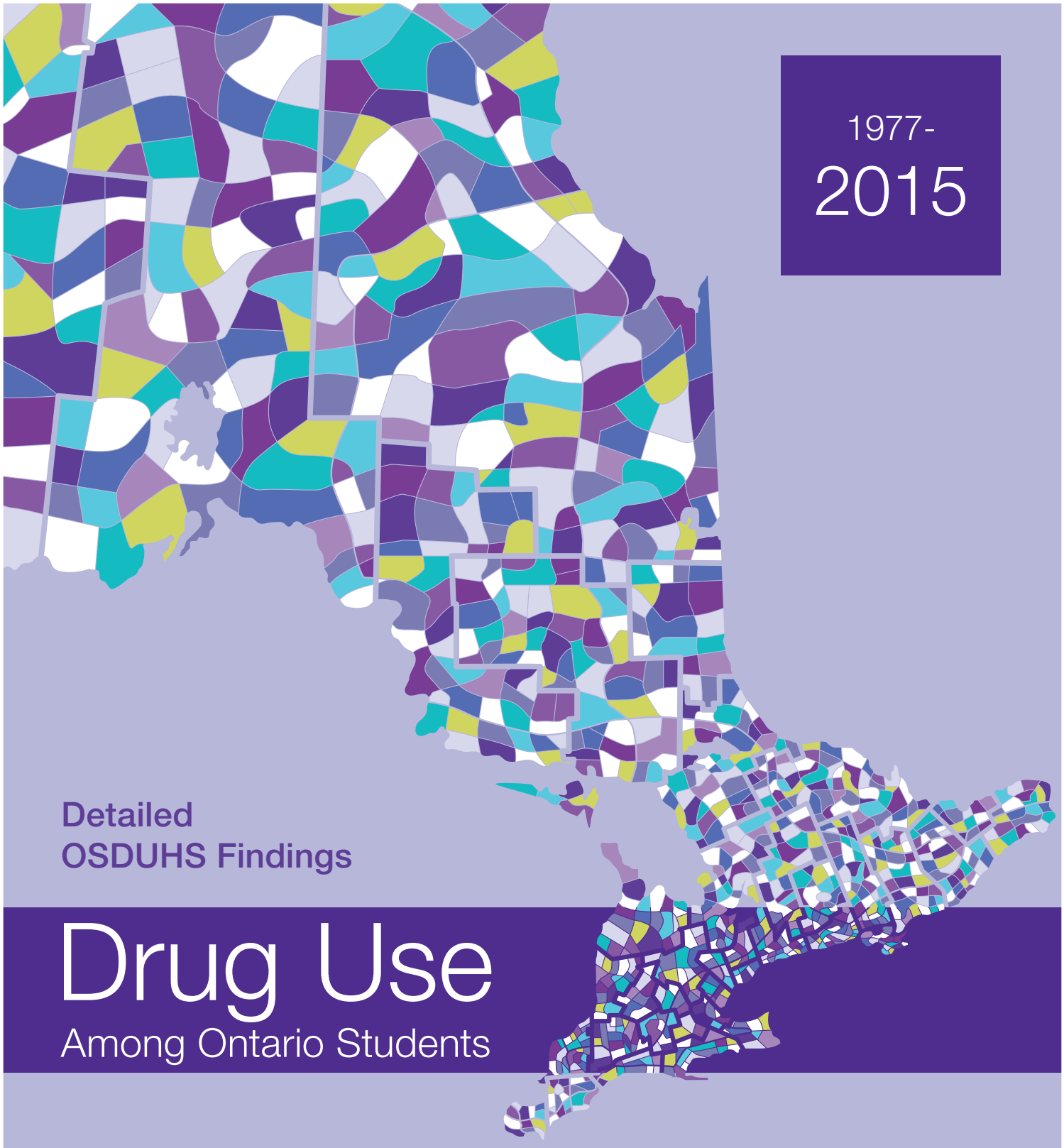


1977-
2015

Detailed
OSDUHS Findings

Drug Use
Among Ontario Students

avec résumé
en français à
l'intérieur

with French
summary
within

camh OSDUHS
Ontario Student Drug
Use and Health Survey

1977-
2015

Detailed
OSDUHS Findings

Drug Use
Among Ontario Students

CAMH Research Document Series
No. 41

Angela Boak
Hayley A. Hamilton
Edward M. Adlaf
Robert E. Mann

camh OSDUHS
Ontario Student Drug
Use and Health Survey

1977-
2015

Detailed OSDUHS Findings

Drug Use
Among Ontario Students

ISBN: 978-1-77114-320-2 (PRINT)
ISBN: 978-1-77114-322-6 (PDF)
ISBN: 978-1-77114-321-9 (HTML)
ISBN: 978-1-77114-323-3 (ePUB)

Printed in Canada

Suggested citation for this report:

Boak, A., Hamilton, H. A., Adlaf, E. M., & Mann, R. E., (2015). Drug use among Ontario students, 1977-2015: Detailed OSDUHS findings (CAMH Research Document Series No. 41). Toronto, ON: Centre for Addiction and Mental Health.

This publication may be available in other formats. For information about alternate formats or other CAMH publications, or to place an order, please contact Sales and Distribution:

Toll-free: 1 800 661-1111
Toronto: 416 595-6059
E-mail: publications@camh.ca
Online store: http://store.camh.ca

Website: www.camh.ca

© 2015 CAMH 5277a / 11-2015

The 2015 OSDUHS Detailed Drug Use Report
Executive Summary

The Centre for Addiction and Mental Health's *Ontario Student Drug Use and Health Survey* (OSDUHS) is the longest ongoing school survey of adolescents in Canada, and one of the longest in the world. The study has been conducted every two years since 1977, and thus consists of 20 survey cycles to date. A total of 10,426 students (59% of selected students in participating classes) in grades 7 through 12 from 43 school boards, 220 schools, and 750 classes participated in the 2015 OSDUHS, which was administered by the Institute for Social Research, York University.

This report describes the past year use of alcohol, tobacco, illicit drugs, nonmedical (NM) use of prescription drugs, and other substances of concern, and changes 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 drug use in 2015 and relatively **recent trends (1999–2015)**, and the second is used to assess **long-term trends (1977–2015)**. All data are based on self-reports derived from anonymous questionnaires administered in classrooms between November 2014 and June 2015.

Past Year Drug Use (%) for the Total Sample, by Sex, and by Grade, 2015 OSDUHS (*n*=10,426)

	Total	Males	Females		G7	G8	G9	G10	G11	G12	
Drug Use Among Grades 7–12											
Alcohol	**45.8**	46.6	44.9		8.6	15.5	33.8	52.4	67.0	72.4	*
High-Caffeine Energy Drinks	**34.8**	40.6	28.6	*	19.2	22.9	32.9	36.3	40.6	45.9	*
Cannabis	**21.3**	22.0	20.5		s	s	10.3	25.2	35.1	37.2	*
Binge Drinking (5+ Drinks Past Month)	**17.6**	18.7	16.4		s	s	9.0	16.2	30.5	32.6	*
Electronic Cigarettes (Vape Pens)	**11.7**	14.5	8.7	*	s	s	8.8	12.3	19.7	17.2	*
Opioid Pain Relievers (NM)	**10.0**	9.6	10.4		9.5	7.2	6.9	10.1	10.9	13.0	*
Tobacco Cigarettes	**8.6**	9.1	8.2		s	s	3.8	10.7	12.5	15.3	*
Waterpipe (Hookah)	**8.3**	9.0	7.5		s	s	5.3	8.4	12.6	14.4	*
OTC Cough/Cold Medication	**6.4**	6.7	6.1		6.4	s	4.1	7.1	7.1	7.1	
Smokeless (Chewing) Tobacco	**6.3**	9.7	2.7	*	s	s	2.9	7.1	10.9	10.6	*
Inhalants (Glue or Solvents)	**2.8**	3.0	2.5		6.2	4.0	2.8	s	2.3	1.5	*
ADHD Drugs (NM)	**2.1**	2.1	2.0		s	s	0.8	1.5	3.4	3.8	*
Salvia Divinorum	**1.6**	2.2	1.0	*	s	s	s	s	2.2	4.1	*
Synthetic Cannabis ("Spice," "K2")	**1.3**	1.5	1.0		s	s	s	1.6	1.9	2.0	*
Drug Use Among Grades 9–12†											
Ecstasy (MDMA)	**5.4**	5.6	5.1		--	--	1.1	3.0	5.8	9.6	*
Cannabis Oil in an Electronic Cigarette	**5.1**	6.3	3.8	*	--	--	s	2.9	8.2	6.7	*
Mushrooms (Psilocybin) or Mescaline	**3.2**	4.2	2.2	*	--	--	s	2.7	4.3	4.4	*
Cocaine	**2.5**	2.5	2.5		--	--	s	1.1	3.1	4.5	*
Tranquillizers/Sedatives (NM)	**2.1**	1.3	3.0	*	--	--	0.5	2.0	2.8	2.8	*
Jimson Weed	**1.8**	1.6	2.0		--	--	s	s	s	s	
LSD	**1.5**	1.5	1.4		--	--	0.6	1.1	1.7	2.2	*
Methamphetamine (incl. Crystal Meth.)	**1.1**	1.1	1.1		--	--	s	s	s	s	
Mephedrone ("Bath Salts")	**0.7**	s	s		--	--	s	s	s	s	
Heroin	**0.5**	s	s		--	--	s	s	s	s	
Any NM Use of a Prescription Drug	**12.1**	11.6	12.7		--	--	7.3	11.7	13.3	15.0	*
Any Drug Use Excluding Cannabis	**21.5**	21.3	21.8		--	--	13.3	18.7	24.8	26.8	*
Any Drug Use Including Cannabis	**36.9**	37.3	36.4		--	--	18.9	32.4	45.8	45.7	*

Notes: † not asked of 7th and 8th graders; * statistically significant sex or grade difference ($p<.05$), *not* controlling for other factors; s=estimate suppressed due to unreliability; estimate for alcohol excludes "a sip"; estimates for tobacco cigarettes, electronic cigarettes, and waterpipe excludes smoking a few puffs; OTC=over-the-counter drug used to "get high"; NM= nonmedical use, without a doctor's prescription; "Any NM Use of a Prescription Drug" refers to nonmedical use of opioids, Attention-Deficit-Hyperactivity-Disorder (ADHD) drugs, or tranquillizers/sedatives; "Any Drug Use Including Cannabis" refers to use of any one of *18 drugs* (excludes alcohol, tobacco and electronic cigarettes, waterpipe, and high-caffeine energy drinks); estimates for crack and modafinil (NM) were suppressed due to unreliability (extremely low values).

2015 Subgroup Differences

- Among the drugs asked about in the 2015 survey, females are more likely than males to report past year nonmedical use of tranquillizers/sedatives.

- Males are more likely than females to report the past year use of:
  - high-caffeine energy drinks
  - electronic cigarettes (any type)
  - cannabis in an electronic cigarette
  - smokeless tobacco
  - salvia divinorum
  - mushrooms/mescaline.

- Past year use varies by grade for most of the drug measures:
  - alcohol
  - high-caffeine energy drinks
  - cannabis
  - binge drinking
  - electronic cigarettes (any type)
  - opioid pain relievers (nonmedical use)
  - tobacco cigarettes
  - waterpipe (hookah)
  - smokeless tobacco
  - inhalants
  - ADHD drugs (nonmedical use)
  - salvia divinorum
  - synthetic cannabis ("spice," "K2")
  - ecstasy
  - cannabis in an electronic cigarette
  - mushrooms/mescaline
  - cocaine
  - tranquillizers (nonmedical use)
  - LSD
  - any prescription drug (nonmedical use)
  - indices measuring any drug use, both including and excluding cannabis.

Use of these drugs tends to increase with grade with the exception of inhalant use, which decreases with grade.

Historically, the survey design has divided the province into four regions: 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).

- There are significant regional differences in the past year use of several drugs. Whereas students in the West region do not significantly differ from the provincial average on any drug use measure, students in Toronto, the North, and East regions do differ from the average, as shown in the table below.

Use in Region Below Provincial Average	Use in Region Above Provincial Average
Toronto	
• Smokeless Tobacco • Alcohol	• Inhalants
Northern Ontario	
	• Tobacco Cigarettes • Alcohol • Binge Drinking
Eastern Ontario	
• Inhalants	• Tobacco Cigarettes • Electronic Cigarettes

Readers should note that an overview of results according to Ontario's Local Health Integration Networks (LHINs) is provided in the report on page 267, and results for the Greater Toronto Area (GTA) on page 270.

Changes in Past Year Drug Use, 2015 vs. 2013

Among the total sample of students, one drug showed an **increase** in use between the previous survey in 2013 and the 2015 survey. The past year use of ecstasy increased from 3.3% to 5.4% (among grades 9–12 only).

Significant **decreases** between 2013 and 2015 were found for three drugs:

- nonmedical use of prescription opioids (from 12.4% in 2013 to 10.0% in 2015),
- nonmedical use of over-the-counter cough or cold medication (from 9.7% to 6.4%), and
- high-caffeine energy drinks (from 39.7% to 34.8%).

	2013 Past Year Use		2015 Past Year Use
Prescription Opioids (NM)	12.4%	↓	10.0%
OTC cough cold/ medication (NM)	9.7%	↓	6.4%
Energy Drinks	39.7%	↓	34.8%
Ecstasy	3.3%	↑	5.4%

The index measuring any nonmedical use of a prescription drug (i.e., opioids, tranquillizers, or ADHD drugs) in the past year also decreased between 2013 and 2015 (from 15.2% to 12.1%). This decrease was mainly due to the decrease in prescription opioids between these two years, as shown above.

1999–2015 Drug Use Trends

Other than the increase in ecstasy use between 2013 and 2015, the only other drug use measure showing a significant **increase** in recent years is the nonmedical use of an ADHD drug (e.g., Ritalin, Adderall, Concerta). The percentage reporting the nonmedical use of an ADHD drug in 2015 (2.1%) is significantly higher than the estimate from 2007 (1.0%), the first year of monitoring.

There have been many significant **decreases** in past year drug use during the period between 1999 and 2015:

- alcohol: from 66.0% to 45.8%
- binge drinking: from 27.6% to 17.6%
- energy drinks: from 49.5% (2011) to 34.8%
- cannabis: from 28.0% to 21.3%
- opioids (NM): from 20.6% (2007) to 10.0%
- tobacco cigarettes: from 28.4% to 8.6%
- inhalants: from 8.9% to 2.8%
- salvia divinorum: from 4.4% (2009) to 1.6%
- mushrooms:* from 17.1% to 3.2%
- ecstasy:* from 7.9% (2001) to 5.4%
- cocaine:* from 5.7% (2003) to 2.5%
- LSD:* from 8.8% to 1.5%
- methamphetamine:* from 6.3% to 1.1%
- heroin:* from 2.1% to 0.5%
- crack:* from 3.2% to <0.5%.

- Any nonmedical use of a prescription drug decreased between 2007 and 2015 (from 23.5% to 12.1%) among grades 9–12.

- Any use of at least one of *nine* drugs (including cannabis) measured over time, significantly decreased between 1999 and 2015 (from 39.2% to 29.0%) among grades 9–12.

- A similar measure to that above, but excluding cannabis, also significantly decreased between 1999 and 2015 (from 22.8% to 9.1%) among grades 9–12.

* among grades 9-12 only (not asked of grade 7 and 8 students)

1999–2015 Drug Use Trends by Sex

Males show no significant increase in the past year use of any drug since the previous survey in 2013. Females, however, show significant increases since 2013 in the past year use of two drugs. Ecstasy use among females significantly increased from 2.6% in 2013 to 5.1% in 2015. The nonmedical use of an ADHD drug among females significantly increased from 0.9% in 2013 to 2.0% in 2015.

However, both sexes show many decreases in drug use since 1999. These are listed in the table below.

Decreases in Past Year Drug Use by Sex, 1999–2015

Males	Females
• Tobacco Cigarettes	• Tobacco Cigarettes
• Alcohol	• Alcohol
• Binge Drinking	• Binge Drinking
• Cannabis	• Inhalants
• Inhalants	• LSD
• Salvia Divinorum	• Mushrooms/Mescaline
• LSD	• Methamphetamine
• Mushrooms/Mescaline	• Cocaine
• Methamphetamine	• Crack
• Cocaine	• **Energy Drinks**
• Crack	• Opioids (NM)
• Heroin	• Any Prescription Drug (NM)
• Ecstasy	• Any Drug incl. Cannabis
• **Energy Drinks**	• Any Drug excl. Cannabis
• **Cough/Cold Meds. (NM)**	
• **Opioids (NM)**	
• **Any Prescription Drug (NM)**	
• Any Drug incl. Cannabis	
• Any Drug excl. Cannabis	

Notes: (1) bolded text indicates decrease in 2015 vs. 2013 (previous survey); (2) NM=nonmedical use

Long-Term Drug Use Trends: 1977–2015 (Grades 7, 9, and 11 only)

Many past year prevalence estimates for drugs monitored since 1977 show a common pattern of use: a peak in the late 1970s, a decline in use during the late 1980s or early 1990s, a second peak in the late 1990s or early 2000s, followed by another decline. The long-term changes can be further categorized into the following five patterns:

Pattern 1: After peaking in the late 1970s/early 1980s and again in the late 1990s, past year prevalence has reached an all-time low in recent years:

- tobacco cigarettes
- alcohol
- LSD
- methamphetamine (includes crystal methamphetamine).

Pattern 2: Prevalence in 2015 is significantly lower than the peaks seen in the late 1970s and late 1990s (2003 for cocaine), and current use is similar to the lows seen in the early 1990s:

- binge drinking
- inhalants
- mushrooms/mescaline
- cocaine.

Pattern 3: Pattern 3 is similar to pattern 2, with one important difference – current use is significantly *higher* compared with the low levels of use seen in the early 1990s:

- cannabis.

Pattern 4: Prevalence shows only one peak in the late 1990s or early 2000s (or the late 1970s for tranquillizers), a decline during the 2000s, and stability in recent years:

- ecstasy
- crack
- tranquillizers/sedatives (NM).

Pattern 5: Prevalence has been very low and stable for decades:

- heroin.

Tracking Emerging Drugs

- The OSDUHS regularly includes new questions about emerging drugs. New to the 2015 cycle was a question about using cannabis oil/liquid/wax in an electronic cigarette in the past year ("vaping cannabis"). The survey shows that about 5% of high school students report using cannabis in an electronic cigarette (representing about 35,300 high school students in Ontario).
- The OSDUHS began to track the use of synthetic cannabis (more commonly known as "spice" or "K2") in the 2013 cycle. In 2015, about 1% of students in grades 7 through 12 (representing about 12,100 students in Ontario) used synthetic cannabis in the past year. There was no significant change in use between 2013 and 2015.
- The 2015 past year prevalence estimate for mephedrone ("bath salts"), first tracked in the 2011 cycle, is 0.7% among high school students. Use of this synthetic drug has remained very low and stable. Thus, there is no evidence that it has measurably diffused into the mainstream student population.

Tobacco and Alternative Smoking Devices Overview

- In 2015, about 9% of students in grades 7–12 (an estimated 82,700 in Ontario) report smoking cigarettes (more than just a few puffs) during the past year. About 3% of students (about 29,400) smoke cigarettes on a daily basis. The consistent downward trend in cigarette smoking seen since the late 1990s appears to have halted, as estimates have remained at about 9% for three survey cycles (since 2011).
- A similar percentage of males (9%) and females (8%) smoke tobacco cigarettes. The prevalence of cigarette smoking significantly increases with grade, reaching 15% among 12th graders.
- The most common source of tobacco cigarettes reported by students who smoke is a friend or family member.
- About 3% of all students (an estimated 31,400 in Ontario) report smoking contraband cigarettes in the past year. Among past year smokers, 39% report smoking contraband cigarettes.
- Smokeless tobacco (a.k.a. chewing tobacco, dipping tobacco, snuff) is used by about 6% of students in grades 7–12 (an estimated 58,200 in Ontario).
- About 8% of students in grades 7–12 (76,200 students in Ontario) report smoking more than just a few puffs from a waterpipe (hookah) in the past year. There was no significant change in waterpipe use between 2013 and 2015.
- For the first time in 2015, students in all grades (7–12) were asked about using an electronic cigarette in the past year. About 12% of students (an estimated 107,800 in Ontario) report using more than just a few puffs of an electronic cigarette, with or without nicotine. Males (15%) are more likely than females (9%) to use electronic cigarettes. Among the grades, students in 11th grade (20%) and 12th grade (17%) are most likely to use.
- About half (51%) of past year electronic cigarette users report using electronic cigarettes without nicotine. One-fifth (19%) of users report using electronic cigarettes with nicotine, 12% report using both types, and 18% report not knowing what type they used.

Alcohol Overview

- Just under half (46%) of all students – an estimated 439,200 in Ontario – report drinking more than just a few sips of alcohol during the past year. Males (47%) and females (45%) are equally likely to drink. Past year drinking varies by grade (increasing from 9% of 7th graders to 72% of 12th graders).

- Alcohol use has been declining gradually since about 1999, reaching a historical low in 2013 and remaining stable since then.

- Drinking alcohol mixed with an energy drink is reported by about 14% of students.

- About one-in-six (18%) students (an estimated 168,100 in Ontario) report binge drinking (defined as 5+ drinks on one occasion) at least once during the month before the survey. A similar percentage (16%) report getting drunk at least once in the past month. Males and females are equally likely to binge drink and get drunk. About one-third of 12th graders report binge drinking and getting drunk at least once in the past month.

- Playing drinking games (such as beer pong) at least once in the past month is reported by about one-fifth (22%) of students in grades 9–12.

- About one-in-five (20%) students in grades 9–12 – representing an estimated 138,500 high school students in Ontario – report drinking hazardously or harmfully, as measured by the *AUDIT* screener. Males and females are equally likely to drink at this level. Hazardous/harmful drinking increases with grade, peaking at 29% among 12th graders.

- One-in-five (19%) high school students could not remember what had happened when they were drinking on at least one occasion during the past year. One-in-ten (9%) report that they were injured or someone else was injured because of their drinking.

- Among past year drinkers, the most common method of obtaining alcohol is to receive it from a family member.

- For the first time in 2015, high school students were asked whether or not their parents allow them to drink alcohol at home during parties or get-togethers with their friends. Just over one-quarter (27%) of students report that they are allowed to drink at home with their friends. There is no difference between males and females. There is significant grade variation, ranging from 9% of 9th graders to 38% of 12th graders.

Cannabis Overview

- One-in-five (21%) students in grades 7–12 – an estimated 203,900 in Ontario – report using cannabis in the past year. Males and females are equally likely to use. Use increases with each grade level, ranging from a negligible proportion of 7th graders up to about 37% among 12th graders.

- Past year cannabis use held steady between 2013 and 2015, but has shown a gradual decline since 1999.

- About 2% of students use cannabis daily – an estimated 20,000 students in Ontario.

- About 2% of students in grades 9–12 (an estimated 14,900) report symptoms of cannabis dependence, as measured by the *Severity of Dependence Scale*.

- Among past year cannabis users, the most common method of obtaining cannabis is through sharing around a group of friends.

Nonmedical Use of Prescription Drugs

- The OSDUHS also asks students about use of the general class of prescription opioid pain relievers (e.g., Percocet, Percodan, Tylenol #3, Demerol, codeine) without a prescription. One-in-ten (10%) students in grades 7–12 – an estimated 95,000 in Ontario – report using a prescription opioid pain reliever nonmedically in the past year. The majority (59%) of past year users report obtaining the drug from someone at home.

- About 2% of students in grades 7–12 (an estimated 19,900) report using a drug typically used to treat Attention Deficit/Hyperactivity Disorder (ADHD) in children (e.g., Ritalin, Concerta, Adderall, Dexedrine) without a prescription.

Nonmedical Use of Over-the-Counter Drugs

- Students were asked about their use of over-the-counter (OTC) cough and cold medications containing the drug dextromethorphan in order to "get high." Overall, 6% of students in grades 7–12 (an estimated 60,600 in Ontario) report using this type of medication to "get high" during the past year.

High-Caffeine Energy Drinks

- Students were asked about their use of highly caffeinated energy drinks (e.g., Red Bull, Rockstar, Monster, Amp) during the past year and the past week. About 35% of all students (an estimated 326,800 in Ontario) report drinking an energy drink at least once in the past year. One-in-eight (12%) students (an estimated 112,400) report drinking an energy drink at least once during the week before the survey.

Past Year Abstinence

- About 42% of students in grades 7 through 12 (an estimated 384,400 in Ontario) report using no drug at all during the past year (this includes alcohol, cigarettes and other smoking devices, but excludes high-caffeine energy drinks). Males and females are equally likely to abstain from drug use. Past year abstinence significantly decreases with grade, from 69% of 7th graders down to 22% of 12th graders.

- The percentage of students reporting no drug use in 2015 is similar to the estimate from 2013. However, between 1999 and 2015, there was an increasing trend in abstinence, from 27% to 42%.

Consequences and Problems Related to Alcohol and Other Drug Use

Vehicles

- One-in-seven (15%) students in grades 7–12 report riding in a vehicle driven by someone who had been drinking alcohol, and one-in-eight (12%) report riding in a vehicle driven by someone who had been using drugs at least once in the past year. The proportion of students reporting these behaviours has significantly decreased during the past decade.

- About 5% of 10th through 12th graders with a G-Class driver's licence report driving a vehicle within an hour of consuming two or more drinks of alcohol at least once during the past year (an estimated 15,300 adolescent drivers in Ontario). Drinking and driving did not change between 2013 (4%)

and 2015 (5%). However, the current estimate is significantly lower than the estimates observed about a decade ago, and especially lower than those found in the late 1970s and early 1980s.

- The percentage of drivers in grades 10–12 reporting driving after cannabis use is higher than the percentage reporting driving after drinking. One-in-ten (10%) drivers report driving a vehicle within one hour of using cannabis at least once during the past year (an estimated 29,500 adolescent drivers in Ontario). Cannabis use and driving did not change between 2013 and 2015 (both years 10%). However, the current estimate is significantly lower than estimates from about a decade ago.

Drug Use Problem

- One-in-six (16%) students in grades 9–12 (an estimated 114,600) report symptoms of a drug use problem, as measured by the *CRAFFT* screener.
- A very small proportion (0.6%) of students in grades 9–12 (an estimated 4,200) report that they had been in a treatment program during the past year because of their alcohol and/or drug use.

Coexisting Hazardous/Harmful Drinking and Psychological Distress

- One-in-ten (10%) students in grades 9–12 (an estimated 65,400 in Ontario) report both hazardous/harmful drinking and psychological distress (i.e., symptoms of anxiety and depression). Females are more likely than males to report these two coexisting problems (14% vs. 6%, respectively).

Other Highlights

Multi-Drug Use and Injection Drug Use

- About 6% of students in grades 9–12 (42,400 in Ontario) report smoking tobacco cigarettes, drinking alcohol, using cannabis, *and* at least one other drug in the past year.
- A very small proportion (< 0.5%) of students in grades 9–12 report using an illegal drug by injection during the past year.

New Users and Early Initiation

- The percentage of students in grades 7–12 reporting first-time drug use during the past year is as follows: 6% for tobacco cigarettes, 16% for electronic cigarettes, 19% for alcohol, 10% for cannabis, and 4% for illicit drugs other than cannabis. New users are most likely to be in grades 9, 10, or 11.
- Fewer students today are smoking cigarettes, drinking alcohol, and using cannabis at an early age compared with their counterparts from past decades. For example, less than 0.5% of 7th graders in 2015 smoked their first whole tobacco cigarette before the end of grade 6, compared with 27% in 1997, and 41% in 1981.
- In 2015, 14% of 7th graders had their first alcoholic drink before the end of grade 6, compared with 42% in 2003, and 50% in 1981.
- In 2015, less than 0.5% of 7th graders used cannabis for the first time before the end of grade 6, compared with 5% in 2003, and 7% in 1981.
- In 2015, the average age at which 12th-grade smokers reported smoking their first cigarette was 14.7 years. The average age at first alcoholic drink among 12th-grade drinkers was 14.8 years, and the first time they were drunk was at age 15.2. The

average age at first cannabis use among 12th-grade users was 15.3 years.

- The average age at first tobacco cigarette, first alcoholic drink, and first cannabis use has increased over the decades.

Perceived Risk and Disapproval Associated with Drug Use

- Students in grades 7 and 8 believe that the greatest risk of harm is associated with regular marijuana use, followed by using a prescription opioid nonmedically (NM). Students in grades 9–12 believe the greatest risk is associated with NM prescription opioid use, followed by trying cocaine. Trying marijuana, waterpipe use, and electronic cigarette use rank among the lowest drug-using behaviours in terms of perceived risk.

- The perceived risk of harm associated with marijuana use (trying and regular use) is currently lower than estimates from 1999. The perceived risk of trying ecstasy shows a downward trend since 2009. The perceived risk of regular waterpipe use decreased between 2013 and 2015. The perceived risk associated with daily smoking and trying cocaine has increased over time.

- The majority of students in grades 7 and 8 disapprove of marijuana use (trying and regular use). The majority of students in grade 9–12 disapprove of trying cocaine and trying ecstasy.

Perceived Availability of Drugs

- In 2015, among students in grades 7–12, the drug perceived to be most readily available is alcohol (65% report that it would be "fairly easy" or "very easy" to obtain), followed by tobacco cigarettes (53%), and cannabis (46%).

- Between 2013 and 2015, the perceived availability of tobacco cigarettes decreased, while the perceived availability of ecstasy increased.

- Cannabis, cocaine, LSD, and ecstasy are perceived to be less readily available today than about a decade ago.

School and Neighbourhood

- Of all the grades surveyed, students in grades 7, 8, and 9 are most likely to report receiving education at school about alcohol, cannabis, and other drugs.

- One-quarter (26%) of students in grades 7–12 indicate that drug use in their school is a "big problem," 49% believe that drug use is a "small problem," and 25% believe that it is "not a problem" in their school.

- One-in-eight (12%) students in grades 7–12 (an estimated 110,400 in Ontario) report being drunk or high at school at least once in the past year.

- One-in-six (17%) students in grades 7–12 (an estimated 158,200 in Ontario) report having been offered, sold, or given an illegal drug at school at least once in the past year.

- One-in-ten (10%) students in grades 7–12 indicate that most or all of their closest friends use drugs.

- One-quarter (25%) of students in grades 7–12 (an estimated 226,900 in Ontario) report that someone tried to sell them drugs anywhere at least once in the past year.

- One-in-five (22%) students in grades 7–12 (an estimated 200,000) report seeing drugs being sold in their own neighbourhood at least once in the past year.

Résumé du rapport détaillé sur la consommation de drogues – SCDSEO 2015

Réalisé par le Centre de toxicomanie et de santé mentale, le *Sondage sur la consommation de drogues et la santé des élèves de l'Ontario* (SCDSEO) est le plus ancien sondage mené auprès d'adolescents en milieu scolaire au Canada et l'un des plus longs dans le monde. Il est réalisé tous les deux ans depuis 1977. Vingt cycles d'enquête ont eu lieu jusqu'à maintenant. Au total, 10 426 élèves (59 % des élèves choisis dans les classes participantes) de la 7e à la 12e année répartis dans 43 conseils scolaires, 220 écoles et 750 classes ont participé au SCDSEO 2015, qui a été administré par l'Institut de recherche sociale de l'Université York.

Le rapport décrit la consommation d'alcool, de tabac, de drogues illicites, de médicaments sur ordonnance à des fins non médicales (NM) et d'autres substances préoccupantes au cours de l'année écoulée, ainsi que les changements survenus depuis 1977. Les tendances sont fournies pour deux groupes d'élèves constitués à des fins d'analyse : ceux de la 7e à la 12e année, d'une part, et ceux des 7e, 9e et 11e années, d'autre part. Le premier groupe sert à évaluer la consommation en 2015 et les **tendances relativement récentes (de 1999 à 2015)** et le second à évaluer les **tendances à long terme (de 1977 à 2015)**. Toutes les données reposent sur les réponses des élèves à des questionnaires anonymes administrés en classe entre novembre 2014 et juin 2015.

Consommation de drogues (en pourcentage) au cours de l'année écoulée parmi l'échantillon total, selon le sexe et l'année d'études, SCDSEO 2015 (n = 10 426)

	Total	Garçons	Filles		7e	8e	9e	10e	11e	12e	
Consommation de drogues (7e-12e année)											
Alcool	**45,8**	46,6	44,9		8,6	15,5	33,8	52,4	67	72,4	*
Boissons énergisantes fortement caféinées	**34,8**	40,6	28,6	*	19,2	22,9	32,9	36,3	40,6	45,9	*
Cannabis	**21,3**	22	20,5		s	s	10,3	25,2	35,1	37,2	*
Excès occasionnels d'alcool (plus de 5 verres au cours du mois écoulé)	**17,6**	18,7	16,4		s	s	9	16,2	30,5	32,6	*
Cigarettes électroniques (vaporettes)	**11,7**	14,5	8,7	*	s	s	8,8	12,3	19,7	17,2	*
Analgésiques opioïdes (usage NM)	**10**	9,6	10,4		9,5	7,2	6,9	10,1	10,9	13	*
Cigarettes de tabac	**8,6**	9,1	8,2		s	s	3,8	10,7	12,5	15,3	*
Pipes à eau (narguilés)	**8,3**	9	7,5		s	s	5,3	8,4	12,6	14,4	*
Antitussifs et antirhumes en vente libre	**6,4**	6,7	6,1		6,4	s	4,1	7,1	7,1	7,1	
Tabac sans fumée (tabac à chiquer)	**6,3**	9,7	2,7	*	s	s	2,9	7,1	10,9	10,6	*
Substances inhalées (colle ou solvants)	**2,8**	3	2,5		6,2	4	2,8	s	2,3	1,5	*
Médicaments pour le TDAH (usage NM)	**2,1**	2,1	2		s	s	0,8	1,5	3,4	3,8	*
Salvia divinorum	**1,6**	2,2	1	*	s	s	s	s	2,2	4,1	*
Cannabis synthétique (« spice », « K2 »)	**1,3**	1,5	1		s	s	s	1,6	1,9	2	*
Consommation de drogues (9e-12e année)†											
Ecstasy (MDMA)	**5,4**	5,6	5,1		--	--	1,1	3	5,8	9,6	*
Cannabis (huile) dans une cigarette électronique	**5,1**	6,3	3,8	*	--	--	s	2,9	8,2	6,7	*
Champignons (psilocybine) ou mescaline	**3,2**	4,2	2,2	*	--	--	s	2,7	4,3	4,4	*
Cocaïne	**2,5**	2,5	2,5		--	--	s	1,1	3,1	4,5	*
Tranquillisants ou sédatifs (usage NM)	**2,1**	1,3	3	*	--	--	0,5	2	2,8	2,8	*
Stramoine	**1,8**	1,6	2		--	--	s	s	s	s	
LSD	**1,5**	1,5	1,4		--	--	0,6	1,1	1,7	2,2	*
Méthamphétamine (y compris cristaux)	**1,1**	1,1	1,1		--	--	s	s	s	s	
Méphédrone (« sels de bain »)	**0,7**	s	s		--	--	s	s	s	s	
Héroïne	**0,5**	s	s		--	--	s	s	s	s	
Tout médicament sur ordonnance (usage NM)	**12,1**	11,6	12,7		--	--	7,3	11,7	13,3	15	*
Toute drogue, sauf cannabis	**21,5**	21,3	21,8		--	--	13,3	18,7	24,8	26,8	*
Toute drogue, y compris cannabis	**36,9**	37,3	36,4		--	--	18,9	32,4	45,8	45,7	*

Nota : † questions non posées aux élèves de 7e et de 8e année; * différence statistiquement significative entre les sexes ou années d'études ($p < 0,05$), *sans* tenir compte d'autres facteurs; s = estimation supprimée pour raison de fiabilité; les estimations pour l'alcool excluent « une gorgée »; les estimations pour les cigarettes de tabac, les cigarettes électroniques et les pipes à eau excluent « quelques bouffées »; médicament en vente libre = utilisé à des fins non médicales pour « planer »; NM = usage non médical, sans ordonnance d'un médecin; « Tout médicament sur ordonnance (usage NM) » renvoie à l'usage NM d'opioïdes, de médicaments pour le trouble d'hyperactivité avec déficit de l'attention (TDAH) et de tranquillisants ou sédatifs; « Toute drogue, y compris cannabis » renvoie à l'usage de l'une quelconque des *18 drogues* (sauf l'alcool, les cigarettes de tabac, les cigarettes électroniques, les pipes à eau et les boissons énergisantes fortement caféinées); les estimations pour le crack et le modafinil (usage NM) ont été supprimées pour raison de fiabilité (valeurs extrêmement faibles).

Différences entre les sous-groupes pour 2015

- En ce qui concerne les substances intoxicantes étudiées lors du sondage de 2015, les filles étaient plus susceptibles que les garçons de déclarer avoir pris des tranquillisants ou des sédatifs à des fins non médicales au cours de l'année écoulée.

- Les garçons étaient plus susceptibles que les filles de déclarer avoir consommé ou utilisé au cours de l'année écoulée :
  - des boissons énergisantes fortement caféinées;
  - des cigarettes électroniques (tous les types);
  - du cannabis dans une cigarette électronique;
  - du tabac sans fumée;
  - de la Salvia divinorum;
  - des champignons ou de la mescaline.

- On a noté des variations, liées à l'année d'études, au cours de l'année écoulée dans la plupart des catégories étudiées :
  - alcool;
  - boissons énergisantes fortement caféinées;
  - cannabis;
  - excès occasionnels d'alcool;
  - cigarettes électroniques (tous les types);
  - analgésiques opioïdes (usage NM);
  - cigarettes de tabac;
  - pipes à eau (narguilés);
  - tabac sans fumée;
  - substances inhalées;
  - médicaments pour le TDAH (usage NM);
  - salvia divinorum;
  - cannabis synthétique (« spice », « K2 »);
  - ecstasy;
  - cannabis dans une cigarette électronique;
  - champignons ou mescaline;
  - cocaïne;
  - tranquillisants (usage NM);
  - LSD;
  - tout médicament sur ordonnance (usage NM);
  - paramètres mesurant toute consommation de substances intoxicantes, que l'on inclue ou non le cannabis.

Plus l'année d'études avançait, plus l'usage de ces substances intoxicantes avait tendance à augmenter, à l'exception des substances inhalées, dont l'usage diminuait au fil des années d'études.

Aux fins du sondage, la province a toujours été divisée en quatre régions : Toronto; le Nord de l'Ontario (districts de Parry Sound et de Nipissing et régions plus au nord); l'Ouest de l'Ontario (district de Peel, comté de Dufferin et régions plus à l'ouest); et l'Est de l'Ontario (comtés de Simcoe et de York et régions plus à l'est).

- On a noté des différences régionales considérables dans la consommation de plusieurs substances intoxicantes au cours de l'année écoulée. Les élèves de la région de l'Ouest restent dans la moyenne provinciale pour toutes les drogues, mais ce n'est pas le cas des élèves de Toronto et des régions du Nord et de l'Est, comme le montre le tableau ci dessous.

Consommation inférieure à la moyenne provinciale	Consommation supérieure à la moyenne provinciale
Toronto	
• Tabac sans fumée • Alcool	• Substances inhalées
Nord de l'Ontario	
	• Cigarettes de tabac • Alcool • Excès occasionnels d'alcool
Est de l'Ontario	
• Substances inhalées	• Cigarettes de tabac • Cigarettes électroniques

Nota : Un aperçu des résultats, répartis selon les Réseaux locaux d'intégration des services de santé (RLISS) de l'Ontario, figure dans le rapport à la page 267 (en anglais seulement). De même, les résultats pour la région du grand Toronto (RGT) figurent à la page 270.

Changements dans la consommation de substances intoxicantes au cours de l'année écoulée : comparaison des résultats de 2015 et de 2013

Parmi l'échantillon total des élèves, on a relevé une **augmentation** de la consommation d'une drogue en 2015 depuis le sondage de 2013. En effet, la consommation d'ecstasy au cours de l'année écoulée a augmenté, passant de 3,3 % à 5,4 % (chez les élèves de la 9e à la 12 année seulement).

La consommation de trois substances intoxicantes a **diminué** considérablement de 2013 à 2015 :

- les opioïdes sur ordonnance utilisés à des fins non médicales (de 12,4 % en 2013 à 10 % en 2015);
- les antitussifs et les antirhumes en vente libre utilisés à des fins non médicales (de 9,7 % à 6,4 %);
- les boissons énergisantes fortement caféinées (de 39,7 % à 34,8 %).

	2013 Usage au cours de l'année écoulée		2015 Usage au cours de l'année écoulée
Opioïdes sur ordonnance (NM)	12,4 %	↓	10 %
Antitussifs et antirhumes en vente libre (NM)	9,7 %	↓	6,4 %
Boissons énergisantes	39,7 %	↓	34,8 %
Ecstasy	3,3 %	↑	5,4 %

On a également relevé une baisse de l'indice mesurant l'usage non médical d'un médicament sur ordonnance (p. ex., opioïdes, tranquillisants ou médicaments pour le TDAH) au cours de l'année écoulée entre 2013 et 2015 (de 15,2 % à 12,1 %). Cette baisse est surtout attribuable à la diminution enregistrée au chapitre des opioïdes sur ordonnance au cours de cette période, tel qu'indiqué ci-dessus.

Tendances relatives à la consommation de substances intoxicantes entre 1999 et 2015

Mise à part la hausse de la consommation d'ecstasy entre 2013 et 2015, la seule autre mesure de la consommation d'une substance intoxicante ayant affiché une **augmentation** importante ces dernières années est l'usage non médical d'un médicament pour le TDAH (p. ex., Ritalin, Adderall, Concerta). Le pourcentage d'élèves ayant déclaré avoir fait un usage non médical d'un médicament pour le TDAH en 2015 (2,1 %) est nettement plus élevé que l'estimation faite en 2007 (1 %), première année de la surveillance de cet usage.

On a relevé de nombreuses **baisses** importantes dans la consommation de substances intoxicantes entre 1999 et 2015 :

- alcool : de 66 % à 45,8 %
- excès d'alcool : de 27,6 % à 17,6 %
- boissons énergisantes : de 49,5 % (2011) à 34,8 %
- cannabis : de 28 % à 21,3 %
- opioïdes (NM) : de 20,6 % (2007) à 10 %
- cigarettes de tabac : de 28,4 % à 8,6 %
- substances inhalées : de 8,9 % à 2,8 %
- salvia divinorum : de 4,4 % (2009) à 1,6 %
- champignons* : de 17,1 % à 3,2 %
- ecstasy* : de 7,9 % (2001) à 5,4 %
- cocaïne* : de 5,7 % (2003) à 2,5 %

* Chez les élèves de la 9e à la 12e année seulement (la question n'a pas été posée aux élèves de la 7e et de la 8e année).

- LSD* : de 8,8 % à 1,5 %
- méthamphétamine* : de 6,3 % à 1,1 %
- héroïne* : de 2,1 % à 0,5 %
- crack* : de 3,2 % à <0,5 %

- Il y a eu une baisse de l'usage non médical d'un médicament sur ordonnance entre 2007 et 2015 (de 23,5 % à 12,1 %) chez les élèves de la 9e à la 12e année.

- Il y a eu une baisse importante de l'usage d'au moins une drogue d'un groupe de *neuf* (incluant le cannabis) entre 1999 et 2015 (de 39,2 % à 29 %) chez les élèves de la 9e à la 12e année.

- Il y a eu une baisse importante de l'usage de substances intoxicantes (paramètre de consommation semblable à celui ci-dessus, mais excluant le cannabis) entre 1999 et 2015 (de 22,8 % à 9,1 %) chez les élèves de la 9e à la 12e année.

Tendances relatives à la consommation de substances intoxicantes selon le sexe entre 1999 et 2015

On n'a relevé aucune hausse importante de la consommation de substances intoxicantes chez les garçons au cours de l'année écoulée par rapport aux résultats du sondage de 2013. Toutefois, la consommation de deux substances intoxicantes au cours de l'année écoulée a augmenté considérablement chez les filles. En effet, l'usage d'ecstasy est passé de 2,6 % en 2013 à 5,1 % en 2015. De plus, l'usage non médical d'un médicament pour le TDAH a augmenté considérablement, passant de 0,9 % en 2013 à 2 % en 2015.

On a relevé une baisse de la consommation de nombreuses substances intoxicantes chez les garçons et les filles depuis 1999. Ces substances sont énumérées dans le tableau suivant.

Baisse de la consommation de substances intoxicantes au cours de l'année écoulée selon le sexe entre 1999 et 2015

Garçons	Filles
• Cigarettes de tabac	• Cigarettes de tabac
• Alcool	• Alcool
• Excès occasionnels d'alcool	• Excès occasionnels d'alcool
• Cannabis	• Substances inhalées
• Substances inhalées	• LSD
• Salvia divinorum	• Champignons/mescaline
• LSD	• Méthamphétamine
• Champignons/mescaline	• Cocaïne
• Méthamphétamine	• Crack
• Cocaïne	• **Boissons énergisantes**
• Crack	• Opioïdes (NM)
• Héroïne	• Tout médicament sur ordonnance (NM)
• Ecstasy	• Toute drogue, y compris cannabis
• **Boissons énergisantes**	• Toute drogue, sauf cannabis
• **Antitussifs/antirhumes (NM)**	
• **Opioïdes (NM)**	
• **Tout médicament sur ordonnance (NM)**	
• Toute drogue, y compris cannabis	
• Toute drogue, sauf cannabis	

Nota : 1) Le texte en gras indique une baisse en 2015 par rapport à 2013 (sondage précédent); 2) NM = usage non médical.

Changements à long terme dans la consommation de substances intoxicantes entre 1977 et 2015 (7e, 9e et 11e années seulement)

On a effectué plusieurs estimations de la prévalence de la consommation de substances intoxicantes au cours de l'année écoulée depuis 1977 et celles-ci ont révélé une même tendance en matière de consommation : un sommet à la fin des années 1970, suivi d'une diminution graduelle à la fin des années 1980 ou au début des années 1990 et d'un deuxième sommet à la fin des années 1990 ou au début des années 2000, suivi par un autre déclin. Les cinq tendances suivantes ont été observées sur le plan des changements à long terme :

1re tendance : Après avoir atteint un sommet à la fin des années 1970, au début des années 1980 et à la fin des années 1990, la prévalence de la consommation des substances intoxicantes suivantes au cours de l'année écoulée a atteint une baisse inégalée ces dernières années :

- cigarettes de tabac;
- alcool;
- LSD;
- méthamphétamine (cristaux y compris).

2e tendance : En 2015, la prévalence de la consommation de substances intoxicantes a été nettement inférieure aux sommets observés à la fin des années 1970 et des années 1990 (et au sommet atteint en 2003 pour la cocaïne). Pour les substances suivantes, le taux de consommation actuel est comparable aux faibles taux observés au début des années 1990 :

- excès occasionnels d'alcool;
- substances inhalées;
- champignons ou mescaline;
- cocaïne.

3e tendance : La 3e tendance est semblable à la 2e, à une nuance d'importance près : la consommation actuelle de la substance suivante est nettement *supérieure* aux faibles taux observés au début des années 1990 :

- cannabis.

4e tendance : La prévalence de la consommation des substances suivantes, qui n'avait atteint qu'un seul sommet à la fin des années 1990 ou au début des années 2000 (ou à la fin des années 1970 pour les tranquillisants) et qui avait graduellement baissé durant les années 2000, s'est stabilisée ces dernières années :

- ecstasy;
- crack;
- tranquillisants ou sédatifs (usage NM).

5e tendance : Depuis plusieurs dizaines d'années, la prévalence de la consommation de la substance suivante est extrêmement faible et demeure stable :

- héroïne.

Recensement de drogues émergentes

- Le SCDSEO comprend régulièrement de nouvelles questions sur les drogues émergentes. En 2015, on a posé pour la première fois une question sur l'usage d'huile ou de cire de cannabis dans une cigarette électronique au cours de l'année écoulée. Environ 5 % des élèves du secondaire (quelque 35 300 élèves du secondaire en Ontario) ont déclaré avoir utilisé du cannabis dans une cigarette électronique.

- À l'aide du SCDSEO, on a commencé à suivre l'usage de cannabis synthétique (communément appelé « spice » ou « K2 ») lors du cycle de 2013. En 2015, environ 1 % des élèves de la 7e à la 12e année (quelque 12 100 élèves en Ontario) avaient consommé du cannabis synthétique pendant l'année écoulée. On n'a pas relevé de variation importante de l'usage entre 2013 et 2015.

- En 2015, la prévalence estimée de l'usage de méphédrone (« sels de bain ») au cours de l'année écoulée, que l'on a commencé à suivre lors du cycle de 2011, est de 0,7 % chez les élèves du secondaire. L'usage de cette substance synthétique est demeuré très faible et stable. Par conséquent, rien n'indique que l'usage de cette substance s'est répandu de façon mesurable chez les élèves.

Tabac et autres dispositifs utilisés pour fumer : vue d'ensemble

- En 2015, environ 9 % des élèves de la 7e à la 12e année (quelque 82 700 élèves en Ontario) ont dit avoir fumé la cigarette (plus que quelques bouffées) au cours de l'année écoulée. Environ 3 % des élèves (quelque 29 400 élèves) fument tous les jours. La tendance constante à la baisse au chapitre de l'usage de la cigarette observée depuis la fin des années 1990 semble s'être interrompue, car les estimations sont demeurées à environ 9 % pendant trois cycles d'enquête (depuis 2011).

- Un pourcentage semblable de garçons (9 %) et de filles (8 %) fument la cigarette. On observe une augmentation importante de la prévalence de l'usage de la cigarette d'une année d'études à l'autre pour atteindre 15 % chez les élèves de 12e année.

- La plupart des élèves ont déclaré que les cigarettes de tabac qu'ils fumaient leur étaient fournies par un ami ou un membre de la famille.

- Environ 3 % des élèves (quelque 31 400 élèves en Ontario) ont déclaré avoir fumé des cigarettes de contrebande au cours de l'année écoulée. Parmi les élèves ayant fumé au cours de l'année écoulée, 39 % ont déclaré avoir fumé des cigarettes de contrebande.

- Environ 6 % des élèves de la 7e à la 12e année (quelque 58 200 élèves en Ontario) ont consommé du tabac sans fumée (tabac à chiquer ou à priser).

- Environ 8 % des élèves de la 7e à la 12e année (quelque 76 200 élèves en Ontario) ont dit avoir fumé plus que quelques bouffées à l'aide d'une pipe à eau (narguilé) au cours de l'année écoulée. On n'a pas relevé de variation importante de l'usage des pipes à eau entre 2013 et 2015.

- En 2015, on a demandé pour la première fois aux élèves de la 7e à la 12e année s'ils avaient utilisé une cigarette électronique au cours de l'année écoulée. Environ 12 % des élèves (quelque 107 800 élèves en Ontario) ont indiqué qu'ils avaient fumé plus que quelques bouffées à l'aide d'une cigarette électronique, avec ou sans nicotine. Les garçons sont plus susceptibles que les filles (15 % par rapport à 9 %) d'utiliser une cigarette électronique. Pour ce qui est des années d'études, les élèves de 11e année (20 %) et ceux de 12e année (17 %) sont les plus susceptibles d'utiliser ce genre de cigarette.

- Environ la moitié (51 %) des élèves ayant utilisé une cigarette électronique au cours de l'année écoulée ont déclaré avoir fumé celles sans nicotine. Un cinquième (19 %) des utilisateurs ont déclaré avoir utilisé une cigarette électronique avec de la nicotine, 12 % ont déclaré avoir utilisé les deux types et 18 % ont dit ne pas savoir quel type ils avaient utilisé.

Alcool : vue d'ensemble

- Un peu moins de la moitié (46 %) de tous les élèves (environ 439 200 élèves en Ontario) ont dit avoir bu plus de quelques gorgées d'alcool au cours de l'année écoulée. La consommation d'alcool était à proportions égales chez les garçons (47 %) et les filles (45 %). La consommation au cours de l'année écoulée variait selon l'année d'études (allant de 9 % des élèves de 7e année à 72 % des élèves de 12e année).

- La consommation d'alcool diminue graduellement depuis 1999. Elle a atteint un creux historique en 2013 et est demeurée stable depuis.

- Environ 14 % des élèves ont déclaré qu'ils avaient mélangé de l'alcool à des boissons énergisantes.

- Environ un élève sur six (18 %), soit quelque 168 100 élèves en Ontario, a déclaré avoir fait un excès d'alcool (au moins cinq verres par occasion) au moins une fois durant le mois qui a précédé le sondage. Environ la même proportion d'élèves (16 %) ont déclaré s'être enivrés au moins une fois au cours du mois écoulé. On n'a pas relevé de différence entre les sexes concernant les excès occasionnels d'alcool et l'enivrement. Environ un tiers des élèves de 12e année ont indiqué avoir fait un excès d'alcool et avoir été saouls à au moins une occasion au cours du mois écoulé.

- Environ un cinquième (22 %) des élèves de la 9e à la 12e année ont déclaré avoir joué à un jeu impliquant la consommation d'alcool tel que le « bière-pong » au moins une fois au cours du mois écoulé.

- Environ un élève sur cinq (20 %) de la 9e à la 12e année (quelque 138 500 élèves du secondaire en Ontario) a signalé des pratiques à risque selon les critères du questionnaire de dépistage *AUDIT*. On n'a pas relevé de différence entre les sexes concernant la consommation à risque. La consommation à risque augmentait selon l'année d'études, atteignant un sommet de 29 % chez les élèves de 12e année.

- Un élève sur cinq (19 %) au palier secondaire n'était pas en mesure de se souvenir de ce qui s'était passé à au moins une occasion pendant laquelle il avait bu au cours de l'année écoulée. Un élève sur dix (9 %) a déclaré s'être blessé ou avoir blessé quelqu'un en raison de sa consommation d'alcool.

- La plupart des élèves ayant bu au cours de l'année écoulée se sont procuré de l'alcool auprès d'un membre de leur famille.

- En 2015, pour la première fois, on a demandé aux élèves du secondaire si leurs parents leur permettaient de consommer de l'alcool à la maison lors d'un party ou d'une rencontre avec leurs amis. Un peu plus du quart des élèves (27 %) ont déclaré qu'ils étaient autorisés à consommer de l'alcool à la maison avec leurs amis. Il n'y a pas de différence entre les garçons et les filles. Toutefois, la consommation augmente de façon marquée avec l'année d'études, passant de 9 % des élèves de 9e année à 38 % des élèves de 12e année.

Cannabis : vue d'ensemble

- Un cinquième (21 %) des élèves de la 7e à la 12e année (environ 203 900 élèves en Ontario) ont déclaré avoir consommé du cannabis au cours de l'année écoulée. Les garçons sont tout aussi susceptibles que les filles de prendre du cannabis. Cette consommation augmentait avec les années d'études, passant d'une proportion négligeable des élèves de 7e année à environ 37 % des élèves de 12e année.

- La consommation de cannabis au cours de l'année écoulée est demeurée stable entre 2013 et 2015, mais a diminué graduellement depuis 1999.

- Environ 2 % des élèves consomment du cannabis tous les jours, ce qui représente quelque 20 000 élèves en Ontario.

- Environ 2 % des élèves de la 9e à la 12e année (quelque 14 900 élèves) signalent des symptômes de dépendance au cannabis selon les critères de l'échelle SDS (*Severity of Dependence Scale*, soit « échelle de la gravité de la dépendance »).

- La plupart des élèves ayant consommé du cannabis au cours de l'année écoulée se sont

procuré cette drogue au sein d'un groupe d'amis dont les membres se la partageaient.

Prise de médicaments sur ordonnance à des fins non médicales

- Dans le cadre du SCDSEO, on a également posé des questions aux élèves sur leur consommation d'analgésiques opioïdes sur ordonnance (p. ex., Percocet, Percodan, Tylenol n^{o} 3, Demerol et codéine) à des fins non médicales. Un élève sur dix (10 %) de la 7^{e} à la 12^{e} année (environ 95 000 élèves en Ontario) a déclaré avoir pris un analgésique opioïde sur ordonnance à des fins non médicales au cours de l'année écoulée. La majorité des élèves (59 %) qui avaient pris un tel médicament au cours de l'année écoulée ont déclaré se l'être procuré chez eux.

- Environ 2 % des élèves de la 7^{e} à la 12^{e} année (quelque 19 900 élèves en Ontario) ont déclaré avoir pris sans ordonnance un médicament prescrit pour traiter le trouble déficitaire de l'attention avec ou sans hyperactivité (TDAH) chez les enfants (p. ex., Ritalin, Concerta, Adderall ou Dexedrine).

Prise de médicaments en vente libre à des fins non médicales

- On a posé des questions aux élèves au sujet de leur utilisation d'antitussifs et d'antirhumes en vente libre contenant du dextrométhorphane pour « planer ». Dans l'ensemble, 6 % des élèves de la 7^{e} à la 12^{e} année (environ 60 600 élèves en Ontario) ont déclaré avoir pris ce type de médicament pour « planer » au cours de l'année écoulée.

Boissons énergisantes fortement caféinées

- On a posé aux élèves des questions sur leur consommation de boissons énergisantes fortement caféinées (p. ex., Red Bull, Rockstar, Monster, Amp) au cours de l'année écoulée et de la semaine précédant le sondage. Environ 35 % de tous les élèves (quelque 326 800 élèves en Ontario) ont déclaré avoir bu une boisson énergisante au moins une fois au cours de l'année écoulée. Un élève sur huit (12 %, soit environ 112 400 élèves) a signalé qu'il avait bu une boisson énergisante au moins une fois au cours de la semaine précédant le sondage.

Abstinence au cours de l'année écoulée

- Environ 42 % des élèves de la 7^{e} à la 12^{e} année (quelque 384 400 élèves en Ontario) ont déclaré n'avoir pris aucune substance intoxicante au cours de l'année écoulée (l'alcool, la cigarette et les autres dispositifs utilisés pour fumer étaient inclus dans les substances intoxicantes, mais non les boissons énergisantes fortement caféinées). Les garçons sont tout aussi susceptibles que les filles de s'être abstenus de prendre des substances intoxicantes. Les taux d'abstinence au cours de l'année écoulée diminuaient de façon importante avec l'année d'études, passant de 69 % des élèves de 7^{e} année à 22 % des élèves de 12^{e} année.

- Le pourcentage d'élèves ayant répondu qu'ils n'avaient pris aucune substance intoxicante en 2015 est semblable à l'estimation de 2013. Toutefois, on observe une tendance linéaire à la hausse du taux d'abstinence, qui est passé de 27 % à 42 % entre 1999 et 2015.

Répercussions de la consommation d'alcool et d'autres substances intoxicantes

Conduite de véhicules

- Environ un septième (15 %) des élèves de la 7e année à la 12e année ont déclaré avoir été dans un véhicule conduit par une personne qui avait bu de l'alcool et 12 % ont déclaré avoir été dans un véhicule conduit par une personne qui avait consommé de la drogue. La fréquence de ces comportements a nettement diminué au cours des dix dernières années.

- Environ 5 % des élèves de la 10e à la 12e année qui sont titulaires d'un permis de catégorie G ont déclaré avoir, au moins une fois au cours de l'année écoulée, pris le volant une heure ou moins après avoir bu deux verres d'alcool ou plus. Cela représente environ 15 300 conducteurs adolescents en Ontario. Le taux de répondants ayant déclaré avoir pris le volant après avoir bu n'a pas changé entre 2013 (4 %) et 2015 (5 %). Toutefois, l'estimation actuelle est nettement plus basse que les estimations d'il y a dix ans environ et que celles datant de la fin des années 1970 et du début des années 1980.

- Le pourcentage d'élèves de la 10e à la 12e année ayant déclaré avoir conduit un véhicule après avoir pris du cannabis est plus élevé que celui des élèves ayant déclaré l'avoir fait après avoir bu. Un conducteur sur dix (10 %) a déclaré avoir, au moins une fois au cours de l'année écoulée, pris le volant une heure ou moins après avoir consommé du cannabis. Cela représente environ 29 500 conducteurs adolescents en Ontario. Tant en 2013 qu'en 2015, 10 % des élèves ont déclaré avoir conduit un véhicule après avoir pris du cannabis. Toutefois, l'estimation actuelle est nettement plus basse que les estimations d'il y a dix ans environ.

Problème lié à la consommation de drogues

- Un sixième (16 %) des élèves de la 9e à la 12e année (environ 114 600 élèves) ont signalé avoir éprouvé des symptômes liés à l'usage de drogues, selon les critères du questionnaire de dépistage *CRAFFT*.

- Un très faible pourcentage des élèves (0,6 %) de la 9e à la 12e année (environ 4 200 élèves) ont déclaré avoir suivi un programme de traitement de l'alcoolisme ou de la toxicomanie au cours de l'année écoulée.

Concomitance de consommation d'alcool à risque et de détresse psychologique

- Un élève sur dix (10 %) de la 9e à la 12e année (environ 65 400 élèves en Ontario) faisant une consommation d'alcool à risque a déclaré souffrir de détresse psychologique (c.-à-d. symptômes d'anxiété et de dépression). Il y avait plus de filles que de garçons dans cette situation (14 % et 6 %, respectivement).

Autres faits saillants

Consommation simultanée de différentes drogues et consommation par injection

- Environ 6 % des élèves de la 9e à la 12e année (quelque 42 400 élèves en Ontario) ont déclaré fumer des cigarettes de tabac, et consommer de l'alcool, du cannabis *et* au moins une autre drogue au cours de l'année écoulée.

- Un très faible pourcentage (< 0,5 %) des élèves de la 9e à la 12e année ont déclaré s'être injecté de la drogue durant l'année écoulée.

Nouveaux consommateurs et initiation précoce

- Les pourcentages d'élèves de la 7e à la 12e année qui ont déclaré avoir pris de la drogue pour la première fois au cours de l'année écoulée sont les suivants : 6 % pour les cigarettes de tabac, 16 % pour les cigarettes électroniques, 19 % pour l'alcool, 10 % pour le cannabis et 4 % pour les drogues illicites autres que le cannabis. Les nouveaux consommateurs de drogues sont plus susceptibles d'être en 9e, en 10e ou en 11e année.

- De nos jours, moins d'élèves fument la cigarette et consomment de l'alcool ou du cannabis à un jeune âge comparativement aux décennies précédentes. Par exemple, en 2015, moins de 0,5 % des élèves de 7e année avaient fumé leur première cigarette de tabac jusqu'au bout avant la fin de la 6e année, comparativement à 27 % en 1997 et à 41 % en 1981.

- En 2015, 14 % des élèves de 7e année avaient consommé leur première boisson alcoolisée avant la fin de la 6e année comparativement à 42 % en 2003 et à 50 % en 1981.

- En 2015, moins de 0,5 % des élèves de 7e année avaient consommé du cannabis pour la première fois avant la fin de la 6e année, comparativement à 5 % en 2003 et à 7 % en 1981.

- En 2015, l'âge moyen auquel les fumeurs de 12e année ont déclaré avoir fumé leur première cigarette était de 14,7 ans. En moyenne, les élèves de 12e année ont également déclaré avoir pris leur première boisson alcoolisée à l'âge de 14,8 ans et s'être enivrés pour la première fois à l'âge de 15,2 ans. Ils ont également déclaré avoir pris du cannabis pour la première fois à l'âge de 15,3 ans.

- L'âge moyen où les élèves ont fumé leur première cigarette, bu leur première boisson alcoolisée et pris du cannabis pour la première fois a augmenté au fil des décennies.

Perception du risque associé à la prise de substances intoxicantes et réprobation de cette consommation

- Les élèves de 7e et de 8e année ont jugé que la consommation régulière de marijuana était la plus dangereuse pour la santé, suivie de la consommation d'opioïdes sur ordonnance à des fins non médicales. Les élèves de la 9e à la 12e année considèrent comme le plus dangereux l'usage non médical d'opioïdes sur ordonnance, suivi de l'essai de la cocaïne. L'essai de la marijuana et l'utilisation d'une pipe à eau et d'une cigarette électronique sont parmi les habitudes de consommation de substances intoxicantes considérées comme les moins risquées.

- La perception du risque associé à la consommation de la marijuana (l'essayer et en consommer régulièrement) est actuellement inférieure aux estimations de 1999. La perception du risque associé à l'essai d'ecstasy est à la baisse depuis 2009. La perception du risque associé à l'utilisation régulière d'une pipe à eau a diminué entre 2013 et 2015. La perception du risque associé à l'usage quotidien du tabac et à l'essai de la cocaïne a augmenté au fil des ans.

- Une majorité d'élèves de 7e et de 8e année réprouvent l'usage fréquent de cannabis ainsi que son essai. Une majorité d'élèves de la 9e à la 12e année réprouvent l'essai de la cocaïne et de l'ecstasy.

Perception de la facilité d'accès aux drogues

- En 2015, les élèves de la 7e à la 12e année ont trouvé que la substance intoxicante la plus facile d'accès était l'alcool (65 % des élèves ont déclaré qu'il serait « assez facile » ou « très facile » de s'en procurer), suivi des cigarettes de tabac (53 %) et du cannabis (46 %).

- Entre 2013 et 2015, la perception de la facilité de se procurer des cigarettes de tabac a diminué, tandis que celle de la facilité de se procurer de l'ecstasy a augmenté.

- Cannabis, cocaine, LSD, et ecstasy sont perçues comme étant moins facilement disponibles aujourd'hui qu'il y a une dizaine d'années.

École et quartier

- Parmi tous les élèves ayant participé au sondage, ce sont ceux de la 7e à la 9e année qui ont été les plus nombreux à déclarer que c'est à l'école qu'on leur a enseigné les effets de l'alcool, du cannabis et d'autres drogues.

- Un quart (26 %) des élèves de la 7e à la 12e année ont déclaré que dans leur école, la consommation de drogues était un « gros problème », 49 % ont dit que c'était un « problème mineur » et 25 % pensent qu'elle ne constituait « pas un problème » dans leur école.

- Parmi les élèves de la 7e à la 12e année, un sur huit (12 %, soit environ 110 400 élèves en Ontario) a déclaré avoir, au moins une fois au cours de l'année écoulée, été sous l'influence de l'alcool ou de drogues à l'école.

- Un sixième (17 %) des élèves de la 7e à la 12e année (environ 158 200 élèves en Ontario) ont déclaré qu'on leur avait proposé, vendu ou donné une substance illégale à l'école à au moins une occasion au cours de l'année écoulée.

- Un élève sur dix (10 %) de la 7e à la 12e année a déclaré que la plupart ou la totalité de ses plus proches amis consommaient de la drogue.

- Le quart (25 %) des élèves de la 7e à la 12e année (environ 226 900 élèves en Ontario) ont déclaré que quelqu'un avait essayé de leur vendre des drogues à un endroit ou à un autre au moins une fois au cours de l'année écoulée.

- Un cinquième (22 %) des élèves de la 7e à la 12e année (environ 200 000 élèves) ont déclaré avoir été témoins de la vente de drogues dans leur quartier au cours de l'année écoulée.

Acknowledgements

A study of this magnitude requires the ongoing cooperation and support of many individuals and groups alike. Over the years, several people have provided invaluable input into this study. Current colleagues who provided support include Anca Ialomiteanu, Anita Dubey, Bruna Brands, Tony Ivanoff, Susan Steinback, and Stacey Penaloza. Former colleagues include Margaret Sheppard, Carolyn Liban, Hau Lei, Michael Goodstadt, and Frank Ivis. The 1981–1997 sampling plan was designed by P. Peskun and C.M. Lamphier of York University. In 1999, the survey was redesigned by Michael Ornstein of York University. The sampling design, fieldwork, data entry, and data file preparation were conducted by the Institute for Social Research, York University, and we especially thank Stella Park, David Northrup, Hugh McCague, John Pollard, and Michael Ornstein for their input throughout the project. We would also like to extend our deepest thanks to the Ontario Tobacco Research Unit, the Problem Gambling Institute of Ontario, St. Michael's Hospital Injury Prevention Unit, and the seven Ontario public health units/departments (Durham Region Health Department; York Region Public Health; Simcoe Muskoka District Health Unit; Peel Public Health; Niagara Region Public Health; Brant County Health Unit; and North Bay Parry Sound District Health Unit) who collaborated with us during the 2015 OSDUHS.

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

Most importantly, the high level of cooperation by Ontario school boards, school board research review committees, school principals, parents, and students has played a major role in ensuring the representativeness and success of this project. We gratefully acknowledge the support of all.

This study was supported, in part, by the Ontario Ministry of Health and Long-Term Care (MOHLTC). The views expressed here are those of the authors and do not necessarily reflect those of the MOHLTC.

Angela Boak
Hayley A. Hamilton
Edward M. Adlaf
Robert E. Mann

Table of Contents

List of Tables

List of Figures

1. INTRODUCTION

This report describes the prevalence and patterns of alcohol and other drug use among Ontario students in grades 7 through 12 in 2015, and changes since 1977. The findings are based on the 20th cycle of the Centre for Addiction and Mental Health's biennial *Ontario Student Drug Use and Health Survey* (OSDUHS).[1] The OSDUHS is the longest ongoing surveillance program of alcohol and other drug use and other health related behaviours among adolescent students in Canada, and one of the longest globally.

Repeated cross-sectional surveys such as the OSDUHS contribute to an understanding of the past, present, and potential future patterns of alcohol and other drug use and misuse in the adolescent population, the harms stemming from such use, and the associated contextual, social, and demographic risk and protective factors. Such monitoring is fundamental to governments and health care professionals alike. For example, one of the six goals of the U.S. Surgeon General's *Call to Action to Prevent and Reduce Underage Drinking* included "work to improve public health surveillance" (U.S. Department of Health and Human Services, 2007), a call which was repeated by the American Academy of Paediatrics (AAP, Committee on Substance Abuse, 2010).

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

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

History of the OSDUHS

The Centre for Addiction and Mental Health's 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 through 1974 monitored alcohol, tobacco and other drug use among Toronto students in grades 7, 9, 11 and 13. (Given the restricted target population of Toronto students, these data are not presented here.)

In **1977**, the study expanded to include students across Ontario, and in **1999**, the OSDUHS was further expanded to include students in grades 7 through 13/OAC. In **2003**, 13th graders were excluded 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 every two years, and to date over 100,000 students in Ontario have participated. The study's history is underscored by considering that most of the 12th graders interviewed in 1977 are now in their 50s. Since its inception, the OSDUHS has not only been the source data for numerous scientific and policy publications on an array of adolescent health issues, but has evolved into a well-recognized school survey globally. Indeed, UN agencies often seek OSDUHS involvement in international work, especially those concerning the methodology of surveying students.

All OSDUHS surveys received primary funding support from the Ontario Ministry of Health and Long-Term Care. The survey has been administered in schools by the Institute for Social Research at York University since 1981.

[1] In 2007, the word "Health" was added to the project title to better reflect its expanding content. Prior cycles used the OSDUS acronym without "Health."

This 2015 OSDUHS drug use report includes **newly introduced material** on the following topics:

- use of electronic cigarettes (also called "vapes" or "vape pens") in the past year;
- use of electronic cigarettes for the very first time in the past year (new users);
- perceived risk of harm from using electronic cigarettes regularly;
- use of cannabis oil/liquid/wax in an electronic cigarette;
- parental permission to drink alcohol at home during parties; and
- source of cannabis.

This report presents descriptive findings related to drug use.[2] Described are the prevalence, frequency, and harms of use, changes in these measures over time, and the associations between drug use and key demographic characteristics, namely sex, grade, and region.

The scope of the OSDUHS has evolved to include an array of mental and physical health indicators and other adolescent risk behaviours (for a topic overview, please see Table 2.2 in the Methods section). The 2015 OSDUHS mental health and well-being findings will be described in a forthcoming companion report, planned for release in 2016.

"Risks for cancer and cardiovascular disease in later life commonly start in adolescence (e.g., tobacco and alcohol use), or intensify during these years (e.g., overweight and obesity, physical inactivity, and poor diet). Most mental disorders begin before age 25 years. Numbers of injuries rise sharply in individuals during their early teenage years, and these account for a higher proportion of deaths in adolescents than in any other age group." (Patton et al., 2014, p. 385)

[2] Our use of the term "drug use" in this report includes alcohol and tobacco.

Why Monitor Student Drug Use?

Adolescent health is now recognized as a priority for health researchers, health service providers, educators, and policy makers (World Health Organization, 2014). As highlighted in the 2012 *Lancet Series on Adolescent Health*, "the most prominent non-communicable diseases are linked to common risk factors, namely tobacco use, harmful use of alcohol, an unhealthy diet and lack of physical activity" [UN Declaration 2011], risk factors that all originate in adolescence (The Lancet, 2012, p. 1561). Thus, there are important reasons for estimating and monitoring drug use among adolescent students.

- In high-income countries, alcohol and illicit drug use are among the top risk factors that contribute to disability-adjusted life-years (DALYs)[3] among young people aged 15-24 (Erskine et al., 2015; Gore et al., 2011; Rehm, Taylor, & Room, 2006).

- Adolescence is not only a turbulent period, but also a pivotal developmental stage in which harms due to drug use could result in negative life trajectories. This is a critical period for initiation, and early initiation of drug use is strongly related to problems experienced later in life, such as substance use disorder (Agrawal et al., 2006; Behrendt, Wittchen, Höfler, Lieb, & Beesdo, 2009; Dawson, Goldstein, Chou, Ruan, & Grant, 2008; Fergusson, Boden, & Horwood, 2015; Hingson, Heeren, & Winter, 2006; Meier et al., 2012).

- Drug use in adolescence is a strong predictor of drug use in adulthood. Adolescent drug use often establishes future drug use among young adults, as the cohort of 12th graders transitions out of secondary school. Elevated drug use among the oldest students may be a signal for a future rise in prevalence among

[3] Cause-specific disability-adjusted life-years (DALYs) are measures used to estimate the global burden of disease. This measure combines years of life lost because of premature mortality and those lost because of disability.

young adults aged 18–29 in the general population.

- Adolescent drug use can be a rapidly changing phenomenon. Drugs can rise or fall in popularity or availability from one year to the next, and related harms may occur for youth, their families, their schools, and their communities. We have seen several drug-related "outbreaks" emerge – crack cocaine in the late 1980s, ecstasy, ketamine, and other "club drugs" in the 1990s, and more recent concern over the nonmedical use of prescription drugs and the use of caffeinated energy drinks by young people. This cycling of emerging drugs and changing forms of administration is the *raison d'être* for a surveillance system that is both timely and relevant, and one that can document important shifts in drug-use behaviours in the population.

- The OSDUHS provides data on a broad set of health indicators and influences among a general population. Such data are critical to the population health framework promoted by Health Canada and the World Health Organization. The findings are used to develop policies and programs to enhance well-being and reduce the potential harms to the population.

- Monitoring surveys provide a basis for evaluating health objectives and related targets established by governmental and non-governmental agencies. Examples include the *Drug Prevention Strategy for Canada's Youth* (Canadian Centre on Substance Abuse, 2007), *Smoke-Free Ontario Strategy* (Ontario Government, 2015), Ontario's *Youth Action Plan* (Ontario Ministry of Children and Youth Services, 2012), and health objectives and targets outlined in the *Healthy People 2020* (U.S. Department of Health and Human Services, 2011).

- Because population surveys have a scientific methodology and a measurable representativeness and precision, they can provide the data needed to identify and confirm current or emerging drug-related outbreaks or turning points. As well, such data can confirm or challenge anecdotal and media reports about the nature of drug use and its consequences. Thus, the survey results can inform the public and challenge myths. In the absence of reliable prevalence and trend data, misconceptions can develop and resources can be misallocated. For example, while methamphetamine use, and crack use before that, may have been endemic in certain adult subpopulations, the OSDUHS data showed that these drugs did not measurably diffuse downward from older groups to the middle and secondary school population. On the other hand, the OSDUHS data can prompt public health stakeholders to take collective action. For example, our data drew national attention to the problem of driving after cannabis use among young drivers, sparking a national public awareness campaign by the Canadian Public Health Association.[4] Our findings on the nonmedical use of prescription opioid pain relievers stimulated a recent public awareness campaign by the Partnership for a Drug-Free Canada.[5]

- Even when the *size* of the drug-using population is stable or declining, *patterns* of drug use among users and associated harms can differ dramatically over time. For example, the same fixed population of users may be consuming drugs more or less hazardously at one point in time than at another.

[4] See http://www.potanddriving.cpha.ca

[5] See http://www.canadadrugfree.org/drug-info/prescription-drugs

What Do Drug Use Surveys Tell Us?

Ongoing drug use surveys provide a public health barometer used to identify and respond to various drug-related behaviours and their potential consequences. Drug use surveys:

- provide a scientific estimate of the size of the adolescent student drug-using population, including both the relative (percentage of the population) and absolute size (population count);
- identify high-risk, resilient, and other drug-consuming subtypes that may inform the need for differential programs or clinical interventions;
- identify the factors that correlate with drug use, such as demographics, other risk behaviours, and mental health problems;
- identify and/or verify newly-emerging drugs, their outbreaks and turning points, and their related harms; and,
- identify the changes in the extent and nature of drug use and related harms over time.

The size of the drug-using population and the pattern of drug use are only two components of the harm caused by drug use. Whether the use of a drug causes societal or individual harms depends on a host of factors in addition to the number of users. Some of these other factors include the pharmacological hazard of the drug, purity levels, addictive potential, and economic and social costs of treatment and enforcement. As well, in evaluating the harm caused by drug use it is important to weigh the relative number of users (the percentage using a drug) with the population count of users. Both factors are important, and in some cases, considering only the percentages or the population counts can leave a misleading impression. Consider, for example, that 1% of the OSDUHS sample represents just under 10,000 7th through 12th graders in Ontario. Clearly, our assessment of harm to public health will differ if this percentage is the number of students using cannabis once, the number of students sharing needles when injecting drugs, the number of students sustaining injuries due to their use of alcohol, or the number of students driving a motor vehicle after using alcohol or other drugs.

Because different students are interviewed during each survey cycle, repeated cross-sectional surveys cannot evaluate developmental change nor measure individual change (e.g., how patterns of drug use change within individuals as they age), nor can they address issues of causal order (e.g., whether poor grades cause drug use or whether drug use causes poor grades). Nonetheless, repeated cross-sectional surveys are especially adept at identifying aggregate period trends, such as changes over time in the size of the population using alcohol and other drugs, while taking into account any population changes.

Why Use a School-Based Survey to Monitor Adolescent Drug Use?

There are many benefits to using school-based surveys:

- School-based surveys are cost efficient, having a low cost per respondent, and are relatively easy to administer. For example, numerous students in a class or school can be interviewed during a single visit.[6]

- Because administrative data on student enrolment and the number of schools are readily available, constructing a sampling frame is straightforward. Although school samples are not without their difficulties, they tend to have fewer sampling frame difficulties than do other sampling methods (e.g., telephone frames).

- In Ontario, adolescents without a secondary school diploma are legally required to attend school until age 18. Thus, the coverage of the total adolescent population is exceptionally good, especially for the lower grade students (grades 7–10), who represent the larger share of the population.

- A wide scope of developmental periods – early, middle, and late adolescence – is "captured" in a school setting. This wide age range allows one to capture the spectrum of drug use patterns, including the early uptake of drug use.

- Response rates for school-based surveys are usually higher than household face-to-face surveys or telephone surveys.

- The school setting is conducive to eliciting truthful responses by adolescents (rather than in the home, for example). Adolescents feel more comfortable answering sensitive questions about drug use and other behaviours that may be considered stigmatizing or illegal in a school setting than in a less anonymous setting such as the home. Data collected through anonymous, self-completed, school-based surveys often demonstrate higher validity than do data collected through alternative methods (Brener et al., 2006; Harrison, 2001; Hibell et al., 2003).

- In addition to drug-using behaviours, we can estimate and monitor exposure to school-based drug prevention in the classroom and similar activities in schools.

- Schools themselves are social units worthy of examination. Schools are part of a fundamental hierarchical social structure: students are embedded, or nested, in classes, which, in turn, are nested in schools, nested in neighbourhoods, and nested in larger regional units. The character of these linkages can affect rates of drug use and their associated harms. OSDUHS research has shown that school characteristics, such as school size, policies, school climate, and connectedness are associated with student drug use (Kairouz & Adlaf, 2003; Rehm et al., 2005).

- International organizations, most notably UN agencies, consider student surveys a valuable methodology to bolster not only surveillance data related to alcohol and other drug use, but for building cross-national comparisons as well. Examples of work encouraging the international development and application of student surveys include the earlier work of Smart and Fejer (1975), sponsored by the World Health Organization (WHO), and the work of Hibell and colleagues (2003), sponsored by the United Nations Office on Drugs and Crime (UNODC).

- In addition to monitoring, repeated surveys can also facilitate an array of special studies on adolescent health. One recent example was the collaboration of the OSDUHS investigators with researchers from St.

[6] Unfortunately, there is a price to pay for this efficiency – higher design effects and lower precision relative to a simple random sample (see the Methods section for a discussion on this issue).

Michael's Hospital in Toronto to conduct a grant-sponsored study on traumatic brain injury among adolescents. This data collection provided the first general population (nonclinical) prevalence estimate in North America (Ilie, Boak, Adlaf, Asbridge, & Cusimano, 2013).

Computer Mode of Administration

The OSDUHS is an in-school, self-administered, paper-and-pencil-instrument (PAPI) survey. The school setting is conducive to maintaining an assurance of anonymity, thereby reducing the likelihood of social desirability bias in reporting sensitive and illegal behaviours. Surveys of adolescents conducted in households, especially with parents at home – regardless of self-administration or interviewer-administration procedures – result in lower prevalence estimates for substance use and other socially stigmatizing behaviours (Brener et al., 2006; Denniston et al., 2010; Kann, Brener, Warren, Collins, & Giovino, 2002; Rootman & Smart, 1985).

The OSDUHS has not adopted an online or computer mode of administration in the school setting because of the complex logistics of coordinating available computers and Internet connectivity with school administrators. Further, not all Ontario schools have the required technical resources. It would be cost-prohibitive and challenging to equip all the survey administrators with the necessary portable devices (i.e., 20-25 tablets/laptops required to survey one class). Although students might prefer to complete the survey electronically rather than in a paper booklet, there is no conclusive evidence showing that a computer mode of administration decreases social desirability bias or improves response rates (Denniston et al., 2010; Dodou & de Winter, 2014; Eaton et al., 2010; Hallfors, Khatapoush, Kadushin, Watson, & Saxe, 2000). However, some advantages of computer administration include speed of data input and decreased missing data.

What Student Drug Use Surveys Do Not Tell Us

Because student surveys represent adolescents in school, their data cannot provide a complete picture of adolescent drug use and related harms. Student surveys cannot address the following:

- the extent and changes in drug use among non-students such as youth in institutions, school-leavers, and homeless/street youth; or
- the nature and changes in drug-related harms in the street drug scene. Student drug use typically plays a small role in administrative indicators such as arrests, convictions, deaths, and treatment. Thus, trends in student drug use need not correspond to trends in other drug use indicators, especially those dominated by older populations (e.g., arrests, seizures, and deaths).

Some Strengths and Limitations of Student Drug Use Surveys

Although no single method can fully describe the extent of drug use and related problems, in our view, the strengths of the survey method far outweigh the limitations in estimating the size and character of the drug-using population.

Strengths	Limitations
■ The survey is based on scientific, random (probability) sampling methods designed to produce representative samples in which the sampling error can be estimated.	■ The survey is restricted to adolescent students enrolled in publicly funded schools (note that schools cannot participate without prior school board approval). Excluded by design are out-of-scope groups for which drug use is typically elevated, such as institutionalized youth, school leavers, and homeless/street youth.
■ Drug use surveys are often the only feasible means to measure the size of the drug-using population because no other administrative source exists (e.g., such as for alcohol which can be estimated by sales data).	■ Enrolled students who do not participate (due to absenteeism or lack of consent) may bias estimates *if* nonparticipating students differ from participating students on variables of interest.
■ The OSDUHS sample is geographically dispersed throughout Ontario with typically over 45 school boards, 150 schools, and 300 classrooms participating.	■ Because the reporting of drug use is based on self-reports, there is an inestimable potential for misestimating drug use caused by intentional (e.g., underreporting) and unintentional errors (e.g., memory and recall errors).
■ The survey is administered in classrooms by trained field staff. This is cost-effective and tends to increase student participation. As well, the questionnaire is completed in an anonymous group setting, which is the most critical factor in reducing the underreporting of drug use and other sensitive behaviours. Indeed, school administered surveys typically obtain higher reports of drug use than do personal interview surveys.	■ The survey is designed to provide precise estimates of drug use at the provincial level. A single cycle, however, is not designed to provide precise estimates for local (small) geographic areas. Small area analysis, however, can be potentially accommodated by oversampling students or cumulating data across cycles
■ Unlike enforcement data (e.g., arrests, convictions) and treatment data (e.g., number of admissions), survey data captures the widest continuum of use, spanning from abstainers to experimenters to active users to former users.	■ The collection of data in clusters (e.g., schools and classrooms), although cost-effective in reducing data collection costs, requires the use of specialized statistical software to accommodate the statistical dependence caused by the naturally occurring similarities among students in the same schools and classrooms.
■ Because surveys are based on individual responses, they can assess the correlates and predictors of drug use and identify varying subtypes of drug users and their defining characteristics.	■ Highly structured self-completed questionnaires do not allow for the probing or collection of rich qualitative information.

2. METHODS

Sampling Design

Target and Survey Population

For each of the 20 survey cycles, the target or in-scope population – the population we are attempting to draw conclusions about – comprised all 7th to 12th graders enrolled in Ontario's four publicly funded school systems (i.e., English language public, English language Catholic, French language public, and French language Catholic). Students excluded from the survey's target population (out-of-scope) were those enrolled in private schools, those who were home-schooled, those institutionalized for correctional or health reasons, those schooled on First Nations reserves, military bases, or in the remote northern region of Ontario. These out-of-scope groups represent a small proportion of the Ontario student population (about 8%). Therefore, although our target population represents students, it captures the vast majority (92%) of Ontario children and adolescents aged 12–18 years, based on Statistics Canada's population estimate (Statistics Canada, 2014).

Table 2.1 Thirty-Nine Years (20 Cycles) of the OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
No. School Boards	20	20	31	31	20	24	25	27	25	20	22	38	41	37	42	43	47	40	42	43
No. Schools	104	87	182	227	193	170	171	179	165	137	168	111	106	126	137	119	181	181	198	220
No. Classes	196	195	198	261	205	215	224	221	233	223	234	285	272	383	445	385	573	581	671	750
No. Students	4687	4794	3270	4737	4154	4267	3915	3945	3571	3870	3990	4894	4211	6616	7726	6323	9112	9288	10272	10426
Participation Rate	70	78	85	85	82	84	81	83	77	76	77	76	71	72	72	68	65	62	63	59
Design Features	three-stage selection (board; school; class), stratified by grade and region; grades 7, 9, 11 & 13; self-weighted estimates		single-stage selection (board clusters), stratified by grade and region; grades 7, 9, 11 & 13 (OAC); weighted estimates									two-stage cluster selection (school, class), stratified by region and school level; North oversampled; sponsored public health regions oversampled in 2009 (n=6), 2011 (n=5), 2013 (n=7), and 2015 (n=7); weighted estimates								
												grades 7–13 (OAC)		grades 7–12 (OAC eliminated in 2003)						

Notes: (1) participation rate shown is at the student level; (2) entries beginning in 2009 include public health regions' oversamples; (3) OAC (Ontario Academic Credits) – until 2003, Ontario students matriculating to postsecondary education were required to attend five years of secondary school (grades 9–13). This additional year of secondary school credits was eliminated in 2003.

The OSDUHS Surveillance Program

Data quality is built on the regular redesign of surveys (Biemer & Lyberg, 2003), and the OSDUHS program has strived to maintain its integrity in this regard. Sample design revisions are often required in organizational surveys such as the educational system to adapt to changing structure, policies and governmental change (e.g., removal of grade 13). As seen in Table 2.1, the OSDUHS program is the culmination of three data series: 1977–1979, 1981–1997 and 1999 onward, of which each odd-year survey was based on a random probability design. The 1977 and 1979 surveys were based on a *stratified* (region by grade) *three-stage cluster design* (school board district, school, class).[7] The proportional allocation of students by grade and region allowed for self-weighted (i.e., unweighted) estimates.[8] In 1981, the design was modified to a *disproportionally stratified single-stage cluster design* with paired selection (two-per-stratum) of first-stage school board district clusters to improve the precision and efficiency of estimates.[9] This design resulted in the selection of more school boards and schools.[10]

Since 1981, York University's Institute for Social Research (ISR) has produced, under contract, the OSDUHS data. ISR is responsible for the sample design and selection, questionnaire review and production, school recruitment, class selection, field operations, data capture, weighting and initial dataset preparation. The OSDUHS team is responsible for institutional and school board approval, questionnaire content, consent forms, and final dataset development (including any generation of poststratification adjustments to sampling weights) and variable creation.

Current Sampling Design[11]

In 1999, the OSDUHS transitioned to a *disproportionally stratified* (region by school level[12]), *two-stage* (school, class) *cluster design*, which included the oversampling of students in Northern Ontario (to provide more precise estimates for that less populous region).[13] Further, rather than sampling students only in grades 7, 9, and 11 (and grade 13 before it was eliminated in 2003), the revised design samples students in grades 7 through 12, inclusive. This expansion provided greater age variation and more developmentally relevant detail on the relationship between health compromising risk behaviours and age. The revised design also allows for more direct grade comparisons to American and other international studies, thereby enhancing data quality by developing cross-national comparability (Biemer & Lyberg, 2003). Another design revision introduced in 1999 was the probability selection of schools in

[7] Sample preparation, fieldwork and data preparation for the 1977 and 1979 surveys were contracted to Ian Sone and Associates.

[8] The original design of every second grade (grade 7, 9, 11, 13) in every second year (1977, 1979, etc.) allowed for the assessment of population cohorts across time given that the 7th grade population in 1977 would be surveyed again in the 9th grade in 1979, in the 11th grade in 1981, and in the 13th grade in 1983. This earlier 2 × 2 cohort design can also be generated for later surveys.

[9] This major redesign was developed by Professors P. Peskun and C.M. Lanphier (Departments of Mathematics and Sociology, respectively), both of York University.

[10] For the 1977, 1981 and 1983 cycles, an additional stratum of 5th graders was also sampled. To ensure cross-time comparability, these data have been excluded. The 5th-grade stratum was eliminated in 1985, largely due to the reticence of school boards to allow surveying of this young cohort.

[11] In addition to the authors, the 2015 OSDUHS sample design team included John Pollard, Stella Park, David Northrup, and Hugh McCague, all from the Institute for Social Research (ISR) at York University.

[12] In Ontario, 7th and 8th graders can be enrolled in elementary schools (JK–G8), middle or senior public schools (G6–G8), or junior high schools (G7–G9). The primary stage stratification of region is disproportional to the enrolled population.

[13] Prior to 1999, the allocation of students from Northern Ontario was proportional to the population, resulting in smaller samples than the other regions. This smaller sample proved problematic because, despite the elevated rates of certain behaviours in the North, the regional comparison tests did not reach significance due to lack of statistical power. This redesign was headed by Professor Michael Ornstein, York University/ISR.

stage 1, rather than selection of school board clusters. In sum, the revised design specifies the sampling of more students per school and a greater geographical dispersion of schools with more precise school-level estimates.[14]

OSDUHS Base Regions

Since 1977, the sample design has divided Ontario into four regional strata based on the following boundaries: *City of Toronto*;[15] *Northern* Ontario (Parry Sound District, Nipissing District, and areas farther north); *Western* Ontario (Peel District, Dufferin County and areas farther west); and *Eastern* Ontario (Simcoe County, York County and areas farther east).

Sponsored Oversamples by Ontario Public Health Units/Departments in 2015

In addition to the four regional strata of the base design just described, the 2015 OSDUHS included an additional seven regional strata oversamples sponsored by the corresponding Ontario public health unit/department. The oversampling of students in these public health regions was conducted to provide more precise regional estimates for the health units/departments. Schools in the following seven regions of the province were oversampled: Durham Region, York Region, Simcoe Muskoka District, Peel Region, Niagara Region, Brant County, and North Bay Parry Sound District.

The addition of these seven regional oversamples resulted in 11 mutually exclusive regions. This created 20 region-by-school level strata ([4 × 2] + [7 × 2]) = 22 – 1 (elementary students were not sampled in one region) = 21 total design-based strata). Mutually exclusive school samples were drawn for each of these 21 strata.[16]

School Selection (Stage 1)

Publicly funded schools represented by four school systems in Ontario – English and French language schools in the public and Catholic school sectors – were eligible to participate.[17] Schools excluded as being out-of-scope were private schools, schools on First Nations reserves, on Canadian Forces Bases, and schools in geographically inaccessible northern areas.

The 2015 OSDUHS school selection proceeded as follows:[18]

1) The sampling frame used to randomly draw the school sample was the Ontario Ministry of Education's 2011/2012 school enrolment database (most recently available at the time). This frame included all publicly funded schools in Ontario that included the grades in our target. As noted earlier, this comprised schools in four sectors: English language public, English language Catholic, French language public, and French language Catholic. For cost-efficiency reasons and due to estimation difficulties with sparse data, schools with low enrolment (i.e., fewer than 30 students in schools with grades 7 and 8, and fewer than

[14] The disadvantages of greater school dispersion are that (1) it increases the number of school boards and therefore the resources needed for recruitment; and (2) it increases the school fieldwork coordination and travel costs. In contrast, greater school dispersion provides richer, more precise school-level data necessary for multilevel analysis. Recent OSDUHS examples of this work include Rehm et al. (2005), and Kariouz and Adlaf (2003).

[15] Throughout the OSDUHS program, the geographical boundary for Toronto schools remained unchanged despite a municipal amalgamation in 1998.

[16] Although each oversample was an independent stratum, for our analyses and presentation, oversamples were assigned to one of the four corresponding base regions.

[17] In Ontario, each regional county has both a public and Catholic school board.

[18] Initially designed to enhance cross-time estimation, school selections for the 2003-2009 cycles were based on a longitudinal sample of schools initially drawn in 2001. Starting in 2011, the school selection reverted to a fully independent sample.

80 students in schools with grades 9 through 12), and schools in the remote northern region of the province, were excluded from the sampling frame.

2) Within *each* of the 21 region-by-school level primary-stage strata, a probability proportionate-to-size (PPS) selection of schools was drawn (i.e., larger schools had a greater probability of being selected). Following a random start, schools were selected with systematic sampling without replacement (WOR).

3) If a selected school declined to participate, or if it had closed, a replacement school from the same region-by-school level stratum was randomly selected, again with PPS/WOR sampling.

Class Selection (Stage 2)

Within each recruited school, a grade-stratified list of all eligible classes (provided by the school) was used to randomly subsample one class per grade with equal probability and without replacement (WOR). In elementary/middle schools, two classes were randomly selected – one 7th-grade class and one 8th-grade class. In secondary schools, four classes were randomly selected, one in each grade from 9 through 12 from either a list of classes in a required subject (e.g., English, math) or a required period (e.g., homeroom).

For the public health region oversamples, the class selection procedure in the secondary schools did not differ from the standard one class per grade selection. In the elementary/middle schools, rather than the standard selection of one class per grade, *two* 7th-grade and *two* 8th-grade classes were selected to participate (or all students in these grades if there was fewer than two classes in each grade).

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

Sample Exclusions

School Exclusions

- private schools
- schools on First Nations reserves
- schools on Canadian Forces bases
- geographically remote schools
- elementary/middle schools with fewer than 30 students enrolled in Grade 7 and Grade 8 (combined)
- secondary schools with fewer than 80 students enrolled in Grades 9–12

Class Exclusions

- special education classes
- English as a Second Language (ESL) classes
- classes with fewer than 5 students

Student Exclusions

- institutionalized or home schooled

Selection of Units

School Selection

- PPS/WOR: probability-proportionate-to-school size via systematic sampling; sampled without replacement

Class Selection

- EPSEM/WOR: Equal probability selection of classes; sampled without replacement

Student Selection

- None: all students in a class with a signed consent form were eligible to participate

Administrative and Recruitment Procedures

The 2015 OSDUHS protocol was approved by the Research Ethics Boards (REBs) at CAMH and York University,[19] as well as 30 school board research review committees (RRC).

Student participation required the approval of school boards, school principals, classroom teachers, parents (if under 18 years) and students themselves. For each school board associated with one or more randomly selected schools, permission to survey students was first requested from the Director of Education. Depending on the school board's policy, agreement to participate was conditional upon approval from the board RRC, as well as school principals, classroom teachers, parents, and students. If a school board was unwilling to have their schools participate, replacement schools from the same stratum were randomly selected and the corresponding board(s) were contacted for permission to approach the replacement schools. Once a school was recruited, the principal provided ISR with a grade-stratified list of classes, from which random selections were drawn.

All participating schools were provided with active (also known as explicit) parental consent forms,[20] which were available in seven languages (English, French, Spanish, Portuguese, Russian, Mandarin, and Korean). Well in advance of the survey date, each selected classroom's teacher distributed the consent forms to students, who, in turn, sought the signature of one parent/guardian if they were under age 18 (students aged 18 and older did not require parental consent). Students themselves were also required to provide a signature of assent. Those who did not return a dual-signed consent form on or before the survey date were not allowed to participate. For reasons of cost efficiency, follow-up data collection was not rescheduled for absent students or those not returning a consent form. If a student did not participate, no substitution took place (because all students in the class were invited to participate). Instead, the selection weights were statistically adjusted for this unit nonresponse.

Administration procedures were designed to protect students' privacy by ensuring anonymous and voluntary participation. The survey was administered across the province by 34 trained ISR field staff in the selected classrooms between November 2014 and June 2015.[21] The survey administrators read a standardized script to participating students explaining the history of the study, its purpose, and underscoring the anonymity of the survey.[22] Students were reminded that participation was voluntary and anonymous, and were instructed not to write their names on the questionnaires. They were also instructed to skip any question they did not understand, rather than risk disclosure by asking for assistance. Students recorded their answers directly on the paper-and-pencil instrument (PAPI), printed in a two-column booklet format. Although teachers were not required to remain in the classrooms during administration, most chose to do so, which added a beneficial climate of order during the administration. Teachers were asked to avoid walking around the room so that students would not feel their answers would be observed. No compensation for participation was provided to schools or students.

[19] A protocol review by York University's REB is required for all contractual projects administered by ISR.

[20] The OSDUHS *active/explicit* parental consent requires a clear approval for their child to participate from at least one parent indicated by an "I approve" response with an accompanying signature. In contrast, *passive* consent allows a student to participate as long as a parent does not indicate objection (or opt-out) to their child participating. In practice, active consent results in fewer students participating (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; Jelsma, Burgess, & Henley, 2012). It is the policy of most school boards in Ontario to require active consent for external research studies.

[21] While some data collection predates 2015, we retain the odd-year designation used in previous cycles for simplicity and to reduce possible confusion. The data collection period was expanded to allow for a longer interval in which schools could arrange an acceptable administration date.

[22] The survey administrators also recorded information about the classroom, such as the number of students enrolled, number absent, presence of teacher during administration, and whether the class was randomly selected.

The ISR field staff collected all completed questionnaires, which were then couriered to ISR for editing and data capture by using the Computer-Assisted Survey Execution System (CASES) software. The quality of the data entry was verified by independently re-keying a random sample of 3% of all questionnaires.[23] The major editing rule used for processing a valid questionnaire was that at least half of the questions had to be completed. Only 44 questionnaires failed to meet this rule and were withdrawn from data entry.

The OSDUHS Questionnaire

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

The objective of the OSDUHS data collection system is to maximize the data to cost ratio – to maximize data usability while minimizing cost and questionnaire length (i.e., respondent burden). To include as many topics as possible in a fixed class period, while minimizing the burden on students, we employed four split ballot versions of the questionnaire,[24] depending on school level. As in past cycles, we used split ballot modularized questionnaires whose item content was distributed according to questionnaire form (Form A vs. Form B).[25] We reduced the number of questions in these forms for students in elementary schools (i.e., the 7th and 8th graders). That is, elementary school (ES) students (grades 7 and 8) completed shorter questionnaires than secondary school (SS) students. The elementary school questionnaires excluded the following topics: the use of cocaine, crack, heroin, methamphetamine, hallucinogens, club drugs and new synthetic drugs, prescription tranquillizers, drug use problem screeners, gambling problem screener, and driving-related behaviours. See Table 2.2 for an overview of the questionnaire content across the four forms. The item count was 171 in Form A-SS, 151 in Form B-SS, 127 in Form A-ES, and 116 in Form B-ES. About half of the items in each form were designated as core, that is, items common to all four forms. Because not all questions were in all forms, the number of cases upon which a finding is based may be less than the total sample size. A French version of Form A (ES and SS) was used in French-language schools.[26] The 2015 questionnaires are available at **www.camh.ca/research/osduhs**.

In each classroom, Form A and Form B were distributed alternately (i.e., A, B, A, B) to achieve two near-equal random samples completing each form.[27] The average completion time was 30 minutes (median=27 minutes) for secondary school students, and 31 minutes (median=29 minutes) for elementary school students. By design, item branching (i.e., designated question skips) was not used in the questionnaire to protect students' privacy by ensuring that students in a classroom completed

[23] The verification rate was reduced from 100% after multiple cycles showed low rates of data entry errors.

[24] Customized questionnaire forms were created for schools in one board that requested the removal of 3 questions (2 about suicide, 1 about past school expulsions), and for secondary schools in two other boards for the purpose of piloting a new question about sexual identity.

[25] Split ballot methods can not only expand the content coverage of the survey, but can also be used in an experimental or evaluative mode to assess methodological and questionnaire development. The disadvantage of the split ballot method is a reduced sample size for analyses based on questions that are not in all forms.

[26] Form B was not translated into French.

[27] Such distribution should result in two balanced random samples of students. An assessment of this alternate distribution showed good random characteristics, as there were few differences between the samples completing each form regarding demographics and drug use variables.

the questionnaires in roughly the same time, thereby reducing the likelihood of identifying drug-using students (or those reporting other sensitive behaviours or problems) who would take longer to complete additional questions.[28] This was achieved by having nonusers respond to all questions using the response categories of *never used, did not currently use,* or *did not know what a drug was* for the drug-related items. A further advantage of minimizing item branching is a reduced risk of navigational errors (i.e., students skipping ahead to the wrong question).

To maximize validity and to enhance cross-study comparability, many of the OSDUHS questionnaire items were derived from international guidelines (e.g., Hibell, Adlaf, et al., 2003) and recognized student surveys such as NIDA's *Monitoring the Future* (MTF) survey,[29] the CDC's *Youth Risk Behavior Survey* (YRBS),[30] and the WHO's *Health Behaviour in School-aged Children* (HBSC) survey,[31] and have been shown to produce valid responses (Brener et al., 2002; Currie et al., 2012; Fosse & Haas, 2009; Mawani & Gilmour, 2010; May & Klonsky, 2011; Miech, Johnston, O'Malley, Bachman, & Schulenberg, 2015; O'Malley, Bachman, & Johnston, 1983). There are two principal advantages of employing existing survey questions: first, existing items have typically gone through field collection and testing for validity and reliability and have a demonstrated "fitness for use" (Biemer & Lyberg, 2003) and "usability" (Groves et al., 2009); and second, the capacity for interprovincial and cross-national comparisons extends the utility of the data. Such comparability of measurements is deemed an essential dimension of data quality by national statistical agencies (Biemer & Lyberg, 2003).

The 2015 OSDUHS questionnaire included validated scales and screeners such as the WHO's *Alcohol Use Disorders Identification Test* (AUDIT) assessing hazardous or harmful drinking (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993), the *CRAFFT* screener assessing drug use problems (Knight et al., 1999), the cannabis subscale of the *Severity of Dependence Scale* (SDS) assessing cannabis dependence (Martin, Copeland, Gates, & Gilmour, 2006), the *Kessler 6-Item Psychological Distress Scale* (K6) (Kessler et al., 2003) assessing nonspecific psychological distress, the reduced version of the *Adult ADHD Self-Report Scale Version 1.1* (ASRS) (Kessler et al., 2005), the *South Oaks Gambling Screen Revised for Adolescents* (SOGS-RA) assessing gambling problems (Winters, Stinchfield, & Fulkerson, 1993), and the *Problem Video Game Playing* (PVP) scale assessing problems with video gaming (Tejeiro Salguero & Morán, 2002).

All newly introduced items in the 2015 questionnaire were evaluated by both expert review (by ISR and CAMH staff) and pretested by ISR on a small convenience sample of young adolescents. The readability of the 2015 questionnaire showed a 7th-grade reading level according to the Flesch-Kincaid reading score.

At the end of the questionnaire, students were asked to evaluate the comprehension and sensitive nature of the questionnaire. The majority of students indicated positive assessments: 98% of students (97% of 7th graders) indicated that the questionnaire was "fairly" or "very easy" to understand; only 7% of students (6% of 7th graders) indicated that the questionnaire was "much too long"; and only 6% of students (6% of 7th graders) indicated that questions in the survey would make most students "very uncomfortable." This latter finding provides some reassurance that social desirability should not greatly bias our estimates, even among the youngest students.

[28] A similar strategy is used in NIDA's *National Survey on Drug Use and Health* (NSDUH) (Biemer & Lyberg, 2003, p. 146).

