1-23.4)	**26.6**** (22.8-30.8)	**19.8** (17.9-22.0)
Drinking-Driving (Drivers Grades 10-12)	†	**10.2** (5.3-18.6)	**4.0*** (3.1-5.1)	†	**4.6** (2.5-8.1)	**4.9** (2.5-9.2)	**10.4** (5.6-18.8)	**10.9**** (9.1-13.0)	**9.8** (5.8-16.1)	**7.0** (4.9-9.8)
Drinking-Snowmobile/ Motorboat/ATV (G10-12)	**5.4** (3.4-8.6)	†	†	†	**3.7*** (2.4-5.8)	**3.9*** (2.4-6.3)	**8.4** (6.0-11.7)	**8.3** (6.4-10.8)	**12.3**** (9.6-15.7)	**6.6** (4.6-9.4)
Cannabis-Driving (Drivers Grades 10-12)	**14.1** (8.8-21.8)	**14.2** (9.0-21.7)	†	**13.5** (10.6-17.0)	**11.1** (7.2-16.6)	**11.9** (8.6-16.1)	**11.2** (7.7-16.1)	**9.6** (7.3-12.5)	**20.2**** (15.5-25.9)	**12.4** (10.4-14.8)
Intoxicated at School	**23.7** (18.4-29.9)	**27.9**** (24.2-31.9)	**20.2** (18.6-22.0)	**23.4** (15.9-33.2)	**13.7**** (11.3-16.5)	**15.3*** (11.4-20.3)	**16.5** (12.0-22.4)	**18.1** (16.4-19.9)	**23.9*** (20.3-27.9)	**20.5** (18.1-23.1)
Was Given/Offered/ Sold a Drug at School	**26.1** (23.5-28.9)	**25.5** (23.7-27.4)	**33.1** (25.7-41.5)	**34.1** (24.7-44.9)	**23.2** (18.6-28.6)	**22.2** (17.5-27.8)	**20.9** (14.8-28.7)	**29.1** (22.0-37.4)	**25.2** (20.9-30.0)	**26.0** (23.7-28.5)
Was Offered/Sold a Drug Anywhere	**33.8** (31.1-36.7)	**36.4** (27.3-46.5)	**30.0** (25.2-35.3)	**30.9** (21.0-42.9)	**32.7** (26.4-39.6)	**36.4** (30.8-42.4)	**29.3** (22.3-37.5)	**36.8** (32.0-41.9)	**39.9** (33.3-46.8)	**33.8** (30.8-36.9)

Notes: (1) no secondary schools from the South West LHIN participated in the survey; (2) due to small sample sizes, the Erie St. Clair and the Waterloo Wellington LHINs were merged, the Central West and the Mississauga Halton LHINs were merged, the South East and the Champlain LHINs were merged, and the North West and the North East LHINs were merged; (3) binge drinking is defined as consuming 5 or more drinks on one occasion; (4) binge drinking and drunkenness refer to the past month; (5) NM=non-medical use, without a doctor's prescription; (6) "Any NM Use of a Prescription Drug" refers to non-medical use of any one of the following classes of prescription drugs: opioids, ADHD drugs, other stimulants, or tranquillizers/sedatives; (7) "Any Illicit Drug, incl. NM Prescription Drug" refers to use of any one of the 22 drugs asked about in the survey (excludes tobacco, alcohol, and energy drinks); (8) "Passenger/Alcohol" refers to being a passenger in a vehicle with a driver who had been drinking alcohol; (9) "Passenger/Drugs" refers to being a passenger in a vehicle with a driver who had been using drugs; (10) entries in brackets are 95% confidence intervals; (11) † estimate suppressed due to unreliability; (12) *p<.05, **p<.01 significant difference, LHIN area vs. Ontario.

Source: OSDUHS, Centre for Addiction & Mental Health

Summary and Discussion

The Public Health Approach Toward Drug Use

Smoking, drinking, 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 examined the past year use of alcohol, tobacco, illicit drugs, and the non-medical (NM) use of prescription drugs, and changes since 1977. There are many findings that should be viewed as encouraging. We have ordered these findings according to their public health importance.

Cigarettes: The vast majority of students in Ontario do not smoke cigarettes. The prevalence of past year smoking significantly decreased in 2011 compared with the last survey in 2009. Over the long-term, smoking began to decline in the 2000s and has reached its lowest point in 2011. 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.

Cannabis: For the first time in a long while, past year cannabis use significantly decreased since the previous survey among the total sample of students. Past month cannabis use also decreased between 2009 and 2011. As well, the proportion of students who "strongly disapprove" of trying cannabis and using it regularly significantly increased between 2009 and 2011.

The **non-medical use of prescription opioid pain relievers** (e.g., Percocet, Percodan, Tylenol #3, OxyContin) in the past year showed a significant decrease among the total sample of students in 2011 compared with the previous survey in 2009, and with the first year of surveillance in 2007.