[29] See http://www.monitoringthefuture.org

[30] See http://www.cdc.gov/healthyyouth/yrbs

[31] See http://www.hbsc.org

Table 2.2 Topic Overview of the Four Questionnaire Forms Used in the 2015 OSDUHS

Grades 7 and 8 (ES)		Grades 9–12 (SS)	
Form A-ES	**Form B-ES**	**Form A-SS**	**Form B-SS**
Demographics			
age, sex, living situation, how long lived in Canada, ethno-racial identity, language spoken at home, hours spent daily on social media		age, sex, living situation, how long lived in Canada, ethno-racial identity, language spoken at home, hours spent daily on social media, hours spent weekly at part-time job	
School Life			
usual marks, hours spent on homework, ever been suspended, attitudes about school, **subjective social status at school**, school transportation	usual marks, attitudes about school, **subjective social status at school**, school transportation	usual marks, hours spent on homework, ever been suspended, attitudes about school, **subjective social status at school**, school transportation	usual marks, attitudes about school, **subjective social status at school**, school transportation
Family Life			
parents' education, parents born in Canada, parental monitoring, subjective socio-economic status		parents' education, parents born in Canada, parental monitoring, subjective socio-economic status	
Drug Use in the Past Year			
alcohol, cigarettes, cannabis, synthetic cannabis, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs	alcohol, cigarettes, smokeless tobacco, **electronic cigarettes**, waterpipe, cannabis, synthetic cannabis, inhalants, salvia, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs	alcohol, cigarettes, cannabis, synthetic cannabis, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs	alcohol, cigarettes, smokeless tobacco, **electronic cigarettes**, **electronic cigarettes used to inhale cannabis oil vapor**, waterpipe, cannabis, synthetic cannabis, inhalants, salvia, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs
More Drug Use in the Past Year			
		hallucinogens, cocaine, crack, ecstasy, methamphetamine, heroin, prescription tranquillizers, prescription stay-awake pills	hallucinogens, cocaine, crack, ecstasy, methamphetamine, heroin, synthetic "club" drugs, prescription tranquillizers, prescription stay-awake pills, steroids, any injection drug use
Alcohol			
first use, past month use, heavy episodic drinking, injuries from drinking	first use, past month use, heavy episodic drinking, usual source of alcohol	first use, past month use, heavy episodic drinking, alcohol problem screener, been in treatment, **parental permission to drink at home with friends**	first use, past month use, heavy episodic drinking, been in treatment, usual source of alcohol, drinking games
Cannabis			
first use, past month use	first use, past month use, **usual source of cannabis**	first use, past month use, drug use problem screener	first use, past month use, cannabis dependence, **usual source of cannabis**
Tobacco Cigarettes			
	first use, quitting, source of cigarettes, contraband cigarettes, exposure to second-hand smoke, opinions		first use, quitting, source of cigarettes, contraband cigarettes, exposure to second-hand smoke, opinions
Vehicles			
been passenger with intoxicated driver	seatbelt use, been passenger with intoxicated driver	been passenger with intoxicated driver	seatbelt use, been passenger with intoxicated driver
Driving Behaviours			
		driver's licence, impaired driving	driver's licence, impaired driving, in-class driver training, collisions, texting and driving

(continued…)

Grades 7 and 8 (ES)		Grades 9–12 (SS)	
Form A-ES	**Form B-ES**	**Form A-SS**	**Form B-SS**
Perceptions About Drugs, Education, and Exposure			
	availability and risk perceptions (alcohol, cigarettes, **electronic cigarettes**, cannabis, prescription pain relievers), recall of drug education, intoxicated at school, exposure to drugs		availability and risk perceptions (alcohol, cigarettes, **electronic cigarettes**, cannabis, prescription pain relievers, cocaine, ecstasy, LSD), recall of drug education, intoxicated at school, exposure to drugs
Physical Health			
self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, **go to bed/school hungry**, energy drinks, **hours of sleep on school night**, head injuries, **context of head injuries**	self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, **go to bed/school hungry**, energy drinks, **hours of sleep on school night**, head injuries, **context of head injuries**, body image, doctor visits, asthma, tanning bed use, helmet use	self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, **go to bed/school hungry**, energy drinks, **hours of sleep on school night**, head injuries, **context of head injuries**	self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, **go to bed/school hungry**, energy drinks, **hours of sleep on school night**, head injuries, **context of head injuries**, body image, doctor visits, asthma, tanning bed use, helmet use
Mental Health			
self-rated mental health, psychological distress, self-esteem, **perceived stress**, suicide ideation and attempt, help-seeking behaviour, **ADHD screener**		self-rated mental health, psychological distress, self-esteem, **perceived stress**, suicide ideation and attempt, help-seeking behaviour, prescription medication for anxiety or depression, **ADHD screener**	
Other Risk Behaviours			
aggressive and other problem behaviours, school violence, bullying perpetration and victimization at school, cyberbullying, gambling activities, video gaming and problems		aggressive and other problem behaviours, school violence, bullying perpetration and victimization at school, cyberbullying, gambling activities and problems, video gaming and problems	
questionnaire evaluation & first three digits of postal code			

Notes: (1) **bolded text** in the table indicates a new topic in 2015; (2) Form A-ES and Form A-SS were translated into French.

Data Quality

2015 Sample Participation and Characteristics

A central objective of the OSDUHS is to generate a representative, unbiased sample of Ontario students in grades 7 through 12. The target sample size for the 2015 OSDUHS was set at about 11,200 students.

Schools

In total, 349 schools (273 initial selections plus 76 replacements) were invited to participate. Of these, **220 schools** (103 elementary/middle – of which four were French language – and 117 secondary – of which three were French language) from 43 school boards participated in the survey, resulting in a school participation rate of 63%. The most common reasons given by nonparticipating schools were that they were too busy, or that they had already committed to other research projects. Each school that was unable to participate was replaced with a randomly selected school from the same stratum and with similar school size in order to maintain representativeness.

Although we could not conduct a systematic follow-up of nonparticipating schools, we do not expect these refusals to have created appreciable bias. Our analysis showed that this group of nonparticipating schools did not discernibly differ from participating schools regarding school level (elementary/middle versus secondary) and language (English versus French). However, there was a larger proportion of public schools that refused relative to the proportion in the participating sample. Further, compared with the regional distribution of the participating schools, there were more refusing schools in the Northern region of the province. As we shall see, such distortions were corrected by adjustments made to the sampling weights. A further analysis was conducted to examine whether replacement schools[32] differed from initially selected schools. Results showed no substantial differences in demographics or drug use between students in these two groups of schools.

If schools substantially differ with regard to student behaviours, then which schools participate can greatly influence the survey findings. Some research suggests that school-level variables are important and show relationships between variables such as sector (public vs. Catholic), or socioeconomic status, and aggregated student drug use (Kairouz & Adlaf, 2003; O'Malley, Johnston, Bachman, Schulenberg, & Kumar, 2006; Rehm et al., 2005). However, the majority of the variance in students' behaviour may lie within schools, not *between* schools (Kairouz & Adlaf, 2003; O'Malley et al. 2006). Further, much of the between-school variance can be attributed to differences in region/urbanicity (Miech et al., 2015) – a factor that is controlled for in the replacement sampling within the same region-by school level stratum. This would imply that if schools are fairly similar in drug use and other risk behaviours then which particular schools participate in the survey has a small influence on estimates.

Classes

A total of **750 classes** met the class inclusion criteria and participated in the survey (286 from elementary/middle schools, 464 from secondary schools). The class participation rate was 88%. We must note that 90 (12%) classes were not randomly selected. Rather, these classes were convenient same-grade replacements, typically identified by principals, for classes that were originally selected but declined to participate for logistical reasons.[33]

[32] Of the 220 participating schools, 42 were replacements.

[33] Statistical tests comparing randomly selected versus nonrandomly selected classes showed that only one of 41 drug-related measures examined showed a significant difference (with nonrandomly selected classes showing a higher prevalence). Drug use measures were also evaluated with and without the inclusion of the nonrandomly selected classes, and results did not substantially differ. Thus, nonrandomly selected classes remained in the final dataset.

Students[34]

Finally, of the 17,804 students enrolled in the eligible classes, 10,523 students were considered "completions,"[35] resulting in a **student participation rate of 59%**.[36] Eleven percent (11%) of cases were lost due to absenteeism, 29% were lost due to either unreturned consent forms or parental refusal, and 1% were lost due to teacher-assisted completions, comprehension issues, or withdrawals. The sources of nonresponse vary by grade: the major source of nonresponse in the lower grades is unreturned consent or parental refusal (35% in grade 7 versus 26% in grade 12, whereas in the upper grades absenteeism is higher than in the lower grades (14% in grade 12 versus 7% in grade 7). The student participation rates according to the four base regions presented in this report were 54% in Toronto, 53% in the North, 60% in the West, and 63% in the East.[37]

Trends in Student Participation

Student participation in the OSDUHS has trended downward over the long-term. Between 1977 and 2015, the student participation rate fell from 70% to 59%, with a peak in 1981–1983 at 85%. This decline is strongly associated with an increase in consent loss, which increased from 4% to 29% during this interval. In contrast, the loss due to absent students remained flat (11%–15%). While the loss due to absenteeism has remained constant across cycles, the proportion not returning their consent form has been increasing across all grades and all regions. The reasons for this increase are unclear. One possible explanation is the increasing number of school board RRCs and institutional REBs that have mandated active parental consent/student assent procedures, which tend to increase loss. This problem of declining response rates is common to the survey research field generally and is not unique to the OSDUHS (de Leeuw & de Heer, 2002; Galea & Tracy, 2007; Groves et al., 2009; Kreuter, 2013).

Still, our student participation rate of 59% is not below average for a student survey employing full active parental consent (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; Shaw, Cross, Thomas, & Zubrick, 2014; Tigges, 2003; White, Hill, & Effendi, 2004). For example, Health Canada's 2012/2013 *Youth Smoking Survey*, based on a combination of active and passive consent procedures, had a national student response rate of 72% yet the response rate in Ontario – where active consent is required by the vast majority of school boards – was 59% (Burkhalter, Cumming, Rynard, & Manske, 2013). The American *Monitoring the Future* (MTF) survey also employs a blend of active and passive consent procedures, an active parental dissent procedure (i.e., passive consent) for all students unless a school requires active consent procedures. MTF reports student response rates of 80%–84% of 12th graders and 86%–91% of 8th and 10th graders.[38]

[34] Although students are neither a stage of selection nor a sampling unit, they are the unit of observation within clusters. Consequently, their participation is a component of the overall participation rate.

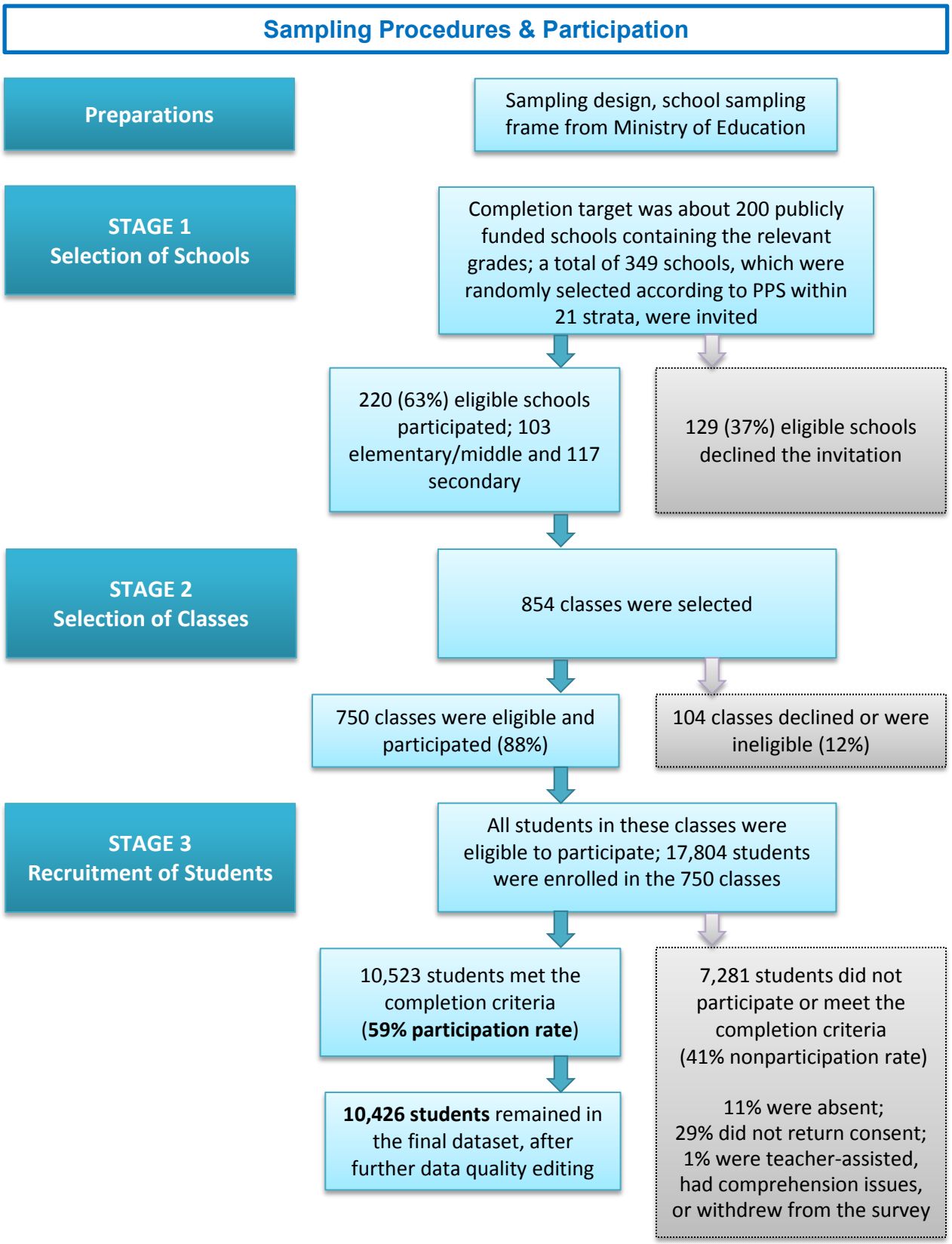
[35] A "complete case" had to answer at least half of the questionnaire and had to report a valid answer for sex and age.

[36] This shows the *unweighted* student participation rate. The *weighed* rate is based on the sum of the product of the regional weighted distribution and regional participation rate: Toronto (.170×.54) + North (.047×.59) + North Bay (.009×.46) + West (.280×.64) + Peel Region (.123×.61) + Niagara Region (.034×.54) + Brant County (.011 ×.59) + East (.161×.66) + Durham Region (.057×.56) + York Region (.065×.68) + Simcoe County (.044×.63) = 61%.

[37] For further details about the 2015 sample selection and participation rates for the 11 regions, please see Park (2015).

[38] There are some important procedural differences between MTF and OSDUHS that may account for an exceptional MTF response rate. First, unlike Canada, research projects conducted in the US can obtain confidentiality protection guaranteed in law. Second, when a school response rate is less than 70% a second "recoup" administration is conducted. Third, the default consent procedure for all students is passive consent (one that typically provides higher response rates), unless the school requires active consent. Fourth, participating schools in the MTF are given a substantial monetary incentive to commit to the study for two cycles.

Figure 2.1 Sampling Procedures and Participation in the 2015 OSDUHS



Nonresponse and Nonresponse Bias

The association between the magnitude of nonresponse and nonresponse *bias* is complex. A nonresponse rate is only an indicator of the *risk* of nonresponse bias. Although a high response rate is a necessary condition for valid data, a low response rate does not necessarily indicate the presence of significant nonresponse bias, as bias is a function of both the *size* of the nonresponse rate and the *differences* between respondents and nonrespondents on the measures of interest (Groves, 2006; Johnson & Wislar, 2012; Peytcheva & Groves, 2009).[39] Moreover, Groves and colleagues (2009) have shown that a survey can have a high response rate, yet discernible nonresponse bias when in the presence of large differences between respondents and nonrespondents.[40]

Existing research examining the impact of nonconsent (nonparticipation) on estimates of student drug use, mental health, and risk behaviours has not been conclusive. Some studies have found that students not providing parental consent or not participating in research studies are more likely to use drugs, engage in risk behaviours, or have mental health problems than students who do participate (Anderman, Cheadle, Curry, & Diehr, 1995; Courser et al., 2009; Shaw et al., 2014; White et al., 2004), whereas others have found no such differences (de Winter et al., 2005; Eaton, Lowry, Brener, Grunbaum, & Kann, 2004; Jelsma et al., 2012).

Evaluation of Nonresponse Bias

While we are unable to compare students who returned a signed parental consent form with those who did not, we did compare demographics, drug use and drug-related measures in classes in which the class participation rate was below 70% (n=466 classes) with classes in which the rate was 70% or higher (n=284 classes). If students without consent are indeed "high-risk" youth, then we would expect classes with low participation to have lower prevalence estimates (less likely) of risk behaviours and problem indicators due to the greater absence of high-risk students compared with high participation classes. We found no significant sex or grade differences between classes with low versus high participation, however low participation classes were most likely to be in Toronto and the North region. Of the 41 drug-related measures compared between the two groups, only one measure showed a significant difference.[41] This suggests that students who participated in the survey were not dominantly "low-risk" youth. In sum, we have no compelling evidence that our nonparticipation rate produced appreciable bias.

By design, one group not represented by the OSDUHS sample is dropouts or early school leavers. We must recall, however, that our target population is *enrolled* students. Adolescents who have dropped out of secondary school are no longer enrolled and, therefore, are out of scope – unless they dropped out after the sampling frame was generated.[42] This should serve as a reminder that readers should not attempt to extrapolate the OSDUHS findings to groups outside the target population (e.g., early school leavers, homeless or institutionalized youth).

[39] Specifically, bias = nonresponse rate × ($\text{mean}_{\text{respondents}} - \text{mean}_{\text{nonrespondents}}$)

[40] An example would be a survey with a 90% response rate in which a large proportion underreported (or unreported) a given behaviour or state.

[41] Low participation classes had a lower estimate for past year drinking compared with high participation classes, but this difference was found only in elementary schools.

[42] Another source of sampling error would occur if school leavers are not removed from the enrolment list resulting in potential coverage errors of ineligible units, and deflating the class response rate and expansion estimates. We expect such error to be negligible.

School Leavers in Ontario

Although the *Ontario Education Act* (2006) stipulates that school attendance is compulsory to age 18 for those who have not graduated from high school,[43] there are some exceptions (e.g., illness, legal emancipation). One challenge in assessing the impact of school leavers (dropouts) on our sample lies with the differing methods of measurement and their corresponding estimates. The Ministry of Education estimates that the high school graduation rate in 2013/2014 was 84% (Ontario Ministry of Education, April 2015). However, we cannot assume that the dropout rate was 16% because some students remain in school without graduating (i.e., take more years to graduate). Statistics Canada, on the other hand, measures the dropout rate using the *Labour Force Survey* and found that about 5% of 16 to 17 year-olds and 7% of 18 to 19 year-olds in Ontario were not attending high school (and did not already graduate) in 2009/2010 (McMullen & Gilmore, 2010).

Because school leavers are outside our target population of enrolled students, their omission should not bias our target population estimates. School leavers are more likely to be male, Canadian-born, and live outside of large urban centres (Gilmore, 2010). However, our poststratification weight adjustments should reduce this concern. The omission of school leavers would not affect our drug use and other risk behaviours trends if the proportion remains constant from cycle to cycle. However, both the Ontario Ministry of Education and Statistics Canada indicate that the proportion of school leavers has declined over the past two decades, not only in Ontario but also in most of Canada. One would assume that because of this decline (and therefore retaining a greater number of older males in schools over time), our estimates would show increases in drug use and other risk behaviours over time, but this has not been the case. This suggests that the omission of school leavers does not substantially affect our trend estimates.

[43] Prior to 2006, the compulsory age of education in Ontario was 16 years.

Postsurvey Processing

Final Data Set Creation

Consistent with previous process quality procedures, editing rules were established to enhance data quality. As mentioned earlier, students that did not answer at least half of the questionnaire were not entered into the dataset, and students that did not report a valid answer for age or sex (n=38) were removed from the dataset and considered "incomplete."[44] These two criteria were applied at ISR. After student data delivery to CAMH, three more data quality criteria were applied. Students that reported: (1) the use of a fictitious drug;[45] (2) using all of the core illicit drugs 40 or more times during the past year ("faking bad"), or (3) did not respond to half or more of the core drug use questions were also removed from the dataset. Note that criteria 1 and 2 address the potential bias due to overreporting drug use. This data editing process resulted in a final dataset consisting of **10,426 minimally complete cases** used in the data analyses (Form A-ES n=1,977 students; Form B-ES n=1,852 students; Form A-SS n=3,426 students; Form B-SS n=3,171 students).[46]

Item Missingness

Both the single item missing rate and the cumulated item missing rate were low, suggesting quality responding. Across the 59 core questions (i.e., items in all four questionnaire forms), the item missingness average was about 1%. In addition, there is no evidence that item nonresponse inflates with the transition from the demographic questions to the

[44] We contend that if students are unwilling to provide valid responses to questions about their sex or age, the data quality of their remaining responses is untrustworthy. Those cases with invalid sex or age responses were removed by ISR, before sending the data to CAMH.

[45] The fictitious drug was called "adrenochromes." Our data suggest that any overreporting bias should be minimal given rare reports of fictitious drug use (n=84 cases).

[46] 97 cases were removed from the final dataset due to the three data quality criteria applied at CAMH. This proportion is similar to the proportion removed in previous cycles.

more sensitive drug use questions.[47] In this report, missing responses to questions were not statistically imputed, but were excluded on a casewise (i.e., listwise) basis for all multivariable analyses.

Poststratification

We compared the 2015 OSDUHS sample with the most currently available school enrolment numbers from the Ministry of Education, which were based on the 2012/2013 academic year. Table 2.3 shows that there were slight discrepancies between the 2015 OSDUHS sex-by-grade weighted (preadjusted) total sample distribution and the provincial enrolment figures. However, larger discrepancies were found within certain regional strata when compared to the provincial distribution. For example, in certain regions younger males were overrepresented, whereas in other regions older females were overrepresented. To further improve the quality of estimates by reducing potential nonresponse and noncoverage bias, we calculated postsurvey adjustments for the sex-by-grade distributions within *each of the eleven regional strata separately* to restore each region's demographic composition to the population composition.[48] The poststratified weighted sample distribution is shown in Table 2.3 (far-right columns). The OSDUHS adjusted-weighted sample corresponds well to the Ontario enrolment.[49] Table 2.4 and Figure 2.2 show the demographic characteristics of the final weighted sample.

---

[47] For example, the demographic and background items immediately preceding the drug use items averaged an item missing rate of 0.9%. Transition to the subsequent module containing the drug use items did not alter this rate (0.9%).

[48] The sex-by-grade population distribution was not available according to each of the 11 regions, thus the provincial distribution was used to calculate the poststratification weights for each region. The assumption is that each region's population sex-by-grade distribution does not substantially differ from the provincial distribution.

[49] After adjustment, the difference between the weighted sample and enrolment figures did not exceed 0.5 percentage points in any of the 12 poststratification classes.

Table 2.3 The 2015 OSDUHS Sample vs. Ontario 2012/2013 School Enrolment

	OSDUHS Preadjusted		Population Enrolment		OSDUHS Postadjusted	
	% Male	% Female	% Male	% Female	% Male	% Female
Grade 7	6.2	7.0	7.3	6.9	6.8	6.4
Grade 8	6.5	7.2	7.5	7.1	7.0	6.7
Grade 9	7.9	8.2	8.0	7.6	8.2	7.8
Grade 10	7.2	9.4	8.2	7.8	8.4	8.0
Grade 11	8.5	9.0	8.5	8.1	8.8	8.3
Grade 12	11.7	11.2	12.2	10.8	12.5	11.1
Total	47.9	52.1	51.7	48.3	51.7	48.3

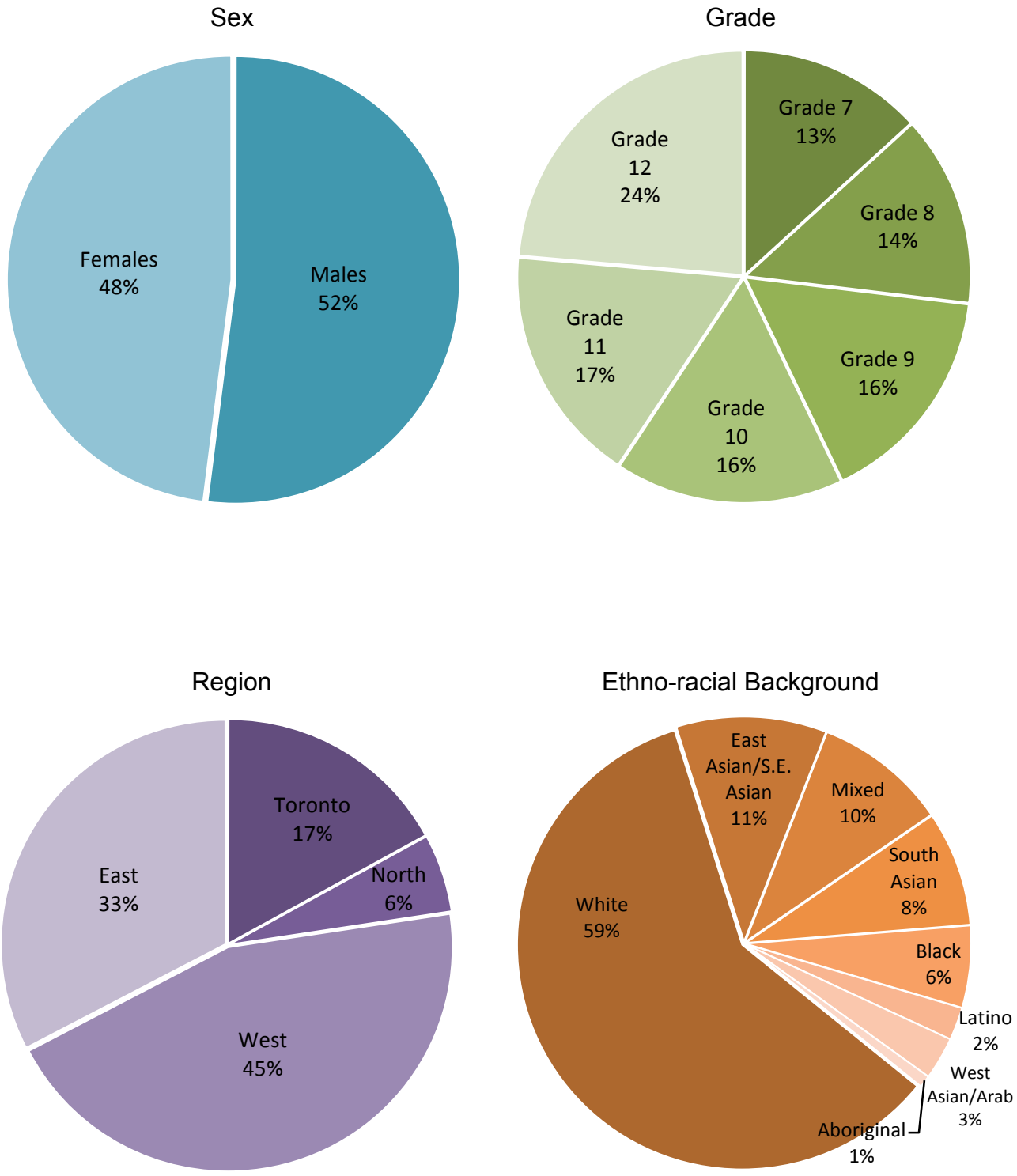
Notes: (1) OSDUHS cell entries are total sample percentages and are based on weighted data; (2) enrolment cell entries are total enrolment percentages and are based on 961,500 students enrolled in Ontario's publicly funded schools during the 2012/2013 academic year.

Table 2.4 Final Sample Characteristics, 2015 OSDUHS

	Final Number (*n*)	Weighted %
Total	**10,426**	
Males	4,782	51.7
Females	5,644	48.3
Grade 7	1,874	13.2
Grade 8	1,955	13.7
Grade 9	1,794	16.0
Grade 10	1,702	16.4
Grade 11	1,557	17.1
Grade 12	1,544	23.6
Toronto	1,053	17.0
North	775	4.7
North Bay Parry Sound District (OS)	580	0.9
West	1,297	28.0
Peel Region (OS)	1,155	12.3
Niagara Region (OS)	889	3.4
Brant County (OS)	1,066	1.1
East	461	16.0
Durham Region (OS)	766	5.7
York Region (OS)	1,110	6.5
Simcoe Muskoka District (OS)	1,274	4.4
Public School	6,443	64.4
Catholic School	3,983	35.6

Notes: (1) OS=oversample for the public health unit/department; (2) mean age was 15.1 years (SD=1.9); (3) the 11 regional strata were mutually exclusive; (4) for the four regional estimates presented in this report, the North region includes North Bay Parry Sound District (combined *n*=1,355), the West region includes Peel Region, Niagara Region, and Brant County (combined *n*=4,407), and the East region includes Durham Region, York Region, and Simcoe Muskoka District (combined *n*=3,611).

Figure 2.2 Sample Demographics, 2015 OSDUHS (Weighted Percentages of Total Sample, N=10,426)



Data Analysis, Interpretation, and Presentation

Data Weighting

Our deliberate oversampling of students in certain regions and our equal allocation of students within grade (and the additional public health region oversamples), results in the oversampling and undersampling of students relative to their population share. Given that the objective of our analyses is to provide descriptive population estimates, our design-based analysis requires selection or case weights attached to each student to ensure the proper representation of students to the Ontario student population.[50]

For each student, the final case weight is based on the product of five components: (1) the probability of a school being selected; (2) the probability of a class being selected within a selected school (components 1 and 2 comprise the base weight); (3) a student unit nonresponse adjustment factor; (4) a regional poststratification adjustment to restore regional representation; and (5) a final poststratification adjustment to restore the sex-by-grade distribution, using the most currently available provincial enrolment numbers.

Our weighted estimates are representative of all students in grades 7 through 12 enrolled in publicly funded schools in Ontario. Our population-scaled case weights expand our sample from **10,426 students to represent about 961,500 Ontario students** in grades 7 through 12, while ensuring that the sample composition corresponds to the population.[51]

Sample Weights

One intuitive way of thinking of the sampling weight is that each student in the sample represents or "stands in" for 92 students in the province who share similar characteristics.

Survey Estimation

Before turning to the survey results, we must first discuss briefly the meaning, interpretation, and limitations of survey estimates as they pertain to our data. The main goal of sample surveys is to estimate the "true" value of a particular characteristic in the population – in our case, the percentage of Ontario students in grades 7–12 who use a specified drug. Because we do not conduct a census of all students in the province, this "true" population percentage is unknown and must be estimated from a single sample. Consequently, every sample estimate has associated with it some degree of sampling error, a type of "statistical noise." The accuracy of a percentage – the difference between the obtained sample percentage and the "true" population percentage – is determined by the degree of precision and bias. Consequently, our goal in sampling is to obtain accurate estimates – that is estimates with high precision and low bias while maintaining an acceptable cost.

Precision refers to the variance or sampling error surrounding an estimate; those summarized in the present report include a range, or confidence interval (CI), enclosing a percentage value. The reason for employing confidence intervals stems from the uncertainty, or sampling error, associated with using the results obtained from a single sample to draw conclusions about the entire population. If we had drawn another sample, using identical procedures, the results would probably have differed slightly from those we obtained from our present sample, although the CI would most likely enclose the true percentage in this sample as well. It is important to note that CIs do not include various errors of bias such as nonresponse and

[50] The use of selection weights are not straightforward for analytic analyses, where data users must choose between an unbiased weighted estimate with inflated variance versus a biased unweighted estimate with smaller variance (Korn & Graubard, 1999).

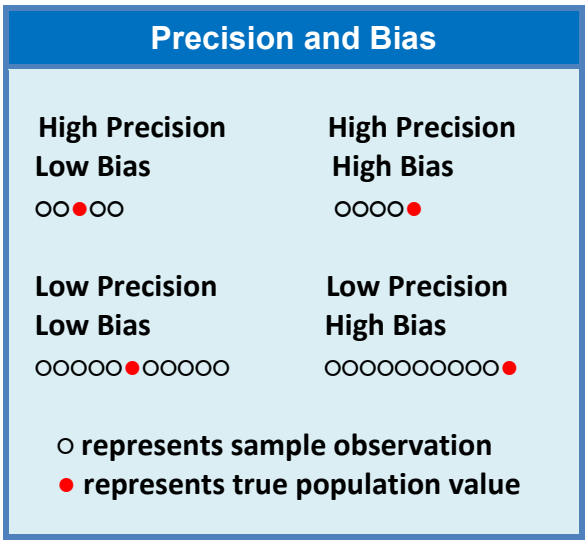
[51] The population-scaled weights range in value from 1.661 to 936.903 (mean=92.229; median=54.776 and inflates to the population count of 961,584. The sample-scaled weight ranges in value from 0.018 to 10.158 (mean=1.00; median=0.594).

misreporting (e.g., unintentional errors of memory and recall, or intentional errors of underreporting or overreporting).

The confidence interval enclosing a percentage estimate indicates the likelihood of CIs from repeated samples containing the true population percentage (in our case, 95% of the CIs drawn from repeated samples). In reporting that the percentage of students who drank alcohol in the past year was 45.8% (42.9%–48.7%), we infer that with repeated sampling 95% of the CIs would contain the true population value (ignoring bias). Narrower confidence intervals indicate greater precision, or less sampling error; wider intervals indicate less precision, or greater sampling error.

In our case, the width of the interval depends on three factors: first, the number of students surveyed – other things being equal, the larger the sample size the narrower or more precise is the interval because sampling variance decreases as the sample size increases; second, the size of the percentage – other things being equal, percentages near 50% have the widest interval (i.e., maximum variance) while percentages approaching 0% and 100% have the narrowest interval;[52] and third, design effects (deff) – in our design, other things being equal, the greater the similarity (or correlation) among students within schools and classrooms the larger is the deff, which, in turn, widens the interval.[53] Changes in any of these three factors combine to affect the width of the confidence interval. All CIs shown in this report are design-adjusted, that is, accommodated for features of the complex sample design, and logit transformed to ensure that the lower and upper limits neither subceed 0% nor exceed 100%, a matter especially important to the estimation of rare or common behaviours (see Korn & Graubard, 1999, pp. 66-68).

Bias, in contrast to precision, refers to sources of error that may systematically inflate or deflate estimates from the true percentage. Such sources of nonsampling error include underreporting or overreporting of drug use, memory effects, nonresponse, noncoverage, and other sources of systematic error. Thus, a percentage may have a high degree of precision (a narrow confidence interval) and yet may still be biased (not close to the true population value). The margins of error, or confidence intervals, we present in this report include only sampling error. Confidence intervals do not include errors due to nonsampling factors such as the underreporting of drug use and other illegal behaviours or sensitive information, or errors of memory or recall.



[52] This is because very large and very small percentages have little variability, as most students are either in the "yes" category or in the "no" category.

[53] The design effect (deff), originated by Kish in 1965, represents the net effect of the combined influence of stratification, clustering and weighting, relative to a simple random sample. Deffs of 1.0 indicate a variable whose complex survey data has an equivalent precision to a simple random sample (SRS). Deffs larger than 1.0 indicate precision loss – precision less than an equivalent SRS. Deffs smaller than 1.0 indicate precision gain – precision greater than an equivalent SRS.

Validity of Self-Reports

The OSDUHS data collection features (i.e., in-class, self-completed, anonymous, voluntary) are the optimal conditions under which to survey adolescents about sensitive topics such as drug use, other illegal behaviours, and mental health problems (Brener et al., 2006; Gfroerer, Wright, & Kopstein, 1997; Griesler, Kandel, Schaffran, Hu, & Davies, 2008; Hibell et al., 2003; O'Malley, Johnston, Bachman, & Schulenberg, 2000; Tourangeau & Yan, 2007). We made full effort to elicit truthful responses by repeatedly ensuring students of complete anonymity and confidentiality of their responses. While the OSDUHS design does not include external, objective validation of students' self-reports of drug use (e.g., biomarkers) and mental health measures, we do have some inferential evidence to support their validity:

- The OSDUHS data have shown predictable relationships between self-reported drug use and other items including demographics, aggressive and other problem behaviours, and school problems (for examples see Cook et al., 2014; Fischer et al., 2013; Hamilton, Danielson, Mann, & Paglia-Boak, 2012; Vingilis et al., 2011). These various studies, including this descriptive report, provide empirical evidence of construct validity.

- As discussed earlier, the questionnaire includes several published, validated measures of problem-behaviour and mental health problems among adolescents.

- As discussed earlier, missing responses to the drug use questions are not substantially higher than nonsensitive questions (e.g., demographics) that immediately precede the drug use questions.

- The fictitious drug question elicited low levels of reported use indicating that intentional overreporting is likely minimal. Further, any cases reporting use of the fictitious drug or exaggerated drug use were removed from the dataset.

Still, there is research evidence to suggest that self-reported drug use, risk behaviours, and other problems are generally underreported to some extent due to the social stigma and sensitivity surrounding the (mostly) illegal behaviours being studied (Adlaf, 2005; Brener, Billy, & Grady, 2003; Delaney-Black et al., 2010; Hibell et al., 2003; McCambridge & Strang, 2006; Meiklejohn, Connor, & Kypri, 2012; Miech et al., 2015; Tourangeau & Yan, 2007). In addition to intentional misreporting, respondents may unintentionally misreport their responses due to various errors in the response process. Indeed, respondents may err in their reporting of a behaviour or event due to such factors as the event not being stored in memory; not understanding the question; being unable to retrieve the information; and difficulty in formatting a response based on provided categories (Biemer & Lyberg, 2003). Further, students absent from class have a greater propensity to engage in risk behaviours than students who are regularly present in class (Bovet, Viswanathan, Faeh, & Warren, 2006; Centers for Disease Control and Prevention, 1994; Eaton, Brener, & Kann, 2008; Michaud, Delbos-Piot, & Narring, 1998; Weitzman, Guttmacher, Weinberg, & Kapadia, 2003). **Considering all this, our survey results should be viewed as conservative, tending toward underestimation.** Yet, understated estimates still provide important public health information by establishing the lower bounds of a population value. Assuming that underreporting and absenteeism remains rather constant across years (as our data show for absenteeism), then any biases in trend estimates should remain constant across time. Therefore, trend estimates should not be greatly affected by any such biases (Cochran, 1977; Groves et al., 2009). Indeed, the steady nature of our trend curves provides support for this assertion.

2015 Estimation and Analysis

The OSDUHS design featuring stratification, clustering, and selection weights (due to unequal selection probabilities) requires the use of estimation methods that accommodate complex survey data. Unfortunately, many standard

statistical software systems assume that data are derived from simple random samples (i.e., the sampling of independent units with equal probability). Such systems cannot correctly estimate variances and their associated confidence intervals and statistical tests from such complex sample data.[54]

All 2015 percentage and population count estimates and corresponding confidence intervals presented in this report were design-based and statistical tests were design-adjusted, (i.e., accommodated for characteristics of the complex sampling, namely, stratification, clustering, and weighting) using Taylor series linearization (TSL) available in Stata 13 (Heeringa et al., 2010; StataCorp, 2013).[55]

The 2015 OSDUHS sampling design was comprised of **21 strata** (region by school level),[56] **220 primary sampling units** (schools), and **10,426 students**. The design-based degrees of freedom (*df*) for our complex sample was 199 (*df*=220 [# school PSUs] – 21 [# strata]). We restrict design specification to stage 1 primary sampling units (schools), given that stage 2 variances (classes) "roll-up" into stage 1 PSUs (Heeringa et al., 2010, p. 67).[57] In addition, our negligible sampling fraction allows us to ignore the finite population correction (fpc) in our estimation.[58]

The statistical significance of subgroup (i.e., sex, grade, region) differences in 2015 was tested using bivariate second-order design-adjusted Rao-Scott Pearson chi-square tests at the $p<.05$ level of significance (Heeringa et al., 2010).

Another unique feature of complex sample analysis is the estimation of subpopulations (e.g., drinking problems among drinkers or drinking-driving among drivers). If the analysis was to employ a simple selection filter command (e.g., "select if" drinker), the software would ignore the correct survey design elements and, consequently, miscalculate the degrees of freedom, and by doing so would overstate statistical tests leading to false positive findings. In this report, we employ unconditional subclass methods for all subgroup analyses by specifying a command (`subpop` in Stata) that properly retains the correct design structure information (clusters and strata) of the subpopulation and full sample.[59]

[54] Statistical systems assuming simple random samples (SRS) underestimate variances of complex sample data due to various violations of some key assumptions of SRS-based estimation, most notably being the independence of observations, which is readily violated by hierarchically clustered data and sampling with unequal probabilities. The consequence of this (and other) violations is underestimated variances and CIs resulting in overstated statistical inference (i.e., deflated probability levels). Another matter related to statistical testing is the calculation of degrees of freedom (*df*). In complex sampling the traditional calculation of the *df* no longer holds; instead, for stratified designs, fixed *df* are calculated based on the *sample design df* = N_{PSU} - N_{strata}. This correction typically reduces the *df*, which, in turn, results in lower statistical significance compared with the unadjusted *df*. Statistical systems that produce correct estimates now include general purpose software, including Stata's *svy* suite of survey commands, SPSSs Complex Samples module, SASs SURVEY procedures, Rs survey package, and dedicated systems including SUDAAN, WesVar, and Mplus.

[55] Estimation of percentages and other point parameters employed pseudo maximum likelihood estimation (PMLE) also known as weighted maximum likelihood estimation; estimation of variances and resulting confidence intervals employed first-order Taylor series linearization (TSL), a robust variance estimator, also known as the Huber White robust sandwich variance estimator.

[56] Elementary/middle schools were not sampled in one of the 11 regions, resulting in 21 rather than 22 strata.

[57] This restriction to stage 1 units has the added advantage of increasing the degrees of freedom by eliminating the stage 2 selection (classes).

[58] The fpc reflects the expected reduction in the sampling variance due to sampling without replacement and is used when the sampling fraction *n/N* exceeds 5%–10%. Given the negligible sampling fraction of the 2015 OSDUHS (n/N=.01) and the resulting fpc is ~ 1.0, we have employed the standard practice of ignoring the fpc in variance estimation (Biemer & Lymer, 2003; Korn & Graubard, 1999).

[59] Essentially, such a procedure assigns a weight of zero to all cases outside of the subclass and retains the original weight for subclass cases (Heeringa et al., 2010; Korn & Graubard, 1999). Consequently, although observations are "removed," their strata and PSUs are not.

Why do cluster samples "lose data"?

One way to understand the loss of data due to clustering is to consider a simple random sample (SRS) of students, each selected independently throughout the province. In this scenario, each student represents a simple case count of 1 because each provides unique, independent information. Because the sample is widely dispersed over a large area, there is wide variability in student characteristics. Students selected in this way would reside in different neighbourhoods, in families with differing incomes, ethnic backgrounds, parental occupations, and so on.

Now, consider a sample of students drawn from clusters of schools and classrooms. Because students in the same schools and classes share many of the same background characteristics and behaviours, they tend to be similar, resulting in extra-correlation. Because of this high similarity, each student is no longer providing unique, independent information, and so is no longer representing a student count of 1, but represents a count of less than 1.

Consequently, a SRS of 100 students would statistically represent 100 students. In contrast, a cluster sample of 100 students might effectively (statistically) represent only 70 SRS equivalent students, for example.

This reduction in effective sample size depends on the degree of similarity – greater similarity within clusters results in greater data loss due to a higher design effect.[60]

[60] This is why sample designers attempt to design clusters that are *internally heterogeneous* (i.e., highly dissimilar). This goal, however, is difficult to attain with some organizational populations such as schools where the composition of organizational-based clusters may be highly structured and less manageable to control.

Trend Analysis

In this report, we describe three patterns of change in our data: the first describes changes between 2013 and 2015 (changes since the previous survey); the second describes trends from 1999 to 2015; and the third describes long-term trends from 1977 to 2015. To evaluate the time trends, a merged or "stacked" dataset was used.[61] All estimates spanning back to 1977 were accommodated for the respective survey design effects.

2015 vs. 2013 and 1999–2015 Trends

We first evaluated changes since the previous survey (i.e., 2015 vs. 2013). Following that, we evaluated changes since 1999 because this was the year the survey first included all grades from 7 through 12. The tests contrasting 2015 and 2013 estimates and estimates since 1999 were based on grades 7 through 12.

For time trends 1999 through 2015, we assessed change with a binary-response logistic regression providing an appraisal of the cycle-to-cycle change (with 2015 contrasted to each prior survey, i.e., reference group contrasts) as well as assessing the presence of linear and nonlinear trends.[62] A linear trend indicates a constant straight-line increase or decrease over the entire period. A nonlinear trend indicates a levelling-off and/or a change in direction over time (one or more bends in the line). Both linear and nonlinear trends may be simultaneously present in a longitudinal data series.

[61] Trend analyses were conducted using a stacked dataset cumulating 20 cycles for the years 1977–2015. The dataset contains 103,679 students enrolled in 2,473 schools (stage 1 PSU clusters) distributed among 264 region-by-school level-by-year strata. (Cluster and stratum codes were created with unique values across cycles.) The notion of a stacked dataset is descriptively accurate given that data from each cycle is sequentially stacked on top of one another. See Kish (1999) and Korn & Graubard (1999) for discussion on combining multiple surveys.

[62] Linear and nonlinear trends were evaluated with orthogonal polynomial contrasts that decompose linear from quadratic and higher order nonlinear contrasts.

1977–2015 Trends

The long-term trend analyses from 1977 through 2015 were based on an unconditional subpopulation consisting of only grades 7, 9 and 11, the three grades common to all survey cycles. Again, we assessed change with a binary-response logistic regression, providing an appraisal of the cycle-to-cycle change (with 2015 contrasted to each prior survey, i.e., reference group contrasts) and a joint test of the presence of any change between 1977 and 2015. We also assessed whether changes over time showed significant linear and nonlinear trends. Given the smaller long-term sample, we restricted our trend analyses to the total sample, and did not evaluate the long-term trends by subgroup.

For all statistical tests comparing percentages across time, we used the more conservative $p<.01$ significance level. As discussed earlier, absolute differences between two percentages do not necessarily signal meaningful differences. This more conservative significance level for temporal differences should reduce the problem of inflated false positive findings due to multiple testing – i.e., our large number of computed tests.

Readers should also note the following regarding our analyses and reporting:

- Statistical differences must be carefully interpreted. First, although we used methods to reduce the problem, our analysis does not fully resolve the problem of the large number of statistical tests performed. Indeed, for every 20 statistical tests, one "significant difference" could occur solely by chance, thus resulting in false positive findings. Second, outcomes that are statistically significant tell us only that the difference is probably not due to chance. Whether a statistically significant difference is a meaningful one of public health importance is a matter that requires both statistical and extra-statistical judgement.

- Readers should be mindful of the varying estimation sample sizes, even for the same subgroup. Although the modularized split ballot questionnaires (Form A vs. Form B) are efficient means to maximize data collection, sample sizes for the same subgroup of students (e.g., males) may vary widely depending on which questions from which questionnaire form are being assessed.

- Visual inspection of overlapping CIs is a useful *approximation* of statistical findings, but each separate CI is a nominal 95% CI. Thus, when visually comparing two or more CIs for overlap, in some instances the visual difference may not perfectly correspond to a statistical test because the probability of two 95% CIs do not equal the probability of a single 95% statistical test.

- The scope of this report is limited to a select few epidemiologically relevant risk factors – sex, grade, and region. It should be obvious that not all potentially relevant risk factors were assessed in this report. Such investigations will be a matter for future work.

- We intentionally emphasize the influence of grade when describing age-based associations because grade-related findings are more readily translated into school system programming. Nonetheless, readers should recognize that our findings concerning grade associations and health indicators would, of course, mirror age associations.

- Our report is descriptive. Associations found in these data do not imply causal relationships. For example, regarding regional differences, we can only determine if a difference exists and describe the pattern of differences. Because other factors may be the root cause of regional differences (e.g., socio-economic status differences or ethno-cultural differences), we cannot causally attribute such differences solely to the regional residence of students. Indeed, many

socio-demographic characteristics are naturally "bundled" within region.

- Most estimates presented in this report are prevalence rates in percentages and population counts, the latter of which have been rounded downward.

- All analyses were based on casewise, or listwise, deletion of missing responses resulting in complete case analysis. In casewise deletion, if a student has at least one missing value for a set of items used in the analysis, *all* information from this student was temporarily removed from the specific analysis.

- For multi-item measures and screeners (e.g., the *AUDIT*), we report the alpha reliability coefficient which measures the internal consistency of the scale – the degree to which the items are strongly interrelated and thus measure the same construct.

- Small percentages and estimates based on few students produce wide confidence intervals (i.e., large error) and ones that have a propensity toward being untrustworthy. In this report, estimates were suppressed due to unreliability (unstable) if they met any *one* of the following conditions:

  (1) an estimate less than 0.5%;

  (2) a base sample size (i.e., the denominator) of fewer than 50 students; or

  (3) a relative standard error, measured by the coefficient of variation[63] (CV), exceeding a value of 33.3. This suppression threshold for untrustworthy estimates is also used by Statistics Canada and other statistical agencies.

Although the numerical value of a suppressed estimate is nonreportable, we may still draw useful interpretations of suppressed data. First, we can conclude that the estimate is too low to be discernible with our sample size. Second, a suppressed estimate can still establish that a behaviour has not measurably diffused into the student population.

[63] The coefficient of variation is the ratio of the standard error to its estimate (i.e., CV = SE/estimate). Stata computes the CV as a percentage: CV = (SE/estimate) × 100%. This measure is especially useful when comparing the precision of measures with different percentage magnitudes and different sample sizes. Another important application of the CV is to flag potentially untrustworthy estimates requiring suppression.

Table 2.5 2015 OSDUHS Method and Sample Summary

2015 OSDUHS Method and Sample Summary	
Design	▪ Target sample consisted of 7th–12th graders enrolled in provincially funded English and French language schools (public and Catholic school sectors) in Ontario during the 2014/2015 school year. Students excluded as being out-of-scope were those in private schools, those schooled in correctional or health facilities, those schooled on First Nations reserves, military bases, those schooled in the remote areas of Northern Ontario, and those who were home-schooled. ▪ Sample selected by a stratified (region by school level), two-stage cluster design. Stage 1: schools (stratified by region and school level) were selected by probability-proportionate-to-school size (PPS). Stage 2: classes (stratified by grade) were selected with equal probability. Both stages employed sampling without replacement (WOR). ▪ The primary stage stratification, which included both a design component (4 regions × 2 school levels) and an optionally-sponsored public health oversample (7 regions × 2 school levels), resulted in a combined total of 21 (22-1) region-by-school level strata (elementary/middle schools were not sampled in one of the 11 regions). ▪ Within each stratum, schools were selected by systematic random sampling according to PPS using the 2011/2012 Ontario Ministry of Education's school enrolment database as the sampling frame. Within selected schools, one class per grade was randomly selected with equal probability of selection (EPSEM).
Participation	▪ 10,523 of 7th–12th graders sampled from 220 schools, 750 classes, and who provided active parental consent and student assent, completed questionnaires from Nov. 2014 to June 2015. ▪ 63% of selected schools, 88% of selected classes, and 59% of students in participating classes participated in the survey. ▪ The **final (edited) sample of 10,426 students** is representative of the 961,500 7th–12th graders enrolled in Ontario's publicly funded public and Catholic schools.
Questionnaire	▪ Four split ballot versions (Form A-ES, Form B-ES, Form A-SS, Form B-SS) of the anonymous, self-completed, paper-and-pencil instrument (PAPI), which averaged 30 minutes to complete, were administered in classrooms by trained staff from the Institute for Social Research.
Student Characteristics	▪ Males (n=4,782; 52% weighted); Females (n=5,644; 48% weighted) ▪ 7th graders (n=1,874; 13%); 8th graders (n=1,955; 14%;) 9th graders (n=1,794; 16%); 10th graders (n=1,702; 16%); 11th graders (n=1,557; 17%); 12th graders (n=1,544; 24%). ▪ Toronto (n=1,053; 17%); North (n=1,355; 6%); West (n=4,407; 45%); East (n=3,611; 33%).
Data Quality	▪ Cases (n=44) not responding to at least half the questionnaire were not entered into the dataset. ▪ Data editing rules were applied, resulting in 135 (n=38 invalid sex or age; n=97 invalid or exaggerated drug use responses) 'untrustworthy' questionnaires removed from the final dataset. ▪ Nonresponse analysis comparing classes with participation rates of 70% or higher to classes with lower rates showed no significant differences in most of the key drug-related measures.
Analysis	▪ Selection weights were used to account for differing sampling probabilities and to restore the sample to the corresponding population distribution. Poststratification adjustments were used to correspond to the Ministry of Education's 2012/2013 enrolment for sex-by-grade groupings. ▪ The complex sample analysis model is based on a design with 220 primary sampling unit clusters (schools), 750 secondary sampling unit clusters (classes) distributed among 21 region-by-school level strata. For analysis, only stage 1 primary sampling units (schools) and strata were necessary to approximate the two-stage sampling design used to draw the sample.

Table 2.6 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 Use of Cigarettes, E-Cigarettes, Waterpipe	Past year use of tobacco cigarettes, electronic cigarettes, and a waterpipe excludes smoking only "a few puffs." These cases were classified as nonusers and assigned to the denominator.
Daily Smoking	Smoking at least one whole cigarette daily during the past 12 months.
Past Year Alcohol Use (Drinkers)	Any alcohol consumed during the past 12 months. Use includes consumption on special occasions, but excludes sips.
Heavy Episodic Drinking	Two indicators are used: (1) binge drinking: drinking 5 or more drinks on the same occasion during the past 4 weeks; (2) getting drunk during the past 4 weeks.
Hazardous/Harmful Drinking	Scoring at least 8 of 40 (Likert scoring) on the World Health Organization's *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, social, or mental health problems, including dependence. Harmful drinking is a pattern that is already causing harms (e.g., injuries).
Past Year Drug Use (Users)	Used the drug at least once during the past 12 months. Cases that responded "don't know what [the drug] is" were classified nonusers and assigned to the denominator.
Frequent Drug Use	Used the drug 6 or more times during the past 12 months. Cases that responded "don't know what [the drug] is" were classified as nonusers and assigned to the denominator.
Nonmedical Use (NM)	Used the drug without a prescription, or without a doctor's supervision.
Any Drug Use in 2015	This binary measure indicates past year use of one or more of the following 18 drugs asked about in the 2015 survey (Form B-SS only): cannabis, synthetic cannabis, inhalants, LSD, mushrooms/mescaline, cocaine, crack, methamphetamine, heroin, ecstasy, jimson weed, salvia divinorum, mephedrone ("bath salts"), tranquillizers/ sedatives (NM), modafinil (NM), prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication). Excluded from this count are tobacco cigarettes, e-cigarettes, waterpipe, alcohol, and high-caffeine energy drinks.
Any Drug Use (for trends)	To examine trends in any drug use, we use two measures based on drugs that were common to all surveys since 1977. The first measures past year use of one or more of the following nine drugs: cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, and tranquillizers/sedatives (NM). A second measure for trends in any drug use excludes cannabis.
Any Nonmedical Prescription Drug Use	Nonmedical use of one or more of the following three prescription drug classes once or more often during the past 12 months: prescription opioid pain relievers, ADHD drugs, 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 subscale of the *Severity of Dependence Scale* (SDS). The SDS is a validated 5-item instrument used to screen for drug dependence in adolescent and general populations.
Psychological Distress	Scoring at least 8 of 24 (Likert scoring) on the *Kessler 6-Item Psychological Distress Scale* (K6). The K6 measures unspecified psychological distress (symptoms of anxiety and/or depression). A score of 8 or higher was used to indicate a moderate or serious level of distress experienced during the past 4 weeks.

3. RESULTS

3.1 Overview of Drug Use in 2015

Drug Use in the Past Year
(Figures 3.1.1, 3.1.2; Table 3.1.1)

By far, the most commonly used drug is alcohol, with 45.8% of students in grades 7 through 12 reporting use (excluding just a sip to try it) during the 12 months before the survey. Consumption of highly caffeinated energy drinks is also quite prevalent, as about one-third (34.8%) of students report past year use, followed by cannabis, with 21.3% reporting past year use. About 11.7% report using electronic cigarettes (with or without nicotine), which is a higher prevalence than regular tobacco cigarettes (8.6%). One-in-ten students (10.0%) report the nonmedical (NM) use of prescription opioid pain relievers, such as codeine, Percocet, Percodan, Demerol, or Tylenol #3 in the past year. The remaining drugs are used by less than 10% of students.

Questions about the use of certain illicit drugs were asked of secondary students only (grades 9–12). Among this subset of illicit drugs, ecstasy (MDMA) ranks highest with about 5.4% of secondary students reporting use in the past year, followed by psilocybin ("mushrooms") at 3.2%. Use of methamphetamine, heroin, and mephedrone ("bath salts") is extremely rare, as their past year prevalence estimates fall below 1%. Over one-third (36.9%) of secondary students report using any drug (other than tobacco, alcohol or caffeine), during the past year. About one-in-eight (12.1%) secondary students report using at least one prescription drug nonmedically (without a doctor's prescription) during the past year.

Figure 3.1.2 shows the past year prevalence estimates for elementary students (grades 7 and 8) and secondary students separately. Not only do younger students have lower prevalence estimates than older students, the drug ranking differs slightly as well.

Lifetime Drug Use
(Figure 3.1.1; Table 3.1.1)

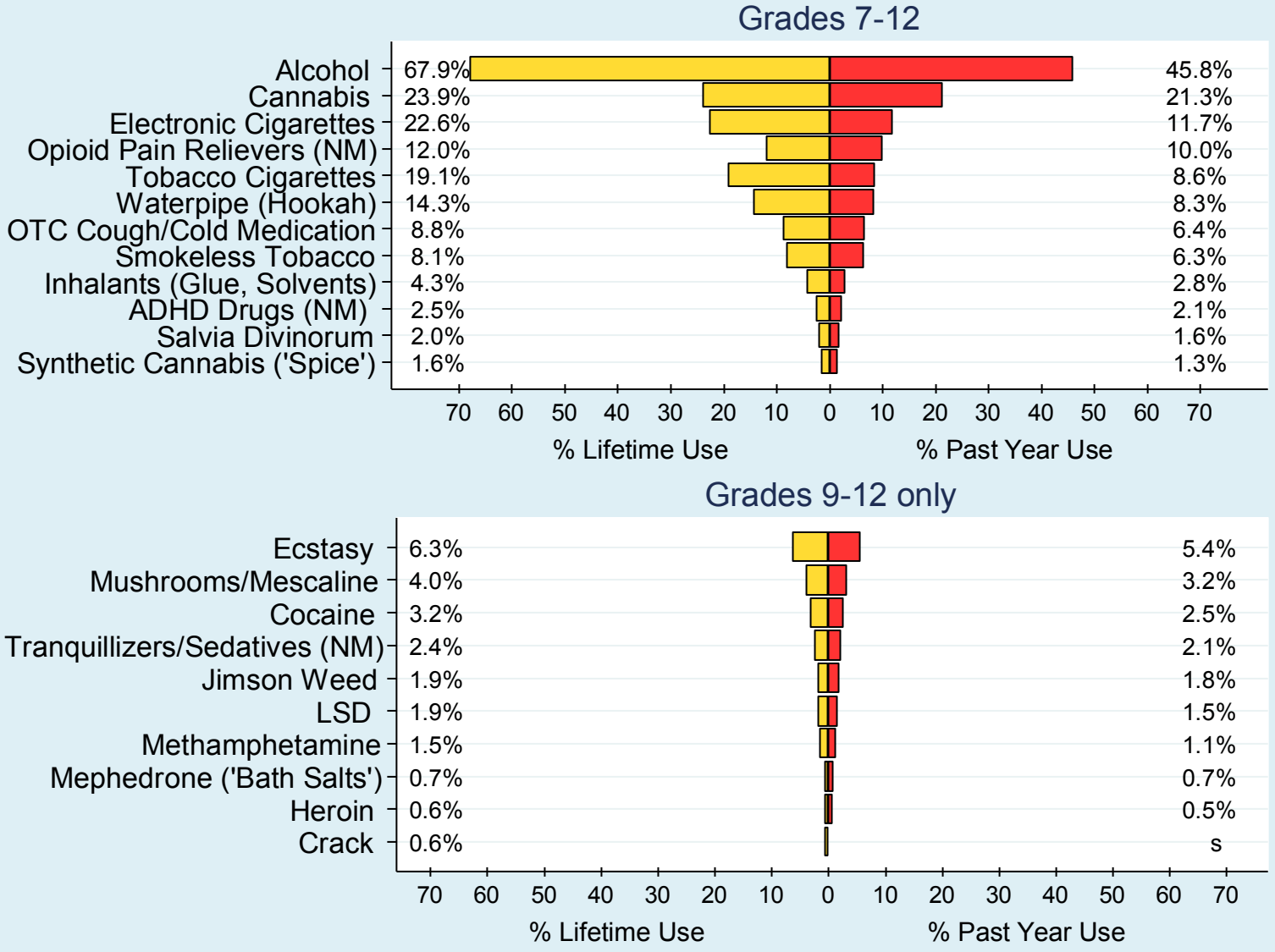
Estimates for lifetime use show that alcohol and cannabis are the most common drugs students in grades 7–12 have ever used. Over three-quarters (67.9%) of students have ever tried alcohol (this includes sips) and about one-quarter (23.9%) have ever tried cannabis. More students have tried electronic cigarettes (22.6%) than regular tobacco cigarettes (19.1%) in their lifetime. About 14.3% of students have tried a waterpipe (hookah) and 12.0% have used prescription opioid pain relievers (e.g., codeine, Percocet, Percodan, Demerol, Tylenol #3) nonmedically in their lifetime. The remaining drugs were used by less than 10% of students during their lifetime.

Frequency of Drug Use
(Figures 3.1.3, 3.1.4)

Frequent drug use, defined as using six or more times during the past year, is shown in Figure 3.1.3. Cannabis is the most frequently used illicit drug. About 12% of students in grades 7–12 report using cannabis frequently during the past year. Frequent prescription opioid pain reliever use is reported by about 4% of all students. All other drugs measured in the survey are used this frequently by less than 2%.

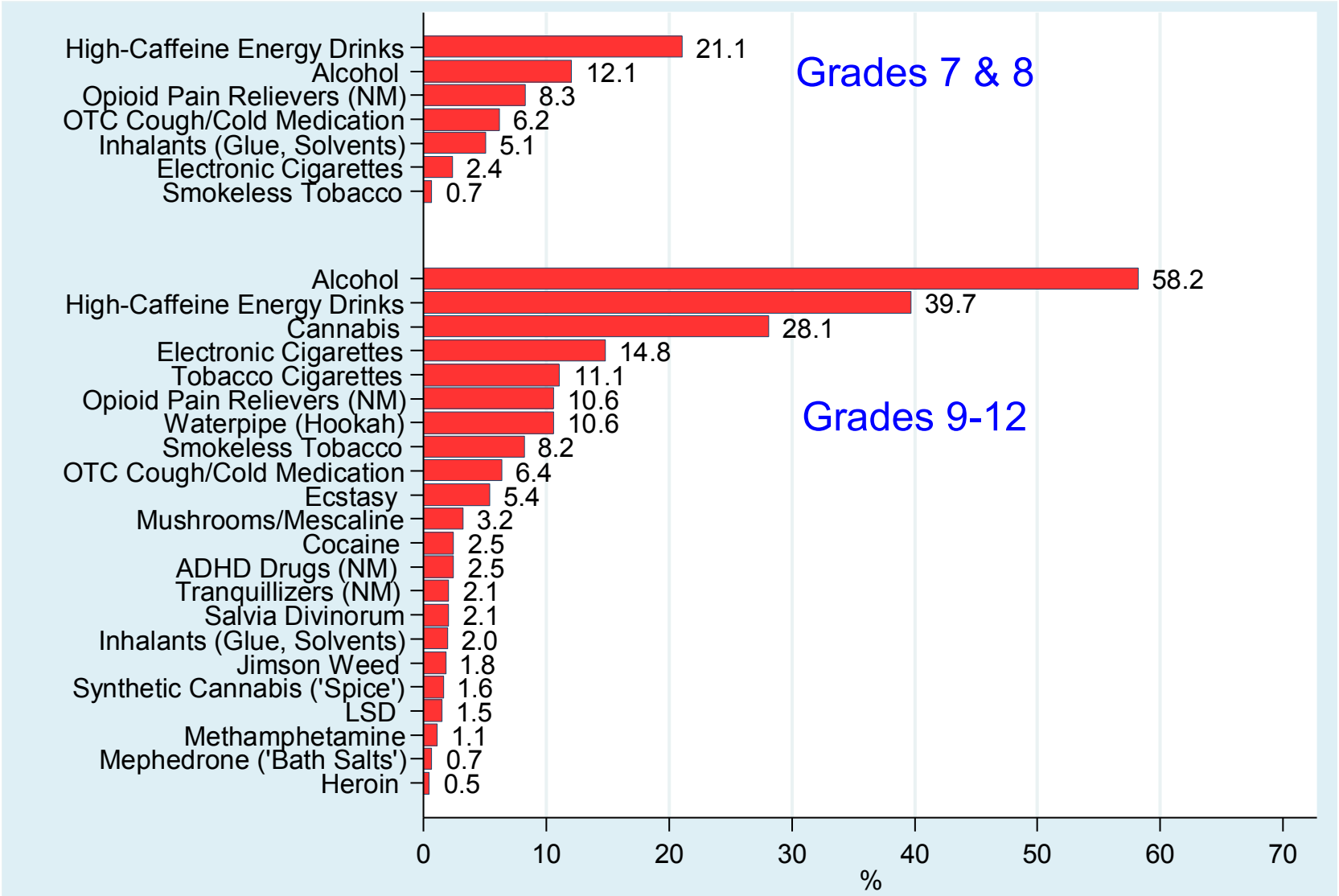
Figure 3.1.4 shows the number of times *past year users* used an illicit drug during the 12 months before the survey. Again, we can readily see that use of most drugs, with the exception of cannabis, is infrequent.

Figure 3.1.1
Percentage Reporting Lifetime and Past Year Drug Use, 2015 OSDUHS



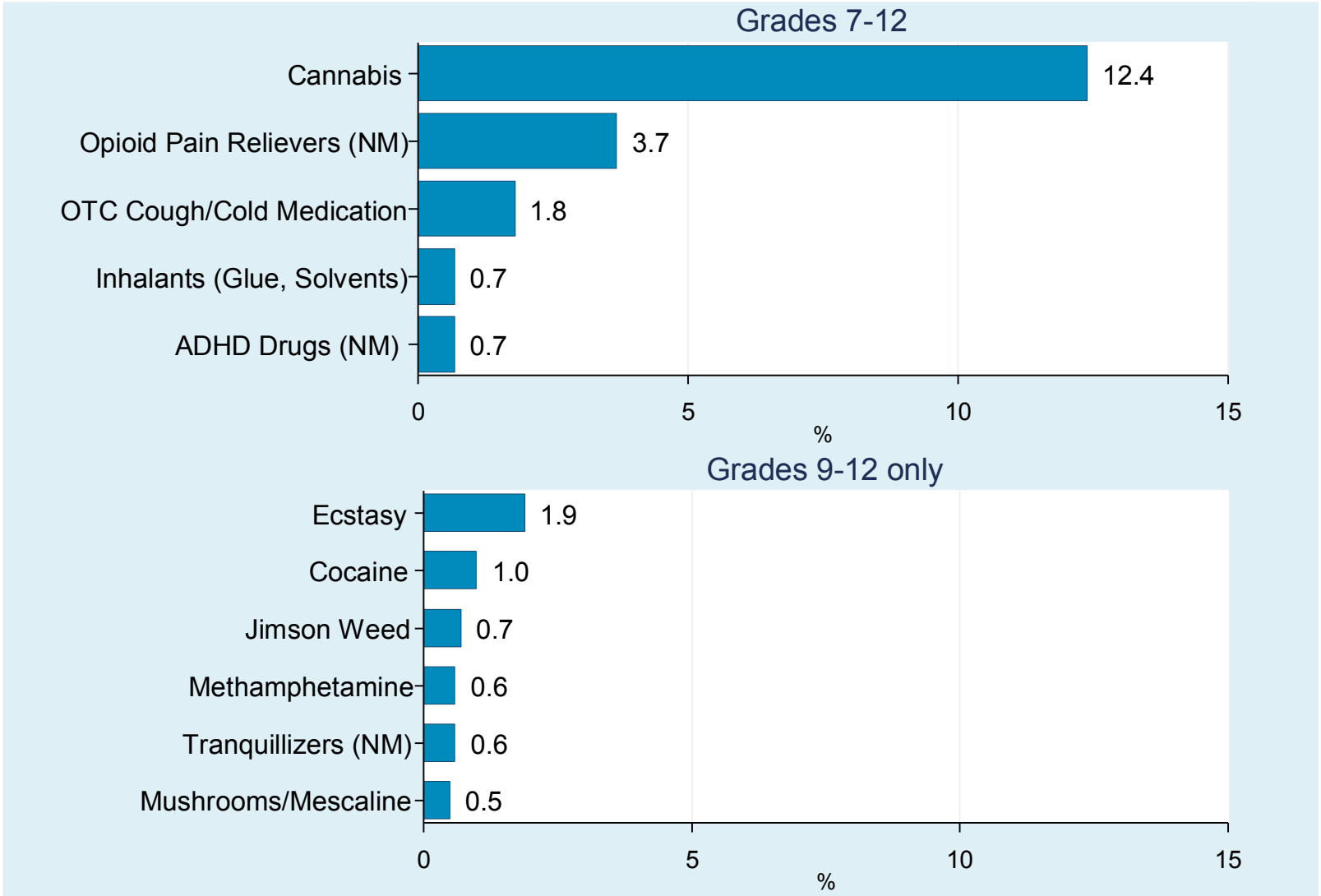
Notes: NM=nonmedical use, without a doctor's prescription; OTC=over-the-counter; ADHD=Attention-Deficit Hyperactivity Disorder; s=suppressed estimate; suppressed estimates for any use of modafinil

Figure 3.1.2
Percentage Reporting Past Year Drug Use by Grade Level, 2015 OSDUHS



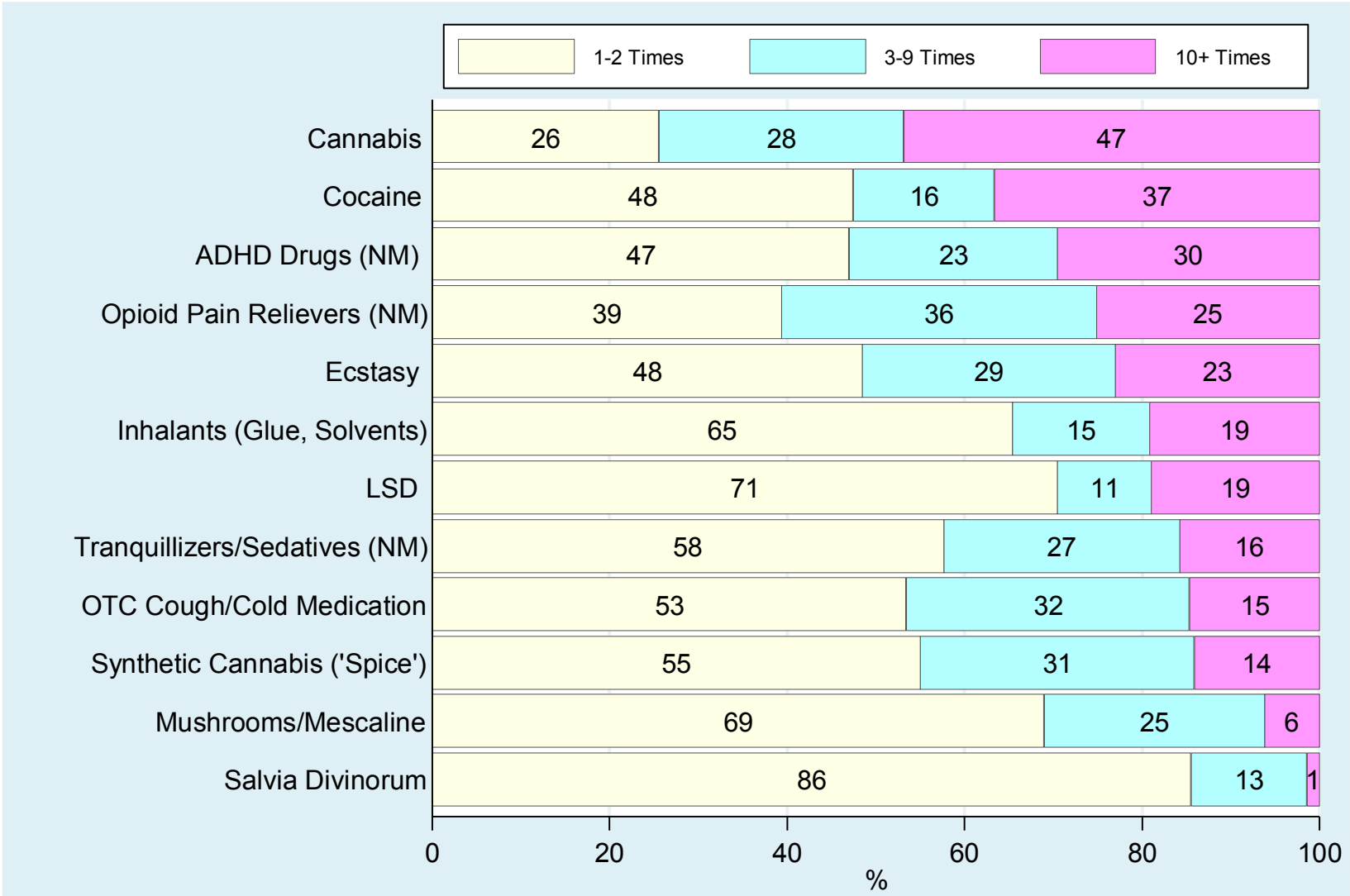
Notes: (1) NM = nonmedical use, without a doctor's prescription; (2) estimates for tobacco cigarettes, waterpipe, cannabis, synthetic cannabis ('spice'), salvia, and ADHD drugs among Grades 7 & 8 were suppressed due to unreliability; (3) estimates for crack and modafinil among Grades 9-12 were suppressed due to unreliability

Figure 3.1.3
Percentage Reporting Frequent Drug Use (Six Times or More Often) in the Past Year, 2015 OSDUHS (Total Sample)



Notes: (1) NM=nonmedical use, without a doctor's prescription; (2) OTC=over-the-counter; (3) ADHD=Attention-Deficit Hyperactivity Disorder; (4) estimates for salvia, synthetic cannabis, LSD, crack, mephedrone, and modafinil were suppressed due to unreliability

Figure 3.1.4
Frequency of Drug Use in the Past Year, Among Users, 2015 OSDUHS (Grades 9–12 only)



Notes: (1) NM=nonmedical use, without a doctor's prescription; (2) OTC=over-the-counter; (3) ADHD=Attention-Deficit Hyperactivity Disorder; (4) frequencies displayed only for drugs with 50 or more users

Table 3.1.1: Percentage Reporting Drug Use in Lifetime and in the Past Year, 2015 OSDUHS

	Lifetime Use			Past Year Use					
	Lower Estimate[a]	%	Upper Estimate[a]	Lower Estimate[a]	%	Upper Estimate[a]	Lower Estimate	**Approximate Number[b]**	Upper Estimate
AMONG GRADES 7–12									
Tobacco Cigarettes	17.3	**19.1**	21.0	7.5	**8.6**	9.9	70,900	**82,700**	94,600
Electronic Cigarettes (Vape Pens)	20.4	**22.6**	24.9	10.2	**11.7**	13.4	92,300	**107,800**	123,300
Waterpipe (Hookah)	12.6	**14.3**	16.2	7.1	**8.3**	9.6	64,000	**76,200**	88,500
Smokeless (Chewing) Tobacco	6.4	**8.1**	10.2	4.9	**6.3**	8.1	43,500	**58,200**	72,800
Alcohol	65.1	**67.9**	70.6	42.9	**45.8**	48.7	406,500	**439,200**	471,800
Cannabis	21.6	**23.9**	26.3	19.2	**21.3**	23.6	181,300	**203,900**	226,500
Synthetic Cannabis (“Spice,” “K2”)	1.2	**1.6**	2.1	0.9	**1.3**	1.7	8,500	**12,100**	15,700
Inhalants (Glue or Solvents)	3.6	**4.3**	5.2	2.2	**2.8**	3.4	19,600	**25,400**	31,200
Salvia Divinorum	1.5	**2.0**	2.6	1.1	**1.6**	2.3	9,400	**14,700**	19,900
OTC Cough/Cold Medication	7.4	**8.8**	10.4	5.3	**6.4**	7.6	48,700	**60,600**	72,400
High-Caffeine Energy Drinks		n/a		32.8	**34.8**	36.9	303,300	**326,800**	350,200
Opioid Pain Relievers (NM)	10.9	**12.0**	13.1	9.0	**10.0**	11.0	84,200	**95,000**	105,700
ADHD Drugs (NM)	2.0	**2.5**	3.1	1.6	**2.1**	2.7	14,700	**19,900**	25,100
AMONG GRADES 9–12 ONLY									
LSD	1.5	**1.9**	2.4	1.1	**1.5**	2.0	7,200	**10,300**	13,400
Mushrooms or Mescaline	3.1	**4.0**	5.1	2.4	**3.2**	4.3	15,700	**22,400**	29,100
Jimson Weed	1.4	**1.9**	2.7	1.3	**1.8**	2.6	7,900	**12,400**	16,900
Methamphetamine (incl. Crystal Meth)	1.0	**1.5**	2.3	0.7	**1.1**	1.8	4,100	**7,800**	11,500
Cocaine	2.6	**3.2**	4.0	2.0	**2.5**	3.2	13,400	**17,600**	21,900
Crack	0.4	**0.6**	0.9		†				
Heroin	0.4	**0.6**	0.9	0.3	**0.5**	0.7	1,900	**3,300**	4,800
Ecstasy (MDMA)	5.4	**6.3**	7.3	4.5	**5.4**	6.4	30,900	**37,700**	44,400
Mephedrone (“Bath Salts”)	0.5	**0.7**	1.2	0.4	**0.7**	1.2	2,000	**4,600**	7,200
Tranquillizers/Sedatives (NM)	1.9	**2.4**	2.9	1.7	**2.1**	2.7	11,200	**14,800**	18,400
Modafinil (NM)		†			†				
Any NM Use of a Prescription Drug				11.0	**12.1**	13.4	76,000	**85,300**	94,500
Any Drug Use Including Cannabis				33.9	**36.9**	39.9	229,600	**254,300**	278,900

Notes: (1) [a] 95% confidence interval; (2) [b] numbers are based on a population of approximately 961,500 students in grades 7–12, and have been rounded down; (3) † estimate suppressed due to unreliability (< 0.5%); (4) “Lifetime Use” refers to ever using the drug, including “sips” for alcohol and “a few puffs” for cigarettes; (5) “Past Year Use” refers to use at least once during the past 12 months, excluding “sips” for alcohol and “a few puffs” for cigarettes; (6) NM=nonmedical use, without a doctor’s prescription; (7) OTC=over-the-counter drug used to “get high”; (8) “Any NM Use of a Prescription Drug” refers to nonmedical use of prescription opioid pain relievers, ADHD drugs, or tranquillizers/sedatives; (9) “Any Drug Use Including Cannabis” refers to the past year use of any one of *18 drugs* (excludes alcohol, tobacco and electronic cigarettes, waterpipe, and high-caffeine energy drinks).

3.2 Overview of Drug Use Trends

2015 vs. 2013

(Figures 3.2.1a, 3.2.1b; Table 3.2.1a)

Of the 24 drugs monitored in both the 2013 and 2015 survey cycles, only ecstasy shows a statistically significant increase in past year prevalence (among secondary students), from 3.3% in 2013 to 5.4% in 2015.

Three drugs show a significant decrease in past year prevalence between these two years:

- opioid pain relievers (nonmedical use) decreased from 12.4% in 2013 to 10.0% in 2015;
- cough and cold medication (used to get high) decreased from 9.7% to 6.4%; and
- high-caffeine energy drinks decreased from 39.7% to 34.8%.

No other drug shows a statistically significant change in past year prevalence between 2013 and 2015.

The index measuring any nonmedical use of a prescription drug (i.e., opioids, tranquillizers, or ADHD drugs) in the past year decreased between 2013 and 2015 (from 15.2% to 12.1%). This decrease was mainly due to the decrease in prescription opioids between these two years, as shown above.

1999–2015 Trends

(Figures 3.2.2a, 3.2.2b; Table 3.2.1a)

Only past year nonmedical use of ADHD drugs shows a slight, yet statistically significant, increase since 1999 (from 1.0% to 2.1%). Most drugs monitored in the OSDUHS have shown decreases in annual prevalence during the past decade or so.

Drugs that decreased among grades 7–12:

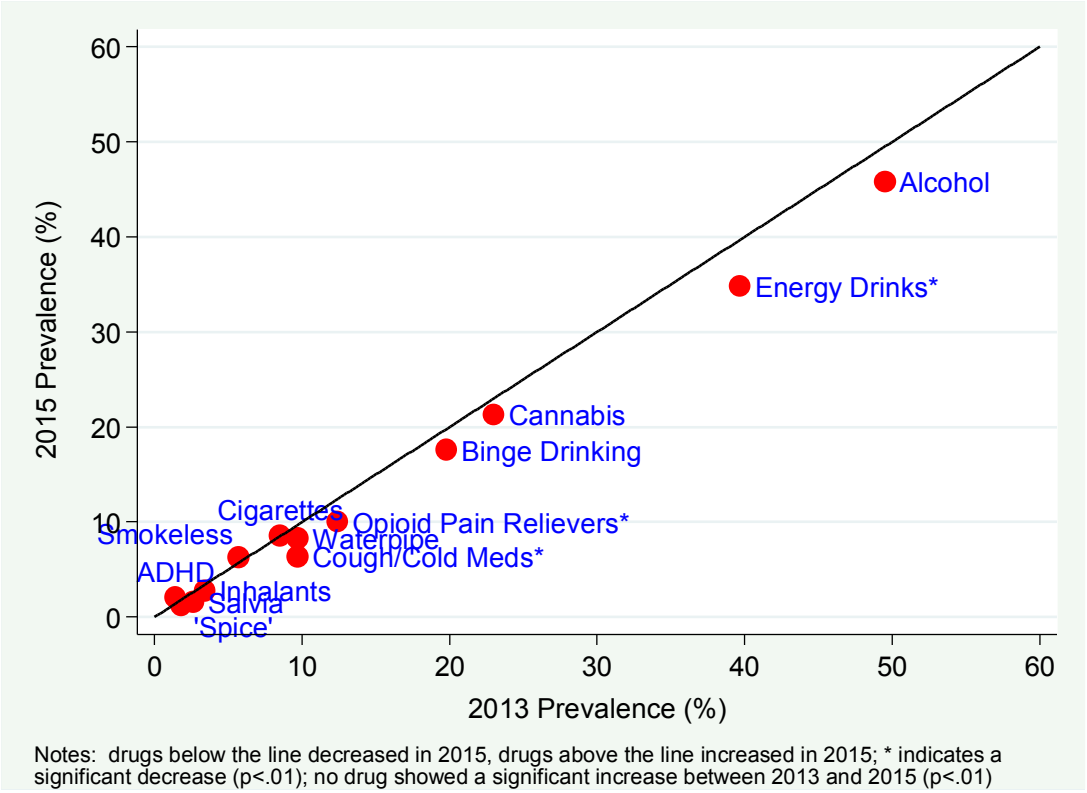
- tobacco cigarette smoking significantly decreased from 28.4% in 1999 to 8.6% in 2015
- alcohol (from 66.0% to 45.8%)
- cannabis (from 28.0% to 21.3%)
- inhalants (from 8.9% to 2.8%)
- salvia divinorum (decreased from 4.4% in 2009 to 1.6%)
- high-caffeine energy drinks (decreased from 49.5% in 2011 to 34.8%)
- opioid pain relievers (nonmedical use decreased from 20.6% in 2007 to 10.0%).

Drugs that decreased among grades 9–12 only:

- LSD (from 8.8% in 1999 to 1.5% in 2015)
- mushrooms/mescaline (from 17.1% to 3.2%)
- methamphetamine (from 6.3% to 1.1%)
- cocaine (from 5.7% in 2003 to 2.5%)
- crack (from 3.2% to <0.5%)
- ecstasy (from 7.9% in 2001 to 5.4%)
- heroin (from 2.1% to 0.5%)
- steroids (lifetime use from 4.3% to 1.2%)
- an index measuring the nonmedical use of any prescription drug decreased from 23.5% in 2007 to 12.1% in 2015 (due to the decrease in prescription opioids)
- an index measuring any drug use of nine drugs, including cannabis, monitored since 1999 significantly decreased from 39.2% to 29.0% in 2015
- a second index similar to that above, but excluding cannabis, decreased from 22.8% in 1999 to 9.1% in 2015.

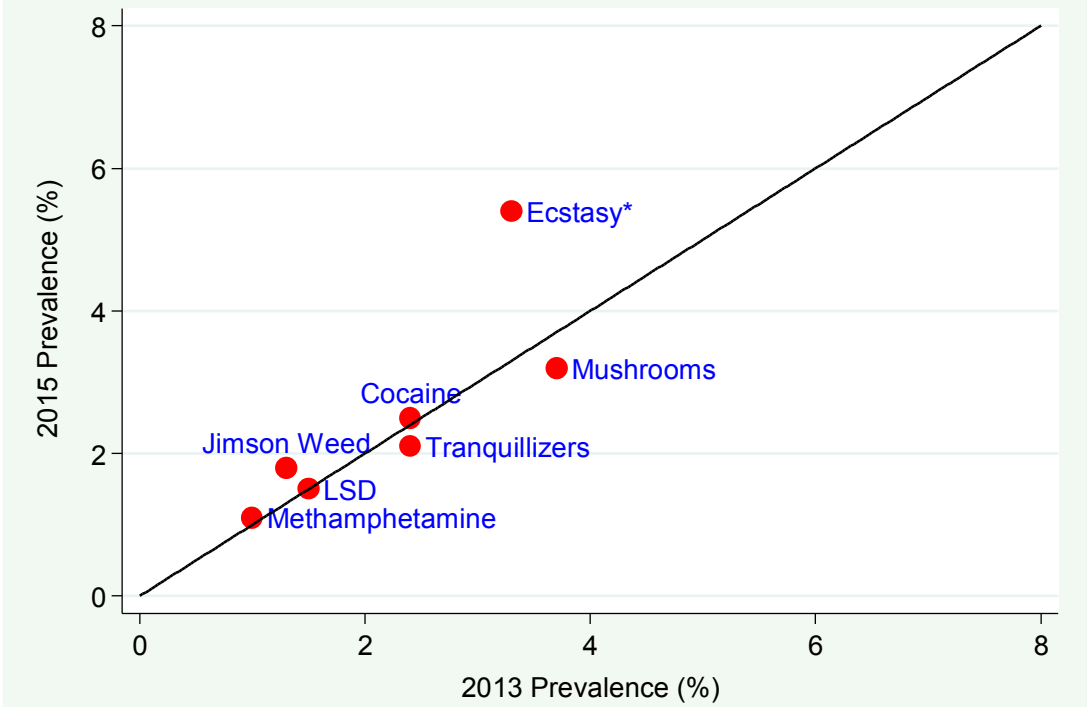
Drugs that remained stable during this period, or since they were first monitored, include smokeless (chewing) tobacco, waterpipe, synthetic cannabis (“spice,” “K2”), jimson weed, mephedrone (“bath salts”), tranquillizers, and modafinil.

Figure 3.2.1a
Past Year Drug Use 2015 vs. 2013, OSDUHS (Grades 7–12)



Notes: drugs below the line decreased in 2015, drugs above the line increased in 2015; * indicates a significant decrease (p<.01); no drug showed a significant increase between 2013 and 2015 (p<.01)

Figure 3.2.1b
Past Year Drug Use 2015 vs. 2013, OSDUHS (Grades 9–12 only)



Notes: drugs below the line decreased in 2015, drugs above the line increased in 2015; * indicates a significant increase (p<.01); no drug showed a significant decrease between 2013 and 2015 (p<.01)

Figure 3.2.2a
Overview of Past Year Drug Use Trends, 1999–2015 OSDUHS (Grades 7–12)

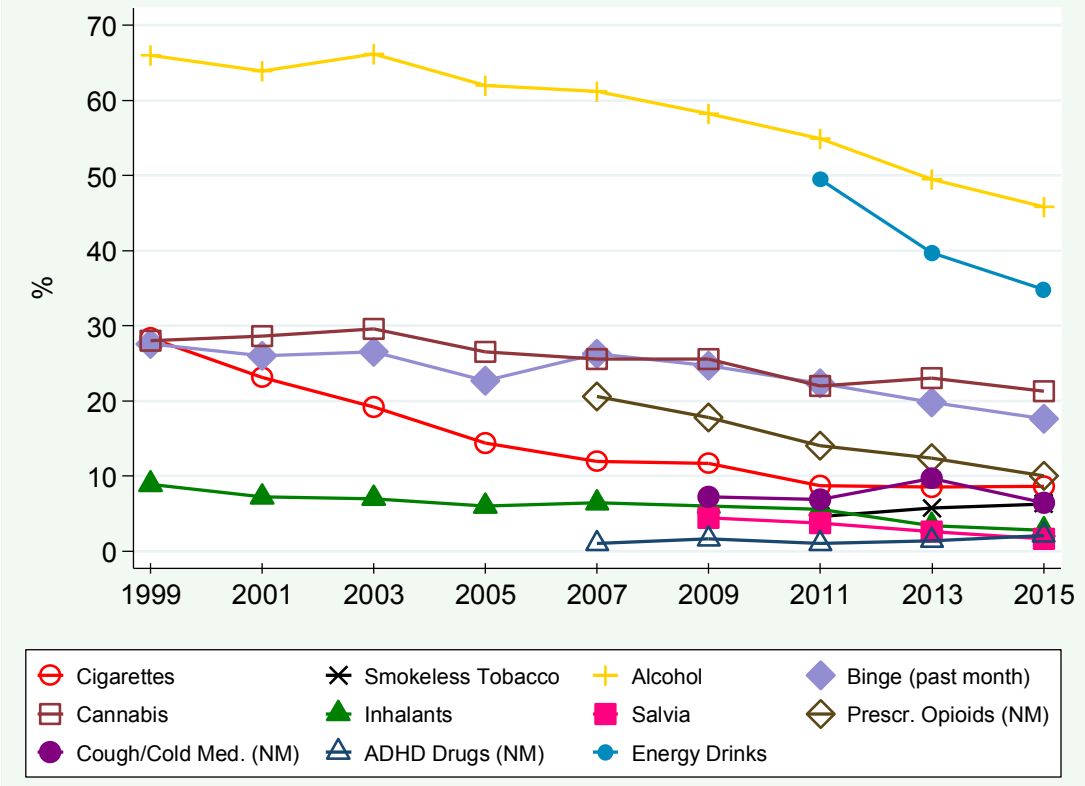
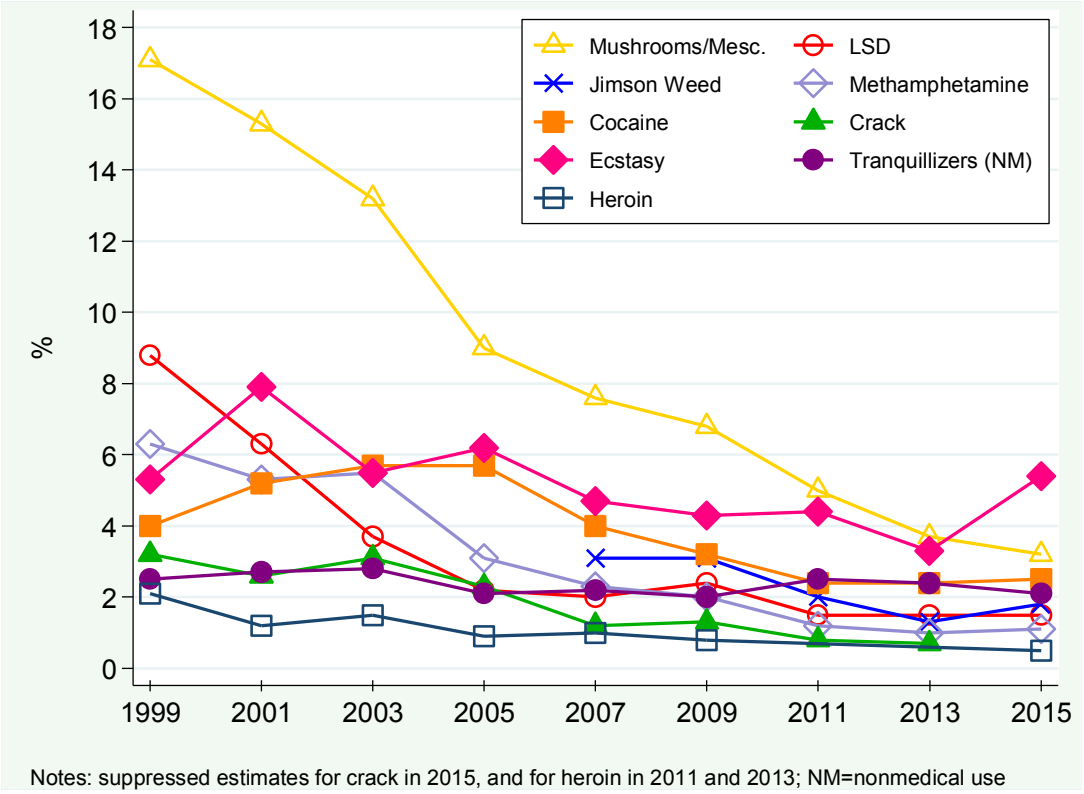


Figure 3.2.2b
Overview of Past Year Drug Use Trends, 1999–2015 OSDUHS (Grades 9–12 only)



Notes: suppressed estimates for crack in 2015, and for heroin in 2011 and 2013; NM=nonmedical use

Table 3.2.1a: Percentage Using the Drug in the Past Year, 1999–2015 OSDUHS

	1999	2001	2003	2005	2007	2009	2011	2013	2015
AMONG GRADES 7–12									
(*n*=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
Tobacco Cigarettes	**28.4** (26.1-30.7)	**23.1** (20.3-26.1)	**19.2** (17.7-20.8)	**14.4** (13.0-15.9)	**11.9** (10.7-13.2)	**11.7** (10.6-13.0)	**8.7** (7.5-10.2)	**8.5** (7.2-9.9)	**8.6** (7.5-9.9) [b]
Smokeless (Chewing) Tobacco	—	—	—	—	—	—	**4.6** (3.9-5.5)	**5.7** (4.6-7.0)	**6.3** (4.9-8.1)
Waterpipe (Hookah)	—	—	—	—	—	—	—	**9.7** (8.2-11.5)	**8.3** (7.1-9.6)
Alcohol	**66.0** (63.6-68.3)	**63.9** (60.8-67.0)	**66.2** (64.1-68.4)	**62.0** (59.3-64.7)	**61.2** (58.9-63.5)	**58.2** (55.7-60.6)	**54.9** (52.1-57.6)	**49.5** (46.4-52.5)	**45.8** (42.9-48.7) [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)	**23.0** (20.7-25.6)	**21.3** (19.2-23.6) [b]
Synthetic Cannabis ("Spice," "K2")	—	—	—	—	—	—	—	**1.8** (1.2-2.6)	**1.3** (0.9-1.7)
Inhalants (Glue or Solvents)	**8.9** (7.7-10.2)	**7.2** (6.1-8.4)	**7.0** (6.1-8.2)	**6.0** (5.1-7.1)	**6.4** (5.3-7.8)	**6.0** (5.0-7.1)	**5.6** (4.5-7.0)	**3.4** (2.7-4.5)	**2.8** (2.2-3.4) [b]
Salvia Divinorum	—	—	—	—	—	**4.4** (3.3-5.7)	**3.7** (2.8-4.8)	**2.6** (1.7-3.8)	**1.6** (1.1-2.3) [b]
OTC Cough/Cold Medication	—	—	—	—	—	**7.2** (6.1-8.5)	**6.9** (5.5-8.7)	**9.7** (8.2-11.4)	**6.4** (5.3-7.6) [a]
High-Caffeine Energy Drinks	—	—	—	—	—	—	**49.5** (46.3-52.7)	**39.7** (37.8-41.7)	**34.8** (32.8-36.9) [ab]
Opioid Pain Relievers (NM)	—	—	—	—	**20.6** (18.9-23.5)	**17.8** (16.6-18.9)	**14.0** (12.8-15.3)	**12.4** (11.2-13.6)	**10.0** (9.0-11.0) [ab]
ADHD Drugs (NM)	—	—	—	—	**1.0** (0.7-1.5)	**1.6** (1.3-2.1)	**1.0** (0.7-1.3)	**1.4** (1.0-2.0)	**2.1** (1.6-2.7) [b]
AMONG GRADES 9–12 ONLY									
(*n*=)	(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
LSD	**8.8** (7.2-10.7)	**6.3** (5.0-7.8)	**3.7** (3.0-4.5)	**2.2** (1.6-3.0)	**2.0** (1.4-2.8)	**2.4** (1.9-3.1)	**1.5** (1.0-2.2)	**1.5** (1.0-2.1)	**1.5** (1.1-2.0) [b]
Mushrooms (Psilocybin)/ Mescaline	**17.1** (15.0-19.3)	**15.3** (13.0-17.8)	**13.2** (11.5-15.1)	**9.0** (7.5-10.8)	**7.6** (6.3-9.0)	**6.8** (5.7-8.1)	**5.0** (3.9-6.2)	**3.7** (2.7-5.1)	**3.2** (2.4-4.3) [b]
Jimson Weed	—	—	—	—	**3.1** (2.3-4.3)	**3.1** (2.3-4.1)	**2.0** (1.1-3.5)	**1.3** (0.7-2.4)	**1.8** (1.3-2.6)
Methamphetamine (includes crystal methamphetamine)	**6.3** (4.6-8.7)	**5.3** (3.5-7.8)	**5.5** (4.5-6.7)	**3.1** (2.4-4.0)	**2.3** (1.7-2.9)	**2.0** (1.4-2.7)	**1.2** (0.7-2.0)	**1.0** (0.6-1.5)	**1.1** (0.7-1.8) [b]
Cocaine	**4.0** (3.2-5.0)	**5.2** (4.1-6.6)	**5.7** (4.9-6.7)	**5.7** (4.8-6.8)	**4.0** (3.4-4.8)	**3.2** (2.5-4.0)	**2.4** (1.9-3.0)	**2.4** (1.7-3.4)	**2.5** (2.0-3.2) [b]
Crack	**3.2** (2.4-4.2)	**2.6** (1.9-3.5)	**3.1** (2.4-4.0)	**2.3** (1.9-2.8)	**1.2** (0.8-1.6)	**1.3** (1.0-1.7)	**0.8** (0.5-1.3)	**0.7** (0.5-1.1)	† [b]
Ecstasy (MDMA)	**5.3** (4.0-7.1)	**7.9** (6.5-9.6)	**5.5** (4.7-6.4)	**6.2** (5.2-7.4)	**4.7** (3.9-5.7)	**4.3** (3.5-5.2)	**4.4** (3.5-5.6)	**3.3** (2.4-4.5)	**5.4** (4.5-6.4) [ab]
Heroin	**2.1** (1.5-2.7)	**1.2** (0.8-1.7)	**1.5** (1.1-1.9)	**0.9** (0.7-1.2)	**1.0** (0.7-1.5)	**0.8** (0.6-1.2)	†	†	**0.5** (0.3-0.7) [b]
Mephedrone ("Bath Salts")	—	—	—	—	—	—	—	†	**0.7** (0.4-1.2)
Tranquillizers/Sedatives (NM)	**2.5** (1.9-3.3)	**2.7** (1.8-3.9)	**2.8** (1.2-3.4)	**2.1** (1.7-2.7)	**2.2** (1.7-2.8)	**2.0** (1.5-2.6)	**2.5** (1.9-3.3)	**2.4** (1.8-3.2)	**2.1** (1.7-2.7)
Modafinil (NM)	—	—	—	—	—	—	—	**0.8** (0.4-1.4)	†
Steroids (lifetime use)	**4.3** (3.3-5.4)	**4.5** (3.5-5.8)	**3.8** (3.0-4.7)	**2.8** (2.3-3.6)	**1.6** (1.1-2.4)	**1.2** (0.8-1.9)	**1.6** (1.1-2.4)	**2.0** (1.1-3.8)	**1.2** (0.7-2.0) [b]
Any NM Use of a Prescription Drug	—	—	—	—	**23.5** (21.5-25.6)	**21.4** (20.0-22.9)	**17.0** (15.3-18.9)	**15.2** (13.8-16.7)	**12.1** (11.0-13.4) [ab]
Any Drug Including Cannabis	**39.2** (35.9-42.6)	**40.0** (36.1-44.0)	**39.8** (37.3-42.3)	**37.4** (35.0-40.0)	**36.1** (33.5-38.8)	**35.3** (33.2-37.5)	**29.9** (28.0-31.9)	**30.7** (27.7-33.8)	**29.0** (26.3-31.9) [b]
Any Drug Excluding Cannabis	**22.8** (20.0-25.8)	**20.5** (18.3-22.9)	**17.0** (15.2-19.0)	**14.2** (12.5-16.1)	**11.9** (10.4-13.6)	**10.6** (9.4-12.0)	**9.5** (8.3-10.9)	**7.9** (6.4-9.7)	**9.1** (7.9-10.6) [b]

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) [a] 2015 vs. 2013 significant difference, p<.01; (4) [b] 2015 vs. 1999 significant difference, p<.01 (vs. 2001 for ecstasy; vs. 2003 for cocaine; vs. 2007 for opioid pain relievers, ADHD drugs, and Any NM Use of a Prescription Drug; vs. 2009 for cough/cold medication; vs. 2011 for energy drinks); (5) NM = nonmedical use, without a doctor's prescription; (6) OTC = over-the-counter drug used to "get high"; (7) ADHD = Attention-Deficit Hyperactivity Disorder; (8) "Any NM Use of a Prescription Drug" refers to nonmedical use of prescription opioids, ADHD drugs, or tranquillizers/sedatives; (9) the "Any Drug" indices used for trend purposes are restricted to use of any one of the following drugs: cannabis, LSD, mushrooms, methamphetamine, cocaine, crack, heroin, ecstasy, or tranquillizers/sedatives (NM). Source: OSDUHS, Centre for Addiction & Mental Health

Long-Term Trends, 1977–2015 (Grades 7, 9, and 11 only)

(Figures 3.2.3–3.2.7; Table 3.2.1b)

Many past year prevalence estimates for drugs monitored since 1977 show a common pattern of use: a peak in the late 1970s, a decline in use during the late 1980s or early 1990s, a second peak in the late 1990s or early 2000s, followed by another decline. The long-term changes can be further categorized into the following five patterns:

Pattern 1: After peaking in the late 1970s/early 1980s and again in the late 1990s, past year prevalence has reached an all-time low in recent years:

- tobacco cigarettes
- alcohol
- LSD
- methamphetamine (includes crystal methamphetamine).

Pattern 2: Prevalence in 2015 is significantly lower than the peaks seen in the late 1970s and late 1990s (2003 for cocaine), and current use is similar to the lows seen in the early 1990s:

- binge drinking
- inhalants
- mushrooms/mescaline
- cocaine.

Pattern 3: Pattern 3 is similar to pattern 2, with one important difference – current use is significantly *higher* compared with the low levels of use seen in the early 1990s:

- cannabis.

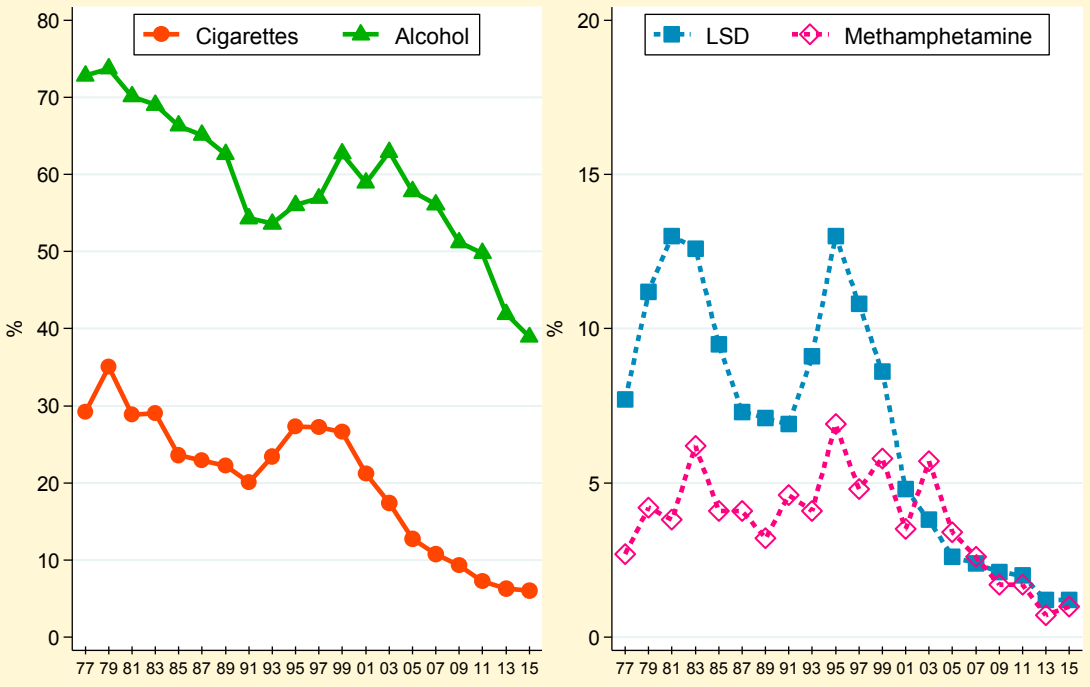
Pattern 4: Prevalence shows only one peak in the late 1990s or early 2000s (or the late 1970s for tranquillizers), a decline during the 2000s, and stability in recent years:

- ecstasy
- crack
- tranquillizers/sedatives (NM).

Pattern 5: Prevalence has been very low and stable for decades:

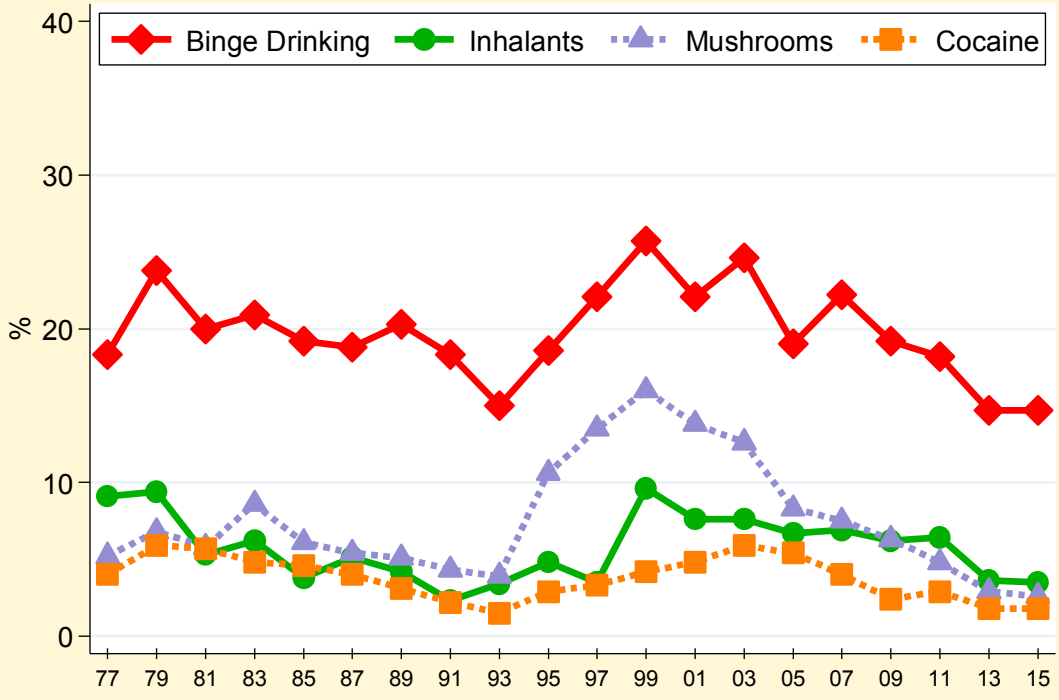
- heroin.

Figure 3.2.3
Pattern 1: Long-Term Drug Use Trends, 1977–2015 OSDUHS



Note: estimates for LSD and methamphetamine exclude Grade 7 students

Figure 3.2.4
Pattern 2: Long-Term Drug Use Trends, 1977–2015 OSDUHS



Notes: (1) binge drinking refers to drinking 5 or more drinks on one occasion at least once in the past month; (2) estimates for mushrooms and cocaine exclude Grade 7 students

Figure 3.2.5
Pattern 3: Long-Term Drug Use Trends, 1977–2015 OSDUHS

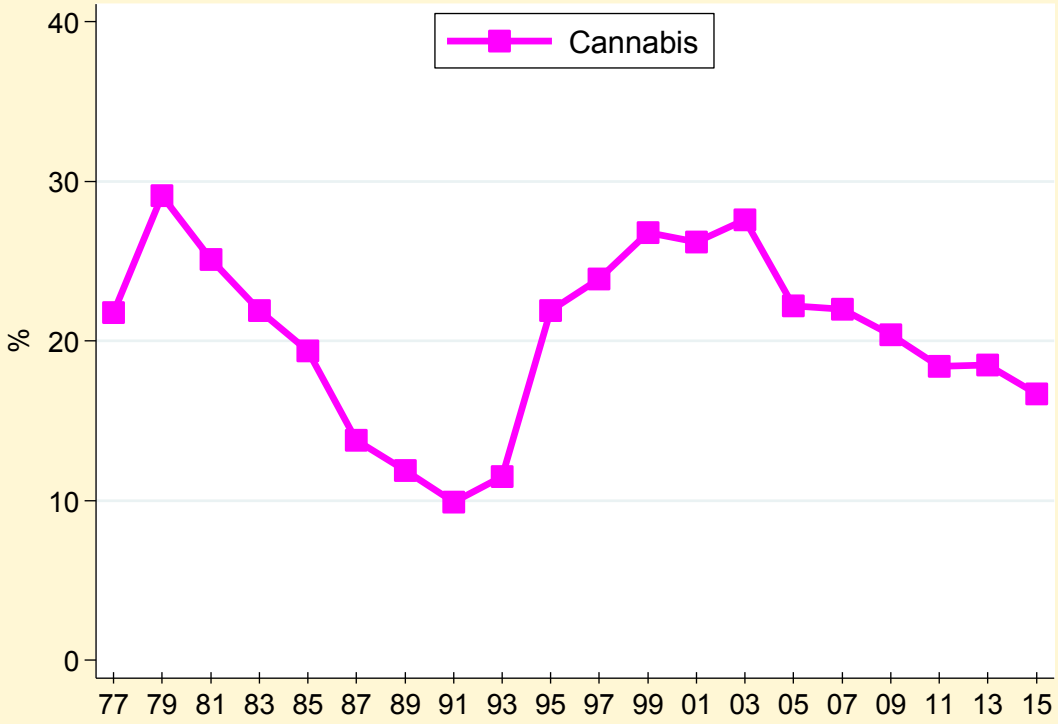
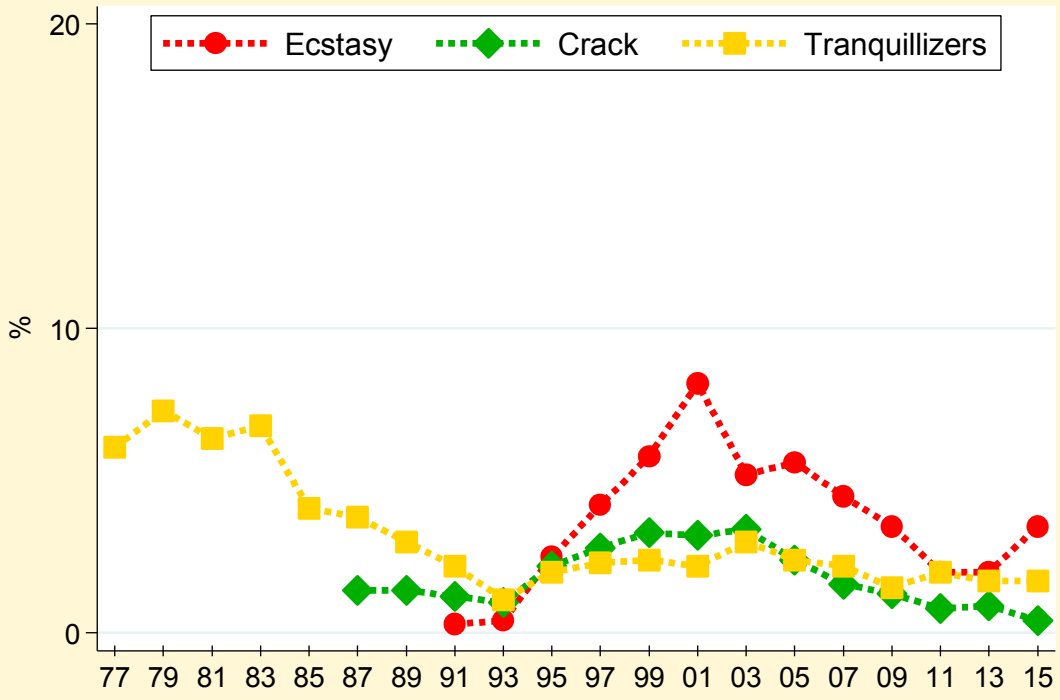
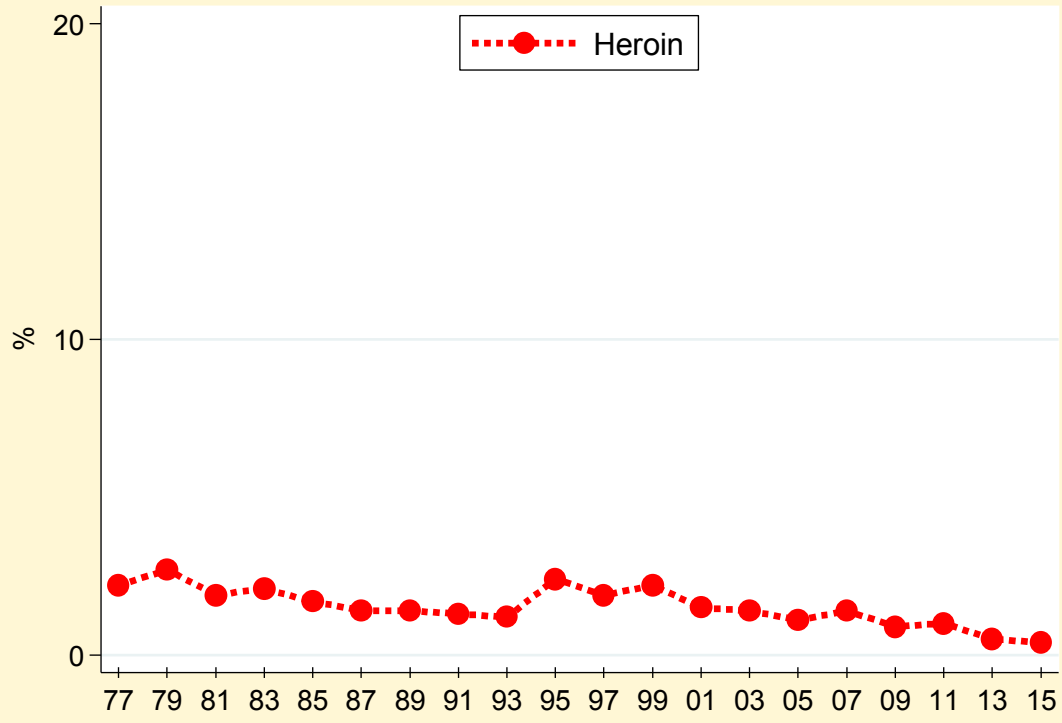


Figure 3.2.6
Pattern 4: Long-Term Drug Use Trends, 1977–2015 OSDUHS



Notes: (1) estimates exclude Grade 7 students; (2) crack not asked about prior to 1987; (3) ecstasy not asked about prior to 1991

Figure 3.2.7
Pattern 5: Long-Term Drug Use Trends, 1977–2015 OSDUHS



Note: estimates exclude Grade 7 students

Table 3.2.1b: Percentage Using the Drug in the Past Year, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
AMONG GRADES 7, 9 & 11																				
(*n*=)	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Cigarettes	**29.2** (26.7-31.8)	**35.0** (32.3-37.7)	**28.8** (25.4-32.5)	**29.0** (25.6-32.6)	**23.6** (21.1-26.2)	**22.9** (21.1-24.8)	**22.2** (20.3-24.2)	**20.1** (18.4-22.0)	**23.4** (21.8-25.2)	**27.3** (25.2-29.5)	**27.2** (25.4-29.0)	**26.6** (23.5-30.0)	**21.2** (17.7-25.2)	**17.4** (15.3-19.7)	**12.7** (11.1-14.5)	**10.8** (9.3-12.6)	**9.3** (8.0-10.9)	**7.2** (6.0-8.4)	**6.3** (4.9-8.0)	**6.0** (5.0-7.2)
Alcohol	**72.8** (70.4-75.1)	**73.7** (71.6-75.8)	**70.1** (67.7-72.3)	**69.0** (66.1-71.9)	**66.3** (64.7-67.9)	**65.1** (63.0-67.3)	**62.6** (58.8-66.3)	**54.3** (51.6-57.0)	**53.6** (50.4-56.6)	**56.0** (53.4-58.4)	**56.9** (53.3-60.4)	**62.7** (59.4-66.0)	**58.9** (54.1-63.5)	**62.9** (60.2-64.4)	**57.8** (54.9-60.5)	**56.1** (53.0-59.0)	**51.2** (47.9-54.4)	**49.8** (44.7-54.9)	**41.8** (38.1-45.7)	**38.9** (36.0-41.7)
Cannabis	**21.8** (19.5-24.3)	**29.1** (26.1-32.4)	**25.1** (22.2-28.2)	**21.9** (19.7-24.3)	**19.4** (16.4-22.9)	**13.8** (10.9-17.3)	**11.9** (9.7-14.4)	**9.9** (8.7-11.3)	**11.5** (10.7-12.4)	**21.9** (18.8-25.4)	**23.9** (21.9-26.0)	**26.8** (23.7-30.1)	**26.2** (22.1-30.8)	**27.8** (25.4-30.3)	**22.2** (20.1-24.5)	**22.0** (19.5-24.7)	**20.4** (18.4-22.6)	**18.4** (16.3-20.7)	**18.5** (15.9-21.5)	**16.7** (14.7-18.9)
Inhalants	**9.1** (8.1-10.1)	**9.4** (8.3-10.5)	**5.3** (4.1-6.9)	**6.2** (5.5-6.9)	**3.8** (3.1-4.6)	**5.1** (3.9-6.8)	**4.2** (3.6-5.0)	**2.3** (1.6-3.2)	**3.4** (2.7-4.1)	**4.8** (4.1-5.6)	**3.5** (3.0-4.1)	**9.6** (8.0-11.4)	**7.6** (6.1-9.5)	**7.6** (6.4-9.0)	**6.7** (5.4-8.4)	**6.9** (5.2-9.0)	**6.2** (4.7-7.9)	**6.4** (5.1-8.1)	**3.6** (2.7-4.8)	**3.5** (2.6-4.8)
AMONG GRADES 9 & 11 ONLY																				
(*n*=)	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
LSD	**7.7** (6.4-9.3)	**11.2** (9.4-13.3)	**13.0** (10.4-16.0)	**12.6** (10.7-14.8)	**9.5** (7.3-12.2)	**7.3** (4.8-10.8)	**7.1** (4.8-10.4)	**6.9** (5.6-8.3)	**9.1** (7.6-10.8)	**13.0** (9.5-7.4)	**10.8** (9.7-12.0)	**8.6** (6.4-11.5)	**4.8** (3.6-6.4)	**3.8** (3.0-4.8)	**2.6** (1.8-3.6)	**2.4** (1.7-3.5)	**2.1** (1.4-3.0)	**2.0** (1.1-3.4)	**1.2** (0.7-1.9)	**1.2** (0.8-1.7)
Mushrooms/ Mescaline	**5.2** (4.2-6.4)	**6.8** (5.5-8.4)	**5.8** (3.9-8.6)	**8.6** (6.6-11.1)	**6.1** (4.5-8.1)	**5.4** (3.2-8.8)	**5.1** (3.4-7.7)	**4.3** (3.4-5.4)	**3.9** (3.0-5.1)	**10.6** (7.5-14.7)	**13.5** (11.5-15.8)	**16.0** (12.9-19.6)	**13.8** (11.0-17.2)	**12.6** (10.6-14.9)	**8.3** (6.7-10.3)	**7.5** (6.1-9.1)	**6.3** (4.8-8.2)	**4.8** (3.6-6.4)	**2.9** (1.8-4.8)	**2.6** (1.9-3.6)
Methampheta-mine	**2.7** (2.1-3.5)	**4.2** (3.5-5.1)	**3.8** (2.5-5.5)	**6.2** (3.3-11.2)	**4.1** (3.2-5.1)	**4.1** (3.0-5.6)	**3.2** (2.5-4.2)	**4.6** (2.9-7.4)	**4.1** (2.7-6.3)	**6.9** (4.6-10.3)	**4.8** (3.6-6.4)	**5.8** (3.5-9.6)	**3.4** (2.2-5.3)	**5.7** (4.4-7.3)	**3.4** (2.5-4.7)	**2.6** (1.8-3.5)	**1.7** (1.2-2.6)	†	**0.7** (0.4-1.4)	**0.9** (0.5-1.9)
Cocaine	**4.0** (3.2-5.0)	**5.9** (4.8-7.2)	**5.7** (4.6-7.0)	**4.8** (3.4-6.8)	**4.6** (3.5-6.1)	**4.0** (2.6-6.0)	**3.1** (2.1-4.6)	**2.2** (1.5-3.1)	**1.5** (0.8-2.8)	**2.9** (2.3-3.7)	**3.3** (2.9-3.8)	**4.2** (3.0-5.7)	**4.8** (3.5-6.6)	**5.9** (4.8-7.2)	**5.4** (4.4-6.8)	**4.0** (3.2-5.1)	**2.4** (1.8-3.2)	**2.9** (2.0-4.1)	**1.8** (1.2-2.6)	**1.8** (1.3-2.5)
Crack	—	—	—	—	—	**1.4** (0.8-2.5)	**1.4** (0.7-2.5)	**1.2** (0.6-2.3)	**1.0** (0.5-2.0)	**2.2** (1.7-2.8)	**2.8** (2.1-3.7)	**3.3** (2.2-4.8)	**3.2** (2.3-4.4)	**3.4** (2.5-4.5)	**2.4** (1.8-3.1)	**1.6** (1.1-2.3)	**1.3** (0.8-2.1)	**0.8** (0.4-1.5)	**0.9** (0.5-1.7)	†
Heroin	**2.2** (1.6-2.9)	**2.7** (2.0-3.6)	**1.9** (1.3-2.9)	**2.1** (1.4-3.1)	**1.7** (1.2-2.4)	**1.4** (0.8-2.7)	**1.4** (0.8-2.3)	**1.3** (0.8-2.0)	**1.2** (0.7-1.9)	**2.4** (1.6-3.5)	**1.9** (1.5-2.4)	**2.2** (1.5-3.2)	**1.5** (0.9-2.4)	**1.4** (1.0-2.0)	**1.1** (0.7-1.6)	**1.4** (0.9-2.1)	**0.9** (0.6-1.5)	†	†	†
Ecstasy	—	—	—	—	—	—	—	†	†	**2.5** (1.4-4.4)	**4.2** (2.3-7.5)	**5.8** (4.0-8.4)	**8.2** (6.5-10.2)	**5.2** (4.2-6.3)	**5.6** (4.4-7.2)	**4.5** (3.4-5.8)	**3.5** (2.7-4.7)	**5.1** (3.8-6.9)	**2.0** (1.2-3.2)	**3.5** (2.7-4.5)
Tranquillizers	**6.1** (5.0-7.4)	**7.3** (6.2-8.7)	**6.4** (5.3-7.7)	**6.8** (5.1-9.1)	**4.1** (3.1-5.3)	**3.8** (2.6-5.6)	**3.0** (2.5-3.6)	**2.2** (1.6-3.0)	**1.1** (0.6-2.3)	**2.0** (1.2-3.2)	**2.3** (1.8-3.0)	**2.4** (1.6-3.5)	**2.2** (1.3-3.7)	**3.0** (2.3-3.9)	**2.4** (1.7-3.2)	**2.2** (1.6-3.0)	**1.5** (1.1-2.0)	**2.0** (1.1-3.5)	**1.7** (1.2-2.4)	**1.7** (1.2-2.4)
Steroids	—	—	—	—	—	—	**1.5** (1.0-2.4)	**1.9** (1.5-2.6)	**1.9** (1.2-2.9)	**1.5** (1.0-2.1)	**1.5** (0.9-2.4)	**3.8** (2.6-5.5)	**4.0** (2.7-5.8)	**3.1** (2.2-4.3)	**2.3** (1.6-3.4)	**1.2** (0.7-2.1)	**1.2** (0.6-2.4)	**1.9** (1.0-3.4)	†	†
Any Drug	**32.3** (28.9-35.8)	**40.9** (36.7-45.1)	**36.2** (32.5-40.0)	**34.7** (31.0-38.7)	**28.8** (23.8-34.3)	**21.3** (16.5-27.0)	**20.3** (16.8-24.3)	**20.0** (16.8-23.7)	**20.6** (16.7-25.1)	**34.8** (29.4-40.7)	**36.6** (34.1-39.2)	**38.2** (33.7-42.9)	**38.3** (32.9-44.1)	**38.1** (34.9-41.4)	**32.9** (30.2-35.7)	**32.1** (28.7-35.8)	**29.6** (26.8-32.6)	**25.4** (23.3-27.7)	**25.9** (22.7-29.4)	**23.9** (21.3-26.8)
Any Drug excl Cannabis	**14.4** (12.6-16.4)	**19.8** (17.4-22.3)	**18.0** (15.9-20.4)	**19.8** (16.9-23.1)	**15.2** (12.4-18.5)	**12.6** (9.5-16.4)	**12.1** (9.8-14.8)	**12.3** (9.6-15.7)	**13.2** (10.2-16.9)	**20.8** (15.8-26.9)	**20.3** (17.7-23.1)	**21.5** (17.4-26.2)	**19.8** (17.0-23.1)	**16.4** (14.2-18.8)	**13.4** (11.5-15.5)	**11.4** (9.6-13.5)	**9.4** (7.8-11.4)	**9.1** (7.3-11.2)	**6.3** (4.8-8.2)	**6.5** (5.3-7.9)

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

Source: OSDUHS, Centre for Addiction & Mental Health

Frequent Drug Use Trends

(Tables 3.2.2a, 3.2.2b)

Frequent drug use is defined here as using six times or more often during the past year. Changes in frequent drug use among students between 1999 and 2015 are shown in Table 3.2.2a. Frequent use of ecstasy significantly increased between 2013 and 2015, from 0.6% to 1.9%. Frequent use of the following drugs has significantly decreased since 1999: inhalants (from 1.8% to 0.7%); opioid pain relievers (from 8.0% in 2007 to 3.7%); LSD (from 2.5% to less than 0.5%); and mushrooms/mescaline (from 5.6% to 0.5%).

As seen in Table 3.2.2b, only cannabis has shown marked fluctuations in frequent use since 1977. Frequent cannabis use was at an elevated level in the late 1970s, dipped in the 1980s and started to increase again in the late 1990s. Currently, frequent cannabis use is lower than the elevated rate found in 1979, but higher than levels from the mid-1980s and early 1990s.

Table 3.2.2: Frequent Drug Use: Percentage Using the Drug Six Times or More Often in the Past Year, 1999–2015 OSDUHS

	1999	2001	2003	2005	2007	2009	2011	2013	2015
Among Grades 7–12 (*n*=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
Cannabis	**15.5** (14.0-17.1)	**16.4** (14.4-18.6)	**16.5** (14.8-18.4)	**14.9** (13.4-16.6)	**14.2** (12.6-15.9)	**14.5** (13.1-16.0)	**12.9** (11.4-14.6)	**13.0** (11.1-15.2)	**12.4** (10.9-14.0)
Inhalants (Glue or Solvents)	**1.8** (1.3-2.4)	**1.0** (0.7-1.6)	**1.6** (1.2-2.0)	**1.3** (0.8-2.0)	**1.7** (1.2-2.4)	**1.0** (0.7-1.6)	**1.7** (1.3-2.3)	**0.7** (0.5-1.2)	**0.7** [b] (0.4-1.2)
Salvia Divinorum	—	—	—	—	—	**1.2** (0.7-2.2)	**0.8** (0.5-1.5)	†	†
OTC Cough/Cold Medication (NM)	—	—	—	—	—	**2.5** (1.8-3.4)	**2.5** (1.7-3.6)	**2.4** (1.8-3.2)	**1.8** (1.4-2.3)
Opioid Pain Relievers (NM)	—	—	—	—	**8.0** (6.8-9.3)	**6.9** (6.2-7.6)	**5.4** (4.6-6.4)	**4.2** (3.7-4.8)	**3.7** [b] (3.1-4.5)
Among Grades 9–12 (*n*=)	(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
LSD	**2.5** (1.7-3.7)	**1.3** (0.7-2.3)	**0.9** (0.6-1.3)	†	†	**0.5** (0.3-0.8)	†	†	† [b]
Mushrooms (Psilocybin)/Mescaline	**5.6** (4.4-7.1)	**4.3** (3.4-5.5)	**3.6** (2.9-4.4)	**1.8** (1.3-2.6)	**1.4** (1.0-1.9)	**1.4** (0.9-2.1)	**0.7** (0.4-1.1)	**0.7** (0.4-1.3)	**0.5** [b] (0.3-0.9)
Jimson Weed	—	—	—	—	**1.3** (0.8-2.2)	**1.0** (0.6-1.6)	†	†	**0.7** (0.4-1.4)
Methamphetamine (includes crystal methamphetamine)	**1.7** (1.0-2.7)	†	**1.5** (1.0-2.2)	**0.7** (0.5-1.2)	**0.5** (0.4-0.8)	**0.5** (0.3-0.9)	†	†	**0.6** (0.4-0.9)
Cocaine	**1.4** (1.0-2.2)	**1.2** (0.7-1.9)	**2.0** (1.5-2.6)	**2.1** (1.6-2.8)	**1.7** (1.2-2.4)	**1.1** (0.8-1.6)	**0.7** (0.5-1.0)	**1.0** (0.7-1.5)	**1.0** (0.7-1.6)
Ecstasy (MDMA)	**1.5** (0.9-2.4)	**2.2** (1.4-3.2)	**1.6** (1.2-2.1)	**2.2** (1.6-3.0)	**1.6** (1.2-2.1)	**1.4** (1.1-2.0)	**1.2** (0.8-1.6)	**0.6** (0.4-1.0)	**1.9** [a] (1.4-2.7)
Tranquillizers/Sedatives (NM)	**0.5** (0.3-0.9)	†	**0.7** (0.5-1.1)	**0.5** (0.3-0.7)	**0.6** (0.4-0.9)	**0.6** (0.4-1.0)	**0.8** (0.4-1.5)	†	**0.6** (0.3-1.0)

Notes: (1) entries in brackets are 95% confidence intervals; (2) [a] 2015 vs. 2013 significant difference, p<.01, [b] 2015 vs. 1999 significant difference, p<.01 (vs. 2007 for opioid pain relievers); (3) † estimate suppressed due to unreliability (< 0.5%); (4) NM = nonmedical use, without a doctor's prescription; (5) OTC = over-the-counter drug used to "get high"; (6) estimates for synthetic cannabis, heroin, crack, ADHD drugs (NM), modafinil (NM) are not presented, all years 0.5% or less.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.2.2b: Frequent Drug Use: Percentage Reporting Using the Drug Six Times or More Often in the Past Year, 1977–2015 OSDUHS (Grades 7, 9, 11 only)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Among Grades 7, 9, & 11																				
(*n*=)	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2424)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Cannabis	**12.8** (11.1-14.7)	**18.0** (15.5-20.8)	**15.2** (12.4-18.5)	**11.6** (10.1-13.3)	**9.4** (7.7-11.5)	**6.2** (4.6-8.2)	**4.8** (3.5-6.4)	**4.6** (3.7-5.7)	**4.9** (3.7-6.6)	**11.4** (9.3-14.0)	**15.2** (13.1-17.7)	**14.9** (12.8-17.3)	**15.4** (12.4-18.8)	**16.0** (13.8-18.4)	**12.8** (11.3-14.6)	**12.0** (10.2-14.0)	**11.2** (9.6-13.1)	**11.0** (8.8-13.4)	**10.1** (8.1-12.6)	**10.0** (8.5-11.8)
Inhalants	**1.4** (1.0-2.0)	**1.6** (1.1-2.2)	**1.2** (0.8-1.6)	**0.7** (0.5-0.9)	†	†	†	**0.6** (0.3-1.0)	**0.5** (0.3-0.8)	**0.7** (0.4-1.0)	**0.7** (0.4-1.3)	**2.0** (1.3-3.0)	**1.1** (0.6-1.7)	**1.8** (1.3-2.4)	**1.5** (0.9-2.5)	**1.8** (1.1-2.7)	†	**1.9** (1.2-2.9)	†	†
Among Grades 9 & 11 Only																				
(*n*=)	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
LSD	**2.0** (1.5-2.8)	**3.0** (2.2-4.0)	**4.8** (2.9-7.9)	**5.4** (3.9-7.4)	**3.4** (2.0-5.5)	**3.0** (1.9-4.5)	**2.3** (1.5-3.5)	**2.4** (1.6-3.6)	**3.6** (2.9-4.4)	**4.6** (3.2-6.6)	**3.4** (2.2-5.2)	**3.0** (1.8-5.1)	†	**0.9** (0.6-1.4)	†	**0.6** (0.3-1.1)	†	†	†	†
Mushrooms/Mesc.	**1.2** (0.8-1.8)	**1.7** (1.2-2.3)	**1.4** (0.6-3.2)	**1.9** (1.0-3.5)	**0.9** (0.5-1.5)	**1.2** (0.5-2.4)	**1.3** (0.6-2.7)	**0.8** (0.6-1.0)	**0.7** (0.4-1.3)	**2.2** (1.2-3.8)	**3.5** (2.2-5.5)	**5.6** (4.0-7.8)	**4.6** (3.2-6.4)	**3.5** (2.7-4.5)	**1.9** (1.3-2.8)	**1.6** (1.0-2.4)	**1.1** (0.6-1.8)	**0.8** (0.4-1.4)	†	**0.5** (0.3-0.9)
Methamphetamine	**0.5** (0.3-0.8)	**0.8** (0.5-1.2)	**0.9** (0.5-1.5)	†	**0.7** (0.3-1.5)	**1.1** (0.5-2.4)	**0.6** (0.4-1.1)	†	†	†	**1.2** (0.6-2.4)	**1.8** (0.9-3.5)	†	**1.7** (1.1-2.6)	**1.1** (0.6-1.9)	**0.8** (0.5-1.3)	†	†	†	†
Cocaine	**0.8** (0.6-1.2)	**1.1** (0.7-1.6)	**1.0** (0.7-1.4)	**1.1** (0.8-1.6)	**1.2** (0.8-1.6)	**1.2** (0.7-2.0)	**0.8** (0.4-1.7)	†	**0.9** (0.4-1.8)	**0.8** (0.4-1.3)	**0.8** (0.4-1.6)	**1.6** (0.8-2.9)	**1.5** (0.8-2.7)	**2.2** (1.5-3.1)	**1.8** (1.3-2.4)	**1.4** (0.9-2.2)	**0.7** (0.4-1.1)	**1.2** (0.8-1.8)	†	**0.7** (0.4-1.2)
Heroin	**0.5** (0.3-0.9)	**0.6** (0.4-1.0)	**0.5** (0.3-0.9)	**0.8** (0.5-1.3)	†	†	†	**0.9** (0.6-1.4)	**0.6** (0.3-1.1)	**1.1** (0.6-1.9)	**1.2** (0.9-1.6)	**0.8** (0.5-1.5)	†	**0.6** (0.3-1.1)	†	†	†	†	†	†
Ecstasy (MDMA)	—	—	—	—	—	—	—	†	†	†	†	**1.7** (0.9-3.2)	**2.0** (1.2-3.4)	**1.8** (1.2-2.8)	**2.2** (1.4-3.2)	**1.7** (1.1-2.5)	**1.2** (0.7-2.0)	**1.9** (1.3-2.8)	†	**1.0** (0.7-1.6)
Tranquillizers (NM)	**1.2** (0.8-1.7)	**1.2** (0.8-1.7)	**1.2** (0.6-2.2)	**1.9** (1.2-3.1)	**0.7** (0.5-0.9)	**1.0** (0.5-1.9)	†	†	†	†	†	†	†	**0.8** (0.5-1.2)	**0.5** (0.3-0.8)	**0.5** (0.3-0.9)	**0.5** (0.3-0.9)	†	†	**0.6** (0.3-1.1)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability (< 0.5%); (3) estimates for ecstasy are based on a random half sample between 1991 and 1999; (4) NM = nonmedical use, without a doctor's prescription; (5) estimates for crack are not presented, all years 0.5% or less.

Source: OSDUHS, Centre for Addiction & Mental Health

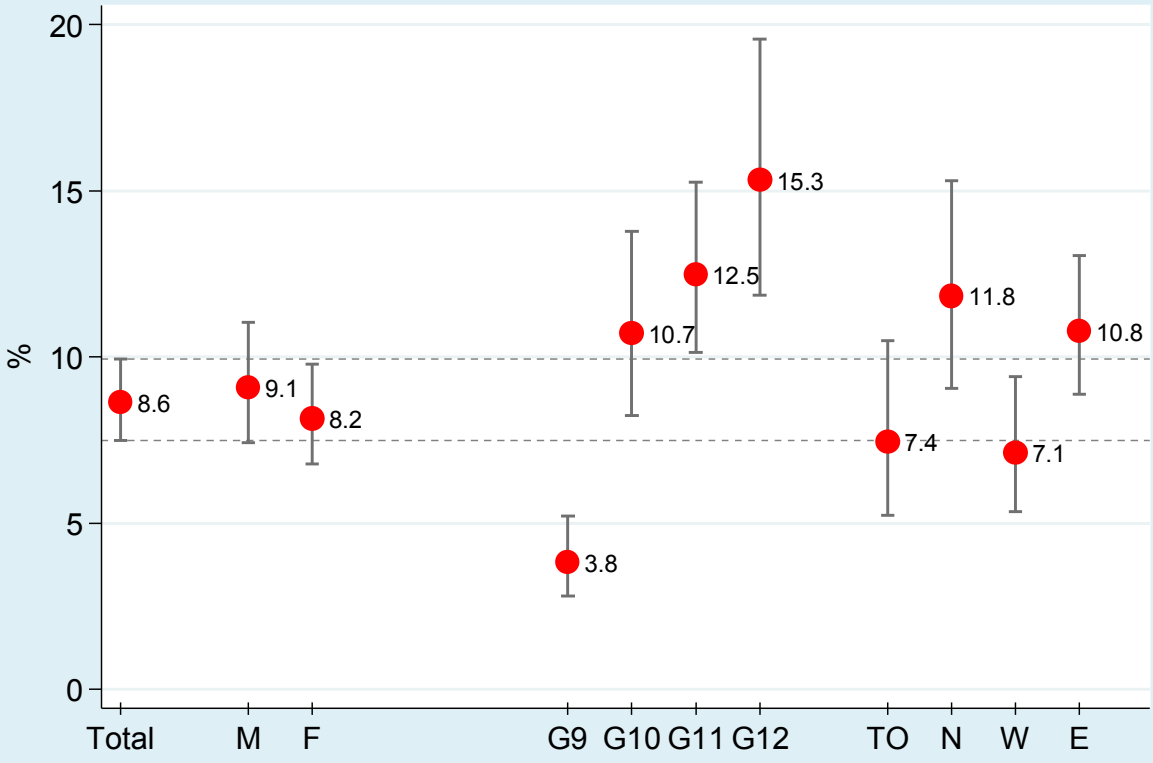
3.3 Tobacco Use and Alternative Smoking Devices

Past Year Tobacco Cigarette Smoking

(Figures 3.3.1–3.3.3; Table 3.3.1)

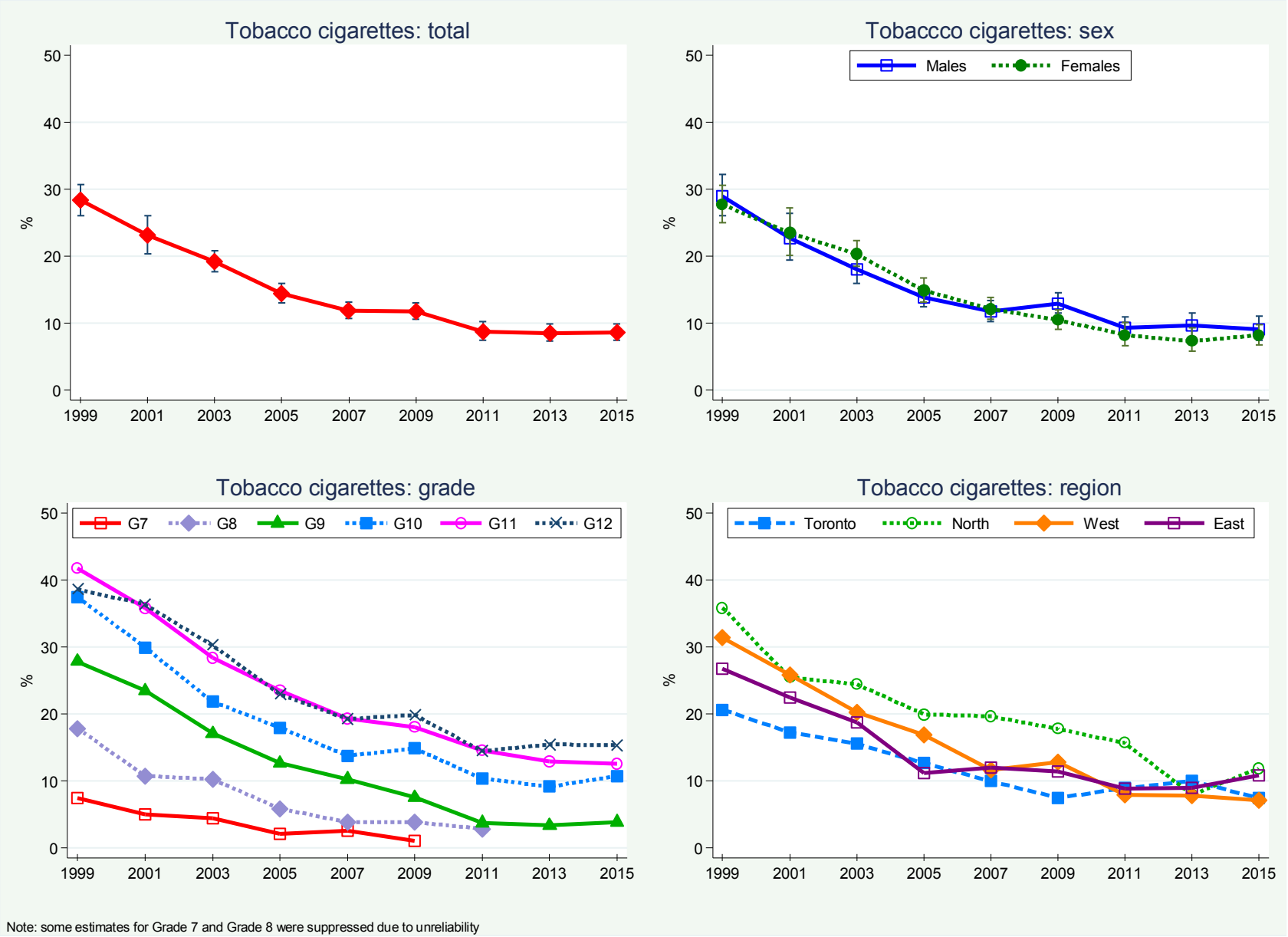
	Tobacco Cigarette Smoking in 2015 (Grades 7–12)	Trends in Tobacco Cigarette Smoking
Total Sample	■ Overall, 8.6% of students report smoking cigarettes during the 12 months before the survey. This estimate includes daily and occasional smoking, but excludes those who only tried a few puffs of a cigarette. We estimate that the actual percentage of all students who smoke cigarettes falls between 7.5% and 9.9% (95% CI). The percentage of 8.6% represents about 82,700 Ontario students in grades 7 through 12.	☐ Past year cigarette smoking among students in grades 7–12 significantly decreased between 1999 (28.4%) and 2007 (11.9%), remained stable in 2009, and then reached an all-time low in 2011 (8.7%). Smoking has remained stable since 2011. ☐ Over the long-term (among grades 7, 9, and 11 only), the highest smoking prevalence rate was found in 1979, at 35%. Smoking decreased in the 1980s, but increased again in the late 1990s. Smoking began on another downward trend after 1999, reached a historical low in 2011, and currently remains at this relatively low level.
Sex	■ In 2015, males (9.1%) and females (8.2%) are equally likely to smoke tobacco cigarettes.	☐ Between 2013 and 2015, cigarette smoking remained stable among males (9.6% and 9.1%, respectively) and females (7.3% and 8.2%, respectively). For both sexes, smoking dramatically declined between 1999 and 2011, and has levelled off since then.
Grade	■ The prevalence of smoking is extremely low (suppressed estimates) among students in grades 7 and 8. About 3.8% of 9th graders smoke cigarettes and the prevalence significantly increases with grade, reaching 15.3% among 12th graders.	☐ No grade shows a statistically significant change in smoking between 2013 and 2015. However, smoking is currently significantly lower among students in all grades compared with their respective estimates from 1999.
Region	■ Cigarette smoking significantly differs by region, with students in the North (11.8%) and East (10.8%) regions most likely to smoke compared with students in Toronto and the West region (about 7%).	☐ None of the four regions shows a statistically significant change in smoking between 2013 and 2015. All four regions show significant decreases since 1999, although the decrease in Toronto was not as dramatic as the other three regions.

Figure 3.3.1
Past Year Tobacco Cigarette Smoking by Sex, Grade, and Region, 2015 OSDUHS



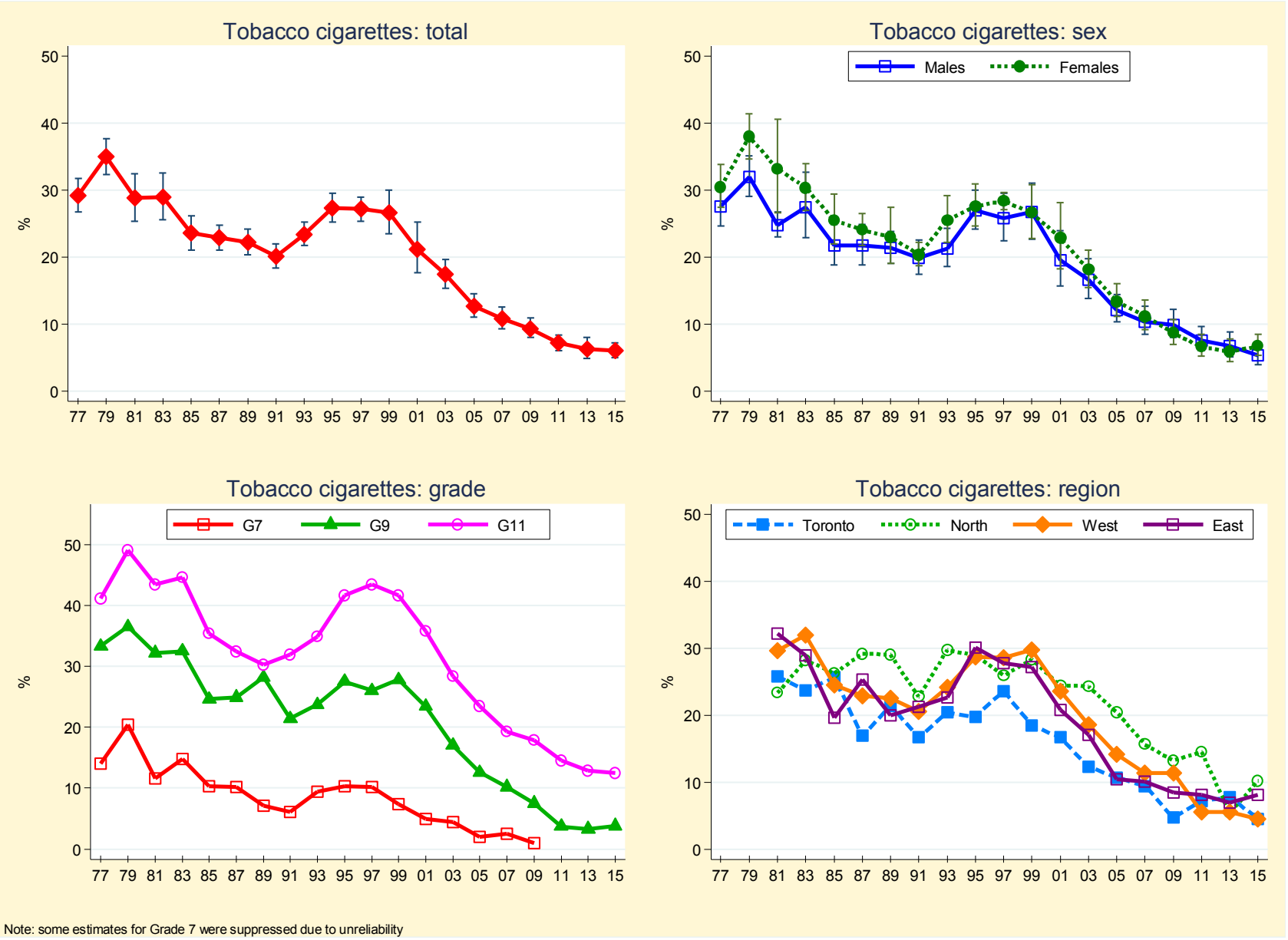
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.3.2
Past Year Tobacco Cigarette Smoking, 1999–2015 OSDUHS (Grades 7–12)



Note: some estimates for Grade 7 and Grade 8 were suppressed due to unreliability

Figure 3.3.3
Past Year Tobacco Cigarette Smoking, 1977–2015 OSDUHS (Grades 7, 9, 11 only)



Note: some estimates for Grade 7 were suppressed due to unreliability

Table 3.3.1: Percentage Reporting Tobacco Cigarette Smoking in the Past Year, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**28.4** (26.1-30.7)	**23.1** (20.4-26.1)	**19.2** (17.7-20.8)	**14.4** (13.0-15.9)	**11.9** (10.7-13.2)	**11.7** (10.6-13.0)	**8.7** (7.5-10.2)	**8.5** (7.2-9.9)	**8.6** (7.5-9.9) [bcd]
Total[2]	**29.2** (26.7-31.8)	**35.0** (32.3-37.7)	**28.8** (25.4-32.5)	**29.0** (25.6-32.6)	**23.6** (21.1-26.2)	**22.9** (21.1-24.8)	**22.2** (20.3-24.2)	**20.1** (18.4-22.0)	**23.4** (21.8-25.2)	**27.3** (25.2-29.5)	**27.2** (25.4-29.0)	**26.6** (23.5-30.0)	**21.2** (17.7-25.2)	**17.4** (15.3-19.7)	**12.7** (11.1-14.5)	**10.8** (9.3-12.6)	**9.3** (8.0-10.9)	**7.2** (6.0-8.4)	**6.3** (4.9-8.0)	**6.0** (5.0-7.2) [cd]
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**29.0** (26.0-32.2)	**22.7** (19.4-26.4)	**18.0** (15.9-20.4)	**13.9** (12.4-15.5)	**11.7** (10.2-13.4)	**12.9** (11.5-14.5)	**9.3** (7.8-10.9)	**9.6** (7.9-11.5)	**9.1** (7.4-11.0) [b]
Males[2]	**27.6** (24.6-30.9)	**32.0** (29.1-35.1)	**24.8** (23.0-26.7)	**27.5** (22.9-32.7)	**21.7** (18.8-24.9)	**21.7** (18.8-24.9)	**21.4** (19.1-23.9)	**19.9** (17.4-22.6)	**21.3** (18.6-24.3)	**27.0** (24.2-30.0)	**25.8** (22.4-29.6)	**26.7** (22.7-31.0)	**19.5** (15.7-24.0)	**16.6** (13.8-19.8)	**12.1** (10.3-14.1)	**10.4** (8.5-12.7)	**9.9** (8.0-12.2)	**7.6** (6.1-9.6)	**6.7** (5.0-8.8)	**5.3** (4.0-7.0)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**27.7** (25.0-30.6)	**23.5** (20.1-27.2)	**20.3** (18.5-22.3)	**14.9** (13.1-16.8)	**12.1** (10.6-13.8)	**10.5** (9.1-12.0)	**8.2** (6.6-10.1)	**7.3** (5.8-9.3)	**8.2** (6.8-9.8) [b]
Females[2]	**30.5** (27.5-33.8)	**38.0** (34.7-41.4)	**33.2** (26.6-40.6)	**30.4** (27.0-34.0)	**25.5** (22.0-29.4)	**24.1** (21.8-26.5)	**23.0** (19.1-27.4)	**20.4** (18.7-22.2)	**25.5** (22.2-29.2)	**27.6** (24.6-30.9)	**28.4** (27.1-29.7)	**26.6** (22.8-30.8)	**22.9** (18.3-28.2)	**18.1** (15.5-21.1)	**13.4** (11.2-16.0)	**11.2** (9.2-13.6)	**8.7** (7.0-10.7)	**6.6** (5.2-8.5)	**5.9** (4.4-7.8)	**6.7** (5.3-8.5)
Grade																				
7	**14.0** (11.1-17.7)	**20.4** (17.2-23.9)	**11.4** (10.7-12.3)	**14.8** (8.9-23.7)	**10.3** (7.3-14.4)	**10.2** (7.4-13.9)	**7.1** (4.6-11.0)	**6.1** (4.4-8.4)	**9.4** (7.7-11.3)	**10.3** (7.2-14.4)	**10.2** (8.1-12.7)	**7.4** (5.2-10.3)	**5.0** (3.2-7.6)	**4.4** (2.8-6.8)	**2.0** (1.2-3.4)	**2.5** (1.2-5.3)	**1.0** (0.6-1.8)	†	†	† [b]
8	—	—	—	—	—	—	—	—	—	—	—	**17.8** (14.3-21.9)	**10.7** (8.3-13.8)	**10.2** (7.2-14.4)	**5.8** (4.3-7.7)	**3.8** (2.4-6.1)	**3.8** (2.5-5.8)	**2.8** (1.5-5.1)	†	† [b]
9	**33.3** (28.9-38.1)	**36.5** (32.2-41.0)	**32.2** (27.0-37.9)	**32.5** (30.8-34.3)	**24.6** (19.8-30.1)	**24.9** (21.3-28.9)	**28.2** (26.2-30.4)	**21.4** (18.5-24.5)	**23.7** (22.8-24.8)	**27.5** (25.8-29.1)	**26.0** (23.5-28.6)	**27.8** (23.6-32.5)	**23.4** (17.5-30.6)	**17.0** (13.9-20.6)	**12.6** (10.4-15.1)	**10.2** (8.1-12.9)	**7.5** (5.5-10.2)	**3.7** (2.5-5.5)	**3.3** (2.3-4.7)	**3.8** (2.8-5.2) [b]
10	—	—	—	—	—	—	—	—	—	—	—	**37.4** (32.0-43.1)	**29.9** (25.6-34.6)	**21.8** (18.4-25.6)	**17.9** (15.2-20.8)	**13.7** (11.4-16.5)	**14.8** (12.1-17.9)	**10.3** (7.2-14.5)	**9.1** (6.8-12.0)	**10.7** (8.2-13.8) [b]
11	**41.1** (36.6-45.7)	**49.1** (44.4-53.9)	**43.4** (37.6-49.4)	**44.6** (38.4-51.0)	**35.4** (31.1-40.0)	**32.4** (28.1-37.0)	**30.3** (26.4-34.5)	**31.9** (28.7-35.3)	**34.9** (30.6-39.5)	**41.7** (36.7-46.8)	**43.4** (39.3-47.6)	**41.7** (35.4-48.4)	**35.8** (29.8-42.2)	**28.3** (24.3-32.6)	**23.5** (20.0-27.2)	**19.3** (16.3-22.7)	**17.9** (14.9-21.5)	**14.5** (12.1-17.3)	**12.9** (9.7-16.9)	**12.5** (10.1-15.3) [b]
12	—	—	—	—	—	—	—	—	—	—	—	**38.6** (33.3-44.2)	**36.3** (27.6-46.1)	**30.2** (25.7-35.2)	**22.9** (19.2-27.1)	**19.2** (16.8-21.8)	**19.8** (16.9-23.0)	**14.4** (10.6-19.2)	**15.4** (12.0-19.4)	**15.3** (11.9-19.6) [b]

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**20.6** (15.7-26.6)	**17.2** (11.0-25.7)	**15.5** (12.2-19.4)	**12.6** (10.1-15.7)	**9.9** (6.6-14.5)	**7.4** (5.0-11.0)	**8.9** (6.4-12.3)	**9.9** (5.9-16.2)	**7.4**[b] (5.2-10.5)
Toronto[2]	—	—	**25.9** (17.8-36.0)	**23.7** (17.7-31.0)	**25.6** (21.6-30.0)	**16.9** (13.1-21.6)	**21.4** (16.1-27.9)	**16.7** (12.7-21.6)	**20.4** (16.7-24.6)	**19.7** (13.5-27.9)	**23.6** (20.3-27.3)	**18.4** (13.6-24.5)	**16.7** (9.2-28.2)	**12.3** (8.4-17.6)	**10.7** (8.0-14.2)	**9.4** (5.3-16.0)	**4.7** (2.6-8.3)	**7.2** (4.6-10.9)	**7.7** (3.8-15.0)	**4.5** (3.0-6.9)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**35.8** (30.3-41.6)	**25.4** (20.3-31.2)	**24.4** (19.7-29.7)	**19.9** (16.4-24.0)	**19.6** (16.4-23.2)	**17.7** (15.5-20.2)	**15.6** (13.5-18.1)	**7.9** (5.9-10.5)	**11.8**[b] (9.1-15.3)
North[2]	—	—	**23.4** (14.2-35.8)	**28.2** (22.3-35.0)	**26.2** (22.1-30.6)	**29.2** (21.1-38.9)	**29.0** (22.2-36.8)	**22.7** (15.5-31.9)	**29.7** (22.0-38.9)	**28.9** (19.2-41.0)	**25.9** (23.9-27.9)	**28.3** (19.4-39.2)	**24.4** (17.4-33.2)	**24.3** (18.5-31.1)	**20.4** (15.6-26.3)	**15.6** (11.2-21.3)	**13.2** (9.2-18.5)	**14.5** (10.0-20.7)	**5.4** (3.8-7.6)	**10.2** (8.0-13.1)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**31.3** (27.8-35.0)	**25.8** (21.6-30.4)	**20.2** (17.9-22.8)	**16.8** (14.4-19.5)	**11.6** (9.9-13.5)	**12.7** (10.7-15.1)	**7.9** (5.7-10.8)	**7.8** (6.2-9.7)	**7.1**[b] (5.3-9.4)
West[2]	—	—	**29.6** (24.3-35.4)	**31.9** (25.2-39.4)	**24.5** (22.8-26.2)	**22.9** (20.3-25.8)	**22.5** (20.2-25.0)	**20.5** (18.2-23.0)	**24.2** (21.9-26.8)	**28.7** (26.0-31.6)	**28.6** (25.5-31.9)	**29.7** (24.3-35.7)	**23.6** (19.2-28.7)	**18.6** (15.7-21.8)	**14.1** (11.5-17.1)	**11.3** (9.0-14.0)	**11.3** (9.0-14.1)	**5.5** (3.9-7.7)	**5.5** (3.8-7.8)	**4.5** (3.5-5.8)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**26.7** (22.9-31.0)	**22.4** (17.6-28.1)	**18.7** (16.2-21.6)	**11.1** (9.0-13.6)	**11.9** (10.0-14.1)	**11.4** (9.7-13.5)	**8.8** (7.3-10.4)	**8.9** (7.3-10.9)	**10.8**[b] (8.9-13.0)
East[2]	—	—	**32.2** (27.2-37.6)	**28.9** (24.6-33.6)	**19.6** (12.9-28.7)	**25.3** (23.6-27.1)	**20.0** (16.3-24.3)	**21.2** (18.1-24.7)	**22.6** (20.3-25.1)	**30.1** (28.5-31.7)	**27.8** (24.6-31.3)	**27.2** (22.1-33.1)	**20.8** (14.3-29.3)	**17.0** (12.8-22.2)	**10.4** (7.9-13.6)	**10.1** (7.7-13.1)	**8.4** (6.4-11.0)	**8.1** (6.2-10.5)	**6.9** (4.7-10.1)	**8.1** (5.7-11.4)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you smoke cigarettes? (The definition of smoking includes occasional smoking, but excludes a few puffs or smoking less than one whole cigarette in the past 12 months.)

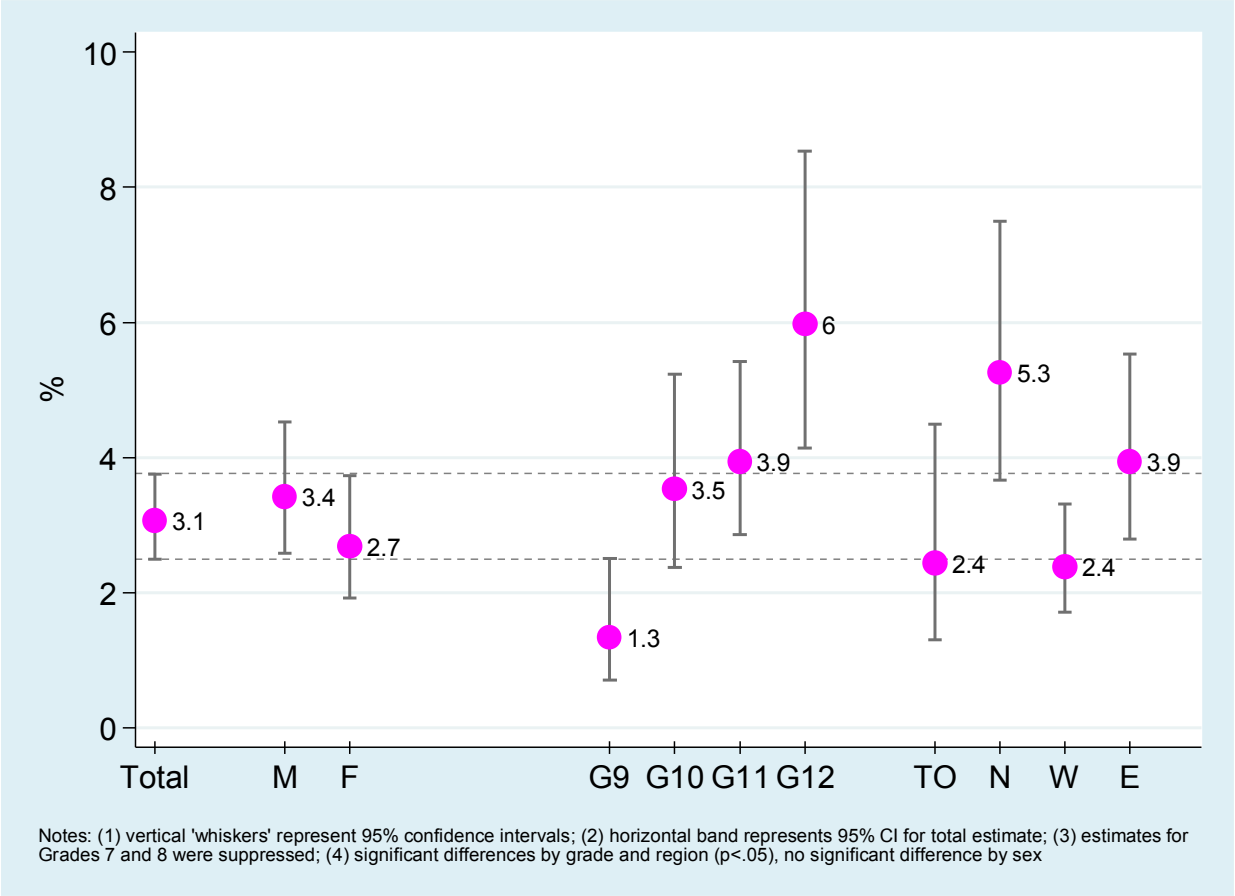
Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Daily Tobacco Cigarette Smoking

(Figures 3.3.4–3.3.6; Table 3.3.2)

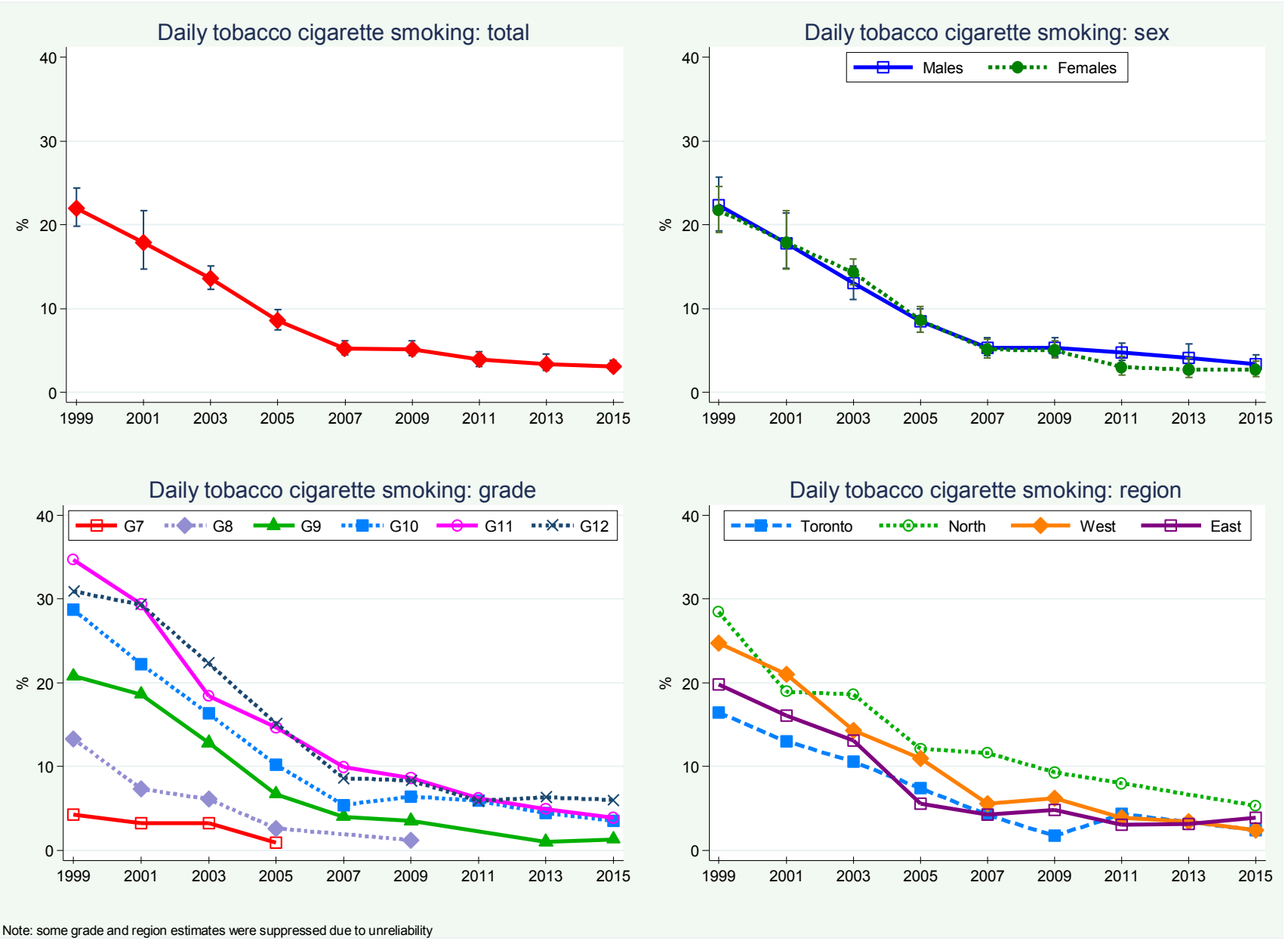
	Daily Tobacco Cigarette Smoking in 2015 (Grades 7–12)	Trends in Daily Tobacco Cigarette Smoking
Total Sample	■ Overall, 3.1% of students report smoking one or more cigarettes on a daily basis during the past 12 months. This percentage represents about 29,400 students in grades 7 through 12 across Ontario.	☐ Overall, daily smoking among grades 7 through 12 remained stable between 2013 (3.4%) and 2015 (3.1%). Daily smoking significantly decreased between 1999 (22.0%) and 2011 (3.9%) and has levelled off since then. ☐ Over the long-term (among grades 7, 9, and 11 only), daily smoking peaked in the late 1970s and again in the late 1990s. Daily smoking began a downward trend after 1999, reached an all-time low in 2013, and remained stable since then.
Sex	■ Daily smoking does not significantly differ between males (3.4%) and females (2.7%).	☐ Daily smoking among both males and females remained stable between 2013 and 2015. However, the current daily smoking estimates for both males and females are significantly lower than their respective 1999 estimates.
Grade	■ The likelihood of daily smoking significantly increases with grade, with the highest level among 12th graders (6.0%).	☐ Daily smoking remained stable between 2013 and 2015 within all grade levels. However, all grades show a significant decrease in 2015 compared with their respective 1999 estimates.
Region	■ Daily smoking significantly differs by region, showing the highest level among students in the North (5.3%).	☐ Daily smoking remained stable between 2013 and 2015 within all regions. However, rates are significantly lower in 2015 compared with estimates seen in 1999.

Figure 3.3.4
Past Year Daily Tobacco Cigarette Smoking by Sex, Grade, and Region, 2015 OSDUHS



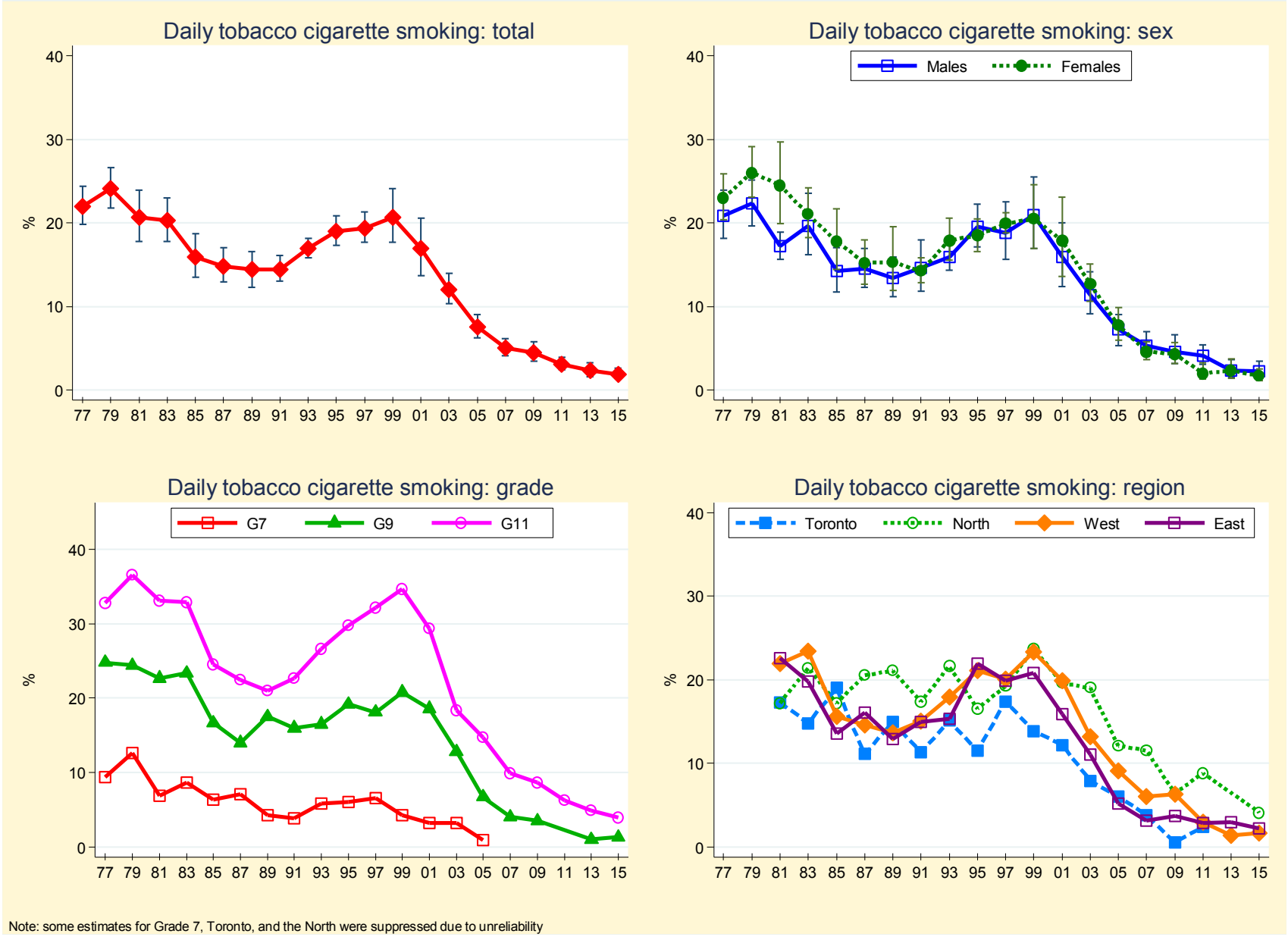
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.3.5
Past Year Daily Tobacco Cigarette Smoking, 1999–2015 OSDUHS (Grades 7–12)



Note: some grade and region estimates were suppressed due to unreliability

Figure 3.3.6
Past Year Daily Tobacco Cigarette Smoking, 1977–2015 OSDUHS (Grades 7, 9, 11 only)



Note: some estimates for Grade 7, Toronto, and the North were suppressed due to unreliability

Table 3.3.2: Percentage Reporting Daily Tobacco Cigarette Smoking in the Past Year, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)	
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**22.0** (19.8-24.4)	**17.9** (14.7-21.7)	**13.6** (12.3-15.1)	**8.6** (7.4-9.9)	**5.2** (4.5-6.1)	**5.1** (4.4-6.1)	**3.9** (3.1-4.8)	**3.4** (2.6-4.6)	**3.1** (2.5-3.8)	bcd
Total[2]	**22.0** (19.8-24.4)	**24.1** (21.8-26.6)	**20.7** (17.8-23.9)	**20.3** (17.8-23.0)	**15.9** (13.5-18.7)	**14.8** (12.9-17.0)	**14.4** (12.3-16.6)	**14.4** (13.0-16.1)	**16.9** (15.8-18.1)	**19.0** (17.3-20.8)	**19.4** (17.7-21.3)	**20.7** (17.7-24.1)	**16.9** (13.7-20.6)	**12.0** (10.3-14.0)	**7.5** (6.2-9.0)	**5.0** (4.1-6.1)	**4.5** (3.4-5.8)	**3.1** (2.4-3.9)	**2.3** (1.6-3.3)	**1.9** (1.4-2.6)	cd
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**22.3** (19.3-25.7)	**17.8** (14.8-21.4)	**13.0** (11.1-15.1)	**8.5** (7.2-10.0)	**5.3** (4.4-6.5)	**5.3** (4.3-6.5)	**4.7** (3.8-5.9)	**4.1** (2.8-5.8)	**3.4** (2.6-4.5)	b
Males[2]	**20.8** (18.1-23.9)	**22.3** (19.6-25.1)	**17.2** (15.6-18.9)	**19.6** (16.2-23.5)	**14.2** (11.7-17.0)	**14.5** (12.3-16.9)	**13.4** (11.2-15.9)	**14.6** (11.8-18.0)	**15.9** (14.3-17.6)	**19.5** (17.1-22.2)	**18.8** (15.6-22.5)	**20.9** (16.9-25.5)	**15.9** (12.4-20.0)	**11.4** (9.1-14.1)	**7.3** (5.8-9.0)	**5.3** (4.0-7.0)	**4.6** (3.2-6.6)	**4.1** (3.1-5.4)	**2.3** (1.5-3.6)	**2.2** (1.4-3.4)	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**21.7** (19.1-24.6)	**17.9** (14.7-21.7)	**14.3** (12.8-15.9)	**8.6** (7.2-10.2)	**5.1** (4.1-6.3)	**5.0** (4.1-6.1)	**3.0** (2.0-4.3)	**2.7** (1.8-4.1)	**2.7** (1.9-3.7)	b
Females[2]	**23.0** (20.4-25.9)	**26.0** (23.1-29.1)	**24.5** (19.9-29.7)	**21.0** (18.2-24.2)	**17.8** (14.4-21.7)	**15.2** (12.7-18.0)	**15.3** (11.9-19.5)	**14.2** (12.8-15.8)	**17.9** (15.5-20.6)	**18.5** (16.6-20.5)	**19.9** (18.8-21.2)	**20.5** (16.9-24.6)	**17.9** (13.6-23.1)	**12.7** (10.6-15.1)	**7.7** (6.0-9.9)	**4.6** (3.6-5.8)	**4.3** (3.2-5.7)	**2.0** (1.3-3.3)	**2.3** (1.4-3.7)	**1.7** (1.1-2.5)	
Grade																					
7	**9.4** (7.1-12.4)	**12.6** (10.3-15.4)	**6.9** (5.5-8.8)	**8.6** (4.9-14.9)	**6.3** (3.9-10.0)	**7.1** (4.9-10.2)	**4.2** (2.7-6.3)	**3.8** (1.9-7.6)	**5.8** (4.4-7.7)	**6.0** (3.2-11.0)	**6.5** (4.5-9.3)	**4.2** (2.8-6.2)	**3.2** (1.6-6.0)	**3.2** (1.8-5.6)	**0.9** (0.5-1.7)	†	†	†	†	†	b
8	—	—	—	—	—	—	—	—	—	—	—	**13.3** (10.1-17.2)	**7.3** (5.2-10.2)	**6.1** (4.0-9.4)	**2.6** (1.7-3.7)	†	†	†	†	†	b
9	**24.8** (20.9-29.2)	**24.4** (20.7-28.5)	**22.7** (18.7-27.3)	**23.4** (20.3-26.9)	**16.7** (12.0-22.8)	**14.0** (11.3-17.3)	**17.5** (14.3-21.3)	**16.0** (14.9-17.1)	**16.5** (14.9-18.1)	**19.2** (16.6-22.0)	**18.1** (16.0-20.4)	**20.8** (16.8-25.5)	**18.6** (13.0-25.8)	**12.8** (10.0-16.3)	**6.7** (5.2-8.7)	**4.0** (2.8-5.6)	**3.5** (2.1-6.0)	†	**1.0** (0.6-1.7)	**1.3** (0.7-2.5)	b
10	—	—	—	—	—	—	—	—	—	—	—	**28.7** (23.6-34.4)	**22.2** (17.9-27.2)	**16.3** (13.3-20.0)	**10.2** (8.0-12.9)	**5.4** (4.0-7.3)	**6.4** (4.8-8.5)	**5.9** (3.6-9.6)	**4.4** (2.8-7.0)	**3.5** (2.4-5.2)	b
11	**32.8** (28.6-37.3)	**36.6** (31.6-41.8)	**33.1** (27.5-39.2)	**32.9** (28.4-37.7)	**24.6** (20.1-29.8)	**22.5** (18.1-27.7)	**21.0** (16.8-26.0)	**22.7** (19.4-26.5)	**26.7** (23.6-30.1)	**29.8** (27.4-32.4)	**32.2** (28.1-36.6)	**34.7** (28.5-41.5)	**29.4** (24.1-35.4)	**18.4** (15.0-22.3)	**14.7** (11.6-18.4)	**9.9** (8.0-12.3)	**8.6** (6.2-11.7)	**6.2** (4.6-8.1)	**4.9** (3.2-7.4)	**3.9** (2.9-5.4)	b
12	—	—	—	—	—	—	—	—	—	—	—	**30.9** (25.9-36.4)	**29.3** (20.3-40.2)	**22.3** (18.0-27.4)	**15.1** (12.1-18.6)	**8.6** (6.8-10.9)	**8.3** (6.3-10.7)	**5.9** (4.1-8.5)	**6.3** (3.9-10.2)	**6.0** (4.1-8.5)	b

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**16.4** (12.2-21.7)	**13.0** (8.3-19.9)	**10.6** (8.2-13.7)	**7.4** (5.6-9.7)	**4.2** (3.2-5.5)	†	**4.3** (2.6-7.0)	†	**2.4** [b] (1.3-4.5)
Toronto[2]	—	—	**17.4** (12.2-24.2)	**14.8** (10.2-20.9)	**19.0** (14.9-23.8)	**11.1** (7.2-16.7)	**14.9** (10.6-20.6)	**11.3** (7.2-17.2)	**15.1** (12.2-18.6)	**11.5** (8.3-15.9)	**17.4** (14.2-21.0)	**13.8** (9.9-18.9)	**12.2** (6.6-21.6)	**7.9** (5.1-12.2)	**6.0** (4.0-8.8)	**3.8** (2.4-6.0)	†	**2.4** (1.4-4.1)	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**28.4** (22.9-34.6)	**18.9** (14.1-24.9)	**18.6** (13.4-25.2)	**12.1** (9.0-16.1)	**11.6** (8.9-15.0)	**9.3** (7.4-11.6)	**8.0** (5.1-12.2)	†	**5.3** [b] (3.7-7.5)
North[2]	—	—	**17.2** (11.8-24.4)	**21.4** (16.1-28.0)	**17.2** (15.2-19.5)	**20.5** (9.4-39.1)	**21.1** (13.4-31.7)	**17.4** (14.7-20.6)	**21.6** (14.9-30.1)	**16.5** (12.8-21.0)	**19.2** (17.3-21.2)	**23.7** (15.4-34.7)	**19.6** (13.4-27.9)	**19.0** (13.1-26.8)	**12.1** (8.1-17.7)	**11.5** (8.1-16.1)	**6.4** (3.4-11.9)	**8.8** (4.6-16.1)	†	**4.1** (2.5-6.8)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**24.7** (20.9-29.0)	**21.0** (16.8-26.0)	**14.3** (12.4-16.6)	**10.9** (8.7-13.6)	**5.5** (4.2-7.2)	**6.2** (5.0-8.1)	**3.9** (2.6-5.7)	**3.4** (2.2-5.3)	**2.4** [b] (1.7-3.3)
West[2]	—	—	**21.9** (17.0-27.7)	**23.4** (18.2-29.4)	**15.6** (14.2-17.1)	**14.6** (13.6-15.7)	**13.6** (11.0-16.7)	**15.0** (13.8-16.2)	**17.9** (17.4-18.4)	**21.1** (18.5-23.9)	**20.1** (16.8-23.8)	**23.3** (17.9-29.8)	**19.9** (15.2-25.6)	**13.2** (10.6-16.2)	**9.1** (6.7-12.3)	**6.0** (4.3-8.2)	**6.3** (4.2-9.2)	**2.9** (2.0-4.1)	**1.4** (0.9-2.3)	**1.6** (1.1-2.4)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**19.8** (16.4-23.7)	**16.1** (11.4-22.3)	**13.1** (10.8-15.7)	**5.5** (4.2-7.3)	**4.2** (3.1-5.7)	**4.8** (3.8-6.1)	**3.0** (2.2-4.0)	**3.1** (2.1-4.7)	**3.9** [b] (2.8-5.5)
East[2]	—	—	**22.6** (17.9-28.2)	**19.8** (17.8-21.8)	**13.5** (7.1-24.1)	**16.1** (13.6-18.9)	**12.9** (9.2-17.9)	**14.9** (11.5-19.1)	**15.3** (13.4-17.4)	**21.9** (18.7-25.4)	**19.9** (17.6-22.4)	**20.8** (16.1-26.6)	**15.9** (10.4-23.6)	**11.0** (8.0-14.9)	**5.2** (3.7-7.1)	**3.1** (2.0-4.6)	**3.7** (2.7-5.2)	**2.8** (1.8-4.3)	**2.9** (1.6-5.2)	**2.2** (1.3-3.7)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) † estimate suppressed due to unreliability; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you smoke cigarettes? (Daily smoking is defined as typically smoking one or more cigarettes per day during the past year.)

Source: OSDUHS, Centre for Addiction & Mental Health

Lifetime Tobacco Cigarette Smoking

(Figure 3.3.7)

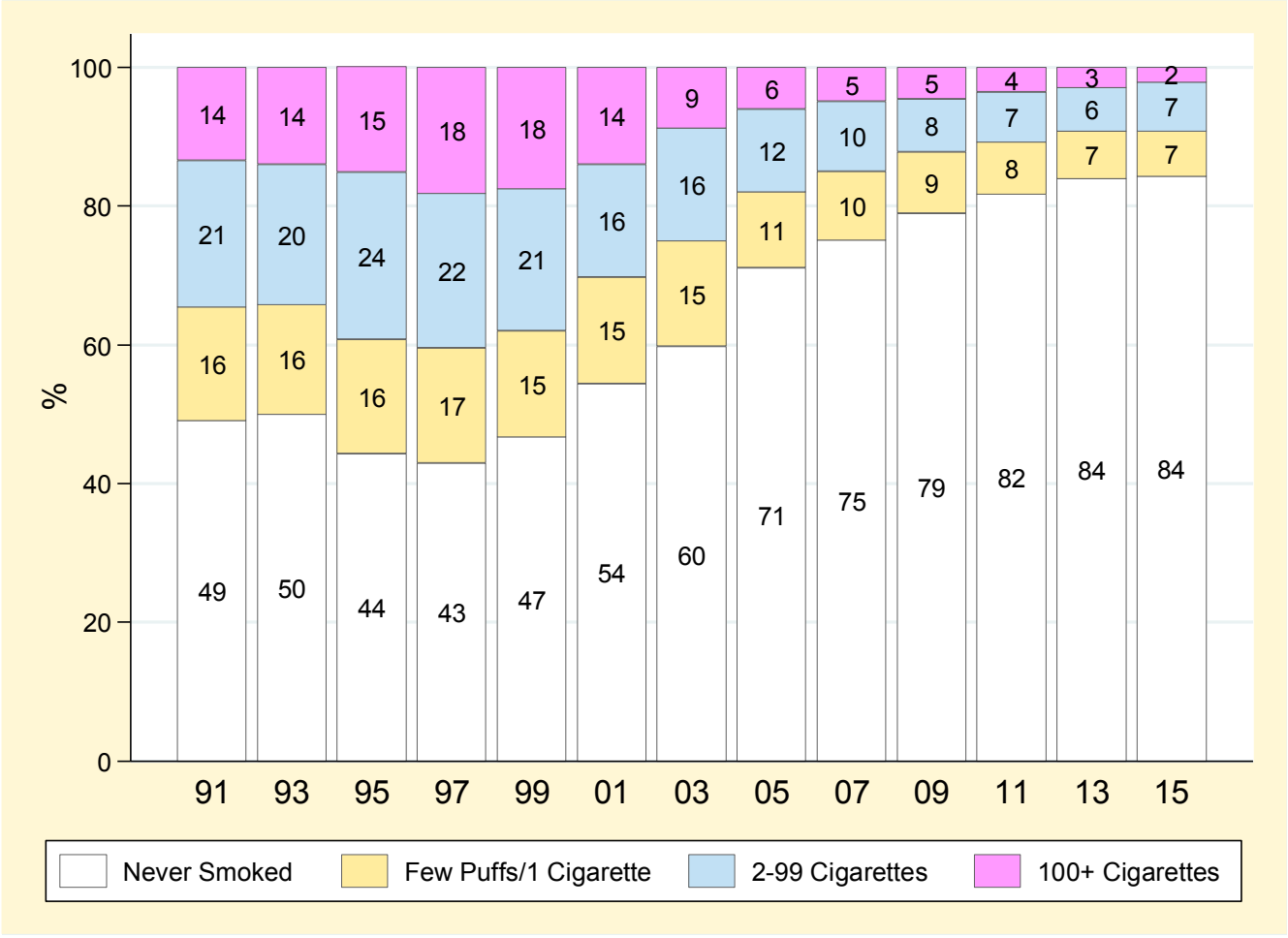
2015: Grades 7–12

■ Although 9% of all students in grades 7 through 12 are considered to be current smokers, about one-in-five (20%) have tried a tobacco cigarette at some point in their life. Specifically, about 8% of students have smoked a few puffs or one whole cigarette, while another 8% have consumed less than 100 cigarettes, and 4% have consumed 100 or more cigarettes in their lifetime.

1991–2015: Grades 7, 9, 11 only

□ Figure 3.3.7 displays the long-term trends in lifetime smoking status. Since 1991, there has been an increase in the percentage of students who have never smoked in their lifetime, from about half of students in 1991 to well over three-quarters of students in 2015.

Figure 3.3.7
Trends in Lifetime Tobacco Cigarette Smoking, 1991–2015 OSDUHS (Grades 7, 9, 11 only)



Attempts to Quit Tobacco Cigarette Smoking (Among Past Year Smokers)

(Table 3.3.3)

We asked a random half sample of about 5,000 students in grades 7–12 about the number of times they tried to quit smoking during the 12 months before the survey. Students had the option of responding that they did not smoke during the past 12 months or that they had never smoked in their lifetime.

2015: Grades 7–12

- In 2015, just over one-third (36.5%) of smokers in all grades reported at least one quit attempt during the 12 months before the survey. Among the 164 smokers who attempted to quit, half reported attempting to do so more than once.

Table 3.3.3: Attempts to Quit Smoking Tobacco Cigarettes in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
(Among Smokers)	(*n*=549)	(*n*=397)	(*n*=591)	(*n*=556)	(*n*=349)	(*n*=322)	(*n*=365)	(*n*=389)	(*n*=455)
% tried to quit smoking	66.2	64.1	62.4	57.6	52.7	53.9	63.1	38.1	36.5
(Among Quitters)	(*n*=363)	(*n*=269)	(*n*=373)	(*n*=323)	(*n*=190)	(*n*=179)	(*n*=207)	(*n*=154)	(*n*=164)
Number of times tried to quit:									
Once	29.9	38.9	42.7	45.2	45.9	32.4	43.6	48.1	50.3
Twice	26.4	25.3	27.0	22.4	19.8	28.1	21.6	21.2	19.5
Three or more times	43.6	35.8	30.3	32.4	34.3	39.5	34.8	30.7	30.2

Notes: (1) entries are percentages; (2) question asked of a random half sample in each year; (3) in 2013, the question's response option format changed to a closed-ended format, whereas in years prior it was an open-ended question asking students to write down the number of quit attempts.
Source: OSDUHS, Centre for Addiction & Mental Health

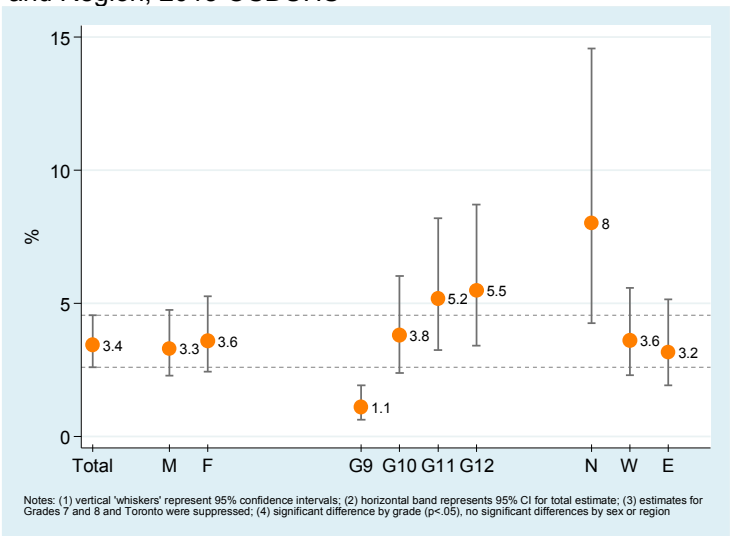
Past Year Contraband Cigarette Smoking

(Figure 3.3.8; Table 3.3.4)

Starting in 2009, we asked students whether they had smoked any contraband cigarettes originating from First Nations 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. By law, status Natives are entitled to purchase them on reserves without paying provincial taxes, while anyone else purchasing them must pay the requisite federal and provincial taxes. However, these cigarettes are illegally sold outside of reserves without payment of all requisite taxes and their lower price makes them especially attractive to youth.

	Contraband Cigarette Smoking in 2015 (Grades 7–12)	Trends in Contraband Cigarette Smoking (Grades 7–12)
Total Sample	■ Among the total sample, 3.4% report smoking contraband cigarettes during the past year. This percentage represents about 31,400 students in Ontario. Among past year smokers, the percentage reporting smoking contraband cigarettes is 39% (95% CI: 32%-47%).	☐ The percentage of students smoking contraband cigarettes in 2015 (3.4%) does not significantly differ from 2013 (2.8%), however the current estimate is significantly lower than that seen in 2009 (6.4%).
Sex	■ Males (3.3%) and females (3.6%) are equally likely to report smoking contraband cigarettes.	☐ Contraband cigarette smoking remained stable between 2013 and 2015 for both sexes. Only males show a statistically significant decrease since 2009 (from 6.7% to 3.3%).
Grade	■ There are significant grade differences, with the likelihood of smoking contraband cigarettes highest among 11th and 12th graders (about 5%).	☐ No grade shows a significant change since 2013. Only 11th graders show a statistically significant decrease since 2009 (from 11.7% to 5.2%).
Region	■ Despite some variation, there are no statistically significant regional differences.	☐ No region shows a significant change since 2013. The West region shows a decrease since 2009 (from 7.9% to 3.6%).

Figure 3.3.8
Past Year Contraband Cigarette Smoking by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 and Toronto were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

Table 3.3.4: Percentage Reporting Smoking Contraband Cigarettes in the Past Year, 2009–2015 OSDUHS

		2009 (*n*=4261)	2011 (*n*=4472)	2013 (*n*=4794)	2015 (*n*=5023)
Total		**6.4**	**3.9**	**2.8**	**3.4** [b]
(95% CI)		(5.1-7.9)	(2.8-5.3)	(2.0-3.7)	(2.6-4.5)
Sex					
	Males	**6.7** (5.1-8.8)	**4.2** (3.1-5.7)	**3.2** (2.2-4.5)	**3.3** [b] (2.3-4.8)
	Females	**6.0** (4.6-7.7)	**3.5** (2.1-5.7)	**2.3** (1.4-3.8)	**3.6** (2.4-5.3)
Grade					
	7	†	†	†	†
	8	†	†	†	†
	9	†	†	†	**1.1** (0.6-1.9)
	10	**7.6** (5.2-10.9)	†	**5.2** (2.8-9.3)	**3.8** (2.4-6.0)
	11	**11.7** (8.5-15.9)	**7.5** (4.2-12.9)	**3.1** (1.8-5.5)	**5.2** [b] (3.2-8.2)
	12	**9.9** (6.6-14.5)	**3.2** (1.9-5.4)	**3.5** (1.8-6.6)	**5.5** (3.4-8.7)
Region					
	Toronto	†	**2.8** (1.5-5.1)	†	†
	North	**8.9** (6.1-12.8)	**8.5** (6.1-11.8)	†	**8.0** (4.2-14.6)
	West	**7.9** (5.6-11.1)	†	**2.3** (1.4-3.8)	**3.6** [b] (2.3-5.6)
	East	**6.0** (4.7-7.6)	**3.7** (2.7-5.0)	**3.5** (2.3-5.3)	**3.2** (1.9-5.1)

Notes: (1) question asked of a random half sample in each year; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 2009 significant difference, p<.01

Q: In the last 12 months, how often did you smoke cigarettes made on Native Reserves (such as "DKs", "Natives", "Putter's", or unbranded cigarettes packaged in a plastic bag)? (The definition of smoking excludes a few puffs or smoking less than one whole cigarette in the past 12 months, but includes occasional smoking.)

Source: OSDUHS, Centre for Addiction & Mental Health

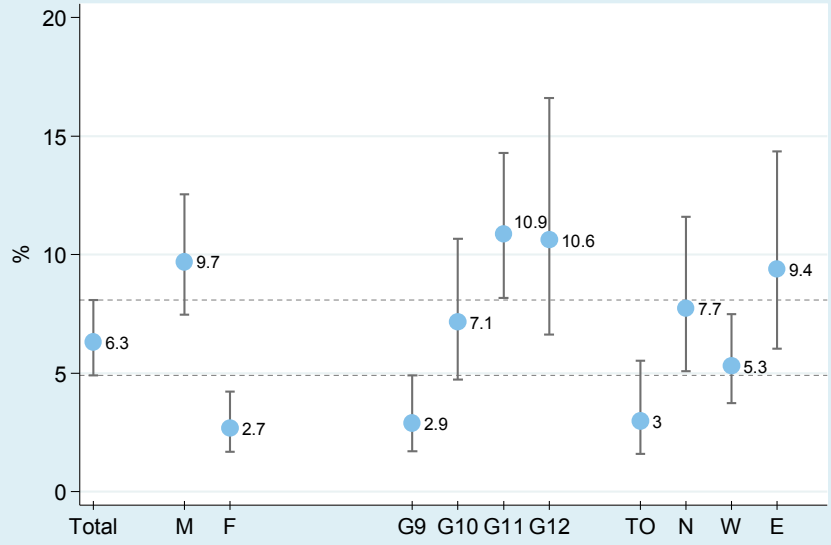
Past Year Smokeless (Chewing) Tobacco Use

(Figure 3.3.9; Table 3.3.5)

Starting in 2011, we asked students whether they used 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. Chewing or sucking on the tobacco allows nicotine to be absorbed into the bloodstream through the tissues in the mouth. One does not need to swallow the tobacco to absorb the nicotine. Smokeless tobacco is not a safe substitute for cigarette smoking, as it is associated with numerous health problems and diseases.

	Smokeless Tobacco Use in 2015 (Grades 7–12)	Trends in Smokeless Tobacco Use (Grades 7–12)
Total Sample	■ Among all students, 6.3% report using smokeless tobacco in the past year. This estimate represents about 58,200 students in Ontario.	☐ The past year prevalence of smokeless tobacco use has not significantly changed since 2011 (4.6% in 2011, 5.7% in 2013, 6.3% in 2015).
Sex	■ Males (9.7%) are significantly more likely than females (2.7%) to use smokeless tobacco.	☐ Neither males nor females show a significant change in smokeless tobacco use since 2011.
Grade	■ There is significant grade variation, with students in grades 11 and 12 most likely to use (about 11%).	☐ No grade shows a significant change since 2011.
Region	■ There is significant regional variation, with students in Toronto (3.0%) least likely to use.	☐ No region shows a significant change since 2011.

Figure 3.3.9
Past Year Smokeless (Chewing) Tobacco Use by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant differences by sex, grade, and region (p<.05)

Table 3.3.5: Percentage Reporting Smokeless (Chewing) Tobacco Use in the Past Year, 2011–2015 OSDUHS

		2011 (*n*=9288)	2013 (*n*=4794)	2015 (*n*=5023)
Total		**4.6**	**5.7**	**6.3**
(95% CI)		(3.9-5.5)	(4.6-7.0)	(4.9-8.1)
Sex				
	Males	**7.5** (6.2-9.0)	**9.0** (7.0-11.5)	**9.7** (7.5-12.5)
	Females	**1.6** (1.2-2.0)	**2.2** (1.3-3.6)	**2.7** (1.7-4.2)
Grade				
	7	†	†	†
	8	**1.3** (0.8-2.3)	†	†
	9	**1.4** (0.9-2.1)	**4.0** (2.3-7.1)	**2.9** (1.7-4.9)
	10	**7.8** (5.8-10.5)	**6.3** (3.7-10.4)	**7.1** (4.7-10.7)
	11	**7.2** (5.4-9.4)	**9.2** (6.3-13.4)	**10.9** (8.2-14.3)
	12	**6.9** (4.9-9.7)	**8.7** (6.1-12.4)	**10.6** (6.6-16.6)
Region				
	Toronto	**4.3** (2.6-7.0)	†	**3.0** (1.6-5.5)
	North	**6.2** (4.8-8.1)	†	**7.7** (5.1-11.6)
	West	**3.6** (2.5-5.0)	**5.9** (4.4-7.9)	**5.3** (3.7-7.5)
	East	**6.0** (4.8-7.3)	**7.0** (5.0-9.8)	**9.4** (6.0-14.4)

Notes: (1) question asked of a random half sample in 2013 and 2015; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) no significant changes over time.
Q: In the last 12 months, how often did you use smokeless tobacco (also known as chewing tobacco, snuff, plug, dipping tobacco)?
Source: OSDUHS, Centre for Addiction & Mental Health

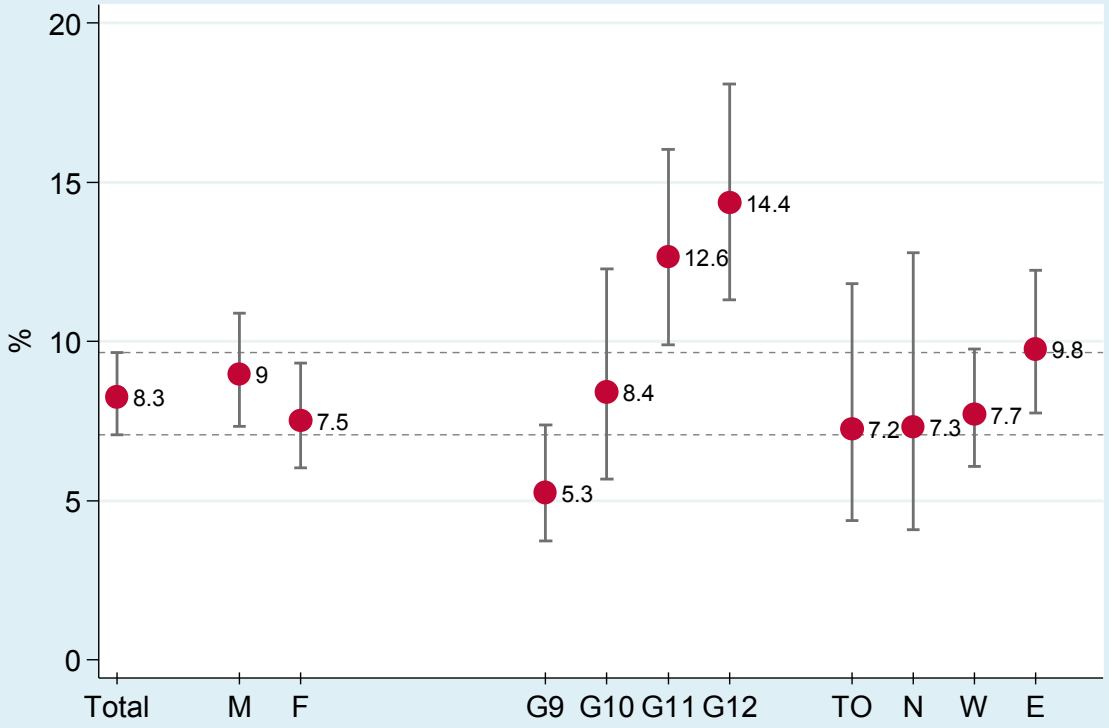
Past Year Waterpipe (Hookah) Use

(Figure 3.3.10, Table 3.3.6)

Starting in 2013, students were asked about their past year use of a waterpipe, also known as a hookah, shisha, or narghile. A waterpipe is typically used to smoke a special form of flavoured tobacco (e.g., apple, mint, chocolate). A modern waterpipe comprises a head (with holes in the bottom), a metal body, a water bowl, and a flexible hose with a mouthpiece. They are typically used in groups with the mouthpiece passed from person to person. Waterpipe smoking delivers the addictive drug nicotine, and these smokers are at risk of developing the same diseases as those caused by tobacco cigarette smoking. Waterpipe smokers may actually inhale more tobacco smoke than do cigarette smokers because of the large volume of smoke inhaled in one smoking session, which can last as long as 60 minutes. Second-hand smoke is also an issue due to the burning of charcoal used in the process.

	Waterpipe Use in 2015 (Grades 7–12)	Trends in Waterpipe Use (Grades 7–12)
Total Sample	■ Among students in grades 7 through 12, 8.3% used a waterpipe at least once in the past year (this excludes smoking "only a few puffs"). This percentage represents about 76,200 students in Ontario.	☐ The percentage of students reporting using a waterpipe in the past year remained stable between 2013 (9.7%) and 2015 (8.3%).
Sex	■ Males (9.0%) and females (7.5%) are equally likely to use a waterpipe.	☐ Neither males nor females show a significant change between 2013 and 2015.
Grade	■ The likelihood of using a waterpipe significantly increases with grade, ranging from 5.3% among 9th graders to a peak of 14.4% among 12th graders.	☐ No grade shows a significant change between 2013 and 2015.
Region	■ There are no significant differences among the four regions.	☐ No region shows a significant change between 2013 and 2015.

Figure 3.3.10
Past Year Waterpipe (Hookah) Use by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

Table 3.3.6: Percentage Reporting Waterpipe (Hookah) Use in the Past Year, 2013–2015 OSDUHS

		2013 (*n*=4794)	2015 (*n*=5023)
Total		**9.7**	**8.3**
(95% CI)		(8.2-11.5)	(7.1-9.6)
Sex			
	Males	**11.5** (9.1-14.4)	**9.0** (7.3-10.9)
	Females	**7.9** (6.4-9.6)	**7.5** (6.0-9.3)
Grade			
	7	†	†
	8	†	†
	9	**4.3** (2.9-6.3)	**5.3** (3.7-7.4)
	10	**8.5** (5.8-12.3)	**8.4** (5.7-12.3)
	11	**15.1** (11.4-19.7)	**12.6** (9.9-16.0)
	12	**18.8** (14.6-23.9)	**14.4** (11.3-18.1)
Region			
	Toronto	**7.0** (3.6-12.9)	**7.2** (4.4-11.8)
	North	**9.3** (5.3-15.8)	**7.3** (4.1-12.8)
	West	**8.9** (6.6-11.8)	**7.7** (6.1-9.7)
	East	**13.1** (10.9-15.6)	**9.8** (7.8-12.2)

Notes: (1) question asked of a random half sample in 2013 and 2015; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) no significant changes between 2013 and 2015.
Q: In the last 12 months, how often did you smoke a waterpipe (also known as a hookah, shisha, hubble-bubble, gouza, narghile)? (Use excludes "smoked only a few puffs once in the last 12 months.")
Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Electronic Cigarette Use

(Figure 3.3.11. 3.3.12)

An electronic cigarette (e-cigarette) is a battery-powered cigarette-shaped canister used to simulate the sensation of smoking. Other names for an e-cigarette include "vape pen," "hookah pen," and "e-hookah." A liquid-filled cartridge is heated and releases vapour. The vapour, which resembles smoke, is inhaled. Some e-cigarettes contain nicotine, and most are flavoured. In Canada, the sale of e-cigarettes with nicotine is prohibited, yet they are widely available over the Internet. E-cigarettes without nicotine can be legally sold in Canada and they are not regulated. To date, Health Canada has not approved an e-cigarette product and warns that e-cigarettes with or without nicotine may pose health risks.

In the 2013 cycle of the OSDUHS, secondary students were asked whether they had used e-cigarettes in their *lifetime*.[64] In 2015, we asked students in grades 7–12 about their past year use of e-cigarettes. Specifically, a random half sample was asked the following: "*Electronic cigarettes (e-cigarettes) are battery-operated devices that look like cigarettes and create a mist which the user inhales. Some e-cigarettes contain nicotine and some do not. Other names for e-cigarettes include 'vape pipes,' 'hookah pens', and 'e-hookahs.' In the last 12 months, how often did you smoke e-cigarettes?*"

A follow-up question asked students whether the e-cigarettes they smoked in the past year contained nicotine. The following question was asked: "*If you smoked e-cigarettes (also known as 'vape pipes,' 'hookah pens,' and 'e-hookahs') in the last 12 months, were they usually the types with nicotine in them?*"

Past Year Use of Electronic Cigarettes

2015: Grades 7–12

- Among the total sample, 11.7% (95% CI: 10.2%-13.4%) report using more than just a few puffs of an electronic cigarette in the past year. This percentage represents about 107,800 students in Ontario. About 1.1% of students use an electronic cigarette on a daily basis (represents about 10,400 students).

- Males (14.5%) are significantly more likely than females (8.7%) to use electronic cigarettes.

- There is significant grade variation showing that use increases with grade level, peaking in 11th grade at 19.7%.

- There is significant regional variation showing that students in the East (17.0%) are most likely to use electronic cigarettes compared with students in the other three regions (about 9%-12%).

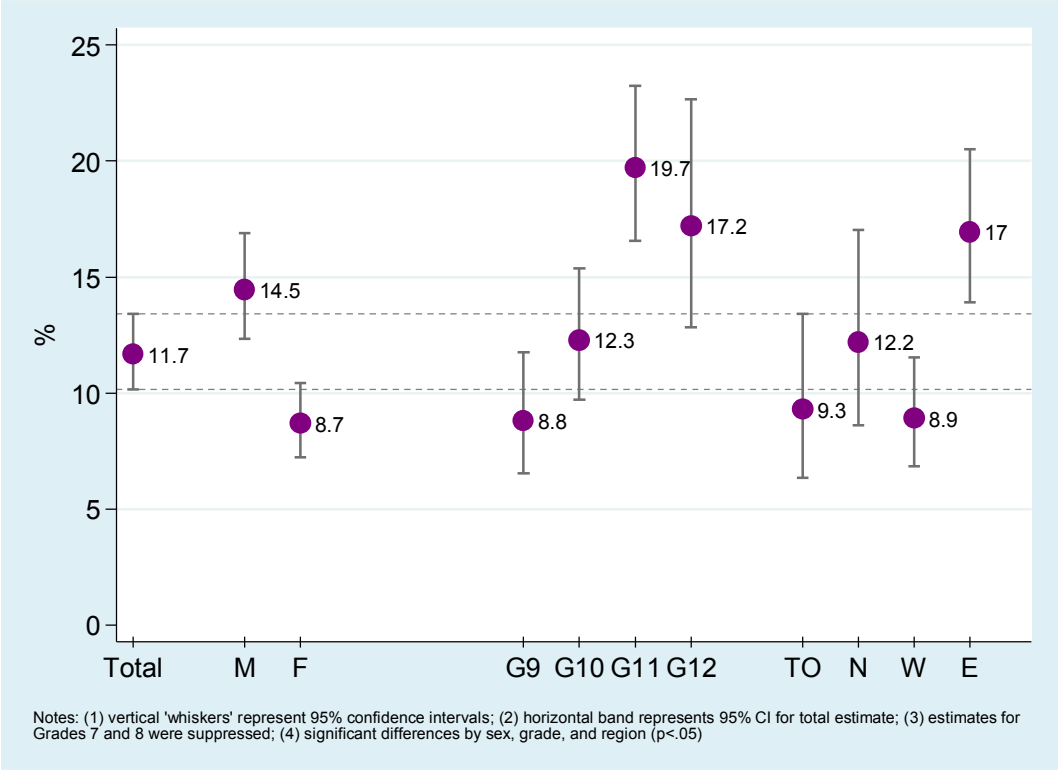
Type of Electronic Cigarettes Usually Used (Among Past Year Users)

2015: Grades 7–12

- Among those who used more than a few puffs of an electronic cigarette in the past year, the most common type of e-cigarettes used was those without nicotine (50.9% of users report using this type). About 18.8% of users report usually using e-cigarettes with nicotine, 12.5% used both types, and 17.8% are not sure what they used.

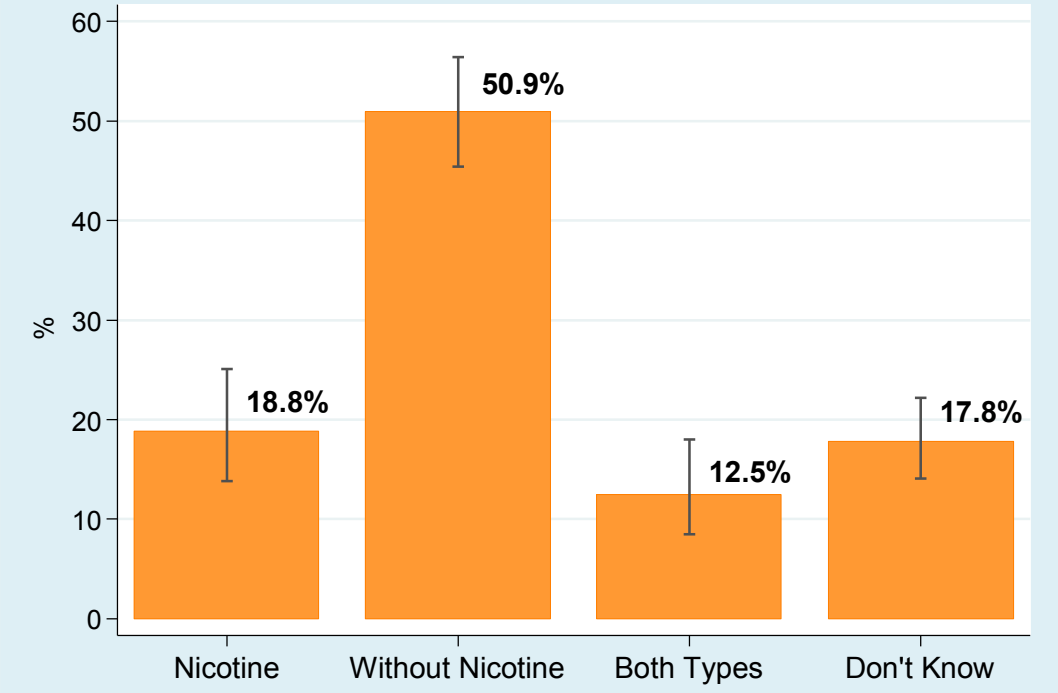
[64] The 2013 data showed that 14.6% of secondary school students reported using an electronic cigarette in their lifetime (including a few puffs). Applying a similar definition to the 2015 data for comparison purposes, we found that 28.2% of secondary school students report using even just a few puffs of an electronic cigarette in their lifetime.

Figure 3.3.11
Past Year Electronic Cigarette Use (Any Type) by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant differences by sex, grade, and region (p<.05)

Figure 3.3.12
Usual Type of Electronic Cigarette Used (Among Past Year Users), 2015 OSDUHS



Note: error bars represent 95% confidence intervals

Past Year Use of an Electronic Cigarette with Cannabis Oil/Liquid/Wax

(Figure 3.3.13)

An electronic cigarette (e-cigarette or vape pen) can also be used to inhale the vapours arising from heating marijuana or hashish oil, liquid, or wax. For the first time in 2015, secondary students (grades 9–12) were asked if they used cannabis oil/wax in an e-cigarette. A random half sample of students was asked the following question: "*If you smoked e-cigarettes (also known as 'vape pipes,' 'hookah pens,' and 'e-hookahs') in the last 12 months, did you try smoking marijuana or hash oil, liquid, or wax in it?*"

2015: Grades 9–12

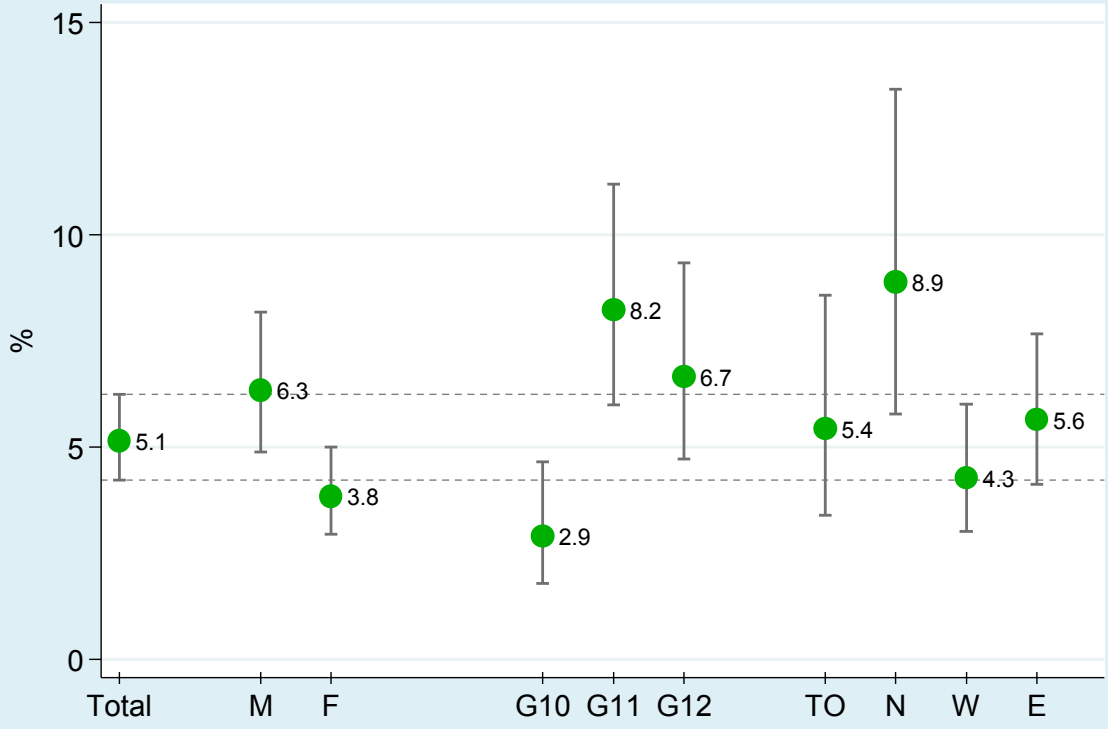
- Among secondary students, 5.1% (95% CI: 4.2%-6.2%) report using cannabis oil/wax in an electronic cigarette in the past year. This percentage represents about 35,300 students in grades 9–12 across Ontario.