Alcohol: While the majority of students are considered to be current drinkers, the past year prevalence of alcohol use is now much lower than a decade ago in 1999. The magnitude of the decline in drinking 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 levels evident during the two peak periods seen in the late 1970s and the late 1990s.

Driving after drinking alcohol among licensed students significantly declined between 2009 and 2011. This is the first statistically significant decline in drinking-driving in a long while. Further, the current rate is markedly lower than rates evident in the late 1970s and early 1980s. It is worth noting here that the decline in 2011 followed the introduction in Ontario of several new initiatives designed to prevent impaired driving, 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 .10%).

Driving after cannabis use among licensed students is also lower in 2011 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.

One-third of students **used no substance** in the past year, including alcohol and cigarettes, and this proportion is significantly 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 like their counterparts from years ago. Indeed, our data show that, at least over the past decade, smoking initiation and drinking initiation is occurring later in adolescence.

Despite media attention given to **methamphetamine** (including crystal methamphetamine) use in various populations, there is no evidence that this drug has measurable 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 non-medical use of prescription opioids and salvia divinorum. For the first time in 2011, the OSDUHS asked students about the use of doda (an opioid), BZP (benzylpiperazine) pills and mephedrone (4-methylmethcathinone) – the latter two being synthetic stimulants. These drugs have appeared in other countries, but only anecdotal evidence exists for use in Canada. The past year prevalence estimates for each of these drugs were suppressed due negligible estimates. This suggests that these 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 emerge at a later date.

Past year use of almost all drugs monitored is lower in 2011 compared with estimates from a decade ago: **inhalants, LSD, mushrooms/mescaline, cocaine, crack, ecstasy, ketamine, and stimulants**. The use of **any illicit drug** including and excluding cannabis has also decreased.

The **perceived availability** of alcohol, cannabis, cocaine, LSD, and ecstasy has significantly decreased over the past decade. Thus, these drugs are reportedly becoming more difficult to obtain.

The **perceptions of risk of harm and the disapproval** of trying cocaine, and of trying ecstasy are higher in 2011 than estimates seen a decade ago. Thus, students today seem to be more aware of the potential for physical harm these drugs can cause.

Also noteworthy are the **declines in several key drug use measures among male students**. Compared with the 2009 estimates, males have shown significant decreases in 2011 in smoking, drinking, cannabis use, and drinking and driving.

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, than do illicit drugs.

Cigarettes: Cigarette smoking is by far the greatest public health issue impinging on a population's health, as it is the leading preventable cause of disease. Although student smoking has decreased since the previous survey in 2009, there is still a significant proportion – about one-in-ten (9%) – that smoke (about 88,000 students in Ontario).

We asked about past year use of **smokeless tobacco** for the first time in 2011. A substantial proportion of students (5% – an estimated 46,500 in Ontario) report this behaviour, and among males the prevalence approaches that of cigarette smoking.

Alcohol: Alcohol is the most common drug used by Ontario students, as over half have drank in the past year (excluding sips). Binge drinking still remains at an elevated level, as about one-in-five (22%) students report drinking five or more drinks on the same occasion once in the past month. Among the 12th-graders, this proportion becomes 40%. About one-in-five students (18%) drink hazardously/harmfully in that their drinking puts them at risk for current or future physical and social problems. Most concerning is that one-in-ten (9%) students 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 7% of licensed students in grades 10 through 12 (an estimated 21,500 in Ontario) who report drinking and driving at least once in the past year. A higher percentage (12%) of licensed students report driving after using cannabis (an estimated 38,300 in Ontario). One-quarter (24%) of all students report being a passenger with a driver who had been drinking, and 16% 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-third 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 that crash risk is not restricted to drivers.

Cannabis: Roughly 2% of all students (10% of past year cannabis users) report symptoms of cannabis dependence, characterized by loss of control and withdrawal. About 2% of students (an estimated 23,000 in Ontario) use cannabis daily. This frequent pattern of cannabis use is worrisome for many reasons including increased risk for respiratory illnesses and cancers in adulthood. Short-term problems from regular cannabis use include memory impairment, reduced attention and motivation, which negatively impact school and family life. Furthermore, research is accumulating to suggest an association between heavy or early cannabis use and the onset of psychotic symptoms in individuals who possess an underlying vulnerability to psychosis.

About 14% of students report using a **prescription opioid pain reliever without their own prescription** at least once in the past year (representing some 140,100 students in Ontario). The non-medical 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.

Past year use of **over-the-counter (OTC) cough/cold medication with dextromethorphan** to "get high" was reported by 7% of students (an estimated 68,600 in Ontario) – a prevalence higher than most of the illicit drugs in the survey.