- Males (6.3%) are significantly more likely than females (3.8%) to use cannabis in an electronic cigarette.

- There is significant grade variation, with students in 11th and 12 grade most likely to use.

- Despite some variation, there are no significant differences among the four regions.

Figure 3.3.13
Past Year Use of Cannabis Oil/Liquid/Wax in an Electronic Cigarette by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 9 was suppressed; (4) significant differences by sex and grade (p<.05), no significant difference by region

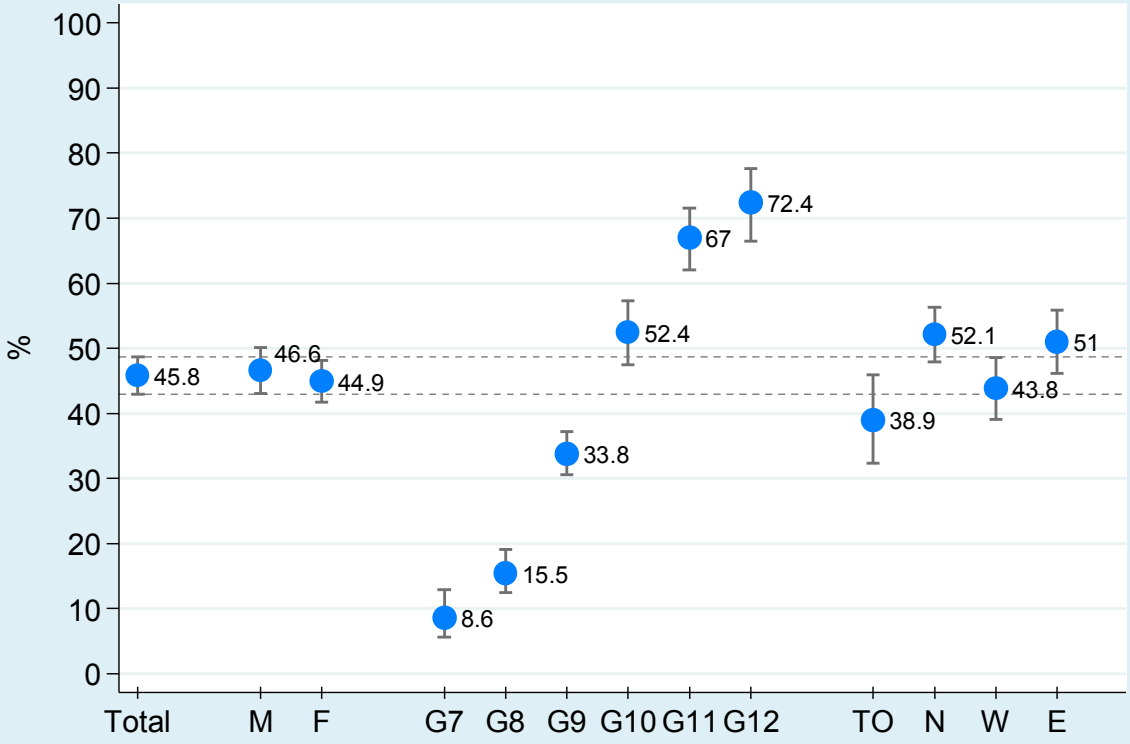
3.4 Alcohol Use

Past Year Alcohol Use

(Figures 3.4.1–3.4.3; Table 3.4.1)

	Alcohol Use in 2015 (Grades 7–12)	Trends in Alcohol Use
Total Sample	■ Just under half (45.8%) of all students report drinking alcohol during the 12 months before the survey. This estimate excludes those who only had a sip of alcohol, but does include those who drank only on a special occasion. We estimate that between 42.9% and 48.7% of all students drink alcohol (95% CI). The percentage of 45.8% represents about 439,200 students in grades 7–12 in Ontario.	☐ Although there was a numeric drop, the percentage of students drinking in the past year did not significantly change between 2013 (49.5%) and 2015 (45.8%). Drinking has been on a significant downward trend – with the exception of a temporary increase in 2003 – since 1999 when the estimate was at 66.0%. ☐ Over the long-term, rates of drinking among grades 7, 9, and 11 gradually decreased between 1977 and 1993. Between 1993 and 2003 drinking gradually increased, but has since decreased once again. The current level is significantly lower than the peaks seen in the late 1970s and late 1990s/early 2000s. In fact, the prevalence of drinking reached a historical low in 2013 – dropping lower than the levels seen in the early 1990s – and has since remained stable.
Sex	■ The prevalence of drinking does not significantly differ between males (46.6%) and females (44.9%).	☐ Although both sexes show a slight drop in drinking between 2013 and 2015, these were not statistically significant. Both sexes do show a significant downward trend since 1999.
Grade	■ Drinking significantly increases with grade, from a low of 8.6% among 7th graders to a high of 72.4% among 12th graders.	☐ No grade shows a significant change between 2013 and 2015. However, all grades show significant decreases in drinking since 1999.
Region	■ Rates of drinking significantly differ by region. Toronto students (38.9%) are least likely to drink alcohol, whereas students in the North (52.1%) are most likely.	☐ No region shows a significant change between 2013 and 2015. All regions show downward trends in drinking since 1999, although the Toronto decline started later in 2003.

Figure 3.4.1
Past Year Alcohol Use by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.4.2
Past Year Alcohol Use, 1999–2015 OSDUHS (Grades 7–12)

Figure 3.4.3
Past Year Alcohol Use, 1977–2015 OSDUHS (Grades 7, 9, 11 only)

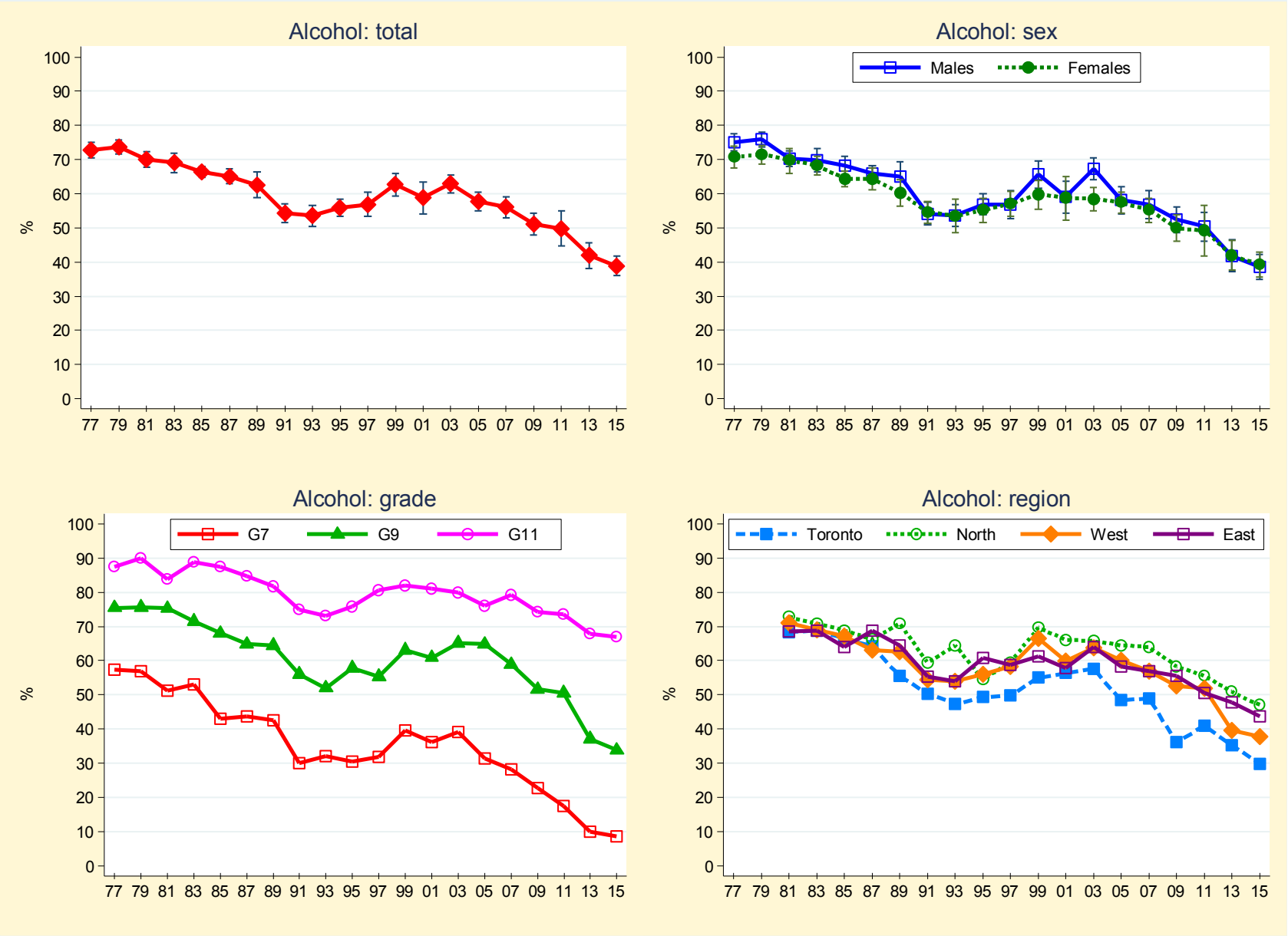


Table 3.4.1: Percentage Reporting Drinking Alcohol in the Past Year, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)	
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**66.0**	**63.9**	**66.2**	**62.0**	**61.2**	**58.2**	**54.9**	**49.5**	**45.8**	bcd
(95% CI)												(63.6-68.3)	(60.8-67.0)	(64.1-68.4)	(59.4-64.6)	(58.9-63.5)	(55.7-60.6)	(52.1-57.6)	(46.4-52.5)	(42.9-48.7)	
Total[2]	**72.8**	**73.7**	**70.1**	**69.0**	**66.3**	**65.1**	**62.6**	**54.3**	**53.6**	**56.0**	**56.9**	**62.7**	**58.9**	**62.9**	**57.8**	**56.1**	**51.2**	**49.8**	**41.9**	**38.9**	cd
	(70.4-75.1)	(71.6-75.8)	(67.7-72.3)	(66.1-71.9)	(64.7-67.9)	(63.0-67.3)	(58.8-66.3)	(51.6-57.0)	(50.4-56.6)	(53.4-58.4)	(53.3-60.4)	(59.4-66.0)	(54.1-63.5)	(60.3-65.4)	(54.9-60.5)	(53.0-59.0)	(47.9-54.4)	(44.7-54.9)	(38.1-45.7)	(36.0-41.7)	
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**69.7**	**64.6**	**68.3**	**62.3**	**61.7**	**60.0**	**54.6**	**49.8**	**46.6**	b
												(66.6-72.6)	(61.1-68.0)	(65.4-71.1)	(58.7-65.7)	(58.8-64.5)	(57.2-62.8)	(52.0-57.2)	(46.7-53.0)	(43.1-50.2)	
Males[2]	**75.1**	**75.9**	**70.3**	**69.9**	**68.1**	**65.9**	**65.0**	**54.1**	**53.6**	**56.9**	**56.8**	**65.6**	**59.0**	**67.4**	**58.1**	**56.9**	**52.4**	**50.4**	**41.8**	**38.5**	
	(72.5-77.6)	(73.6-78.0)	(68.0-72.5)	(66.4-73.2)	(65.1-71.0)	(63.6-68.2)	(60.5-69.3)	(50.8-57.4)	(50.4-56.9)	(53.8-59.9)	(52.6-60.9)	(61.5-69.6)	(54.2-63.7)	(64.2-70.5)	(54.0-62.1)	(52.7-61.0)	(48.6-56.1)	(46.1-54.6)	(37.3-46.5)	(34.9-42.3)	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**62.2**	**63.2**	**64.3**	**61.8**	**60.7**	**56.3**	**55.1**	**49.1**	**44.9**	b
												(59.2-65.2)	(59.0-67.2)	(61.6-67.0)	(59.2-64.4)	(58.0-63.5)	(53.2-59.4)	(51.3-58.8)	(45.3-52.9)	(41.8-48.2)	
Females[2]	**70.7**	**71.5**	**69.8**	**68.2**	**64.4**	**64.4**	**60.3**	**54.6**	**53.5**	**55.1**	**57.0**	**59.8**	**58.8**	**58.5**	**57.4**	**55.2**	**49.9**	**49.2**	**41.9**	**39.2**	
	(67.5-73.8)	(68.6-74.2)	(66.0-73.4)	(65.4-70.9)	(62.1-66.6)	(61.2-67.5)	(56.3-64.2)	(51.4-57.7)	(48.5-58.4)	(51.6-58.6)	(53.3-60.6)	(55.5-63.9)	(52.2-65.1)	(54.9-61.9)	(54.3-60.4)	(51.6-58.7)	(46.0-53.8)	(41.8-56.5)	(37.6-46.3)	(35.5-43.0)	
Grade																					
7	**57.3**	**57.0**	**51.2**	**53.0**	**43.1**	**43.6**	**42.5**	**30.1**	**32.0**	**30.5**	**31.9**	**39.7**	**36.1**	**39.1**	**31.4**	**28.1**	**22.7**	**17.4**	**9.9**	**8.6**	b
	(53.5-61.0)	(53.6-60.4)	(48.6-53.8)	(46.3-60.0)	(39.6-46.6)	(39.5-47.8)	(38.5-46.6)	(26.8-33.6)	(25.6-39.1)	(27.8-33.3)	(26.1-38.3)	(33.8-45.9)	(29.6-43.1)	(35.0-43.4)	(28.1-35.0)	(23.7-33.1)	(18.6-27.4)	(13.5-22.1)	(7.5-13.0)	(5.6-13.0)	
8	—	—	—	—	—	—	—	—	—	—	—	**53.7**	**52.0**	**48.9**	**44.3**	**40.1**	**36.5**	**26.4**	**24.6**	**15.5**	b
												(49.2-58.3)	(45.5-58.4)	(44.5-53.4)	(39.4-49.4)	(34.8-45.7)	(31.5-41.7)	(22.6-30.5)	(18.2-32.3)	(12.5-19.0)	
9	**75.5**	**75.6**	**75.4**	**71.5**	**68.0**	**64.8**	**64.5**	**56.0**	**52.0**	**57.8**	**55.3**	**63.1**	**60.9**	**65.1**	**64.8**	**58.9**	**51.6**	**50.5**	**37.1**	**33.8**	b
	(72.7-78.1)	(72.9-78.1)	(71.4-78.9)	(68.6-74.3)	(65.8-70.1)	(59.0-70.2)	(58.1-70.5)	(52.1-59.8)	(49.2-54.7)	(54.5-61.0)	(47.4-63.0)	(58.0-67.9)	(54.3-67.1)	(60.5-69.3)	(60.4-68.9)	(53.8-63.8)	(46.3-56.8)	(43.8-57.2)	(32.9-41.5)	(30.6-37.2)	
10	—	—	—	—	—	—	—	—	—	—	—	**74.9**	**76.8**	**75.1**	**69.6**	**69.6**	**64.5**	**59.6**	**53.5**	**52.4**	b
												(69.2-79.8)	(73.0-80.2)	(71.1-78.7)	(65.7-73.3)	(65.2-73.6)	(59.8-68.9)	(54.9-64.2)	(49.0-57.9)	(47.5-57.3)	
11	**87.4**	**89.9**	**83.9**	**88.9**	**87.4**	**84.8**	**81.8**	**75.0**	**73.2**	**75.8**	**80.6**	**82.0**	**81.0**	**79.9**	**76.1**	**79.2**	**74.3**	**73.5**	**67.9**	**67.0**	b
	(85.1-89.3)	(87.0-92.2)	(80.3-87.0)	(86.3-91.1)	(84.7-89.7)	(81.1-87.9)	(73.1-88.2)	(69.7-79.6)	(68.7-77.3)	(69.3-81.3)	(76.3-84.3)	(77.7-85.6)	(75.1-85.8)	(76.3-83.1)	(72.3-79.5)	(75.5-82.4)	(70.0-78.2)	(66.8-79.3)	(62.6-72.7)	(62.1-71.6)	
12	—	—	—	—	—	—	—	—	—	—	—	**84.6**	**80.0**	**82.5**	**81.8**	**83.0**	**82.6**	**78.4**	**74.4**	**72.4**	b
												(80.8-87.8)	(72.5-85.9)	(77.7-86.4)	(77.7-85.4)	(79.5-86.0)	(79.0-85.8)	(74.6-81.8)	(69.9-78.4)	(66.5-77.6)	

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**56.1** (49.4-62.5)	**56.3** (44.7-67.3)	**61.5** (55.8-66.9)	**51.3** (43.8-58.8)	**55.1** (46.9-63.1)	**44.6** (37.0-52.4)	**47.2** (42.0-52.5)	**41.5** (31.1-52.7)	**38.9** [b] (32.4-45.9)
Toronto[2]	—	—	**68.3** (60.5-75.1)	**68.8** (61.1-75.6)	**66.6** (62.0-71.0)	**64.1** (58.1-69.7)	**55.5** (40.9-69.2)	**50.4** (44.1-56.8)	**47.3** (41.3-53.4)	**49.4** (40.3-58.5)	**49.8** (39.5-60.1)	**55.0** (47.6-62.2)	**56.4** (41.4-70.3)	**57.6** (50.1-64.7)	**48.4** (40.5-56.4)	**48.9** (38.2-59.7)	**36.2** (27.1-46.5)	**40.9** (35.7-46.4)	**35.2** (23.5-49.0)	**29.9** (22.9-37.9)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**75.9** (69.3-81.5)	**72.3** (68.2-76.0)	**70.0** (65.7-73.9)	**69.0** (64.8-73.0)	**70.6** (65.1-75.6)	**63.6** (58.1-68.8)	**59.5** (54.0-64.7)	**58.9** (52.9-64.7)	**52.1** [b] (47.9-56.3)
North[2]	—	—	**72.8** (61.6-81.7)	**70.8** (65.7-75.4)	**68.8** (64.6-72.7)	**66.3** (62.1-70.2)	**70.9** (58.2-81.0)	**59.4** (50.4-67.8)	**64.4** (50.3-76.4)	**54.5** (49.4-59.6)	**59.5** (54.7-64.1)	**69.7** (60.6-77.5)	**66.1** (60.6-71.3)	**65.7** (60.3-70.8)	**64.5** (59.0-69.7)	**64.0** (55.9-71.3)	**58.3** (52.164.3)	**55.5** (49.7-61.1)	**50.8** (44.4-57.3)	**47.0** (39.6-54.5)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**69.7** (66.1-73.2)	**66.2** (62.3-70.0)	**67.3** (63.4-71.0)	**65.6** (62.1-69.0)	**61.5** (58.2-64.7)	**59.6** (55.6-63.4)	**55.7** (50.8-60.5)	**47.5** (43.4-51.6)	**43.8** [b] (39.1-48.6)
West[2]	—	—	**71.1** (68.4-73.3)	**69.0** (64.9-72.9)	**67.1** (64.5-69.6)	**63.1** (59.2-66.8)	**62.7** (57.5-67.7)	**54.4** (51.9-57.0)	**54.0** (48.2-60.0)	**56.0** (52.8-59.2)	**58.3** (52.9-63.5)	**66.4** (61.1-71.4)	**59.8** (54.6-64.8)	**63.8** (59.3-68.1)	**60.0** (56.4-63.5)	**57.0** (52.4-61.5)	**52.5** (47.3-57.5)	**51.9** (41.7-62.0)	**39.6** (34.0-45.5)	**37.8** (33.2-42.5)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**63.9** (59.8-67.8)	**63.0** (58.7-67.2)	**66.6** (63.9-69.2)	**61.8** (56.5-66.9)	**62.2** (58.7-65.6)	**62.1** (58.5-65.6)	**56.8** (53.0-60.6)	**55.6** (51.7-59.4)	**51.0** [b] (46.1-55.9)
East[2]	—	—	**68.6** (64.8-72.2)	**68.7** (62.4-74.3)	**63.9** (61.6-66.2)	**68.8** (66.7-70.8)	**64.4** (60.6-68.0)	**55.3** (48.6-61.8)	**54.0** (50.7-57.3)	**60.9** (57.4-64.3)	**58.8** (52.8-64.6)	**61.3** (55.5-66.8)	**57.8** (50.8-64.4)	**64.0** (60.8-67.0)	**58.4** (52.9-63.6)	**57.0** (52.4-61.5)	**55.5** (50.5-60.4)	**50.6** (46.0-55.2)	**47.7** (43.9-51.4)	**43.7** (39.4-48.0)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend , p<.01.

Q: In the last 12 months, how often did you drink alcohol - liquor (rum, whiskey, etc.), wine, beer, or coolers? (Alcohol use includes drinking at a special event, but excludes a sip just to try.)

Source: OSDUHS, Centre for Addiction & Mental Health

Frequency of Drinking Alcohol in the Past Year

(Figure 3.4.4; Table 3.4.2)

2015: Grades 7–12

■ As seen in Table 3.4.2, about one-in-five (19.8%) students restrict their drinking to special occasions, 10.2% drink once a month or less often, another 9.2% drink two or three times a month, and about 6.1% drink at least once a week. Very few students drink on a daily basis (estimate suppressed).

1987–2015: Grades 7, 9, 11

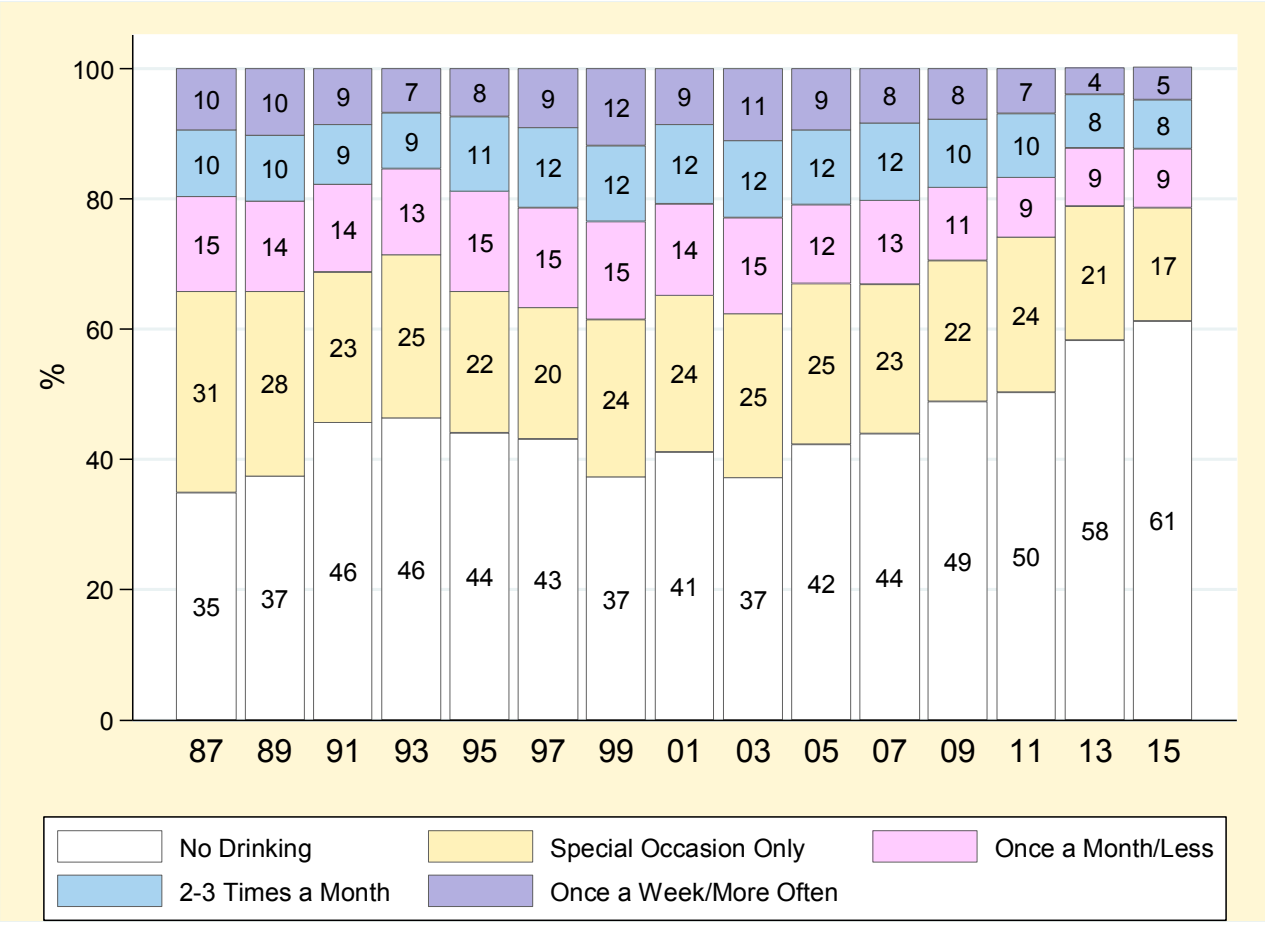
☐ Figure 3.4.4 presents trends in the frequency of past year drinking between 1987 and 2015 among the total sample. Compared with students in the late 1980s, the percentage of students reporting no drinking is higher today, and the percentage reporting drinking once a week or more often is currently lower.

Table 3.4.2: Frequency of Drinking Alcohol in the Past Year Among the Total Sample, 1999–2015 OSDUHS (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011	2013	2015
	(*n*=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
No Drinking										
Total		**34.0**	**36.1**	**33.8**	**38.0**	**38.8**	**41.8**	**45.1**	**50.5**	**54.2**
Sex	Males	30.3	35.4	31.7	37.7	38.3	40.0	45.4	50.2	53.4
	Females	37.8	36.8	35.7	38.2	39.3	43.7	44.9	50.9	55.1
On Special Occasions Only										
Total		**23.7**	**24.6**	**25.1**	**24.3**	**23.0**	**21.5**	**23.3**	**21.7**	**19.8**
Sex	Males	23.8	22.4	25.2	24.0	23.3	22.0	23.5	21.1	20.9
	Females	23.6	26.9	24.9	24.6	22.8	21.0	23.0	22.4	18.5
Once a Month or Less Often										
Total		**16.1**	**14.7**	**16.0**	**13.9**	**15.1**	**14.0**	**12.5**	**10.6**	**10.2**
Sex	Males	16.0	14.1	14.9	12.4	13.3	13.4	11.9	10.8	8.9
	Females	16.3	15.4	17.3	15.5	17.1	14.6	13.0	10.2	11.7
2-3 Times a Month										
Total		**13.0**	**14.2**	**13.0**	**13.5**	**12.9**	**13.0**	**11.6**	**10.7**	**9.2**
Sex	Males	13.3	14.8	11.9	12.8	13.6	12.8	11.6	10.8	8.6
	Females	12.6	13.6	14.2	14.2	12.1	13.3	11.6	10.6	9.9
At Least Once a Week										
Total		**12.3**	**10.0**	**11.7**	**10.1**	**9.8**	**9.5**	**7.2**	**6.4**	**6.1**
Sex	Males	15.1	13.0	14.0	12.7	11.0	11.4	7.1	7.0	7.5
	Females	9.4	7.1	9.6	7.3	8.6	7.4	7.2	5.7	4.6
Almost Daily										
Total		**0.9**	†	†	†	†	†	†	†	†
Sex	Males	1.5	†	†	†	†	†	†	†	†
	Females	†	†	†	†	†	†	†	†	†

Notes: (1) the "No Drinking" category includes those who reported they had a sip just to try; (2) † estimate suppressed due to unreliability.
Q: In the last 12 months, how often did you drink alcohol - liquor (rum, whiskey, etc.), wine, beer, or coolers?
Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.4.4
Frequency of Drinking Alcohol in the Past Year, 1987–2015 OSDUHS
(Grades 7, 9, 11 only)



Frequency of Drinking Alcohol in the Past Month

(Figure 3.4.5; Table 3.4.3)

Students were also asked about their use of alcohol during the four weeks before the survey.

2015: Grades 7–12

- As seen in Table 3.4.3, 68.9% of students did not drink alcohol during the month before the survey (thus, 31.1% did drink). About one-quarter (22.1%) of students drank only once or twice in the past month; 6.3% drank once or twice per week; and 2.7% drank three or more times per week during the past month.

- There is a significant sex difference, with males drinking more frequently in the past month than females.

- As expected, the older students are most likely to report drinking more frequently during the past month.

1999–2015: Grades 7–12

☐ Table 3.4.3 also presents the past month drinking frequencies from 1999 to 2015. The percentage of students reporting not drinking at all in the past month in 2015 (68.9%) is similar to the estimate from 2013 (66.6%), but significantly higher than the estimate in 1999 (48.3%).

1987–2015: Grades 7, 9, 11

☐ Figure 3.4.5 presents the past month drinking frequency from 1987 to 2015, among grades 7, 9, and 11 only. Over the long-term, abstention in the past month has increased, while drinking once or twice in the past month has decreased. Drinking at the higher frequencies (e.g., three or more times each week) has remained stable.

Figure 3.4.5
Frequency of Drinking Alcohol in the Past Month, 1987–2015 OSDUHS
(Grades 7, 9, 11 only)

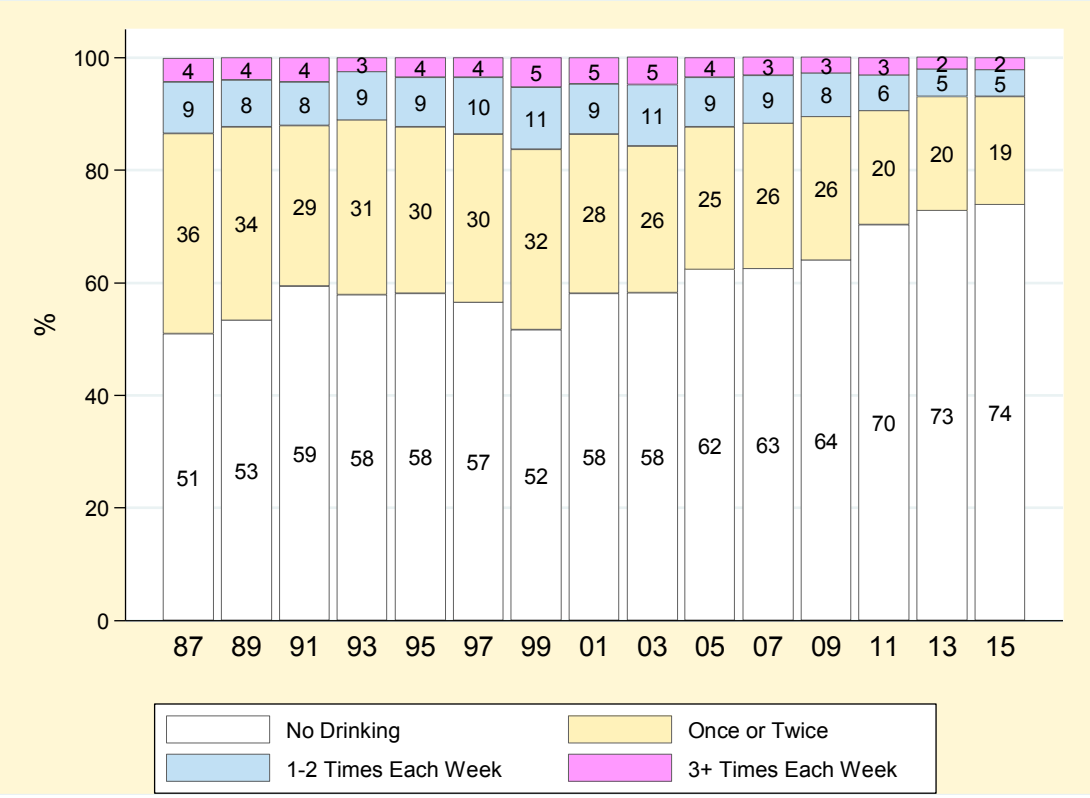


Table 3.4.3: Frequency of Drinking Alcohol in the Past Month Among the Total Sample, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
Total									
Not in Past 4 Weeks	**48.3**	**53.7**	**54.7**	**57.3**	**57.5**	**58.1**	**65.3**	**66.6**	**68.9** [b]
Once or Twice	**33.5**	**30.0**	**28.7**	**28.6**	**28.6**	**28.4**	**23.3**	**24.1**	**22.1**
Once or Twice a Week	**12.5**	**11.5**	**11.6**	**10.2**	**9.9**	**9.4**	**8.2**	**6.7**	**6.3**
3 + Times a Week	**5.7**	**4.8**	**5.0**	**3.9**	**4.0**	**4.0**	**3.1**	**2.6**	**2.7**
Males									
Not in Past 4 Weeks	44.3	50.7	53.4	56.0	57.5	56.2	66.1	66.1	69.1
Once or Twice	33.9	28.6	27.6	27.3	27.2	28.2	22.2	23.7	20.6
Once or Twice a Week	13.5	14.5	12.7	11.3	10.5	10.2	8.3	7.2	7.0
3 + Times a Week	8.3	6.2	6.3	5.4	4.7	5.3	3.3	3.0	3.2
Females									
Not in Past 4 Weeks	52.5	56.6	56.0	58.7	57.4	60.1	64.4	67.2	68.7
Once or Twice	33.1	31.4	29.7	30.1	30.1	28.7	24.5	24.6	23.6
Once or Twice a Week	11.4	8.6	10.6	8.9	9.2	8.5	8.2	6.1	6.0
3 + Times a Week	3.1	3.4	3.7	2.3	3.3	2.6	2.9	2.1	2.1
Grade 7									
Not in Past 4 Weeks	76.4	83.0	82.4	85.4	85.6	88.6	93.5	95.3	94.2
Once or Twice	20.1	14.2	13.0	13.1	12.4	9.8	5.8	4.2	5.6
Once or Twice a Week	2.7	1.3	2.8	1.0	0.9	1.4	†	†	†
3 + Times a Week	0.8	1.5	1.8	†	1.1	†	†	†	†
Grade 8									
Not in Past 4 Weeks	58.8	69.2	74.9	72.6	77.4	79.9	87.1	88.3	89.3
Once or Twice	31.7	24.5	20.1	22.6	18.3	17.0	11.0	10.3	10.0
Once or Twice a Week	6.2	4.7	3.5	2.7	2.7	1.9	1.2	1.0	†
3 + Times a Week	3.3	1.6	1.5	2.1	1.6	1.2	†	†	†
Grade 9									
Not in Past 4 Weeks	50.8	54.9	55.7	59.9	62.4	63.0	69.9	77.9	80.2
Once or Twice	33.4	32.9	30.2	28.0	26.7	28.9	23.4	18.6	16.5
Once or Twice a Week	10.3	9.0	8.9	8.7	7.7	5.7	4.5	2.3	2.5
3 + Times a Week	5.5	3.2	5.2	3.4	3.2	2.3	†	1.2	0.9
Grade 10									
Not in Past 4 Weeks	42.0	40.9	47.3	52.1	51.0	54.3	63.2	65.4	66.7
Once or Twice	34.9	33.2	34.5	33.6	33.3	32.3	26.1	26.2	25.2
Once or Twice a Week	15.0	19.4	13.1	10.4	11.1	9.7	6.9	6.0	6.2
3 + Times a Week	8.0	6.6	5.1	3.9	4.6	3.6	3.8	2.4	1.9
Grade 11									
Not in Past 4 Weeks	31.6	35.6	41.0	42.3	41.2	44.5	53.0	53.0	52.5
Once or Twice	40.5	37.6	32.5	34.2	37.1	35.1	28.4	32.3	31.6
Once or Twice a Week	19.1	16.8	19.4	16.5	16.4	15.1	12.3	10.6	11.0
3 + Times a Week	8.8	9.9	7.1	6.9	5.3	5.3	6.3	4.1	4.9
Grade 12									
Not in Past 4 Weeks	29.2	34.9	34.1	35.5	35.6	34.0	43.9	44.3	49.1
Once or Twice	40.2	39.8	38.3	38.5	39.4	39.5	34.5	37.5	32.6
Once or Twice a Week	22.6	18.9	19.4	19.9	17.6	17.6	17.4	13.4	12.6
3 + Times a Week	8.0	6.4	8.2	6.1	7.4	8.9	4.2	4.8	5.7

Notes: (1) † estimate suppressed due to unreliability; (2) no significant differences among the total sample 2015 vs. 2013; [b] 2015 vs. 1999 significant difference p<.01.

Q: During the last 4 weeks, how often did you drink alcohol (liquor, wine, beer, or coolers)?

Source: OSDUHS, Centre for Addiction & Mental Health

Heavy Episodic Drinking in the Past Month

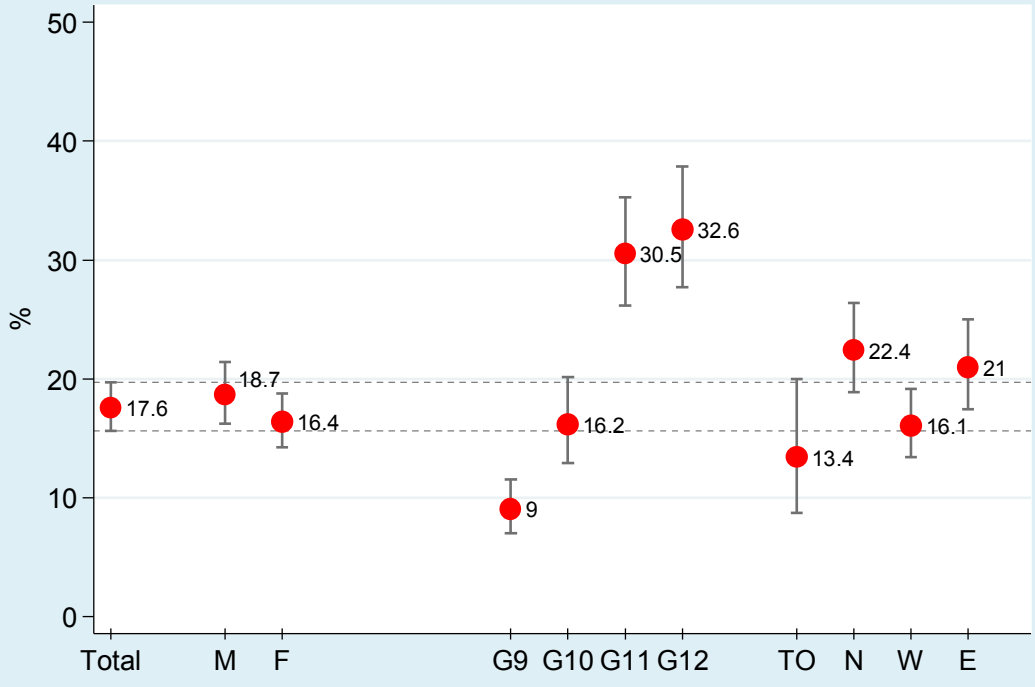
(Figures 3.4.6–3.4.12; Tables 3.4.4-3.4.6)

We use two indicators of heavy episodic drinking in this report: consuming 5 or more drinks on a single occasion ("binge drinking"), and getting drunk (i.e., drinking until becoming ill). Both refer to the past-4-week period (past month). We also examine the frequency of binge drinking in the past 4 weeks.

	Heavy Episodic Drinking in 2015 (Grades 7–12)	Trends in Heavy Episodic Drinking
Total Sample	■ One-in-six (17.6%) students report binge drinking at least once during the four weeks before the survey. This percentage represents about 168,100 students in grades 7 through 12 in Ontario. ■ A similar proportion (15.9%) report becoming drunk at least once during the past month, representing about 151,900 students in Ontario. ■ About 6.3% of all students report binge drinking two to three times during the month before the survey. Another 3.3% report binge drinking four or more times (see Table 3.4.5a).	☐ The percentage of students reporting at least one binge drinking episode in the past month, as well as the percentage reporting becoming drunk, did not significantly change between 2013 and 2015. However, both measures show a significant downward trend since 1999. Binge drinking declined from 27.6% in 1999 to 17.6% in 2015. Drunkenness declined from 25.0% in 1999 to 15.9% in 2015. Frequent binge drinking (e.g., four or more times in the past month) also shows a linear decline since 1999 (see Table 3.4.5a). ☐ Over the long-term, binge drinking among grades 7, 9, and 11 was elevated in the late 1970s, decreased in the late 1980s/early 1990s, increased again in the late 1990s/early 2000s, and has since declined. The current level of binge drinking is significantly lower than the peaks seen in the late 1970s and late 1990s/early 2000s, but is similar to the lows levels seen in the early 1990s. Frequent binge drinking (e.g., four or more times in the past month) remained stable during the 1980s, decreased in 1993–1995, increased gradually during the late 1990s and early 2000s, and decreased again during the past decade (see Figure 3.4.10). ☐ Over the long-term, drunkenness remained stable between 1977 and the early 1990s, increased during the second half of the 1990s, and has since been on a downward trend. The current level is significantly lower than the peak seen in the late 1990s and early 2000s.
Sex	■ Binge drinking does not significantly differ between males (18.7%) and females (16.4%).	☐ Neither sex shows a significant change in binge drinking between 2013 and 2015. Both sexes show significant downward trends in

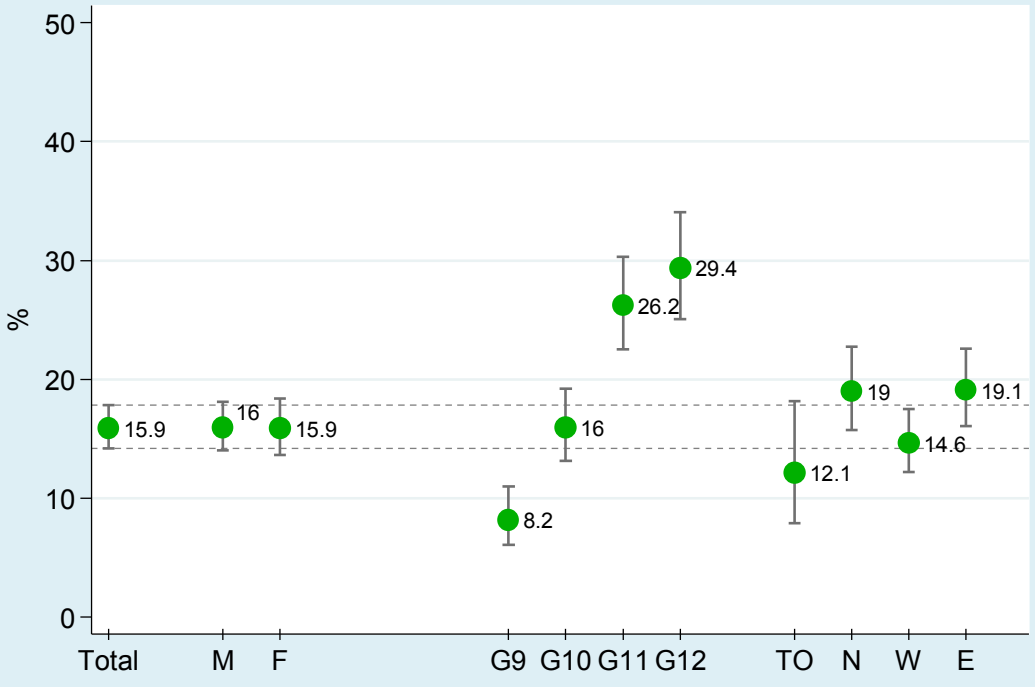
	Nor is there a difference in reported drunkenness between males (16.0%) and females (15.9%).	binge drinking and drunkenness between 1999 2015.
Grade	▪ Heavy episodic drinking significantly increases with grade level: binge drinking is lowest among 7th graders (suppressed estimate) and climbs to a high of 32.6% among 12th graders. Drunkenness is lowest among 7th graders (suppressed estimate) and climbs to a high of 29.4% among12th graders.	☐ No grade shows a significant decrease in heavy episodic drinking between 2013 and 2015. All grades show a significant downward trend in both binge drinking and drunkenness between 1999 and 2015.
Region	▪ Binge drinking significantly varies by region, with students in the North (22.4%) most likely to binge drink. Reported drunkenness also significantly varies, with Toronto students (12.1%) least likely and Northern and Eastern students most likely to report drunkenness (about 19%).	☐ No region shows a significant change in heavy episodic drinking between 2013 and 2015. Students in the North and West regions show significant decreases in binge drinking and drunkenness compared with their respective 1999 estimates. Toronto and the Eastern region show no significant changes since 1999.

Figure 3.4.6
Binge Drinking in the Past Month by Sex, Grade, and Region, 2015 OSDUHS



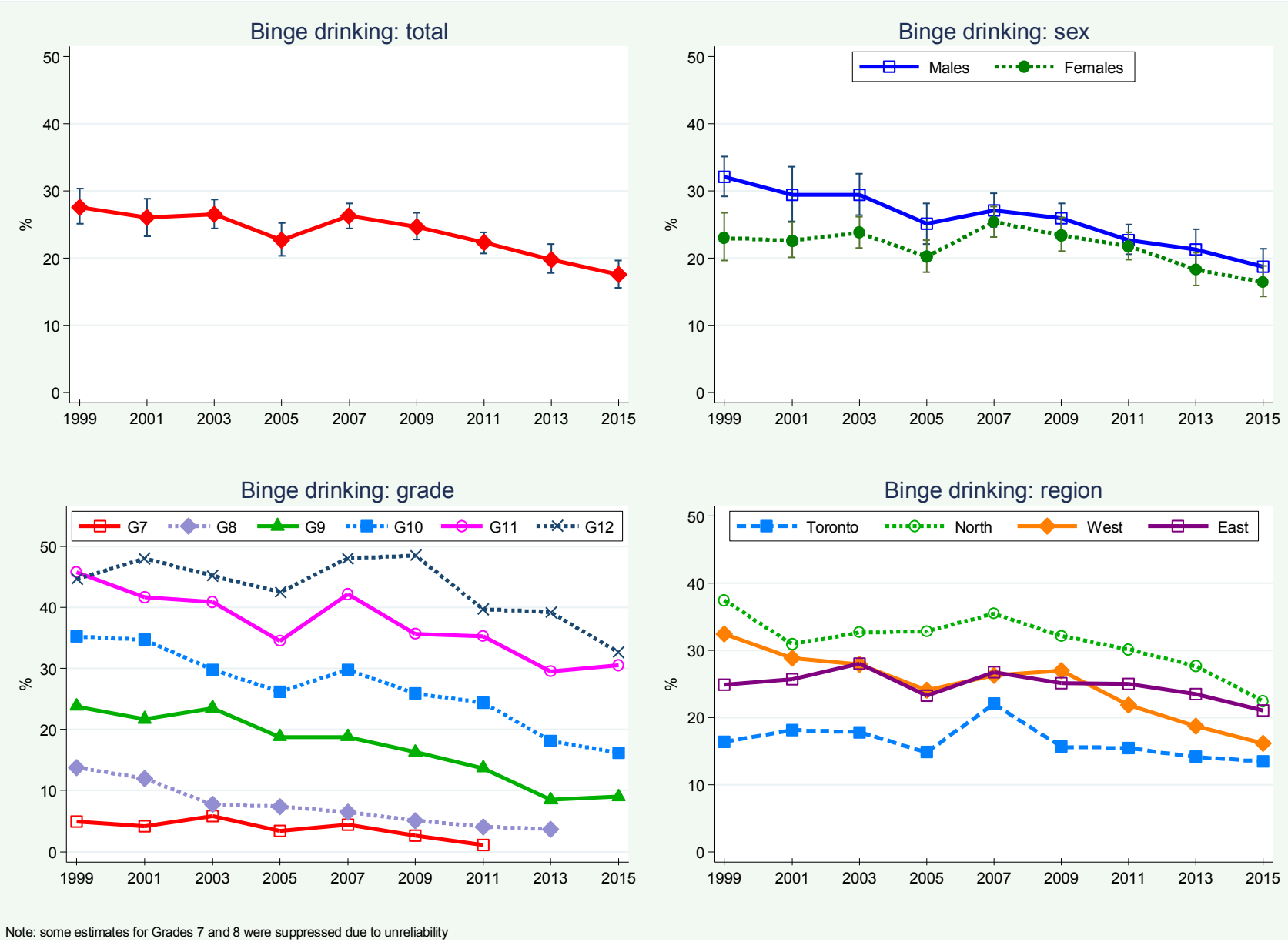
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.4.7
Drunkenness in the Past Month by Sex, Grade, and Region, 2015 OSDUHS



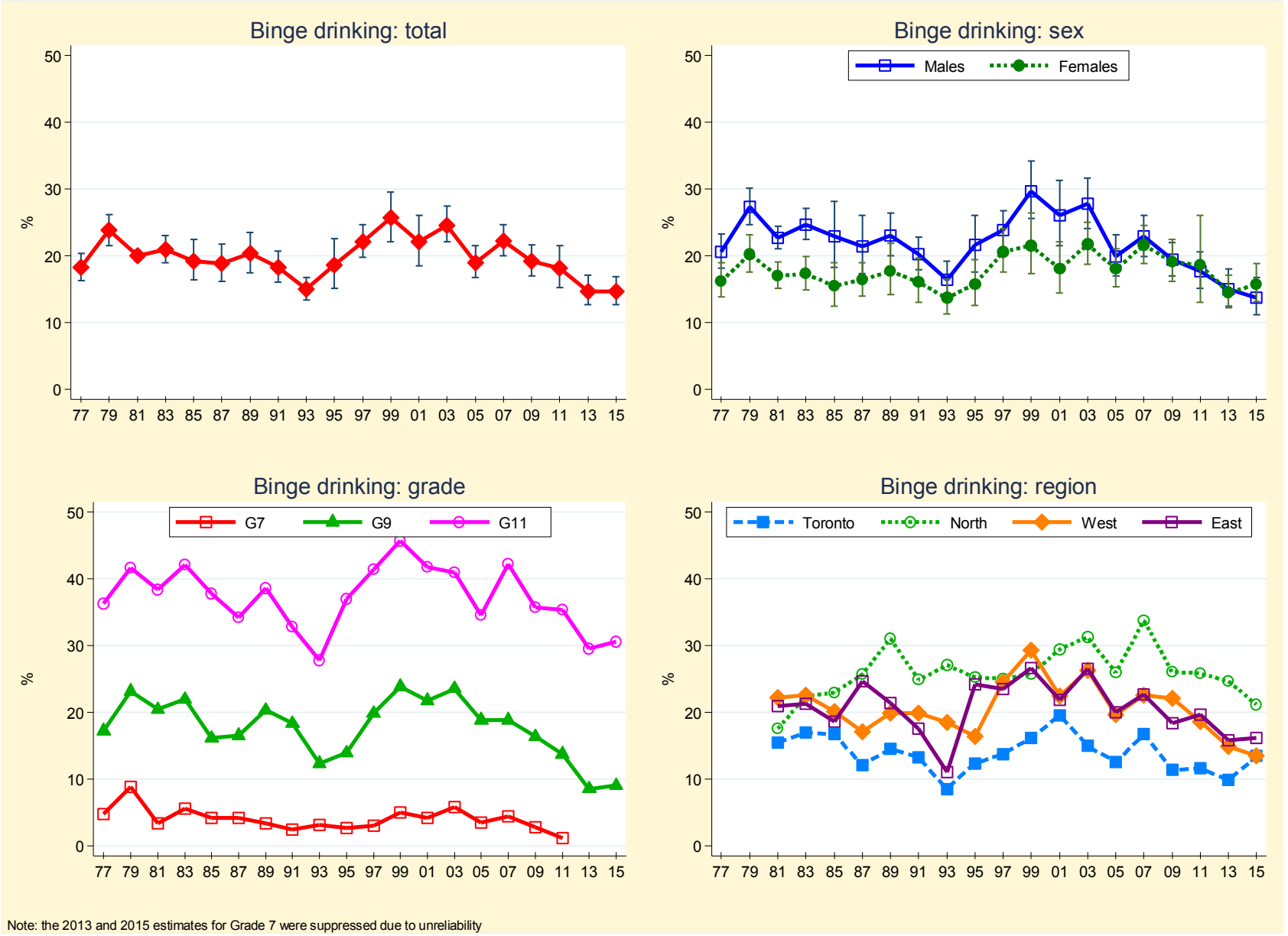
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.4.8
Binge Drinking in the Past Month, 1999–2015 OSDUHS (Grades 7–12)



Note: some estimates for Grades 7 and 8 were suppressed due to unreliability

Figure 3.4.9
Binge Drinking in the Past Month, 1977–2015 OSDUHS (Grades 7, 9, 11 only)



Note: the 2013 and 2015 estimates for Grade 7 were suppressed due to unreliability

Figure 3.4.10
Frequency of Binge Drinking in the Past Month, 1979–2015 OSDUHS
(Grades 7, 9, 11 only)

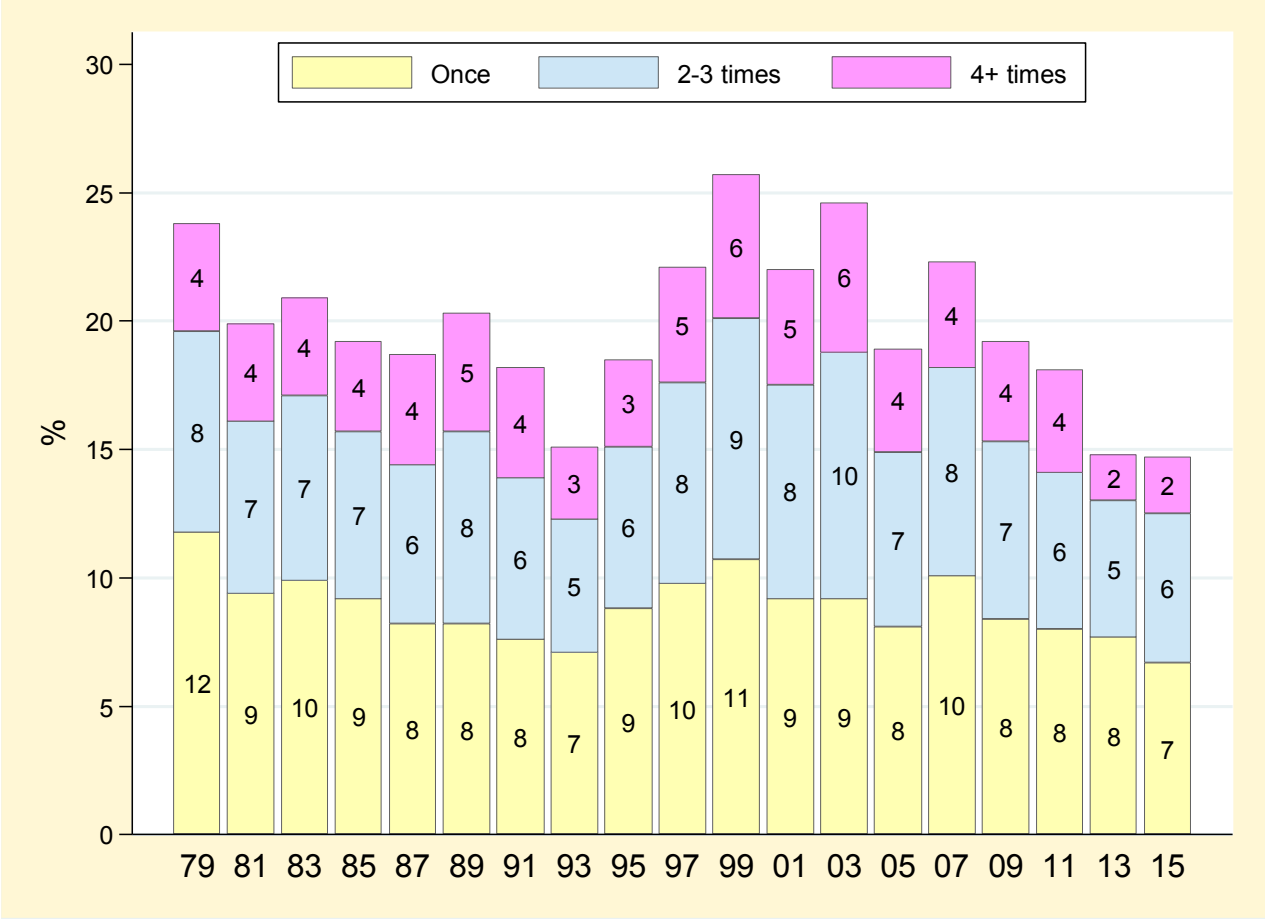
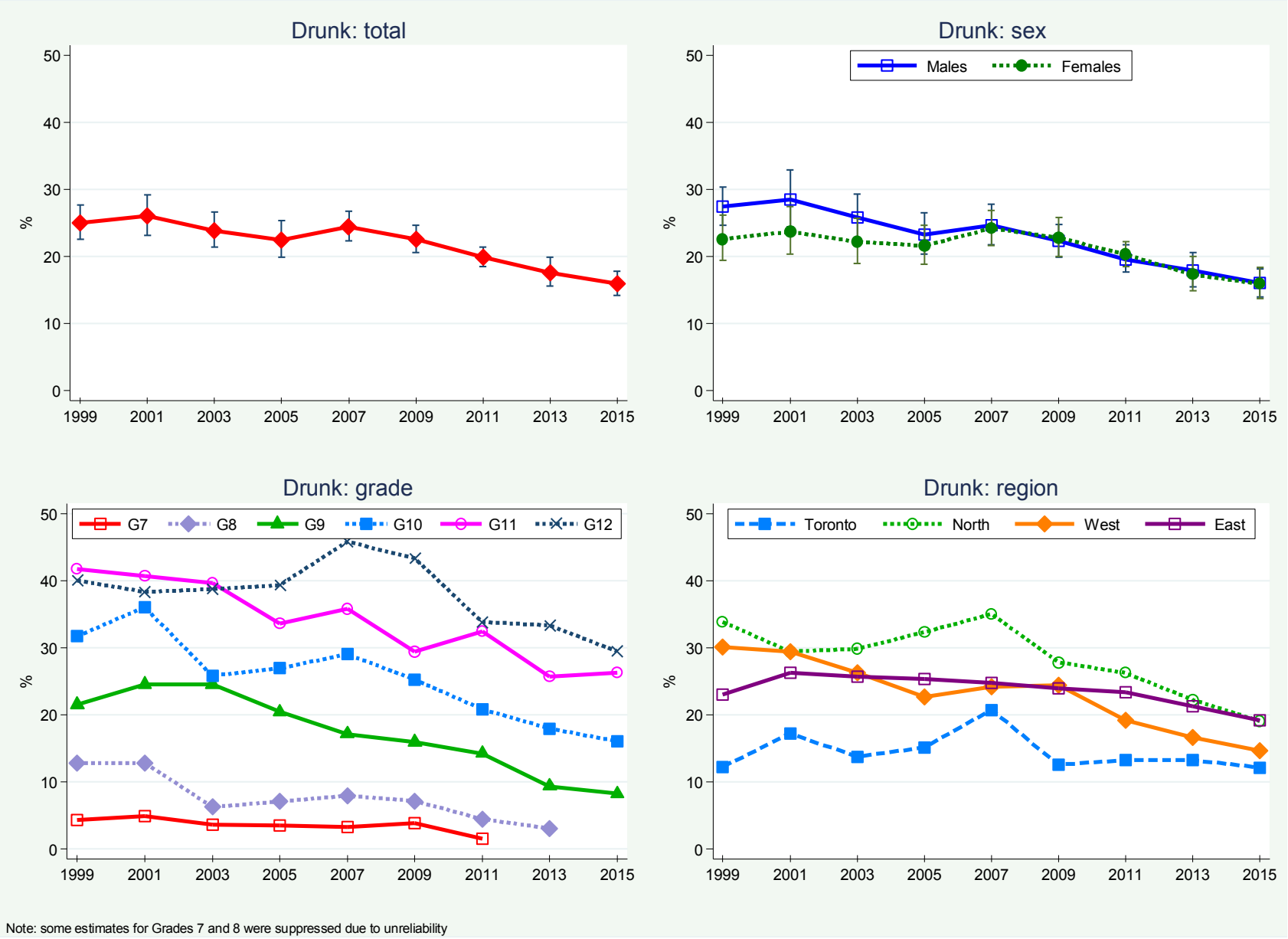
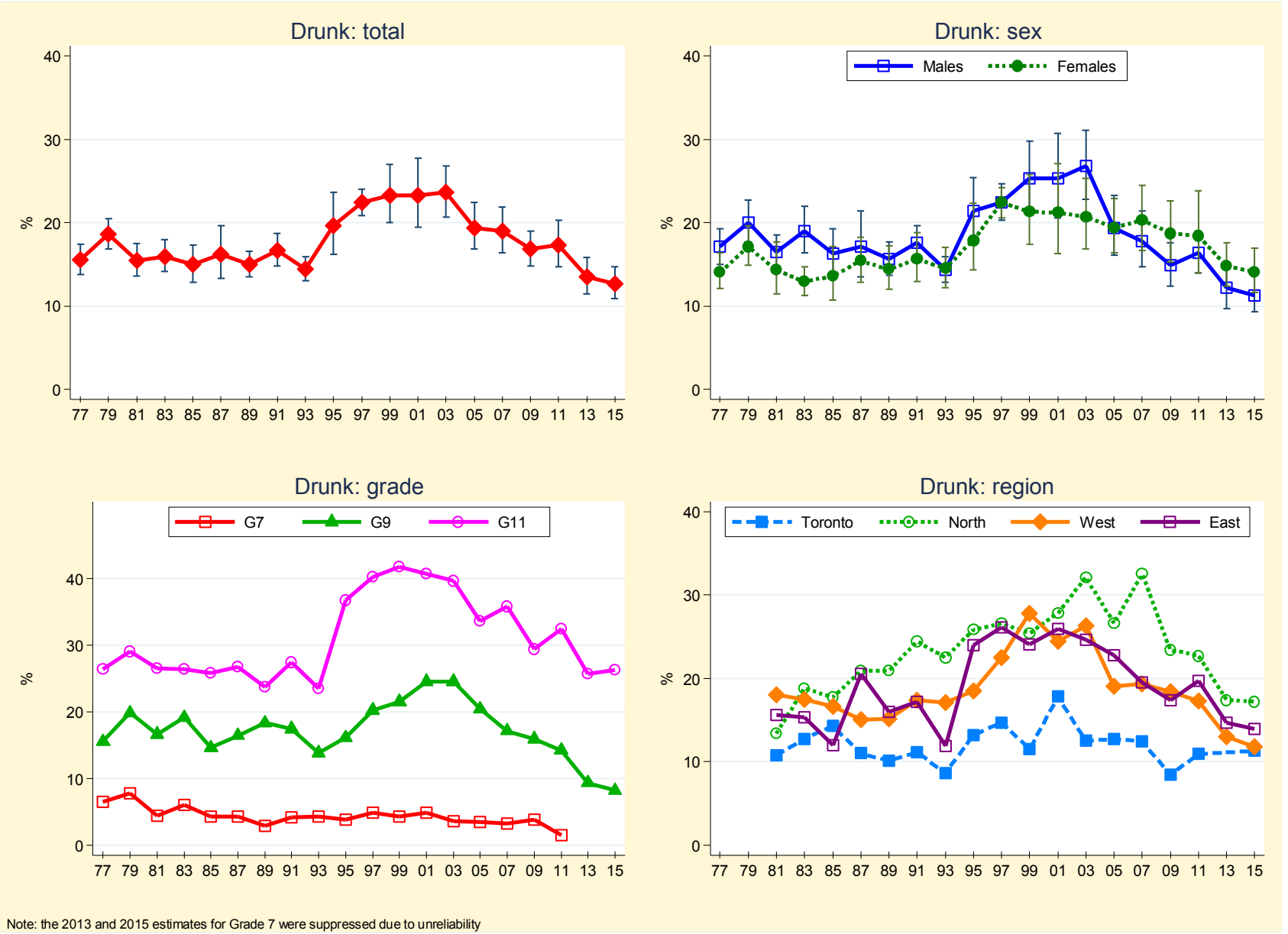


Figure 3.4.11
Drunkenness in the Past Month, 1999–2015 OSDUHS (Grades 7–12)



Note: some estimates for Grades 7 and 8 were suppressed due to unreliability

Figure 3.4.12
Drunkenness in the Past Month, 1977–2015 OSDUHS (Grades 7, 9, 11 only)



Note: the 2013 and 2015 estimates for Grade 7 were suppressed due to unreliability

Table 3.4.4: Percentage Reporting Binge Drinking in the Past Month, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)	
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**27.6** (25.1-30.3)	**26.0** (23.3-28.8)	**26.5** (24.4-28.7)	**22.7** (20.4-25.2)	**26.3** (24.4-28.2)	**24.7** (22.8-26.7)	**22.3** (20.7-23.9)	**19.8** (17.8-22.1)	**17.6** (15.6-19.7)	bcd
Total[2]	**18.3** (16.3-20.4)	**23.8** (21.5-26.2)	**20.0** (19.2-20.8)	**20.9** (19.0-23.0)	**19.2** (16.4-22.5)	**18.8** (16.2-21.7)	**20.3** (17.5-23.5)	**18.3** (16.0-20.7)	**15.0** (13.4-16.8)	**18.6** (15.1-22.6)	**22.1** (19.8-24.6)	**25.7** (22.1-29.6)	**22.1** (18.5-26.1)	**24.6** (22.1-27.4)	**19.0** (16.7-21.5)	**22.2** (20.0-24.6)	**19.2** (17.0-21.6)	**18.2** (15.2-21.5)	**14.7** (12.7-17.1)	**14.7** (12.7-16.9)	cd
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**32.1** (29.2-35.1)	**29.4** (25.5-33.6)	**29.4** (26.4-32.6)	**25.1** (22.1-28.2)	**27.1** (24.7-29.7)	**25.9** (23.9-28.1)	**22.7** (20.6-25.0)	**21.3** (18.5-24.3)	**18.7** (16.2-21.4)	b
Males[2]	**20.6** (18.2-23.3)	**27.3** (24.6-30.1)	**22.7** (21.1-24.4)	**24.7** (22.4-27.1)	**22.9** (18.3-28.1)	**21.4** (17.3-26.0)	**23.0** (20.0-26.4)	**20.2** (17.9-22.8)	**16.4** (13.9-19.2)	**21.6** (17.6-26.1)	**23.8** (21.1-26.8)	**29.7** (25.6-34.2)	**26.1** (21.5-31.3)	**27.7** (24.1-31.6)	**19.9** (17.0-23.1)	**22.9** (19.9-26.1)	**19.4** (17.0-22.0)	**17.7** (15.1-20.6)	**15.0** (12.5-18.0)	**13.7** (11.2-16.7)	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**23.0** (19.7-26.8)	**22.6** (20.1-25.4)	**23.8** (21.5-26.2)	**20.2** (17.9-22.7)	**25.4** (23.1-27.7)	**23.4** (21.0-26.0)	**21.8** (19.8-23.9)	**18.3** (15.9-20.8)	**16.4** (14.2-18.8)	b
Females[2]	**16.2** (13.9-18.9)	**20.2** (17.6-23.1)	**17.0** (15.1-19.1)	**17.3** (14.9-19.9)	**15.5** (12.5-19.0)	**16.4** (14.0-19.0)	**17.7** (14.2-21.9)	**16.0** (13.0-19.7)	**13.7** (11.3-16.5)	**15.7** (12.6-19.4)	**20.6** (17.6-24.1)	**21.5** (17.3-26.4)	**18.0** (14.4-22.1)	**21.7** (18.7-25.0)	**18.0** (15.4-21.0)	**21.6** (18.8-24.5)	**19.1** (16.2-22.4)	**18.6** (13.0-26.0)	**14.5** (12.2-17.1)	**15.7** (13.0-18.8)	
Grade																					
7	**4.7** (3.4-6.5)	**8.8** (6.8-11.2)	**3.3** (2.4-4.6)	**5.5** (2.9-10.3)	**4.1** (1.9-8.4)	**4.2** (2.5-6.9)	**3.3** (2.4-4.5)	**2.4** (1.5-4.0)	**3.1** (2.1-4.6)	**2.6** (2.2-3.1)	**3.0** (2.3-3.9)	**5.0** (3.5-7.1)	**4.2** (2.7-6.7)	**5.8** (4.0-8.4)	**3.4** (2.1-5.5)	**4.4** (2.9-6.6)	**2.7** (1.6-4.5)	**1.1** (0.6-2.1)	†	†	b
8	—	—	—	—	—	—	—	—	—	—	—	**13.8** (11.1-16.9)	**12.0** (8.5-16.8)	**7.7** (5.6-10.5)	**7.4** (5.8-9.5)	**6.5** (4.5-9.4)	**5.0** (3.5-7.2)	**4.1** (2.8-5.9)	**3.7** (2.3-5.9)	†	b
9	**17.2** (14.3-20.6)	**23.1** (20.0-26.5)	**20.2** (18.9-21.6)	**21.9** (19.6-24.3)	**16.1** (10.6-23.7)	**16.5** (12.6-21.3)	**20.3** (17.7-23.2)	**18.3** (13.8-23.8)	**12.3** (9.7-15.4)	**13.9** (9.1-20.6)	**19.8** (15.6-24.9)	**23.8** (18.7-29.7)	**21.7** (17.0-27.2)	**23.5** (20.3-27.0)	**18.8** (15.4-22.7)	**18.8** (15.6-22.4)	**16.3** (12.9-20.4)	**13.7** (10.7-17.4)	**8.5** (6.5-11.0)	**9.0** (7.0-11.6)	b
10	—	—	—	—	—	—	—	—	—	—	—	**35.2** (29.7-41.0)	**34.7** (30.6-39.0)	**29.8** (25.7-34.3)	**26.2** (22.8-30.0)	**29.8** (26.2-33.6)	**25.9** (22.0-30.3)	**24.4** (19.0-30.8)	**18.1** (14.9-21.6)	**16.2** (12.9-20.1)	b
11	**36.2** (32.2-40.5)	**41.6** (36.8-46.5)	**38.3** (32.1-44.9)	**42.1** (38.8-45.4)	**37.7** (32.5-43.2)	**34.2** (26.2-43.2)	**38.6** (30.8-47.1)	**32.8** (28.5-37.4)	**27.7** (24.5-31.2)	**36.9** (28.5-45.2)	**41.4** (36.3-46.6)	**45.7** (39.1-52.5)	**41.7** (36.1-47.5)	**40.9** (36.0-46.0)	**34.5** (30.4-38.8)	**42.2** (37.7-47.0)	**35.6** (31.3-40.0)	**35.3** (30.9-40.0)	**29.5** (25.1-34.3)	**30.5** (26.2-35.3)	b
12	—	—	—	—	—	—	—	—	—	—	—	**44.6** (38.6-50.7)	**48.0** (37.1-59.0)	**45.2** (39.9-50.6)	**42.5** (37.8-47.4)	**48.0** (44.1-51.9)	**48.5** (44.1-52.9)	**39.7** (35.3-44.3)	**39.2** (34.8-43.8)	**32.6** (27.7-37.9)	b

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**16.3** (13.0-20.3)	**18.1** (12.0-26.4)	**17.8** (14.5-21.7)	**14.8** (11.4-19.1)	**22.0** (16.4-28.7)	**15.6** (10.7-22.1)	**15.4** (11.3-20.6)	**14.1** (8.5-22.5)	**13.4** (8.7-20.0)
Toronto[2]	—	—	**15.4** (13.3-17.9)	**16.9** (12.4-22.5)	**16.7** (10.1-26.2)	**12.1** (8.5-16.8)	**14.5** (7.4-26.3)	**13.2** (10.3-16.7)	**8.5** (6.4-11.1)	**12.3** (6.9-21.1)	**13.7** (11.8-15.8)	**16.1** (12.6-20.4)	**19.5** (11.7-30.8)	**14.9** (11.0-19.7)	**12.5** (9.7-15.8)	**16.7** (11.0-24.4)	**11.3** (5.9-20.5)	**11.6** (9.3-14.4)	**9.8** (5.1-17.9)	**13.4** (8.4-20.7)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**37.4** (31.1-44.2)	**30.9** (26.0-36.3)	**32.6** (28.2-37.3)	**32.8** (28.5-37.4)	**35.4** (31.3-39.6)	**32.1** (28.1-36.5)	**30.1** (25.3-35.4)	**27.6** (23.5-32.3)	**22.4** [b] (18.9-26.4)
North[2]	—	—	**17.5** (14.2-21.4)	**22.4** (18.2-27.4)	**22.9** (18.6-27.9)	**25.6** (17.0-36.6)	**31.0** (22.2-41.4)	**24.8** (15.8-36.9)	**27.0** (21.5-33.2)	**25.2** (18.4-33.4)	**25.0** (20.4-30.2)	**25.7** (19.0-33.8)	**29.4** (23.4-36.1)	**31.2** (25.6-37.3)	**25.9** (21.6-30.7)	**33.7** (27.2-41.0)	**26.0** (20.2-32.7)	**25.8** (18.0-35.5)	**24.6** (18.9-31.3)	**21.1** (16.5-26.5)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**32.4** (27.9-37.3)	**28.8** (24.6-33.4)	**27.9** (24.3-31.8)	**24.0** (20.5-27.8)	**26.2** (23.5-29.1)	**26.9** (23.8-30.2)	**21.8** (20.2-23.5)	**18.7** (15.6-22.3)	**16.1** [b] (13.4-19.1)
West[2]	—	—	**22.2** (21.4-23.1)	**22.5** (18.9-26.6)	**20.1** (17.0-23.8)	**17.0** (12.5-22.6)	**19.8** (15.3-25.3)	**19.8** (16.9-23.2)	**18.4** (15.4-21.9)	**16.4** (10.0-25.7)	**24.5** (22.1-27.1)	**29.3** (22.6-37.0)	**22.4** (17.8-27.9)	**26.2** (22.1-30.8)	**19.6** (16.2-23.5)	**22.5** (19.6-25.6)	**22.1** (18.6-26.2)	**18.6** (13.2-25.7)	**14.8** (11.7-18.6)	**13.4** (10.2-17.2)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**24.8** (21.1-28.9)	**25.6** (21.5-30.3)	**28.0** (24.2-32.1)	**23.2** (18.5-28.8)	**26.7** (23.9-29.7)	**25.1** (22.3-28.0)	**25.0** (21.9-28.4)	**23.5** (21.3-25.9)	**21.0** (17.4-25.0)
East[2]	—	—	**20.9** (19.0-22.8)	**21.2** (18.9-23.6)	**18.6** (12.5-26.8)	**24.6** (21.2-28.4)	**21.4** (18.6-24.5)	**17.5** (13.0-23.1)	**11.0** (8.9-13.6)	**24.2** (22.0-26.5)	**23.5** (17.3-31.2)	**26.6** (21.1-33.0)	**21.8** (15.2-30.3)	**26.5** (21.6-32.2)	**20.0** (15.3-25.9)	**22.6** (18.7-26.9)	**18.3** (15.2-21.7)	**19.6** (16.4-23.1)	**15.8** (12.7-19.4)	**16.1** (13.6-19.1)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: How many times in the last 4 weeks have you had 5 or more drinks of alcohol on the same occasion?

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.4.5a: Frequency of Binge Drinking in the Past Month, 1999–2015 OSDUHS (Grades 7–12)

	Percentage of Total Sample								
	1999	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**
(*n*=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
Total									
Did Not	**72.4**	**74.0**	**73.5**	**77.3**	**73.7**	**75.3**	**77.8**	**80.2**	**82.4**
Once	**11.3**	**10.7**	**10.1**	**9.3**	**11.4**	**9.7**	**9.2**	**8.9**	**8.0**
2 to 3 times	**10.2**	**9.9**	**9.9**	**8.5**	**9.6**	**9.2**	**8.2**	**7.1**	**6.3**
4 + times	**6.1**	**5.4**	**6.4**	**4.9**	**5.2**	**5.8**	**4.8**	**3.8**	**3.3**
Males									
Did Not	67.9	70.6	70.6	74.9	72.9	74.1	77.3	78.7	81.3
Once	11.0	10.8	10.7	9.1	11.3	9.4	9.1	8.9	7.8
2 to 3 times	12.8	11.4	10.2	9.6	9.5	9.6	8.4	7.9	6.6
4 + times	8.3	7.1	8.4	6.3	6.3	6.9	5.2	4.6	4.3
Females									
Did Not	77.0	77.4	76.2	79.8	74.6	76.6	78.2	81.8	83.6
Once	11.7	10.6	9.6	9.5	11.5	10.0	9.3	8.9	8.1
2 to 3 times	7.5	8.4	9.6	7.3	9.7	8.8	8.0	6.5	6.1
4 + times	3.9	3.6	4.5	3.4	4.1	4.6	4.4	2.9	2.2
Grade 7									
Did Not	95.0	95.8	94.2	96.6	95.6	97.3	98.9	98.7	99.0
Once	3.2	2.2	3.2	2.6	2.7	1.5	†	†	†
2 to 3 times	1.1	1.5	2.3	0.6	1.2	†	†	†	†
4 + times	†	†	†	†	†	†	†	†	†
Grade 8									
Did Not	86.2	88.0	92.3	92.6	93.5	95.0	95.9	96.3	97.0
Once	7.6	8.7	5.0	3.4	4.1	2.8	2.7	†	†
2 to 3 times	4.4	2.8	2.0	3.1	1.8	1.7	0.8	†	†
4 + times	1.8	†	†	†	†	†	†	†	†
Grade 9									
Did Not	76.2	78.3	76.5	81.2	81.2	83.7	86.3	91.5	91.0
Once	11.4	10.6	10.3	8.5	8.8	9.0	6.5	6.6	5.4
2 to 3 times	8.8	7.9	9.3	7.2	6.6	5.0	5.7	1.6	2.7
4 + times	3.6	3.2	3.9	3.0	3.3	2.3	1.4	†	†
Grade 10									
Did Not	64.8	65.3	70.2	73.8	70.2	74.1	75.6	82.0	83.8
Once	12.6	12.9	11.5	11.9	14.0	10.9	10.0	8.1	8.1
2 to 3 times	16.3	14.6	11.0	10.2	10.7	10.4	9.7	6.8	6.1
4 + times	6.4	7.1	7.3	4.1	5.2	4.7	4.6	3.2	1.9
Grade 11									
Did Not	54.3	58.3	59.1	65.5	57.8	64.4	64.7	70.5	69.5
Once	16.3	15.0	13.0	13.1	18.2	13.6	15.0	13.1	12.4
2 to 3 times	17.1	16.1	15.8	12.5	15.9	13.5	10.8	12.1	13.2
4 + times	12.3	10.5	12.1	8.9	8.2	8.4	9.6	4.3	5.0
Grade 12									
Did Not	55.4	52.0	54.8	57.5	52.0	51.6	60.3	60.8	67.4
Once	17.4	16.5	16.2	15.5	18.0	16.0	14.8	15.3	13.3
2 to 3 times	14.2	18.5	16.6	15.9	18.4	18.3	15.7	14.2	11.0
4 + times	13.1	13.0	12.4	11.1	11.6	14.1	9.2	9.7	8.3

Notes: † estimate suppressed due to unreliability
Q: How many times in the last 4 weeks have you had 5 or more drinks of alcohol on the same occasion?
Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.4.5b: Frequency of Binge Drinking in the Past Month, 1987–2015 OSDUHS (Grades 7, 9, 11 only)

	Percentage of Total Sample														
	1987	**1989**	**1991**	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**
(*n*=)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4469)	(5211)	(5225)
Total															
Did Not	**81.2**	**79.7**	**81.7**	**85.0**	**81.4**	**77.9**	**74.3**	**77.9**	**75.4**	**81.0**	**77.7**	**80.8**	**81.8**	**85.3**	**85.3**
Once	**8.2**	**8.2**	**7.6**	**7.1**	**8.8**	**9.8**	**10.7**	**9.2**	**9.2**	**8.1**	**10.1**	**8.4**	**8.0**	**7.7**	**6.7**
2 to 3 times	**6.2**	**7.5**	**6.3**	**5.2**	**6.3**	**7.8**	**9.4**	**8.3**	**9.6**	**6.8**	**8.1**	**6.9**	**6.1**	**5.3**	**5.8**
4 + times	**4.3**	**4.6**	**4.3**	**2.8**	**3.4**	**4.5**	**5.6**	**4.5**	**5.8**	**4.0**	**4.1**	**3.9**	**4.0**	**1.8**	**2.2**
Males															
Did Not	78.6	77.0	79.8	83.6	78.4	76.2	70.3	73.9	72.3	80.1	77.1	80.6	82.3	85.0	86.3
Once	8.3	8.9	8.0	7.3	9.4	8.6	10.2	10.1	9.8	7.4	10.4	8.0	8.4	7.7	5.7
2 to 3 times	7.5	8.3	6.2	4.9	7.2	8.8	11.9	9.6	10.3	7.1	8.3	6.7	5.7	5.8	5.7
4 + times	5.5	5.8	6.1	4.2	4.9	6.4	7.6	6.4	7.6	5.4	4.2	4.7	3.5	1.5	2.3
Females															
Did Not	83.6	82.3	84.0	86.3	84.3	79.4	78.5	82.0	78.3	82.0	78.4	80.9	81.4	85.5	84.3
Once	8.1	7.6	7.2	6.8	8.3	10.8	11.1	8.3	8.6	8.8	9.8	8.9	7.5	7.7	7.8
2 to 3 times	5.0	6.6	6.5	5.5	5.5	7.0	6.8	7.0	9.0	6.6	7.8	7.1	6.6	4.8	5.9
4 + times	3.2	3.5	2.4	1.4	1.9	2.9	3.6	2.6	4.1	2.6	3.9	3.1	4.5	2.0	2.0
Grade 7															
Did Not	95.8	97.0	97.5	96.9	97.4	97.0	95.0	95.8	94.2	96.6	95.6	97.3	98.9	98.7	99.0
Once	2.1	1.7	1.4	2.0	1.6	1.2	3.2	2.2	3.2	2.6	2.7	1.5	†	†	†
2 to 3 times	1.2	0.9	†	†	†	1.2	1.1	1.5	2.3	†	1.2	†	†	†	†
4 + times	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
Grade 9															
Did Not	83.5	80.0	81.7	87.7	86.1	80.2	76.2	78.3	76.5	81.2	81.2	83.7	86.3	91.5	91.0
Once	7.8	9.0	9.3	7.0	8.2	10.4	11.4	10.6	10.3	8.5	8.8	9.0	6.5	6.6	5.4
2 to 3 times	5.3	8.2	5.8	4.6	4.2	6.4	8.8	7.9	9.3	7.2	6.6	5.0	5.7	1.6	2.7
4 + times	3.3	3.1	3.2	†	†	2.9	3.6	3.2	3.9	3.0	3.3	2.3	1.4	†	†
Grade 11															
Did Not	65.8	61.4	67.2	72.3	63.1	58.6	54.3	58.3	59.1	65.5	57.8	64.4	64.7	70.5	69.5
Once	14.1	14.2	11.7	11.4	15.8	16.7	16.3	15.0	13.0	13.1	18.2	13.6	15.0	13.1	12.4
2 to 3 times	11.6	13.6	11.9	9.6	13.3	15.1	17.1	16.1	15.8	12.5	15.9	13.5	10.8	12.1	13.2
4 + times	8.4	10.9	9.2	6.7	7.9	9.6	12.3	10.5	12.1	8.9	8.2	8.4	9.6	4.3	5.0

Note: † estimate suppressed due to unreliability
Q: How many times in the last 4 weeks have you had 5 or more drinks of alcohol on the same occasion?
Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.4.6: Percentage Reporting Drunkenness in the Past Month, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(2148)	(1837)	(3152)	(3648)	(2935)	(4851)	(9288)	(10272)	(10426)	
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(1168)	(953)	(1618)	(1862)	(1488)	(2355)	(4669)	(5211)	(5225)	
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**25.0**	**26.0**	**23.9**	**22.5**	**24.4**	**22.6**	**19.9**	**17.6**	**15.9**	bc
(95% CI)												(22.6-27.7)	(23.1-29.2)	(21.4-26.6)	(19.9-25.3)	(22.3-26.7)	(20.6-24.6)	(18.5-21.4)	(15.6-19.9)	(14.2-17.8)	
Total[2]	**15.5**	**18.6**	**15.4**	**15.9**	**15.0**	**16.2**	**15.0**	**16.7**	**14.4**	**19.6**	**22.4**	**23.3**	**23.3**	**23.6**	**19.4**	**19.0**	**16.8**	**17.3**	**13.5**	**12.7**	d
	(13.8-17.4)	(16.8-20.5)	(13.6-17.5)	(14.1-18.0)	(12.8-17.3)	(13.3-19.6)	(13.5-16.6)	(14.8-18.7)	(13.0-15.9)	(16.2-23.6)	(20.8-24.0)	(20.0-27.0)	(19.4-27.7)	(20.7-26.8)	(16.8-22.4)	(16.4-21.9)	(14.8-19.0)	(14.7-20.3)	(11.4-15.8)	(10.9-14.7)	
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**27.4**	**28.5**	**25.8**	**23.3**	**24.7**	**22.3**	**19.6**	**17.9**	**16.0**	b
												(24.6-30.3)	(24.4-32.9)	(22.6-29.3)	(20.3-26.5)	(21.8-27.8)	(19.9-24.8)	(17.7-21.7)	(15.5-20.6)	(14.0-18.1)	
Males[2]	**17.1**	**20.0**	**16.5**	**19.0**	**16.3**	**17.1**	**15.6**	**17.6**	**14.3**	**21.4**	**22.4**	**25.3**	**25.3**	**26.8**	**19.4**	**17.8**	**14.9**	**16.4**	**12.2**	**11.3**	
	(15.0-19.3)	(17.7-22.7)	(14.8-18.5)	(16.4-22.0)	(13.6-19.3)	(13.5-21.4)	(13.7-17.7)	(15.7-19.6)	(12.8-15.9)	(17.9-25.4)	(20.3-24.7)	(21.2-29.8)	(20.6-30.7)	(22.8-31.1)	(16.1-23.3)	(14.7-21.4)	(12.4-17.6)	(14.0-19.0)	(9.7-15.2)	(9.2-13.8)	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**22.6**	**23.7**	**22.2**	**21.6**	**24.2**	**22.8**	**20.3**	**17.3**	**15.9**	b
												(19.4-26.2)	(20.3-27.4)	(19.0-25.7)	(18.8-24.7)	(21.6-26.9)	(20.0-25.8)	(18.5-22.2)	(14.9-20.0)	(13.6-18.4)	
Females[2]	**14.1**	**17.1**	**14.3**	**12.9**	**13.6**	**15.4**	**14.4**	**15.6**	**14.5**	**17.9**	**22.4**	**21.3**	**21.2**	**20.7**	**19.4**	**20.3**	**18.7**	**18.4**	**14.8**	**14.0**	
	(12.1-16.4)	(14.9-19.6)	(11.4-17.7)	(11.3-14.7)	(10.7-17.1)	(12.8-18.2)	(12.0-17.2)	(12.9-18.8)	(12.2-17.0)	(14.3-22.3)	(20.6-24.2)	(17.4-25.8)	(16.3-27.1)	(16.8-25.3)	(16.4-22.9)	(16.7-24.5)	(15.3-22.6)	(14.0-23.8)	(12.4-17.6)	(11.6-16.9)	
Grade																					
7	**6.5**	**7.8**	**4.4**	**6.0**	**4.3**	**4.3**	**2.9**	**4.2**	**4.3**	**3.8**	**4.8**	**4.3**	**4.8**	**3.6**	**3.4**	**3.2**	**3.8**	**1.5**	†	†	b
	(4.9-8.5)	(6.0-10.1)	(3.7-5.1)	(3.8-9.4)	(2.6-7.2)	(2.8-6.6)	(2.3-3.6)	(3.5-5.1)	(2.8-6.6)	(3.0-4.9)	(3.1-7.4)	(2.8-6.6)	(2.8-8.1)	(2.0-6.5)	(2.1-5.3)	(1.6-6.6)	(2.4-5.9)	(0.9-2.4)			
8	—	—	—	—	—	—	—	—	—	—	—	**12.8**	**12.8**	**6.2**	**7.0**	**7.9**	**7.1**	**4.4**	**3.0**	†	b
												(9.7-16.6)	(6.5-23.5)	(4.3-9.0)	(5.0-9.7)	(4.9-12.5)	(4.7-10.5)	(2.9-6.6)	(1.9-4.7)		
9	**15.5**	**19.8**	**16.6**	**19.1**	**14.6**	**16.4**	**18.3**	**17.4**	**13.8**	**16.1**	**20.2**	**21.5**	**24.5**	**24.5**	**20.4**	**17.1**	**15.9**	**14.2**	**9.3**	**8.2**	b
	(12.8-18.6)	(17.0-22.9)	(13.3-20.6)	(17.7-20.5)	(11.1-19.2)	(12.4-21.4)	(15.2-21.8)	(13.9-21.5)	(11.0-17.0)	(10.9-23.1)	(17.7-22.8)	(16.7-27.1)	(19.2-30.8)	(20.6-28.8)	(16.4-25.0)	(13.2-22.0)	(12.5-20.1)	(11.7-17.1)	(7.1-12.0)	(6.1-11.0)	
10	—	—	—	—	—	—	—	—	—	—	—	**31.7**	**36.0**	**25.8**	**26.9**	**29.0**	**25.2**	**20.8**	**17.9**	**16.0**	b
												(26.4-37.4)	(31.2-41.2)	(21.0-31.2)	(22.8-31.4)	(24.4-33.9)	(21.1-29.8)	(16.6-25.8)	(14.7-21.5)	(13.2-19.2)	
11	**26.3**	**29.0**	**26.5**	**26.3**	**25.8**	**26.7**	**23.7**	**27.4**	**23.4**	**36.7**	**40.2**	**41.7**	**40.7**	**39.6**	**33.6**	**35.8**	**29.4**	**32.4**	**25.6**	**26.2**	b
	(22.9-30.0)	(25.4-33.0)	(20.2-33.8)	(21.4-31.8)	(21.5-30.7)	(18.5-36.9)	(21.3-26.2)	(23.9-31.1)	(20.6-26.4)	(28.9-45.5)	(37.0-43.4)	(35.3-48.4)	(32.5-49.4)	(33.4-46.1)	(28.7-39.0)	(30.8-41.1)	(25.3-34.0)	(28.1-36.9)	(21.3-30.4)	(22.5-30.3)	
12	—	—	—	—	—	—	—	—	—	—	—	**40.0**	**38.3**	**38.7**	**39.3**	**45.8**	**43.3**	**33.8**	**33.3**	**29.4**	b
												(33.5-46.8)	(25.4-53.1)	(32.7-45.1)	(33.9-44.9)	(40.8-50.9)	(38.5-48.2)	(29.3-38.5)	(29.4-37.4)	(25.0-34.1)	

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2148)	(1837)	(3152)	(3648)	(2935)	(4851)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(1168)	(953)	(1618)	(1862)	(1488)	(2355)	(4669)	(5211)	(5225)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**12.2** (8.8-16.6)	**17.2** (10.8-26.2)	**13.7** (8.9-20.5)	**15.1** (10.4-21.2)	**20.7** (14.5-28.7)	**12.5** (7.8-19.5)	**13.2** (9.9-17.4)	**13.2** (7.3-22.6)	**12.1** (7.9-18.2)
Toronto[2]	—	—	**10.8** (7.9-14.6)	**12.7** (7.4-20.8)	**14.3** (11.4-17.7)	**11.0** (7.2-16.4)	**10.1** (6.4-15.6)	**11.1** (7.0-17.0)	**8.6** (6.5-11.2)	**13.2** (6.8-24.2)	**14.7** (14.2-15.2)	**11.5** (7.9-16.5)	**17.8** (9.5-30.8)	**12.5** (7.6-20.1)	**12.7** (8.1-19.2)	**12.4** (7.0-21.1)	**8.4** (4.0-16.9	**10.9** (8.4-13.9)	†	**11.3** (7.0-17.8)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**33.8** (28.6-39.3)	**29.4** (25.2-33.9)	**29.8** (24.2-36.0)	**32.3** (27.0-38.0)	**35.0** (30.0-40.4)	**27.8** (22.6-33.6)	**26.2** (22.3-30.4)	**22.2** (19.6-25.1)	**19.0** [b] (15.8-22.7)
North[2]	—	—	**13.4** (9.2-19.1)	**18.8** (15.2-22.9)	**17.7** (12.6-24.3)	**20.9** (16.4-26.3)	**20.9** (14.3-29.4)	**24.4** (14.9-37.2)	**22.5** (16.6-29.7)	**25.8** (19.1-34.0)	**26.6** (22.9-30.7)	**25.4** (18.0-34.4)	**27.8** (23.1-33.1)	**32.1** (25.0-40.1)	**26.6** (21.2-32.8)	**32.5** (25.5-40.4)	**23.4** (17.0-31.2)	**22.7** (16.0-31.2)	**17.4** (13.3-22.3)	**17.2** (13.1-22.4)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**30.1** (25.6-35.0)	**29.4** (24.8-34.6)	**26.2** (22.0-30.9)	**22.6** (19.0-26.6)	**24.2** (21.5-27.1)	**24.4** (21.3-27.8)	**19.2** (17.6-20.8)	**16.6** (13.5-20.2)	**14.6** [b] (12.2-17.5)
West[2]	—	—	**18.0** (15.0-21.3)	**17.5** (14.9-20.5)	**16.6** (14.6-18.8)	**15.0** (10.2-21.6)	**15.1** (13.4-17.0)	**17.4** (15.2-19.8)	**17.1** (15.3-19.1)	**18.5** (12.4-26.6)	**22.5** (21.2-23.9)	**27.8** (21.9-34.6)	**24.4** (19.5-30.1)	**26.3** (21.6-31.7)	**19.0** (15.3-23.3)	**19.3** (15.9-23.3)	**18.4** (15.3-21.9)	**17.3** (12.4-23.6)	**13.0** (10.1-16.6)	**11.8** (8.9-15.4)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**23.0** (19.3-27.2)	**26.2** (22.0-31.0)	**25.7** (21.9-29.8)	**25.3** (20.2-31.0)	**24.7** (20.8-29.2)	**23.9** (21.1-27.0)	**23.3** (20.4-26.5)	**21.2** (19.2-23.2)	**19.1** (16.0-22.6)
East[2]	—	—	**15.6** (15.0-16.3)	**15.3** (13.1-17.8)	**12.0** (6.8-20.4)	**20.5** (15.1-27.3)	**16.0** (13.5-19.0)	**17.2** (14.0-20.8)	**11.9** (8.9-15.8)	**24.0** (20.5-27.9)	**26.1** (21.6-31.2)	**24.1** (18.6-30.6)	**25.9** (18.8-34.6)	**24.6** (19.8-30.2)	**22.8** (17.5-29.2)	**19.5** (14.5-25.7)	**17.4** (14.2-21.2)	**19.7** (16.5-23.4)	**14.7** (12.7-17.1)	**13.9** (11.5-16.6)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) based on random half sample between 1999 and 2009; (5) entries in brackets are 95% confidence intervals; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: How many times in the last 4 weeks has drinking alcohol made you drunk (that is, you had so much that you could not do what you wanted to do, or you threw up)?

Source: OSDUHS, Centre for Addiction & Mental Health

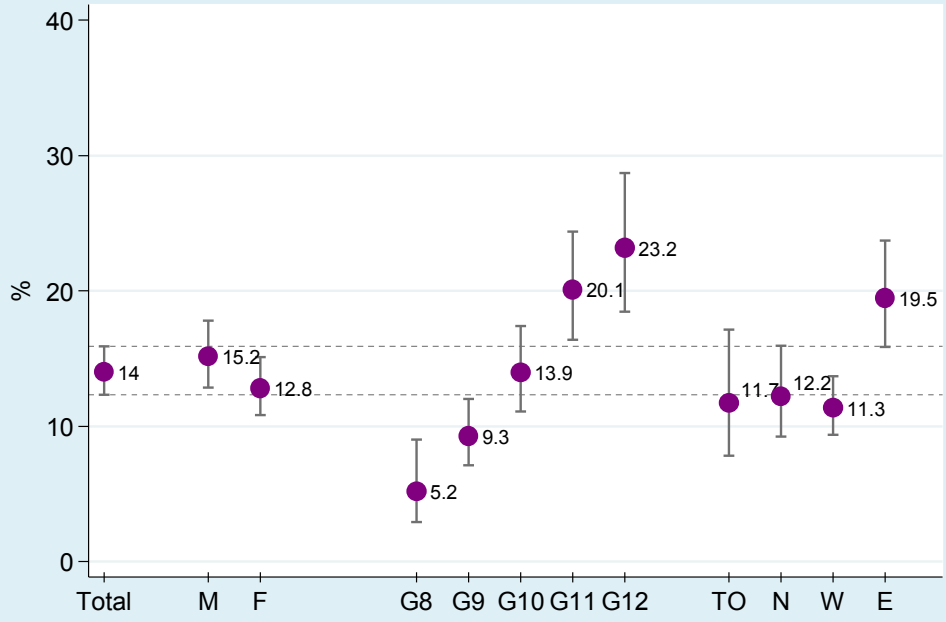
Past Year Use of Alcohol Mixed with an Energy Drink

(Figure 3.4.13; Table 3.4.7)

Starting in 2013, the OSDUHS included a question about drinking alcohol mixed with an energy drink.

	Alcohol with an Energy Drink in 2015 (Grades 7–12)	Trends (Grades 7–12)
Total Sample	■ The percentage of students who report drinking alcohol mixed with an energy drink at least once in the past year is 14.0%. This estimate represents about 129,100 students in Ontario in grades 7–12.	☐ The percentage of students drinking alcohol mixed with an energy drink did not significantly change between 2013 (15.9%) and 2015 (14.0%).
Sex	■ Males (15.2%) and females (12.8%) are equally likely to drink alcohol mixed with an energy drink.	☐ Neither males nor females showed a significant change between 2013 and 2015.
Grade	■ Drinking alcohol with an energy drink significantly increases with grade.	☐ No grade showed a significant change.
Region	■ There are significant differences among the four regions, with students in the East region (19.5%) most likely to drink alcohol mixed with an energy drink.	☐ No region showed a significant change.

Figure 3.4.13
Past Year Use of Alcohol Mixed with an Energy Drink by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 7 was suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

Table 3.4.7: Percentage Reporting Drinking Alcohol Mixed with an Energy Drink in the Past Year, 2013–2015 OSDUHS

		2013 (*n*=4794)	2015 (*n*=5023)
Total		**15.9**	**14.0**
(95% CI)		(13.8-18.3)	(12.3-15.9)
Sex			
	Males	**17.5** (14.1-21.5)	**15.2** (12.8-17.8)
	Females	**14.3** (12.2-16.7)	**12.8** (10.8-15.1)
Grade			
	7	**3.2** (1.9-5.5)	†
	8	**9.5** (5.7-15.6)	**5.2** (2.9-9.0)
	9	**9.6** (6.6-13.7)	**9.3** (7.1-12.0)
	10	**15.3** (11.6-20.0)	**13.9** (11.1-17.4)
	11	**19.4** (15.1-24.6)	**20.1** (16.4-24.4)
	12	**28.0** (22.9-33.6)	**23.2** (18.5-28.7)
Region			
	Toronto	**12.5** (7.4-20.1)	**11.7** (7.8-17.1)
	North	**15.9** (11.6-21.4)	**12.2** (9.2-16.0)
	West	**15.6** (12.8-19.1)	**11.3** (9.4-13.7)
	East	**19.0** (15.6-22.9)	**19.5** (15.8-23.7)

Notes: (1) question asked of a random half sample in 2013 and 2015; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) no significant differences 2015 vs. 2013.

Q: In the last 12 months, how often did you drink an energy drink mixed with alcohol, such as Red Bull mixed with alcohol, Rock Star + vodka, or other brands?

Source: OSDUHS, Centre for Addiction & Mental Health

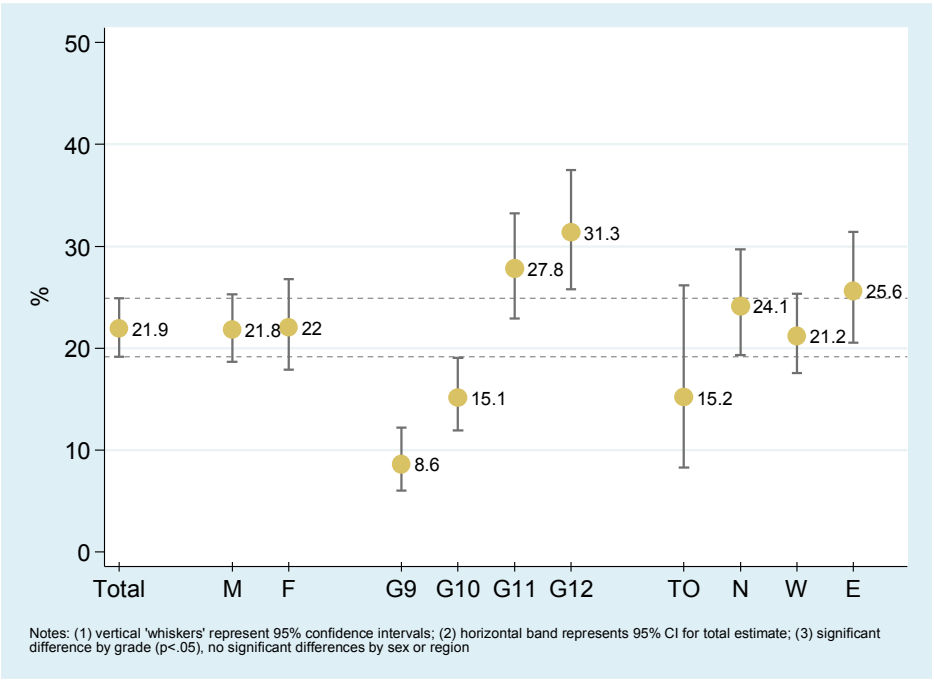
Participation in Drinking Games Among Grades 9–12

(Figure 3.4.14; Table 3.4.8)

Starting in 2013, secondary students were asked about participation in drinking games.

	Drinking Games in 2015 (Grades 9–12)	Trends (Grades 9–12)
Total Sample	■ About one-fifth (21.9%) of secondary students report playing a drinking game in the past month. This estimate represents about 150,600 secondary students in Ontario. (Among past year drinkers, 36.6% report playing a drinking game in the past month).	☐ The percentage of secondary students reporting playing a drinking game did not significantly change between 2013 (23.3%) and 2015 (21.9%).
Sex	■ Males (21.8%) and females (22.0%) are equally likely to play drinking games.	☐ Neither males nor females showed a significant change between these two years.
Grade	■ Participation significantly increases with grade, with a substantial jump between 10th grade (15.1%) and 11th grade (27.8%), and remaining stable in 12th grade (31.3%).	☐ No grade showed a significant change.
Region	■ Despite some variation, there are no significant differences among the four regions.	☐ No region showed a significant change.

Figure 3.4.14
Participating in Drinking Games in the Past Month by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Table 3.4.8: Percentage Reporting Participating in Drinking Games in the Past Month, 2013–2015 OSDUHS (Grades 9–12)

	2013 (*n*=2895)	2015 (*n*=3171)
Total	**23.3**	**21.9**
(95% CI)	(20.4-26.4)	(19.1-24.9)
Sex		
Males	**24.7**	**21.8**
	(20.4-29.5)	(18.6-25.3)
Females	**21.7**	**22.0**
	(18.5-25.3)	(17.9-26.8)
Grade		
9	**7.5**	**8.6**
	(5.2-10.6)	(6.0-12.2)
10	**13.9**	**15.1**
	(10.8-17.7)	(11.9-19.0)
11	**30.9**	**27.8**
	(24.8-37.7)	(22.9-33.3)
12	**34.3**	**31.3**
	(29.7-39.2)	(25.8-37.5)
Region		
Toronto	**13.3**	**15.2**
	(6.8-24.4)	(8.3-26.2)
North	**29.9**	**24.1**
	(21.2-40.2)	(19.3-29.7)
West	**24.0**	**21.2**
	(19.8-28.7)	(17.6-25.4)
East	**27.1**	**25.6**
	(23.1-31.5)	(20.6-31.4)

Notes: (1) question asked of a random half sample in 2013 and 2015; (2) entries in brackets are 95% confidence intervals; (3) no significant differences 2015 vs. 2013.

Q: Drinking games are games in which players drink alcohol quickly with the purpose of getting drunk. Examples of such games include Beer Pong, Flip Cup, and Power Hour. In the last 4 weeks, how often have you played drinking games with others?

Source: OSDUHS, Centre for Addiction & Mental Health

Hazardous or Harmful Drinking (AUDIT Screener) Among Grades 9–12

(Figures 3.4.15-3.4.17; Tables 3.4.9, 3.4.10)

Starting in 1999, the OSDUHS included the *Alcohol Use Disorders Identification Test* (AUDIT) developed by the World Health Organization (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993). This 10-item instrument identifies problem drinkers at the less severe end of the spectrum of alcohol problems. The AUDIT assesses hazardous or harmful drinking. **Hazardous drinking** refers to an established pattern of drinking that increases the likelihood of future physical, social, or mental health problems (e.g., dependence), whereas **harmful drinking** refers to a pattern of drinking that is already causing harm (e.g., alcohol-related injuries). Those with a score of eight 8 or higher out of a maximum total of 40 are considered to be drinking at a hazardous or harmful level (Cronbach's α=.86).