Over one-third (37%) of students report past year use of **at least one illicit drug**, including a prescription drug or an OTC drug used for non-medical purposes. The proportion increases with grade, reaching 51% by grade 11. 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 non-medically rather than other "street" drugs such as hallucinogens, cocaine, or ecstasy.

About one-in-six (16%) students report having been **drunk or high at school** at least once in the past year, and about one-in-five (20%) report **being offered, sold, or given a drug at school**.

One-quarter (27%) of students report that **someone tried to sell drugs to them** at least once during the year before the survey. This proportion increases to 40% among students in grades 11 and 12, suggesting that drugs are readily available to older adolescents.

High-Caffeine Energy Drinks: Recently, the medical community has expressed concern about children and adolescents consuming highly-caffeinated energy drinks, and calls for restrictions on labelling, sales and marketing have been made. Our data show that energy drink consumption is common among adolescents, with half (50%) of all students reporting past year use (ranging from 34% of 7th-graders to almost 60% of 12th-graders). One-in-five (19%) students report drinking an energy drink in the past week.

Overlapping Alcohol and Mental Health Problems

There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2011 OSDUHS shows that about 9% of all students in grades 7 through 12 (an estimated 83,300 Ontario students) report both hazardous/harmful drinking and elevated psychological distress (symptoms of anxiety and depression). This increases to 16% 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 as grade level increases, typically peaking in grade 11 (ages 16-17). The exception is inhalant use, which is most prevalent among 7th- and 8th-graders, and then declines by grade 9.

There is a prominent pattern of increasing drug use that corresponds to the transition from grade 7 to grade 8, and again from grade 8 to grade 9. This suggests that the transition from elementary school to high school may be a high-risk period for either the initiation or the increased likelihood of drug use. Another prominent pattern is an increase in illicit drug use between 10th-grade and 11th-grade. Smoking, drinking, binge drinking, and cannabis use continue to increase with each grade level until 11th-grade.

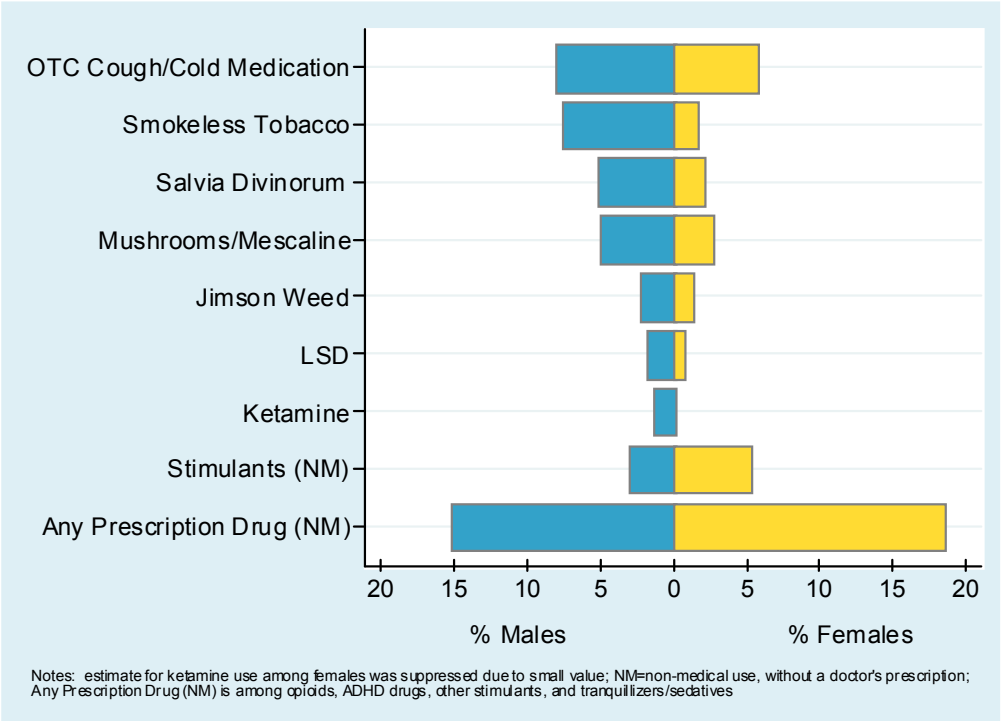
Sex is also associated with certain types of drug use. As summarized in Table A5 and Figure 15, males are significantly more likely to use OTC cough/cold medication, smokeless tobacco, salvia divinorum, mushrooms/mescaline, jimson weed, LSD, and ketamine. Females are more likely to use stimulants non-medically, and any prescription drug non-medically.

It is interesting to note that the 2011 cycle found fewer differences between males and females compared with past cycles, suggesting that the sex gap may be narrowing. This appears to be due to decreases found among males in 2011 (e.g., smoking, drinking, cannabis use), rather than increases among females.