	Hazardous/Harmful Drinking in 2015 (Grades 9–12)	Trends in Hazardous/Harmful Drinking (Grades 9–12)
Total Sample	■ Almost one-fifth (19.2%) of secondary students could not remember what had happened when they were drinking on at least one occasion during the past 12 months. Also worrisome is that just about one-in-ten (9.4%) report that they were injured or someone else was injured because of their drinking, during the past 12 months. ■ Overall, 19.8% of secondary students report hazardous/harmful drinking (that is, scoring 8 or higher of 40). This represents about 138,500 students in grades 9–12. Among past-year drinkers, about one-third (34.6%) drink hazardously/harmfully.	☐ There was no significant change in hazardous/harmful drinking between 2013 (20.0%) and 2015 (19.8%). The 2015 percentage is also similar to that found in 1999 (23.9%). However, a significant nonlinear trend occurred between 1999 and 2015, showing a peak in 2009, followed by a decrease.
Sex	■ Males (19.2%) and females (20.4%) are equally likely to drink hazardously or harmfully.	☐ Neither sex shows a statistically significant change between 2013 and 2015. Only males show a significant decrease in 2015 compared with the 1999 estimate.
Grade	■ There is significant variation by grade, with students in grade 12 most likely to report hazardous/harmful drinking (about 29.4%).	☐ None of the grades shows a statistically significant change in 2015 compared with their respective 2013 estimates. However, 9th and 10th graders show a significant downward trend between 1999 and 2015.
Region	■ There is significant variation among the regions, with students in the North (26.9%) most likely to report hazardous/harmful drinking, whereas students in Toronto (14.1%) are least likely.	☐ None of the four regions shows a significant change between 2013 and 2015. However, the current estimates for students in the North and the West are significantly lower than their respective 1999 estimates.

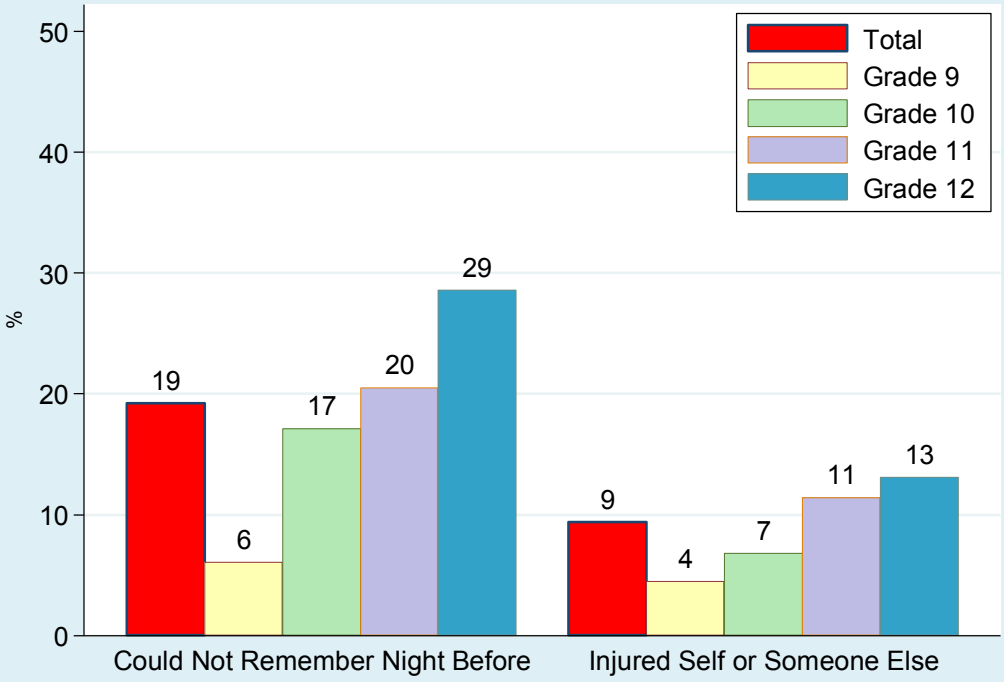
Table 3.4.9: Percentage of the Total Sample, and of Past Year Drinkers, Reporting AUDIT Indicators, 2015 OSDUHS (Grades 9–12)

AUDIT Item	% "yes"	
	Total Sample (*n*=3426)	Past Year Drinkers (*n*=1951)
Alcohol Intake		
1. Consumed alcohol during the past 12 months	57.4	--
2. Number of drinks usually have on typical day when drink (% reporting 2+ drinks)	39.4	67.1
3. Consumed 5 or more drinks on one occasion during the past 12 months	35.7	61.0
Dependence Indicators (past 12 months)		
4. Were not able to stop drinking once you had started	9.9	17.0
5. Failed to do what was normally expected from you because of your drinking	12.8	22.1
6. Needed a first alcoholic drink in the morning to get yourself going after a heavy drinking session	2.1	3.6
Adverse Consequences		
7. Had a feeling of guilt or remorse after drinking, during the past 12 months	13.6	23.4
8. Been unable to remember what happened the night before because you had been drinking, during the past 12 months	19.2	33.2
9. You or someone else been injured as a result of your drinking		
Yes, but not in the past 12 months:	5.2	7.3
Yes, in the past 12 months:	9.4	15.5
10. A relative/friend or a doctor/health worker has been concerned about your drinking or suggested that you cut down		
Yes, but not in the past 12 months:	0.7	1.2
Yes, in the past 12 months:	2.1	3.7
AUDIT 8+ Score (95% CI)	**19.8%** (17.0-23.0)	**34.6%** (30.5-38.8)

Notes: (1) The AUDIT is a screener that measures hazardous or harmful drinking, as indicated by a score of 8 or more out of 40; (2) "Past Year Drinkers" are those who drank alcohol, excluding just a sip, at least once during the past 12 months; (3) based on a random half sample of secondary school students.

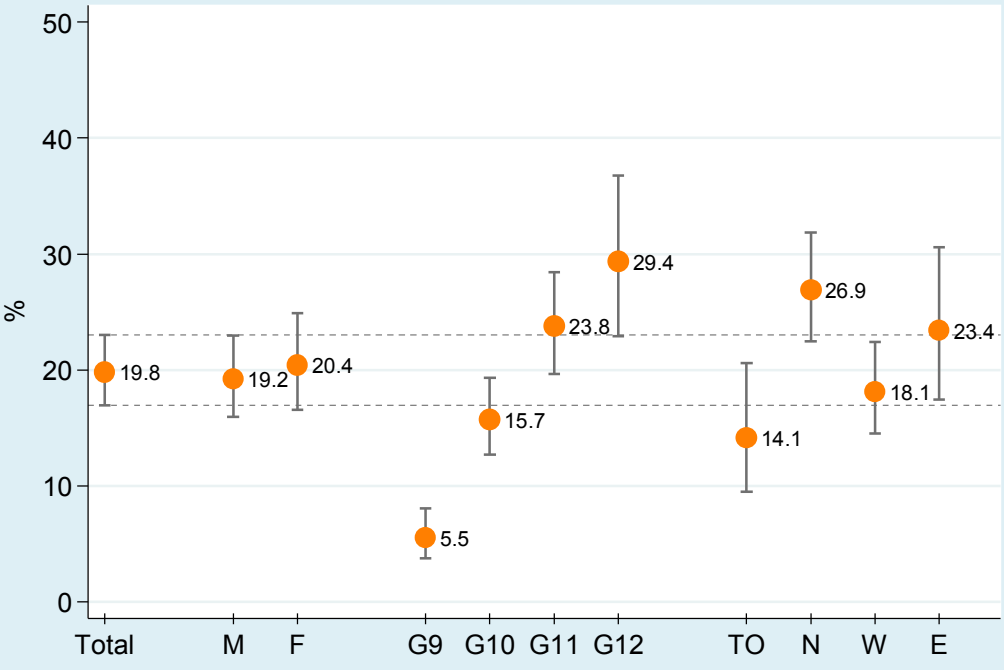
Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.4.15
Percentage Reporting They Could Not Remember the Night Before Due to Their Drinking, and Reporting They (or Someone Else) Were Injured Due to Their Drinking, by Grade, 2015 OSDUHS (Grades 9–12)



Notes: (1) both adverse consequences are from the AUDIT screener and refer to the past 12 months; (2) significant grade differences for both (p<.05)

Figure 3.4.16
Percentage Reporting Hazardous/Harmful Drinking (AUDIT 8+) by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by grade and region(p<.05), no significant difference by sex

Figure 3.4.17
Hazardous/Harmful Drinking (AUDIT 8+), 1999–2015 OSDUHS (Grades 9–12)

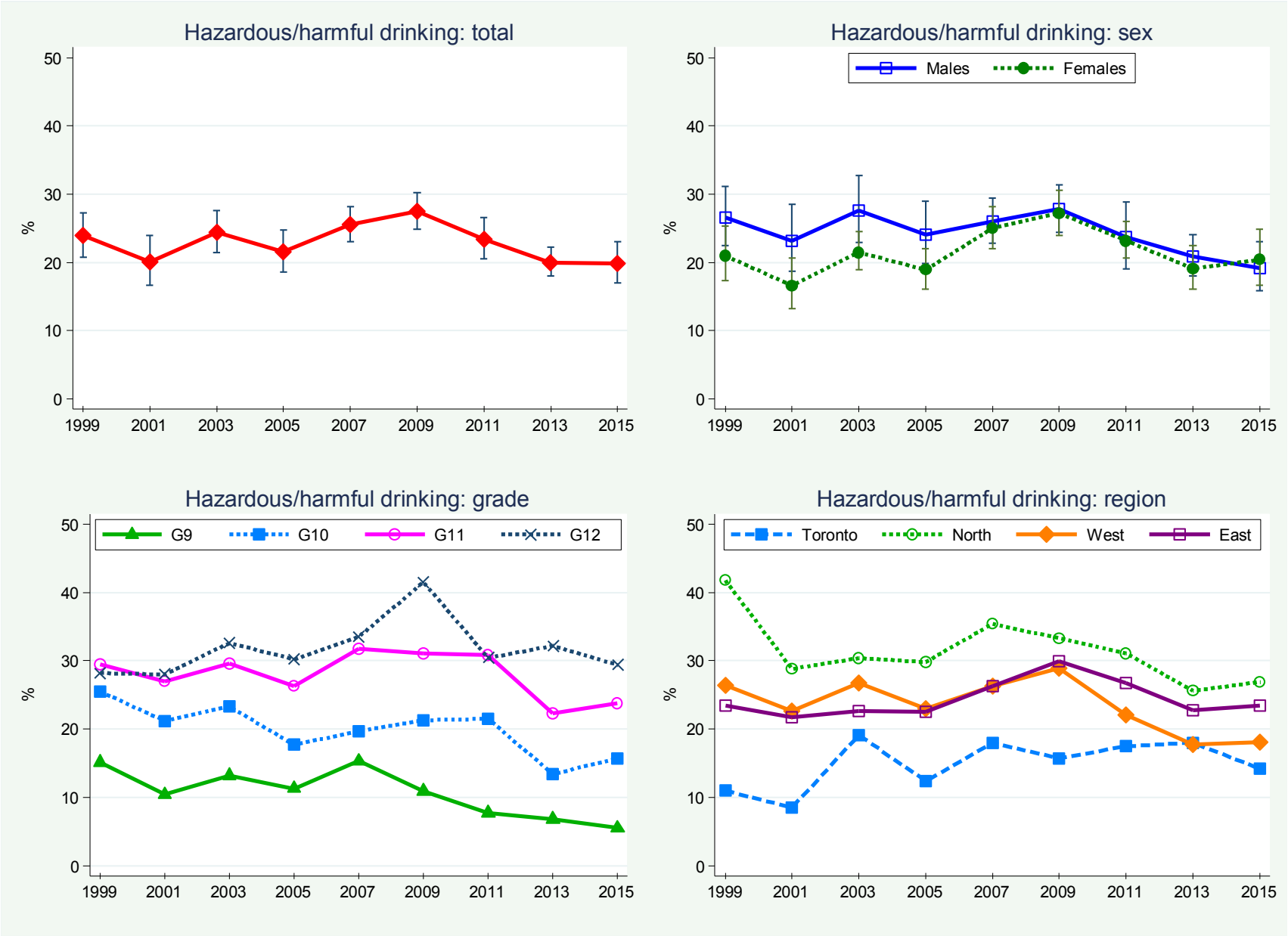


Table 3.4.10: Percentage of the Total Sample Reporting Hazardous/Harmful Drinking (AUDIT 8+), 1999–2015 OSDUHS (Grades 9–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(*n*=)	(1495)	(1278)	(2455)	(3069)	(2587)	(3055)	(3358)	(3264)	(3426)	
Total	**23.9**	**20.1**	**24.4**	**21.6**	**25.5**	**27.5**	**23.4**	**20.0**	**19.8**	[d]
(95% CI)	(20.8-27.3)	(16.7-23.9)	(21.5-27.6)	(18.6-24.8)	(23.0-28.2)	(24.9-30.2)	(20.5-26.6)	(18.0-22.2)	(17.0-23.0)	
Sex										
Males	**26.6**	**23.2**	**27.6**	**24.1**	**26.0**	**27.8**	**23.7**	**20.9**	**19.2**	[b]
	(22.5-31.1)	(18.7-28.5)	(22.9-32.7)	(19.9-29.0)	(22.8-29.4)	(24.4-31.4)	(19.1-28.9)	(18.0-24.1)	(15.9-23.0)	
Females	**21.0**	**16.6**	**21.5**	**18.9**	**25.0**	**27.2**	**23.2**	**19.1**	**20.4**	
	(17.3-25.3)	(13.2-20.7)	(18.9-24.5)	(16.1-22.0)	(22.0-28.2)	(24.0-30.6)	(20.6-26.0)	(16.1-22.5)	(16.6-24.9)	
Grade										
9	**15.1**	**10.4**	**13.2**	**11.3**	**15.3**	**10.9**	**7.7**	**6.8**	**5.5**	[b]
	(10.6-21.0)	(7.2-14.8)	(10.8-16.2)	(8.0-15.5)	(11.6-20.0)	(8.0-14.8)	(5.4-10.8)	(5.0-9.2)	(3.7-8.1)	
10	**25.5**	**21.2**	**23.3**	**17.7**	**19.7**	**21.3**	**21.5**	**13.4**	**15.7**	[b]
	(19.5-32.6)	(16.0-27.4)	(18.8-28.5)	(14.4-21.6)	(16.6-23.2)	(17.4-25.7)	(15.7-28.6)	(9.7-18.3)	(12.7-19.3)	
11	**29.5**	**27.0**	**29.6**	**26.3**	**31.8**	**31.1**	**30.8**	**22.3**	**23.8**	
	(23.8-36.0)	(20.5-34.5)	(24.5-35.2)	(22.3-30.8)	(27.0-37.0)	(25.2-37.6)	(24.9-37.3)	(17.8-27.5)	(19.6-28.5)	
12	**28.2**	**27.9**	**32.6**	**30.2**	**33.5**	**41.5**	**30.4**	**32.2**	**29.4**	
	(21.1-36.6)	(21.9-34.9)	(27.0-38.7)	(25.2-35.6)	(28.9-38.4)	(37.2-46.1)	(23.5-38.2)	(28.2-36.5)	(22.9-36.8)	
Region										
Toronto	**11.0**	**8.5**	**19.1**	**12.4**	**18.0**	**15.7**	**17.5**	**18.0**	**14.1**	
	(7.6-15.7)	(3.4-19.5)	(14.2-25.3)	(8.9-16.8)	(11.9-26.3)	(10.3-23.4)	(12.3-24.3)	(12.0-26.0)	(9.5-20.6)	
North	**41.8**	**28.8**	**30.4**	**29.8**	**35.4**	**33.3**	**31.1**	**25.6**	**26.9**	[b]
	(32.6-51.6)	(22.5-36.1)	(25.2-36.2)	(25.6-34.4)	(28.1-43.5)	(25.7-41.9)	(26.3-36.2)	(21.2-30.6)	(22.5-31.8)	
West	**26.4**	**22.6**	**26.8**	**23.0**	**26.3**	**28.9**	**22.1**	**17.8**	**18.1**	[b]
	(21.0-32.7)	(17.0-29.4)	(22.2-32.1)	(18.4-28.4)	(21.8-31.4)	(24.6-33.6)	(17.2-28.0)	(15.0-21.1)	(14.5-22.4)	
East	**23.4**	**21.7**	**22.6**	**22.5**	**26.3**	**29.9**	**26.8**	**22.8**	**23.4**	
	(18.2-29.4)	(16.2-28.3)	(17.2-29.2)	(16.6-29.6)	(23.0-29.8)	(26.0-34.2)	(23.1-30.8)	(19.2-26.8)	(17.4-30.6)	

Notes: (1) based on a random half sample in each year; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [d] significant nonlinear trend, p<.01.

Source: OSDUHS, Centre for Addiction & Mental Health

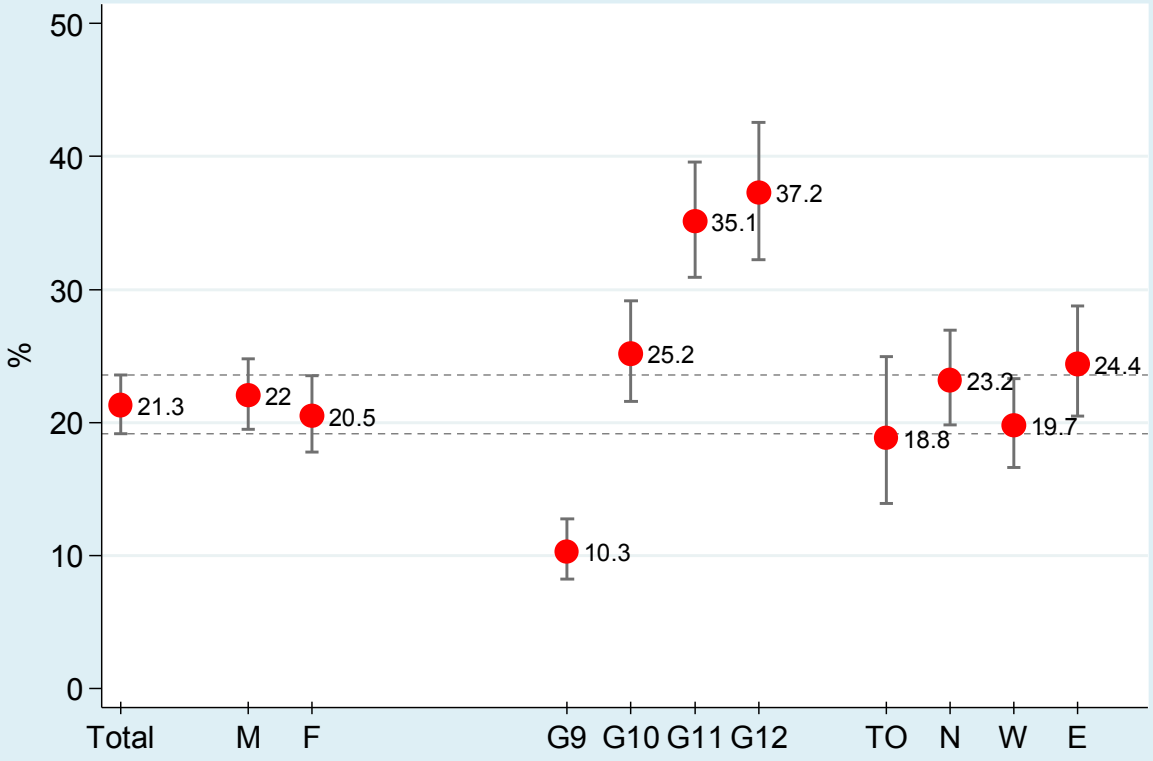
3.5 Cannabis Use

Past Year Cannabis Use

(Figures 3.5.1–3.5.3; Table 3.5.1)

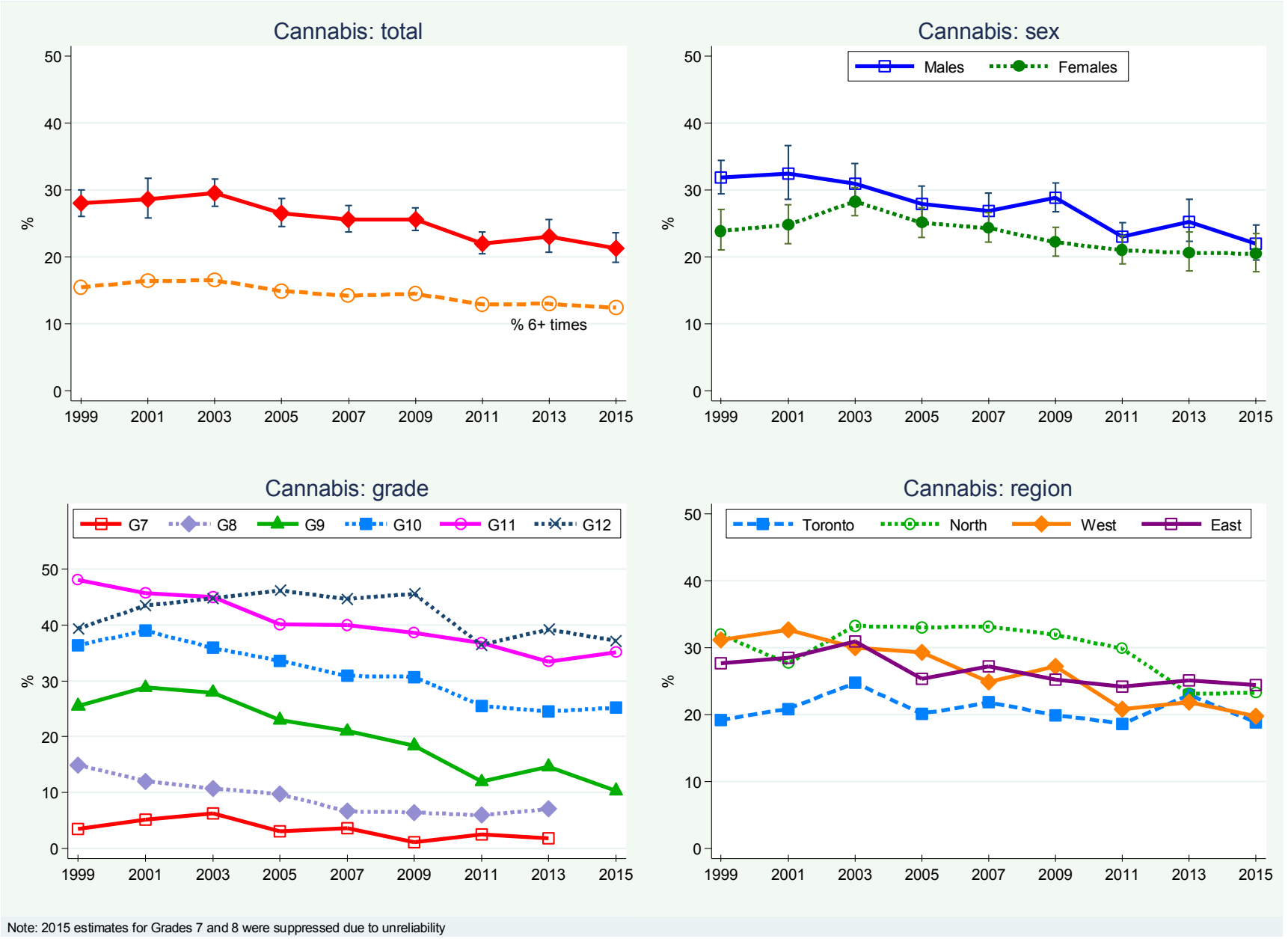
	Cannabis Use in 2013 (Grades 7–12)	Trends in Cannabis Use
Total Sample	▪ About one-fifth (21.3%) of students report using cannabis at least once during the 12 months before the survey. With the sampling error, we estimate that between 19.2% and 23.6% of students in grades 7 through 12 use cannabis (95% CI). The percentage of 21.3% represents about 203,900 students in Ontario.	☐ Among the total sample of students in grades 7 through 12, cannabis use did not significantly change between 2013 (23.0%) and 2015 (21.3%). Cannabis use was on a downward trend between 1999 and 2011 (from 28.0% to 22.0%), and has remained stable since then. ☐ Over the long-term (grades 7, 9, 11 only), the 2015 cannabis prevalence is significantly lower than the historical peak years in the late 1970s and in 1999/early 2000s, but still remains higher than the low levels evident in the late 1980s/early 1990s.
Sex	▪ Males (22.0%) and females (20.5%) are equally likely to report using cannabis.	☐ Neither sex shows a significant change in cannabis use between 2013 and 2015. However, both show a significant downward trend in use over the past decade or so. Use among males is significantly lower in 2015 compared with 1999-2001, when use was at about 32%. Use among females began to decline after 2003, when use was at 28.3%.
Grade	▪ Cannabis use significantly increases with grade, to a high of 37.2% among 12th graders.	☐ No grade shows a significant change in cannabis use between 2013 and 2015. Students in grades 7 through 11 show a significant downward trend in use since 1999. Students in 12th grade show an increase in use between 1999 and 2009, a decline in 2011, and stability since then.
Region	▪ There are no significant regional differences in cannabis use in 2015.	☐ No region shows a significant change in cannabis use between 2013 and 2015. Only the North and West regions show a significant downward trend since 1999.

Figure 3.5.1
Past Year Cannabis Use by Sex, Grade, and Region, 2015 OSDUHS



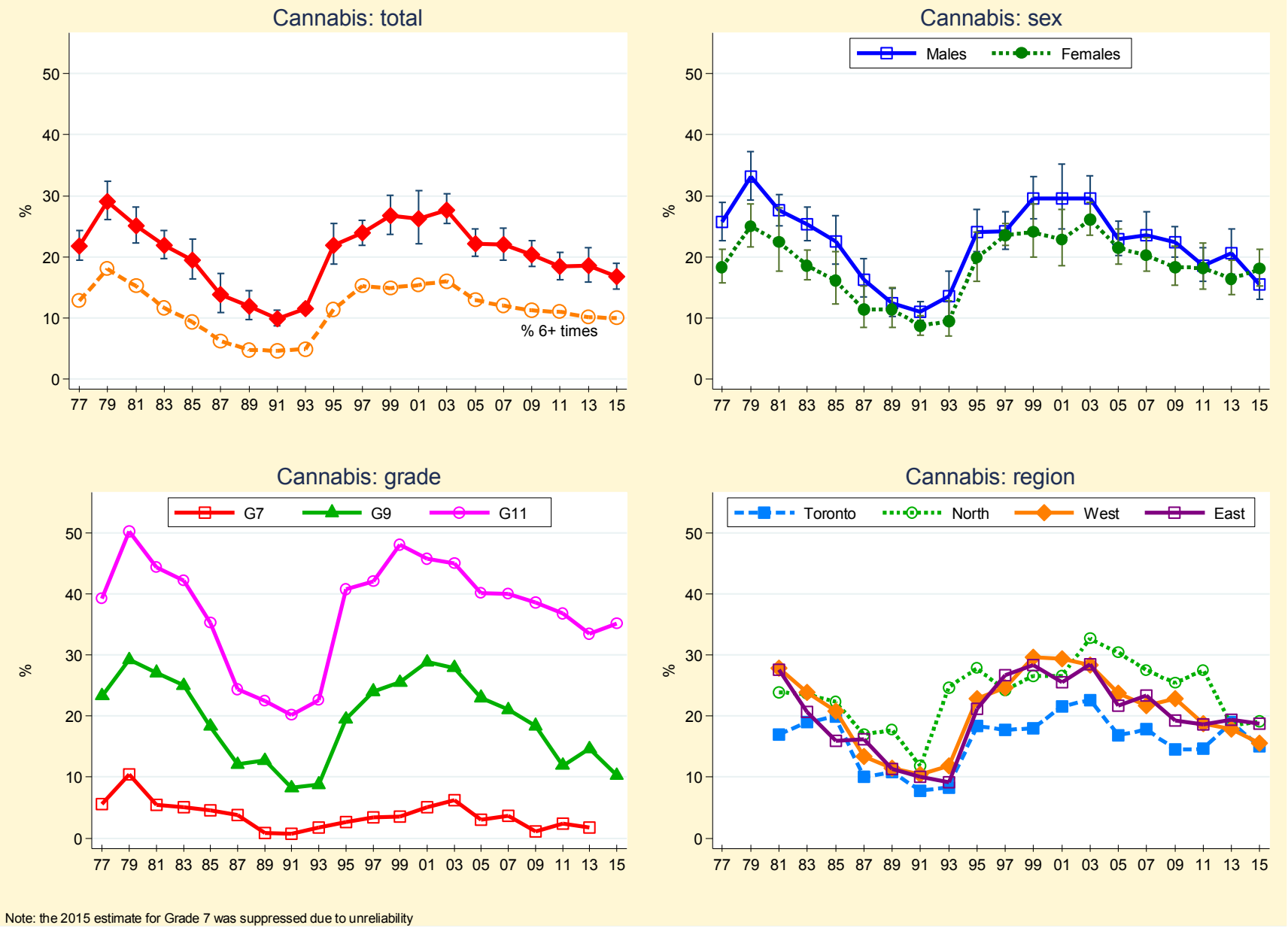
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.5.2
Past Year Cannabis Use, 1999–2015 OSDUHS (Grades 7–12)



Note: 2015 estimates for Grades 7 and 8 were suppressed due to unreliability

Figure 3.5.3
Past Year Cannabis Use, 1977–2015 OSDUHS (Grades 7, 9, 11 only)



Note: the 2015 estimate for Grade 7 was suppressed due to unreliability

Table 3.5.1: Percentage Reporting Cannabis Use in the Past Year, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)	
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**28.0** (26.0-30.0)	**28.6** (25.8-31.7)	**29.6** (27.6-31.6)	**26.5** (24.5-28.7)	**25.6** (23.7-27.7)	**25.6** (24.0-27.3)	**22.0** (20.5-23.7)	**23.0** (20.7-25.6)	**21.3** (19.2-23.6)	bc
Total[2]	**21.8** (19.5-24.3)	**29.1** (26.1-32.4)	**25.1** (22.2-28.2)	**21.9** (19.7-24.3)	**19.4** (16.4-22.9)	**13.8** (10.9-17.3)	**11.9** (9.7-14.4)	**9.9** (8.7-11.3)	**11.5** (10.7-12.4)	**21.9** (18.8-25.4)	**23.9** (21.9-26.0)	**26.8** (23.7-30.1)	**26.2** (22.1-30.8)	**27.8** (25.4-30.3)	**22.2** (20.1-24.5)	**22.0** (19.5-24.7)	**20.4** (18.4-22.6)	**18.4** (16.3-20.7)	**18.5** (15.9-21.5)	**16.7** (14.7-18.9)	d
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**31.9** (29.4-34.4)	**32.5** (28.6-36.6)	**30.9** (28.1-34.0)	**27.9** (25.4-30.6)	**26.9** (24.3-29.6)	**28.8** (26.7-31.0)	**23.0** (21.0-25.1)	**25.3** (22.2-28.6)	**22.0** (19.5-24.8)	b
Males[2]	**25.7** (22.7-28.9)	**33.1** (29.3-37.2)	**27.6** (25.1-30.2)	**25.3** (22.6-28.1)	**22.5** (18.8-26.7)	**16.3** (13.4-19.7)	**12.4** (10.2-14.9)	**11.0** (9.6-12.7)	**13.6** (10.3-17.6)	**24.1** (20.8-27.7)	**24.2** (21.3-27.4)	**29.5** (26.2-33.1)	**29.6** (24.5-35.2)	**29.5** (25.9-33.3)	**22.9** (20.2-25.8)	**23.6** (20.3-27.4)	**22.4** (20.0-25.0)	**18.6** (16.0-21.5)	**20.6** (17.1-24.5)	**15.5** (13.1-18.3)	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**23.9** (21.0-27.1)	**24.8** (22.0-27.8)	**28.3** (26.2-30.4)	**25.1** (22.9-27.3)	**24.3** (22.2-26.6)	**22.2** (20.1-24.4)	**21.0** (18.9-23.2)	**20.6** (17.9-23.7)	**20.5** (17.8-23.5)	
Females[2]	**18.3** (15.7-21.3)	**25.0** (21.6-28.7)	**22.4** (17.6-28.0)	**18.6** (16.3-21.1)	**16.1** (12.3-20.8)	**11.4** (8.5-15.2)	**11.4** (8.5-15.0)	**8.7** (7.2-10.4)	**9.5** (7.0-12.8)	**19.8** (16.0-24.1)	**23.6** (21.9-25.4)	**24.0** (19.9-28.6)	**22.8** (18.5-27.7)	**26.1** (23.6-28.9)	**21.5** (18.8-24.5)	**20.2** (17.6-23.1)	**18.3** (15.3-21.8)	**18.2** (14.7-22.2)	**16.4** (13.8-19.4)	**18.0** (15.2-21.2)	
Grade																					
7	**5.6** (4.1-7.5)	**10.4** (8.2-13.0)	**5.4** (4.2-6.8)	**5.1** (2.8-9.1)	**4.6** (3.1-6.8)	**3.8** (2.4-6.0)	**0.9** (0.5-1.5)	**0.7** (0.2-2.1)	**1.7** (0.9-3.0)	**2.6** (1.2-5.6)	**3.4** (1.4-8.1)	**3.5** (2.2-5.6)	**5.1** (3.4-7.6)	**6.2** (4.3-8.7)	**3.0** (1.9-4.9)	**3.6** (2.2-5.8)	**1.1** (0.6-1.8)	**2.4** (1.3-4.4)	**1.7** (1.0-3.1)	†	b
8	—	—	—	—	—	—	—	—	—	—	—	**14.9** (11.6-18.9)	**12.0** (9.4-15.1)	**10.7** (6.8-16.4)	**9.7** (7.3-12.8)	**6.6** (4.7-9.4)	**6.4** (4.4-9.2)	**5.9** (4.1-8.4)	**7.0** (4.2-11.5)	†	b
9	**23.3** (19.3-27.8)	**29.2** (24.1-34.8)	**27.1** (24.1-30.3)	**25.0** (22.1-28.3)	**18.3** (13.1-25.0)	**12.1** (6.0-23.0)	**12.7** (8.8-18.0)	**8.2** (6.6-10.0)	**8.8** (7.5-10.2)	**19.5** (14.1-26.2)	**24.0** (21.6-26.5)	**25.5** (21.7-29.7)	**28.8** (23.8-34.2)	**27.9** (24.5-31.5)	**23.0** (20.2-26.1)	**21.0** (17.2-25.4)	**18.4** (15.0-22.3)	**11.9** (10.0-14.1)	**14.6** (11.6-18.2)	**10.3** (8.2-12.8)	b
10	—	—	—	—	—	—	—	—	—	—	—	**36.4** (30.7-42.6)	**39.0** (35.0-43.1)	**35.9** (31.4-40.8)	**33.6** (30.2-37.1)	**30.9** (27.4-34.6)	**30.7** (26.6-35.0)	**25.5** (20.4-31.4)	**24.5** (20.9-28.4)	**25.2** (21.6-29.1)	b
11	**39.2** (34.4-44.1)	**50.2** (44.3-56.1)	**44.3** (36.6-52.2)	**42.2** (36.8-47.7)	**35.2** (28.6-42.4)	**24.4** (19.9-29.4)	**22.5** (18.5-27.0)	**20.1** (17.3-23.2)	**22.6** (20.5-24.8)	**40.8** (34.1-47.9)	**42.0** (37.5-46.7)	**48.1** (42.8-53.4)	**45.7** (37.7-53.9)	**45.0** (40.6-49.5)	**40.1** (36.2-44.1)	**40.0** (35.9-44.2)	**38.6** (34.4-42.9)	**36.8** (33.2-40.7)	**33.5** (29.1-38.3)	**35.1** (30.9-39.6)	b
12	—	—	—	—	—	—	—	—	—	—	—	**39.4** (33.2-45.9)	**43.5** (33.1-54.5)	**44.8** (39.4-50.4)	**46.2** (42.0-50.5)	**44.7** (40.8-48.7)	**45.6** (41.9-49.3)	**36.4** (31.6-41.5)	**39.2** (34.2-44.4)	**37.2** (32.2-42.5)	

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**19.2** (16.2-22.6)	**20.8** (13.2-31.3)	**24.7** (20.3-29.8)	**20.1** (16.2-24.6)	**21.8** (14.9-30.8)	**19.9** (15.2-25.5)	**18.6** (14.4-23.6)	**22.9** (15.2-32.9)	**18.8** (13.9-25.0)
Toronto[2]	—	—	**17.0** (12.9-21.9)	**19.0** (12.8-27.2)	**19.9** (16.8-23.4)	**10.0** (4.8-19.8)	**10.8** (5.1-21.3)	**7.8** (7.3-8.2)	**8.3** (7.8-8.6)	**18.4** (10.5-30.2)	**17.7** (14.1-21.9)	**18.0** (14.2-22.6)	**21.6** (11.4-37.1)	**22.6** (16.9-29.6)	**16.9** (12.8-22.0)	**17.8** (9.4-31.2)	**14.5** (8.7-23.2)	**14.6** (11.7-18.0)	**19.0** (10.4-32.0)	**15.0** (10.2-21.4)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**31.9** (26.2-38.2)	**27.6** (22.4-33.6)	**33.2** (27.9-39.0)	**33.0** (29.6-36.6)	**33.1** (28.9-37.7)	**31.9** (27.8-36.2)	**29.8** (26.4-33.4)	**23.1** (17.8-29.3)	**23.2** [b] (19.8-27.0)
North[2]	—	—	**23.9** (18.6-30.1)	**23.6** (18.6-29.4)	**22.3** (18.0-27.4)	**17.0** (8.9-29.9)	**17.7** (14.2-22.0)	**11.8** (6.6-20.2)	**24.7** (18.9-31.6)	**27.8** (22.5-33.8)	**24.3** (23.1-25.5)	**26.6** (16.6-39.7)	**26.6** (18.8-36.2)	**32.7** (26.8-39.2)	**30.4** (25.6-35.8)	**27.5** (21.2-35.0)	**25.4** (19.6-32.4)	**27.5** (21.2-34.7)	**18.5** (13.6-24.7)	**19.1** (15.9-22.8)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**31.1** (27.6-34.8)	**32.6** (28.5-37.1)	**30.0** (26.7-33.5)	**29.3** (26.0-32.8)	**24.8** (22.6-27.3)	**27.2** (24.7-29.9)	**20.8** (18.4-23.4)	**21.8** (18.6-23.4)	**19.7** [b] (16.6-23.3)
West[2]	—	—	**27.9** (22.7-33.7)	**23.9** (20.3-28.0)	**20.8** (17.1-25.0)	**13.4** (8.8-20.0)	**11.5** (8.5-15.3)	**10.5** (9.0-12.2)	**11.9** (10.8-13.1)	**22.8** (18.0-28.4)	**24.7** (21.8-28.0)	**29.6** (24.0-35.8)	**29.4** (24.6-34.6)	**28.5** (24.8-32.6)	**23.8** (20.4-27.4)	**21.7** (18.9-24.7)	**22.8** (19.9-26.1)	**18.7** (14.9-23.2)	**17.8** (15.0-21.0)	**15.6** (12.5-19.2)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**27.6** (24.1-31.4)	**28.4** (24.1-33.1)	**30.9** (28.2-33.8)	**25.3** (21.7-29.2)	**27.2** (24.1-30.4)	**25.2** (22.9-27.6)	**24.2** (21.9-26.6)	**25.1** (21.9-28.5)	**24.4** (20.5-28.8)
East[2]	—	—	**27.6** (23.2-32.4)	**20.7** (18.6-23.1)	**15.9** (8.4-28.0)	**16.2** (13.2-19.7)	**11.3** (8.0-15.6)	**10.0** (7.2-13.8)	**9.2** (7.6-11.1)	**21.2** (16.8-26.5)	**26.7** (22.4-31.5)	**28.3** (23.9-33.3)	**25.6** (18.7-33.9)	**28.5** (24.6-32.7)	**21.3** (17.7-25.3)	**23.4** (19.8-27.3)	**19.3** (16.5-22.5)	**18.6** (16.0-21.5)	**19.4** (15.1-24.5)	**18.8** (15.7-22.4)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use cannabis (also known as marijuana, “weed”, “pot”, “grass”, hashish, “hash”, hash oil, etc.)?

Source: OSDUHS, Centre for Addiction & Mental Health

Frequency of Cannabis Use in the Past Year, and in the Past Month

(Figures 3.5.4–3.5.6; Tables 3.2.2a, 3.2.2b, 3.5.2a–3.5.3b)

2015: Grades 7–12

- Among all students, 12.4% report using cannabis six times or more often during the past year (see Table 3.2.2a and Table 3.2.2b for trends). About 9% of students report using between one and five times during the past year.

- During the month (4 weeks) before the survey, 13.8% (95% CI: 12.2%-15.5%) of students used cannabis at least once.

- About 2.1% (95% CI: 1.6%-2.8%) used on a daily basis during the past month – representing about 20,000 Ontario students.

- Daily cannabis use is more prevalent among older students.

- There are no significant differences in daily cannabis use between the sexes, or among the four regions.

1999–2015: Grades 7–12

- The percentage reporting any cannabis use in the past month in 2015 (13.8%) is similar to the percentage seen in 2013 (14.2%), but significantly lower than in 1999 (20.9%).

- There were no significant changes in daily cannabis use between 1999 and 2015.

1981–2015: Grades 7, 9, 11

- Among students in grades 7, 9, and 11 only, cannabis use six or more times in the past year is currently at an elevated level compared with estimates from the late 1980s and early 1990s, but is lower than the peaks evident in the late 1970s and again in the late 1990s/early 2000s (see Table 3.2.2b and Figure 3.5.3).

- Similarly, as seen in the bottom panel of Table 3.5.3b, daily cannabis use in 2015 is significantly higher than the estimates from the late 1980s and early 1990s.

Table 3.5.2a: Frequency of Cannabis Use in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
Frequency:									
Not Used	72.0	71.4	70.4	73.5	74.4	74.4	78.0	77.0	78.7
1-2 times	8.1	7.0	8.6	7.4	6.9	6.6	5.6	6.2	5.5
3-5 times	4.3	5.2	4.5	4.2	4.6	4.6	3.4	3.8	3.5
6-9 times	3.6	3.5	3.4	2.6	3.0	2.7	2.6	2.3	2.5
10-19 times	3.4	3.6	3.3	3.3	3.2	3.3	2.8	3.1	2.5
20-39 times	2.8	2.8	2.6	2.3	2.2	2.3	1.7	2.2	2.0
40+ times	5.8	6.6	7.2	6.7	5.7	6.2	5.8	5.4	5.3

Q: In the last 12 months, how often did you use cannabis (also known as marijuana, "weed", "pot", "grass", hashish, "hash", hash oil, etc.)?
Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.5.2b: Frequency of Cannabis Use in the Past Year, 1981–2015 OSDUHS (Grades 7, 9, 11 only)

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Frequency:																		
Not Used	75.0	78.1	80.6	86.2	88.1	90.1	88.5	78.1	72.2	73.2	73.8	72.2	77.8	78.0	79.6	81.6	81.5	83.3
1-2 times	6.8	7.1	6.6	5.5	5.0	3.6	4.5	6.7	8.0	8.0	6.0	8.2	6.1	6.2	5.4	5.1	5.5	4.1
3-5 times	3.1	3.2	3.3	2.2	2.1	1.7	2.1	3.7	4.5	3.8	4.8	3.6	3.2	3.8	3.8	2.4	2.9	2.6
6-9 times	3.5	2.8	2.3	1.2	1.2	1.1	1.2	2.1	3.3	3.8	2.9	3.2	1.8	2.5	2.3	2.4	1.9	2.2
10-19 times	3.3	2.5	2.0	2.1	1.4	1.1	0.9	2.8	3.5	3.4	4.1	3.4	3.2	3.0	2.5	2.3	2.6	2.5
20-39 times	2.8	1.9	1.7	0.9	1.0	1.0	1.1	2.0	2.8	2.7	2.6	2.5	2.0	1.6	1.7	1.2	1.8	1.7
40+ times	5.5	4.3	3.5	2.0	1.2	1.4	1.6	4.4	5.7	5.1	5.8	6.8	5.9	4.8	4.7	5.1	3.9	3.6

Q: In the last 12 months, how often did you use cannabis (also known as marijuana, "weed", "pot", "grass", hashish, "hash", ash oil, etc.)?
Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.5.4
Frequency of Cannabis Use in the Past Month, 2015 OSDUHS (Grades 7–12)

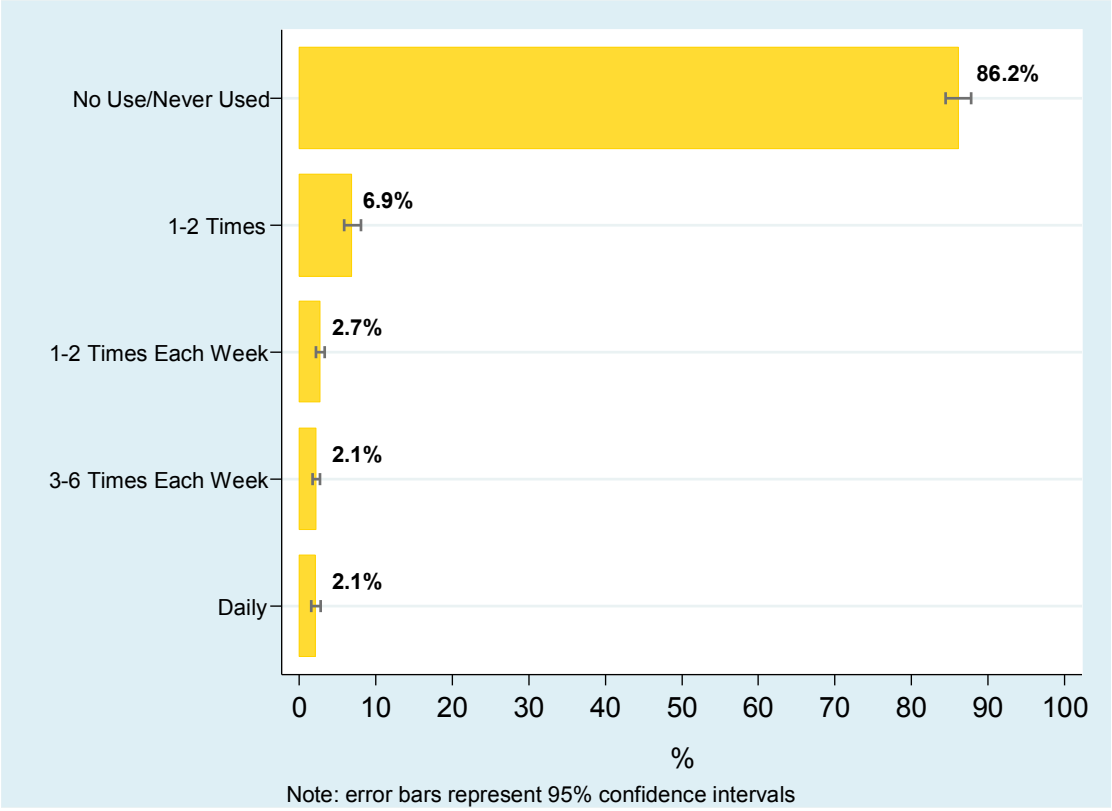


Figure 3.5.5
Daily Cannabis Use in the Past Month by Sex, Grade, and Region, 2015 OSDUHS

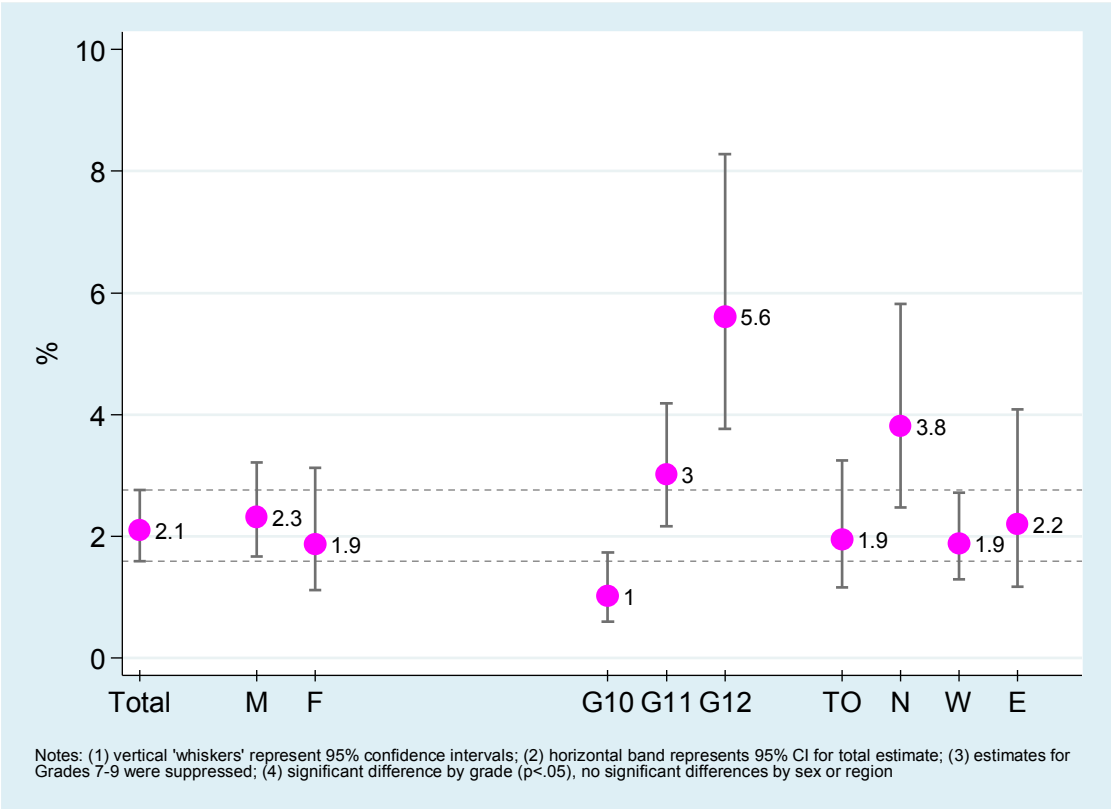


Table 3.5.3a: Frequency of Cannabis Use in the Past Month, 1999–2015 OSDUHS (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011	2013	2015
	(*n*=)	(4447)	(1837)	(3152)	(4078)	(3388)	(4851)	(4816)	(10272)	(10426)
Not Used in the Past Month										
Total		**79.1**	**78.4**	**79.4**	**83.9**	**83.9**	**86.6**	**82.8**	**85.8**	**86.2** [b]
Sex	Males	75.2	75.4	76.2	82.1	82.5	84.0	81.0	83.6	85.3
	Females	83.2	81.4	82.4	85.8	85.3	89.2	84.6	88.3	87.2
1-2 Times										
Total		**10.2**	**10.1**	**8.8**	**7.8**	**8.8**	**7.4**	**8.9**	**7.0**	**6.9**
Sex	Males	10.6	10.0	8.4	7.1	8.2	7.8	8.8	7.4	6.9
	Females	9.8	10.3	9.3	8.5	9.4	7.0	8.9	6.6	6.9
1-2 Times Each Week										
Total		**4.3**	**3.9**	**3.7**	**2.4**	**2.9**	**2.0**	**2.9**	**2.4**	**2.7**
Sex	Males	5.2	5.1	4.1	2.6	2.6	2.6	3.1	2.7	3.0
	Females	3.3	2.7	3.2	2.1	3.2	1.3	2.7	2.0	2.3
3-6 Times Each Week										
Total		**3.8**	**4.5**	**4.0**	**2.8**	**1.9**	**1.7**	**2.5**	**2.1**	**2.1**
Sex	Males	5.2	4.6	5.1	3.4	2.6	2.0	3.3	2.5	2.5
	Females	2.5	4.4	3.8	2	1.2	1.4	1.6	1.8	1.7
Daily Use										
Total		**2.5**	**3.1**	**4.2**	**3.2**	**2.5**	**2.3**	**2.9**	**2.7**	**2.1**
Sex	Males	3.8	5.0	6.2	4.8	4.1	3.5	3.8	3.9	2.3
	Females	1.2	1.2	2.2	1.6	1.0	†	2.1	1.3	1.9

Notes: (1) question asked of a random half sample between 2001 and 2011; (2) † estimate suppressed due to unreliability; (3) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01.

Q: During the last 4 weeks how often (if ever) did you use cannabis (also known as marijuana, "weed", "pot", "grass", hashish, "hash", hash oil, etc.)?

Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.5.6
Frequency of Cannabis Use in the Past Month, 1983–2015 OSDUHS
(Grades 7, 9, 11 only)

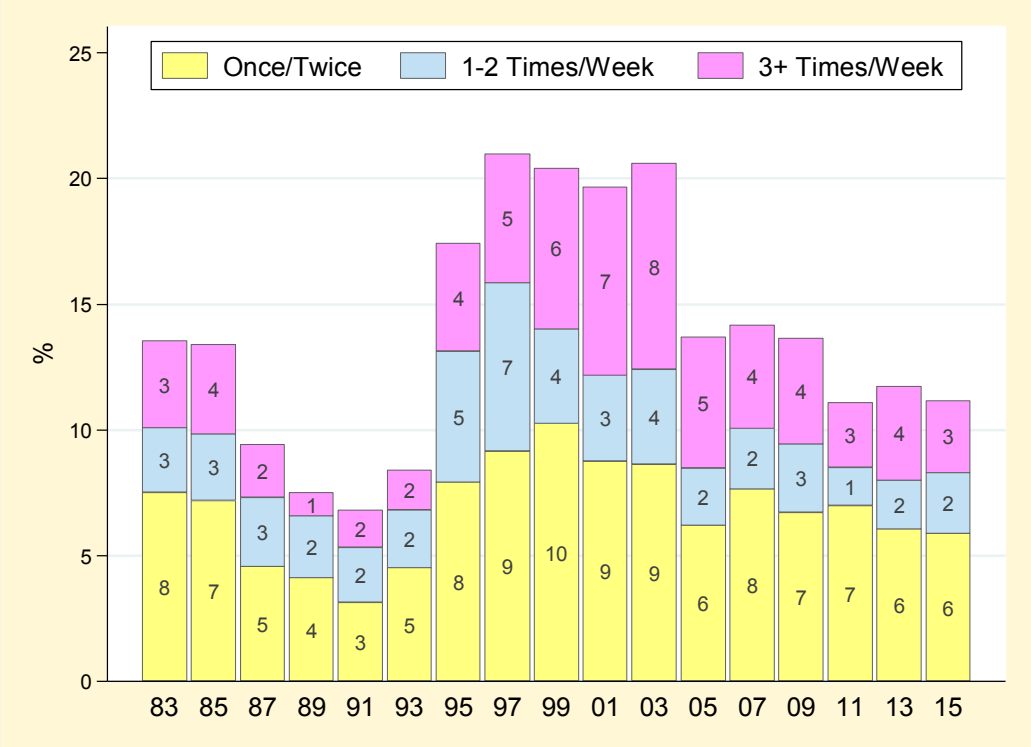


Table 3.5.3b: Frequency of Cannabis Use in the Past Month, 1983–2015 OSDUHS (Grades 7, 9, 11 only)

		1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
	(*n*=)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(2544)	(2421)	(953)	(1618)	(2107)	(1727)	(2355)	(2415)	(5211)	(5225)
Not Uses in Past Month																		
Total		**86.4**	**86.6**	**90.6**	**92.5**	**93.2**	**91.6**	**82.6**	**79.0**	**79.6**	**80.3**	**79.4**	**86.3**	**85.8**	**86.4**	**88.9**	**88.3**	**88.8**
Sex	Males	82.9	84.6	88.6	92.1	92.1	89.0	80.1	77.0	76.8	76.2	74.7	84.5	85.0	84.9	86.7	85.9	89.4
	Females	89.9	88.7	92.4	92.9	94.4	94.1	85.0	80.1	82.4	84.6	83.8	88.2	86.7	87.8	91.1	90.7	88.2
1-2 Times																		
Total		**7.5**	**7.2**	**4.6**	**4.1**	**3.1**	**4.5**	**7.9**	**9.2**	**10.3**	**8.8**	**8.6**	**6.2**	**7.7**	**6.7**	**7.0**	**6.1**	**5.9**
Sex	Males	8.3	7.4	4.9	3.9	3.2	5.2	8.2	8.0	10.3	9.6	8.9	6.1	6.8	6.9	8.0	6.9	5.0
	Females	6.8	7.0	4.3	4.4	3.0	3.9	7.7	10.2	10.3	7.8	8.3	6.4	8.6	6.6	6.0	5.2	6.9
1-2 Times Each Week																		
Total		**2.6**	**2.7**	**2.7**	**2.4**	**2.2**	**2.3**	**5.2**	**6.7**	**3.8**	**3.4**	**3.8**	**2.2**	**2.4**	**2.7**	**1.5**	**1.9**	**2.4**
Sex	Males	3.4	3.1	3.2	2.6	2.3	3.3	6.1	7.0	4.1	4.1	4.5	2.4	2.1	2.8	1.7	2.1	2.3
	Females	1.8	2.2	2.3	2.4	2.0	1.3	4.3	6.4	3.4	2.7	3.0	2.1	2.8	2.7	1.3	1.7	2.6
3-6 Times Each Week																		
Total		**2.6**	**2.5**	**1.5**	**†**	**†**	**1.2**	**2.9**	**3.5**	**4.0**	**4.8**	**3.9**	**2.4**	**1.8**	**1.8**	**1.4**	**1.4**	**1.6**
Sex	Males	4.0	3.4	2.2	†	†	2.0	3.5	5.2	5.5	5.3	5.5	2.7	2.9	2.2	1.8	1.8	2.1
	Females	†	1.5	†	†	†	†	2.4	2.1	2.0	4.2	2.3	1.9	†	1.4	1.0	1.0	1.0
Daily Use																		
Total		**0.9**	**†**	**0.6**	**†**	**0.7**	**†**	**1.4**	**1.6**	**2.5**	**2.7**	**4.3**	**2.8**	**2.3**	**2.4**	**1.2**	**2.3**	**1.3**
Sex	Males	†	†	†	†	†	†	2.1	2.8	3.3	4.8	6.3	4.2	3.2	3.2	1.7	3.2	1.2
	Females	†	†	†	†	†	†	†	†	1.6	†	2.4	1.4	1.4	1.6	†	1.4	1.3

Notes: (1) question asked of a random half sample between 2001 and 2011; (2) † estimate suppressed due to unreliability
Q: During the last 4 weeks, how often (if ever) did you use cannabis (also known as marijuana, "weed", "pot", "grass", hashish, "hash", hash oil, etc.)?
Source: OSDUHS, Centre for Addiction & Mental Health

Cannabis Dependence Among Grades 9–12

(Tables 3.5.4, 3.5.5)

Starting in 2007, the OSDUHS included the *Severity of Dependence Scale* (SDS) for cannabis use (Martin, Copeland, Gates, & Gilmour, 2006). The SDS is a validated 5-item scale used to screen for dependence in adolescent populations. The SDS was asked of a random half sample of grades 9–12 only.

The five questions were: (1) "*In the last 3 months, how often was your use of cannabis out of control?*"; (2) "*In the last 3 months, how often did the idea of missing a smoke of cannabis make you very anxious or worried?*"; (3) "*In the last 3 months, how much did you worry about your use of cannabis?*"; (4) "*In the last 3 months, how often did you wish you could stop using cannabis?*"; and (5) "*How difficult would it be for you to stop or go without using cannabis?*"

The response options for items #1, 2, and 4 were: *Never used; Did not use in the last 3 months; Never; Sometimes; Often;* or A*lways*. Responses for item #3 were: *Never used; Did not use in the last 3 months; Not at all; A little; Quite a lot;* or *A great deal*. Responses for item #5 were: *Don't use; Not difficult; Quite difficult; Very difficult;* or *Impossible*. Each item was scored on a 4-point scale and item scores were summed. A total score of 4 or more (of 15) indicates potential cannabis dependence (α=0.78).

2015: Grades 9–12 (Among the Total Sample)

- An estimated 2.2% of students in grades 9 through 12 report symptoms of cannabis dependence. This percentage represents about 14,900 Ontario secondary students. Males (1.7%) and females (2.8%) are equally likely to report dependence symptoms.

2015: Grades 9–12 (Among Cannabis Users)

- When we look at the results among users only, about 7.2% of past year cannabis users in grades 9 through 12 report dependence symptoms.

2007–2015: Grades 9– 12

☐ Among the total sample, the percentage reporting symptoms of cannabis dependence has not significantly changed since 2007.

Table 3.5.4: Percentage of the Total Sample, and of Past Year Cannabis Users, Reporting Severity of Dependence (SDS) Indicators Experienced in the Past Three Months, 2015 OSDUHS (Grades 9–12)

	Total Sample (*n*=3171)	Past Year Users (*n*=869)
1. Your cannabis use was out of control *	3.4	11.7
2. Idea of missing a smoke of cannabis made you very anxious or worried *	5.9	19.6
3. Worried about your use of cannabis †	5.8	20.1
4. Wished you could stop using cannabis *	4.1	14.1
5. Would be difficult for you to stop or go without using cannabis ‡	2.6	8.6
SDS Score 4+ (95 % CI)	**2.2%** (1.5-3.2)	**7.2%** (5.1-10.2)

Notes: based on a random half sample of secondary school students; CI=confidence interval; * percentage reporting *sometimes, often,* or *always/nearly always*; † percentage reporting *a little, quite a lot,* or *a great deal*; ‡ percentage reporting *quite difficult, very difficult*, or *impossible*.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.5.5: Percentage of Total Sample Reporting Symptoms of Cannabis Dependence as Measured by the Severity of Dependence Scale (SDS), 2007–2015 OSDUHS (Grades 9–12)

		2007	2009	2011	2013	2015
	(*n*=)	(2587)	(3055)	(3358)	(3264)	(3171)
Total		**3.5**	**3.6**	**2.7**	**2.7**	**2.2**
(95% CI)		(2.8-4.4)	(2.7-4.7)	(1.8-4.3)	(1.9-3.8)	(1.5-3.2)
Sex						
	Males	**4.4** (3.2-6.0)	**4.4** (3.0-6.6)	**3.6** (2.1-6.4)	**2.8** (1.8-4.2)	**1.7** (1.0-2.7)
	Females	**2.6** (1.8-3.8)	**2.7** (1.7-4.2)	**1.8** (1.1-2.9)	**2.5** (1.5-4.1)	**2.8** (1.6-4.6)
Grade						
	9	**2.3** (1.3-4.1)	†	†	†	†
	10	**3.4** (2.1-5.4)	†	†	**3.1** (1.8-5.6)	**1.2** (0.7-2.2)
	11	**4.5** (2.9-7.1)	†	†	**3.6** (2.0-6.2)	**2.8** (1.7-4.6)
	12	**3.8** (2.4-5.9)	**4.5** (2.9-6.9)	**4.0** (2.4-6.7)	†	**3.3** (1.8-6.2)
Region						
	Toronto	†	†	**3.0** (1.9-4.7)	†	†
	North	**7.0** (4.0-12.0)	†	**4.1** (2.4-6.7)	**3.1** (1.8-5.1)	**3.6** (2.3-5.5)
	West	**2.9** (1.9-4.3)	**2.5** (1.5-4.2)	†	**2.7** (1.5-5.0)	**2.4** (1.4-3.9)
	East	**4.1** (3.1-5.4)	**5.7** (3.9-8.3)	**2.8** (1.8-4.5)	**3.0** (1.7-5.1)	†

Notes: (1) entries in brackets are 95% confidence intervals; (2) cannabis dependence is indicated by a score of 4 or higher (of 15) on the SDS; (3) scale asked of a random half sample of secondary students in each year; (4) † estimate suppressed due to unreliability; (5) no significant changes over time among the total sample.
Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Synthetic Cannabis ("Spice," "K2") Use

(Table 3.5.6)

Starting in 2013, students were asked about their use of synthetic cannabis (cannabinoids), also known as "Spice," "K2," "K3," "black mamba," or "legal weed." Synthetic cannabis refers to a wide variety of herbal mixtures that contain plant material, preservatives, fragrance, and chemicals that fall into the cannabinoid family. The texture of synthetic cannabis resembles potpourri and it is usually smoked. Synthetic cannabis is marketed as a "safe," legal alternative to cannabis, but is illegal in Canada because of the synthetic cannabinoid compounds. Generally, the effects are similar to those of cannabis – elevated mood, relaxation, and altered perception, with the potential for rapid heart rate, agitation, anxiety, nausea, and other adverse effects. However, because there are over 100 types of synthetic cannabinoids (and new derivatives are continuously emerging), each with differing potency, the effects from use will vary greatly.

	"Spice" Use in 2015 (Grades 7–12)	Trends (Grades 7–12)
Total Sample	■ Among students in grades 7 through 12, the percentage reporting using synthetic cannabis at least once in the past year is 1.3%. This estimate represents about 12,100 students in Ontario.	☐ Among all students, the past year use of synthetic cannabis remained stable between 2013 (1.8%) and 2015 (1.3%).
Sex	■ There is no significant difference between males (1.5%) and females (1.0%).	☐ Neither males nor females showed a significant change in use between 2013 and 2015.
Grade	■ There is variation by grade. Students in grades 7–9 report almost no use of synthetic cannabis in the past year (suppressed estimates). About 2% of students in the older grades report use.	☐ No grade showed a significant change between 2013 and 2015.
Region	■ There is no significant regional variation.	☐ No region showed a significant change between 2013 and 2015.

Table 3.5.6: Percentage Reporting Synthetic Cannabis ("Spice," "K2") Use in the Past Year, 2013–2015 OSDUHS

		2013 (*n*=10,272)	2015 (*n*=10,426)
Total		**1.8**	**1.3**
(95% CI)		(1.2-2.6)	(0.9-1.7)
Sex			
	Males	**1.9** (1.2-2.8)	**1.5** (1.0-2.3)
	Females	**1.7** (1.1-2.5)	**1.0** (0.7-1.6)
Grade			
	7	†	†
	8	†	†
	9	**0.8** (0.4-1.5)	†
	10	**2.6** (1.7-4.0)	**1.6** (0.9-2.6)
	11	**2.3** (1.4-3.6)	**1.9** (1.1-3.0)
	12	†	**2.0** (1.2-3.3)
Region			
	Toronto	†	**1.3** (0.7-2.5)
	North	†	**1.6** (1.0-2.5)
	West	†	**0.9** (0.6-1.5)
	East	**1.6** (1.0-2.4)	**1.6** (0.9-2.9)

Notes: (1) question asked of a random half sample in 2013 and 2015; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) no significant differences 2015 vs. 2013.

Q: In the last 12 months, how often did you use the drug 'Spice' (also known as 'K2', 'K3', 'Blaze', 'Black Mamba', 'legal weed', 'fake pot', 'IZMS')?

Source: OSDUHS, Centre for Addiction & Mental Health

3.6 Other Illicit Drug Use

3.6.1 Other Illicit Drug Use Among Grades 7–12

Past Year Inhalant Use: Glue or Solvents

(Figures 3.6.1–3.6.3; Table 3.6.1)

Inhalants are substances, such as glue, cleaning solvents, gasoline, and aerosols, with chemical vapours that produce a "high" when inhaled through the nose or mouth. Inhalants are legal, widely available, and inexpensive, all of which makes them attractive to children and young adolescents.

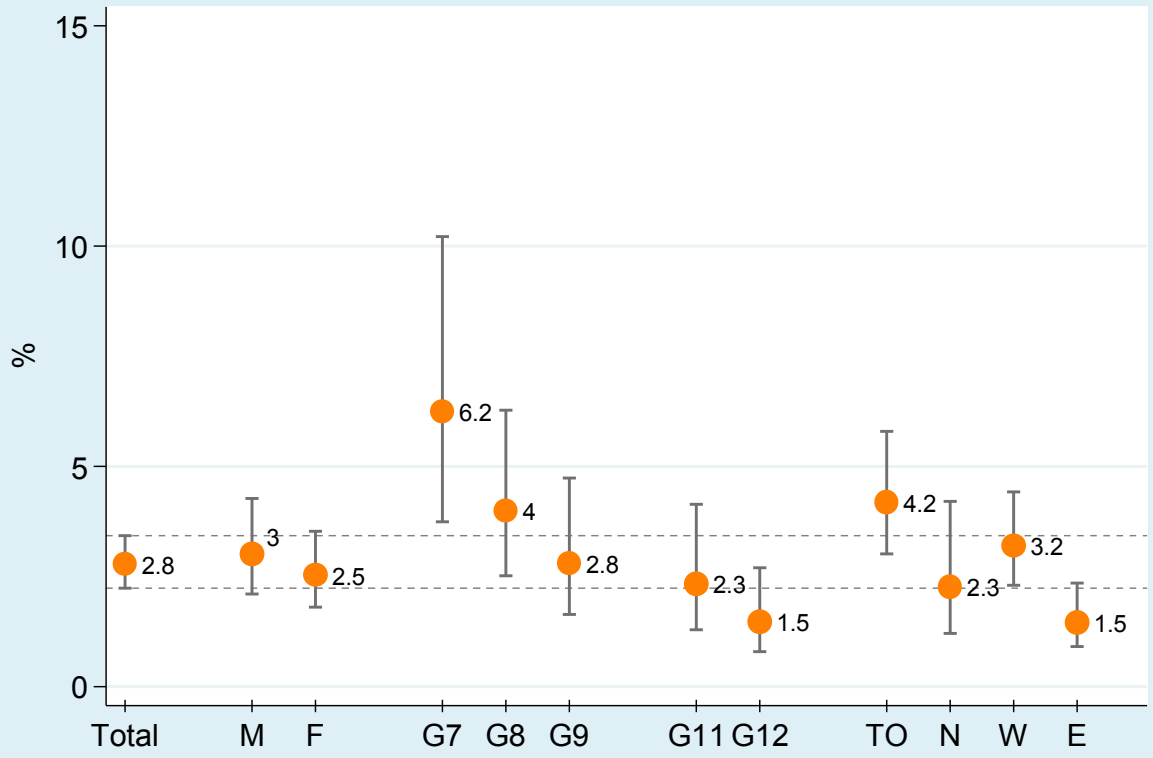
	Inhalant Use in 2015 (Grades 7–12)	Trends in Inhalant Use
Total Sample	■ Overall, 2.8% of Ontario students report inhaling glue or solvents in order to "get high" at least once during the 12 months before the survey. With the sampling error, we estimate that between 2.2% and 3.4% (95% CI) of students inhaled glue or solvents. The current estimate of 2.8% represents about 25,400 students in grades 7 through 12 in Ontario.	☐ The percentage of students in grades 7 through 12 that inhale glue or solvents did not significantly change between 2013 (3.4%) and 2015 (2.8%). Inhalant use shows a significant downward trend since 1999, when the estimate was at 8.9%. ☐ Over the long-term (among grades 7, 9, and 11 only), inhalant use decreased gradually during the 1980s, increased gradually during the 1990s peaking in 1999, and decreased again during the 2000s. Use is currently lower than the peak years seen in the late 1970s and again in 1999, and is similar to the low levels seen in the late 1980s and early 1990s.
Sex	■ There is no significant difference between males (3.0%) and females (2.5%).	☐ Neither sex shows a significant change in use between 2013 and 2015. Both sexes show a significant decreasing linear trend since 1999 (males dropped from 8.0% in 1999 to 3.0% in 2015; females dropped from 9.8% in 1999 to 2.5% in 2015).
Grade	■ Inhaling glue or solvents significantly decreases with grade, from 6.2% among 7th graders to 1.5% among 12th graders.	☐ None of the grades shows a significant change in inhalant use between 2013 and 2015. However, all grades, except grade 11, show a significant downward trend in inhalant use since 1999.
Region	■ There are significant differences, with Toronto students (4.2%) most likely, and those in the East (1.5%) least likely, to use.	☐ No region shows a significant change in use between 2013 and 2015. However, all regions show a significant downward trend since 1999.

Frequency of Use

- Inhaling glue or solvents six times or more often in the past year was reported by 0.7% of the total sample (see Figure 3.1.3).

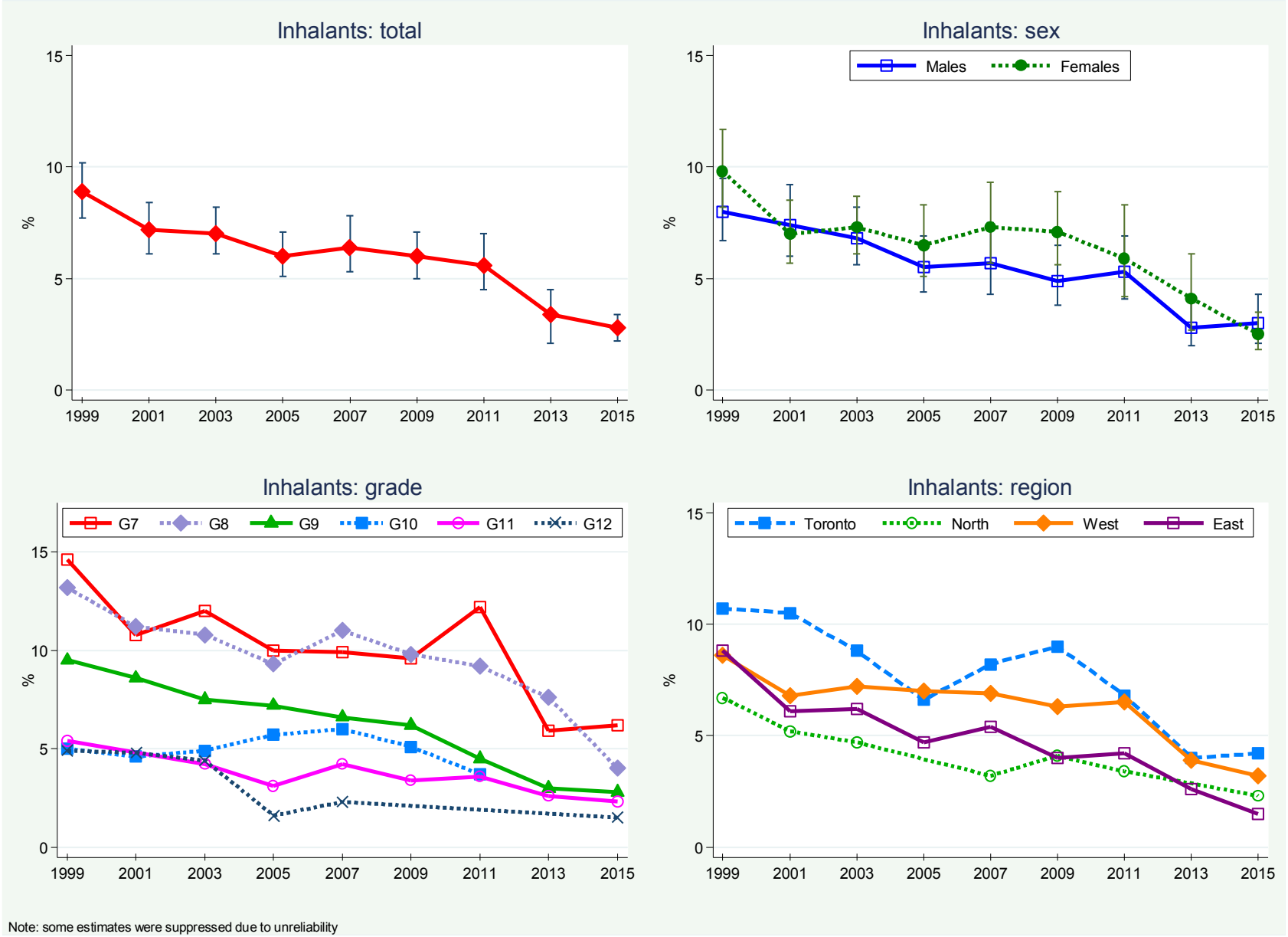
- Most (65%) past year users report using inhalants only once or twice in the past year (see Figure 3.1.4).

Figure 3.6.1
Past Year Inhalant Use (Glue or Solvents) by Sex, Grade, and Region, 2015 OSDUHS



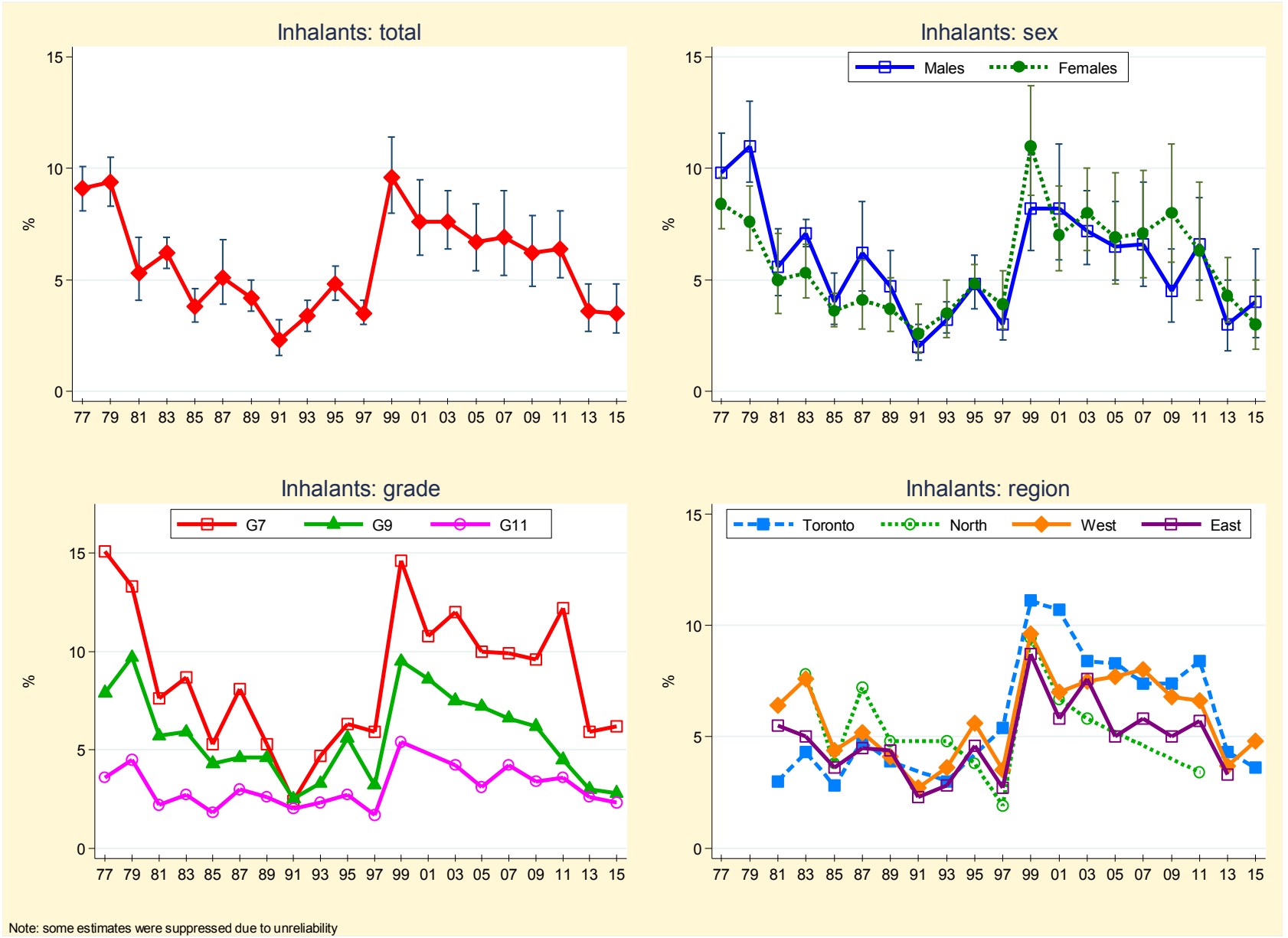
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 10 was suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.6.2
Past Year Inhalant Use (Glue or Solvents), 1999–2015 OSDUHS (Grades 7–12)



Note: some estimates were suppressed due to unreliability

Figure 3.6.3
Past Year Inhalant Use (Glue or Solvents), 1977–2015 OSDUHS (Grades 7, 9, 11 only)



Note: some estimates were suppressed due to unreliability

Table 3.6.1: Percentage Reporting Inhalant Use (Glue or Solvents) During the Past Year, 1977–2015 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**8.9** (7.7-10.2)	**7.2** (6.1-8.4)	**7.0** (6.1-8.2)	**6.0** (5.1-7.1)	**6.4** (5.3-7.8)	**6.0** (5.0-7.1)	**5.6** (4.5-7.0)	**3.4** (2.7-4.5)	**2.8** [bcd] (2.2-3.4)
Total[2] (95% CI)	**9.1** (8.1-10.1)	**9.4** (8.3-10.5)	**5.3** (4.1-6.9)	**6.2** (5.5-6.9)	**3.8** (3.1-4.6)	**5.1** (3.9-6.8)	**4.2** (3.6-5.0)	**2.3** (1.6-3.2)	**3.4** (2.7-4.1)	**4.8** (4.1-5.6)	**3.5** (3.0-4.1)	**9.6** (8.0-11.4)	**7.6** (6.1-9.5)	**7.6** (6.4-9.0)	**6.7** (5.4-8.4)	**6.9** (5.2-9.0)	**6.2** (4.7-7.9)	**6.4** (5.1-8.1)	**3.6** (2.7-4.8)	**3.5** [d] (2.6-4.8)
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**8.0** (6.7-9.5)	**7.4** (6.0-9.2)	**6.8** (5.6-8.2)	**5.5** (4.4-6.9)	**5.7** (4.3-7.5)	**4.9** (3.8-6.5)	**5.3** (4.1-6.9)	**2.8** (2.0-4.0)	**3.0** [b] (2.1-4.3)
Males[2]	**9.8** (8.2-11.6)	**11.0** (9.4-13.0)	**5.6** (4.3-7.3)	**7.1** (6.5-7.7)	**4.0** (3.0-5.3)	**6.2** (4.5-8.5)	**4.7** (3.6-6.3)	**2.0** (1.4-3.0)	**3.2** (2.6-4.0)	**4.8** (3.7-6.1)	**3.0** (2.3-4.0)	**8.2** (6.3-10.6)	**8.2** (5.9-11.1)	**7.2** (5.7-9.0)	**6.5** (5.0-8.5)	**6.6** (4.7-9.4)	**4.5** (3.1-6.4)	**6.6** (5.0-8.7)	**3.0** (1.8-5.0)	**4.0** (2.4-6.4)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**9.8** (8.2-11.7)	**7.0** (5.7-8.5)	**7.3** (6.1-8.7)	**6.5** (5.1-8.3)	**7.3** (5.7-9.3)	**7.1** (5.6-8.9)	**5.9** (4.2-8.2)	**4.1** (2.7-6.1)	**2.5** [b] (1.8-3.5)
Females[2]	**8.4** (7.3-9.6)	**7.6** (6.3-9.2)	**5.0** (3.5-7.1)	**5.3** (4.2-6.6)	**3.6** (2.9-4.4)	**4.1** (2.8-5.9)	**3.7** (2.7-5.1)	**2.6** (1.7-3.9)	**3.5** (2.4-5.0)	**4.8** (4.9-5.7)	**3.9** (2.8-5.4)	**11.0** (8.8-13.7)	**7.0** (5.4-9.2)	**8.0** (6.3-10.0)	**6.9** (4.8-9.8)	**7.1** (5.1-9.9)	**8.0** (5.8-11.1)	**6.3** (4.1-9.4)	**4.3** (3.1-6.0)	**3.0** (1.9-5.0)
Grade																				
7	**15.1** (13.2-17.1)	**13.3** (11.5-15.3)	**7.6** (4.6-12.6)	**8.7** (7.4-10.3)	**5.3** (3.9-7.2)	**8.1** (5.2-12.4)	**5.3** (3.9-7.1)	**2.4** (1.2-4.46)	**4.7** (3.4-6.4)	**6.3** (4.8-8.1)	**5.9** (4.7-7.3)	**14.6** (11.6-18.1)	**10.8** (8.4-13.8)	**12.0** (8.6-16.4)	**10.0** (7.0-14.2)	**9.9** (6.3-15.4)	**9.6** (6.4-14.1)	**12.2** (8.9-16.6)	**5.9** (4.1-8.4)	**6.2** [b] (3.7-10.2)
8	—	—	—	—	—	—	—	—	—	—	—	**13.2** (10.5-16.5)	**11.2** (8.9-14.1)	**10.8** (8.1-14.3)	**9.3** (7.1-12.3)	**11.0** (8.4-14.5)	**9.8** (7.3-13.2)	**9.2** (6.6-12.8)	**7.6** (4.9-11.6)	**4.0** [b] (2.5-6.3)
9	**7.9** (6.7-9.4)	**9.7** (7.9-11.9)	**5.7** (4.6-7.2)	**5.9** (5.0-7.0)	**4.3** (3.2-5.8)	**4.6** (3.3-6.2)	**4.6** (3.7-5.8)	**2.5** (1.7-3.8)	**3.3** (3.1-3.5)	**5.6** (4.5-6.8)	**3.2** (2.5-4.2)	**9.5** (7.3-12.3)	**8.6** (6.3-11.6)	**7.5** (6.0-9.3)	**7.2** (5.1-10.1)	**6.6** (4.2-10.4)	**6.2** (3.9-9.8)	**4.5** (3.2-6.5)	**3.0** (1.9-4.7)	**2.8** [b] (1.6-4.7)
10	—	—	—	—	—	—	—	—	—	—	—	**5.0** (3.3-7.6)	**4.6** (2.9-7.4)	**4.9** (3.6-6.6)	**5.7** (4.0-8.2)	**6.0** (4.1-8.7)	**5.1** (3.5-7.6)	**3.7** (2.2-6.2)	†	† [b]
11	**3.6** (2.5-5.0)	**4.5** (3.3-6.2)	**2.2** (1.3-3.6)	**2.7** (2.1-3.6)	**1.8** (1.1-2.9)	**3.0** (1.9-4.8)	**2.6** (2.0-3.4)	**2.0** (1.0-3.6)	**2.3** (1.3-4.0)	**2.7** (1.7-4.2)	**1.7** (1.0-2.8)	**5.4** (3.4-8.6)	†	**4.2** (3.0-5.9)	**3.1** (1.9-5.2)	**4.2** (2.6-6.8)	**3.4** (2.0-5.8)	**3.6** (1.9-6.6)	**2.6** (1.4-4.8)	**2.3** (1.3-4.1)
12	—	—	—	—	—	—	—	—	—	—	—	**4.9** (3.1-7.7)	**4.8** (3.0-7.5)	**4.4** (3.1-6.3)	**1.6** (0.8-2.9)	**2.3** (1.4-4.0)	†	†	†	**1.5** [b] (0.8-2.7)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**10.7** (7.9-14.4)	**10.5** (7.0-15.6)	**8.8** (6.4-12.1)	**6.6** (4.7-9.0)	**8.2** (6.6-10.0)	**9.0** (6.2-13.1)	**6.8** (5.1-9.0)	**4.0** (2.3-7.1)	**4.2** [b] (3.0-5.8)
Toronto[2]	—	—	**3.0** (1.6-5.2)	**4.3** (2.6-7.2)	**2.8** (1.4-5.5)	**4.8** (3.5-6.7)	**3.9** (2.8-5.4)	†	**3.0** (1.9-4.5)	†	**5.4** (4.0-7.2)	**11.1** (7.6-15.9)	**10.7** (6.4-17.5)	**8.4** (5.2-13.1)	**8.3** (5.7-12.0)	**7.4** (4.6-11.6)	**7.4** (4.2-12.8)	**8.4** (5.9-11..9)	**4.3** (2.5-7.3)	**3.6** (1.9-6.9)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**6.7** (4.5-9.9)	**5.2** (3.8-7.2)	**4.7** (3.6-6.2)	†	**3.2** (1.9-5.3)	**4.1** (2.3-7.2)	**3.4** (1.9-5.9)	†	**2.3** [b] (1.2-4.2)
North[2]	—	—	†	**7.8** (6.6-9.1)	**3.8** (2.1-6.5)	**7.2** (5.5-9.5)	**4.8** (2.7-8.2)	†	**4.8** (3.2-7.1)	**3.8** (3.2-4.3)	**1.9** (1.2-3.0)	**9.4** (5.1-16.7)	**6.7** (4.7-9.4)	**5.8** (4.2-8.0)	†	†	†	**3.4** (1.9-6.2)	†	†
West[1]	—	—	—	—	—	—	—	—	—	—	—	**8.6** (6.9-10.6)	**6.8** (5.4-8.5)	**7.2** (5.7-9.2)	**7.0** (5.4-8.9)	**6.9** (4.9-9.5)	**6.3** (4.8-8.3)	**6.5** (4.3-9.8)	**3.9** (2.7-5.6)	**3.2** [b] (2.3-4.4)
West[2]	—	—	**6.4** (4.2-9.6)	**7.6** (7.0-8.3)	**4.4** (3.7-5.2)	**5.2** (2.9-9.2)	**4.1** (3.1-5.4)	**2.7** (1.7-4.2)	**3.6** (2.8-4.6)	**5.6** (4.9-6.4)	**3.5** (2.6-4.7)	**9.6** (7.2-12.7)	**7.0** (5.1-9.6)	**7.5** (5.8-9.7)	**7.7** (5.4-10.7)	**8.0** (5.1-12.3)	**6.8** (4.7-9.8)	**6.6** (4.2-10.4)	**3.7** (2.4-5.5)	**4.8** (3.1-7.2)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**8.8** (6.9-11.2)	**6.1** (4.6-7.9)	**6.2** (4.8-8.2)	**4.7** (3.4-6.5)	**5.4** (3.8-7.7)	**4.0** (3.0-5.4)	**4.2** (3.2-5.5)	**2.6** (1.8-3.6)	**1.5** [b] (0.9-2.4)
East[2]	—	—	**5.5** (5.0-6.1)	**5.0** (3.9-6.4)	**3.6** (2.3-5.7)	**4.5** (2.9-6.8)	**4.4** (3.4-5.8)	**2.3** (1.3-4.3)	**2.8** (1.5-5.1)	**4.6** (3.5-6.1)	**2.7** (2.2-3.4)	**8.7** (6.2-11.9)	**5.8** (3.7-8.9)	**7.6** (5.6-10.3)	**5.0** (3.2-7.8)	**5.8** (3.8-8.7)	**5.0** (3.0-8.0)	**5.7** (4.1-7.8)	**3.3** (1.9-5.9)	†

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) question asked of a random half-sample starting in 2005; (4) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) entries in brackets are 95% confidence intervals; (6) † estimate suppressed due to unreliability; (7) estimates prior to 2011 are based on two separate questions (glue and solvent use) in the questionnaire; (8) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12months, how often did you sniff glue or solvents (for example, gasoline, butane, aerosols, paint thinner, nail polish remover, etc.) in order to get high?

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Salvia Divinorum Use

(Figure 3.6.4; Table 3.6.2)

Salvia divinorum (also known as "salvia," "magic mint") is a legal plant that can be purchased online or in "head shops." This drug can be ingested either by chewing the fresh leaves, drinking their extracted juices, or smoking the dried leaves. Its effects include intense short-lived hallucinations and delusions. Use was first monitored in the 2009 cycle of the survey.

	Salvia Divinorum Use in 2015 (Grades 7–12)	Trends in Salvia Divinorum Use (Grades 7–12)
Total Sample	■ In 2015, 1.6% of students in grades 7 through 12 report using salvia divinorum at least once in the past year. This percentage represents roughly 14,700 students in Ontario.	☐ The 2015 estimate (1.6%) for past year salvia use is similar to that found in 2013 (2.6%), but is significantly lower than the estimate from 2009 (4.4%).
Sex	■ Males (2.2%) are significantly more likely than females (1.0%) to use salvia divinorum.	☐ Only males show a significant decrease in use between 2009 and 2015, from 6.2% to 2.2%. Use among females remained low and stable.
Grade	■ There is significant grade variation showing that salvia use is most likely among 12th graders (4.1%).	☐ Among the grades, only 11th graders show a significant decrease between 2009 and 2015.
Region	■ Despite some variation, there are no significant regional differences.	☐ Among the regions, only students in the West show a significant decrease between 2009 and 2015.
Frequency of Use	■ Most (86%) salvia users report using only once or twice in the past year (see Figure 3.1.4).	

Figure 3.6.4
Past Year Salvia Divinorum Use by Sex, Grade, and Region, 2015 OSDUHS

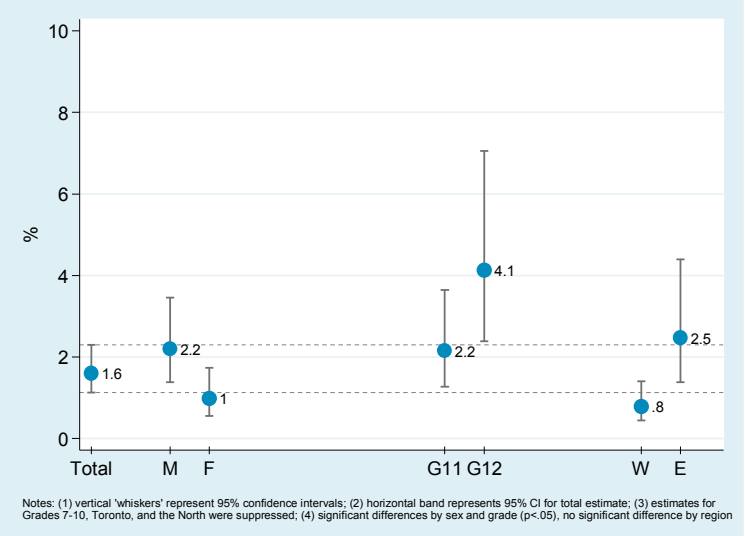


Table 3.6.2: Percentage Reporting Salvia Divinorum Use in the Past Year, 2009–2015 OSDUHS

	(*n*=)	2009 (4220)	2011 (4472)	2013 (4794)	2015 (5023)
Total		**4.4**	**3.7**	**2.6**	**1.6** [b]
(95% CI)		(3.3-5.7)	(2.8-4.8)	(1.7-3.8)	(1.1-2.3)
Sex					
	Males	**6.2** (4.7-8.2)	**5.1** (3.7-6.8)	**3.6** (2.2-5.8)	**2.2** [b] (1.4-3.5)
	Females	**2.3** (1.5-3.5)	**2.1** (1.1-4.0)	**1.5** (0.9-2.2)	**1.0** (0.6-1.7)
Grade					
	7	†	†	†	†
	8	†	†	†	†
	9	†	**3.1** (1.7-5.4)	†	†
	10	**4.7** (2.9-7.3)	**5.0** (3.2-7.8)	**2.7** (1.6-4.4)	†
	11	**8.6** (6.4-11.4)	**5.2** (3.5-7.6)	**4.3** (2.4-7.4)	**2.2** [b] (1.3-3.6)
	12	**8.4** (5.4-12.7)	**6.2** (3.3-11.3)	**4.4** (2.4-7.8)	**4.1** (2.4-7.1)
Region					
	Toronto	†	†	†	†
	North	**9.2** (6.5-12.8)	**4.9** (2.8-8.6)	†	†
	West	**4.7** (2.8-7.6)	**3.0** (1.6-5.5)	**2.2** (1.3-3.9)	**0.8** [b] (0.4-1.4)
	East	**4.0** (3.0-5.4)	**5.0** (3.9-6.4)	**3.3** (1.7-6.1)	**2.5** (1.4-4.4)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant differences 2015 vs. 2013; [b] 2015 vs. 2009 significant difference, p<.01; [c] significant linear trend, p<.01.
Q: In the last 12 months, how often did you use salvia divinorum (also known as "sally-D", "magic mint", "sadi")?
Source: OSDUHS, Centre for Addiction & Mental Health

3.6.2 Other Illicit Drug Use Among Grades 9–12

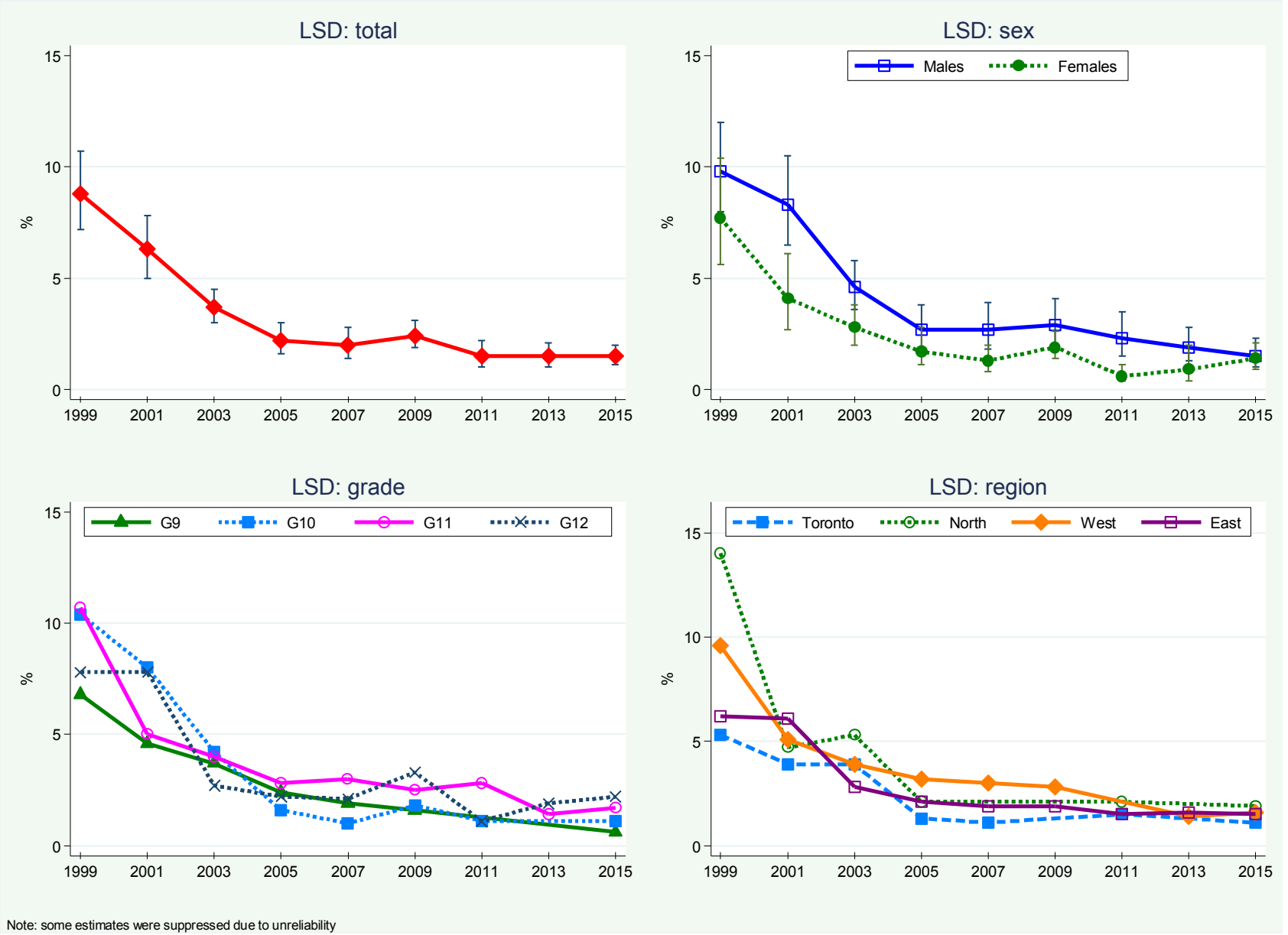
Past Year LSD Use

(Figures 3.6.5, 3.6.6; Table 3.6.3)

LSD (also known as "acid") is a semi-synthetic hallucinogenic substance, originally derived from a fungus. LSD is usually taken orally. The effects include altered perceptions (e.g., visual patterns), increased heart rate, body temperature, and sleeplessness. Starting in 2013, the question about LSD use was asked of students in grades 9 through 12 only (not asked of grades 7 and 8).

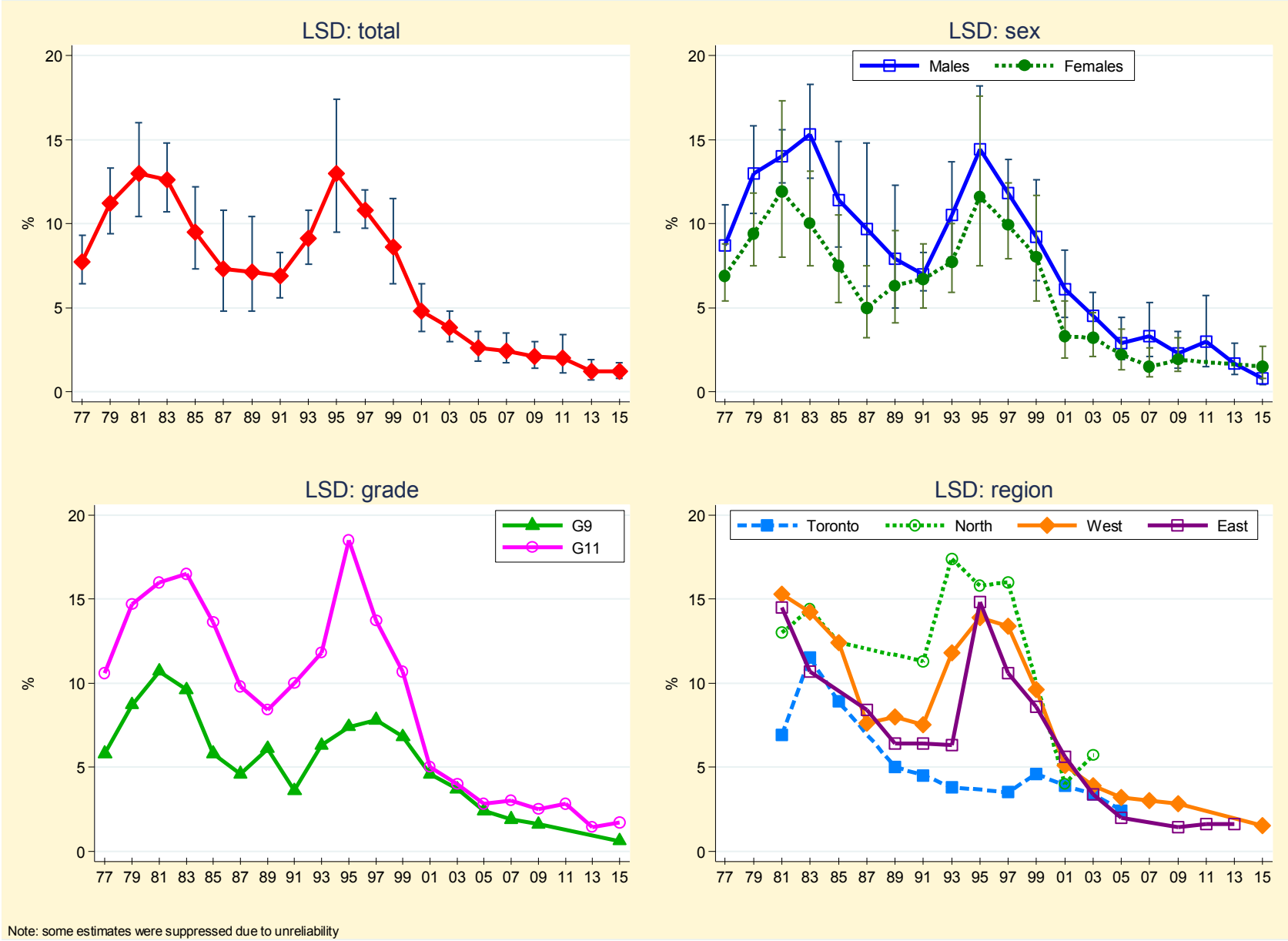
	LSD Use in 2015 (Grades 9–12)	Trends in LSD Use
Total Sample	■ LSD use is reported by 1.5% of Ontario students in grades 9 through 12 (representing about 10,300 students). With the sampling error, we estimate that between 1.1% and 2.0% (95% CI) of students in Ontario use LSD.	☐ LSD use remained stable between 2013 and 2015 (both years at 1.5%) among the total sample of secondary students. LSD use showed a significant downward trend between 1999 and 2005 (from 8.8% down to 2.2%), followed by low and stable estimates between 2005 and 2015. ☐ Over the long-term (among grades 9 and 11 only), LSD use decreased in the 1980s and early 1990s, made a brief comeback between 1991 and 1995, and has been moving downward since then, reaching an all-time low in recent years.
Sex	■ LSD use does not significantly differ between males (1.5%) and females (1.4%).	☐ No sex shows a significant change in LSD use between 2013 and 2015. Both males and females show a significant decline in use between 1999 and 2015.
Grade	■ LSD use significantly varies by grade from a low of 0.6% among 9th graders to 2.2% among 12th graders.	☐ No grade shows a significant change between 2013 and 2015. All four grades show a significant decline since 1999.
Region	■ LSD use does not significantly differ by region.	☐ No region shows a significant change in LSD use between 2013 and 2015. All four regions show a significant decline since 1999.
Frequency of Use	■ The majority (71%) of LSD users report using only once or twice during the past year (see Figure 3.1.4).	