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, binge drink, use cannabis, cocaine, and energy drinks.
- Northern Ontario students are more likely to smoke cigarettes, drink alcohol, binge drink, use cannabis, cocaine, and energy drinks.
- Western Ontario students are less likely to use smokeless tobacco. They are more likely to use energy drinks.
- Eastern Ontario students do not differ from the province as a whole on any drug measure.

Figure 15. Significant Sex Differences in Past Year Drug Use, 2011 OSDUHS



Notes: estimate for ketamine use among females was suppressed due to small value; NM=non-medical use, without a doctor's prescription; Any Prescription Drug (NM) is among opioids, ADHD drugs, other stimulants, and tranquillizers/sedatives

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 2011 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 non-medically. Similar changes in the "drug landscape" over the past decade have been found 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 also 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 non-medical use of these drugs. Initiatives in Ontario intended to reduce prescription opioid abuse (e.g., Ontario's Narcotics Strategy) could be one reason for the recent drop in non-medical opioid pain reliever use among students in 2011.

Other findings in this report suggest that the prime period for prevention programs is between grade 7 and 9 (ages 12-14), as this is the most likely time for the initiation of substance use. Behaviours such as smoking, drinking, binge drinking, and cannabis use continue increasing with each grade level until 11th-grade, suggesting the prevention efforts should extend into the older grade levels as well.

Prevention efforts should include a component that targets youths' 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. Thus, any prevention effort should provide drug-specific information.

Finally, the OSDUHS data also suggest a relationship between use and availability, for certain drugs such as alcohol, cannabis, ecstasy, and LSD. That is, past year use and perceived availability have been deceasing 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 age laws, and reducing the number of sales outlets can reduce use among youth.

Future OSDUHS Monitoring

Substance use by young people is an ever-changing phenomenon, requiring ongoing monitoring and evaluation. As new drugs emerge it is important to assess their use, related perceptions and beliefs, and harms. Monitoring health risk behaviours, such as substance 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. Finally, 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, followed by substantial increases in the late 1990s and early 2000s. The past decade has shown 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. Although we cannot be certain what the near future holds for adolescent drug use, we can closely monitor changes to ensure that any programmatic responses are based not on sensationalized fears, but rather on sound scientific information.

Readers should note that there is a companion OSDUHS report titled *The Mental Health and Well-Being of Ontario Students*, which addresses trends in other important public health issues such as physical activity, obesity, mental health, gambling, bullying and violence. The next release will be in the summer of 2012.

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 are not considered to be 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 Drinking	Two indicators are used: (1) Binge drinking: drinking 5 or more drinks on the same occasion during the past 4 weeks; (2) Becoming drunk during the past 4 weeks.
Hazardous/Harmful Drinking	Scoring at least 8 of 40 (Likert scoring) on the World Health Organization's *Alcohol Use Disorders Identification Test* (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 considered non-users 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 considered non-users and assigned to the denominator.
Non-Medical Use (NM)	Used the drug without a prescription, or without a doctor's supervision.
Any Drug Use, including Non-Medical Prescription Drug Use	This binary measure indicates past year use of one or more of the following 22 drugs asked about in the 2011 survey (Form B only): cannabis, inhalants, LSD, mushrooms/mescaline, cocaine, crack, methamphetamine, heroin, doda, ecstasy, ketamine, jimson weed, salvia divinorum, BZP pills, mephedrone, stimulants (NM), tranquillizers/sedatives (NM), OxyContin (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), over-the-counter cough/cold medication (to "get high"), and Gravol (to "get high"). Excluded from this count are tobacco, alcohol, and high-caffeine energy drinks.
Any Illicit Drug Use (for trends)	To examine trends in any illicit 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 10 drugs: cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, stimulants (NM), and tranquillizers/sedatives (NM). A second measure for any illicit drug use excludes cannabis from the count.
Any Non-Medical Prescription Drug Use	Non-medical use of one or more of the following five prescription drugs or drug classes once or more often during the past 12 months: OxyContin, other prescription opioid pain relievers, ADHD drugs, other stimulants, or tranquillizers/sedatives.
Drug Use Problem	Reporting 2 or more of the 6 items on the *CRAFFT* 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 *Severity of Dependence Scale* (SDS). The SDS is a validated 5-item instrument used to screen for drug dependence in adolescent and general populations.
Elevated Psychological Distress	Reporting 3 or more of the 12 items on the *General Health Questionnaire* (GHQ12). The GHQ12 measures symptoms of anxiety, depression, and social dysfunction during the past few weeks.

Note: Please see the 2011 OSDUHS detailed drug use report for specific details and references associated with the scales and screeners used. It is available in PDF format at: www.camh.net/research/osdus.html.

Table A2. Percentage Using Drug at Least Once in the Past Year, 1999–2011 (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	
(N)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	
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)	ab
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)	b
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)	ab
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)	b
LSD	**6.8** (6.7-8.1)	**4.8** (3.9-5.9)	**2.9** (2.4-3.5)	**1.7** (1.3-2.3)	**1.6** (1.2-2.2)	**1.8** (1.5-2.3)	**1.2** (0.9-1.7)	b
Mushrooms (Psilocybin)/ Mescaline	**12.8** (11.4-14.4)	**11.1** (9.6-12.9)	**10.0** (8.8-11.4)	**6.7** (5.6-8.0)	**5.5** (4.6-6.5)	**5.0** (4.2-5.9)	**3.8** (3.1-4.8)	b
Jimson Weed	—	—	—	—	**2.6** (1.9-3.4)	**2.3** (1.8-3.1)	**1.7** (1.1-2.8)	
Salvia Divinorum	—	—	—	—	—	**4.4** (3.3-5.7)	**3.7** (2.8-4.8)	
Methamphetamine (includes crystal methamphetamine)	**5.1** (3.9-6.7)	**4.1** (2.9-5.8)	**4.4** (3.7-5.3)	**2.7** (2.1-3.4)	**1.8** (1.4-2.3)	**1.6** (1.2-2.2)	**1.0** (0.6-1.6)	b
Cocaine	**3.4** (2.8-4.2)	**4.4** (3.6-5.4)	**4.8** (4.2-5.5)	**4.4** (3.7-5.2)	**3.4** (2.8-3.9)	**2.6** (2.1-3.2)	**2.1** (1.7-2.6)	b
Crack	**2.5** (1.9-3.2)	**2.1** (1.6-2.8)	**2.7** (2.2-3.3)	**2.0** (1.6-2.4)	**1.0** (0.8-1.4)	**1.1** (0.8-1.4)	**0.7** (0.5-1.1)	b
Heroin	**1.9** (1.5-2.5)	**1.1** (0.8-1.5)	**1.4** (1.1-1.7)	**0.9** (0.7-1.2)	**0.9** (0.7-1.3)	**0.7** (0.5-0.9)	†	b
Ecstasy (MDMA)	**4.0** (3.1-5.2)	**6.0** (5.0-7.1)	**4.1** (3.5-4.8)	**4.5** (3.7-5.3)	**3.5** (2.9-4.1)	**3.2** (2.6-3.8)	**3.3** (2.6-4.2)	b
Ketamine	—	—	**2.2** (1.8-2.9)	**1.3** (0.9-1.7)	**1.1** (0.7-1.7)	**1.6** (1.1-2.3)	**0.9** (0.5-1.6)	b
OxyContin (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)	
Opioid Pain Relievers (NM)	—	—	—	—	**20.6** (18.9-23.5)	**17.8** (16.6-18.9)	**14.0** (12.8-15.3)	ab
Stimulants (NM)	**7.3** (6.4-8.4)	**6.3** (5.4-7.4)	**5.8** (5.0-6.6)	**4.8** (4.1-5.6)	**5.7** (5.0-6.5)	**4.8** (4.1-5.5)	**4.1** (3.3-5.0)	b
Tranquillizers/Sedatives (NM)	**2.0** (1.6-2.6)	**2.2** (1.6-3.1)	**2.2** (1.8-2.7)	**1.6** (1.3-2.0)	**1.8** (1.4-2.3)	**1.6** (1.2-2.0)	**1.9** (1.5-2.6)	
ADHD Drugs (NM)	—	—	—	—	**1.0** (0.7-1.5)	**1.6** (1.3-2.1)	**1.0** (0.7-1.3)	
OTC Cough/Cold Medication (NM)	—	—	—	—	—	**7.2** (6.1-8.5)	**6.9** (5.5-8.7)	
Steroids (lifetime use)	**3.4** (2.7-4.2)	**3.8** (3.0-4.8)	**3.0** (2.4-3.7)	**2.3** (1.9-2.9)	**1.3** (0.9-1.9)	**1.1** (0.7-1.6)	**1.2** (0.8-1.8)	b
Any NM Use of a Prescription Drug	—	—	—	—	—	**20.3** (19.2-21.5)	**16.7** (15.1-18.4)	a
Any Illicit Drug, Including Cannabis	**31.7** (29.2-34.2)	**31.9** (29.2-34.8)	**32.0** (29.9-34.1)	**28.6** (26.6-30.8)	**28.8** (26.9-30.8)	**28.0** (26.4-29.6)	**24.8** (23.5-26.2)	ab
Any Illicit Drug, Excluding Cannabis	**20.0** (18.1-22.1)	**17.8** (16.2-19.5)	**15.1** (13.7-16.7)	**12.3** (11.0-13.8)	**12.2** (11.1-13.4)	**10.6** (9.7-11.6)	**9.9** (8.7-11.2)	b