Figure 3.6.5
Past Year LSD Use, 1999–2015 OSDUHS (Grades 9–12)



Note: some estimates were suppressed due to unreliability

Figure 3.6.6
Past Year LSD Use, 1977–2015 OSDUHS (Grades 9 and 11 only)



Note: some estimates were suppressed due to unreliability

Table 3.6.3: Percentage Reporting LSD Use in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2404)	(2792)	(3223)	(3111)	(3351)
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**8.8** (7.2-10.7)	**6.3** (5.0-7.8)	**3.7** (3.0-4.5)	**2.2** (1.6-3.0)	**2.0** (1.4-2.8)	**2.4** (1.9-3.1)	**1.5** (1.0-2.2)	**1.5** (1.0-2.1)	**1.5**[bcd] (1.1-2.0)
Total[2]	**7.7** (6.4-9.3)	**11.2** (9.4-13.3)	**13.0** (10.4-16.0)	**12.6** (10.7-14.8)	**9.5** (7.3-12.2)	**7.3** (4.8-10.8)	**7.1** (4.8-10.4)	**6.9** (5.6-8.3)	**9.1** (7.6-10.8)	**13.0** (9.5-17.4)	**10.8** (9.7-12.0)	**8.6** (6.4-11.5)	**4.8** (3.6-6.4)	**3.8** (3.0-4.8)	**2.6** (1.8-3.6)	**2.4** (1.7-3.5)	**2.1** (1.4-3.0)	**2.0** (1.1-3.4)	**1.2** (0.7-1.9)	**1.2**[cd] (0.8-1.7)
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**9.8** (8.0-12.0)	**8.3** (6.5-10.5)	**4.6** (3.6-5.8)	**2.7** (1.9-3.8)	**2.7** (1.8-3.9)	**2.9** (2.0-4.1)	**2.3** (1.5-3.5)	**1.9** (1.3-2.8)	**1.5**[b] (1.0-2.3)
Males[2]	**8.7** (6.8-11.1)	**13.0** (10.6-15.8)	**14.0** (12.4-15.6)	**15.3** (12.7-18.3)	**11.4** (8.6-14.9)	**9.7** (6.3-14.8)	**7.9** (5.0-12.3)	**7.0** (6.0-8.3)	**10.5** (8.0-13.7)	**14.4** (11.3-18.2)	**11.8** (10.0-13.8)	**9.2** (6.6-12.6)	**6.1** (4.4-8.4)	**4.5** (3.4-5.9)	**2.9** (1.9-4.4)	**3.3** (2.1-5.3)	**2.3** (1.4-3.6)	**3.0** (1.5-5.7)	**1.7** (1.0-2.9)	**0.8** (0.4-1.6)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**7.7** (5.6-10.4)	**4.1** (2.7-6.1)	**2.8** (2.0-3.8)	**1.7** (1.1-2.8)	**1.3** (0.8-2.0)	**1.9** (1.4-2.6)	**0.6** (0.4-1.1)	**0.9** (0.4-2.0)	**1.4**[b] (0.9-2.1)
Females[2]	**6.9** (5.4-8.8)	**9.4** (7.5-11.8)	**11.9** (8.0-17.3)	**10.0** (7.5-13.1)	**7.5** (5.3-10.5)	**5.0** (3.2-7.5)	**6.3** (4.1-9.6)	**6.7** (5.0-8.8)	**7.7** (5.9-10.0)	**11.6** (7.5-17.6)	**9.9** (7.9-12.4)	**8.0** (5.4-11.7)	**3.3** (2.0-5.4)	**3.2** (2.1-4.7)	**2.2** (1.3-3.7)	**1.5** (0.9-2.6)	**1.9** (1.2-3.2)	†	†	**1.5** (0.9-2.6)
Grade																				
9	**5.8** (4.4-7.6)	**8.7** (6.9-11.1)	**10.7** (8.4-13.6)	**9.6** (8.2-11.2)	**5.8** (3.9-8.4)	**4.6** (2.2-9.2)	**6.1** (3.3-11.2)	**3.6** (2.8-4.7)	**6.3** (5.0-8.1)	**7.4** (4.3-12.5)	**7.8** (6.2-9.9)	**6.8** (4.8-9.4)	**4.6** (3.3-6.4)	**3.7** (2.6-5.2)	**2.4** (1.6-3.6)	**1.9** (1.2-3.0)	**1.7** (0.9-3.1)	†	†	**0.6**[b] (0.3-1.2)
10	—	—	—	—	—	—	—	—	—	—	—	**10.4** (7.4-14.3)	**8.0** (5.7-11.2)	**4.2** (2.8-6.3)	**1.6** (1.0-2.6)	†	**1.8** (1.1-2.9)	**1.1** (0.6-2.1)	†	**1.1**[b] (0.7-1.9)
11	**10.6** (8.5-13.3)	**14.7** (11.6-18.5)	**16.0** (11.5-21.9)	**16.5** (12.7-21.0)	**13.6** (9.9-18.2)	**9.8** (5.8-15.9)	**8.4** (5.4-12.8)	**10.0** (8.1-12.2)	**11.8** (9.1-15.2)	**18.5** (12.6-26.1)	**13.7** (12.2-15.3)	**10.7** (7.2-15.6)	**5.1** (2.9-8.6)	**4.0** (2.8-5.5)	**2.8** (1.8-4.3)	**3.0** (1.8-4.9)	**2.5** (1.5-4.1)	**2.8** (1.6-4.8)	**1.4** (0.8-2.4)	**1.7**[b] (1.0-2.8)
12	—	—	—	—	—	—	—	—	—	—	—	**7.8** (5.9-10.2)	**7.8** (4.1-14.4)	**2.7** (1.7-4.2)	**2.2** (1.2-3.9)	**2.1** (1.2-3.7)	**3.3** (2.1-5.4)	**1.1** (0.7-1.8)	**1.9** (1.0-3.7)	**2.2**[b] (1.4-3.4)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2404)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**5.3** (3.5-7.9)	**3.9** (1.9-7.5)	**3.9** (2.3-6.5)	**1.3** (0.7-2.5)	**1.1** (0.6-2.0)	†	**1.5** (0.8-2.8)	†	**1.1**[b] (0.6-2.1)
Toronto[2]	—	—	**6.9** (3.0-14.9)	**11.5** (5.6-22.3)	**8.9** (5.9-13.2)	†	**5.0** (3.8-6.6)	**4.5** (2.3-8.6)	**3.8** (2.0-7.3)	†	**3.5** (2.3-5.2)	**4.6** (2.6-7.9)	**3.9** (2.1-7.0)	**3.4** (1.9-6.0)	**2.4** (1.3-4.5)	†	†	†	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**14.0** (8.2-22.9)	**4.7** (3.0-7.2)	**5.3** (3.7-7.4)	**2.1** (1.3-3.5)	†	†	†	†	**1.9**[b] (1.0-3.7)
North[2]	—	—	**13.0** (8.5-19.3)	**14.4** (10.3-19.9)	**12.4** (8.0-18.8)	†	†	**11.3** (5.7-21.2)	**17.4** (9.4-30.0)	**15.8** (11.3-21.5)	**16.0** (12.0-21.0)	†	**4.0** (2.0-7.6)	**5.7** (3.9-8.4)	†	†	†	†	†	†
West[1]	—	—	—	—	—	—	—	—	—	—	—	**9.8** (6.8-13.9)	**7.8** (5.7-10.3)	**3.8** (2.8-5.2)	**2.8** (1.7-4.5)	**2.3** (1.3-4.1)	**2.9** (2.0-4.2)	†	**1.4** (0.7-2.5)	**1.6**[b] (1.1-2.3)
West[2]	—	—	**15.3** (11.0-21.1)	**14.2** (12.7-15.9)	**12.4** (8.5-17.9)	**7.6** (3.6-15.4)	**8.0** (3.9-15.9)	**7.5** (5.9-9.5)	**11.8** (10.4-3.4)	**13.9** (7.8-23.7)	**13.4** (11.5-15.6)	**9.6** (5.5-16.2)	**5.1** (3.2-8.1)	**3.9** (2.7-5.4)	**3.2** (1.8-5.6)	**3.0** (1.7-5.1)	**2.8** (1.7-4.6)	†	†	**1.5** (0.8-2.6)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**6.2** (5.1-7.5)	**6.1** (4.0-9.2)	**2.8** (1.8-4.4)	**2.1** (1.3-3.4)	**1.9** (1.1-3.3)	**1.9** (1.2-3.0)	**1.5** (1.1-2.2)	**1.6** (1.0-2.3)	**1.5**[b] (0.8-2.7)
East[2]	—	—	**14.5** (11.4-18.3)	**10.7** (7.9-14.4)	†	**8.4** (6.7-10.4)	**6.4** (3.2-12.5)	**6.4** (4.1-9.8)	**6.3** (3.4-11.4)	**14.8** (11.7-18.5)	**10.6** (8.6-13.1)	**8.6** (6.0-12.1)	**5.6** (3.5-8.9)	**3.4** (2.1-5.7)	**2.0** (1.1-3.6)	†	**1.4** (0.8-2.7)	**1.6** (1.0-2.5)	**1.6** (0.8-3.2)	†

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) † estimate suppressed due to unreliability; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use LSD or "acid"?

Source: OSDUHS, Centre for Addiction & Mental Health

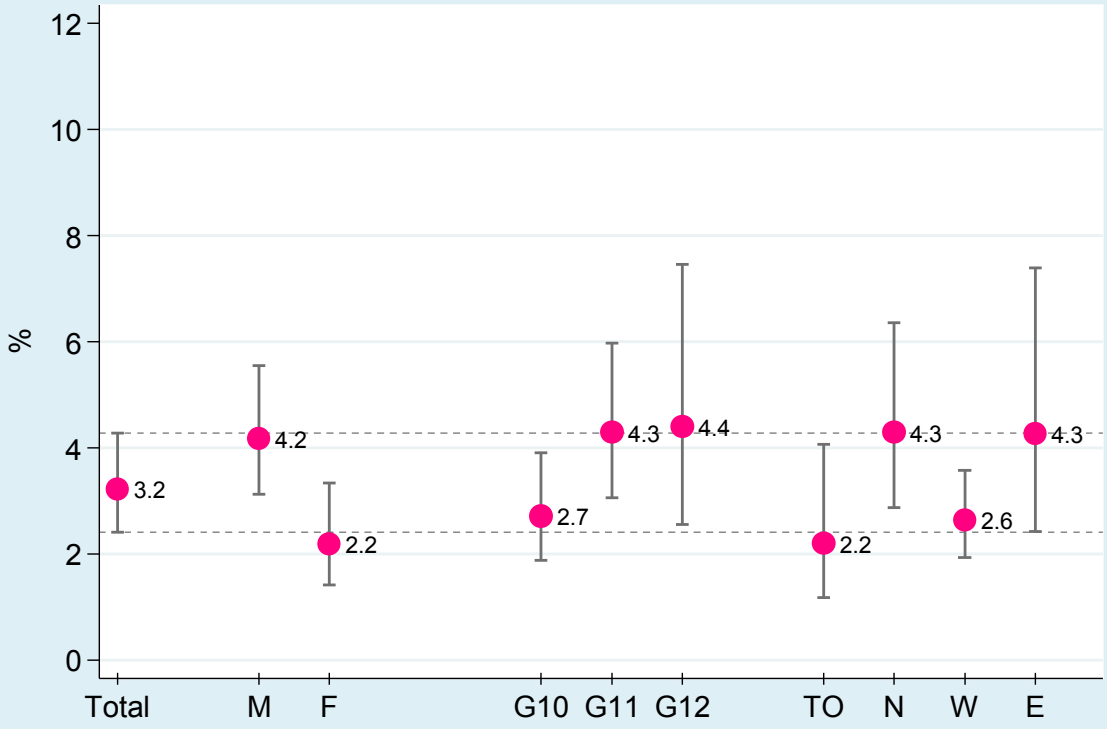
Past Year Mushroom (Psilocybin) or Mescaline Use

(Figures 3.6.7–3.6.9; Table 3.6.4)

Psilocybin (more commonly known as "magic mushrooms") is a hallucinogenic drug that comes from the psilocybe mushroom. It can be taken orally or by injection and its effects include altered perceptions, nervousness, and paranoia. Mescaline (also known as "mesc") is also a hallucinogen that comes from the peyote cactus plant, and its effects include altered perceptions. Starting in 2013, the question asking about the use of these hallucinogens was asked of students in grades 9 through 12 only (not asked of grades 7 and 8).

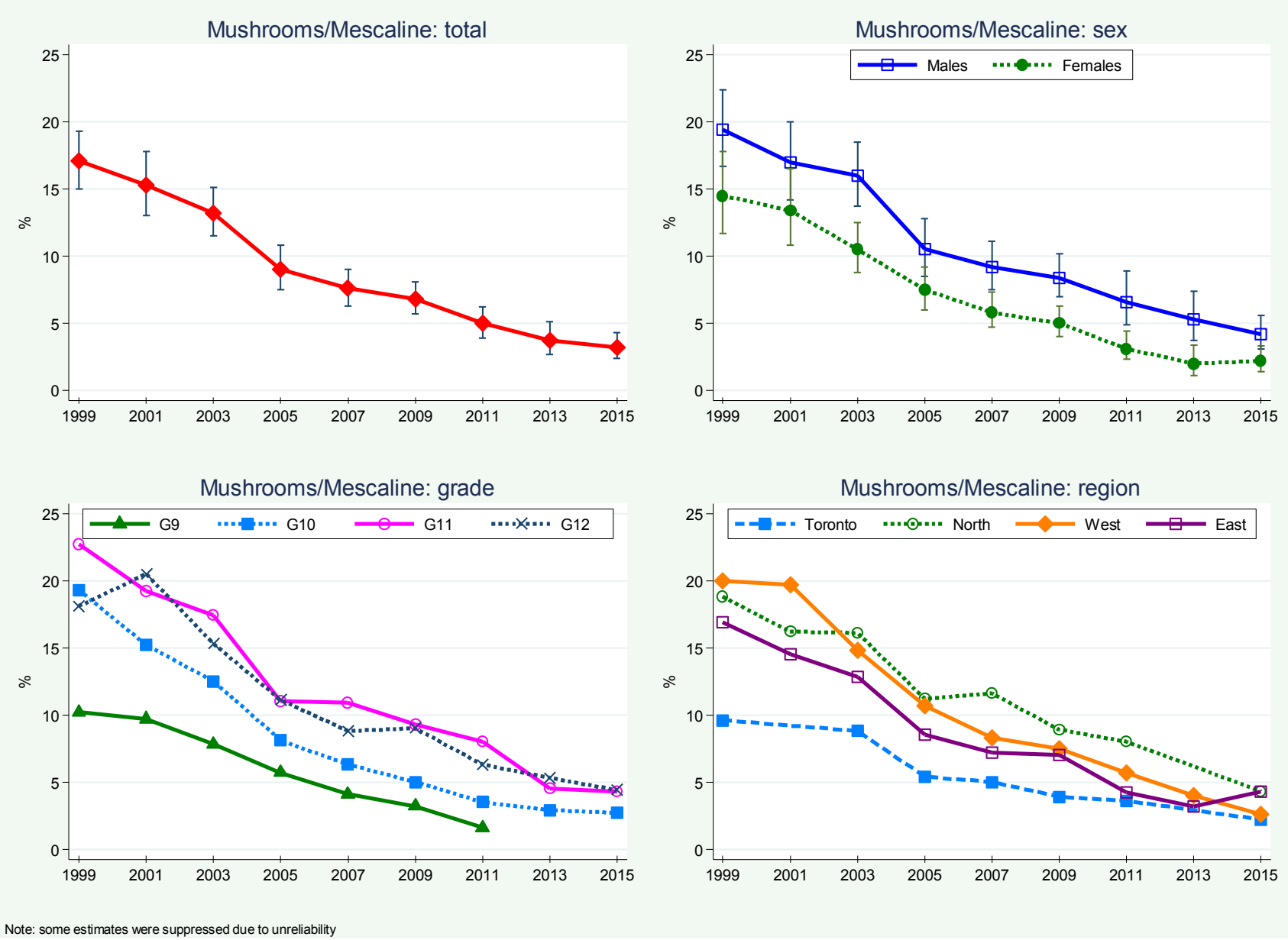
	Mushroom/Mescaline Use in 2015 (Grades 9–12)	Trends in Mushroom/Mescaline Use
Total Sample	■ Psilocybin ("mushrooms") or mescaline use is reported by 3.2% of Ontario students in grades 9 through 12. This estimate represents about 22,400 secondary students in Ontario. With the sampling error, we estimate that between 2.4% and 4.3% (95% CI) of students use these hallucinogens.	☐ Mushroom/mescaline use did not significantly change between 2013 (3.7%) and 2015 (3.2%). However, a dramatic linear decline in use occurred between 1999 – when the estimate was at 17.1% – and 2015. ☐ Over the long-term (among grades 9 and 11 only), use was elevated in the early 1980s, decreased gradually during the late 1980s and early 1990s, increased during the late 1990s reaching an all-time peak in 1999. Use has steadily decreased since then. The current level remains below the two peaks, and is similar to the lows seen in the early 1990s.
Sex	■ Males (4.2%) are significantly more likely than females (2.2%) to use mushrooms/mescaline.	☐ No sex shows a significant change in use between 2013 and 2015. Both males and females show substantial declines since 1999.
Grade	■ Use significantly varies by grade, and is most likely among 11th and 12th graders (about 4%).	☐ No grade shows a significant change in use between 2013 and 2015. All four grades showed significant declines since 1999.
Region	■ There is no significant regional variation.	☐ No region shows a significant change in use between 2013 and 2015. All four regions show significant declines since 1999.
Frequency of Use	■ Less than 1% of students use these hallucinogenic drugs on a frequent basis (see Figure 3.1.3). ■ Most (69%) users used only once or twice in the past year (see Figure 3.1.4).	☐ Frequent use (six times or more often in the past year) of these hallucinogens remained low from the late 1970s until the mid-1990s, peaked in 1999, and subsequently decreased.

Figure 3.6.7
Past Year Mushroom/Mescaline Use by Sex, Grade, and Region, 2015 OSDUHS



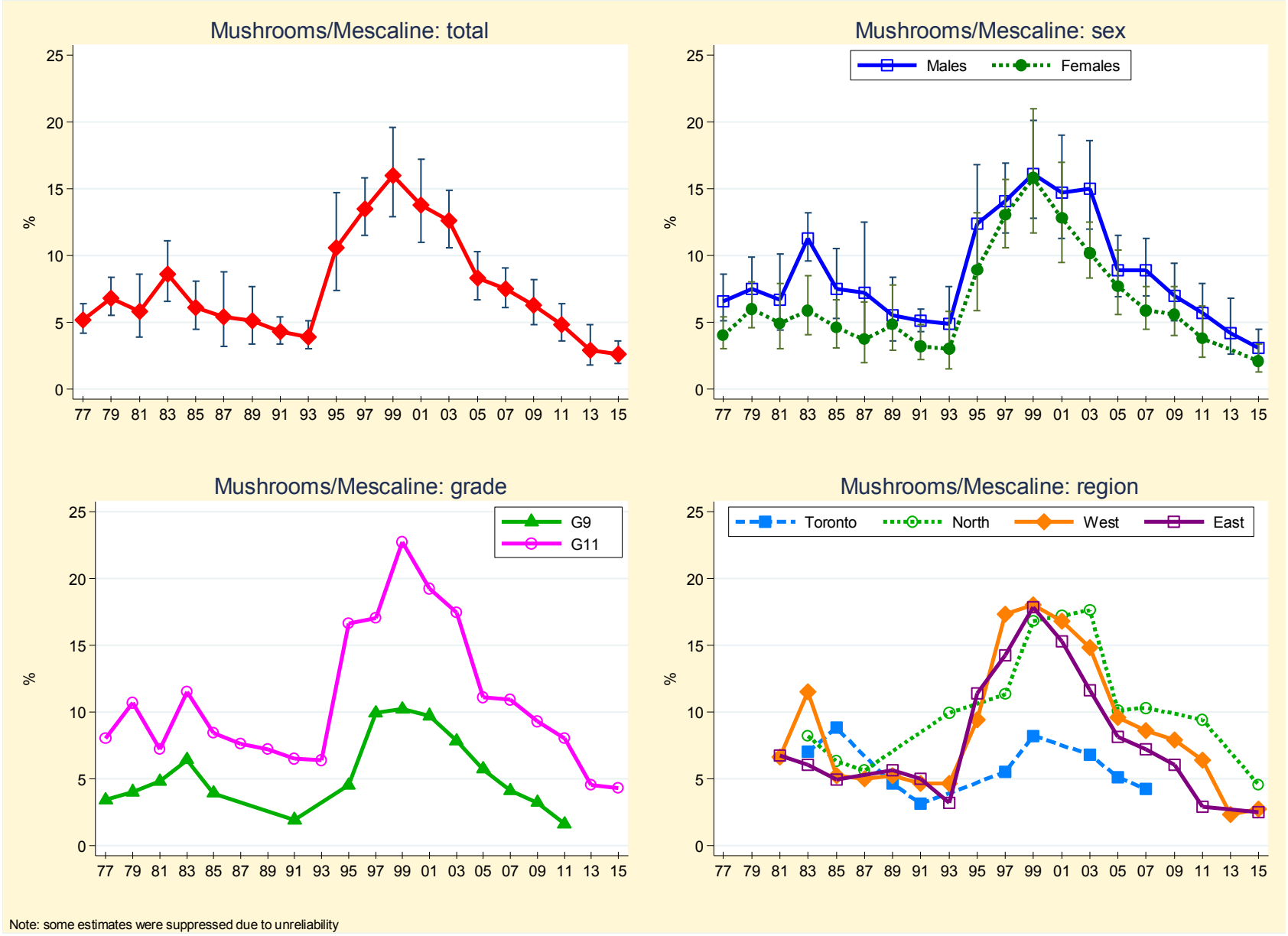
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 9 was suppressed; (4) significant differences by sex and by grade (p<.05), no significant difference by region

Figure 3.6.8
Past Year Mushroom/Mescaline Use, 1999–2015 OSDUHS (Grades 9–12)



Note: some estimates were suppressed due to unreliability

Figure 3.6.9
Past Year Mushroom/Mescaline Use, 1977–2015 OSDUHS (Grades 9 and 11 only)



Note: some estimates were suppressed due to unreliability

Table 3.6.4: Percentage Reporting Mushroom or Mescaline Use in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**17.1**	**15.3**	**13.2**	**9.0**	**7.6**	**6.8**	**5.0**	**3.7**	**3.2** [bc]
(95% CI)												(15.0-19.3)	(13.0-17.8)	(11.5-15.1)	(7.5-10.8)	(6.3-9.0)	(5.7-8.1)	(3.9-6.2)	(2.7-5.1)	(2.4-4.3)
Total[2]	**5.2** (4.2-6.4)	**6.8** (5.5-8.4)	**5.8** (3.9-8.6)	**8.6** (6.6-11.1)	**6.1** (4.5-8.1)	**5.4** (3.2-8.8)	**5.1** (3.4-7.7)	**4.3** (3.4-5.4)	**3.9** (3.0-5.1)	**10.6** (7.4-14.7)	**13.5** (11.5-15.8)	**16.0** (12.9-19.6)	**13.8** (11.0-17.2)	**12.6** (10.6-14.9)	**8.3** (6.7-10.3)	**7.5** (6.1-9.1)	**6.3** (4.8-8.2)	**4.8** (3.6-6.4)	**2.9** (1.8-4.8)	**2.6** [d] (1.9-3.6)
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**19.4**	**17.0**	**16.0**	**10.5**	**9.2**	**8.4**	**6.6**	**5.3**	**4.2** [b]
												(16.7-22.4)	(14.2-20.2)	(13.7-18.5)	(8.5-12.8)	(7.5-11.1)	(7.0-10.2)	(4.9-8.9)	(3.7-7.4)	(3.1-5.6)
Males[2]	**6.6** (5.1-8.6)	**7.5** (5.7-9.9)	**6.7** (4.4-10.1)	**11.3** (9.6-13.2)	**7.5** (5.3-10.5)	**7.2** (4.0-12.5)	**5.5** (3.6-8.4)	**5.1** (4.3-6.0)	**4.9** (3.1-7.7)	**12.4** (9.0-16.8)	**14.1** (11.7-16.9)	**16.1** (12.8-20.1)	**14.7** (11.3-19.0)	**15.0** (12.0-18.6)	**8.9** (6.9-11.5)	**8.9** (7.0-11.3)	**7.0** (5.1-9.4)	**5.7** (4.1-7.9)	**4.2** (2.6-6.8)	**3.1** (2.1-4.5)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**14.5**	**13.4**	**10.5**	**7.5**	**5.8**	**5.0**	**3.1**	**2.0**	**2.2** [b]
												(11.7-17.8)	(10.8-16.5)	(8.8-12.5)	(6.0-9.2)	(4.7-7.3)	(4.0-6.3)	(2.3-4.4)	(1.1-3.4)	(1.4-3.3)
Females[2]	**4.0** (3.0-5.4)	**6.0** (4.6-8.0)	**4.9** (3.0-7.9)	**5.9** (4.1-8.5)	**4.6** (3.1-6.7)	**3.7** (2.0-6.5)	**4.8** (2.9-7.8)	**3.2** (2.2-4.8)	**3.0** (1.5-5.8)	**8.9** (5.9-13.2)	**13.0** (10.6-15.7)	**15.8** (11.7-21.0)	**12.8** (9.5-17.0)	**10.2** (8.3-12.5)	**7.7** (5.6-10.4)	**5.9** (4.5-7.7)	**5.6** (4.0-7.7)	**3.8** (2.4-6.2)	†	**2.1** (1.3-3.4)
Grade																				
9	**3.4** (2.4-4.6)	**4.0** (3.0-5.3)	**4.8** (2.4-9.5)	**6.4** (4.5-9.0)	**3.9** (2.5-6.2)	†	†	**1.9** (1.5-2.5)	†	**4.5** (3.1-6.6)	**9.9** (6.8-14.4)	**10.2** (7.6-13.5)	**9.7** (7.0-13.4)	**7.8** (6.1-10.0)	**5.7** (4.4-7.5)	**4.1** (2.9-5.7)	**3.2** (2.0-5.0)	**1.6** (0.9-2.6)	†	† [b]
10	—	—	—	—	—	—	—	—	—	—	—	**19.3**	**15.2**	**12.5**	**8.1**	**6.3**	**5.0**	**3.5**	**2.9**	**2.7** [b]
												(15.0-24.4)	(11.9-19.2)	(9.9-15.7)	(6.0-10.7)	(4.7-8.4)	(3.7-6.7)	(2.2-5.3)	(1.8-4.6)	(1.9-3.9)
11	**8.0** (6.2-10.3)	**10.7** (8.2-14.0)	**7.2** (4.8-10.8)	**11.5** (7.9-16.3)	**8.4** (5.9-11.8)	**7.6** (4.1-13.5)	**7.2** (5.3-9.8)	**6.5** (5.0-8.5)	**6.4** (5.0-8.0)	**16.6** (10.8-24.6)	**17.0** (14.8-19.4)	**22.7** (17.9-28.3)	**19.2** (14.9-24.5)	**17.4** (14.3-21.1)	**11.1** (8.8-13.9)	**10.9** (8.8-13.5)	**9.3** (6.6-12.9)	**8.0** (5.8-10.9)	**4.5** (2.8-7.3)	**4.3** [b] (3.1-6.0)
12	—	—	—	—	—	—	—	—	—	—	—	**18.1**	**20.5**	**15.3**	**11.1**	**8.8**	**9.0**	**6.3**	**5.3**	**4.4** [b]
												(14.1-22.9)	(13.9-29.3)	(12.3-18.9)	(8.7-14.0)	(6.7-11.5)	(6.7-12.0)	(3.8-10.2)	(3.1-8.8)	(2.6-7.5)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**9.6** (6.7-13.5)	†	**8.8** (6.5-11.7)	**5.4** (3.2-8.8)	**5.0** (3.0-8.0)	**3.9** (2.2-6.8)	**3.6** (1.9-6.8)	†	**2.2** [b] (1.2-4.1)
Toronto[2]	—	—	†	**7.0** (4.2-11.3)	**8.8** (4.9-15.4)	†	**4.6** (2.4-8.4)	**3.1** (1.9-5.0)	†	†	**5.5** (4.0-7.5)	**8.2** (5.0-13.3)	†	**6.8** (4.0-11.5)	**5.1** (3.2-8.0)	**4.2** (2.4-7.3)	†	†	†	†
North[1]	—	—		—	—	—	—	—	—	—	—	**18.8** (14.4-24.1)	**16.2** (12.1-21.3)	**16.1** (12.6-20.4)	**11.2** (8.5-14.5)	**11.6** (8.8-15.3)	**8.9** (5.7-13.8)	**8.0** (5.7-11.2)	†	**4.3** [b] (2.9-6.4)
North[2]	—	—	†	**8.2** (4.9-13.4)	**6.3** (3.9-10.0)	**5.6** (2.7-11.0)	†	†	**9.9** (6.6-14.6)	†	**11.3** (5.7-21.2)	**16.8** (11.4-24.1)	**17.2** (12.2-23.8)	**17.6** (13.6-22.6)	**10.1** (6.2-15.9)	**10.3** (5.9-17.2)	†	**9.4** (5.7-15.2	†	**4.5** (2.6-7.6)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**20.0** (16.3-24.3)	**19.7** (16.2-23.8)	**14.8** (12.0-18.1)	**10.7** (8.0.-14.1)	**8.3** (6.0-11.5)	**7.5** (5.5-10.2)	**5.7** (3.7-8.6)	**4.0** (2.5-6.5)	**2.6** [b] (1.9-3.6)
West[2]	—	—	**6.6** (3.5-11.9)	**11.5** (7.5-17.4)	**5.2** (2.9-9.4)	**5.0** (2.9-8.4)	**5.2** (2.6-10.6)	**4.6** (4.1-5.2)	**4.6** (3.1-6.9)	**9.4** (5.8-14.9)	**17.3** (13.6-21.7)	**18.0** (12.7-25.0)	**16.8** (12.2-22.7)	**14.8** (11.7-18.5)	**9.6** (6.5-13.8)	**8.6** (6.1-11.9)	**7.9** (5.3-11.5)	**6.4** (4.2-9.6)	**2.3** (1.3-3.9)	**2.7** (1.6-4.5)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**16.9** (13.7-20.8)	**14.5** (11.2-18.4)	**12.8** (9.6-17.1)	**8.5** (6.1-11.7)	**7.2** (5.7-9.0)	**7.0** (5.6-8.5)	**4.2** (3.3-5.4)	**3.2** (2.0-5.2)	**4.3** [b] (2.4-7.4)
East[2]	—	—	**6.7** (3.7-12.0)	**6.0** (3.8-9.2)	**4.9** (3.5-6.8)	†	**5.6** (2.6-11.7)	**5.0** (2.8-8.8)	**3.2** (2.1-4.8)	**11.4** (7.8-16.3)	**14.2** (10.7-18.5)	**17.8** (13.0-23.9)	**15.3** (11.3-20.5)	**11.6** (7.9-16.9)	**8.1** (5.9-11.0)	**7.2** (5.2-9.9)	**6.0** (3.8-9.4)	**2.9** (2.0-4.2)	†	**2.5** (1.5-4.2)

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) † estimate suppressed or less than 0.5%; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use psilocybin or mescaline (also known as "magic mushrooms", "shrooms", "mesc", etc.)?

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Jimson Weed Use

(Table 3.6.5)

Jimson weed (also known as "stinkweed" or "locoweed") is a legal, yet poisonous plant with hallucinogenic properties. Users can ingest the seeds, brew the leaves as tea, or smoke the dried leaves. It produces euphoria and hallucinations, and can easily cause accidental poisoning in large dosages. The use of jimson weed was first surveyed in 2007. Starting in 2013, jimson weed use was asked of students in grades 9 through 12 only (not asked of grades 7 and 8).

	Jimson Weed Use in 2015 (Grades 9–12)	Trends in Jimson Weed Use (Grades 9–12)
Total Sample	■ Overall, 1.8% of students report using jimson weed at least once during the past year. This represents about 12,400 Ontario students in grades 9 through 12.	☐ Jimson weed use did not significantly change between 2013 (1.3%) and 2015 (1.8%) among secondary students. The 2015 estimate is not significantly different from that found in 2007 (3.1%), when monitoring first began.
Sex	■ Males (1.6%) and females (2.0%) are equally likely to use jimson weed.	☐ Use did not significantly change among males or females between 2007 and 2015.
Grade	■ Estimates by grade were suppressed.	☐ No grade shows a significant change in jimson weed use between 2007 and 2015.
Region	■ There are no significant differences among the four regions.	☐ No region shows a significant change in jimson weed use between 2007 and 2015.

Table 3.6.5: Percentage Reporting Jimson Weed Use in the Past Year, 2007–2015 OSDUHS (Grades 9–12)

		2007	2009	2011	2013	2015
	(*n*=)	(2247)	(2728)	(3025)	(2895)	(3171)
Total		**3.1**	**3.1**	**2.0**	**1.3**	**1.8**
(95% CI)		(2.3-4.3)	(2.3-4.1)	(1.1-3.5)	(0.7-2.4)	(1.3-2.6)
Sex						
	Males	**3.1** (1.9-5.0)	**3.7** (2.6-5.4)	**2.5** (1.3-4.6)	†	**1.6** (1.0-2.7)
	Females	**3.1** (2.2-4.4)	**2.3** (1.5-3.7)	**1.5** (0.8-2.7)	†	**2.0** (1.1-3.5)
Grade						
	9	†	†	†	†	†
	10	**3.1** (1.8-5.4)	**2.5** (1.4-4.4)	**2.8** (1.6-4.9)	†	†
	11	**3.3** (2.1-5.0)	**4.2** (2.6-7.0)	**2.8** (1.2-6.6)	†	†
	12	**3.4** (1.9-6.0)	**3.4** (1.9-6.1)	**1.2** (0.5-2.7)	†	†
Region						
	Toronto	**1.9** (1.1-3.4)	†	†	†	†
	North	**3.2** (1.9-5.4)	†	†	†	†
	West	**3.3** (1.9-5.6)	**4.0** (2.7-6.0)	†	†	**2.2** (1.3-3.8)
	East	**3.5** (2.2-5.7)	**2.2** (1.4-3.4)	**2.1** (1.4-3.3)	†	**1.6** (0.8-2.8)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant changes over time.
Q: In the last 12 months, how often did you use jimson weed (also known as "locoweed", "stinkweed", "mad apple")?
Source: OSDUHS, Centre for Addiction & Mental Health

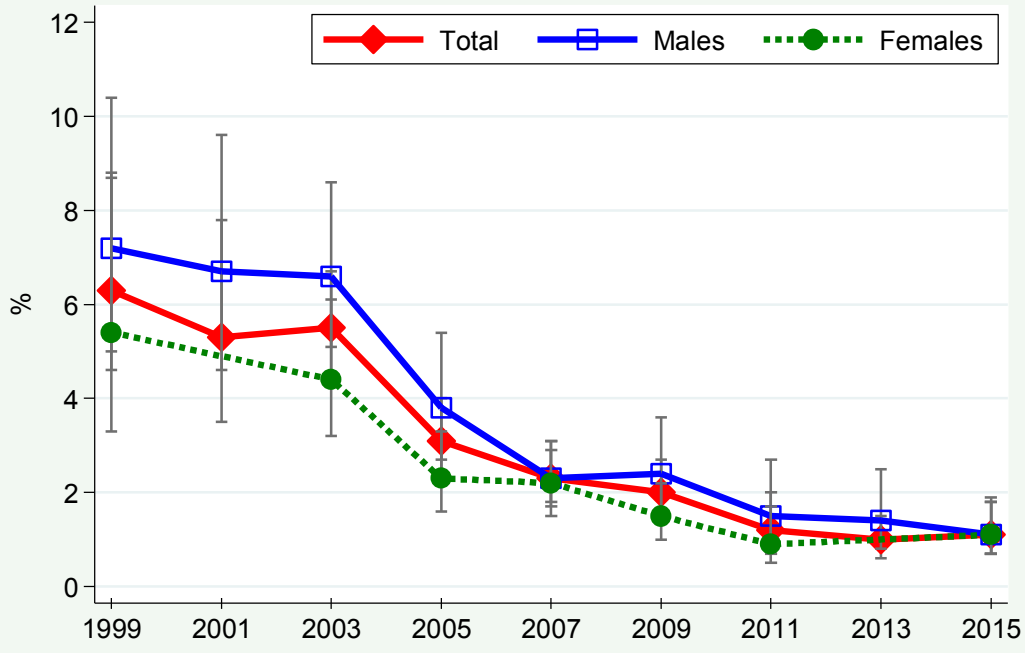
Past Year Methamphetamine or Crystal Methamphetamine Use

(Figures 3.6.10, 3.6.11; Table 3.6.6)

This section presents the past year use of methamphetamine (also known as "speed") or crystal methamphetamine (also known as "crystal meth" or "ice"). Methamphetamine comes in a powder that can be swallowed, snorted, smoked, or injected. Crystallized methamphetamine, resembling pieces of ice, is the smokeable form, although it can be used by other routes. These substances are synthetic stimulants and produce powerful "highs" similar to cocaine, but can last much longer. Crystal methamphetamine made its first appearance in Canada in 1989 and so this drug was first included in the OSDUHS in 1991. Therefore, estimates prior to 1991 are based solely on methamphetamine. Starting in 2013, methamphetamine use was asked of students in grades 9 through 12 only (not asked of grades 7 and 8).

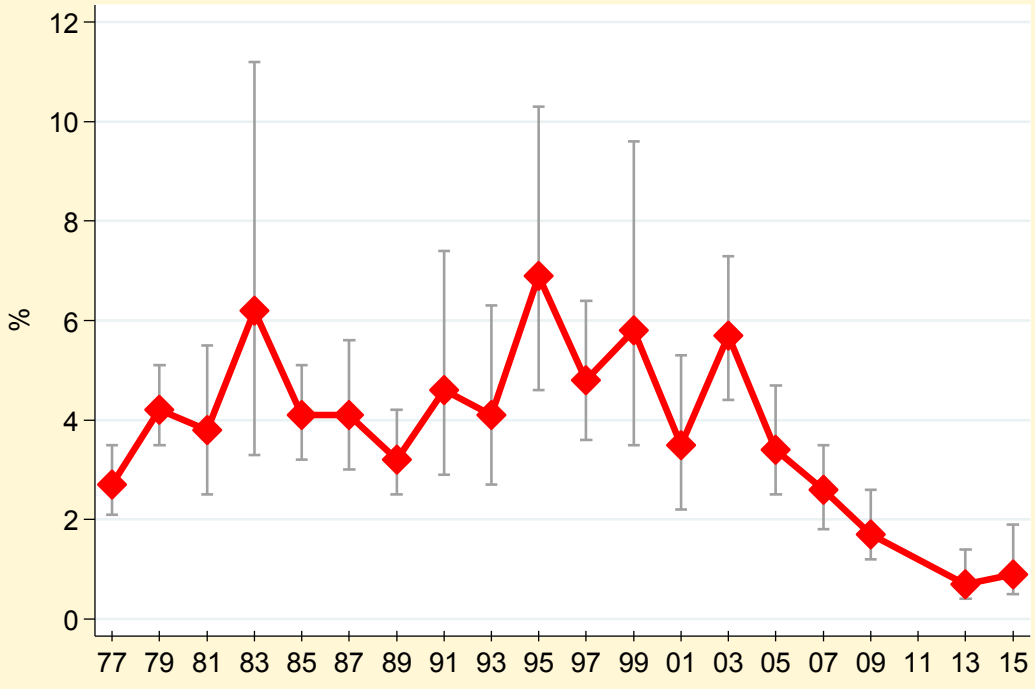
	Methamphetamine Use in 2015 (Grades 9–12)	Trends in Methamphetamine Use
Total Sample	■ Overall, 1.1% of secondary students report using methamphetamine at least once during the 12 months before the survey. Taking into account the sampling error, we estimate that between 0.7% and 1.8% (95% CI) of students use methamphetamine. The percentage of 1.1% represents about 7,800 Ontario students in grades 9 through 12.	☐ Methamphetamine use did not significantly change between 2013 (1.0%) and 2015 (1.1%). However, since 1999 there has been a significant downward trend in use, from 6.3% down to the current 1.1%. ☐ Over the long-term (among students in grades 9 and 11 only), methamphetamine use was elevated in the late 1970s/early 1980s, decreased during the late 1980s, peaked again in the late 1990s, and has subsequently declined to historical lows in recent years.
Sex	■ Males (1.1%) and females (1.1%) are equally likely to use methamphetamine.	☐ Methamphetamine use among males and females has not changed since the last survey in 2013. However, both sexes show a significant decline between 1999 and 2015.
Grade	■ Estimates by grade were suppressed.	☐ No grade shows a significant decline in methamphetamine use between 2013 and 2015, but all grades show significant declines since 1999.
Region	■ There is no significant variation by region.	☐ No region shows a significant decline in methamphetamine use between 2013 and 2015. Students in the North and West regions show significant declines since 1999.

Figure 3.6.10
Past Year Methamphetamine Use (includes Crystal Methamphetamine) by Sex, 1999–2015 OSDUHS (Grades 9–12)



Note: vertical 'whiskers' represent 95% confidence intervals around the estimate

Figure 3.6.11
Past Year Methamphetamine Use (includes Crystal Methamphetamine), 1977–2015 OSDUHS (Grades 9 and 11 only)



Note: the 2011 estimate was suppressed due to unreliability

Table 3.6.6: Percentage Reporting Methamphetamine Use (includes Crystal Methamphetamine) in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(1496)	(1278)	(2238)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(888)	(870)	(991)	(1125)	(856)	(656)	(1168)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**6.3** (4.6-8.7)	**5.3** (3.5-7.8)	**5.5** (4.5-6.7)	**3.1** (2.4-4.0)	**2.3** (1.7-2.9)	**2.0** (1.4-2.7)	**1.2** (0.7-2.0)	**1.0** (0.6-1.5)	**1.1** (0.7-1.8)	bc
Total[2] (95% CI)	**2.7** (2.1-3.5)	**4.2** (3.5-5.1)	**3.8** (2.5-5.5)	**6.2** (3.3-11.2)	**4.1** (3.2-5.1)	**4.1** (3.0-5.6)	**3.2** (2.5-4.2)	**4.6** (2.9-7.4)	**4.1** (2.7-6.3)	**6.9** (4.6-10.3)	**4.8** (3.6-6.4)	**5.8** (3.5-9.6)	**3.5** (2.2-5.3)	**5.7** (4.4-7.3)	**3.4** (2.5-4.7)	**2.6** (1.8-3.5)	**1.7** (1.2-2.6)	†	**0.7** (0.4-1.4)	**0.9** (0.5-1.9)	cd
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**7.2** (5.0-10.4)	**6.7** (4.6-9.6)	**6.6** (5.1-8.6)	**3.8** (2.7-5.4)	**2.3** (1.8-3.1)	**2.4** (1.6-3.6)	**1.5** (0.8-2.7)	**1.4** (0.8-2.5)	**1.1** (0.7-1.8)	b
Males[2]	**3.2** (2.2-4.6)	**5.0** (3.9-6.3)	**3.5** (2.1-5.7)	**8.1** (4.7-13.5)	**4.3** (3.3-5.5)	**5.3** (3.6-7.9)	**3.8** (2.3-6.1)	**4.8** (2.8-8.2)	**5.8** (3.7-8.9)	**8.2** (5.2-12.7)	**4.6** (3.5-5.9)	**6.3** (3.3-11.8)	**4.8** (2.9-7.8)	**6.5** (4.5-9.2)	**3.8** (2.5-5.8)	**2.7** (1.8-3.9)	**1.6** (1.0-2.7)	†	†	†	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**5.4** (3.3-8.8)	†	**4.4** (3.2-6.1)	**2.3** (1.6-3.3)	**2.2** (1.5-3.1)	**1.5** (1.0-2.2)	**0.9** (0.5-1.7)	†	**1.1** (0.6-1.9)	b
Females[2]	**2.3** (1.6-3.2)	**3.4** (2.5-4.7)	**4.1** (2.6-6.3)	**4.3** (2.0-9.0)	**3.9** (2.7-5.5)	**3.0** (1.9-4.6)	**2.7** (1.7-4.2)	†	**2.5** (1.2-5.4)	**5.7** (3.3-10.0)	**5.0** (3.1-7.9)	**5.4** (2.9-9.6)	†	**4.8** (3.3-7.1)	**3.0** (1.8-5.0)	**2.4** (1.6-3.8)	**1.8** (1.1-2.9)	†	†	†	
Grade																					
9	**2.8** (2.1-3.8)	**4.0** (3.0-5.3)	**3.8** (2.0-7.0)	†	**3.2** (2.5-4.1)	**3.0** (1.9-4.7)	**2.9** (1.9-4.4)	**4.3** (2.6-7.3)	**3.1** (1.9-4.9)	**6.0** (2.9-12.2)	**3.2** (1.8-5.5)	**3.9** (2.3-6.5)	**2.8** (1.7-4.7)	**4.5** (2.8-7.1)	**3.8** (2.5-5.8)	**1.8** (1.0-3.3)	**1.4** (0.8-2.4)	†	†	†	b
10	—	—	—	—	—	—	—	—	—	—	—	**6.3** (4.1-9.6)	**8.9** (5.0-15.4)	**4.8** (3.2-7.1)	**1.7** (1.0-2.9)	**1.8** (1.1-2.8)	**0.9** (0.5-1.6)	†	†	†	b
11	**2.5** (1.6-4.0)	**4.5** (3.4-5.9)	**3.7** (2.6-5.3)	**5.3** (3.7-7.4)	**5.0** (3.5-7.1)	**5.2** (3.4-7.9)	**3.6** (2.6-4.9)	**4.9** (2.3-10.0	**5.3** (2.8-9.9)	**7.8** (5.0-12.1)	**6.4** (4.5-9.0)	**8.1** (4.3-14.9)	†	**6.8** (4.7-9.7)	**3.0** (1.7-5.2)	**3.3** (2.3-4.7)	**2.0** (1.1-3.6)	†	†	†	b
12	—	—	—	—	—	—	—	—	—	—	—	**7.9** (4.5-13.7)	†	**6.0** (3.6-9.6)	**3.7** (2.4-5.6)	**2.2** (1.4-3.4)	**3.1** (1.9-5.0)	†	**1.7** (0.9-3.2)	†	b

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(1496)	(1278)	(2238)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(888)	(870)	(991)	(1125)	(856)	(656)	(1168)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	†	†	**3.5** (2.2-5.4)	†	**1.1** (0.6-2.0)	†	†	†	**0.7** (0.4-1.3)
Toronto[2]	—	—	†	†	**5.1** (2.9-8.9)	**3.5** (2.6-4.6)	**3.3** (2.0-5.6)	**4.2** (2.2-7.7)	†	**4.4** (2.7-7.2)	**3.0** (1.6-5.6)	†	†	†	†	†	†	†	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**5.2** (3.0-8.7)	**4.6** (2.6-8.2)	**8.9** (5.9-13.3)	**3.4** (1.9-6.1)	†	†	†	†	† [b]
North[2]	—	—	**3.1** (1.9-5.0)	**6.0** (2.9-12.1)	**3.2** (2.9-3.6)	**5.1** (3.4-7.7)	†	**4.6** (2.3-9.2)	†	†	†	†	†	†	**4.7** (2.4-9.0)	†	†	†	†	†
West[1]	—	—	—	—	—	—	—	—	—	—	—	**8.6** (5.4-13.4)	**6.1** (3.4-10.4)	**6.3** (4.6-8.5)	**3.4** (2.5-4.7)	**2.0** (1.4-3.0)	**1.8** (1.0-3.2)	†	†	**0.8** (0.5-1.3) [b]
West[2]	—	—	**5.3** (3.2-8.9)	†	**4.3** (3.1-6.0)	**3.4** (1.7-6.4)	**4.5** (3.1-6.6)	†	**5.5** (3.6-8.2)	**7.2** (3.5-14.5)	**5.6** (4.2-7.6)	†	**3.3** (1.8-6.2)	**6.4** (4.3-9.3)	**3.3** (2.1-5.4)	**2.3** (1.5-3.5)	†	†	†	†
East[1]	—	—	—	—	—	—	—	—	—	—	—	**4.6** (2.4-8.3)	†	**4.7** (3.3-6.7)	**3.0** (1.6-5.4)	**2.7** (1.8-4.0)	**2.4** (1.4-4.0)	**0.8** (0.5-1.4)	†	†
East[2]	—	—	**2.9** (1.9-4.3)	**5.0** (3.2-7.8)	**3.2** (2.2-4.6)	**5.5** (3.1-9.4)	**2.0** (1.1-3.7)	**2.6** (1.5-4.4)	**2.0** (1.3-3.2)	**5.4** (3.5-8.2)	**4.8** (2.7-8.5)	†	†	**4.3** (2.9-6.4)	†	**2.7** (1.5-5.1)	**2.0** (1.3-3.2)	†	†	†

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) question asked of a random half sample between 1991 and 2005; (6) † estimate suppressed due to unreliability; (7) all estimates between 1991 and 2009 are based on two separate questions (methamphetamine and crystal methamphetamine) in the questionnaire; (8) all estimates between 1977 and 1989 are based on methamphetamine use only and excludes crystal methamphetamine because it was not measured in those years; (9) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use methamphetamine or crystal methamphetamine (also known as “speed”, “crystal meth”, “crank”, “Ice”, etc.)?

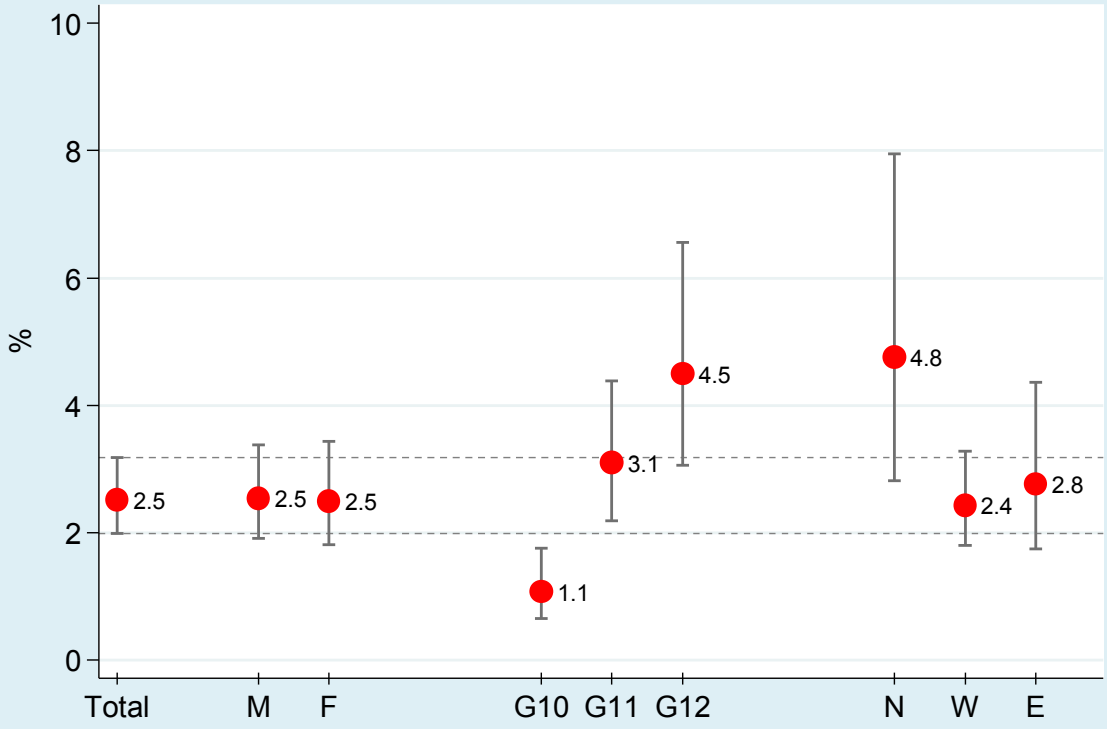
Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Cocaine Use

(Figures 3.6.12–3.6.14; Table 3.6.7)

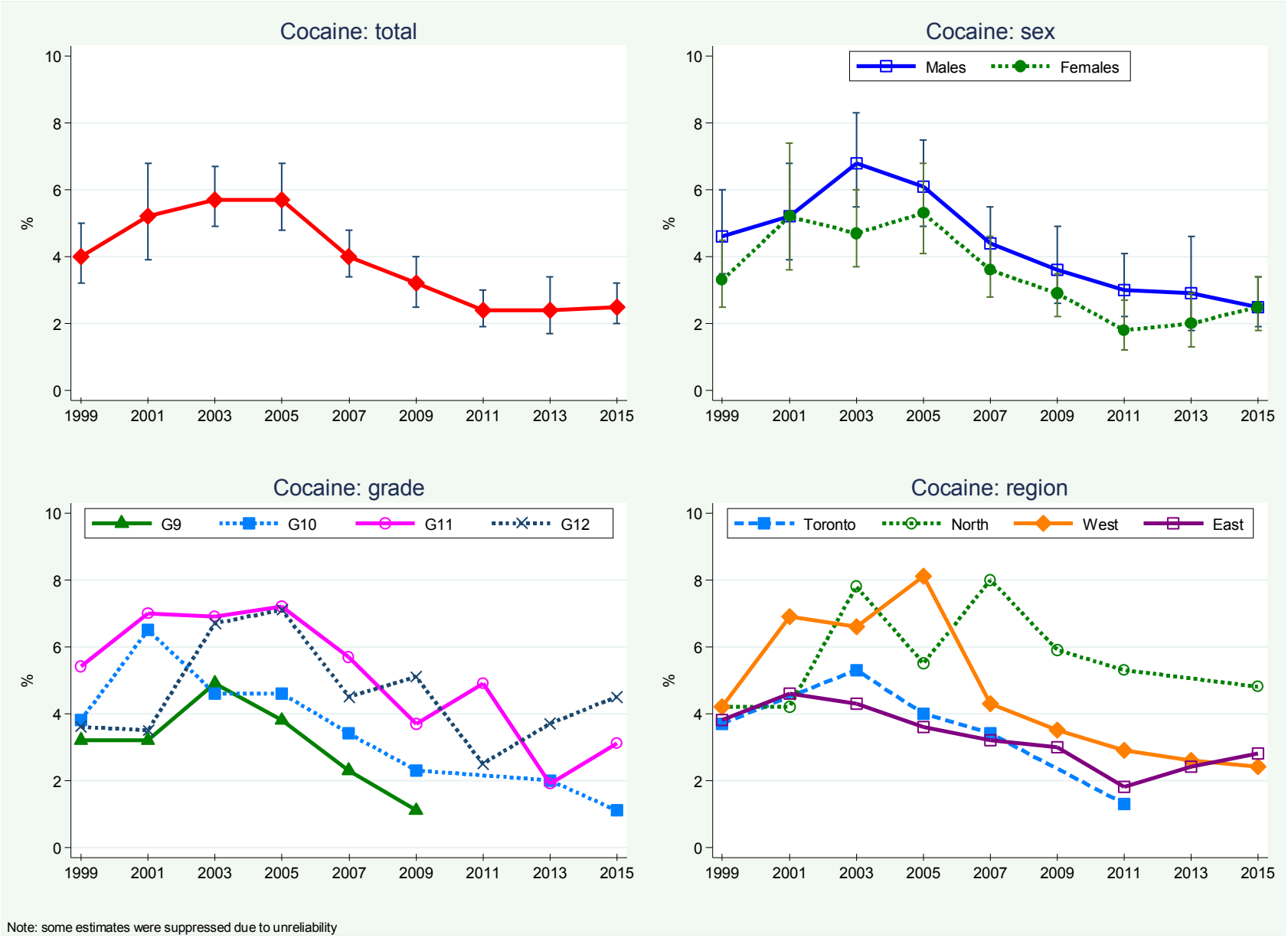
	Cocaine Use in 2015 (Grades 9–12)	Trends in Cocaine Use
Total Sample	■ Overall, 2.5% of secondary students report using cocaine at least once during the 12 months before the survey. Accounting for sampling error, we project that between 2.0% and 3.2% (95% CI) of Ontario students use cocaine. The 2.5% estimate represents roughly 17,600 students in grades 9 through 12.	☐ Cocaine use did not change between 2013 (2.4%) and 2015 (2.5%). There was a significant increase between 1999 (4.0%) and 2003 (5.7%), and the level has since declined. The 2015 estimate is significantly lower than the peak years of use seen a decade ago in 2003 and 2005. ☐ Over the long-term (among grades 9 and 11 only), cocaine use was elevated in 1979, and then gradually decreased during the 1980s and early 1990s. Use began a significant upswing in 1993, peaking again in 2003, and has subsequently declined. The current estimate is lower than the peak years of 1979 and 2003, and similar to the lows evident in the early 1990s.
Sex	■ Cocaine use does not significantly differ between males (2.5%) and females (2.5%).	☐ Neither males nor females show a significant change in cocaine use since 2013. However, both sexes show a significant decline over the past decade.
Grade	■ Cocaine use significantly increases with grade, peaking in grade 12 (4.5%).	☐ No grade shows a change in cocaine use between 2013 and 2015. Cocaine use among students in grade 9, 10, and 11 significantly declined over the past decade. Despite some downward movement, cocaine use among 12th graders remained stable over the past decade.
Region	■ Despite some variation, the differences in cocaine use among the regions were not statistically significant.	☐ No region shows a change in cocaine use between 2013 and 2015. Students in Toronto and the West region show a significant decline in cocaine use over the past decade.
Frequency of Use	■ About 1% of all secondary students report using cocaine six or more times during the past year (see Figure 3.1.3). ■ About half (48%) of cocaine users report using once or twice, while about one-third (37%) report using ten or more times in the past year (Figure 3.1.4).	

Figure 3.6.12
Past Year Cocaine Use by Sex, Grade, and Region, 2015 OSDUHS



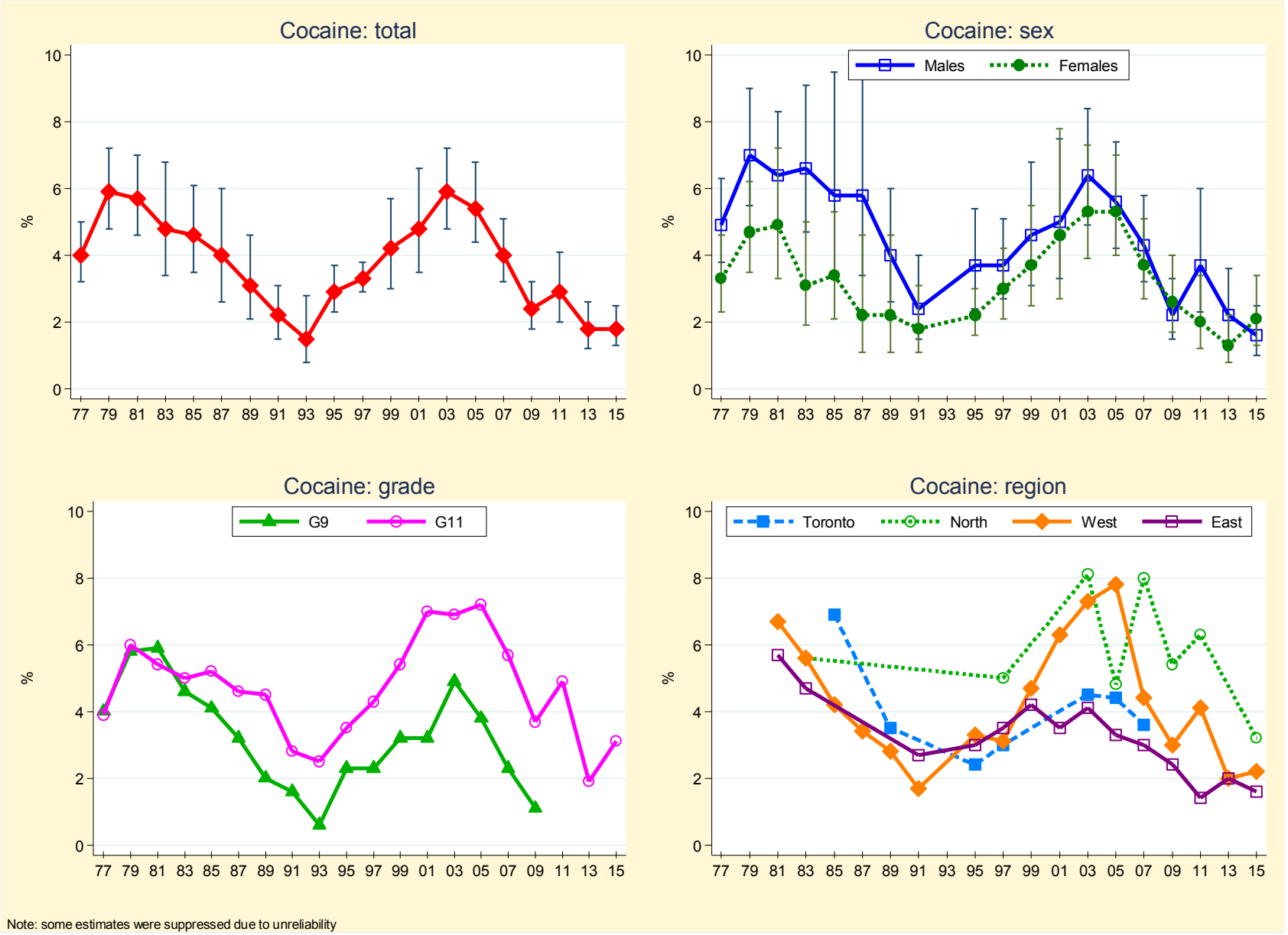
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grade 9 and Toronto were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.6.13
Past Year Cocaine Use, 1999–2015 OSDUHS (Grades 9–12)



Note: some estimates were suppressed due to unreliability

Figure 3.6.14
Past Year Cocaine Use, 1977–2015 OSDUHS (Grades 9 and 11 only)



Note: some estimates were suppressed due to unreliability

Table 3.6.7: Percentage Reporting Cocaine Use in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**4.0** (3.2-5.0)	**5.2** (3.9-6.8)	**5.7** (4.9-6.7)	**5.7** (4.8-6.8)	**4.0** (3.4-4.8)	**3.2** (2.5-4.0)	**2.4** (1.9-3.0)	**2.4** (1.7-3.4)	**2.5** (2.0-3.2)	bcd
Total[2]	**4.0** (3.2-5.0)	**5.9** (4.8-7.2)	**5.7** (4.6-7.0)	**4.8** (3.4-6.8)	**4.6** (3.5-6.1)	**4.0** (2.6-6.0)	**3.1** (2.1-4.6)	**2.2** (1.5-3.1)	**1.5** (0.8-2.8)	**2.9** (2.3-3.7)	**3.3** (2.9-3.8)	**4.2** (3.0-5.7)	**4.8** (3.5-6.6)	**5.9** (4.8-7.2)	**5.4** (4.4-6.8)	**4.0** (3.2-5.1)	**2.4** (1.8-3.2)	**2.9** (2.0-4.1)	**1.8** (1.2-2.6)	**1.8** (1.3-2.5)	cd
Sex																					
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**4.6** (3.5-6.0)	**5.2** (3.9-6.8)	**6.8** (5.5-8.3)	**6.1** (4.9-7.5)	**4.4** (3.5-5.5)	**3.6** (2.6-4.9)	**3.0** (2.2-4.1)	**2.9** (1.8-4.6)	**2.5** (1.9-3.4)	b
Males[2]	**4.9** (3.8-6.3)	**7.0** (5.5-9.0)	**6.4** (4.9-8.3)	**6.6** (4.7-9.1)	**5.8** (3.5-9.5)	**5.8** (3.4-9.8)	**4.0** (2.6-6.0)	**2.4** (1.5-4.0)	†	**3.7** (2.4-5.4)	**3.7** (2.7-5.1)	**4.6** (3.1-6.8)	**5.0** (3.3-7.5)	**6.4** (4.9-8.4)	**5.6** (4.2-7.4)	**4.3** (3.2-5.8)	**2.2** (1.5-3.3)	**3.7** (2.3-6.0)	**2.2** (1.3-3.6)	**1.6** (1.0-2.5)	
Females[1]	—	—	—	—	—	—	—	—		—	—	**3.3** (2.5-4.5)	**5.2** (3.6-7.4)	**4.7** (3.7-6.0)	**5.3** (4.1-6.8)	**3.6** (2.8-4.6)	**2.9** (2.2-3.5)	**1.8** (1.2-2.7)	**2.0** (1.3-2.9)	**2.5** (1.8-3.4)	b
Females[2]	**3.3** (2.3-4.6)	**4.7** (3.5-6.2)	**4.9** (3.3-7.2)	**3.1** (1.9-5.0)	**3.4** (2.1-5.3)	**2.2** (1.1-4.6)	**2.2** (1.1-4.6)	**1.8** (1.1-3.1)	†	**2.2** (1.6-3.0)	**3.0** (2.1-4.2)	**3.7** (2.5-5.5)	**4.6** (2.7-7.8)	**5.3** (3.9-7.3)	**5.3** (4.0-7.0)	**3.7** (2.7-5.1)	**2.6** (1.7-4.0)	**2.0** (1.2-3.4)	**1.3** (0.8-2.2)	**2.1** (1.3-3.4)	
Grade																					
9	**4.1** (3.1-5.3)	**5.8** (4.3-7.6)	**5.8** (4.6-7.4)	**4.6** (2.9-7.3)	**4.1** (2.5-6.6)	†	**2.0** (1.0-3.8)	**1.6** (1.0-2.5)	**0.6** (0.3-1.1)	**2.3** (1.5-3.6)	**2.3** (2.0-2.8)	**3.2** (2.1-4.7)	**3.2** (2.0-5.2)	**4.9** (3.5-6.8)	**3.8** (2.8-5.1)	**2.3** (1.6-3.5)	**1.1** (0.6-1.9)	†	†	†	b
10	—	—	—	—	—	—	—	—	—	—	—	**3.8** (2.4-5.9)	**6.5** (4.4-9.6)	**4.6** (3.3-6.2)	**4.6** (3.4-6.2)	**3.4** (2.4-4.8)	**2.3** (1.5-3.6)	†	**2.0** (1.2-3.3)	**1.1** (0.6-1.8)	b
11	**4.0** (2.8-5.6)	**6.0** (4.6-7.9)	**5.5** (3.6-8.1)	**5.0** (3.0-8.3)	**5.2** (3.8-7.0)	**4.6** (2.8-7.5)	**4.5** (2.8-7.1)	**2.8** (1.7-4.6)	**2.5** (1.2-5.0)	**3.5** (2.6-4.6)	**4.3** (3.5-5.2)	**5.4** (3.4-8.4)	**7.0** (4.4-10.9)	**6.9** (5.1-9.2)	**7.2** (5.6-9.2)	**5.7** (4.3-7.6)	**3.7** (2.6-5.2)	**4.9** (3.3-7.2)	**1.9** (1.2-3.1)	**3.1** (2.2-4.4)	b
12	—	—	—	—	—	—	—	—	—	—	—	**3.6** (2.3-5.7)	**3.5** (1.9-6.2)	**6.7** (5.1-8.8)	**7.1** (5.1-9.7)	**4.5** (3.3-6.1)	**5.1** (3.5-7.4)	**2.5** (1.4-4.4)	**3.7** (2.1-6.4)	**4.5** (3.1-6.6)	

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**3.7** (2.0-6.9)	†	**5.3** (3.5-8.0)	**4.0** (2.7-5.8)	**3.4** (2.1-5.5)	†	**1.3** (0.8-2.2)	†	† [b]
Toronto[2]	—	—	†	†	**6.9** (4.3-11.0)	†	**3.5** (1.7-6.8)	†	†	**2.4** (1.3-4.5)	**3.0** (1.8-4.9)	†	†	**4.5** (2.9-6.9)	**4.4** (2.7-7.1)	**3.6** (2.1-6.2)	†	†	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**4.2** (2.4-7.2)	**4.2** (2.4-7.2)	**7.8** (6.0-10.0)	**5.5** (3.8-7.9)	**8.0** (5.1-12.3)	**5.9** (3.6-9.5)	**5.3** (3.2-8.7)	†	**4.8** (2.8-7.9)
North[2]	—	—	†	**5.6** (4.0-7.8)	†	†	†	†	†	†	**5.0** (2.4-10.4)	†	†	**8.1** (5.7-11.5)	**4.8** (2.5-9.0)	**8.0** (4.3-14.5)	**5.4** (3.0-9.5)	**6.3** (3.8-10.4)	†	**3.2** (1.7-5.9)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**4.2** (2.9-6.2)	**6.9** (5.0-9.4)	**6.6** (5.2-8.2)	**8.1** (6.4-10.2)	**4.3** (3.1-5.8)	**3.5** (2.5-4.9)	**2.9** (2.0-4.3)	**2.6** (1.4-4.8)	**2.4** (1.8-3.3) [b]
West[2]	—	—	**6.7** (5.5-8.3)	**5.6** (3.0-10.4)	**4.2** (2.9-6.0)	**3.4** (2.2-5.1)	**2.8** (1.9-3.9)	**1.7** (0.9-3.2)	†	**3.3** (2.9-3.7)	**3.1** (2.8-3.3)	**4.7** (2.7-8.1)	**6.3** (4.0-9.8)	**7.3** (5.3-9.9)	**7.8** (5.8-10.4)	**4.4** (2.9-6.6)	**3.0** (1.9-4.6)	**4.1** (2.5-6.8)	**2.0** (1.2-3.4)	**2.2** (1.4-3.7)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**3.8** (2.7-5.2)	**4.6** (2.8-7.5)	**4.3** (3.0-5.9)	**3.6** (2.4-5.4)	**3.2** (2.4-4.2)	**3.0** (2.0-4.4)	**1.8** (1.2-2.7)	**2.4** (1.7-3.3)	**2.8** (1.7-4.4)
East[2]	—	—	**5.7** (3.2-10.0)	**4.7** (3.0-7.3)	†	†	†	**2.7** (1.9-3.9)	†	**3.0** (1.7-5.4)	**3.5** (3.0-4.0)	**4.2** (2.8-6.3)	**3.5** (2.3-5.2)	**4.1** (2.9-5.8)	**3.3** (2.0-5.3)	**3.0** (2.0-4.4)	**2.4** (1.4-3.8)	**1.4** (0.9-2.3)	**2.0** (1.1-3.6)	**1.6** (1.0-2.7)

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) † estimate suppressed due to unreliability; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. **2003 (peak)** significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use cocaine (also known as “coke”, “blow”, “snow”, “powder”, “snort”, etc.)?

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Crack Cocaine Use
(Table 3.6.8)

Crack cocaine, which first appeared in Canada in the mid-1980s, is a highly addictive and powerful stimulant derived from powdered cocaine. It is easy to produce and, therefore, inexpensive. Smoking crack cocaine will cause an immediate and intense euphoric effect. The OSDUHS began to monitor crack cocaine use in 1987, soon after its appearance in Canada. Starting in 2013, crack use was asked of students in grades 9 through 12 only (not asked of 7th and 8th graders).

	Crack Cocaine Use in 2015 (Grades 9–12)	Trends in Crack Cocaine Use
Total Sample	■ The 2015 OSDUHS estimate for past year crack use among the total sample of secondary students was suppressed (less than 0.5%).	☐ Crack use remained low and stable between 2013 and 2015. Between 1999 and 2005, use remained stable (at about 2%-3%), but began a significant downward trend thereafter. ☐ Over the long-term (among grades 9 and 11 only), there was a small, but significant increase in crack use between 1993 and 2003, followed by a gradual decline during the past decade, reaching all-time lows in recent years.
Sex	■ Estimates by sex were suppressed.	☐ Crack use has significantly declined since 1999 for both males and females.
Grade	■ Estimates by grade were suppressed.	☐ All grades show a significant decline in use since 1999.
Region	■ Estimates by region were suppressed.	☐ All regions, except the North, show a significant decline in use since 1999.

Table 3.6.8: Percentage Reporting Crack Cocaine Use in the Past Year, 1987–2015 OSDUHS (Grades 9–12)

	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])							(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	
(n[2])	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	
Total[1] (95% CI)	—	—	—	—	—	—	**3.2** (2.4-4.2)	**2.6** (1.9-3.5)	**3.1** (2.4-4.0)	**2.3** (1.9-2.8)	**1.2** (0.8-1.6)	**1.3** (1.0-1.7)	**0.8** (0.5-1.3)	**0.7** (0.5-1.1)	†	bc
Total[2]	**1.4** (0.8-2.5)	**1.4** (0.7-2.5)	**1.2** (0.6-2.3)	**1.0** (0.5-2.0)	**2.2** (1.7-2.8)	**2.8** (2.1-3.7)	**3.3** (2.2-4.8)	**3.2** (2.3-4.4)	**3.4** (2.5-4.5)	**2.4** (1.8-3.1)	**1.6** (1.1-2.3)	**1.3** (0.8-2.1)	**0.8** (0.4-1.5)	**0.9** (0.5-1.7)	†	cd
Sex																
Males[1]	—	—	—	—	—	—	**3.8** (2.7-5.3)	**3.0** (1.9-4.8)	**3.5** (2.6-4.6)	**2.6** (2.0-3.3)	**1.1** (0.7-1.7)	**1.6** (1.1-2.4)	**1.1** (0.6-2.0)	**0.9** (0.5-1.5)	†	b
Males[2]	†	**1.8** (0.9-3.3)	**1.3** (0.6-2.9)	†	**2.7** (1.7-4.3)	**3.8** (2.2-6.5)	**3.7** (2.4-5.7)	**3.1** (1.8-5.2)	**3.8** (2.6-5.4)	**2.3** (1.6-3.4)	**1.4** (0.9-2.2)	**1.4** (0.8-2.6)	†	†	†	
Females[1]	—	—	—	—	—	—	**2.5** (1.8-3.6)	**2.2** (1.3-3.5)	**2.7** (1.9-3.9)	**2.0** (1.6-2.7)	**1.2** (0.8-1.9)	**0.9** (0.6-1.5)	†	**0.5** (0.3-0.9)	†	b
Females[2]	**0.6** (0.4-0.9)	†	†	†	**1.7** (1.3-2.2)	**1.9** (1.1-3.2)	**2.8** (1.7-4.5)	**3.3** (2.0-5.4)	**3.0** (1.9-4.7)	**2.4** (1.6-3.5)	**1.8** (1.0-3.1)	**1.2** (0.7-2.2)	†	†	†	
Grade																
9	**1.7** (1.0-3.0)	†	†	†	**1.8** (1.1-3.1)	**2.3** (1.3-3.8)	**2.9** (1.9-4.6)	**3.7** (2.3-6.0)	**3.1** (2.2-4.5)	**2.6** (1.8-3.8)	**1.0** (0.6-1.8)	†	†	†	†	b
10	—	—	—	—	—	—	**3.7** (2.1-6.6)	†	**3.0** (2.0-4.5)	**2.5** (1.7-3.8)	**1.1** (0.6-2.0)	**0.9** (0.5-1.6)	†	†	†	b
11	†	†	**1.3** (0.7-2.4)	†	**2.5** (1.9-3.2)	**3.3** (2.4-4.4)	**3.6** (1.9-6.8)	**2.6** (1.6-4.0)	**3.6** (2.4-5.4)	**2.1** (1.4-3.1)	**2.2** (1.4-3.4)	**1.7** (0.9-2.9)	†	†	†	b
12	—	—	—	—	—	—	†	†	**2.5** (1.7-3.7)	**2.1** (1.3-3.3)	†	**1.5** (0.8-2.8)	†	†	†	b

(cont'd)

	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])							(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region															
Toronto[1]	—	—	—	—	—	—	†	**3.4** (2.6-4.4)	**2.6** (1.3-5.1)	**1.4** (0.8-2.4)	**1.0** (0.5-1.8)	**1.6** (0.9-3.0)	†	†	† [b]
Toronto[2]	†	†	†	**0.6** (0.3-1.2)	**2.4** (1.3-4.4)	†	†	**4.0** (2.6-6.1)	†	†	†	†	†	†	†
North[1]	—	—	—	—	—	—	†	†	**5.6** (4.1-7.6)	**2.8** (1.6-4.5)	**3.6** (2.0-6.4)	†	†	†	†
North[2]	**1.5** (0.8-3.0)	†	†	†	†	†	†	†	**6.1** (4.2-8.9)	†	**5.3** (2.9-9.4)	†	†	†	†
West[1]	—	—	—	—	—	—	**3.8** (2.4-6.0)	**3.4** (2.1-5.5)	**3.2** (2.2-4.8)	**3.1** (2.4-4.0)	**0.9** (0.5-1.8)	**1.2** (0.7-1.9)	†	**0.7** (0.4-1.4)	† [b]
West[2]	†	**1.0** (0.5-1.9)	†	†	**2.6** (2.0-3.5)	**3.1** (2.3-4.0)	**4.0** (2.1-7.5)	**4.1** (2.5-6.7)	**3.5** (2.2-5.6)	**3.0** (2.0-4.4)	**1.1** (0.6-2.0)	†	†	†	†
East[1]	—	—	—	—	—	—	**2.9** (2.0-4.1)	**1.1** (0.6-2.1)	**2.5** (1.5-4.2)	**1.8** (1.1-2.7)	**1.1** (0.6-1.9)	**1.2** (0.8-1.9)	†	**0.8** (0.4-1.5)	† [b]
East[2]	†	†	**0.8** (0.5-1.4)	†	**1.8** (0.9-3.5)	**2.6** (1.8-3.7)	**3.4** (2.1-5.6)	†	**2.7** (1.5-4.7)	**1.5** (1.0-2.5)	†	†	†	†	†

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) † estimate suppressed due to unreliability; (5) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often have you used cocaine in the form of "crack"?

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Heroin Use

(Table 3.6.9)

	Heroin Use in 2015 (Grades 9–12)	Trends in Heroin Use
Total Sample	▪ Overall, 0.5% of secondary students used heroin at least once during the past year. This percentage represents about 3,300 secondary students in Ontario.	☐ Heroin use remained very low and stable between 2013 and 2015. However, use is currently lower than the level seen in 1999 (2.1%). ☐ Since 1977, the use of heroin has been very low and stable (among grades 9 and 11 only).
Sex	▪ Estimates by sex were suppressed.	☐ Males show a significant decline in heroin use since 1999, when the estimate was 2.8%. Use among females has been very low and stable since 1999.
Grade	▪ Estimates by grade were suppressed.	☐ Use among students in grades 9 and 12 significantly declined since 1999, while use among the other grades has been very low and stable.
Region	▪ The estimate among students in the West region was 0.7%. Estimates for the other three regions were suppressed.	☐ Only students in the East region show a significant decline in use since 1999, when the estimate was 3.0%. Use among students in other regions has been very low and stable.

Table 3.6.9: Percentage Reporting Heroin Use in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**2.1** (1.6-2.7)	**1.2** (0.8-1.7)	**1.5** (1.1-1.9)	**0.9** (0.7-1.2)	**1.0** (0.7-1.5)	**0.8** (0.6-1.2)	†	†	**0.5** (0.3-0.7) [bc]
Total[2]	**2.2** (1.6-2.9)	**2.7** (2.0-3.6)	**1.9** (1.3-2.9)	**2.1** (1.4-3.1)	**1.7** (1.2-2.4)	**1.4** (0.8-2.7)	**1.4** (0.8-2.3)	**1.3** (0.8-2.0)	**1.2** (0.7-1.9)	**2.4** (1.6-3.5)	**1.9** (1.6-2.4)	**2.2** (1.5-3.2)	**1.5** (0.9-2.4)	**1.4** (1.0-2.0)	**1.1** (0.7-1.6)	**1.4** (0.9-2.1)	**0.9** (0.6-1.5)	†	†	†
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**2.8** (2.0-3.9)	**1.8** (1.1-2.7)	**2.2** (1.6-3.0)	**1.1** (0.8-1.6)	**1.4** (1.0-2.2)	**1.2** (0.8-1.9)	†	**0.7** (0.4-1.2)	† [b]
Males[2]	**1.7** (1.1-2.7)	**3.4** (2.4-4.8)	**2.7** (1.6-4.3)	**2.6** (1.7-3.9)	**2.3** (1.7-3.2)	**2.2** (1.1-4.2)	**1.9** (1.0-3.5)	**1.4** (0.8-2.5)	†	**3.6** (2.4-5.2)	**2.5** (1.8-3.4)	**2.6** (1.5-4.3)	**2.1** (1.1-3.9)	**1.8** (1.2-2.9)	**1.2** (0.7-2.0)	**2.3** (1.4-3.6)	†	†	†	†
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**1.3** (0.7-2.4)	†	**0.8** (0.4-1.3)	**0.8** (0.5-1.2)	†	†	†	†	†
Females[2]	**2.6** (1.8-3.7)	**2.0** (1.3-3.1)	**1.1** (0.6-2.1)	**1.5** (0.8-3.1)	**1.0** (0.5-2.1)	†	†	**1.1** (0.7-1.8)	†	**1.2** (0.6-2.4)	**1.4** (1.1-2.0)	†	†	**0.9** (0.5-1.7)	**1.0** (0.5-1.8)	†	†	†	†	†
Grade																				
9	**2.7** (1.8-3.8)	**3.2** (2.3-4.6)	**2.2** (1.3-3.9)	**2.4** (1.5-3.9)	**2.0** (1.2-3.3)	†	†	†	**1.2** (0.6-2.3)	**2.3** (1.6-3.2)	**2.1** (1.6-2.7)	**2.5** (1.7-3.8)	**2.2** (1.3-3.6)	**1.5** (0.9-2.4)	**1.4** (0.8-2.3)	**1.0** (0.6-1.8)	†	†	†	† [b]
10	—	—	—	—	—	—	—	—	—	—	—	†	**1.2** (0.6-2.2)	**2.0** (1.2-3.5)	†	**0.7** (0.4-1.3)	†	†	†	†
11	**1.4** (0.8-2.5)	**2.0** (1.3-3.1)	**1.5** (1.0-2.3)	**1.6** (0.8-3.2)	**1.3** (0.9-2.1)	**1.6** (0.8-3.3)	**1.7** (0.8-3.4)	**1.4** (0.8-2.3)	**1.2** (0.6-2.5)	**2.4** (1.2-4.8)	**1.8** (1.2-2.5)	†	†	**1.3** (0.7-2.2)	**0.8** (0.4-1.5)	**1.7** (1.0-2.9)	†	†	†	†
12	—	—	—	—	—	—	—	—	—	—	—	**2.2** (1.2-4.0)	†	**1.1** (0.6-2.0)	**1.0** (0.6-1.7)	†	**1.0** (0.5-2.0)	†	†	† [b]

(cont'd)

	1977	1979	981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	†	†	**1.5** (0.8-2.9)	**1.2** (0.6-2.1)	†	†	†	†	†
Toronto[2]	—	—	†	†	**3.1** (1.5-6.2)	†	†	†	†	**2.6** (1.5-4.3)	**1.5** (0.8-2.9)	†	†	†	†	†	†	†	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**1.4** (0.8-2.6)	†	†	**1.0** (0.6-1.7)	†	†	†	†	†
North[2]	—	—	†	†	†	†	†	†	†	†	**3.2** (1.6-6.3)	†	†	†	†	†	†	†	†	†
West[1]	—	—	—	—	—	—	—	—	—	—	—	**1.7** (1.0-3.0)	**1.8** (1.2-2.9)	**1.5** (1.0-2.2)	**1.2** (0.9-1.8)	**1.1** (0.6-2.0)	**0.9** (0.5-1.6)	†	†	**0.7** (0.4-1.3)
West[2]	—	—	**2.8** (1.9-4.2)	**2.4** (1.2-4.9)	**1.6** (1.1-2.2)	†	**1.9** (1.1-3.4)	**1.4** (0.7-2.8)	**1.5** (0.8-3.0)	†	**1.9** (1.3-2.7)	†	**2.4** (1.3-4.4)	**1.1** (0.6-1.9)	**1.2** (0.7-2.2)	**1.5** (0.8-2.9)	†	†	†	†
East[1]	—	—	—	—	—	—	—	—	—	—	—	**3.0** (2.1-4.2)	†	**1.5** (1.0-2.4)	†	**1.0** (0.6-1.7)	†	†	†	† [b]
East[2]	—	—	**1.3** (0.7-2.2)	**2.8** (1.8-4.2)	†	†	†	†	†	**2.4** (1.6-3.5)	**1.9** (1.4-2.6)	**3.0** (1.7-5.1)	†	†	†	†	†	†	†	†

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) † estimate suppressed due to unreliability; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend.
Q: In the last 12 months, how often did you use heroin (also known as "H", "junk", or "smack")?
Source: OSDUHS, Centre for Addiction & Mental Health

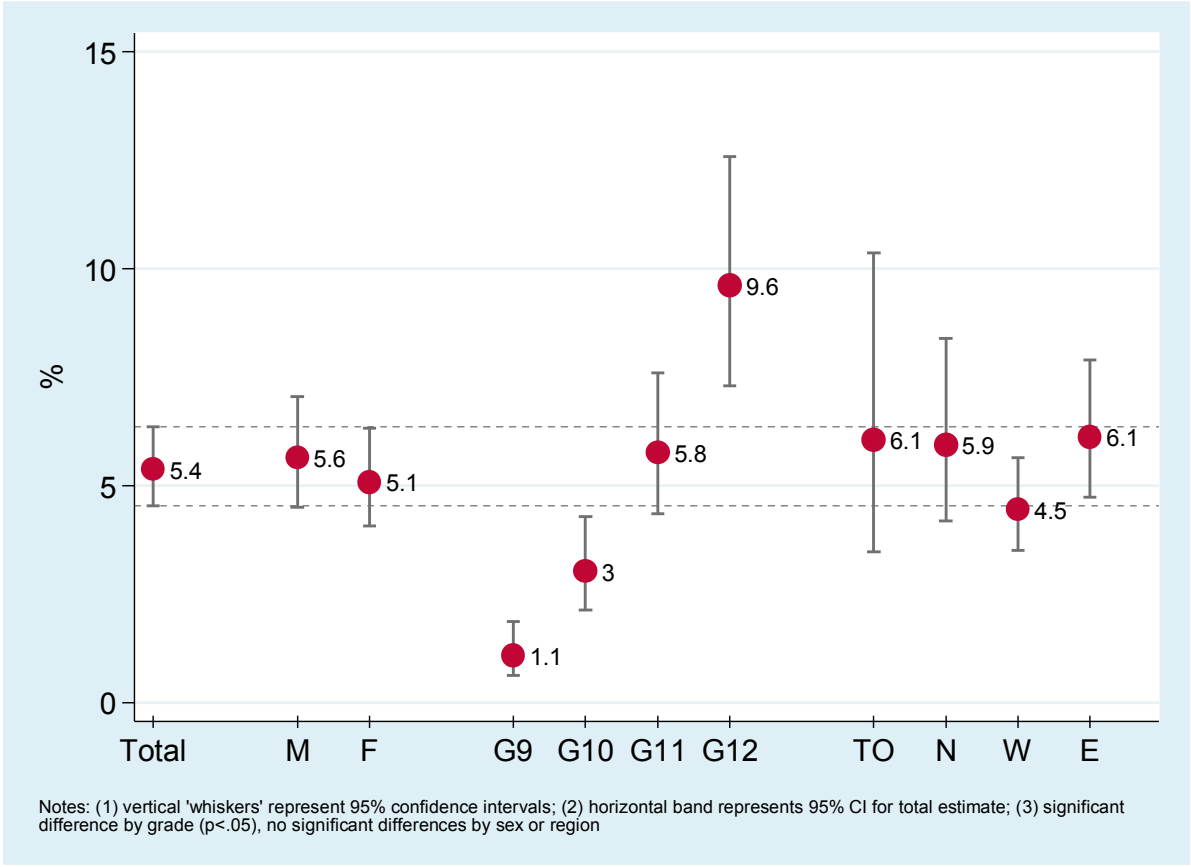
Past Year Ecstasy (MDMA) Use

(Figures 3.6.15–3.6.17; Table 3.6.10)

"Ecstasy" (MDMA, methylenedioxymethamphetamine), which first appeared in Canada in 1989, is a synthetic substance with both stimulant and hallucinogenic properties. Its effects include mild hallucinogenic effects, increased tactile sensitivity, empathic feelings, dehydration, and impaired memory. The OSDUHS began to monitor ecstasy use in 1991. Starting in 2013, ecstasy use was asked of students in grades 9 through 12 only (not asked of 7th and 8th graders).

	Ecstasy Use in 2015 (Grades 9–12)	Trends in Ecstasy Use
Total Sample	■ In 2015, 5.4% of students in grades 9 through 12 report using ecstasy at least once during the 12 months before the survey. With the sampling error, we estimate that between 4.5% and 6.4% (95% CI) of students use ecstasy. The estimated number of secondary students in Ontario who use ecstasy is about 37,700.	☐ Ecstasy use significantly increased between 2013 and 2015 (from 3.3% to 5.4%) among students in grades 9–12. However, the 2015 estimate (5.4%) remains significantly lower than the peak level seen in 2001 (7.9%). ☐ Since monitoring began in 1991, ecstasy use steadily increased from below 0.5% to a peak in 2001 (among grades 9 and 11 only). Use has been on a general downward trend since that peak.
Sex	■ There is no significant sex difference (5.6% of males use ecstasy, 5.1% of females).	☐ Ecstasy use significantly increased among females between 2013 and 2015, from 2.6% to 5.1%, and the current estimate is similar to the peak seen in 2001. Use among males remained stable between 2013 and 2015, and is currently significantly lower than the peak in 2001.
Grade	■ Ecstasy use significantly increases with grade, from 1.1% of 9th graders to 9.6% of 12th graders.	☐ No grade shows a significant change between 2013 and 2015. Ecstasy use among grades 9–11 significantly declined between 2001 and 2015. Use among 12th graders shows no significant change during these years.
Region	■ There is no significant variation among the regions.	☐ No region shows a significant change between 2013 and 2015. Students in the West show a significant decline in use since 2001, when it peaked at 10.8%. There have been no significant changes over the past decade or so among students in the other three regions.
Frequency of Use	■ Less than 2% of students report using ecstasy six times or more often in the past year (see Figure 3.1.3). ■ About half (48%) of ecstasy users report using once or twice in the past year, while about one-quarter (23%) of users report using ten or more times (see Figure 3.1.4).	

Figure 3.6.15
Past Year Ecstasy Use by Sex, Grade, and Region, 2015 OSDUHS

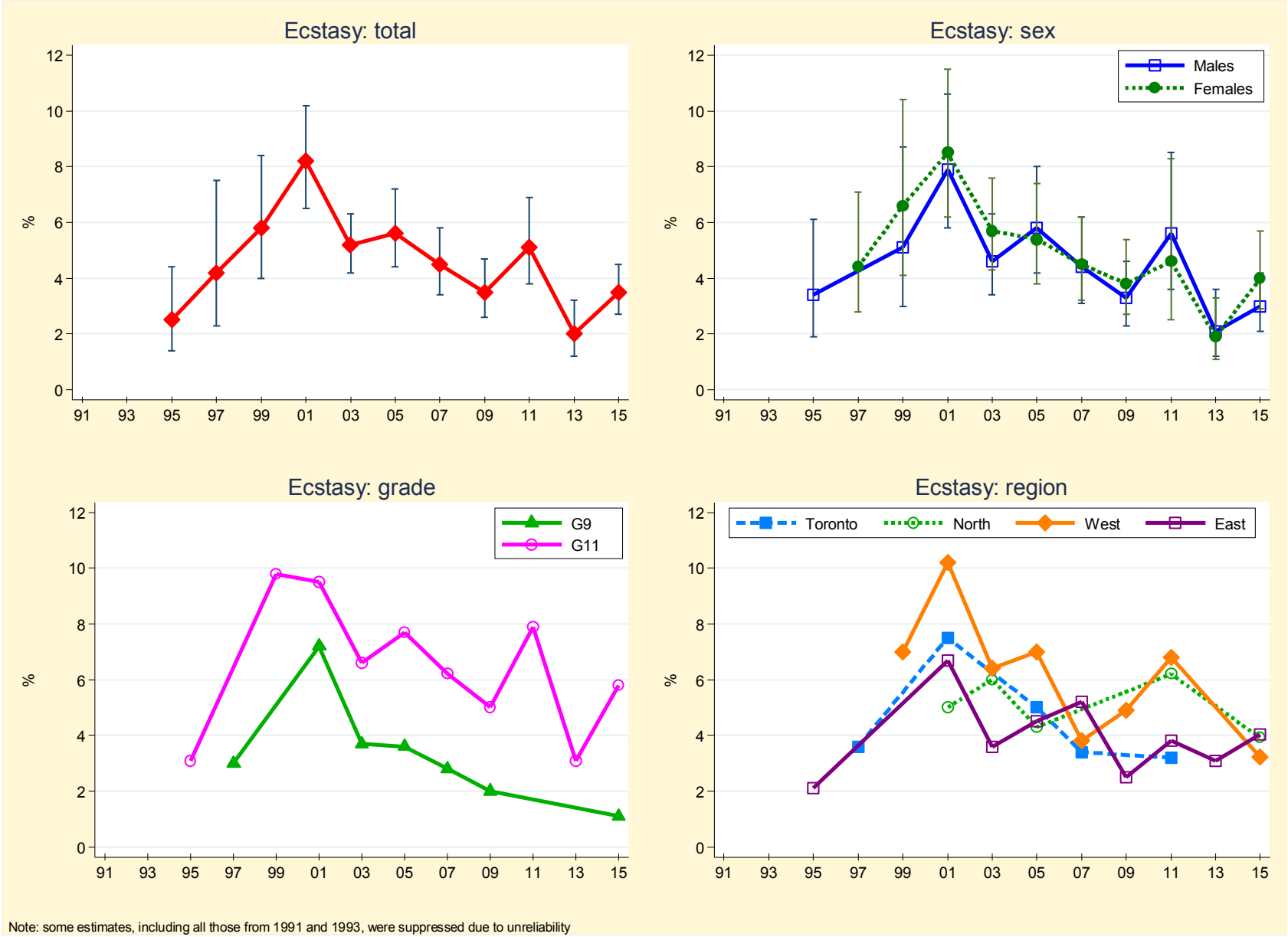


Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.6.16
Past Year Ecstasy Use, 1999–2015 (Grades 9–12)

Note: some estimates were suppressed due to unreliability

Figure 3.6.17
Past Year Ecstasy Use, 1991–2015 (Grades 9 and 11 only)



Note: some estimates, including all those from 1991 and 1993, were suppressed due to unreliability

Table 3.6.10: Percentage Reporting Ecstasy Use in the Past Year, 1991–2015 OSDUHS (Grades 9–12)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])					(1496)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	
(n[2])	(888)	(870)	(991)	(1125)	(856)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	
Total[1] (95% CI)	—	—	—	—	**5.3** (4.0-7.0)	**7.9** (6.5-9.6)	**5.5** (4.7-6.4)	**6.2** (5.2-7.4)	**4.7** (3.9-5.7)	**4.3** (3.5-5.2)	**4.4** (3.5-5.6)	**3.3** (2.4-4.5)	**5.4** (4.5-6.4)	abcd
Total[2]	†	†	**2.5** (1.4-4.4)	**4.2** (2.3-7.5)	**5.8** (4.0-8.4)	**8.2** (6.5-10.2)	**5.2** (4.2-6.3)	**5.6** (4.4-7.2)	**4.5** (3.4-5.8)	**3.5** (2.6-4.7)	**5.1** (3.8-6.9)	**2.0** (1.2-3.2)	**3.5** (2.7-4.5)	cd
Sex														
Males[1]	—	—	—	—	**5.7** (3.9-8.3)	**8.7** (6.8-11.2)	**5.7** (4.6-7.2)	**6.4** (5.2-8.0)	**4.8** (3.6-6.2)	**4.2** (3.1-5.7)	**4.6** (3.2-6.6)	**3.9** (2.5-6.0)	**5.6** (4.5-7.0)	b
Males[2]	†	†	**3.4** (1.9-6.1)	†	**5.1** (3.0-8.7)	**7.9** (5.8-10.6)	**4.6** (3.4-6.3)	**5.8** (4.2-8.0)	**4.4** (3.1-6.2)	**3.3** (2.3-4.6)	**5.6** (3.6-8.5)	**2.1** (1.2-3.6)	**3.0** (2.1-4.1)	
Females[1]	—	—	—	—	**5.0** (3.3-7.4)	**7.0** (5.4-8.9)	**5.2** (4.2-6.5)	**6.0** (4.7-7.5)	**4.6** (3.8-5.6)	**4.3** (3.5-5.3)	**4.2** (3.2-5.4)	**2.6** (1.8-3.8)	**5.1** (4.1-6.3)	a
Females[2]	†	†	†	**4.4** (2.8-7.1)	**6.6** (4.1-10.4)	**8.5** (6.2-11.5)	**5.7** (4.3-7.6)	**5.4** (3.8-7.4)	**4.5** (3.2-6.2)	**3.8** (2.7-5.4)	**4.6** (2.5-8.3)	**1.9** (1.0-3.3)	**4.0** (2.9-5.6)	
Grade														
9	†	†	†	**3.0** (2.1-4.3)	†	**7.2** (5.0-10.1)	**3.7** (2.7-5.1)	**3.6** (2.6-4.9)	**2.8** (1.9-4.1)	**2.0** (1.1-3.5)	†	†	**1.1** (0.6-1.9)	b
10	—	—	—	—	**4.5** (2.5-7.8)	**6.8** (4.6-10.0)	**4.6** (3.2-6.4)	**5.3** (3.9-7.0)	**4.7** (3.5-6.4)	**4.2** (3.1-5.7)	**2.7** (1.5-4.8)	**2.7** (1.5-4.8)	**3.0** (2.1-4.3)	b
11	†	†	**3.1** (1.6-5.8)	†	**9.8** (6.4-14.8)	**9.5** (6.9-13.0)	**6.6** (4.9-9.0)	**7.7** (5.7-40.5)	**6.2** (4.6-8.2)	**5.0** (3.7-6.9)	**7.9** (5.9-10.6)	**3.1** (2.0-4.8)	**5.8** (4.4-7.6)	b
12	—	—	—	—	**4.8** (2.6-8.8)	**9.2** (6.0-14.1)	**7.2** (5.5-9.4)	**8.1** (6.3-10.5)	**5.0** (3.8-6.7)	**5.4** (3.8-7.6)	**4.6** (3.0-7.0)	**5.6** (3.6-8.5)	**9.6** (7.3-12.6)	

(cont'd)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])					(1496)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(888)	(870)	(991)	(1125)	(856)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region													
Toronto[1]	—	—	—	—	†	**6.4** (4.0-10.1)	**4.9** (3.2-7.5)	**4.6** (2.8-7.6)	**3.1** (2.2-4.4)	**2.9** (1.6-5.2)	**3.2** (1.8-5.5)	†	**6.1** (3.5-10.4)
Toronto[2]	†	†	†	**3.6** (2.2-5.9)	†	**7.5** (4.7-11.7)	†	**5.0** (3.0-8.2)	**3.4** (2.0-5.5)	†	**3.2** (1.6-6.1)	†	†
North[1]	—	—	—	—	†	**4.8** (3.2-7.0)	**5.9** (4.7-7.3)	**5.3** (4.0-6.8)	**9.0** (5.7-13.8)	**6.4** (3.9-10.5)	**5.6** (3.9-8.0)	**2.6** (1.3-5.0)	**5.9** (4.2-8.4)
North[2]	†	†	†	†	†	**5.0** (2.6-9.5)	**6.0** (4.4-8.2)	**4.3** (2.6-7.0)	†	†	**6.2** (3.8-9.8)	†	**3.9** (2.1-7.1)
West[1]	—	—	—	—	**5.8** (3.8-8.7)	**10.8** (8.5-13.5)	**6.5** (5.1-8.3)	**7.8** (6.1-10.0)	**4.1** (3.0-5.6)	**4.8** (3.5-6.4)	**4.7** (3.1-7.1)	**3.2** (1.7-5.6)	**4.5** [b] (3.5-5.6)
West[2]	†	†	†	†	**7.0** (4.2-11.5)	**10.2** (7.6-13.5)	**6.4** (4.8-8.5)	**7.0** (4.6-10.4)	**3.8** (2.4-5.7)	**4.9** (3.3-7.2)	**6.8** (4.5-10.1)	†	**3.2** (2.2-4.6)
East[1]	—	—	—	—	**5.5** (3.3-9.1)	**5.5** (3.1-9.6)	**4.2** (3.1-5.7)	**5.2** (3.8-7.2)	**5.4** (4.0-7.5)	**3.9** (2.8-5.5)	**4.4** (3.2-6.0)	**3.7** (2.6-5.3)	**6.1** (4.7-7.9)
East[2]	†	†	**2.1** (0.4-10.4)	†	†	**6.7** (3.6-12.3)	**3.6** (2.5-5.4)	**4.5** (3.1-6.5)	**5.2** (3.2-8.2)	**2.5** (1.6-4.0)	**3.8** (2.4-5.8)	**3.1** (1.9-5.1)	**4.0** (2.8-5.8)

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) question asked of a random half sample between 1991 and 1999; (5) † estimate suppressed due to unreliability; (6) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. **2001 (peak)** significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use MDMA or "ecstasy" (also known as "Molly", "E", "X")?

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Mephedrone ("Bath Salts") Use

Starting in 2011, we asked a random half sample of secondary students (grades 9–12) whether they used mephedrone. Mephedrone (4-methylmethcathinone), more commonly known as "bath salts." Mephedrone is a synthetic stimulant, which is illegal and relatively new to Canada that produces an experience similar to methamphetamine in that it can cause rapid heart rate, hallucinations, and violent behaviour. It comes in powder form and is usually snorted, but can be swallowed in pill form or inhaled. Mephedrone is sold over the Internet, usually under the guise of plant food or bath salts.

To assess use, students were asked: "*In the last 12 months, how often did you use mephedrone (also known as 'bath salts', 'vanilla sky', 'drone', 'bubbles', 'm-cat')?*"

2015: Grades 9–12

- The percentage of secondary students reporting past year use of mephedrone ("bath salts") was 0.7% (95% CI: 0.4%-1.2%). This percentage represents about 4,600 students in grades 9–12 in Ontario.

- No further breakdown by sex, grade, or region could be performed due to small values.

2011–2015: Grades 9–12

- Because the estimates for past year mephedrone use in 2011 and 2013 were suppressed (due to extremely low values), a trend analysis could not be performed.

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

3.7.1 Nonmedical Use of Prescription Drugs and Over-the-Counter Drugs Among Grades 7–12

Past Year Nonmedical Use of Prescription Opioid Pain Relievers

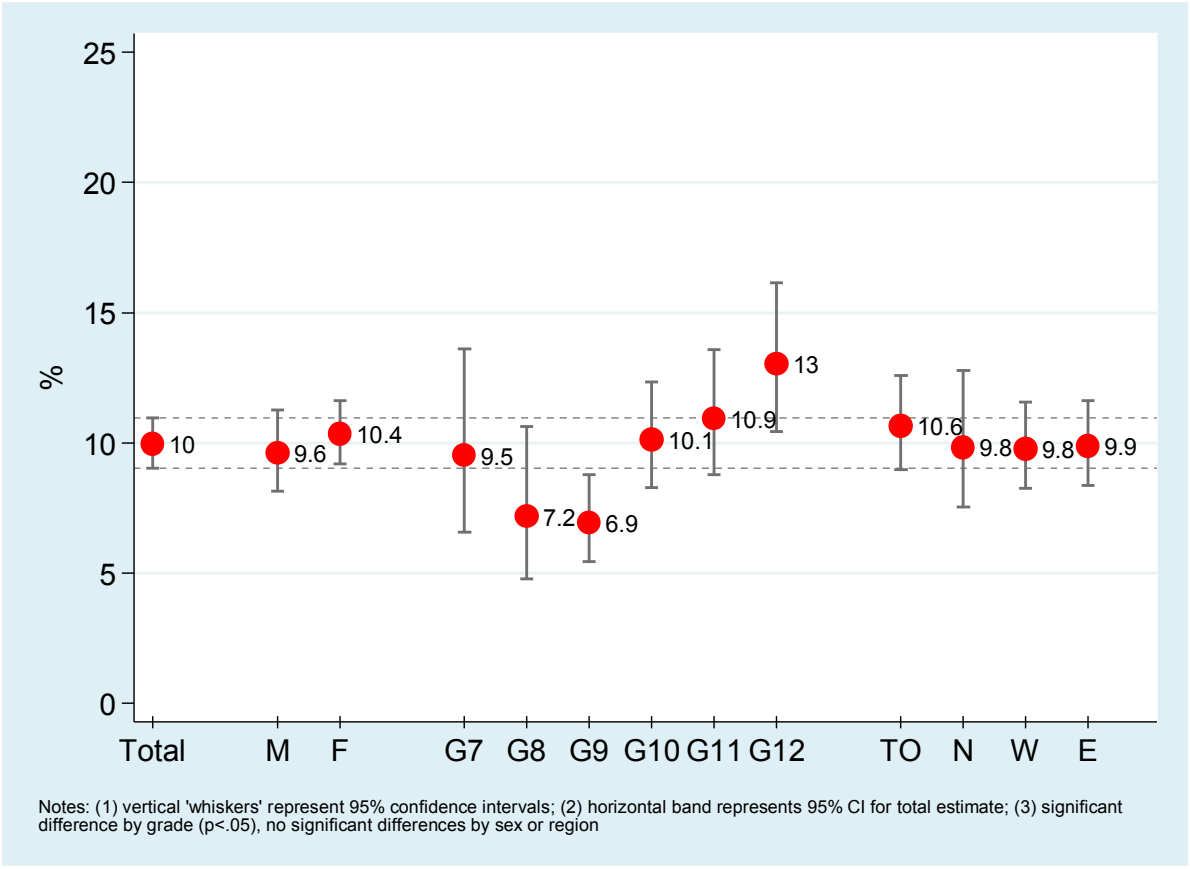
(Figures 3.7.1, 3.7.2; Table 3.7.1)

Starting in 2007, students were asked about nonmedical (NM) use of the general class of prescription opioid pain relievers, such as Percocet and Tylenol #3. In addition to suppressing pain, these drugs may also cause a relaxed or euphoric feeling. 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. To measure past year use, students were asked "*In the last 12 months, how often did you use pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, OxyNEO, codeine) without a prescription or without a doctor telling you to take them? (We do not mean regular Tylenol, Advil, or Aspirin that anyone can buy in a drugstore.*)"

	NM Use of an Opioid Pain Reliever in 2015 (Grades 7–12)	2007–2015 Trends (Grades 7–12)
Total Sample	■ One-in-ten (10.0%) students report using a prescription opioid pain reliever nonmedically at least once during the 12 months before the survey. This estimate represents about 95,000 Ontario students in grades 7 through 12.	☐ Among the total sample of students, nonmedical opioid use in the past year significantly declined between 2013 and 2015, from 12.4% to 10.0%. There has been a significant linear downward trend since 2007 – when monitoring began – from 20.6% down to 10.0% in 2015.
Sex	■ There is no significant difference in nonmedical opioid use between males (9.6%) and females (10.4%).	☐ Males show a significant decline in use between 2013 and 2015, from 12.8% to 9.6%. Use among females remained stable between these two survey cycles. Both sexes show a significant linear decline between 2007 and 2015.
Grade	■ There is significant grade variation showing that use increases with grade, peaking in 12th grade at 13.0%.	☐ Only 9th graders show a significant decline between 2013 and 2015, from 11.8% to 6.9%. Students in all grades, except grade 7, show a significant downward trend since 2007.

Region	■ Use does not significantly differ by region.	☐ Nonmedical use of prescription opioids significantly declined between 2013 and 2015 only among students in the West, from 13.1% to 9.8%. However, all regions show significant declines since 2007.
Frequency of Use	■ About 4% of all students report using an opioid pain reliever nonmedically six times or more often in the past year (see Figure 3.1.3). ■ One-quarter (25%) of past year users report using ten times or more often (see Figure 3.1.4).	

Figure 3.7.1
Past Year Nonmedical Use of a Prescription Opioid Pain Reliever by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.7.2
Past Year Nonmedical Use of a Prescription Opioid Pain Reliever, 2007–2015 OSDUHS (Grades 7–12)

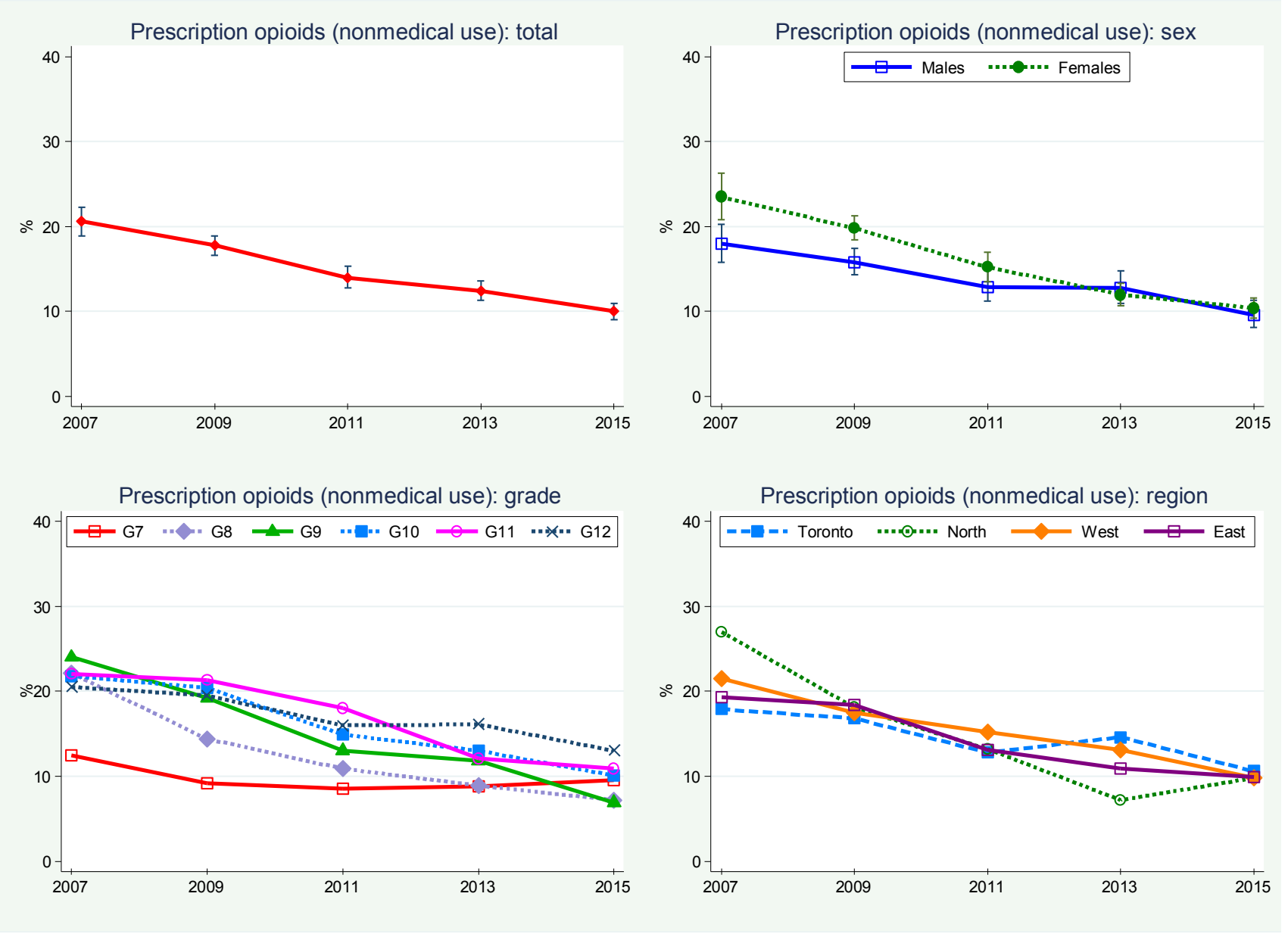


Table 3.7.1: Percentage Reporting Nonmedical Use of a Prescription Opioid Pain Reliever in the Past Year, 2007–2015 OSDUHS

	(*n*=)	2007 (2935)	2009 (9112)	2011 (9288)	2013 (10272)	2015 (10426)
Total		**20.6**	**17.8**	**14.0**	**12.4**	**10.0** [abc]
(95% CI)		(18.9-22.3)	(16.6-18.9)	(12.8-15.3)	(11.2-13.6)	(9.0-11.0)
Sex						
	Males	**18.0** (15.8-20.3)	**15.8** (14.3-17.4)	**12.9** (11.2-14.9)	**12.8** (11.0-14.8)	**9.6** [ab] (8.1-11.3)
	Females	**23.5** (20.8-26.3)	**19.8** (18.4-21.3)	**15.2** (13.5-17.0)	**12.0** (10.7-13.3)	**10.4** [b] (9.2-11.6)
Grade						
	7	**12.5** (8.4-18.2)	**9.2** (6.9-12.2)	**8.5** (6.7-10.7)	**8.8** (6.8-11.3)	**9.5** (6.6-13.6)
	8	**22.1** (17.7-27.2)	**14.4** (11.9-17.4)	**10.9** (8.5-13.8)	**8.9** (6.6-11.7)	**7.2** [b] (4.8-10.6)
	9	**24.0** (19.5-29.1)	**19.2** (16.4-22.3)	**13.0** (10.7-15.6)	**11.8** (9.2-14.9)	**6.9** [ab] (5.4-8.8)
	10	**21.8** (18.1-25.9)	**20.4** (17.1-24.2)	**14.9** (12.9-17.2)	**13.0** (10.4-16.0)	**10.1** [b] (8.3-12.3)
	11	**22.0** (18.4-26.2)	**21.3** (18.6-24.3)	**18.0** (14.6-22.0)	**12.1** (9.9-14.7)	**10.9** [b] (8.8-13.6)
	12	**20.5** (16.6-25.1)	**19.5** (16.8-22.5)	**16.0** (13.2-19.2)	**16.1** (13.2-19.6)	**13.0** [b] (10.4-16.2)
Region						
	Toronto	**17.9** (14.5-21.9)	**16.8** (14.7-19.2)	**12.8** (11.4-14.4)	**14.6** (11.1-19.0)	**10.6** [b] (9.0-12.6)
	North	**27.0** (21.6-33.1)	**18.1** (15.9-20.6)	**13.2** (9.7-17.8)	**7.2** (5.5-9.4)	**9.8** [b] (7.5-12.8)
	West	**21.5** (18.8-24.4)	**17.5** (15.6-19.5)	**15.2** (13.0-17.8)	**13.1** (11.6-14.7)	**9.8** [ab] (8.2-11.6)
	East	**19.3** (16.8-22.1)	**18.4** (16.6-20.4)	**13.1** (11.8-14.6)	**10.9** (9.1-13.1)	**9.9** [b] (8.4-11.6)

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in 2007; (3) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 2007 significant difference, p<.01; [c] significant linear trend, p<.01.

Q: In the last 12 months, how often did you use pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, OxyNEO, codeine) without a prescription or without a doctor telling you to take them? We do not mean regular Tylenol, Advil, or Aspirin that anyone can buy in a drugstore. (Note that the last sentence was added in the 2009 cycle and tested on a random half sample. An evaluation showed it had no discernible effect on responses, and it was retained in subsequent cycles.)

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Nonmedical Use of ADHD Drugs
(Table 3.7.2)

Ritalin and Concerta (methylphenidate), Adderall and Dexedrine (dextroamphetamine) are stimulant drugs used to treat Attention Deficit/Hyperactivity Disorder (ADHD) in children. However, some people take these drugs without a prescription (i.e., abuse) for various purposes including appetite suppression, wakefulness, increased focus, and euphoria. Starting in 2007, students were asked about the nonmedical (NM) use of this class of drugs.

	NM ADHD Drug Use in 2015 (Grades 7–12)	2007–2015 Trends (Grades 7–12)
Total Sample	■ Among all students, 2.1% report using an ADHD drug for nonmedical purposes at least once in the past 12 months. This represents about 19,900 Ontario students in grades 7 through 12.	☐ The nonmedical use of an ADHD drug did not significantly change between 2013 (1.4%) and 2015 (2.1%). However, use is currently higher than the estimate from 2007 (1.0%), the first year of monitoring.
Sex	■ Males (2.1%) and females (2.0%) are equally likely to use an ADHD drug nonmedically.	☐ Use among females significantly increased between 2013 and 2015, from 0.9% to 2.0%. Use among males has remained stable since 2007.
Grade	■ There is significant grade variation showing that 11th and 12th graders are most likely to use.	☐ No grade shows a significant change in use.
Region	■ There is no significant regional variation.	☐ No region shows a significant change in use.
Frequency of Use	■ About half (47%) of past year users report using only once or twice in the past year (see Figure 3.1.4).	

Table 3.7.2: Percentage Reporting Nonmedical Use of an ADHD Drug in the Past Year, 2007–2015 OSDUHS

	(*n*=)	2007 (2935)	2009 (9112)	2011 (9288)	2013 (10272)	2015 (10426)
Total		**1.0**	**1.6**	**1.0**	**1.4**	**2.1** [bd]
(95% CI)		(0.7-1.5)	(1.3-2.1)	(0.7-1.3)	(1.0-2.0)	(1.6-2.7)
Sex						
	Males	**1.1** (0.7-1.8)	**1.7** (1.2-2.4)	**1.2** (0.7-2.2)	**1.9** (1.2-2.9)	**2.1** (1.5-3.0)
	Females	**1.0** (0.5-1.9)	**1.6** (1.2-2.1)	**0.7** (0.4-1.3)	**0.9** (0.6-1.3)	**2.0** [a] (1.4-2.9)
Grade						
	7	†	**0.8** (0.4-1.5)	†	†	†
	8	†	**1.2** (0.7-2.3)	†	†	†
	9	†	**1.8** (1.0-3.0)	†	†	**0.8** (0.4-1.4)
	10	†	**1.6** (1.0-2.6)	†	**1.6** (0.8-3.0)	**1.5** (0.9-2.5)
	11	**2.2** (1.3-3.7)	**2.5** (1.5-4.1)	†	**1.4** (0.8-2.5)	**3.4** (2.3-5.0)
	12	†	**1.7** (1.1-2.7)	†	**2.4** (1.2-4.7)	**3.8** (2.3-6.1)
Region						
	Toronto	†	†	†	†	†
	North	†	**2.5** (1.4-4.4)	**1.3** (0.8-2.3)	†	**1.7** (0.9-3.1)
	West	**1.1** (0.6-1.7)	**1.7** (1.1-2.4)	†	**1.4** (0.8-2.7)	**1.7** (1.2-2.3)
	East	†	**1.8** (1.2-2.7)	**1.4** (1.0-2.0)	**1.3** (0.8-2.1)	**2.9** (1.9-4.5)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in 2007; (4) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 2007 significant difference, p<.01; [d] significant nonlinear trend, p<.01.

Q: Sometimes doctors give medicine to students who are hyperactive or have problems concentrating in school. This is called Attention Deficit Hyperactivity Disorder (ADHD). In the last 12 months, how often did you use medicine that is usually used to treat ADHD (such as Ritalin, Concerta, Adderall, Dexedrine) without a prescription or without a doctor telling you to take it?

Source: OSDUHS, Centre for Addiction & Mental Health

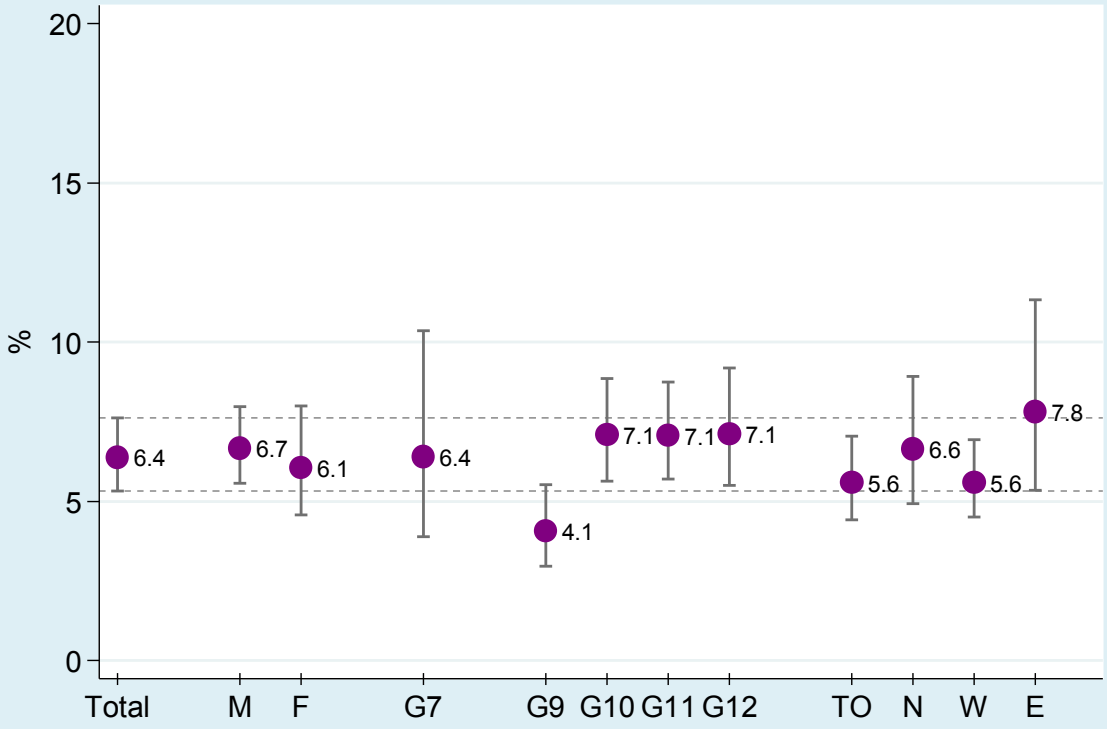
Past Year Nonmedical Use of Over-the-Counter Cough or Cold Medication

(Figures 3.7.3, 3.7.4; Table 3.7.3)

Starting in 2009, the OSDUHS asked students about using over-the-counter (OTC) cough or cold medication that contains the drug dextromethorphan (DXM) in order to "get high." When abused, DXM takes on qualities of a dissociative drug such as ketamine, producing feelings of detachment and distorting perceptions of sight and sound and impairing motor coordination.

	Use in 2015 (Grades 7–12)	2009–2015 Trends (Grades 7–12)
Total Sample	■ In 2015, 6.4% of students report using an OTC cough/cold medication to get high at least once in the past year. This estimate represents about 60,600 students in grades 7–12 in Ontario.	☐ The percentage of students reporting using an OTC cough/cold medication to get high significantly decreased between 2013 and 2015 (from 9.7% to 6.4%), reverting back down to the level seen when monitoring first began in 2009 (7.2%).
Sex	■ Males (6.7%) and females (6.1%) are equally likely to use cough/cold medication to get high.	☐ Only males show a significant decrease in the use of an OTC cough/cold medication to get high between 2013 and 2015, from 10.7% to 6.7%. There was no significant change among females.
Grade	■ There are no significant grade differences.	☐ Among the grades, only students in grade 9 show a significant decrease in use between 2013 and 2015, from 10.1% to 4.1%. No other grade shows a significant change.
Region	■ There are no significant regional differences.	☐ Among the regions, students in Toronto show a significant decrease in 2015 (5.6%) compared with 2013 (9.7%), and with 2009 (10.6%). Students in the West show a significant decrease in use between 2013 and 2015, from 9.6% to 5.6%. No change is evident in the North or East.
Frequency of Use	■ Among the total sample of students, 1.8% report using an OTC cough/cold medication to get high six times or more often during the past year (see Figure 3.1.3).	

Figure 3.7.3
Past Year Nonmedical Use of Over-the-Counter (OTC) Cough or Cold Medication by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 8 was suppressed; (4) no significant differences by sex, grade, or region

Figure 3.7.4
Past Year Nonmedical Use of Over-the-Counter (OTC) Cough or Cold Medication,
2009–2015 OSDUHS (Grades 7–12)

Table 3.7.3: Percentage Reporting Nonmedical Use of Over-the-Counter (OTC) Cough or Cold Medication in the Past Year, 2009–2015 OSDUHS

	2009 (*n*=4220)	2011 (*n*=4472)	2013 (*n*=10272)	2015 (*n*=10426)
Total	**7.2**	**6.9**	**9.7**	**6.4** [ad]
(95% CI)	(6.1-8.5)	(5.5-8.7)	(8.2-11.4)	(5.3-7.6)
Sex				
Males	**6.8** (5.4-8.6)	**8.0** (6.2-10.2)	**10.7** (8.8-13.0)	**6.7** [a] (5.6-8.0)
Females	**7.6** (5.9-9.8)	**5.7** (4.2-7.5)	**8.6** (7.2-10.4)	**6.1** (4.6-8.0)
Grade				
7	**6.0** (3.8-9.4)	**3.1** (1.8-5.3)	**9.1** (6.7-12.1)	**6.4** (3.9-10.3)
8	**6.3** (4.1-9.6)	**7.5** (5.2-10.8)	**10.2** (7.0-14.4)	†
9	**6.8** (4.0-11.2)	**4.5** (3.1-6.5)	**10.1** (7.2-13.9)	**4.1** [a] (3.0-5.5)
10	**7.9** (5.3-11.4)	**8.9** (6.6-11.9)	**9.5** (7.3-12.2)	**7.1** (5.6-8.9)
11	**7.8** (5.6-10.9)	**11.7** (6.1-21.5)	**8.5** (6.2-11.4)	**7.1** (5.7-8.7)
12	**7.9** (5.3-11.5)	**5.5** (3.6-8.3)	**10.6** (7.8-14.2)	**7.1** (5.5-9.2)
Region				
Toronto	**10.6** (7.4-15.1)	**8.0** (6.3-10.1)	**9.7** (7.1-13.2)	**5.6** [ab] (4.4-7.0)
North	**5.0** (2.9-8.7)	**3.8** (2.4-5.9)	**7.6** (4.6-12.1)	**6.6** (4.9-8.9)
West	**6.7** (5.0-8.8)	**7.9** (5.2-11.8)	**9.6** (7.4-12.2)	**5.6** [a] (4.5-6.9)
East	**6.5** (5.3-8.1)	**5.5** (4.3-7.1)	**10.3** (7.4-14.1)	**7.8** (5.3-11.3)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 2009 significant difference, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use a cough or cold medicine form a drug store, such as Robitussin DM, Benylin DM (also known as "robos", "dex", "DXM") in order to get high?

Source: OSDUHS, Centre for Addiction & Mental Health

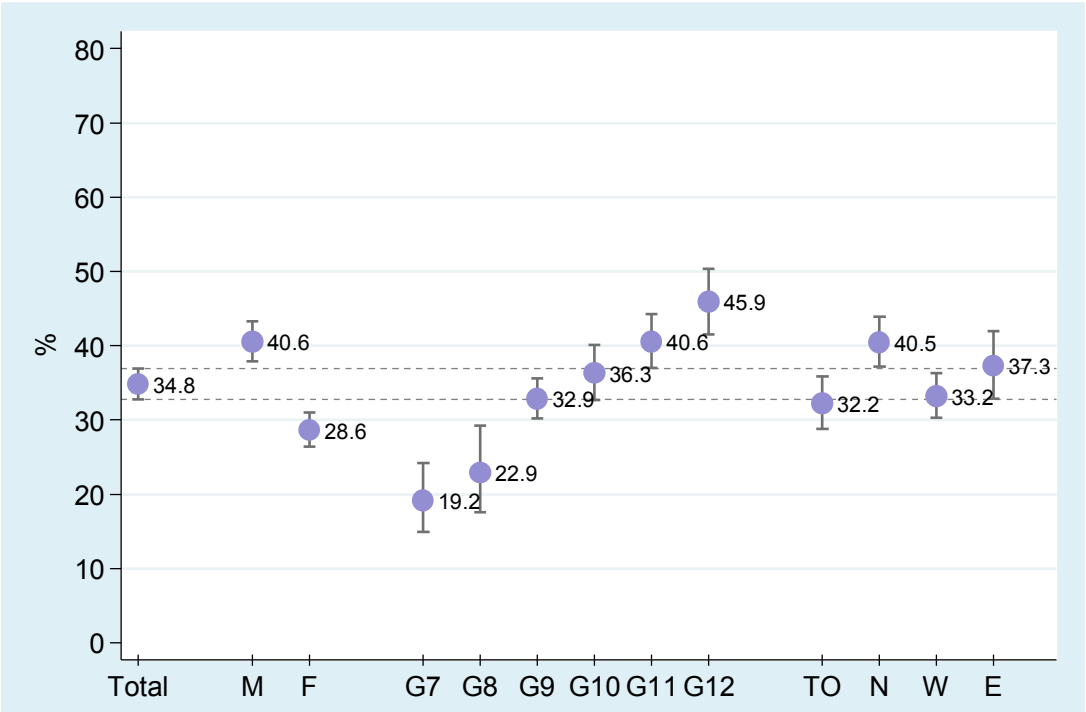
Past Year Use of High-Caffeine Energy Drinks

(Figures 3.7.5, 3.7.6; Table 3.7.4)

Starting in 2011, the OSDUHS asked students about their use of highly caffeinated energy drinks (such as Red Bull, Rockstar, Monster, Amp). The consumption of these energy drinks by children and adolescents is concerning because the stimulating effects can cause rapid heart rate, an abnormal heart rhythm, increased blood pressure, agitation and sleeplessness.

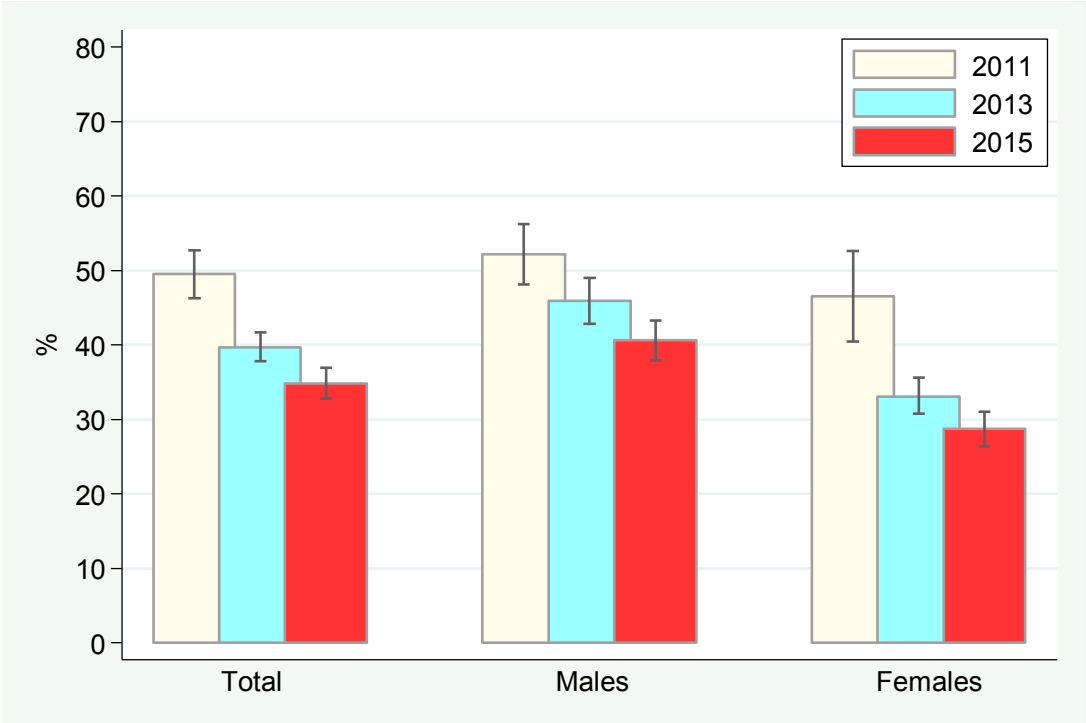
	Use in 2015 (Grades 7–12)	2011–2015 Trends Grades 7–12)
Total Sample	■ Over one-third (34.8%) of students in grades 7 through 12 report drinking an energy drink at least once in the past year. This estimate represents about 326,800 Ontario students. ■ About 12.0% (95% CI: 10.8%-13.3%) report drinking an energy drink at least once during the seven days before the survey. This estimate represents about 112,400 students.	☐ Among the total sample, past year use of an energy drink significantly decreased between 2013 and 2015, from 39.7% to 34.8%. The 2015 estimate is also significantly lower than the estimate from 2011 (49.5%), the first year of monitoring.
Sex	■ Males are more likely than females to report drinking an energy drink in the past year (40.6% vs. 28.6%, respectively).	☐ Use of energy drinks among both males and females is significantly lower in 2015 compared with their respective estimates from 2013 and 2011.
Grade	■ Use significantly increases with grade, from 19.2% among 7th graders up to 45.9% among 12th graders.	☐ Students in grade 8 show a significant decrease between 2013 and 2015, from 33.6% to 22.9%. All grades, except grade 12, show significant decreases in 2015 compared with their respective estimates from 2011.
Region	■ Despite some variation, there are no significant differences among the four regions.	☐ Students in the West region show a significant decrease between 2013 and 2015, from 40.5% to 33.2%. All regions except Toronto show significant decreases compared with their respective estimates from 2011.

Figure 3.7.5
Past Year Use of High-Caffeine Energy Drinks by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by sex and grade (p<.05), no significant difference by region

Figure 3.7.6
Past Year Use of High-Caffeine Energy Drinks, 2011–2015 OSDUHS (Grades 7–12)



Notes: error bars represent 95% confidence intervals; significant decrease between 2011 and 2015 for total and both sexes (p<.01)

Table 3.7.4: Percentage Reporting Drinking High-Caffeine Energy Drinks in the Past Year, 2011–2015 OSDUHS

	2011 (*n*=4472)	2013 (*n*=10272)	2015 (*n*=10426)	
Total	**49.5**	**39.7**	**34.8**	[abc]
(95% CI)	(46.3-52.7)	(37.8-41.7)	(32.8-36.9)	
Sex				
Males	**52.2**	**45.9**	**40.6**	[ab]
	(48.1-56.2)	(42.8-49.0)	(37.9-43.3)	
Females	**46.5**	**33.1**	**28.6**	[ab]
	(40.5-52.6)	(30.8-35.6)	(26.4-31.0)	
Grade				
7	**34.1**	**26.4**	**19.2**	[b]
	(27.0-42.0)	(20.2-33.8)	(14.9-24.2)	
8	**41.8**	**33.6**	**22.9**	[ab]
	(34.8-49.3)	(29.3-38.2)	(17.6-29.3)	
9	**48.6**	**36.6**	**32.9**	[b]
	(42.4-54.8)	(31.7-41.7)	(30.2-35.6)	
10	**49.0**	**40.0**	**36.3**	[b]
	(42.5-55.6)	(35.8-44.4)	(32.7-40.1)	
11	**56.2**	**41.7**	**40.6**	[b]
	(47.4-64.7)	(37.8-45.6)	(36.9-44.2)	
12	**58.5**	**49.9**	**45.9**	
	(47.6-68.6)	(46.2-53.6)	(41.5-50.4)	
Region				
Toronto	**37.9**	**34.7**	**32.2**	
	(32.9-43.2)	(31.2-38.4)	(28.8-35.9)	
North	**53.7**	**42.2**	**40.5**	[b]
	(50.2-57.2)	(36.0-48.6)	(37.2-43.9)	
West	**54.9**	**40.5**	**33.2**	[ab]
	(49.2-60.5)	(37.5-43.5)	(30.3-36.3)	
East	**48.0**	**41.1**	**37.3**	[b]
	(44.5-51.4)	(37.4-44.8)	(32.9-42.0)	

Notes: (1) entries in brackets are 95% confidence intervals; (2) asked of a random half sample in 2011; (3) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 2011 significant difference, p<.01; [c] significant linear trend, p<.01.

Q: In the last 7 days, how often did you drink a can of a high-energy caffeine drink, such as Red Bull, Rockstar, Amp, Full Throttle, Monster, etc.? (Note that one of the response options referred to use in the past year.)

Source: OSDUHS, Centre for Addiction & Mental Health

3.7.2 Nonmedical Use of Prescription Drugs Among Grades 9–12

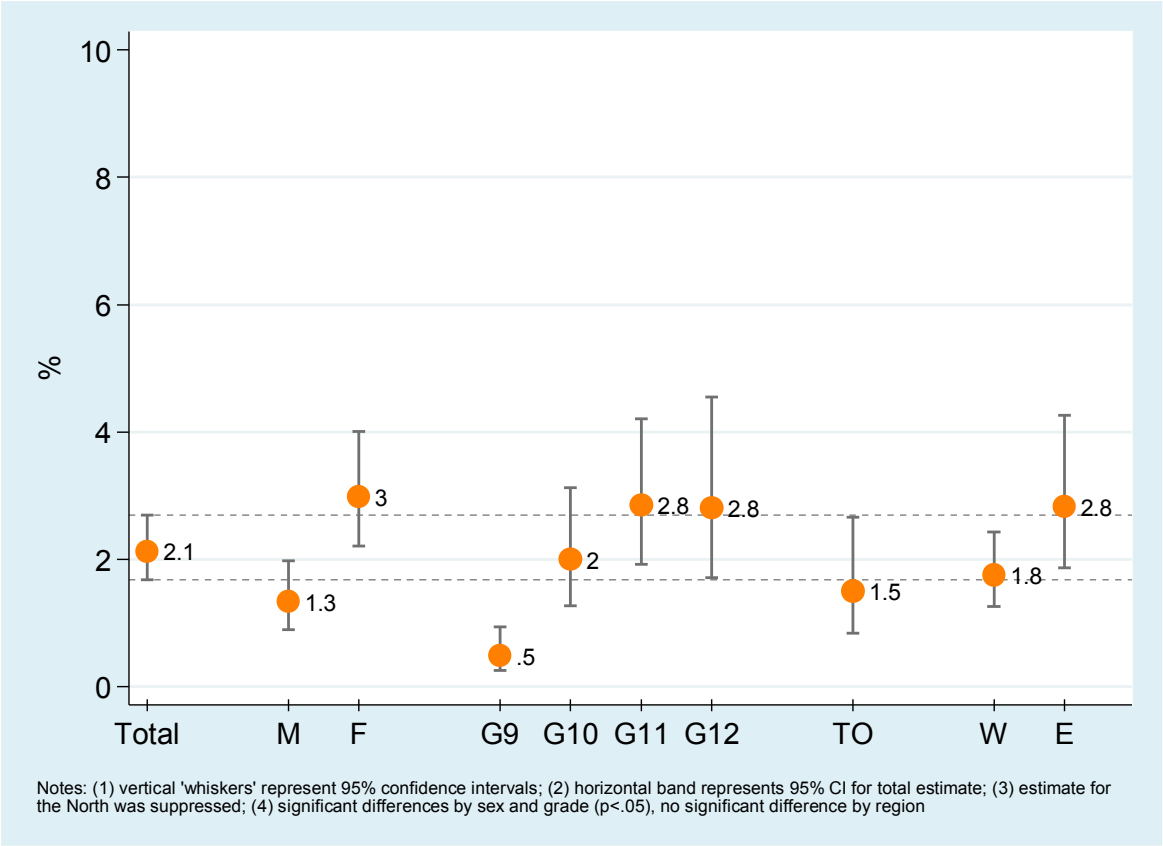
Past Year Nonmedical Use of Tranquillizers/Sedatives

(Figures 3.7.7–3.7.9; Table 3.7.5)

This section presents past year tranquilizer/sedative use (e.g., Valium) without a prescription or doctor's supervision. These drugs are benzodiazepines, and may have the following effects: sedation, drowsiness, reduced anxiety and inhibitions, and impaired motor coordination. The OSDUHS began monitoring nonmedical use of tranquilizers/sedatives in 1977. Starting in 2013, use of this medication was asked of students in grades 9 through 12 only (not asked of 7th and 8th graders).

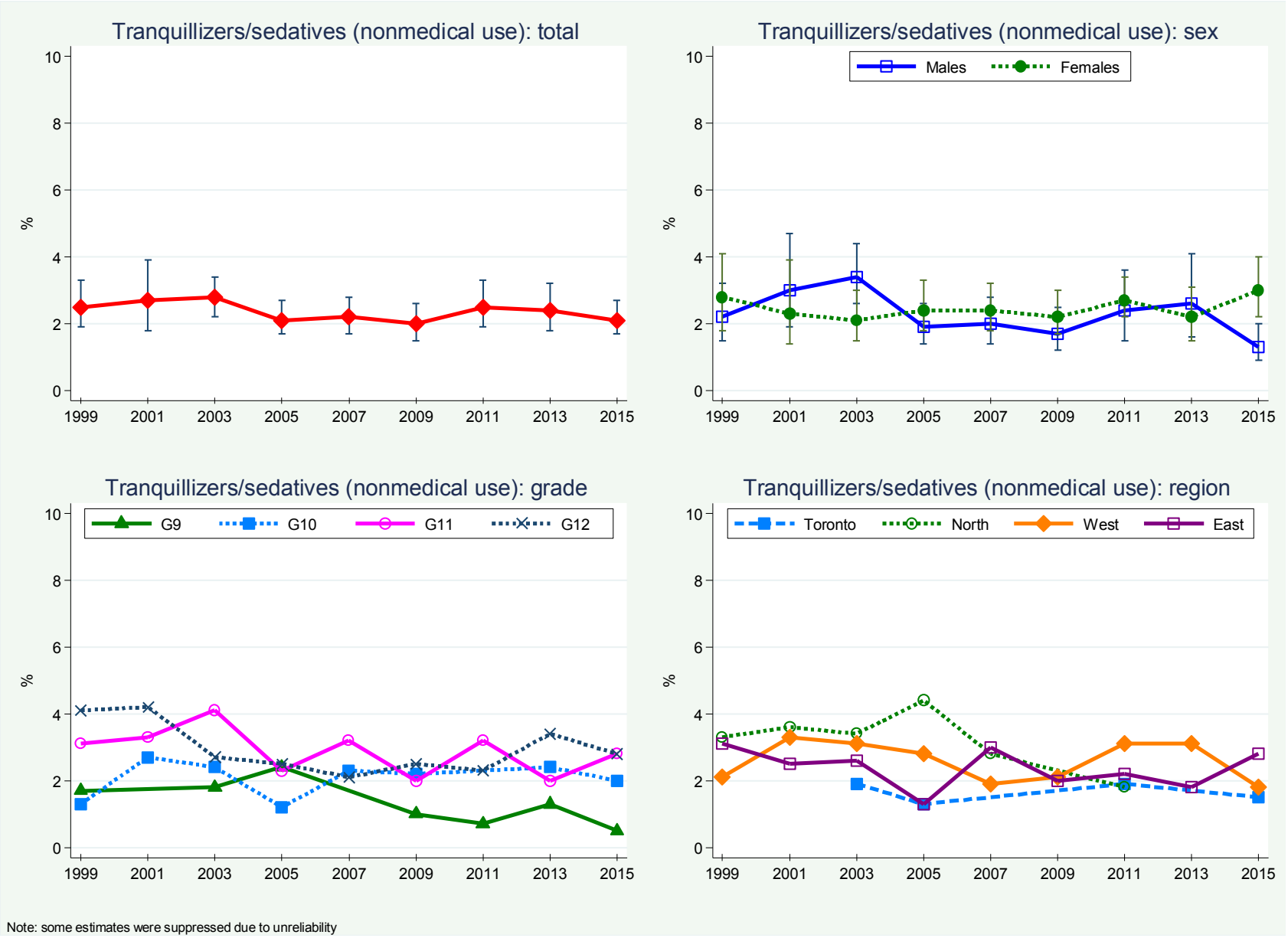
	Nonmedical Tranquillizer Use in 2015 (Grades 9–12)	Trends in Use
Total Sample	■ Nonmedical tranquillizer/sedative use is reported by 2.1% of students in grades 9 through 12. This percentage represents about 14,800 students.	☐ Among the total sample, there has been no change in tranquillizer/sedative use between 1999 and 2015, as estimates have remained stable at about 2%. ☐ Over the long-term (among grades 9 and 11 only), use peaked in the late 1970s/early 1980s, and then decreased substantially over the late 1980s/early 1990s. Since 1991, use has remained low and stable.
Sex	■ Females (3.0%) are significantly more likely than males (1.3%) to use tranquillizers nonmedically.	☐ Neither males nor females show a significant change in tranquillizer use since 1999.
Grade	■ Tranquillizer use significantly differs by grade, with 11th and 12th graders most likely to use (about 2.8%).	☐ No grade shows a significant change in tranquillizer use since 1999.
Region	■ Use does not significantly vary by region.	☐ No region shows a significant change in tranquillizer use since 1999.
Frequency of Use	■ Most (58%) users report using only once or twice during the past year (see Figure 3.1.4).	

Figure 3.7.7
Past Year Nonmedical Tranquillizer/Sedative Use by Sex, Grade, and Region, 2015 OSDUHS



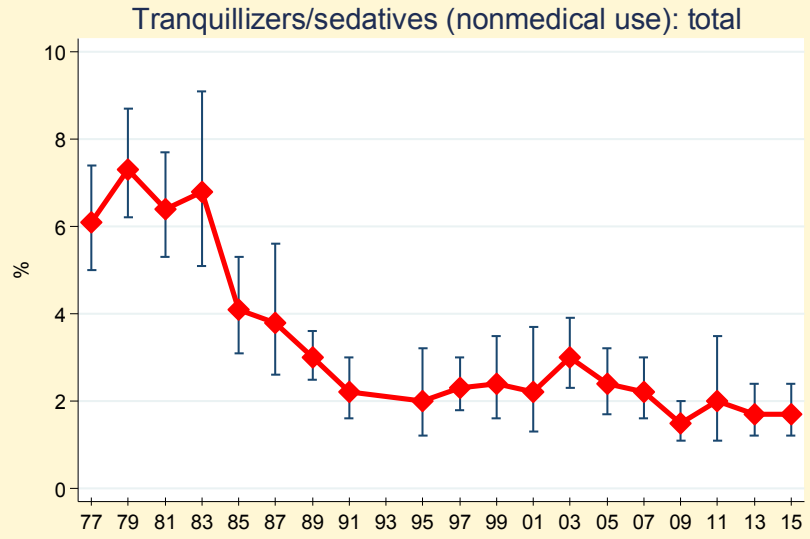
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for the North was suppressed; (4) significant differences by sex and grade (p<.05), no significant difference by region

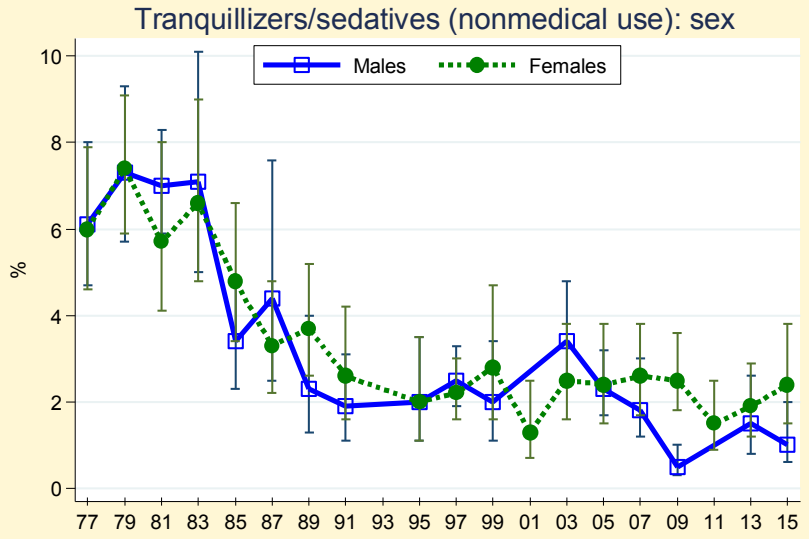
Figure 3.7.8
Past Year Nonmedical Tranquillizer/Sedative Use, 1999–2015 OSDUHS (Grades 9–12)

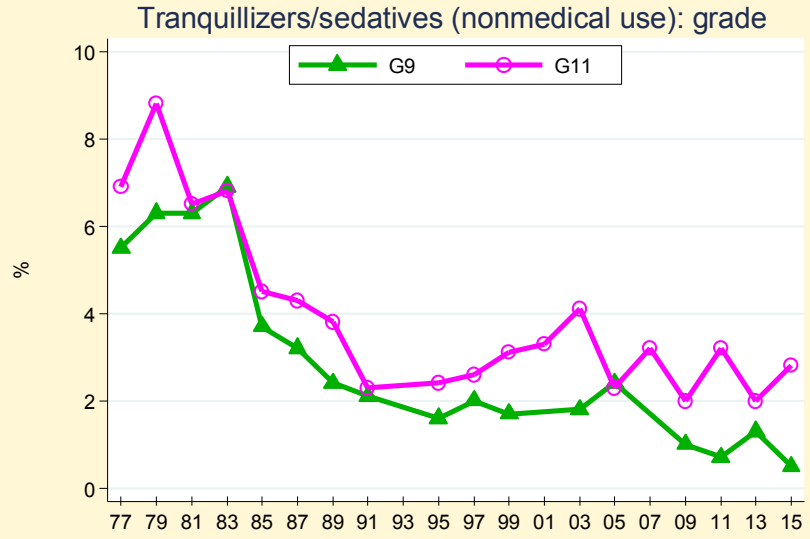


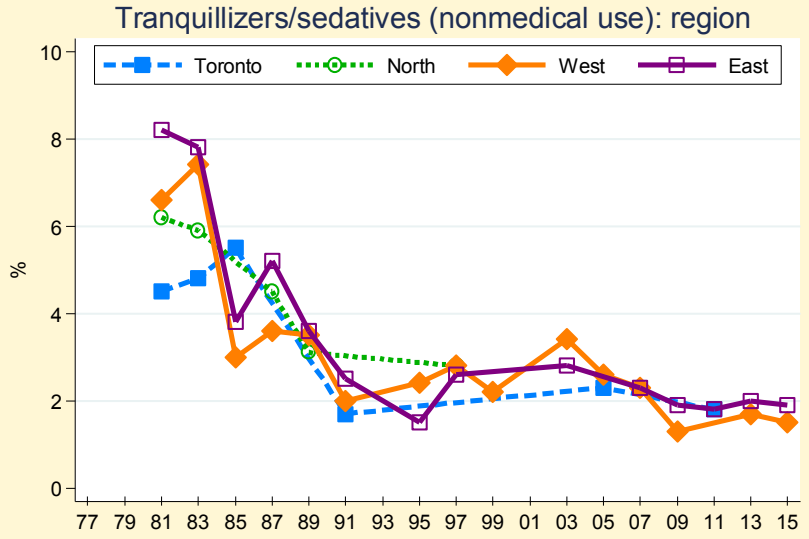
Note: some estimates were suppressed due to unreliability

Figure 3.7.9
Past Year Nonmedical Tranquillizer/Sedative Use, 1977–2015 OSDUHS (Grades 9 and 11 only)









Note: some estimates were suppressed due to unreliability

Table 3.7.5: Percentage Reporting Nonmedical Tranquillizer/Sedative Use in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**2.5** (1.9-3.3)	**2.7** (1.8-3.9)	**2.8** (2.2-3.4)	**2.1** (1.7-2.7)	**2.2** (1.7-2.8)	**2.0** (1.5-2.6)	**2.5** (1.9-3.3)	**2.4** (1.8-3.2)	**2.1** (1.7-2.7)
Total[2]	**6.1** (5.0-7.4)	**7.3** (6.2-8.7)	**6.4** (5.3-7.7)	**6.8** (5.1-9.1)	**4.1** (3.1-5.3)	**3.8** (2.6-5.6)	**3.0** (2.5-3.6)	**2.2** (1.6-3.0)	**1.1** (0.6-2.3)	**2.0** (1.2-3.2)	**2.3** (1.8-3.0)	**2.4** (1.6-3.5)	**2.2** (1.3-3.7)	**3.0** (2.3-3.9)	**2.4** (1.7-3.2)	**2.2** (1.6-3.0)	**1.5** (1.1-2.0)	**2.0** (1.1-3.5)	**1.7** (1.2-2.4)	**1.7** (1.2-2.4) [cd]
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**2.2** (1.5-3.2)	**3.0** (1.9-4.7)	**3.4** (2.6-4.4)	**1.9** (1.4-2.6)	**2.0** (1.4-2.8)	**1.7** (1.2-2.5)	**2.4** (1.5-3.6)	**2.6** (1.6-4.1)	**1.3** (0.9-2.0)
Males[2]	**6.1** (4.7-8.0)	**7.3** (5.7-9.3)	**7.0** (5.9-8.3)	**7.1** (5.0-10.1)	**3.4** (2.3-4.9)	**4.4** (2.5-7.6)	**2.3** (1.3-4.0)	**1.9** (1.1-3.1)	†	**2.0** (1.1-3.5)	**2.5** (1.9-3.3)	**2.0** (1.1-3.4)	†	**3.4** (2.4-4.8)	**2.3** (1.7-3.2)	**1.8** (1.2-3.0)	**0.5** (0.3-1.0)	†	**1.5** (0.8-2.6)	**1.0** (0.6-2.0)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**2.8** (1.8-4.1)	**2.3** (1.4-3.9)	**2.1** (1.5-3.0)	**2.4** (1.8-3.3)	**2.4** (1.8-3.2)	**2.2** (1.7-3.0)	**2.7** (2.2-3.4)	**2.2** (1.5-3.1)	**3.0** (2.2-4.0)
Females[2]	**6.0** (4.6-7.9)	**7.4** (5.9-9.1)	**5.7** (4.1-8.0)	**6.6** (4.8-9.0)	**4.8** (3.4-6.6)	**3.3** (2.2-4.8)	**3.7** (2.6-5.2)	**2.6** (1.6-4.2)	†	**2.0** (1.1-3.5)	**2.2** (1.6-3.0)	**2.8** (1.6-4.7)	**1.3** (0.7-2.5)	**2.5** (1.6-3.8)	**2.4** (1.5-3.8)	**2.6** (1.7-3.8)	**2.5** (1.8-3.6)	**1.5** (0.9-2.5)	**1.9** (1.2-2.9)	**2.4** (1.5-3.8)
Grade																				
9	**5.5** (4.3-7.1)	**6.3** (5.0-8.0)	**6.4** (4.9-8.2)	**6.9** (5.2-9.2)	**3.7** (2.7-5.0)	**3.2** (1.7-6.2)	**2.4** (1.8-3.1)	**2.1** (1.4-3.1)	†	**1.6** (1.0-2.6)	**2.0** (1.3-3.1)	**1.7** (1.0-2.9)	†	**1.8** (1.1-2.9)	**2.5** (1.5-3.9)	†	**1.0** (0.6-1.8)	**0.7** (0.4-1.1)	**1.3** (0.8-2.1)	**0.5** (0.3-0.9)
10	—	—	—	—	—	—	—	—	—	—	—	**1.3** (0.7-2.3)	**2.7** (1.6-4.6)	**2.4** (1.7-3.5)	**1.2** (0.7-2.2)	**2.3** (1.4-3.6)	**2.1** (1.4-3.3)	†	**2.4** (1.5-3.6)	**2.0** (1.3-3.1)
11	**6.9** (5.1-9.3)	**8.8** (6.9-11.1)	**6.5** (4.9-8.6)	**6.8** (3.8-11.7)	**4.5** (2.9-6.8)	**4.3** (2.7-7.0)	**3.8** (3.1-4.7)	**2.3** (1.4-3.7)	†	**2.4** (1.2-4.9)	**2.6** (2.0-3.4)	**3.1** (1.8-5.2)	**3.3** (1.7-6.5)	**4.1** (2.9-5.9)	**2.3** (1.5-3.3)	**3.2** (2.2-4.6)	**2.0** (1.3-3.1)	**3.2** (1.6-6.3)	**2.0** (1.3-3.2)	**2.8** (1.9-4.2)
12	—	—	—	—	—	—	—	—	—	—	—	**4.1** (2.7-6.2)	**4.2** (2.0-8.4)	**2.7** (1.8-4.2)	**2.5** (1.7-3.8)	**2.1** (1.2-3.5)	**2.5** (1.5-4.1)	**2.3** (1.5-3.5)	**3.4** (1.8-6.2)	**2.8** (1.7-4.5)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	†	†	**1.9** (1.1-3.4)	**1.3** (0.7-2.5)	†	†	**1.9** (1.2-3.0)	†	**1.5** (0.8-2.7)
Toronto[2]	—	—	**4.5** (3.4-5.9)	**4.8** (4.2-5.5)	**5.5** (4.6-6.5)	†	†	**1.7** (0.9-3.3)	†	†	†	†	†	†	**2.3** (1.4-3.9)	†	†	**1.8** (1.0-3.0)	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**3.3** (1.9-5.8)	**3.6** (2.2-6.0)	**3.4** (2.2-5.0)	**4.4** (2.3-8.3)	**2.8** (1.7-4.6)	†	**1.8** (1.2-2.8)	†	†
North[2]	—	—	**6.2** (3.2-11.8)	**5.9** (4.2-8.2)	†	**4.5** (3.8-5.3)	**3.1** (1.7-5.5)	†	†	†	**2.8** (2.0-4.0)	†	†	†	†	†	†	†	†	†
West[1]	—	—	—	—	—	—	—	—	—	—	—	**2.1** (1.3-3.4)	**3.3** (1.9-5.7)	**3.1** (2.3-4.3)	**2.8** (2.1-3.7)	**1.9** (1.3-2.8)	**2.1** (1.4-3.3)	**3.1** (2.0-4.7)	**3.1** (2.0-4.8)	**1.8** (1.3-2.4)
West[2]	—	—	**6.6** (5.3-8.2)	**7.4** (4.4-12.1)	**3.0** (1.4-6.4)	**3.6** (1.8-7.0)	**3.5** (3.1-3.8)	**2.0** (1.1-3.5)	†	**2.4** (1.4-4.1)	**2.8** (2.0-3.8)	**2.2** (1.2-4.1)	†	**3.4** (2.3-5.0)	**2.6** (1.7-3.8)	**2.3** (1.4-3.8)	**1.3** (0.7-2.2)	†	**1.7** (1.1-2.6)	**1.5** (0.9-2.5)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**3.1** (1.9-4.9)	**2.5** (1.3-4.7)	**2.6** (1.6-4.2)	**1.3** (0.8-2.1)	**3.0** (2.0-4.6)	**2.0** (1.4-3.0)	**2.2** (1.6-3.2)	**1.8** (1.2-2.6)	**2.8** (1.9-4.3)
East[2]	—	—	**8.2** (4.7-13.8)	**7.8** (4.5-13.2)	**3.8** (2.4-6.0)	**5.2** (3.2-8.3)	**3.6** (2.8-4.6)	**2.5** (1.5-4.1)	†	**1.5** (0.7-2.9)	**2.6** (1.7-4.1)	†	†	**2.8** (1.7-4.3)	†	**2.3** (1.4-3.9)	**1.9** (1.3-2.9)	**1.8** (1.2-2.7)	**2.0** (1.2-3.4)	**1.9** (1.1-3.4)

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) † estimate suppressed due to unreliability; (6) no significant changes between 1999 and 2015; [c] significant linear trend; [d] significant nonlinear trend.

Q: Sedatives or tranquillizers are sometimes prescribed by doctors to help people sleep, calm them down, or to relax their muscles. In the last 12 months, how often did you use sedatives or tranquillizers (such as Valium, Ativan, Xanax, also known as "tranqs", "downers", etc.) without a prescription or without a doctor telling you to take them? (Note that "sedatives" was added to the question in 2007.)

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Nonmedical Use of Modafinil

Starting in 2013, a random half sample of secondary students was asked about the nonmedical use of modafinil, which is the generic name for a prescription stay-awake drug (central nervous system stimulant) typically used to treat sleep disorders by reducing excessive daytime drowsiness. Anecdotal and media reports warn that it is being used by some students who want to stay alert and focussed while studying, hence its label as a "cognitive enhancer" or "smart drug."

Student were asked "*In the last 12 months, how often did you use modafinil (such as Alertec, Provigil), which is a prescription stay-awake drug, without a prescription or without a doctor telling you to take it?*"

2015: Grades 9–12

- The percentage of secondary students reporting past year nonmedical use of modafinil was suppressed due to an extremely low value relative to our sample size.

2015 vs. 2013: Grades 9– 12

- The percentage of students reporting nonmedical modafinil use in 2013 was 0.8% (95% CI: 0.4%-1.4%). Because of the extremely low value in 2015, no year comparison could be made.

Lifetime Steroid Use

(Table 3.7.6)

In 1989, the OSDUHS began asking students whether they had ever used steroids (e.g., body builders, testosterone, androgens, durabolin, growth hormones) to enhance their athletic performance or to change their physical appearance. Steroid use does not cause intoxication, but can cause hypertension, blood clotting and cholesterol changes, aggression, acne, and adolescents can experience premature stoppage of growth. Starting in 2013, the steroid use question was asked of students in grades 9 through 12 only (not asked of 7th and 8th graders).

	Lifetime Steroid Use (Grades 9–12)	Trends in Use
Total Sample	▪ In 2015, 1.2% of students in grades 9 through 12 report ever using steroids to increase performance or change their physical appearance. This estimate represents about 7,900 students in Ontario.	☐ Among the total sample of students, there has been no significant change in reported lifetime steroid use between 2013 (2.0%) and 2015 (1.2%). The estimate significantly decreased between 1999 and 2007 (from 4.3% to 1.6%) and has remained stable since then. ☐ Looking at the long-term estimates (among grades 9 and 11 only), steroid use peaked in 1999 and 2001, but has since declined gradually back down to a level that is similar to the lows seen in the late 1980s/early 1990s.
Sex	▪ There is a significant sex difference in reported lifetime steroid use (1.5% among males; the estimate among females was suppressed).	☐ The use of steroids among males did not significantly change between 2013 and 2015. However, males do show a significant downward trend since 1999, when the estimate was at 7.0%. There has been no significant change among females during the past decade or so.
Grade	▪ Estimates by grade were suppressed.	☐ Students in grades 11 and 12 show significant declines in use since 1999 or 2001.
Region	▪ Estimates by region were suppressed.	☐ All regions show significant declines in use since 1999 or 2001.

Table 3.7.6: Percentage Reporting Steroid Use in Lifetime, 1989–2015 OSDUHS (Grades 9–12)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])						(2883)	(2457)	(2238)	(2725)	(2247)	(2728)	(3025)	(2895)	(3171)	
(n[2])	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(1168)	(1409)	(1150)	(1320)	(1536)	(1459)	(1656)	
Total[1] (95% CI)	—	—	—	—	—	**4.3** (3.3-5.4)	**4.5** (3.5-5.8)	**3.8** (3.0-4.7)	**2.8** (2.3-3.6)	**1.6** (1.1-2.4)	**1.2** (0.8-1.9)	**1.6** (1.1-2.4)	**2.0** (1.1-3.8)	**1.2** (0.7-2.0)	bc
Total[2]	**1.5** (1.0-2.4)	**1.9** (1.5-2.6)	**1.9** (1.2-2.9)	**1.5** (1.0-2.1)	**1.5** (0.9-2.4)	**3.8** (2.6-5.5)	**4.0** (2.7-5.8)	**3.1** (2.2-4.3)	**2.3** (1.6-3.4)	**1.2** (0.7-2.1)	**1.2** (0.6-2.4)	**1.9** (1.0-3.4)	†	†	cd
Sex															
Males[1]	—	—	—	—	—	**7.0** (5.3-9.1)	**6.3** (4.5-8.8)	**5.8** (4.5-7.4)	**3.8** (2.8-5.1)	**2.6** (11.7-4.1)	**2.0** (1.2-3.3)	**2.7** (1.7-4.3)	**2.7** (1.6-4.5)	**1.5** (0.9-2.5)	b
Males[2]	**3.0** (1.9-4.6)	**3.3** (2.4-4.5)	**2.7** (1.9-3.8)	**2.0** (1.2-3.5)	**2.6** (1.6-4.2)	**6.1** (4.0-9.2)	**5.4** (3.5-8.2)	**5.2** (3.6-7.5)	**3.1** (1.9-5.1)	**1.8** (1.0-3.5)	†	†	†	†	
Females[1]	—	—	—	—	—	**1.3** (0.8-2.1)	**2.5** (1.7-3.7)	**1.8** (1.1-3.0)	**1.8** (1.1-2.8)	†	†	†	†	†	
Females[2]	†	†	†	**0.9** (0.4-1.9)	†	**1.3** (0.7-2.3)	**2.4** (1.3-4.3)	†	†	†	†	†	†	†	
Grade															
9	†	**1.8** (1.2-2.6)	†	**1.4** (1.3-1.6)	†	†	**2.7** (1.4-5.2)	**1.6** (0.9-2.9)	**2.0** (1.1-3.8)	†	†	†	†	†	
10	—	—	—	—	—	**2.9** (1.8-4.7)	**3.1** (2.0-4.9)	**3.8** (2.4-6.1)	**2.9** (1.8-4.4)	†	**1.8** (1.0-3.4)	†	†	†	
11	**1.8** (1.2-2.9)	**2.1** (1.4-3.1)	**2.8** (1.8-4.3)	**1.5** (0.7-3.0)	**1.8** (1.1-3.2)	**6.2** (4.2-9.1)	**5.6** (3.4-9.1)	**4.6** (3.2-6.6)	**2.6** (1.6-4.3)	**2.0** (1.1-3.7)	**1.2** (0.6-2.7)	†	†	†	
12	—	—	—	—	—	**6.9** (4.9-9.7)	**9.1** (5.7-14.4)	**5.3** (3.4-8.1)	**3.7** (2.5-5.5)	**2.4** (1.2-4.7)	†	**0.8** (0.4-1.6)	†	†	

(cont'd)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])						(2883)	(2457)	(2238)	(2725)	(2247)	(2728)	(3025)	(2895)	(3171)
(n[2])	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(1168)	(1409)	(1150)	(1320)	(1536)	(1459)	(1656)
Region														
Toronto[1]	—	—	—	—	—	**4.3** (2.4-7.4)	**3.8** (2.4-5.9)	**3.1** (1.6-5.9)	**2.4** (1.4-4.0)	†	†	†	†	†
Toronto[2]	†	**2.1** (1.6-2.7)	†	†	†	†	**2.4** (1.3-4.4)	†	†	†	†	†	†	†
North[1]	—	—	—	—	—	**6.0** (3.2-11.1)	**4.6** (3.1-6.9)	**5.0** (3.3-7.5)	**1.3** (0.7-2.4)	†	†	†	†	†
North[2]	†	†	†	†	**1.1** (1.0-1.2)	†	**4.0** (2.4-6.8)	**3.1** (1.6-5.9)	†	†	†	†	†	†
West[1]	—	—	—	—	—	**4.2** (2.7-6.4)	**5.2** (3.7-7.3)	**3.1** (2.2-4.4)	**3.1** (2.2-4.4)	**1.9** (1.0-3.4)	†	†	†	†
West[2]	**1.6** (1.0-2.6)	**2.5** (1.7-3.8)	**2.5** (1.4-4.4)	**1.6** (1.1-2.2)	**1.7** (0.8-3.6)	**3.7** (2.0-7.1)	**4.2** (2.2-7.7)	**2.4** (1.2-4.5)	**2.8** (1.6-4.6)	†	†	†	†	†
East[1]	—	—	—	—	—	**3.8** (2.5-5.7)	†	**5.0** (3.3-7.5)	**3.1** (2.1-4.4)	†	†	**1.9** (1.2-3.1)	†	†
East[2]	†	**0.6** (0.4-1.2)	**1.5** (1.0-2.3)	**1.9** (0.9-3.9)	†	**3.7** (2.2-6.3)	†	**5.2** (3.6-7.6)	**2.4** (1.3-4.5)	†	†	†	†	†

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) † estimate suppressed due to unreliability; (5) question asked of a random half sample starting in 2005; (6) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: Have you ever used steroids, body builders (e.g. testosterone and other androgens, durabolin, growth hormones, etc.) to increase your performance in some sport or activity and/or to change your physical appearance?

Source: OSDUHS, Centre for Addiction & Mental Health

3.8 Any Drug Use and Multiple Drug Use

This chapter presents an overview of drug use by examining the following indices: (1) the percentage who used any drug during the past year including the nonmedical (NM) use of a prescription drug, but excluding tobacco, alcohol, and high-caffeine energy drinks (among grades 9–12 only); (2) the percentage who used any drug during the past year excluding cannabis (among grades 9–12 only); (3) the percentage who used any prescription drug nonmedically during the past year (among grades 9–12 only); (4) the percentage who used any illicit drug by injection (among grades 9–12 only); (5) the overlap of alcohol, tobacco, cannabis, and other drug use (among grades 9–12 only); and (6) the percentage who used no drug (abstinence) during the past year (among grades 7–12).

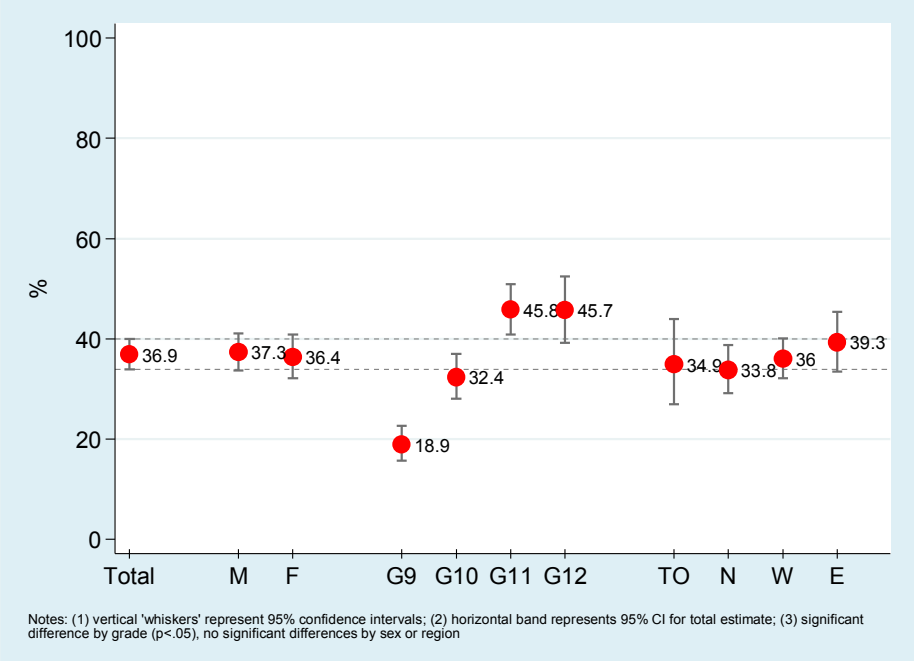
Any Drug Use Including Cannabis in 2015 (Figure 3.8.1)

This composite measure captures the use of at least one of the following 18 drugs asked about in the 2015 survey: cannabis, synthetic cannabis, inhalants, LSD, mushrooms/mescaline, jimson weed, salvia divinorum, cocaine, crack, methamphetamine, heroin, ecstasy, mephedrone ("bath salts"), tranquillizers/sedatives (NM), modafinil (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication. Excluded from this index are tobacco and electronic cigarettes, waterpipe, alcohol, and high-caffeine energy drinks. These results are among grades 9 through 12 only.

2015: Grades 9–12

- Among secondary students, 36.9% (95% CI: 33.9%-39.9%) report using at least one drug in the past year. This estimate represents about 254,300 Ontario students in grades 9 through 12.
- Males (37.3%) and females (36.4%) are equally likely to report the use of at least one drug.
- Drug use significantly increases with grade, from 18.9% of 9th graders up to almost half (46%) of 11th and 12th graders.
- There are no significant regional differences.

Figure 3.8.1
Past Year Use of Any Drug Including Cannabis, by Sex, Grade, and Region, 2015 OSDUHS (Grades 9–12)



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Any Drug Use Excluding Cannabis in 2015

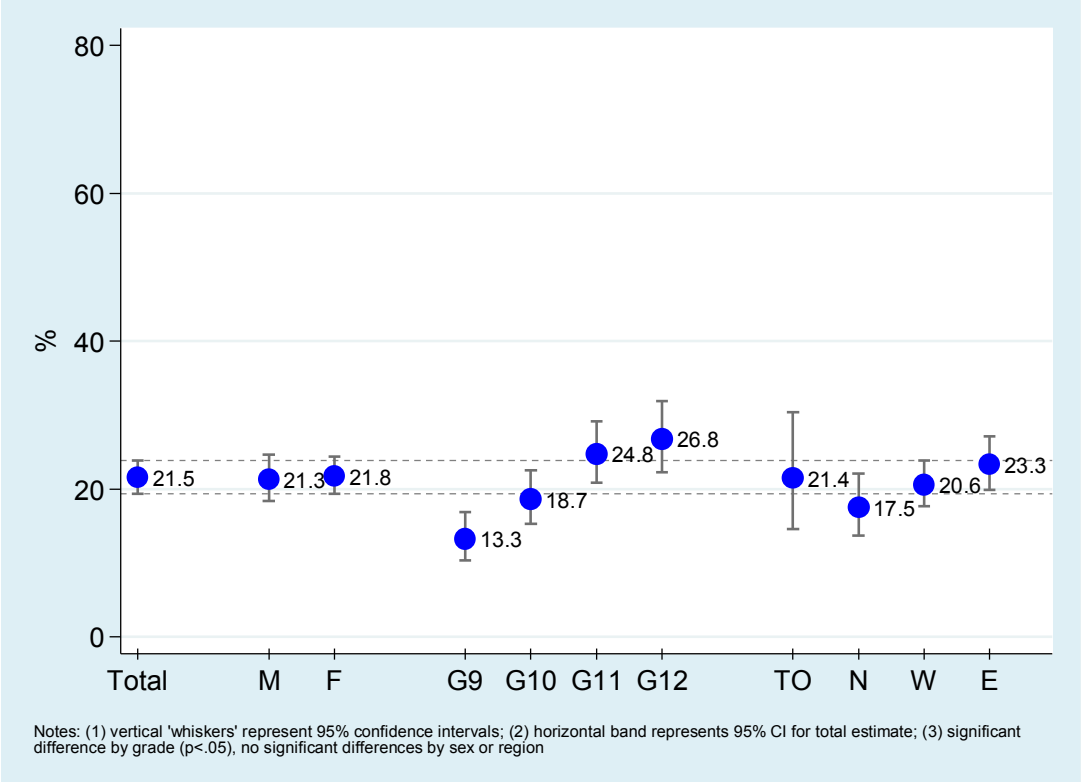
(Figure 3.8.2)

This composite measure captures the use of at least one of the following 17 drugs asked about in the 2015 survey: synthetic cannabis, inhalants, LSD, mushrooms/mescaline, jimson weed, salvia divinorum, cocaine, crack, methamphetamine, heroin, ecstasy, mephedrone ("bath salts"), tranquillizers/sedatives (NM), modafinil (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication. Excluded from this index are tobacco and electronic cigarettes, waterpipe, alcohol, high-caffeine energy drinks, and cannabis. These results are among grades 9 through 12 only.

2015: Grades 9–12

- Among secondary students, 21.5% (95% CI: 19.3%-23.9%) report using at least one drug, excluding cannabis, in the past year. This estimate represents about 148,500 Ontario students in grades 9 through 12.
- Males (21.3%) and females (21.8%) are equally likely to use a drug, excluding cannabis.
- There is significant grade variation, increasing between 9th grade and 12th grade, from 13.3% up to 26.8%.
- There are no significant regional differences.

Figure 3.8.2
Past Year Use of Any Drug Excluding Cannabis, by Sex, Grade, and Region, 2015 OSDUHS (Grades 9–12)



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Trends in Any Drug Use

(Figures 3.8.3–3.8.6; Tables 3.8.1, 3.8.2)

In this section, we report on changes over time in two estimates of any drug use. The first estimate measures use of any of *nine* drugs that are common to most OSDUHS cycles since 1977: cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, and tranquillizers/sedatives (NM). Because crack use was not asked about before 1987, and ecstasy use was not asked about before 1991, these two drugs are excluded from the computation for those earlier years. The drugs excluded from this measure across all years are the following: tobacco/nicotine, alcohol, high-caffeine energy drinks, synthetic cannabis, inhalants, jimson weed, salvia divinorum, mephedrone ("bath salts"), prescription ADHD drugs, prescription opioid pain relievers, and any over-the-counter medication.

The second measure of any drug use that is used to show trends is similar to the first, but also excludes cannabis.

1999–2015: Grades 9–12

☐ Neither of the two measures for any drug use significantly changed between 2013 and 2015 among the total sample of secondary students.

☐ Both measures for any drug use show a significant downward trend between 1999 and 2015. Among the total sample, the 2015 estimate (29.0%) for any illicit drug use including cannabis is significantly lower than the 1999 estimate (39.2%). Similarly, any drug use excluding cannabis is significantly lower in 2015 (9.1%) compared with 1999 (22.8%).

☐ Any drug use including cannabis significantly declined between 1999 and 2015 among all subgroups except 12th graders and students in Toronto.

☐ Similarly, any drug use excluding cannabis significantly declined among all subgroups except for students in Toronto.

1977–2015: Grades 9 and 11 only

☐ Any drug use including cannabis began to decline during the 1980s after peaking in 1979. Use increased again after 1991 (when it was at an all-time low) up until the early 2000s. Use declined after 2003 and has levelled off in recent years. The current estimate is significantly lower than both peak periods, but is similar to the low levels seen in the late 1980s/early 1990s.

☐ The long-term trend pattern for the measure excluding cannabis is similar to the one described above, except that the decline in the past decade has been more dramatic. The prevalence of any drug use excluding cannabis reached an all-time low in recent years.

Figure 3.8.3
Past Year Use of Any Drug Including Cannabis, 1999–2015 OSDUHS (Grades 9–12)

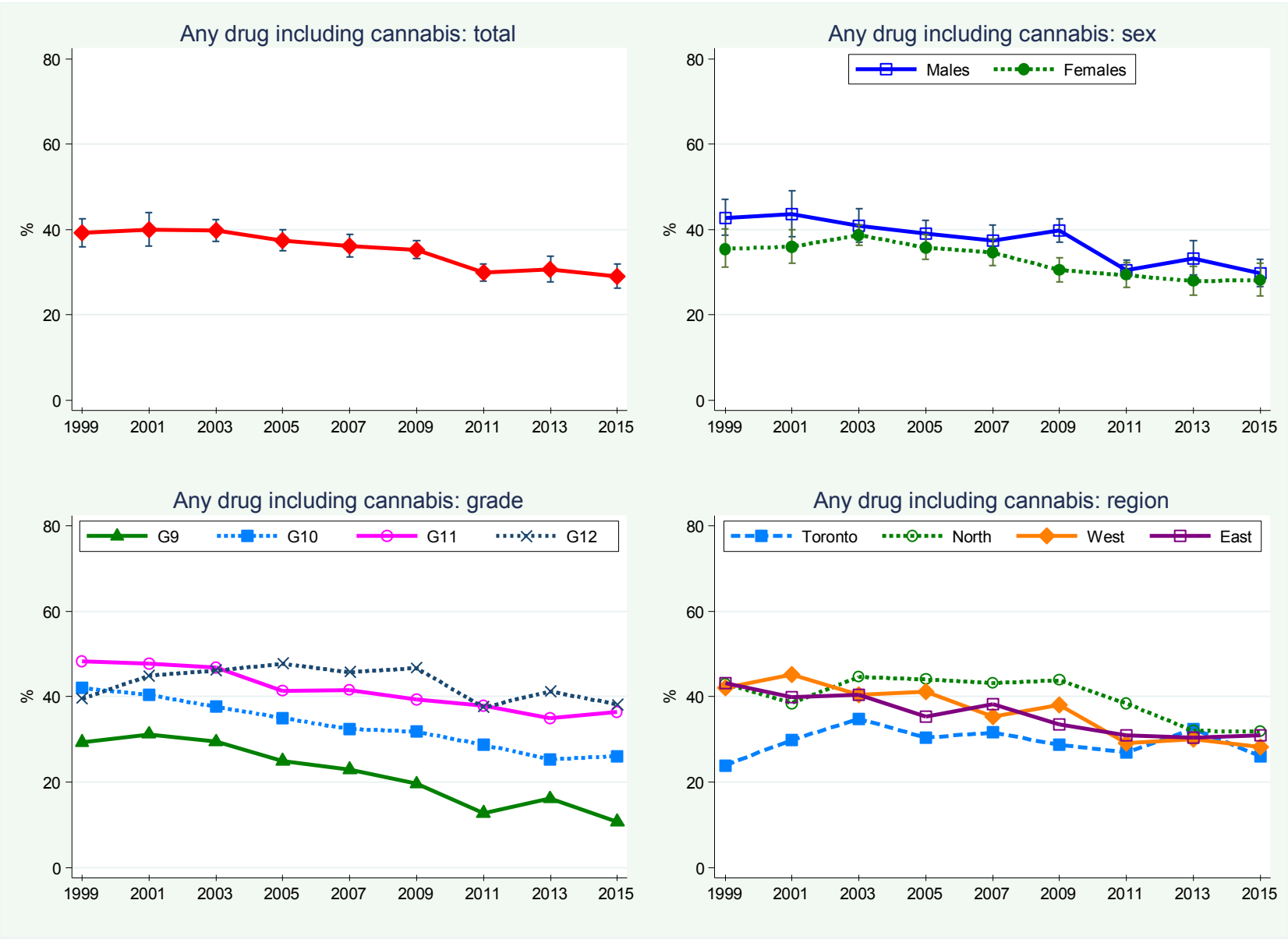


Figure 3.8.4
Past Year Use of Any Drug Including Cannabis, 1977–2015 OSDUHS (Grades 9 and 11 only)

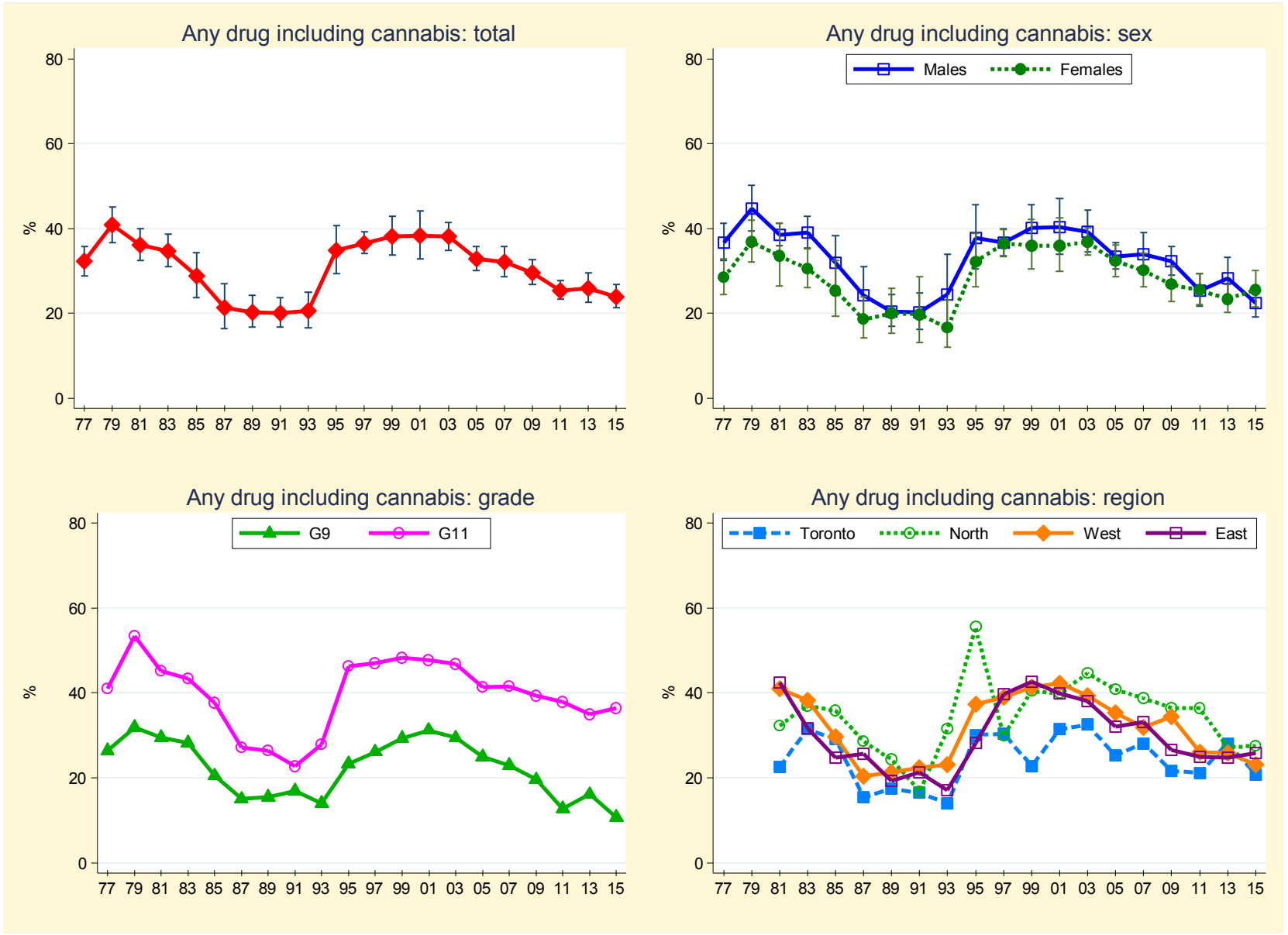


Figure 3.8.5
Past Year Use of Any Drug Excluding Cannabis, 1999–2015 OSDUHS (Grades 9–12)

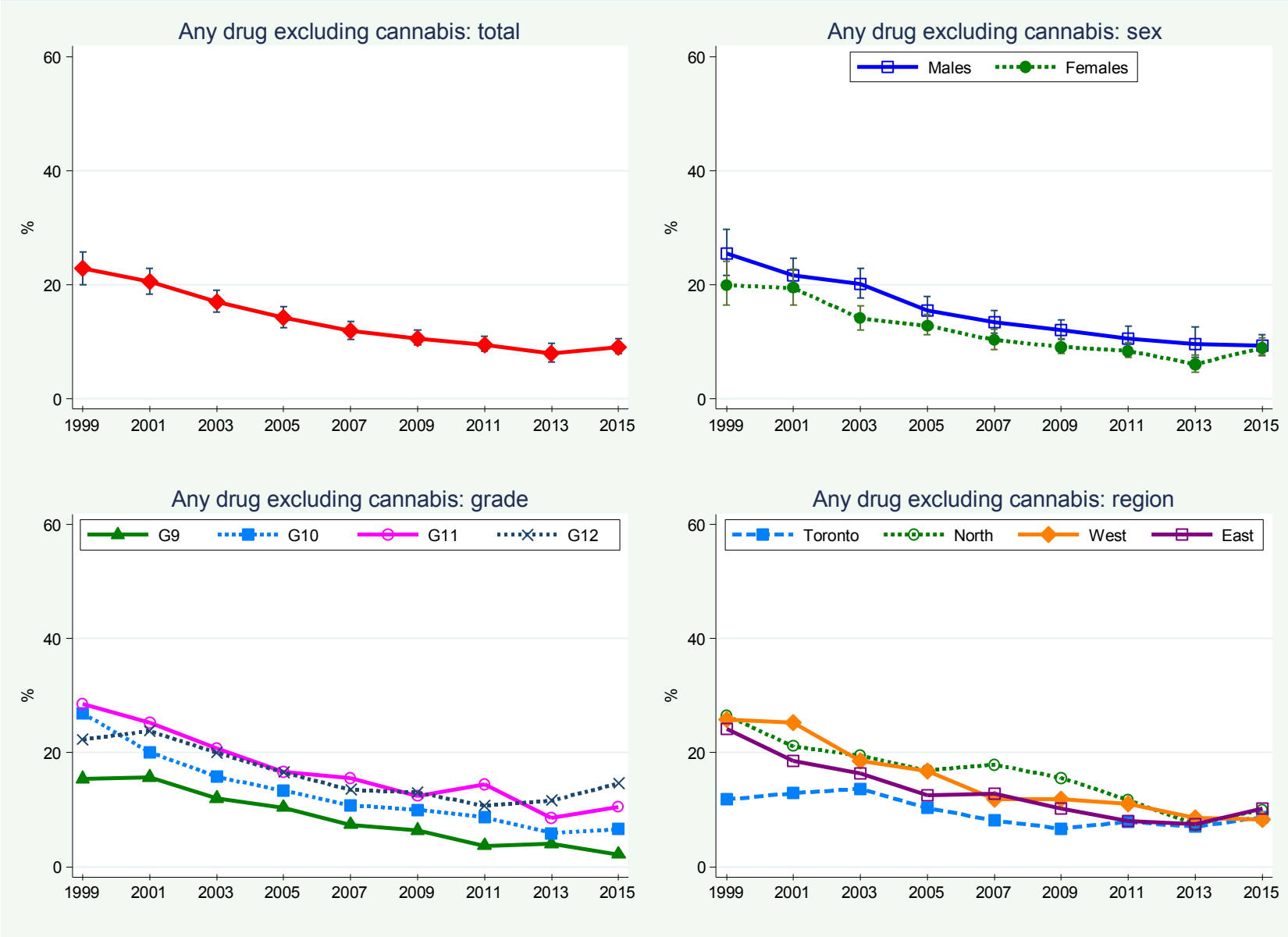
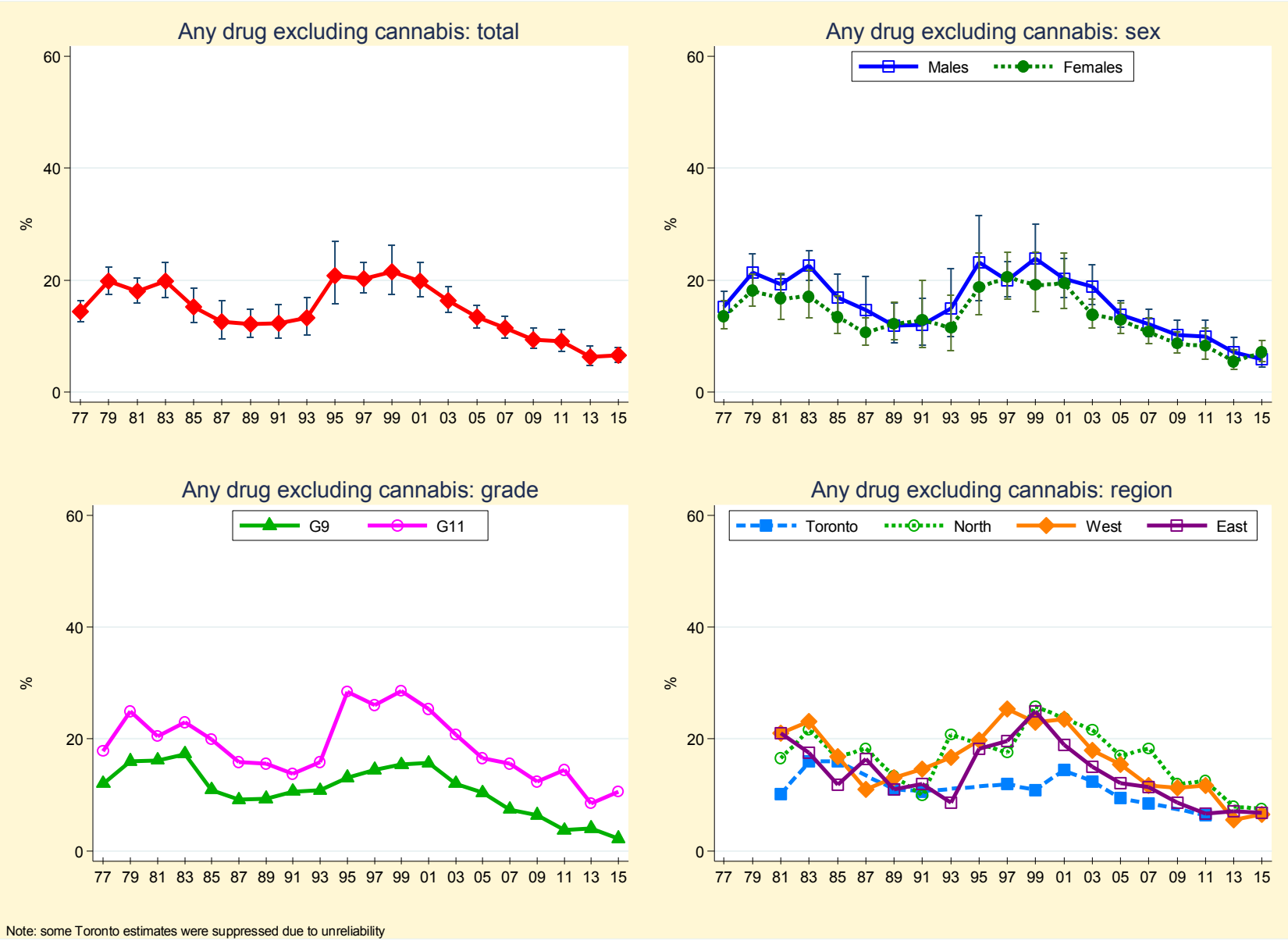


Figure 3.8.6
Past Year Use of Any Drug Excluding Cannabis, 1977–2015 OSDUHS (Grades 9 and 11 only)



Note: some Toronto estimates were suppressed due to unreliability

Table 3.8.1: Percentage Reporting Any Drug Use Including Cannabis in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(1496)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(888)	(870)	(991)	(1125)	(856)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**39.2**	**40.0**	**39.8**	**37.4**	**36.1**	**35.3**	**29.9**	**30.7**	**29.0** [bc]
(95% CI)												(35.9-42.6)	(36.1-44.0)	(37.3-42.3)	(35.0-40.0)	(33.5-38.8)	(33.2-37.5)	(28.0-31.9)	(27.7-33.8)	(26.3-31.9)
Total[2]	**32.3**	**40.9**	**36.2**	**34.7**	**28.8**	**21.3**	**20.3**	**20.0**	**20.6**	**34.8**	**36.6**	**38.2**	**38.3**	**38.1**	**32.9**	**32.1**	**29.6**	**25.4**	**25.9**	**23.9** [d]
	(28.9-35.8)	(36.7-45.1)	(32.5-40.0)	(31.0-38.7)	(23.8-34.3)	(16.5-27.0)	(16.8-24.3)	(16.8-23.7)	(16.7-25.1)	(29.4-40.7)	(34.1-39.2)	(33.7-42.9)	(32.9-44.1)	(34.9-41.4)	(30.2-35.7)	(28.7-35.8)	(26.8-32.6)	(23.3-27.7)	(22.7-29.4)	(21.3-26.8)
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**42.8**	**43.6**	**40.9**	**39.0**	**37.5**	**39.8**	**30.5**	**33.2**	**29.8** [b]
												(38.6-47.0)	(38.3-49.1)	(37.1-44.8)	(35.8-42.2)	(34.2-41.0)	(37.1-42.5)	(28.4-32.8)	(29.4-37.4)	(26.7-33.1)
Males[2]	**36.7**	**44.7**	**38.6**	**39.0**	**32.0**	**24.3**	**20.4**	**20.2**	**24.4**	**37.7**	**36.7**	**40.2**	**40.3**	**39.3**	**33.4**	**34.0**	**32.3**	**25.3**	**28.3**	**22.4**
	(32.4-41.2)	(39.4-50.2)	(35.9-41.3)	(35.4-42.8)	(26.3-38.4)	(18.5-31.1)	(17.0-24.4)	(16.2-24.8)	(16.9-33.9)	(30.5-45.6)	(33.6-39.9)	(35.0-45.7)	(33.9-47.1)	(34.5-44.4)	(30.4-36.6)	(29.4-39.0)	(29.0-35.8)	(21.8-29.3)	(23.8-33.3)	(19.2-26.0)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**35.5**	**36.0**	**38.7**	**35.8**	**34.6**	**30.5**	**29.3**	**27.9**	**28.2** [b]
												(31.2-40.1)	(32.2-40.0)	(36.3-41.1)	(33.0-38.8)	(31.6-37.7)	(27.8-33.4)	(26.4-32.3)	(24.6-31.4)	(24.5-32.2)
Females[2]	**28.4**	**36.9**	**33.5**	**30.5**	**25.4**	**18.6**	**20.1**	**19.8**	**16.7**	**32,2**	**36.5**	**36.0**	**36.0**	**36.8**	**32.3**	**30.1**	**26.8**	**25.5**	**23.4**	**25.6**
	(24.4-32.8)	(32.1-41.9)	(26.5-41.3)	(26.1-35.3)	(19.4-32.4)	(14.2-23.9)	(15.4-25.9)	(13.2-28.7)	(12.1-23.1)	(26.2-38.8)	(33.4-39.7)	(30.4-42.1)	(29.9-42.6)	(33.7-40.1)	(28.6-36.2)	(26.3-34.2)	(22.8-31.3)	(22.1-29.3)	(20.3-26.8)	(21.5-30.1)
Grade																				
9	**26.4**	**31.9**	**29.5**	**28.2**	**20.5**	**15.0**	**15.5**	**16.9**	**14.0**	**23.3**	**26.1**	**29.3**	**31.2**	**29.4**	**24.9**	**22.9**	**19.6**	**12.7**	**16.1**	**10.6** [ab]
	(22.4-30.8)	(26.7-37.6)	(26.6-32.6)	(23.6-33.2)	(14.9-27.6)	(7.9-26.6)	(11.6-20.6)	(15.9-17.9)	(10.0-19.3)	(17.9-29.8)	(23.9-28.5)	(24.2-35.1)	(26.8-36.1)	(25.9-33.2)	(22.1-28.0)	(19.1-27.1)	(16.1-23.6)	(10.8-14.8)	(13.1-19.6)	(8.5-13.2)
10	—	—	—	—	—	—	—	—	—	—	—	**42.0**	**40.4**	**37.6**	**35.0**	**32.4**	**31.8**	**28.7**	**25.3**	**26.1** [b]
												(35.4-48.8)	(36.4-44.4)	(32.8-42.6)	(31.4-38.8)	(28.7-36.3)	(27.8-36.2)	(24.9-32.8)	(21.7-29.4)	(22.4-30.2)
11	**41.0**	**53.3**	**45.1**	**43.3**	**37.6**	**27.2**	**26.4**	**22.7**	**27.9**	**46.3**	**47.0**	**48.3**	**47.7**	**46.8**	**41.3**	**41.6**	**39.4**	**37.9**	**34.9**	**36.4** [b]
	(36.3-46.0)	(47.6-60.0)	(37.2-53.3)	(37.4-49.4)	(30.3-45.5)	(22.2-32.9)	(21.3-32.2)	(16.9-29.8)	(21.0-35.9)	(37.5-55.3)	(42.6-51.5)	(42.5-54.1)	(39.2-56.2)	(42.4-51.2)	(37.5-45.3)	(37.4-45.9)	(35.2-43.7)	(34.3-41.6)	(30.4-39.8)	(32.2-40.8)
12	—	—	—	—	—	—	—	—	—	—	—	**39.5**	**44.9**	**46.1**	**47.7**	**45.7**	**46.7**	**37.5**	**41.2**	**38.2**
												(33.4-45.9)	(33.7-56.7)	(40.6-51.7)	(43.2-52.2)	(41.8-50.0)	(43.1-50.3)	(32.6-42.6)	(35.9-46.7)	(33.2-43.4)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(1496)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(888)	(870)	(991)	(1125)	(856)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**23.9** (17.9-31.1)	**29.9** (18.8-44.0)	**34.8** (29.7-40.4)	**30.4** (25.6-35.5)	**31.6** (22.5-42.3)	**28.7** (22.0-36.5)	**26.9** (21.5-33.0)	**32.4** (22.4-44.3)	**26.1** (19.6-33.7)
Toronto[2]	—	—	**22.5** (18.9-26.6)	**31.5** (21.0-44.3)	**29.1** (22.9-36.2)	**15.4** (7.3-29.4)	**17.4** (8.7-31.8)	**16.5** (12.3-21.7)	**14.0** (9.1-21.1)	**30.1** (15.8-49.8)	**30.4** (26.7-34.3)	**22.8** (16.2-31.1)	**31.4** (17.8-49.0)	**32.5** (25.0-41.0)	**25.3** (19.9-31.7)	**28.1** (16.1-44.4)	**21.6** (13.3-33.2)	**21.1** (17.6-25.1)	**28.1** (16.7-43.3)	**20.8** (14.1-29.6)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**43.0** (34.7-51.6)	**38.5** (31.4-46.1)	**44.6** (38.3-51.0)	**44.0** (39.9-48.1)	**43.2** (37.8-48.6)	**43.8** (37.2-50.6)	**38.4** (34.1-42.8)	**32.0** (24.4-40.7)	**31.8** [b] (27.3-36.6)
North[2]	—	—	**32.3** (23.0-43.2)	**37.0** (32.3-41.8)	**35.8** (29.8-42.4)	**28.6** (15.7-46.4)	**24.3** (21.0-27.8)	**16.8** (12.2-22.7)	**31.4** (21.3-43.8)	**55.5** (23.9-83.1)	**29.9** (24.2-36.3)	**40.4** (23.8-59.5)	**39.8** (27.7-53.2)	**44.6** (37.8-51.5)	**40.8** (34.0-47.9)	**38.7** (30.1-48.1)	**36.5** (27.4-46.8)	**36.4** (29.0-44.5)	**27.2** (18.9-37.4)	**27.5** (23.3-32.2)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**42.1** (36.8-47.5)	**45.1** (39.9-50.4)	**40.5** (36.0-45.1)	**41.1** (36.8-45.5)	**35.3** (31.8-38.9)	**38.1** (34.8-41.6)	**29.2** (26.0-32.5)	**30.1** (25.7-34.8)	**28.3** [b] (24.1-32.9)
West[2]	—	—	**41.0** (35.5-46.6)	**38.3** (31.9-45.2)	**29.6** (23.5-36.4)	**20.3** (12.5-31.2)	**21.3** (15.4-28.8)	**22.4** (15.0-32.2)	**23.1** (15.9-32.2)	**37.3** (31.6-43.4)	**38.9** (35.8-42.0)	**41.3** (34.2-48.8)	**42.2** (35.9-48.7)	**39.3** (34.3-44.5)	**35.4** (31.4-39.6)	**31.9** (27.4-36.8)	**34.4** (30.3-38.8)	**26.1** (22.4-30.1)	**25.8** (22.2-29.8)	**23.1** (18.9-28.0)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**43.2** (37.5-49.0)	**39.9** (34.7-45.4)	**40.5** (37.0-44.1)	**35.4** (31.2-39.8)	**38.2** (34.3-42.2)	**33.5** (30.9-36.3)	**31.0** (28.6-33.6)	**30.4** (27.034.0)	**31.0** [b] (26.3-36.0)
East[2]	—	—	**42.5** (34.6-50.7)	**31.7** (27.9-35.9)	**24.8** (12.8-42.6)	**25.6** (19.8-32.6)	**19.3** (14.7-24.8)	**21.2** (19.8-22.8)	**17.0** (11.4-24.7)	**28.2** (23.2-33.9)	**39.7** (32.9-47.0	**42.6** (34.6-51.1)	**39.8** (31.4-48.8)	**38.1** (32.6-43.9)	**32.1** (27.1-37.5)	**33.1** (28.9-37.7)	**26.5** (22.7-30.6)	**25.0** (21.8-28.4)	**24.8** (20.0-30.4)	**25.9** (22.0-30.1)

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) † estimate suppressed due to unreliability; (5) question asked of a random half sample from 1991 to 1999; (6) the 9 drugs included in the index are: cannabis, LSD, mushrooms/mescaline, methamphetamine, heroin, cocaine, crack (except for years prior to 1987), ecstasy (except for years prior to 1991), and tranquillizers/sedatives (NM); excluded from the index: tobacco/nicotine, alcohol, energy drinks, synthetic cannabis, inhalants, jimson weed, salvia divinorum, mephedrone ("bath salts"), prescription ADHD drugs, prescription opioid pain relievers, and OTC cough/cold medication; (7) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend; [d] significant nonlinear trend.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.8.2: Percentage Reporting Any Drug Use Excluding Cannabis in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(1496)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(870)	(991)	(1125)	(856)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Total[1]	—	—	—	—	—	—	—	—	—	—	—	**22.8**	**20.5**	**17.0**	**14.2**	**11.9**	**10.6**	**9.5**	**7.9**	**9.1** [bc]
(95% CI)												(20.0-25.8)	(18.3-22.9)	(15.2-19.0)	(12.5-16.1)	(10.4-13.6)	(9.4-12.0)	(8.3-10.9)	(6.4-9.7)	(7.9-10.6)
Total[2]	**14.4**	**19.8**	**18.0**	**19.8**	**15.2**	**12.6**	**12.1**	**12.3**	**13.2**	**20.8**	**20.3**	**21.5**	**19.8**	**16.4**	**13.4**	**11.4**	**9.4**	**9.1**	**6.3**	**6.5** [cd]
	(12.6-16.4)	(17.4-22.3)	(15.9-20.4)	(16.9-23.1)	(12.4-18.5)	(9.5-16.4)	(9.8-14.8)	(9.6-15.7)	(10.2-16.9)	(15.8-26.9)	(17.7-23.1	(17.4-26.2)	(17.0-23.1)	(14.2-18.8)	(11.5-15.5)	(9.6-13.5)	(7.8-11.4)	(7.3-11.2)	(4.8-8.2)	(5.3-7.9)
Sex																				
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**25.5**	**21.6**	**20.1**	**15.5**	**13.4**	**12.0**	**10.5**	**9.6**	**9.3** [b]
												(21.6-29.7)	(18.8-24.6)	(17.6-22.9)	(13.3-18.0)	(11.5-15.5)	(10.4-13.9)	(8.6-12.8)	(7.2-12.6)	(7.7-11.3)
Males[2]	**15.2**	**21.4**	**19.3**	**22.6**	**16.9**	**14.7**	**11.9**	**12.0**	**15.0**	**23.1**	**20.0**	**23.8**	**20.2**	**18.9**	**13.8**	**12.1**	**10.2**	**9.9**	**7.1**	**5.9**
	(12.8-18.0)	(18.4-24.7)	(17.7-20.9)	(20.0-25.3)	(13.4-21.1)	(10.3-20.6)	(8.8-15.9)	(8.4-16.7)	(9.9-22.0)	(16.4-31.5)	(17.0-23.3)	(18.5-30.0)	(16.9-23.8)	(15.6-22.8)	(11.6-16.4)	(9.9-14.8)	(7.9-12.9)	(7.6-12.8)	(5.1-9.7)	(4.4-7.8)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**19.9**	**19.4**	**14.1**	**12.8**	**10.3**	**9.1**	**8.4**	**6.0**	**8.9** [b]
												(16.4-24.1)	(16.4-22.7)	(12.1-16.3)	(11.2-14.8)	(8.7-12.2)	(7.9-10.6)	(7.2-9.9)	(4.7-7.7)	(7.5-10.6)
Females[2]	**13.6**	**18.1**	**16.7**	**17.1**	**13.4**	**10.6**	**12.2**	**12.8**	**11.5**	**18.7**	**20.5**	**19.1**	**19.4**	**13.8**	**12.9**	**10.7**	**8.6**	**8.2**	**5.5**	**7.1**
	(11.3-16.3)	(15.4-21.1)	(13.0-21.2)	(13.2-21.8)	(10.5-17.1)	(8.4-13.3)	(9.3-16.0)	(7.9-20.0)	(7.4-17.3)	(13.8-24.9)	(16.6-25.0)	(14.4-25.0)	(15.0-24.8)	(11.4-16.6)	(10.4-15.9)	(8.6-13.3)	(7.0-10.7)	(5.8-11.5)	(4.1-7.4)	(5.4-9.2)
Grade																				
9	**12.0**	**16.0**	**16.2**	**17.3**	**10.9**	**9.1**	**9.3**	**10.6**	**10.8**	**13.1**	**14.5**	**15.4**	**15.7**	**12.0**	**10.4**	**7.4**	**6.4**	**3.7**	**4.0**	**2.2** [b]
	(9.9-14.6)	(13.4-19.1)	(13.6-19.2)	(13.4-22.1)	(7.6-15.4)	(5.4-14.8)	(6.6-13.0)	(9.0-12.4)	(7.8-14.7)	(10.5-16.1)	(10.1-20.3)	(11.1-21.0)	(12.9-19.0)	(9.8-14.8)	(8.5-12.5)	(5.6-9.6)	(4.6-8.7)	(2.5-5.4)	(2.5-6.3)	(1.5-3.3)
10	—	—	—	—	—	—	—	—	—	—	—	**26.9**	**20.1**	**15.8**	**13.3**	**10.8**	**10.0**	**8.7**	**5.9**	**6.6** [b]
												(21.5-33.2)	(16.9-23.8)	(12.8-19.3)	(11.1-15.9)	(8.6-13.5)	(7.8-12.7)	(6.5-11.6)	(4.1-8.4)	(5.1-8.7)
11	**17.8**	**24.9**	**20.5**	**23.0**	**19.9**	**15.9**	**15.6**	**13.8**	**15.8**	**28.4**	**26.0**	**28.5**	**25.3**	**20.7**	**16.6**	**15.6**	**12.4**	**14.4**	**8.5**	**10.5** [b]
	(14.9-21.2)	(21.1-29.2)	(17.1-24.4)	(18.9-27.7)	(16.0-24.4)	(11.4-21.7)	(12.6-19.1)	(9.1-20.3)	(10.8-22.7)	(19.2-39.9)	(23.5-28.6)	(22.5-35.2)	(20.5-30.8)	(17.2-24.6)	(13.9-19.8)	(13.0-18.6)	(9.5-15.9)	(11.2-18.3)	(6.4-11.2)	(8.5-13.0)
12	—	—	—	—	—	—	—	—	—	—	—	**22.3**	**23.8**	**20.0**	**16.5**	**13.5**	**13.0**	**10.7**	**11.6**	**14.6** [b]
												(17.9-27.4)	(17.2-32.0)	(16.7-23.9)	(13.5-20.0)	(10.9-16.6)	(10.4-16.1)	(7.6-15.0)	(8.1-16.3)	(11.4-18.4)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n[1])												(1496)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(870)	(991)	(1125)	(856)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Region																				
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**11.8** (7.6-17.8)	**12.9** (8.1-20.0)	**13.7** (10.3-18.0)	**10.3** (7.6-13.8)	**8.1** (5.5-11.8)	**6.7** (4.5-9.9)	**7.9** (6.2-10.1)	**7.0** (3.4-13.7)	**8.7** (5.4-13.8)
Toronto[2]	—	—	**10.1** (5.3-18.5)	**16.0** (9.1-26.5)	**16.0** (10.0-24.6)	†	**11.0** (8.1-14.8)	**10.6** (8.0-13.8)	†	†	**11.9** (7.4-18.6)	**10.9** (6.1-18.8)	**14.4** (9.1-22.1)	**12.4** (8.2-18.2)	**9.4** (7.0-12.5)	**8.5** (6.0-12.0)	†	**6.4** (4.3-9.3)	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**26.5** (19.2-35.4)	**21.1** (15.8-27.5)	**19.5** (15.8-23.8)	**16.9** (14.1-20.2)	**17.9** (13.5-23.3)	**15.6** (11.4-21.1)	**11.7** (8.4-16.1)	**7.4** (5.5-9.8)	**10.0** [b] (7.5-13.3)
North[2]	—	—	**16.5** (9.5-27.2)	**21.6** (19.8-23.5)	**16.7** (8.9-29.2)	**18.3** (9.2-33.1)	**13.3** (7.8-21.7)	**9.9** (9.4-10.4)	**20.8** (13.1-31.4)	†	**17.5** (8.4-32.9)	**25.8** (14.3-41.9)	**23.7** (15.6-34.3)	**21.6** (17.3-26.6)	**17.0** (12.6-22.6)	**18.3** (10.9-29.3)	**11.9** (6.7-20.3)	**12.5** (8.2-18.6)	**7.9** (5.8-10.6)	**7.5** (4.9-11.3)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**25.8** (21.3-30.9)	**25.2** (21.9-28.9)	**18.5** (15.5-21.9)	**16.8** (13.8-20.3)	**11.8** (9.2-14.9)	**11.8** (9.4-14.6)	**11.0** (8.8-13.7)	**8.6** (5.9-12.2)	**8.3** [b] (6.9-10.0)
West[2]	—	—	**21.0** (18.5-23.7)	**23.1** (17.6-29.7)	**16.8** (12.5-22.1)	**11.0** (6.6-17.7)	**13.0** (9.0-18.4)	**14.6** (8.2-24.5)	**16.7** (12.3-22.3)	**19.7** (16.5-23.3)	**25.3** (22.0-28.8)	**23.0** (15.6-32.5)	**23.5** (19.0-28.7)	**18.0** (14.7-21.9)	**15.5** (12.2-19.6)	**11.6** (8.6-15.4)	**11.3** (8.6-14.7)	**11.7** (8.6-15.6)	**5.5** (4.1-7.4)	**6.5** (4.8-8.9)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**24.1** (19.2-29.9)	**18.6** (15.0-22.8)	**16.4** (13.1-20.2)	**12.6** (9.9-15.8)	**12.8** (10.6-15.4)	**10.2** (9.2-11.3)	**8.0** (6.6-9.8)	**7.5** (6.4-8.8)	**10.2** [b] (7.9-13.2)
East[2]	—	—	**21.0** (16.8-26.0)	**17.6** (14.7-21.0)	**11.8** (8.0-17.0)	**16.4** (11.6-22.9)	**11.0** (6.8-17.3)	**11.9** (10.4-13.5)	**8.6** (3.4-19.9)	**18.3** (17.2-19.5)	**19.6** (14.4-26.2)	**24.9** (18.5-32.7)	**18.9** (13.6-25.6)	**15.0** (10.9-20.3)	**12.1** (9.2-15.7)	**11.4** (8.6-15.0)	**8.6** (6.3-11.8)	**6.6** (4.9-8.9)	**7.0** (5.3-9.2)	**6.8** (5.3-8.8)

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; 4) † estimate suppressed due to unreliability; (5) question asked of a random half sample from 1991 to 1999; (6) the 8 drugs included in the index are LSD, mushrooms/mescaline, methamphetamine, heroin, cocaine, crack (except for years prior to 1987), ecstasy (except for years prior to 1991), and tranquillizers/sedatives (NM); excluded from the index: tobacco/nicotine, alcohol, energy drinks, cannabis, synthetic cannabis, inhalants, jimson weed, salvia divinorum, mephedrone ("bath salts"), prescription ADHD drugs, prescription opioid pain relievers, and OTC cough/cold medication; (7) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend; [d] significant nonlinear trend.

Source: OSDUHS, Centre for Addiction & Mental Health

Any Nonmedical Prescription Drug Use

(Figures 3.8.7, 3.8.8; Table 3.8.3)

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

	Nonmedical Prescription Drug Use in 2015 (Grades 9–12)	2007–2015 Trends (Grades 9–12)
Total Sample	■ Among secondary students, 12.1% report using a prescription drug nonmedically in the past year. This estimate represents about 85,300 Ontario students in grades 9 through 12.	☐ The nonmedical use of a prescription drug significantly decreased between 2013 and 2015, from 14.9% to 12.1%. Nonmedical use of a prescription drug has steadily decreased since 2007 (23.0%), the first year of monitoring. The decrease in this index is likely due to the parallel decrease in nonmedical use of prescription opioids.
Sex	■ There is no significant difference between males (11.6%) and females (12.7%).	☐ Only males show a significant decrease between 2013 and 2015, from 15.8% to 11.6%. Both sexes show significant decreases since 2007.
Grade	■ Nonmedical use of a prescription drug significantly increases with grade, from 7.3% of 9th graders to 15.0% of 12th graders.	☐ Only 9th graders show a significant decrease between 2013 to 2015, from 12.6% to 7.3%. All grades show significant decreases since 2007.
Region	■ There are no significant differences among the regions.	☐ The West region shows a significant decrease between 2013 and 2015, from 15.8% to 11.3%. All four regions show significant decreases since 2007.