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) [a] 2011 vs. 2009 significant difference, p<.01; (4) [b] 2011 vs. 1999 significant difference, p<.01 (vs. 2001 for ecstasy; vs. 2003 for ketamine; vs. 2007 for opioid pain relievers); (5) NM = non-medical use, without a doctor's prescription; (6) ADHD = Attention-Deficit Hyperactivity Disorder; (7) OTC = over-the-counter drug used for non-medical purposes or to "get high"; (8) "Any NM Use of a Prescription Drug" refers to non-medical use of any one of the following classes of prescription drugs: opioids, ADHD drugs, other stimulants, or tranquillizers/sedatives; (9) "Any illicit" drug includes cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, stimulants (NM), and tranquillizers/sedatives (NM). The drugs excluded from the indices are inhalants, jimson weed, salvia, ketamine, OxyContin and other prescription opioid pain relievers, prescription ADHD drugs, OTC medication, and steroids.

Source: OSDUHS, Centre for Addiction & Mental Health

Table A3. Significant Changes in Past Year Drug Use by Subgroup, 2011 vs. 2009 and 2011 vs. 1999 (Grades 7–12)

	Cigarettes	Alcohol	Binge Drinking	Cannabis	Inhalants	LSD	Mushrooms/Mesc.	Methamphetamine	Cocaine	Crack	Heroin	Ecstasy	Ketamine	OxyContin (NM)	Opioid Pain Relievers (NM)	Stimulants (NM)	Any Illicit Drug, including Cannabis	Any Illicit Drug, excluding Cannabis
Total	↓▽	▽	▽	↓▽	▽	▽	▽	▽	▽	▽	▽	▽	▽		↓▽	▽	↓▽	▽
Males	↓▽	↓▽	▽	↓▽		▽	▽	▽		▽	▽	▽			▽	▽	↓▽	▽
Females	▽	▽			▽	↓▽	▽	▽	▽	▽			▽		↓▽	▽		▽
Grade 7	▽	▽	▽															
Grade 8	▽	↓▽	▽	▽		▽	▽	▽							▽	▽	▽	▽
Grade 9	↓▽	▽	▽	↓▽	▽	▽	▽	▽				▽			↓▽	▽	↓▽	▽
Grade 10	▽	▽				▽	▽	▽							▽	▽	▽	▽
Grade 11	▽			▽		▽	▽			▽								▽
Grade 12	▽			↓		↓▽	▽	↓▽			▽					▽	↓	▽
Toronto	▽					▽	▽	▽	▽						↓▽	▽		
North	▽	▽				▽	▽	▽							▽			▽
West	▽	▽	↓▽	↓▽		▽	▽	▽		▽		▽			▽	▽	↓▽	▽
East	▽				▽	▽	↓▽	↓▽	▽	▽	▽			△	↓▽		▽	▽

Notes: (1) ↓ significant decrease in 2011 vs. 2009, p<.01; (2)△▽ significant increase or decrease in 2011 vs. 1999, p<.01 (vs. 2001 for ecstasy, vs. 2003 for ketamine, vs. 2005 for OxyContin, vs. 2007 for opioid pain relievers); (3) binge drinking refers to the past month; (4) NM = non-medical use, without a doctor's prescription; (5) "Any Illicit Drug" indices are based on 10 drugs asked about over time; (6) no significant year differences for jimson weed, salvia divinorum, cocaine, ADHD drugs (NM), tranquillizers/sedatives (NM), and over-the-counter cough/cold medication, therefore these drugs are not presented.

Source: OSDUHS, Centre for Addiction & Mental Health

Table A4. Percentage Using Drug at Least Once in the Past Year, 1977–2011 (Grades 7, 9, 11 only)

(N)	1977 (3927)	1979 (3920)	1981 (3010)	1983 (3614)	1985 (3146)	1987 (3376)	1989 (3040)	1991 (2961)	1993 (2617)	1995 (2907)	1997 (3072)	1999 (2421)	2001 (2013)	2003 (3389)	2005 (3969)	2007 (3215)	2009 (4424)	2011 (4669)
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)
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)
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)
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)
LSD	**6.0** (5.1-7.1)	**9.0** (7.7-10.5)	**9.4** (7.6-11.6)	**8.5** (7.2-9.9)	**7.1** (5.6-8.9)	**5.8** (4.2-7.9)	**5.4** (3.8-7.4)	**4.9** (4.2-5.9)	**6.8** (5.8-7.9)	**9.5** (7.2-12.5)	**7.7** (7.0-8.5)	**6.5** (4.8-8.6)	**3.6** (2.7-4.7)	**2.9** (2.3-3.6)	**1.8** (1.3-2.6)	**1.8** (1.2-2.5)	**1.5** (1.1-2.2)	**1.6** (0.9-2.6)
Mushrooms or Mescaline	**3.9** (3.2-4.7)	**5.2** (4.3-6.4)	**4.2** (2.9-6.1)	**5.6** (4.4-7.1)	**4.5** (3.5-5.8)	**4.0** (2.6-6.1)	**3.8** (2.7-5.4)	**3.0** (2.4-3.7)	**2.8** (2.2-3.6)	**7.6** (5.5-10.4)	**9.6** (8.3-11.2)	**11.7** (9.4-14.4)	**9.7** (7.7-12.1)	**9.5** (8.0-11.2)	**5.8** (4.7-7.2)	**5.3** (4.4-6.4)	**4.4** (3.4-5.8)	**3.6** (2.6-4.8)
Methamphetamine (incl. crystal meth)	**2.7** (2.2-3.2)	**3.7** (3.0-4.4)	**2.8** (2.0-3.9)	**4.2** (2.4-7.0)	**3.2** (2.7-3.9)	**3.3** (2.5-4.2)	**2.5** (2.0-3.2)	**3.1** (2.1-4.7)	**3.3** (2.3-4.9)	**6.0** (4.4-8.2)	**3.6** (2.7-4.9)	**4.5** (2.8-7.2)	**2.8** (1.9-4.1)	**4.6** (3.6-5.8)	**2.8** (2.1-3.8)	**1.9** (1.4-2.6)	**1.4** (1.0-2.0)	†
Cocaine	**3.6** (3.0-4.3)	**5.3** (4.4-6.2)	**4.6** (3.8-5.6)	**4.0** (3.1-5.3)	**4.0** (3.1-5.3)	**3.4** (2.5-4.7)	**2.4** (1.7-3.4)	**1.7** (1.2-2.4)	**1.5** (0.9-2.4)	**2.5** (2.1-3.0)	**2.7** (2.4-3.1)	**3.7** (2.8-4.9)	**4.0** (3.1-5.3)	**5.1** (4.2-6.1)	**4.2** (3.5-5.2)	**3.3** (2.6-4.1)	**1.9** (1.5-2.6)	**2.4** (1.7-3.3)
Crack	—	—	—	—	—	**1.5** (1.0-2.2)	**1.3** (0.8-2.0)	**1.1** (0.6-1.9)	**1.1** (0.6-2.0)	**1.8** (1.5-2.3)	**2.4** (1.7-3.3)	**2.5** (1.7-3.6)	**2.4** (1.7-3.2)	**3.0** (2.2-3.8)	**1.9** (1.5-2.5)	**1.3** (1.0-1.8)	**1.0** (0.7-1.5)	**0.7** (0.4-1.2)
Heroin	**2.0** (1.6-2.6)	**2.5** (1.9-3.2)	**1.5** (1.0-2.2)	**1.8** (1.3-2.5)	**1.6** (1.2-2.3)	**1.5** (1.0-2.3)	**1.2** (0.8-1.9)	**1.1** (0.7-1.7)	**1.3** (0.9-1.8)	**2.1** (1.4-2.9)	**1.8** (1.6-2.2)	**1.7** (1.2-2.4)	**1.3** (0.9-2.0)	**1.4** (1.0-1.9)	**0.9** (0.7-1.3)	**1.1** (0.8-1.7)	**0.7** (0.4-1.1)	†
Ecstasy (MDMA)	—	—	—	—	—	—	—	†	†	**2.0** (1.2-3.3)	**2.9** (1.7-5.1)	**4.3** (3.0-6.2)	**5.8** (4.7-7.3)	**3.8** (3.2-4.7)	**3.9** (3.0-4.9)	**3.1** (2.4-4.0)	**2.5** (1.9-3.3)	**3.7** (2.7-5.1)
Stimulants (NM)	**7.3** (6.4-8.3)	**11.0** (9.5-12.6)	**11.0** (9.4-12.8)	**14.3** (12.2-16.8)	**10.9** (9.4-12.5)	**7.6** (6.4-8.9)	**5.8** (5.0-6.6)	**3.8** (2.9-4.8)	**5.2** (3.7-7.4)	**6.4** (5.3-7.7)	**7.2** (6.2-8.3)	**6.7** (5.3-8.5)	**5.7** (4.6-7.2)	**5.4** (4.6-6.3)	**4.5** (3.6-5.6)	**5.6** (4.8-6.6)	**4.5** (3.7-5.6)	**4.4** (3.1-6.1)
Tranquillizers (NM)	**4.8** (4.0-5.7)	**5.8** (5.0-6.8)	**4.6** (3.8-5.6)	**5.0** (3.8-6.4)	**3.3** (2.6-4.2)	**3.0** (2.2-4.0)	**2.2** (1.9-2.7)	**1.6** (1.2-2.2)	**1.0** (0.6-1.7)	**1.6** (1.0-2.4)	**1.7** (1.4-2.2)	**1.8** (1.2-2.6)	**1.7** (1.1-2.7)	**2.3** (1.8-3.0)	**1.7** (1.2-2.3)	**1.6** (1.2-2.2)	**1.1** (0.8-1.5)	**1.5** (0.9-2.6)
Steroids (lifetime)	—	—	—	—	—	—	**1.3** (0.9-1.8)	**1.7** (1.4-2.1)	**1.6** (1.1-2.4)	**1.4** (1.0-2.0)	**1.4** (1.0-2.0)	**3.1** (2.2-4.3)	**3.4** (2.4-4.6)	**2.4** (1.8-3.3)	**1.7** (1.2-2.5)	**1.1** (0.6-1.8)	**1.0** (0.5-1.8)	**1.3** (0.7-2.5)
Any Illicit Drug, Incl. Cannabis	**25.9** (23.5-28.4)	**33.2** (30.1-36.4)	**27.8** (25.3-30.6)	**26.4** (23.9-29.2)	**24.0** (20.7-27.6)	**19.0** (15.9-22.5)	**16.2** (14.2-18.5)	**13.8** (11.9-16.0)	**17.9** (15.1-21.0)	**27.7** (23.6-32.2)	**28.2** (25.6-31.0)	**29.8** (26.4-33.4)	**29.8** (25.8-34.0)	**30.1** (27.7-32.6)	**24.2** (22.0-26.5)	**25.6** (23.2-28.2)	**22.8** (20.8-24.9)	**21.2** (18.9-23.8)
Any Illicit Drug, Excl. Cannabis	**14.5** (13.0-16.1)	**19.7** (17.7-21.8)	**16.6** (15.0-18.3)	**19.7** (17.5-22.0)	**16.2** (14.0-18.7)	**13.4** (11.5-15.6)	**11.3** (9.9-12.9)	**9.1** (7.5-11.0)	**12.9** (10.4-15.9)	**18.1** (14.6-22.2)	**17.3** (15.0-20.0)	**18.4** (15.3-21.9)	**16.8** (14.7-19.2)	**14.0** (12.3-15.9)	**11.1** (9.7-12.7)	**11.8** (10.5-13.3)	**9.4** (8.1-10.9)	**9.7** (7.7-12.2)

Notes: (1) entries in brackets are 95% confidence intervals; (2) NM = non-medical use, without a doctor's prescription; (3) † estimate suppressed (< 0.5%); (4) estimates for "Any illicit" drug include cannabis, LSD, mushrooms/mescaline, methamphetamine, heroin, cocaine, crack (except for years prior to 1987), ecstasy (except for years prior to 1991), stimulants (NM), tranquillizers/sedatives (NM).
Source: OSDUHS, Centre for Addiction & Mental Health

Table A5: Significant Subgroup Differences in Past Year Drug Use, 2011 OSDUHS

	Cigarettes	Smokeless Tobacco	Alcohol	Binge Drinking	Cannabis	Inhalants	LSD	Mushrooms/Mesc.	Jimson Weed	Salvia Divinorum	Cocaine	Ecstasy	Ketamine	OxyContin (NM)	Opioid Pain Relievers (NM)	Stimulants (NM)	Tranquillizers (NM)	OTC Cough/Cold Medication	High-Caffeine Energy Drinks	Any NM Prescription Drug Use	Any Illicit Drug, incl. NM Prescription Drug
Sex Effect	ns	***	ns	ns	ns	ns	**	***	*	*	ns	ns	**	ns	ns	**	ns	**	ns	**	ns
		M ↑					M ↑	M ↑	M ↑	M ↑			M ↑			F ↑		M ↑		F ↑	
Grade Effect	***	***	***	***	***	***	**	***	ns	**	***	***	ns	***	***	***	***	*	**	***	***
(compared with previous grade)			8 ↑ 7	8 ↑ 7	8 ↑ 7							8 ↑ 7						8 ↑ 7			
			9 ↑ 8	9 ↑ 8	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
	11 ↑ 10		11 ↑ 10	11 ↑ 10	11 ↑ 10		11 ↑ 10	11 ↑ 10			11 ↑ 10	11 ↑ 10				11 ↑ 10				11 ↑ 10	
							12 ↓ 11					12 ↓ 11									
Region Effect	*	*	*	***	**	ns	ns	ns	ns	ns	**	ns	ns	ns	ns	ns	ns	ns	***	ns	ns
(region compared with Ontario)			T ↓	T ↓	T ↓						T ↓								T ↓		
	N ↑		N ↑	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) grade contrasts for inhalant use compares with the next grade level; (4) ns=non-significant; (5) binge drinking refers to the past month; (6) NM=non-medical use, without a doctor's prescription; (7) use of methamphetamine, crack, heroin, ADHD drugs (NM) showed no significant differences according to sex, grade, or region and therefore are not presented.

Source: OSDUHS, Centre for Addiction & Mental Health

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