Figure 3.8.7
Past Year Nonmedical Use of a Prescription Drug by Sex, Grade, and Region, 2015 OSDUHS

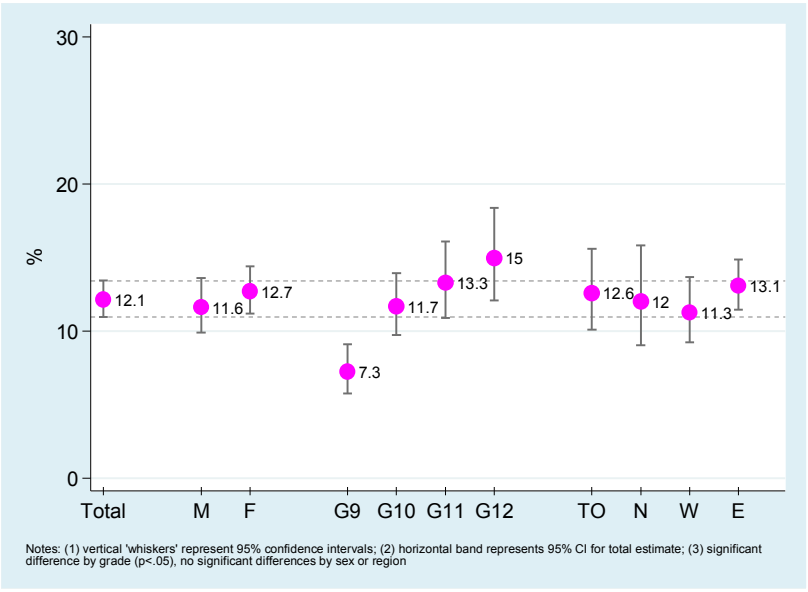


Figure 3.8.8
Past Year Nonmedical Use of Any Prescription Drug, 2007–2015 OSDUHS (Grades 9–12)

Table 3.8.3: Percentage Reporting Nonmedical Use of a Prescription Drug in the Past Year, 2007–2015 OSDUHS (Grades 9–12)

	(*n*=)	2007 (2247)	2009 (5783)	2011 (6383)	2013 (6159)	2015 (6597)	
Total		**23.0**	**21.0**	**16.8**	**14.9**	**12.1**	[abc]
(95% CI)		(20.9-25.2)	(19.6-22.5)	(15.0-18.7)	(13.5-16.4)	(11.0-13.4)	
Sex							
	Males	**19.8**	**19.3**	**15.3**	**15.8**	**11.6**	[ab]
		(17.2-22.6)	(17.5-21.3)	(13.0-17.9)	(13.5-18.5)	(9.9-13.6)	
	Females	**26.7**	**22.9**	**18.4**	**14.0**	**12.7**	[b]
		(23.5-30.2)	(21.1-24.7)	(16.6-20.3)	(12.3-15.8)	(11.2-14.4)	
Grade							
	9	**25.4**	**20.0**	**13.6**	**12.6**	**7.3**	[ab]
		(21.0-30.4)	(17.5-23.1)	(11.2-16.5)	(9.9-16.0)	(5.8-9.1)	
	10	**22.6**	**21.5**	**17.2**	**13.8**	**11.7**	[b]
		(18.7-27.1)	(18.0-25.4)	(14.9-19.9)	(11.1-16.9)	(9.7-14.0)	
	11	**23.0**	**22.5**	**19.5**	**13.6**	**13.3**	[b]
		(19.2-27.4)	(19.6 -25.6)	(15.7-24.0)	(11.4-16.0)	(10.9-16.1)	
	12	**21.3**	**20.4**	**16.7**	**18.3**	**15.0**	[b]
		(17.3-25.9)	(17.7 -23.4)	(13.9-20.0)	(15.1-22.0)	(12.1-18.4)	
Region							
	Toronto	**19.7**	**19.7**	**15.3**	**18.9**	**12.6**	[b]
		(15.7-24.5)	(17.2-22.3)	(13.6-17.0)	(14.6-24.0)	(10.1-15.6)	
	North	**28.7**	**20.8**	**15.8**	**9.4**	**12.0**	[b]
		(22.0-36.5)	(18.01-23.7)	(11.2-21.8)	(7.6-11.6)	(9.0-15.8)	
	West	**24.1**	**20.8**	**18.6**	**15.8**	**11.3**	[ab]
		(20.8-27.7)	(18.2-23.7)	(15.3-22.4)	(13.7-18.1)	(9.2-13.7)	
	East	**21.9**	**22.0**	**15.4**	**12.6**	**13.1**	[b]
		(18.7-25.5)	(19.8-24.2)	(13.8-17.1)	(10.8-14.8)	(11.5-14.9)	

Notes: (1) entries in brackets are 95% confidence intervals; (2) based on a random half sample in 2007; (3) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 2007 significant difference, p<.01; [c] significant linear trend, p<.01; (4) the nonmedical use of a prescription drug is defined as the use of a prescription opioid, an ADHD medication, or a tranquillizer/sedative without one's own prescription, at least once in the past year

Source: OSDUHS, Centre for Addiction & Mental Health

Past Year Injection Drug Use

The OSDUHS has been asking students about injection drug use for over a decade. The question asked is "*In the last 12 months, have you used any illegal drug by injection or needle?*"

2015: Grades 9–12

- The 2015 estimate for use of an illegal drug by injection during the past year among secondary students was suppressed due to an extremely low value (less than 0.5%).

1999–2015: Grades 9–12

- ☐ The following are the estimates for injection drug use from previous survey cycles: 2013 (estimate suppressed, less than 0.5%), 2011 (1.4%), 2009 (0.8%), 2007 (0.9%), 2005 (0.9%), 2003 (1.4%), 2001 (0.9%), and 1999 (1.9%).

Multiple Drug Use in the Past Year: Cigarettes, Alcohol, Cannabis, and Other Drugs

(Figure 3.8.9)

2015: Grades 9–12

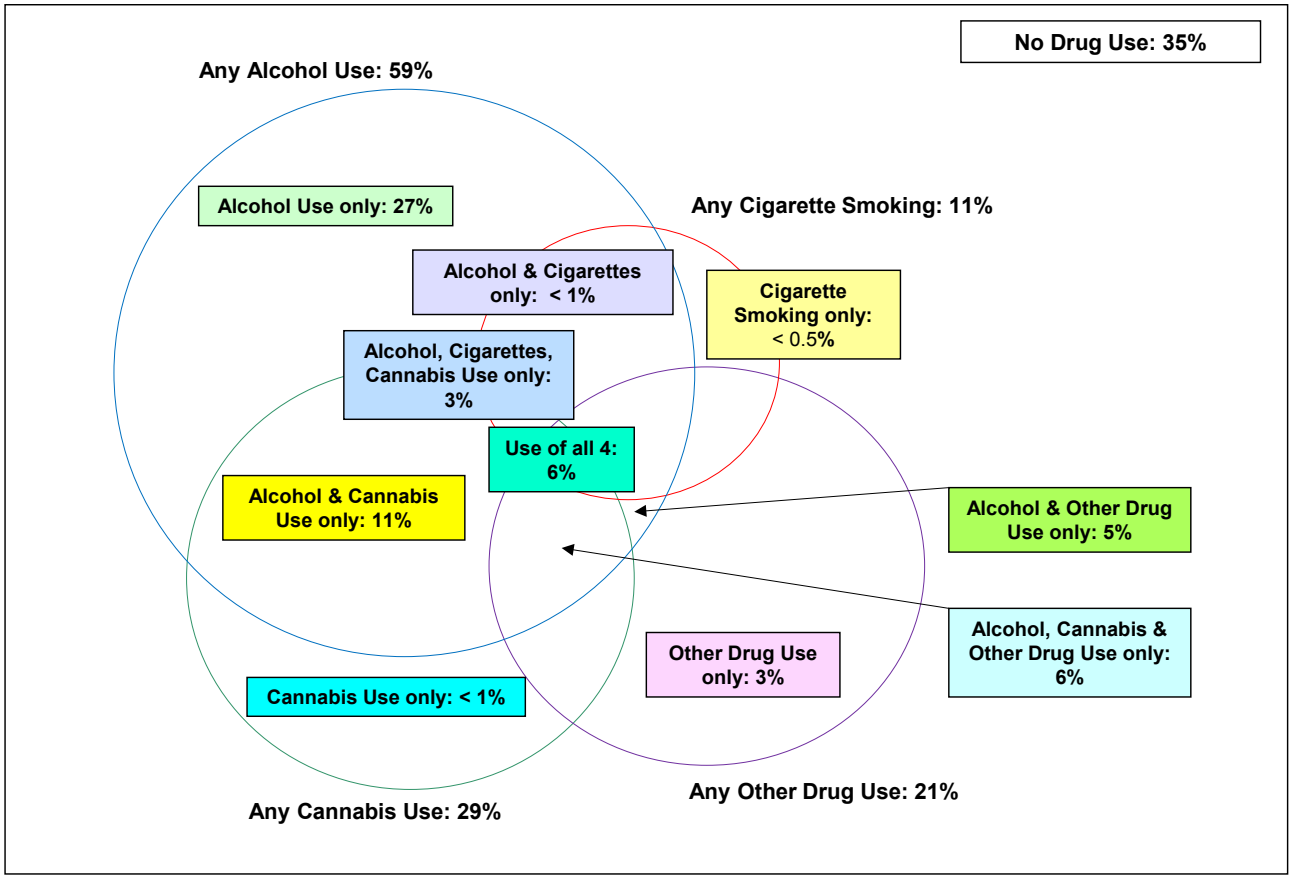
- Figure 3.8.9 presents the overlap of past year use of all drugs asked about in the 2015 survey (excluding electronic cigarettes, waterpipe, and high-caffeine energy drinks). As seen in the figure, most secondary students use alcohol either exclusively, or in addition to other drugs.

- About one-quarter (27%) of secondary students use only alcohol, and no other drug; about 11% use only alcohol and cannabis; and about 6% use alcohol, cannabis, and another drug.

- Negligible proportions (below 1%) of students smoke cigarettes exclusively or use cannabis exclusively.

- About 6% (95% CI: 5%-7%) smoke tobacco cigarettes, and use alcohol, cannabis, *and* at least one other drug. This percentage represents about 42,400 students in grade 9–12 in Ontario.

Figure 3.8.9
The Overlap of Tobacco Cigarette Smoking, Alcohol, Cannabis, and Other Drug Use in the Past Year, 2015 OSDUHS (Grades 9–12)



Notes: (1) based on a random half sample of secondary students (n=3,171); (2) "Other Drug Use" refers to use of at least one of 17 drugs: synthetic cannabis ("spice," "K2"), inhalants, LSD, mushrooms/mescaline, jimson weed, salvia divinorum, cocaine, crack, methamphetamine, heroin, ecstasy, mephedrone ("bath salts"), tranquillizers/sedatives (NM), modafinil (NM), prescription opioid pain relievers (NM), ADHD drugs (NM), and over-the-counter cough/cold medication; (3) not all combinations are presented, therefore the percentages shown do not total to 100%.

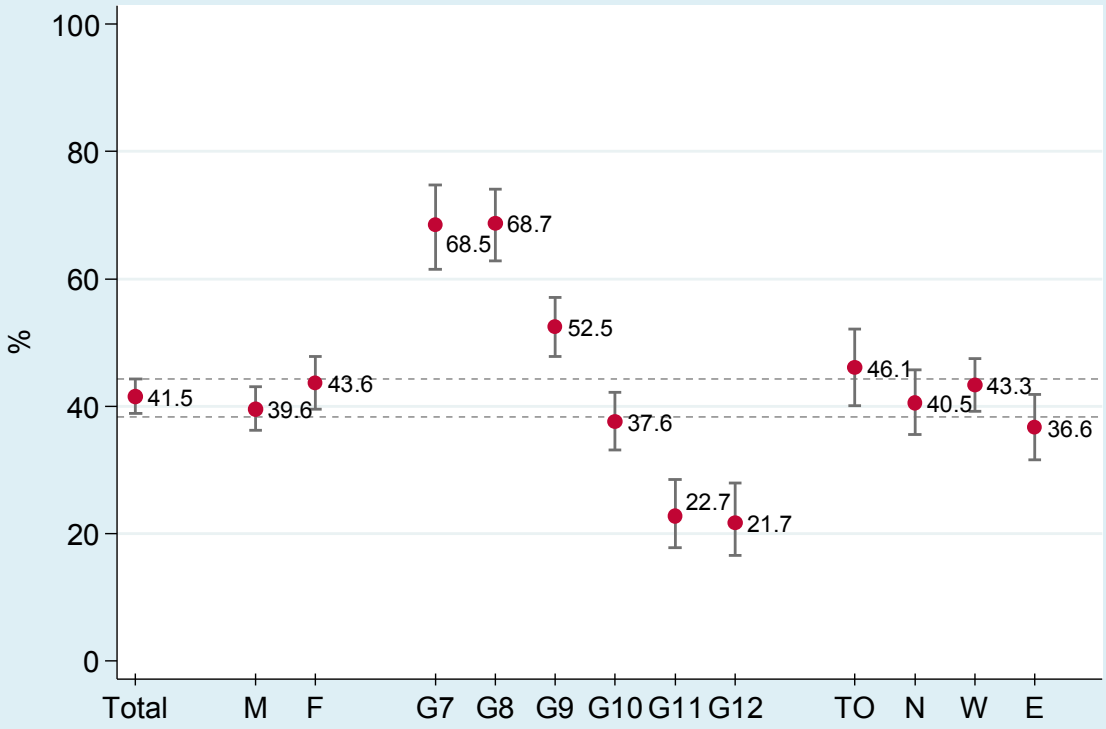
Past Year Abstinence

(Figures 3.8.10–3.8.12; Table 3.8.4)

In this section, we report trends in abstinence – no drug use, including tobacco/nicotine and alcohol (but excluding caffeinated energy drinks) – during the past year. Readers should note that the number of drugs asked about varies from survey to survey, as new drugs emerge and other drugs wane. In general, over the course of the study the number of drugs assessed has *increased* over time, as each cycle attempts to include all or at least most of the drugs available at the time. These results are among grades 7 through 12.

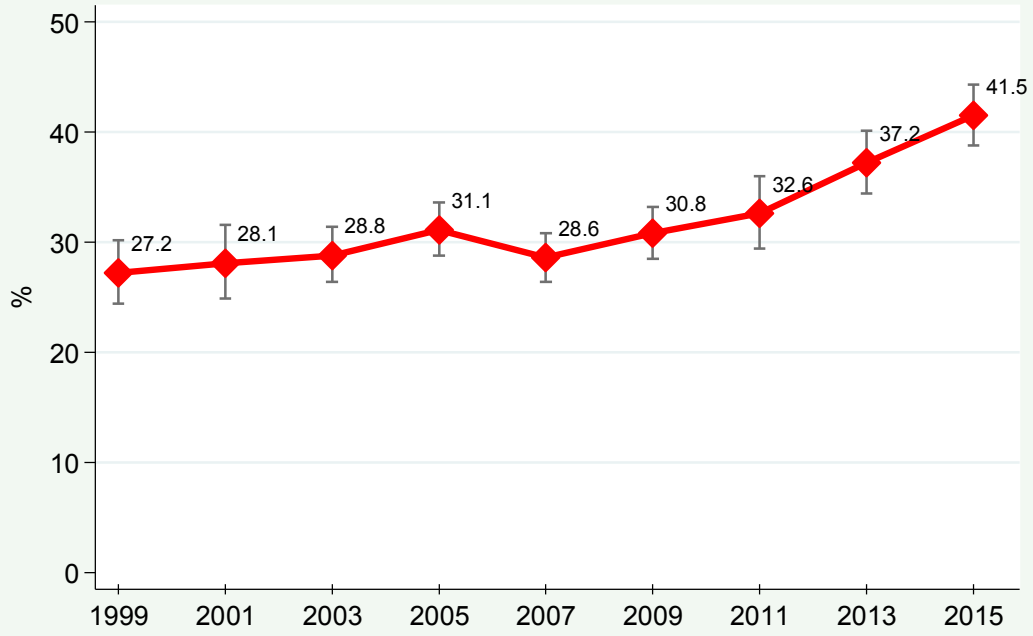
	Abstinence in 2015 (Grades 7–12)	Trends (Grades 7–12)
Total Sample	■ Four-in-ten (41.5%) students in grades 7 through 12 report using no drug at all during the past year – this includes alcohol, cigarettes, and other smoking devices. This percentage represents about 384,400 students in Ontario.	☐ Among the total sample, the 2015 percentage (41.5%) of students reporting no drug use is statistically similar to the estimate from 2013 (37.2%). However, between 1999 and 2015, there was a significant linear increase in abstinence, from 27.2% to 41.5%. ☐ Over the long-term, past year abstinence was lowest in the late 1970s and early 1980s, as only about 20%–25% of students in grade 7, 9, and 11 reported no drug use (see Figure 3.8.12). This percentage increased during the late 1980s, peaked in 1991, decreased during the 1990s, and increased again during the 2000s. The percentage reporting past year abstinence has reached historic elevated levels in recent years.
Sex	■ Males (39.6%) and females (43.6%) are equally likely to report no drug use.	☐ Both males and females show a significant increase in abstinence between 1999 and 2015.
Grade	■ Past year abstinence significantly decreases with grade, from 68.5% of 7th graders to 21.7% of 12th graders.	☐ Among the grades, only 8th graders show a significant increase in abstinence between 2013 and 2015, from 55.7% to 68.7%. All grades show significant increases since 1999.
Region	■ There are significant differences among the regions showing that students in the East region (36.6%) are least likely to abstain.	☐ Among the regions, only students in the West show a significant increase between 2013 and 2015, from 36.2% to 43.3%. The North and West regions show significant increases in abstinence since 1999.

Figure 3.8.10
Percentage Reporting No Drug Use in the Past Year, by Sex, Grade, and Region, 2015 OSDUHS



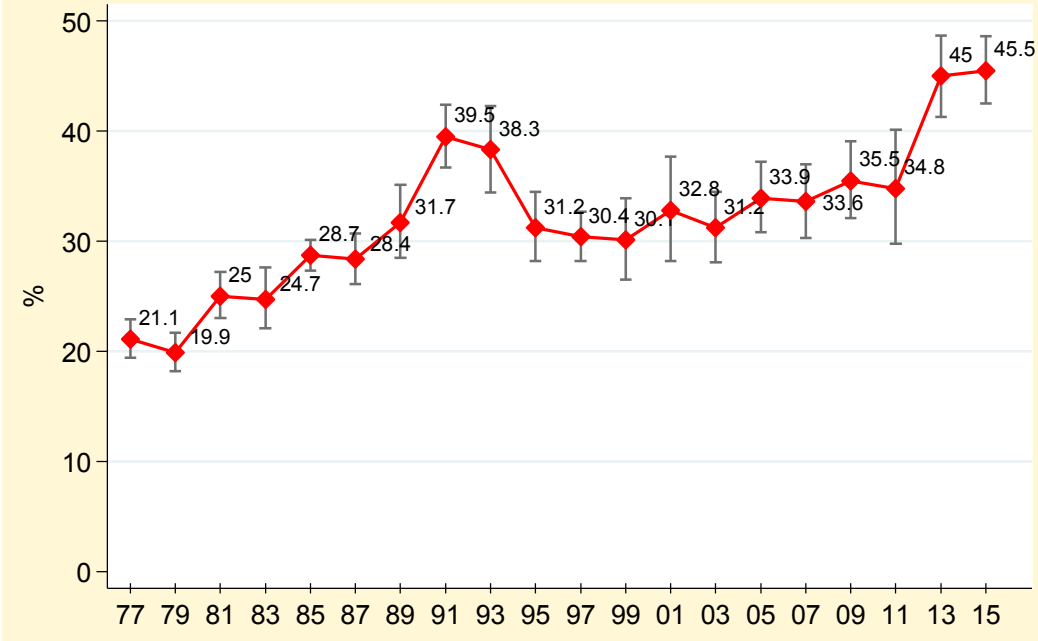
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by grade and region (p<.05), no significant difference by sex

Figure 3.8.11
Percentage Reporting No Drug Use in the Past Year, 1999–2015 OSDUHS
(Grades 7–12)



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) the number of drugs asked about increases over time

Figure 3.8.12
Percentage Reporting No Drug Use in the Past Year, 1977–2015 OSDUHS
(Grades 7, 9, and 11 only)



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) the number of drugs asked about increases over time

Table 3.8.4: Percentage Reporting No Drug Use in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(2229)	(1837)	(3152)	(3648)	(2395)	(4261)	(4472)	(4794)	(5023)
Total	**27.2**	**28.1**	**28.8**	**31.1**	**28.6**	**30.8**	**32.6**	**37.2**	**41.5** [bcd]
(95% CI)	(24.4-30.2)	(24.9-31.6)	(26.4-31.4)	(28.8-33.6)	(26.4-30.8)	(28.5-33.2)	(29.4-36.0)	(34.4-40.1)	(38.8-44.2)
Sex									
Males	**24.7** (21.5-28.2)	**27.2** (23.7-30.9)	**25.7** (22.3-29.4)	**29.3** (26.5-32.2)	**28.9** (26.2-31.8)	**28.9** (25.9-32.0)	**31.9** (28.5-35.5)	**35.0** (31.4-38.8)	**39.6** [b] (36.2-43.0)
Females	**29.8** (25.7-34.3)	**29.0** (24.7-33.7)	**31.8** (28.7-35.0)	**33.2** (30.1-36.4)	**28.2** (25.4-31.2)	**33.0** (30.2-35.8)	**33.4** (28.7-38.5)	**39.6** (36.2-42.9)	**43.6** [b] (39.5-47.8)
Grade									
7	**47.3** (39.0-55.7)	**49.4** (42.0-56.9)	**47.5** (42.1-53.0)	**54.5** (48.0-60.8)	**54.1** (46.9-61.1)	**55.5** (49.0-61.8)	**56.6** (50.8-62.3)	**69.5** (65.5-73.2)	**68.5** [b] (61.5-74.8)
8	**36.0** (31.5-40.7)	**37.5** (30.1-45.5)	**44.2** (39.0-49.4)	**48.3** (43.8-52.8)	**40.2** (34.0-46.8)	**42.4** (36.9-48.0)	**55.0** (49.6-60.3)	**55.7** (47.2-63.9)	**68.7** [ab] (62.8-74.1)
9	**29.7** (24.5-35.4)	**29.7** (22.2-38.5)	**30.3** (25.4-35.8)	**30.5** (26.0-35.4)	**31.5** (25.6-38.0)	**35.6** (29.7-42.0)	**33.0** (25.7-41.3)	**51.5** (45.7-57.4)	**52.5** [b] (47.8-57.1)
10	**20.8** (14.7-28.6)	**17.1** (12.8-22.4)	**21.5** (16.9-26.9)	**25.0** (21.0-29.3)	**24.0** (19.4-29.3)	**27.8** (23.1-32.9)	**30.9** (25.2-37.3)	**31.7** (25.3-38.8)	**37.6** [b] (33.1-42.2)
11	**15.9** (12.0-20.8)	**19.2** (12.9-27.6)	**18.3** (14.5-22.9)	**18.0** (14.5-22.2)	**16.2** (13.2-19.8)	**19.8** (15.8-24.5)	**18.7** (13.9-24.6)	**22.0** (17.6-27.2)	**22.7** [b] (17.8-28.5)
12	**11.9** (8.1-17.1)	**14.0** (8.1-22.9)	**15.5** (11.2-21.1)	**15.0** (11.3-19.7)	**11.7** (9.1-14.9)	**15.4** (11.4-20.6)	**16.0** (12.1-20.8)	**16.5** (13.0-20.7)	**21.7** [b] (16.5-27.6)
Region									
Toronto	**37.9** (30.8-45.6)	**32.8** (22.6-45.1)	**29.2** (23.1-36.2)	**40.7** (33.3-48.1)	**31.0** (24.4-38.3)	**37.9** (31.3-45.0)	**37.2** (32.2-42.5)	**45.0** (36.0-54.4)	**46.1** (40.1-52.2)
North	**19.8** (13.4-28.2)	**22.8** (17.1-29.6)	**24.7** (19.3-31.0)	**23.3** (18.6-28.7)	**18.4** (14.7-22.8)	**26.4** (21.0-32.5)	**32.7** (27.9-37.8)	**33.8** (26.0-42.5)	**40.5** [b] (35.5-45.7)
West	**22.0** (17.8-27.0)	**26.7** (22.3-31.6)	**27.9** (23.6-32.5)	**28.0** (25.2-31.1)	**28.8** (26.0-31.9)	**29.0** (25.7-32.5)	**29.3** (23.7-35.4)	**36.2** (33.2-39.4)	**43.3** [ab] (39.2-47.4)
East	**30.0** (25.6-34.7)	**28.3** (24.2-32.9)	**31.2** (28.8-33.7)	**31.0** (26.9-35.4)	**28.9** (25.3-32.8)	**30.4** (26.3-34.7)	**34.5** (30.8-38.5)	**33.9** (29.2-39.0)	**36.6** (31.6-41.9)

Notes: (1) based on a random half sample in each year; (2) entries in brackets are 95% confidence intervals; (3) the number of drugs asked about increased over time; (4) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Source: OSDUHS, Centre for Addiction & Mental Health

3.9 New Users and Early Initiation

Incidence: First-Time Use in the Past Year

(Figure 3.9.1; Tables 3.9.1–3.9.3)

2015: Grades 7–12

Students were asked if they used certain drugs for the very first time during the past 12 months. Here we evaluate the incidence of tobacco cigarette smoking, electronic cigarette use (new in the 2015 survey), drinking alcohol, cannabis use, and other drug use in the past year. We also compare the 2015 results with those from past surveys.

- Among all students, 6.3% smoked a whole **tobacco cigarette** for the first time during the 12 months before the survey. This estimate represents about 58,400 students in Ontario. There is significant grade variation in first-time use of cigarettes in the past year, with the highest level among 11th graders (12.2%).

- Among all students, 15.7% used an **electronic cigarette** (any type) for the first time during the 12 months before the survey. This estimate represents about 145,300 students in Ontario. First use significantly increases with grade, ranging from 1.8% of 7th graders to about 21% of 11th and 12th graders (data not tabled).

- About one-in-five (19.0%) students tried **alcohol** for the first time in the past year (representing about 175,000 students). First use of alcohol increases steadily between grades 7 and 9, and then decreases slightly in the older grades.

- About one-in-ten (9.6%) students tried **cannabis** (about 88,400 students) for the first time. Grade is significantly associated with incidence of cannabis use showing that incidence increases steadily between grades 7 and 10, remains stable in grade 11, and then decreases in grade 12.

- About 3.7% tried **another illicit drug** such as cocaine or ecstasy for the first time (this represents about 33,900 students). This significantly increases with grade, from less than 1% of students in grades 7 and 8 up to 7.2% of 12th graders (data not tabled).

1999–2015: Grades 7–12

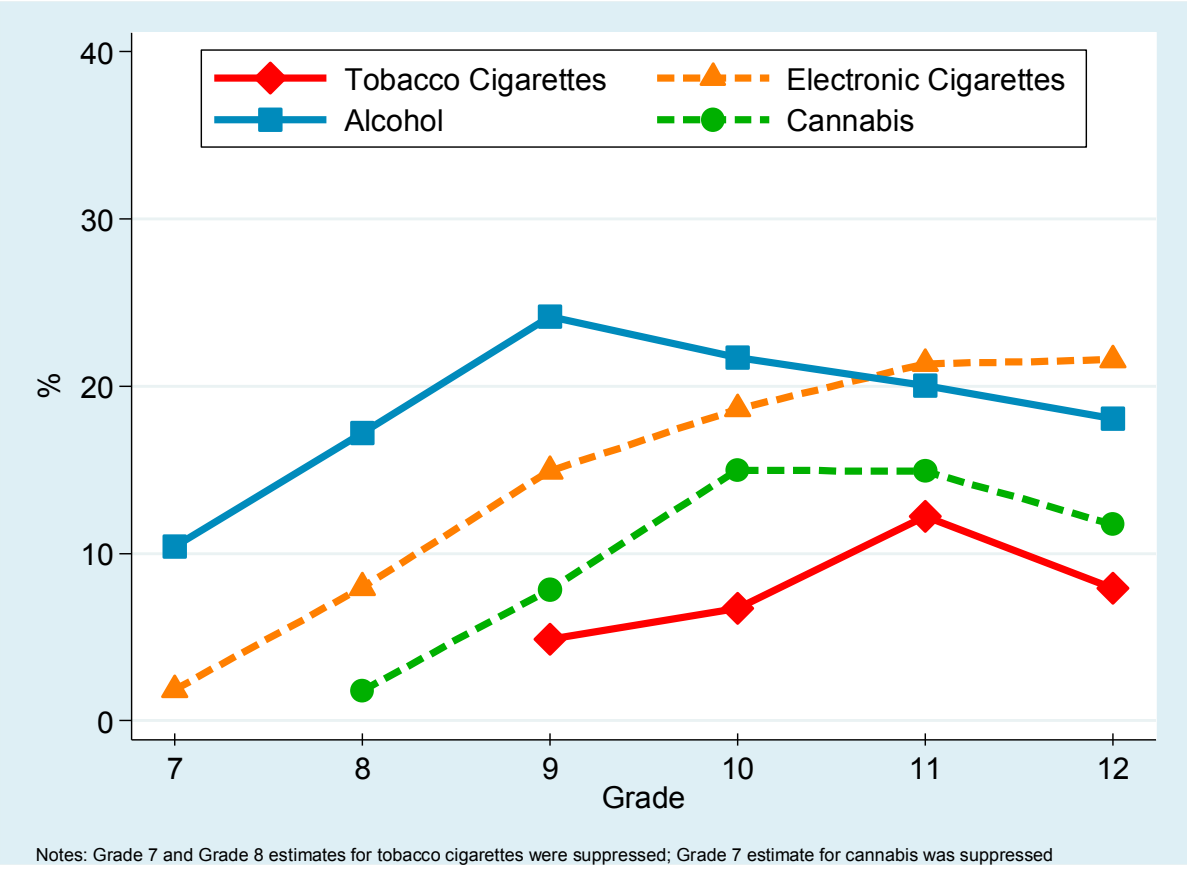
- The percentage who smoked a **tobacco cigarette** for the first time in 2015 (6.3%) is similar to the percentage from 2013 (5.3%). There was a significant downward trend in new smokers between 1999 and 2015, from 10.9% to 6.3%.

- The percentage who tried **alcohol** for the first time in 2015 (19.0%) is similar to the percentage from 2013 (17.3%). There has been no substantial change since 1999 (remaining between 16% and 20%) among the total sample.

- Among all students, there was no significant change in the percentage of first-time **cannabis** users over this period (remaining between 8% and 10%).

- First-time use of an **illicit drug other than cannabis** in 2015 (3.7%) is similar to the estimate from 2013 (2.6%), but significantly lower than the estimates from 1999 and 2001 (about 5%-6%; data not tabled).

Figure 3.9.1
Percentage Reporting First-Time Use of the Substance in the Past Year, by Grade, 2015 OSDUHS



Notes: Grade 7 and Grade 8 estimates for tobacco cigarettes were suppressed; Grade 7 estimate for cannabis was suppressed

Table 3.9.1: Percentage Reporting Smoking a Whole Tobacco Cigarette for the First Time in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(*n*=)	(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)	
Total	**10.9**	**10.1**	**9.3**	**7.3**	**6.3**	**6.1**	**6.3**	**5.3**	**6.3**	[bc]
(95% CI)	(9.7-12.4)	(9.0-11.4)	(8.4-10.3)	(6.4-8.3)	(5.2-7.7)	(5.1-7.4)	(5.1-7.6)	(4.3-6.5)	(5.4-7.4)	
Sex										
Males	**11.0**	**10.0**	**8.1**	**6.9**	**6.6**	**6.9**	**6.2**	**5.7**	**5.9**	[b]
	(9.3-13.0)	(8.3-12.0)	(7.1-9.2)	(5.8-8.1)	(5.1-8.4)	(5.4-8.7)	(4.6-8.3)	(4.2-7.7)	(4.7-7.4)	
Females	**10.8**	**10.3**	**10.5**	**7.8**	**6.1**	**5.2**	**6.4**	**4.9**	**6.8**	[b]
	(9.3-12.6)	(8.5-12.3)	(9.0-12.1)	(6.4-9.4)	(4.7-7.9)	(4.0-6.9)	(4.5-9.0)	(3.8-6.2)	(5.5-8.4)	
Grade										
7	**7.9**	**7.8**	**5.8**	**2.9**	†	†	†	†	†	[b]
	(5.7-10.8)	(5.6-10.9)	(4.3-7.8)	(1.7-5.0)						
8	**11.2**	**8.6**	**8.1**	**5.3**	**5.2**	**3.6**	**4.5**	†	†	[b]
	(9.0-13.9)	(6.7-11.0)	(5.2-12.3)	(3.2-8.6)	(2.7-9.8)	(2.0-6.5)	(2.6-7.7)			
9	**14.6**	**14.2**	**12.3**	**7.7**	**6.6**	**4.3**	**5.7**	**2.7**	**4.9**	[b]
	(11.9-17.8)	(11.8-17.0)	(10.1-14.8)	(5.7-10.2)	(4.6-9.3)	(2.6-6.9)	(3.7-8.6)	(1.4-5.0)	(3.3-7.2)	
10	**12.2**	**11.0**	**9.8**	**10.3**	**8.2**	**7.6**	**7.3**	**6.0**	**6.7**	[b]
	(9.7-15.4)	(8.4-14.2)	(7.9-12.1)	(8.0-13.2)	(5.8-11.6)	(5.5-10.5)	(4.5-11.5)	(3.8-9.4)	(5.0-9.0)	
11	**9.2**	**9.2**	**10.6**	**8.8**	**7.6**	**8.8**	**6.1**	**9.9**	**12.2**	
	(7.1-11.8)	(6.5-12.9)	(9.0-12.5)	(6.5-11.8)	(5.4-10.6)	(6.3-12.2)	(3.9-9.5)	(6.5-14.8)	(9.2-16.0)	
12	**9.6**	**7.5**	**8.2**	**8.1**	**8.0**	**8.6**	**9.1**	**5.6**	**7.9**	
	(6.3-14.4)	(5.4-10.4)	(6.6-10.1)	(5.9-11.1)	(5.5-11.3)	(5.6-13.0)	(5.6-14.6)	(3.9-8.0)	(5.6-11.0)	
Region										
Toronto	**10.3**	**9.2**	**7.3**	**6.4**	**6.6**	**5.6**	**4.5**	**4.4**	**7.2**	
	(7.6-13.9)	(6.9-12.3)	(5.6-9.5)	(4.3-9.2)	(4.2-10.3)	(3.3-9.2)	(2.8-7.2)	(2.8-6.8)	(4.9-10.4)	
North	**12.1**	**12.5**	**9.8**	**9.6**	**5.2**	**10.7**	**7.0**	**6.4**	**7.6**	
	(9.0-16.1)	(10.2-15.2)	(7.9-12.0)	(7.2-12.6)	(2.8-9.4)	(7.4-15.2)	(5.2-9.3)	(4.1-9.8)	(4.9-11.5)	
West	**11.5**	**10.3**	**9.2**	**7.2**	**6.0**	**6.1**	**7.2**	**4.2**	**5.2**	[b]
	(9.3-14.2)	(8.6-12.4)	(7.7-10.9)	(6.1-8.6)	(4.5-7.9)	(4.4-8.3)	(4.9-10.4)	(3.0-5.8)	(3.9-6.8)	
East	**10.1**	**9.7**	**10.6**	**7.6**	**7.0**	**5.6**	**5.9**	**7.5**	**7.4**	
	(8.4-12.2)	(7.5-12.5)	(9.3-12.1)	(5.8-9.8)	(4.8-10.0)	(4.1-7.5)	(4.9-7.1)	(5.2-10.6)	(6.1-9.0)	

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in each year since 2005; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant liner trend, p<.01.

Q: In the last 12 months, have you smoked one whole tobacco cigarette for the very first time?

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.9.2: Percentage Reporting Using Alcohol for the First Time in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
Total	**20.0**	**21.1**	**19.4**	**17.7**	**16.1**	**16.8**	**17.2**	**17.3**	**19.0**
(95% CI)	(18.3-21.8)	(19.1-23.3)	(18.1-20.8)	(16.2-19.3)	(14.3-18.0)	(15.2-18.6)	(15.1-19.5)	(15.3-19.4)	(17.2-20.8)
Sex									
Males	**20.1**	**21.9**	**20.4**	**17.5**	**16.1**	**16.3**	**15.9**	**15.7**	**18.4**
	(17.9-22.6)	(19.4-24.7)	(18.4-22.5)	(15.4-19.8)	(13.6-18.8)	(13.7-19.1)	(13.5-18.6)	(13.4-18.2)	(16.3-20.6)
Females	**19.8**	**20.3**	**18.4**	**17.8**	**16.0**	**17.5**	**18.6**	**19.0**	**19.6**
	(17.5-22.4)	(17.7-23.2)	(17.0-20.0)	(15.8-20.0)	(13.9-18.4)	(15.4-19.7)	(15.9-21.6)	(15.9-22.4)	(17.2-22.2)
Grade									
7	**20.3**	**21.5**	**21.4**	**17.9**	**15.0**	**14.8**	**14.4**	**11.6**	**10.4** [b]
	(16.2-25.0)	(17.2-26.5)	(18.1-25.0)	(14.2-22.4)	(10.8-20.6)	(11.9-18.1)	(10.9-18.8)	(7.8-16.8)	(6.6-16.1)
8	**23.4**	**24.7**	**21.7**	**20.2**	**19.0**	**19.4**	**20.6**	**17.3**	**17.2**
	(20.5-26.6)	(21.7-28.0)	(18.6-25.1)	(16.2-24.8)	(13.7-25.7)	(16.1-23.2)	(17.3-24.4)	(12.8-23.0)	(13.5-21.7)
9	**25.6**	**25.6**	**23.4**	**20.1**	**19.0**	**23.0**	**21.6**	**21.1**	**24.1**
	(22.4-29.1)	(21.3-30.3)	(20.9-26.0)	(17.0-23.7)	(15.8-22.8)	(18.8-27.8)	(17.8-25.8)	(16.6-26.4)	(20.1-28.7)
10	**20.7**	**22.5**	**20.4**	**19.9**	**17.9**	**18.9**	**21.6**	**23.1**	**21.7**
	(16.9-25.1)	(18.6-26.8)	(17.3-23.9)	(16.6-23.6)	(14.2-22.3)	(15.1-23.5)	(16.5-27.6)	(18.1-29.0)	(17.3-26.9)
11	**13.5**	**15.1**	**16.1**	**16.5**	**14.0**	**15.4**	**15.4**	**20.0**	**20.0** [b]
	(10.6-16.9)	(10.6-21.2)	(13.7-18.9)	(13.3-20.3)	(10.9-17.7)	(12.4-18.9)	(11.7-19.9)	(15.7-25.2)	(16.9-23.6)
12	**15.0**	**12.4**	**13.5**	**12.2**	**12.4**	**11.5**	**11.7**	**11.6**	**18.1**
	(10.6-20.8)	(8.2-18.5)	(10.9-16.6)	(9.3-15.9)	(8.9-17.0)	(8.7-15.2)	(8.1-16.5)	(8.6-15.5)	(14.3-22.5)
Region									
Toronto	**23.4**	**20.8**	**19.7**	**16.6**	**14.2**	**20.4**	**17.3**	**16.7**	**18.8**
	(20.0-27.2)	(14.1-29.8)	(16.1-23.8)	(13.4-20.5)	(10.0-19.8)	(16.0-25.7)	(14.0-21.2)	(12.0-22.8)	(15.2-23.1)
North	**18.5**	**19.4**	**22.2**	**19.2**	**14.8**	**19.2**	**16.5**	**24.1**	**23.7**
	(14.6-23.2)	(17.2-21.8)	(18.8-26.1)	(15.8-23.3)	(10.3-20.9)	(14.4-25.2)	(14.3-19.1)	(17.7-31.8)	(18.9-29.2)
West	**19.4**	**19.6**	**18.4**	**18.8**	**16.3**	**14.4**	**16.7**	**15.1**	**18.5**
	(16.4-22.8)	(17.1-22.3)	(16.4-20.6)	(16.5-21.3)	(13.8-19.2)	(12.3-16.9)	(12.7-21.6)	(12.2-18.5)	(16.0-21.3)
East	**19.2**	**24.2**	**19.9**	**16.4**	**17.1**	**17.8**	**17.8**	**20.0**	**19.0**
	(16.7-22.0)	(21.1-27.5)	(17.9-22.0)	(13.8-19.4)	(14.0-20.7)	(14.8-21.4)	(15.1-20.9)	(17.3-23.1)	(15.8-22.6)

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in each year since 2005; (3) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01.
Q: In the last 12 months, have you tried alcohol (beer, wine or liquor) for the very first time?
Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.9.3: Percentage Reporting Using Cannabis for the First Time in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
Total	**10.0**	**10.3**	**10.4**	**8.8**	**8.5**	**8.5**	**7.8**	**8.8**	**9.6**
(95% CI)	(9.1-11.1)	(9.2-11.4)	(9.6-11.2)	(7.6-10.2)	(7.3-9.9)	(7.3-9.9)	(6.4-9.4)	(7.4-10.5)	(8.2-11.1)
Sex									
Males	**10.7** (9.3-12.2)	**11.2** (9.4-13.3)	**10.8** (9.5-12.2)	**8.8** (7.3-10.6)	**8.8** (7.2-10.8)	**9.7** (8.1-11.6)	**7.2** (5.6-9.2)	**9.2** (7.1-11.9)	**9.2** (7.5-11.1)
Females	**9.4** (8.0-11.0)	**9.3** (7.9-11.0)	**10.0** (8.9-11.1)	**8.8** (7.2-10.6)	**8.2** (6.7-10.0)	**7.2** (5.7-9.1)	**8.5** (6.7-10.7)	**8.4** (6.8-10.3)	**10.0** (8.2-12.2)
Grade									
7	†	**4.2** (2.6-6.5)	**3.2** (2.1-4.9)	**2.9** (1.8-4.8)	**2.9** (1.5-5.3)	†	†	†	†
8	**7.6** (5.8-10.1)	**6.0** (4.2-8.4)	**5.4** (3.4-8.5)	**4.2** (2.5-7.1)	**4.5** (2.7-7.4)	**3.7** (1.9-6.8)	**5.5** (2.9-9.9)	**6.5** (3.9-10.8)	**1.8** [ab] (1.0-3.2)
9	**15.3** (13.3-17.5)	**14.9** (12.7-17.3)	**13.1** (11.2-15.4)	**11.8** (8.8-15.6)	**9.5** (6.9-13.0)	**11.8** (8.6-15.9)	**7.9** (5.5-11.3)	**9.2** (6.3-13.2)	**7.8** [b] (5.9-10.3)
10	**11.2** (8.4-14.9)	**12.6** (10.5-15.1)	**14.8** (12.7-17.3)	**12.8** (10.2-16.0)	**10.2** (7.7-13.2)	**12.7** (9.8-16.4)	**10.0** (7.6-13.2)	**11.5** (8.4-15.5)	**15.0** (12.2-18.3)
11	**13.5** (11.1-16.4)	**11.4** (8.4-15.3)	**12.8** (11.0-14.8)	**9.1** (6.7-12.2)	**13.2** (10.3-16.8)	**9.8** (7.0-13.4)	**10.8** (7.7-15.0)	**13.1** (9.5-17.9)	**14.9** (12.2-18.2)
12	**8.2** (5.9-11.1)	**10.7** (6.6-16.9)	**10.4** (8.6-12.4)	**11.1** (8.1-15.0)	**10.0** (7.6-13.0)	**10.1** (7.6-13.5)	**8.4** (5.0-13.6)	**8.8** (6.4-12.0)	**11.7** (8.7-15.6)
Region									
Toronto	**7.8** (6.0-10.1)	**9.5** (7.7-11.7)	**8.5** (6.7-10.9)	**9.1** (5.5-14.7)	**7.3** (4.6-11.5)	**7.9** (5.0-12.3)	**7.9** (5.2-11.6)	**8.4** (5.3-13.1)	**10.1** (6.7-15.0)
North	**11.5** (9.8-13.5)	**9.2** (7.8-10.9)	**13.2** (10.9-15.8)	**10.4** (8.3-13.0)	**12.2** (8.6-17.1)	**10.8** (6.9-16.3)	**8.1** (5.7-11.3)	**9.2** (6.3-13.4)	**7.5** (5.1-10.8)
West	**10.1** (8.5-11.9)	**10.9** (9.1-13.0)	**9.8** (8.8-10.9)	**7.7** (6.2-9.6)	**7.5** (6.1-9.2)	**9.3** (7.4-11.5)	**7.7** (5.3-11.0)	**8.1** (6.2-10.6)	**9.4** (7.4-11.9)
East	**10.9** (9.1-12.9)	**10.2** (8.5-12.1)	**11.6** (10.0-13.4)	**9.9** (8.2-12.0)	**10.1** (7.6-13.3)	**7.3** (5.8-9.2)	**7.9** (6.2-10.0)	**10.2** (7.9-13.1)	**9.8** (8.0-12.0)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in each year since 2005; (4) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 1999 significant difference, p<.01.
Qs: In the last 12 months, have you tried cannabis (marijuana or hashish, "weed") for the very first time?
Source: OSDUHS, Centre for Addiction & Mental Health

Early Initiation Among 7th Graders, 1981–2015

(Figures 3.9.2–3.9.4)

Perhaps one of the most consistent and robust factors associated with future substance problems is the early initiation of use. Much research has shown that those who begin using substances at an early age (i.e., typically defined as before age 13 or 14) are more likely to develop substance use disorders and other problems later on in life (Agrawal et al., 2006; Behrendt, Wittchen, Höfler, Lieb, & Beesdo, 2009; Dawson, Goldstein, Chou, Ruan, & Grant, 2008; Fergusson, Boden, & Horwood, 2015; Hingson, Heeren, & Winter, 2006; Meier et al., 2012).

One way of monitoring changes in early initiation is to examine initiation of drug use among the youngest cohort of students, namely the 7th graders (ages 12/13). We asked students in which grade did they first smoke a whole cigarette, drink an alcoholic drink, and try cannabis. The grade of first drug use among the 7th graders is profiled in Figures 3.9.2 to 3.9.4 for selected years since 1981.

Tobacco Cigarettes

- As seen in Figure 3.9.2, early initiation of cigarette smoking shows a downward trend over time, with fewer 7th graders today reporting trying cigarette smoking at an early age. Most notably, an extremely low percentage (less than 0.5%) of 7th graders in 2015 reported smoking their first whole cigarette before the end of grade 6 (ages 11/12), compared with 9% in 2003, 27% in 1997, and 41% in 1981.

Alcohol

- Early initiation of alcohol use also declined over time (see Figure 3.9.3). For example, about 14% of 7th graders in 2015 tried alcohol before the end of grade 6 compared with 31% in 2007, 42% in 2003, and 50% in 1981.
- The OSDUHS also asked students in which grade they first drank enough alcohol to feel drunk. About 1% of 7th graders in 2015 experienced drunkenness before the end of grade 6 (data not presented).

Cannabis

- As seen in Figure 3.9.4, early initiation of cannabis use – defined as trying for the first time before the end of grade 6 (ages 11/12) – was at 7% in 1981. Early use decreased by 1989 (1%), increased again in 1997 and remained elevated until 2003 (5%). In 2015, the estimate is much lower (less than 0.5%).

Drug Use Trends Among 7th Graders, 1977–2015

(Figure 3.9.5)

Another approach to assess potential future trends in adolescent drug use is to closely monitor prevalence among the 7th graders (ages 12/13), the youngest students in our sample. We present the past year prevalence rates for tobacco, alcohol, and cannabis among 7th graders in Figure 3.9.5. An overview of these data shows that use of these drugs is currently lower compared with use during the late 1970s (the peak years of use on record), and compared with the elevated rates seen again in the late 1990s and early 2000s.

Figure 3.9.2
Grade First Smoked a Whole Tobacco Cigarette Among All 7th Graders, by Year of Survey, 1981–2015 OSDUHS

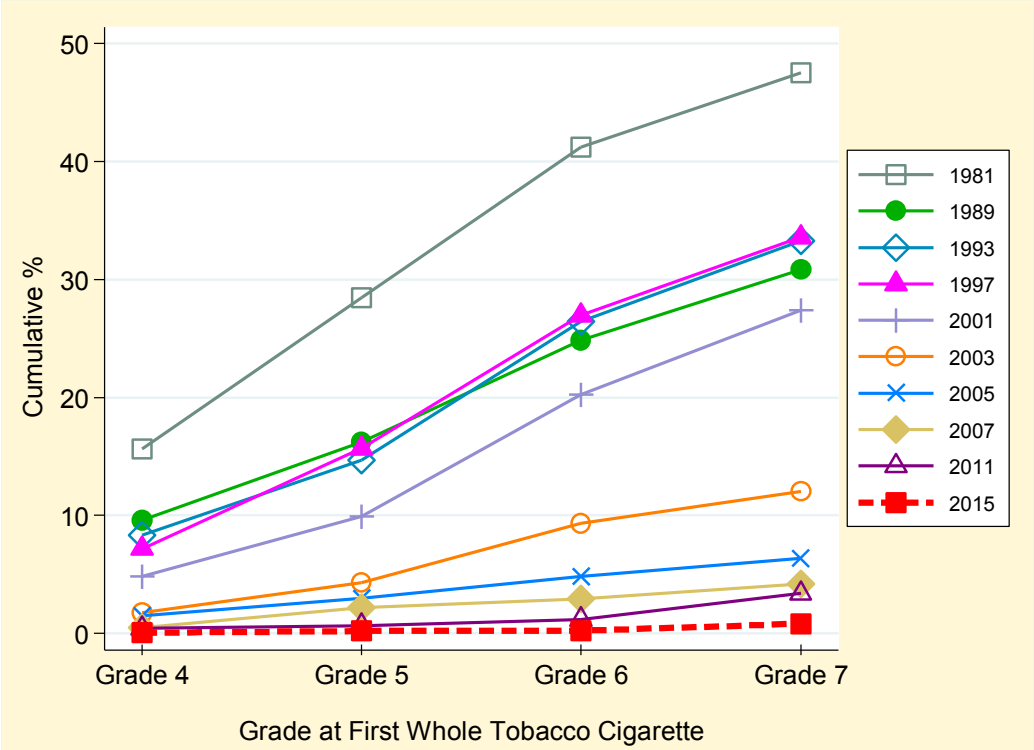


Figure 3.9.3
Grade First Drank Alcohol Among All 7th Graders, by Year of Survey, 1981–2015 OSDUHS

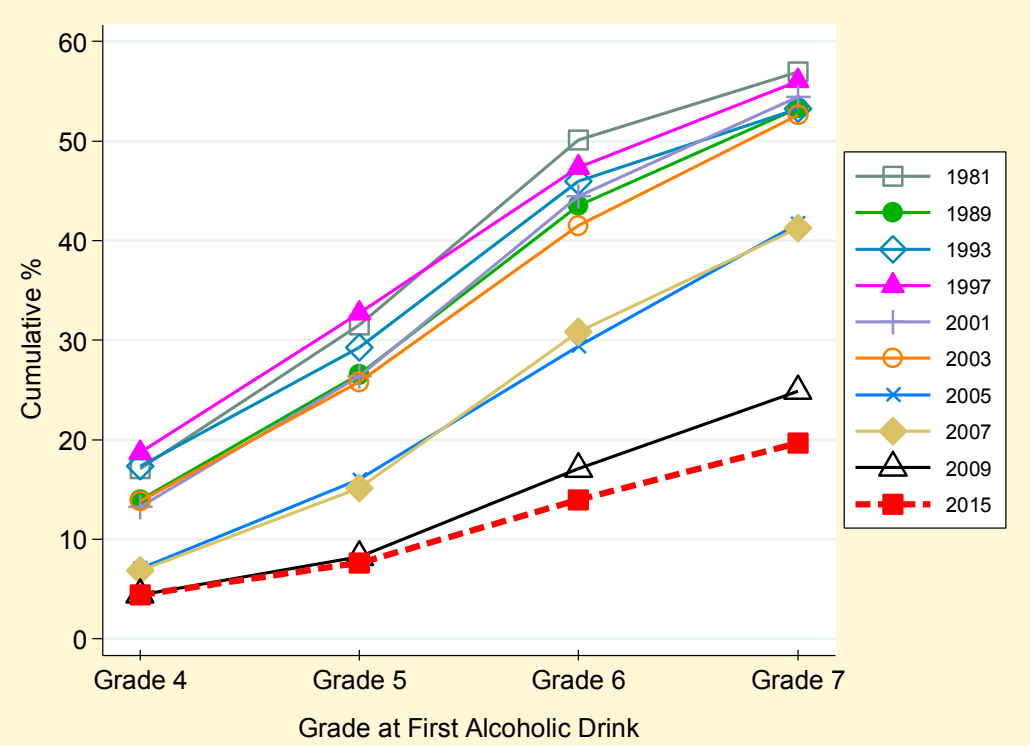


Figure 3.9.4
Grade First Used Cannabis Among All 7th Graders, by Year of Survey, 1981–2015 OSDUHS

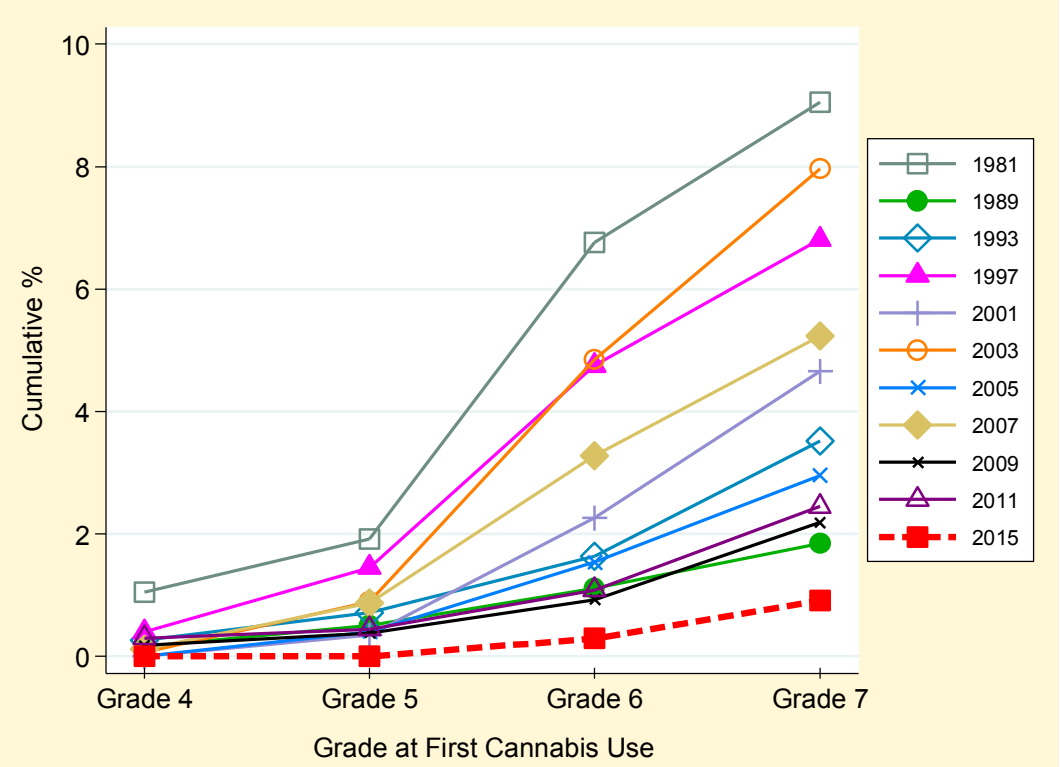
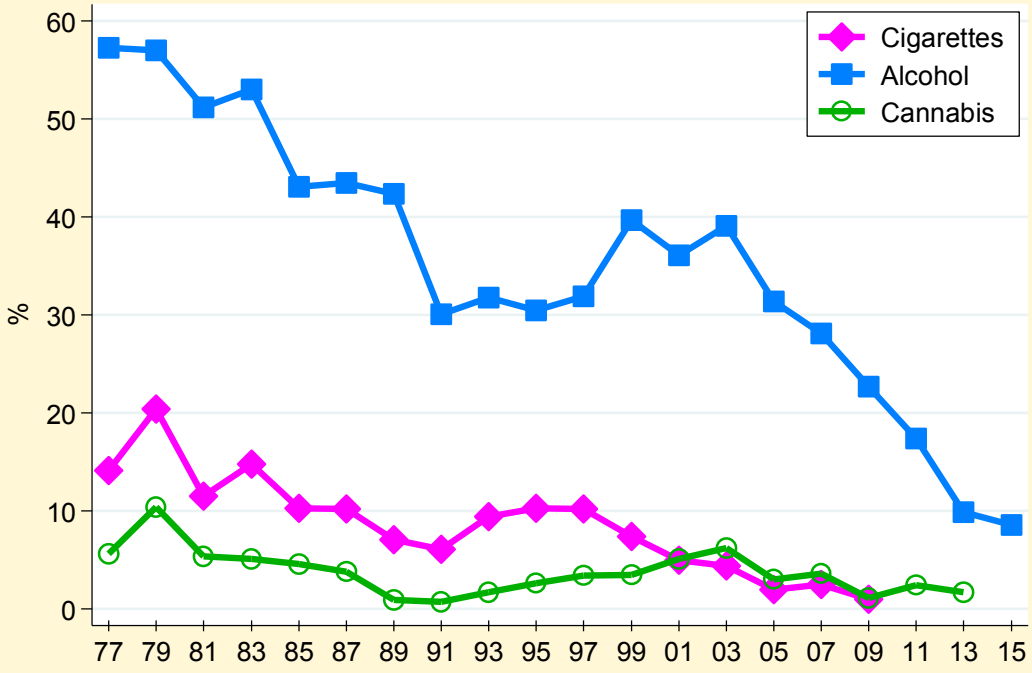


Figure 3.9.5
Percentage of 7th Graders Reporting Tobacco Cigarette Smoking, Alcohol Use, and Cannabis Use in the Past Year, 1977–2015 OSDUHS



Note: estimates for cigarette smoking since 2011, and for cannabis use in 2015, were suppressed due to unreliability (small values)

Age at Initiation of Smoking, Drinking, and Cannabis Use, 1981–2015

(Figures 3.9.6–3.9.10)

As previously mentioned, early initiation of substance use is a risk factor for substance use disorders and other problems later in life. In this section, we present the average age at initiation for cigarette, alcohol, and cannabis use *among grade 12 users* (ages 17/18). We select 12th graders because this is the oldest grade in the study and thus this group is nearing the end of adolescence. We restrict our analysis to past year users because our focus is on ongoing use rather than experimental behaviour. Trends in age of initiation for 12th graders are also presented for the years since 1999.

We also present long-term findings since 1981 for *grade 11 users* (ages 16/17) because it is the oldest grade for which we have data spanning back the furthest.

2015 OSDUHS: Mean Ages

- As seen in Figure 3.9.6, in 2015 the average age at first cigarette smoking (smoking one whole tobacco cigarette) among grade 12 smokers was age 14.7. The average age at first alcoholic drink among grade 12 drinkers was 14.8, and the average age at first drunkenness among grade 12 drinkers was 15.2. The average age at first cannabis use among grade 12 users was 15.3.

Tobacco Cigarette Smoking

- The average initiation age for cigarette smoking increased between 1981 and 1995, decreased slightly in the late 1990s, and has increased considerably since 1999 (see Figures 3.9.6 to 3.9.8).

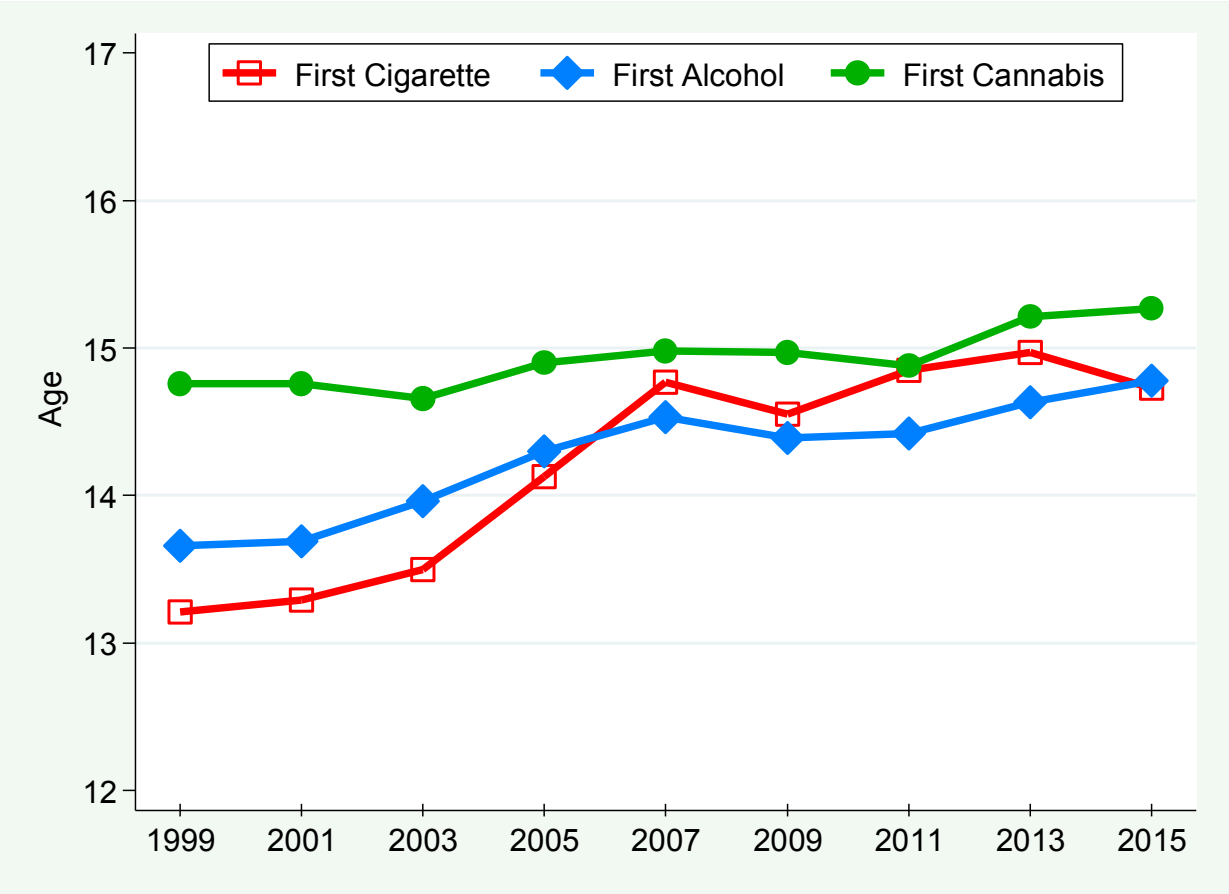
Drinking Alcohol

- The average initiation age for drinking was stable during the 1990s, followed by an increase between 1999 and 2015 (see Figures 3.9.6, 3.9.7, and 3.9.9).

Cannabis Use

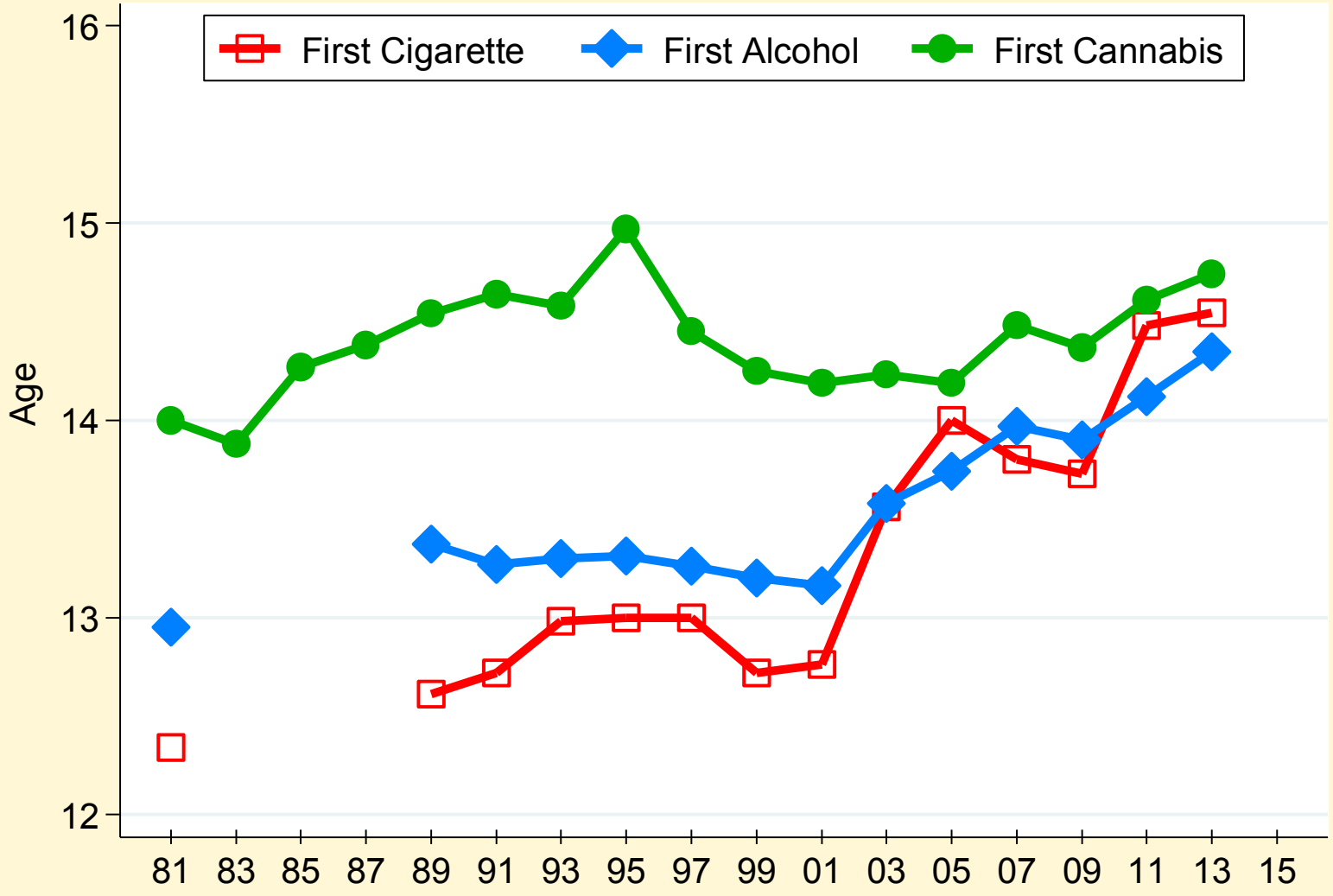
- The average age at first cannabis use increased between 1981 and 1995, and then decreased during the late 1990s. Between 1999 and 2015, there has been a slight increase in the average initiation age (see Figures 3.9.6, 3.9.7 and 3.9.10).

Figure 3.9.6
Average Age at First Tobacco Cigarette Among 12th-Grade Smokers, First Alcoholic Drink Among 12th-Grade Drinkers, and First Cannabis Use Among 12th-Grade Users, 1999–2015 OSDUHS



	1999	2001	2003	2005	2007	2009	2011	2013	2015
Cigarette	13.21	13.29	13.50	14.13	14.77	14.55	14.85	14.97	14.73
Alcohol	13.66	13.69	13.96	14.30	14.53	14.39	14.42	14.63	14.78
Cannabis	14.76	14.76	14.66	14.90	14.98	14.97	14.88	15.21	15.27

Figure 3.9.7
Average Age at First Tobacco Cigarette Among 11th-Grade Smokers, First Alcoholic Drink Among 11th-Grade Drinkers, and First Cannabis Use Among 11th-Grade Users, 1981–2015 OSDUHS



Note: age (grade) at first cigarette and first alcoholic drink not asked between 1983 and 1987

Figure 3.9.8
Grade at First Whole Tobacco Cigarette Among 11th-Grade Smokers, by Year of Survey, 1981–2015 OSDUHS

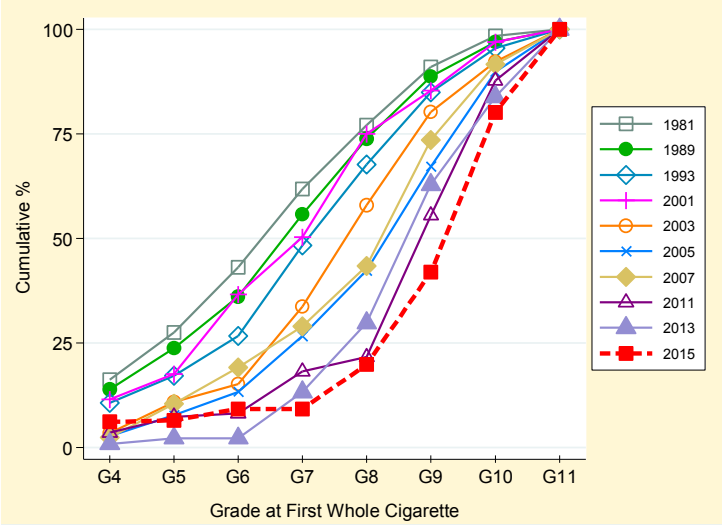


Figure 3.9.9
Grade at First Alcoholic Drink Among 11th-Grade Drinkers, by Year of Survey, 1981–2015 OSDUHS

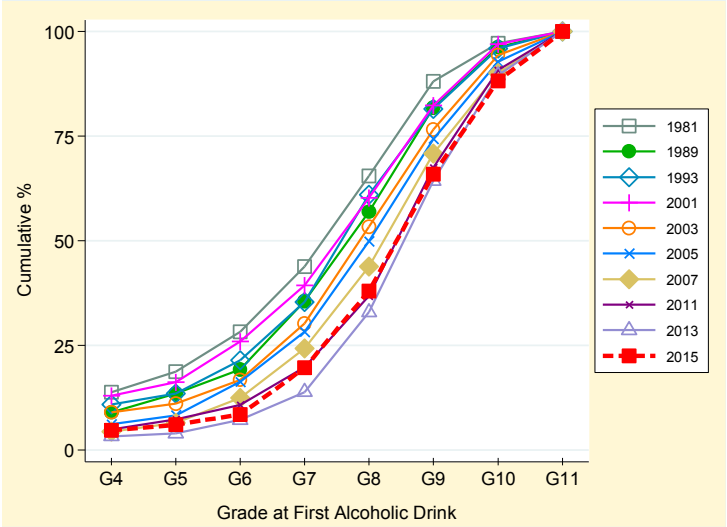
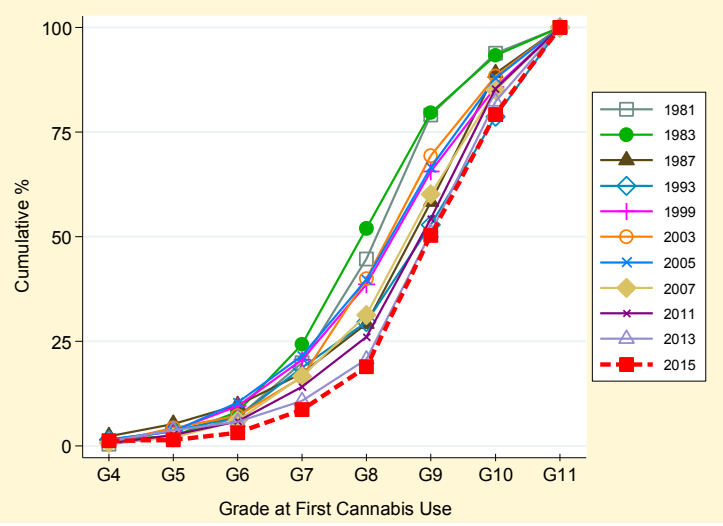


Figure 3.9.10
Grade at First Cannabis Use Among 11th-Grade Users, by Year of Survey, 1981–2015 OSDUHS



3.10 Consequences and Harms

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

(Figures 3.10.1-3.10.4; Tables 3.10.1, 3.10.2)

All students in grades 7 through 12 were asked how often they rode in a vehicle driven by someone who had been drinking alcohol, and how often they rode with a driver who had been using drugs. Both questions refer to the past 12 months before the survey.

2015: Grades 7– 12

- The 2015 survey found that about 15.3% of students rode in a vehicle at least once in the past year with a driver who had been drinking. This represents roughly 146,400 students in Ontario. About 12.3% of students rode with a driver who had been using drugs at least once in the past year. This estimate represents 117,700 students in Ontario.

- Males and females are equally likely to ride with a driver who had been drinking, or using drugs.

- The likelihood of riding in a vehicle with a driver who had been drinking or using drugs significantly increases with grade level.

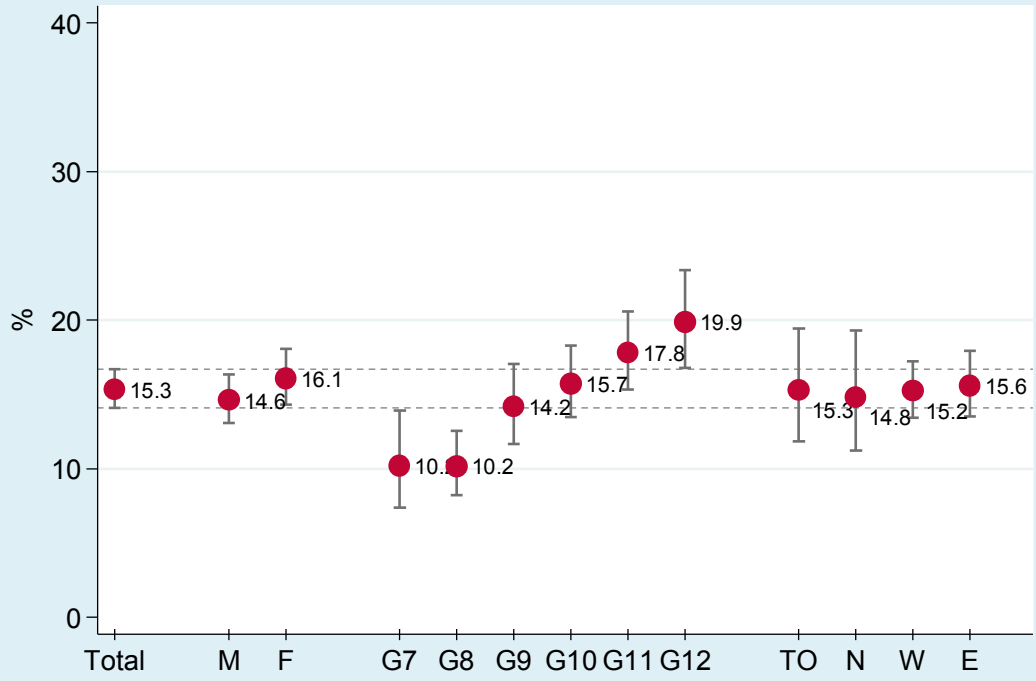
- There are no significant regional differences regarding the likelihood of riding with a driver who had been drinking, or using drugs.

2001–2015: Grades 7– 12

- The percentage of students who report riding with a driver who had been drinking alcohol significantly declined between 2013 (17.8%) and 2015 (15.3%). There has been a significant downward trend since 2001, when monitoring first began, reaching an all-time low in 2015 (from 30.9% to 15.3%)

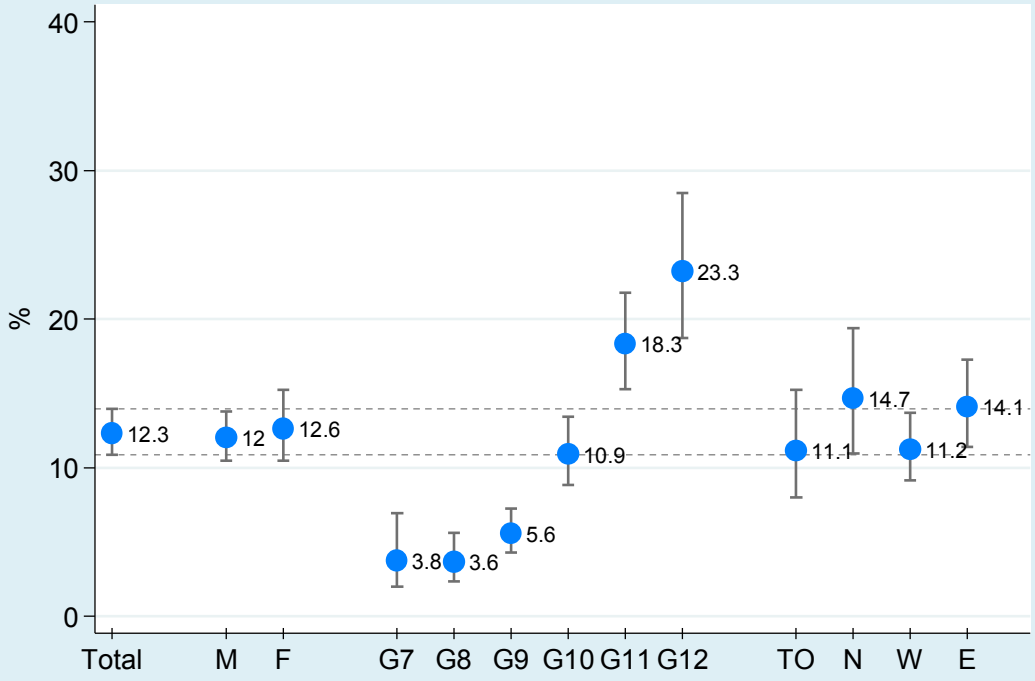
- The percentage of students who report riding in a vehicle with a driver who been using drugs did not significantly change between 2013 (13.8%) and 2015 (12.3%). However, the current estimate is significantly lower than the estimate found in 2003 (22.9%), when monitoring first began.

Figure 3.10.1
Percentage Reporting Riding in a Vehicle with a Driver Who Had Been Drinking Alcohol (at Least Once in the Past Year) by Sex, Grade, and Region, 2015 OSDUHS



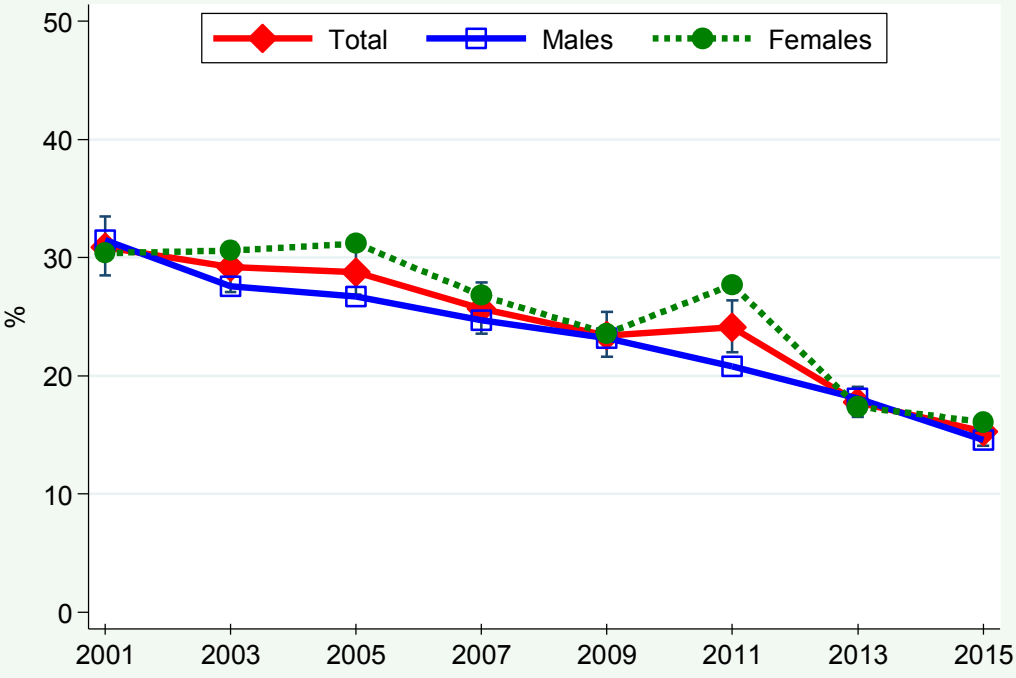
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.10.2
Percentage Reporting Riding in a Vehicle with a Driver Who Had Been Using Drugs (at Least Once in the Past Year) by Sex, Grade, and Region, 2015 OSDUHS



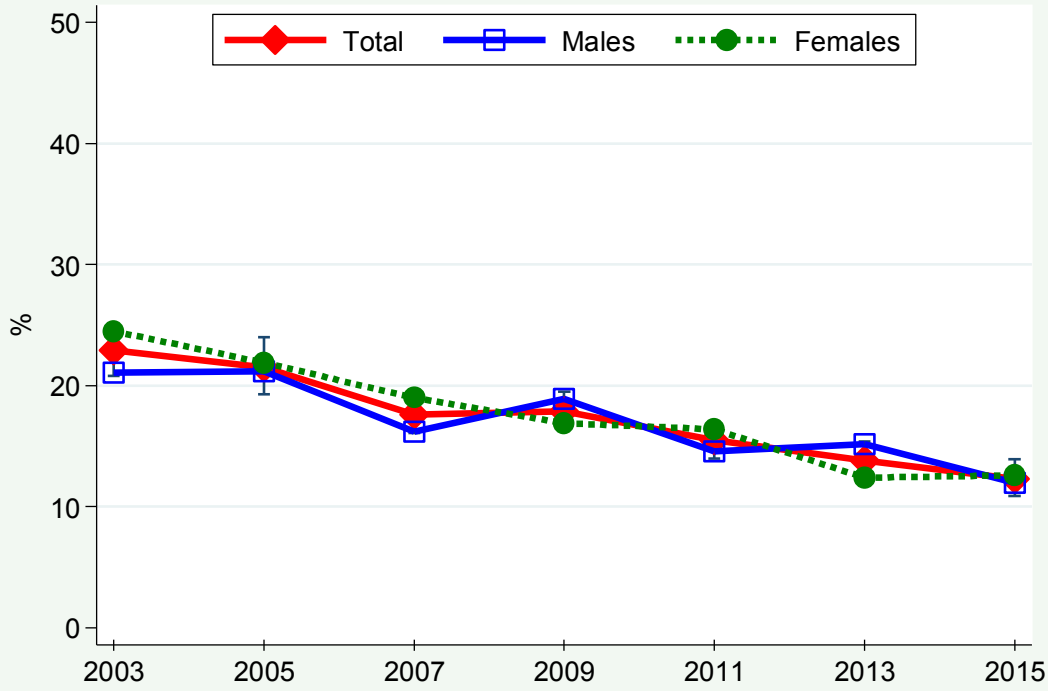
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.10.3
Percentage Reporting Riding in a Vehicle with a Driver Who Had Been Drinking Alcohol, by Sex, 2001–2015 OSDUHS



Note: error bars represent 95% confidence intervals for the total estimates

Figure 3.10.4
Percentage Reporting Riding in a Vehicle with a Driver Who Had Been Using Drugs, by Sex, 2003–2015 OSDUHS



Note: error bars represent 95% confidence intervals for the total estimates

Table 3.10.1: Percentage Reporting Riding in a Vehicle in the Past Year with a Driver Who Had Been Drinking Alcohol, 2001–2015 OSDUHS (Grades 7–12)

	2001	2003	2005	2007	2009	2011	2013	2015	
(*n*=)	(1837)	(3152)	(3648)	(2935)	(4261)	(9288)	(10272)	(10426)	
Total	**30.9**	**29.2**	**28.8**	**25.7**	**23.4**	**24.1**	**17.8**	**15.3**	[abc]
(95% CI)	(28.5-33.5)	(27.1-31.3)	(26.9-30.8)	(23.6-27.9)	(21.6-25.4)	(22.0-26.4)	(16.5-19.1)	(14.1-16.7)	
Sex									
Males	**31.5**	**27.6**	**26.7**	**24.7**	**23.2**	**20.8**	**18.1**	**14.6**	[ab]
	(28.2-34.9)	(25.0-30.5)	(24.3-29.2)	(22.2-27.5)	(20.5-26.2)	(18.7-23.2)	(16.3-20.0)	(13.1-16.3)	
Females	**30.4**	**30.6**	**31.2**	**26.8**	**23.6**	**27.7**	**17.4**	**16.1**	[b]
	(26.7-34.3)	(27.7-33.6)	(28.5-33.9)	(23.9-29.9)	(21.1-26.3)	(23.6-32.2)	(15.8-19.2)	(14.3-18.0)	
Grade									
7	**17.5**	**21.2**	**17.7**	**14.0**	**10.0**	**10.7**	**10.4**	**10.2**	
	(12.9-23.4)	(16.6-26.8)	(14.1-22.0)	(10.8-18.0)	(6.6-14.8)	(8.7-13.2)	(8.3-12.8)	(7.4-13.9)	
8	**23.2**	**25.2**	**19.9**	**17.3**	**14.8**	**18.6**	**10.7**	**10.2**	[b]
	(16.5-31.5)	(21.1-29.8)	(16.7-23.5)	(13.9-21.4)	(11.4-19.2)	(14.5-23.4)	(8.4-13.6)	(8.2-12.6)	
9	**31.5**	**24.0**	**27.3**	**22.0**	**23.3**	**23.8**	**16.3**	**14.2**	[b]
	(25.1-38.6)	(20.1-28.4)	(23.2-31.9)	(18.4-26.0)	(18.9-28.3)	(20.3-27.8)	(13.5-19.5)	(11.7-17.1)	
10	**36.0**	**30.2**	**28.9**	**24.9**	**23.0**	**24.7**	**19.9**	**15.7**	[b]
	(30.8-41.7)	(25.5-35.4)	(24.5-33.7)	(21.2-29.0)	(19.4-27.0)	(21.8-27.9)	(17.0-23.2)	(13.5-18.3)	
11	**40.0**	**38.3**	**36.5**	**33.1**	**26.5**	**26.8**	**20.6**	**17.8**	[b]
	(33.4-46.9)	(33.9-42.8)	(31.9-41.2)	(29.0-37.4)	(22.0-31.6)	(21.6-32.6)	(18.1-23.4)	(15.3-20.6)	
12	**36.2**	**34.1**	**39.4**	**37.4**	**34.1**	**32.7**	**22.6**	**19.9**	[b]
	(28.9-44.1)	(30.1-38.2)	(34.8-44.3)	(31.8-43.4)	(28.0-40.8)	(29.4-36.3)	(19.9-25.5)	(16.8-23.4)	
Region									
Toronto	**26.1**	**27.1**	**21.3**	**19.9**	**19.1**	**19.9**	**18.1**	**15.3**	[b]
	(19.0-34.6)	(21.6-33.4)	(18.6-24.3)	(14.3-26.9)	(14.4-24.9)	(17.3-22.8)	(14.4-22.5)	(11.8-19.4)	
North	**34.7**	**29.8**	**31.7**	**27.2**	**27.3**	**24.6**	**15.9**	**14.8**	[b]
	(30.9-38.8)	(26.0-33.8)	(26.7-37.2)	(22.8-32.1)	(21.7-33.6)	(22.8-26.5)	(13.1-19.2)	(11.2-19.3)	
West	**32.8**	**32.5**	**30.0**	**27.9**	**23.9**	**25.1**	**17.7**	**15.2**	[b]
	(29.2-36.5)	(29.4-35.6)	(26.9-33.3)	(25.3-30.6)	(20.8-27.2)	(21.2-29.6)	(15.8-19.7)	(13.4-17.2)	
East	**30.2**	**25.1**	**31.2**	**25.6**	**24.5**	**24.8**	**18.1**	**15.6**	[b]
	(26.5-34.2)	(21.6-28.9)	(27.6-35.1)	(21.4-30.4)	(22.0-27.2)	(22.4-27.4)	(16.4-19.9)	(13.5-17.9)	

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in each year between 2001 and 2009; (3) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 2001 significant difference, p<.01; [c] significant linear trend, p<.01.
Q: How often in the last 12 months did you ride in a car or other vehicle driven by someone who had been drinking alcohol?
Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.10.2: Percentage Reporting Riding in a Vehicle in the Past Year with a Driver Who Had Been Using Drugs, 2003–2015 OSDUHS (Grades 7–12)

(*n*=)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (9288)	2013 (10272)	2015 (10426)	
Total	**22.9**	**21.5**	**17.6**	**17.9**	**15.5**	**13.8**	**12.3**	[bc]
(95% CI)	(20.8-25.0)	(19.3-24.0)	(16.1-19.2)	(16.4-19.5)	(14.0-17.0)	(12.4-15.4)	(10.9-13.9)	
Sex								
Males	**21.1** (18.3-24.1)	**21.2** (18.3-24.5)	**16.2** (14.2-18.2)	**18.9** (16.4-21.6)	**14.6** (12.9-16.5)	**15.2** (13.0-17.7)	**12.0** (10.5-13.8)	[b]
Females	**24.5** (21.8-27.3)	**21.9** (19.3-24.7)	**19.0** (16.8-21.4)	**16.9** (14.9-19.1)	**16.4** (14.1-19.0)	**12.4** (11.0-14.0)	**12.6** (10.4-15.2)	[b]
Grade								
7	**9.4** (6.1-14.1)	**6.1** (3.6-10.0)	**2.8** (1.6-4.9)	**1.5** (0.9-2.5)	**2.2** (1.2-3.7)	**1.7** (1.0-2.8)	**3.8** (2.0-6.9)	
8	**11.1** (8.0-15.3)	**9.2** (6.3-13.2)	**5.6** (3.5-9.1)	**5.1** (3.5-7.5)	**4.4** (3.2-6.1)	**5.5** (3.7-8.1)	**3.6** (2.4-5.6)	[b]
9	**17.4** (14.0-21.3)	**15.2** (11.8-19.2)	**13.9** (10.6-18.1)	**10.0** (7.9-12.7)	**9.0** (6.3-12.6)	**7.0** (5.2-9.4)	**5.6** (4.3-7.2)	[b]
10	**23.3** (19.0-28.3)	**23.6** (20.0-27.7)	**17.9** (14.8-21.6)	**16.7** (13.6-20.4)	**14.8** (11.7-18.5)	**13.2** (11.0-15.8)	**10.9** (8.8-13.4)	[b]
11	**33.8** (28.7-39.3)	**34.7** (31.2-38.3)	**25.0** (21.6-28.7)	**25.9** (20.2-32.6)	**21.4** (18.8-24.2)	**18.2** (15.5-21.2)	**18.3** (15.3-21.8)	[b]
12	**37.0** (31.4-43.0)	**38.0** (33.7-42.5)	**34.0** (29.3-39.1)	**37.1** (23.8-41.6)	**30.4** (26.4-34.7)	**26.3** (22.9-29.9)	**23.3** (18.7-28.5)	[b]
Region								
Toronto	**20.7** (17.0-25.0)	**15.3** (11.6-20.0)	**12.0** (9.4-15.1)	**12.7** (9.9-16.3)	**11.2** (9.0-13.8)	**9.9** (6.8-14.2)	**11.1** (8.0-15.2)	[b]
North	**27.0** (21.7-33.2)	**27.2** (23.6-31.3)	**22.3** (18.1-27.2)	**22.2** (16.8-28.8)	**20.6** (17.8-23.8)	**15.6** (12.9-18.7)	**14.7** (10.9-19.4)	[b]
West	**22.7** (19.9-25.8)	**23.6** (20.5-27.0)	**19.0** (16.5-21.7)	**18.4** (16.1-21.0)	**16.5** (13.8-19.4)	**13.4** (11.1-16.0)	**11.2** (9.1-13.7)	[b]
East	**23.2** (18.9-28.0)	**20.9** (16.6-26.1)	**17.7** (15.3-20.4)	**18.9** (16.3-21.8)	**15.6** (13.5-17.9)	**16.6** (14.7-18.7)	**14.1** (11.4-17.3)	[b]

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in each year between 2003 and 2009; (3) no significant differences 2015 vs. 2013; [b] 2013 vs. 2003 significant difference, p<.01; [c] significant linear trend, p<.01.

Q: How often in the last 12 months did you ride in a car or other vehicle driven by someone who had been using drugs (other than alcohol)?

Source: OSDUHS, Centre for Addiction & Mental Health

Driving a Motor Vehicle After Drinking Alcohol

(Figures 3.10.5, 3.10.6; Table 3.10.3)

2015: Drivers in Grades 10–12

- In 2015, 5.1% of drivers (with a G-Class licence) in grades 10 through 12 drove within an hour of consuming *two or more* alcoholic drinks at least once during the past 12 months. With the sampling error, we estimate that between 3.7% and 6.8% of adolescent drivers in Ontario drove after drinking alcohol. The estimate of 5.1% represents about 15,300 drivers in grades 10, 11, and 12.

- Male drivers (6.4%) are significantly more likely than female drivers (3.4%) to drink and drive.

- There are no significant grade differences.

- There are no significant regional differences.

1999–2015: Drivers in Grades 10–12

- There was no significant change in drinking and driving among adolescent drivers between 2013 (4.0%) and 2015 (5.1%). The estimate had been stable between 1999 and 2009, significantly decreased in 2011 and again in 2013, and remains stable in 2015.

- Among the subgroups, no group shows a significant change between 2013 and 2015. However, all subgroups do show significant decreases over the past decade or so.

1977–2015: Drivers in Grade 11 only

- Figure 3.10.6 shows trends in drinking and driving among grade 11 licensed drivers (including graduated licences). Drinking and driving has significantly declined over the long-term among 11th graders, especially since the late 1970s when monitoring first began.

Figure 3.10.5
Percentage of Drivers in Grades 10–12 Reporting Drinking and Driving at Least Once in the Past Year, 1999–2015 OSDUHS

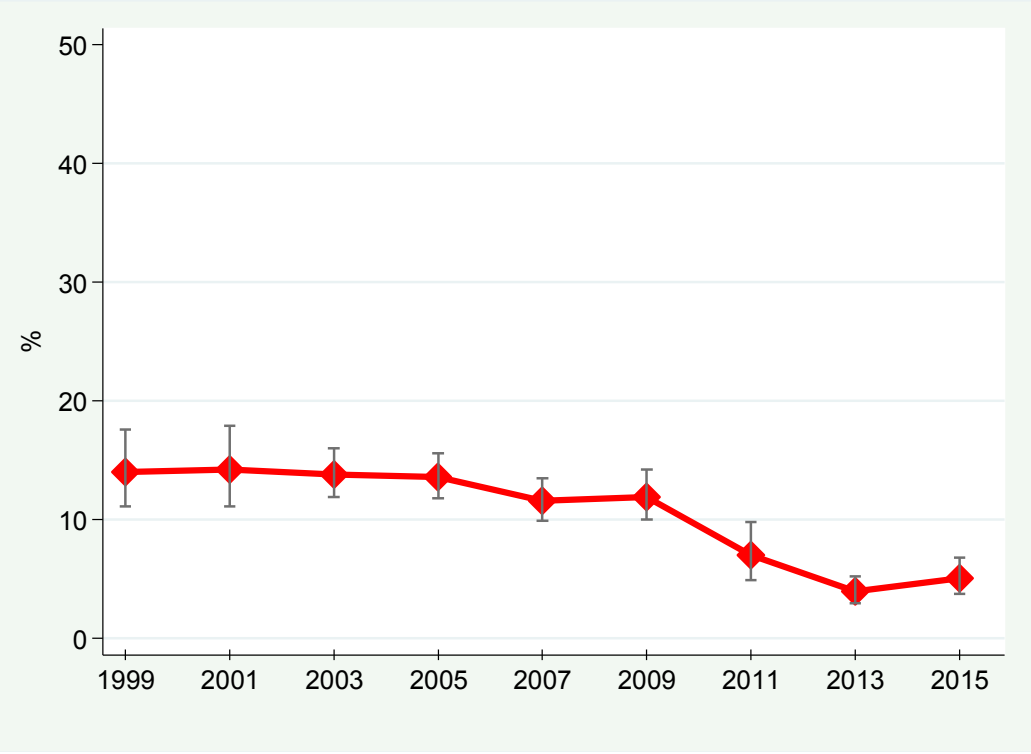


Figure 3.10.6
Percentage of 11th-Grade Drivers Reporting Drinking and Driving in the Past Year, 1977–2015 OSDUHS

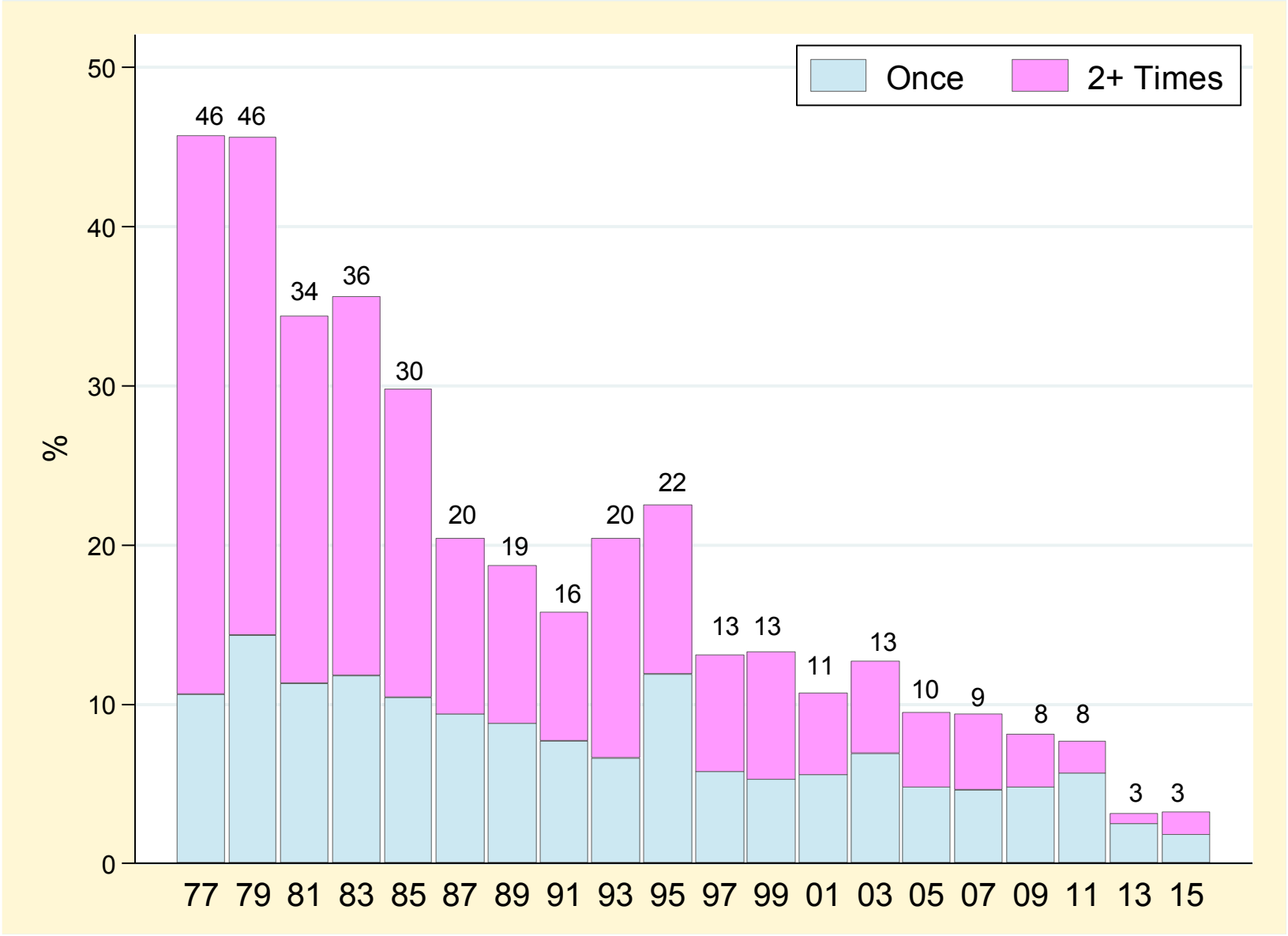


Table 3.10.3: Percentage of Drivers in Grades 10–12 Reporting Drinking and Driving at Least Once in the Past Year, 1999–2015 OSDUHS

	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(*n*=)	(1009)	(847)	(1973)	(2280)	(1897)	(2219)	(2486)	(2433)	(2443)	
Total	**14.0**	**14.2**	**13.8**	**13.6**	**11.6**	**11.9**	**7.0**	**4.0**	**5.1**	bcd
(95% CI)	(11.1-17.6)	(11.1-17.9)	(11.9-16.0)	(11.8-15.6)	(9.9-13.5)	(10.0-14.2)	(4.9-9.8)	(3.0-5.2)	(3.7-6.8)	
Sex										
Males	**17.6**	**19.0**	**19.5**	**17.7**	**14.1**	**14.9**	**7.8**	**4.6**	**6.4**	b
	(14.0-21.8)	(14.2-25.1)	(16.5-22.9)	(15.0-20.7)	(11.5-17.2)	(12.3-18.0)	(5.8-10.6)	(3.2-6.7)	(4.6-8.9)	
Females	**9.8**	**7.4**	**7.8**	**8.5**	**8.4**	**8.3**	†	**3.1**	**3.4**	b
	(6.4-14.7)	(4.6-11.8)	(6.0-10.0)	(6.7-10.7)	(6.5-10.9)	(6.3-10.7)		(2.1-4.6)	(2.2-5.2)	
Grade										
10	**8.1**	**9.8**	**9.8**	**7.6**	**9.0**	**3.8**	†	†	†	b
	(4.0-15.5)	(4.4-20.6)	(6.1-15.4)	(4.2-13.3)	(5.0-15.8)	(1.7-8.2)				
11	**13.4**	**10.7**	**12.7**	**9.5**	**9.3**	**8.1**	**7.8**	**3.1**	**3.2**	b
	(9.1-19.4)	(8.0-14.2)	(10.3-15.6)	(7.3-12.4)	(6.9-12.6)	(5.4-12.0)	(2.9-19.4)	(1.7-5.6)	(2.1-5.0)	
12	**16.3**	**20.9**	**16.2**	**17.4**	**13.4**	**15.1**	**7.0**	**4.9**	**6.2**	b
	(11.4-22.8)	(15.4-27.7)	(13.1-19.8)	(14.7-20.6)	(11.2-15.9)	(12.3-18.5)	(5.0-9.8)	(3.4-7.1)	(4.0-9.6)	
Region										
Toronto	**7.3**	**13.2**	**12.4**	**9.8**	**11.0**	**6.5**	†	†	**3.9**	
	(3.0-16.9)	(10.7-16.2)	(8.5-17.9)	(5.7-16.1)	(6.1-19.1)	(2.7-15.1)			(2.3-6.7)	
North	**26.0**	**12.5**	**16.8**	**16.8**	**12.7**	**12.5**	**9.8**	†	†	b
	(17.3-37.2)	(9.0-17.0)	(12.0-23.0)	(12.9-21.5)	(8.4-18.8)	(8.9-17.2)	(5.8-16.1)			
West	**13.6**	**18.5**	**13.9**	**15.6**	**11.7**	**10.8**	†	**4.5**	**5.6**	b
	(9.8-18.6)	(13.1-25.6)	(10.6-18.0)	(12.9-18.7)	(9.1-14.8)	(7.8-14.9)		(2.9-6.8)	(4.0-7.7)	
East	**12.9**	**8.2**	**13.6**	**12.1**	**11.5**	**14.6**	**7.9**	**3.7**	**5.2**	
	(7.7-21.0)	(4.8-13.5)	(11.0-16.7)	(9.1-15.9)	(9.1-14.3)	(11.8-18.0)	(5.5-11.2)	(2.5-5.5)	(2.7-9.9)	

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.
Q: How often in the last 12 months, have you driven a vehicle within an hour of drinking two or more drinks of alcohol?
Source: OSDUHS, Centre for Addiction & Mental Health

Driving a Motor Vehicle After Using Cannabis

(Figures 3.10.7, 3.10.8; Table 3.10.4)

Beginning in 2001, the OSDUHS asked students how often, if at all, they had driven a vehicle within an hour of using cannabis during the past 12 months. We present the percentage of students in grades 10 through 12 with a licence who report doing so at least once in the past 12 months.

2015: Drivers in Grades 10–12

- In 2015, 9.8% of students in grades 10–12 with a driver's licence report driving after using cannabis at least once in the past 12 months. With the sampling error, we estimate that between 8.3% and 11.4% of adolescent drivers in Ontario drove after using cannabis. This estimate represents about 29,500 adolescent drivers in Ontario.

- Male drivers are significantly more likely than female drivers to use cannabis and drive (11.6% vs. 7.6%, respectively).

- There is no significant grade variation in the likelihood of using cannabis and driving.

- Despite some variation, there are no statistically significant regional differences.

2001–2015: Drivers in Grades 10–12

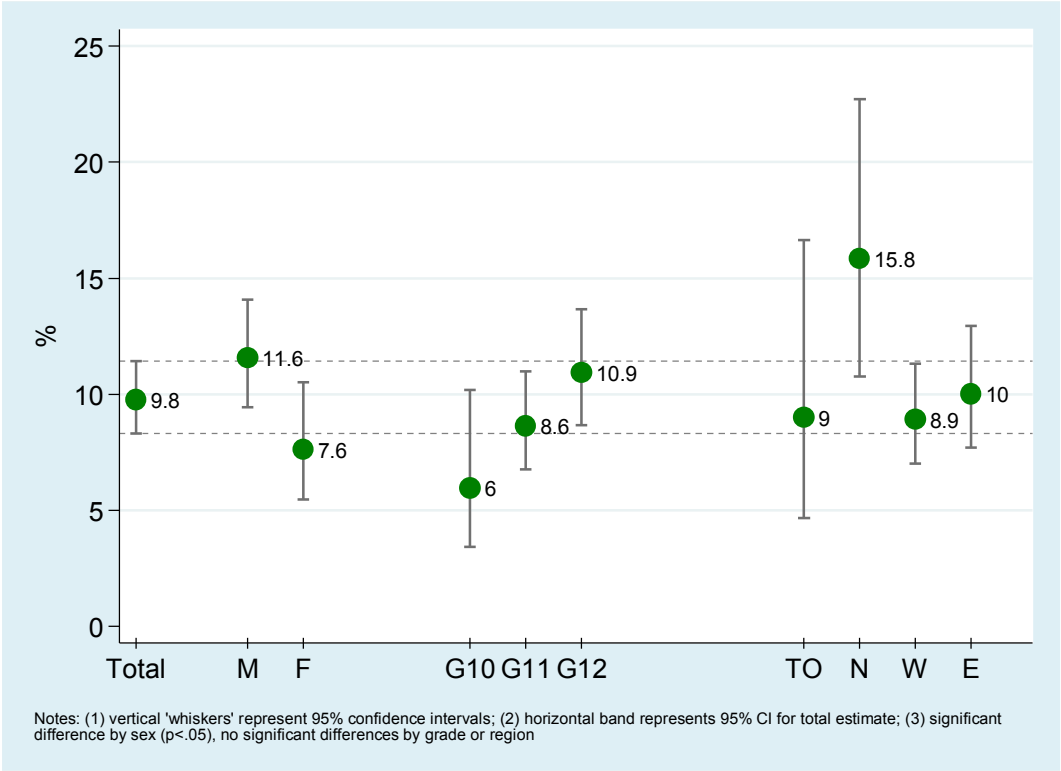
- The 2015 estimate (9.8%) for driving after cannabis use is similar to the 2013 estimate (9.7%). Cannabis use and driving remained stable between 1999 and 2005 (at about 20%) and began to significantly decline thereafter. The 2015 estimate is half that from 2001, the year monitoring first began.

- Both male and female adolescent drivers show significant decreases in cannabis use and driving since 2001 or 2003.

- Grade 10, 11, and 12 students show significant decreases since 2001.

- The West and East regions show decreases since 2001 or 2003.

Figure 3.10.7
Percentage of Drivers in Grades 10–12 Reporting Using Cannabis and Driving at Least Once in the Past Year, by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex (p<.05), no significant differences by grade or region

Figure 3.10.8
Percentage of Drivers in Grades 10–12 Reporting Using Cannabis and Driving at Least Once in the Past Year, 2001–2015 OSDUHS

Table 3.10.4: Percentage of Drivers in Grades 10–12 Reporting Using Cannabis and Driving at Least Once in the Past Year, 2001–2015 OSDUHS

	2001	2003	2005	2007	2009	2011	2013	2015
(*n*=)	(400)	(1973)	(2280)	(1897)	(2219)	(2468)	(2433)	(2443)
Total	**19.9**	**20.1**	**20.0**	**15.5**	**16.6**	**12.4**	**9.7**	**9.8** [bc]
(95% CI)	(14.9-26.0)	(17.3-23.1)	(17.6-22.5)	(13.4-17.9)	(13.8-19.9)	(10.4-14.8)	(7.9-11.9)	(8.3-11.4)
Sex								
Males	**25.3** (17.3-35.5)	**25.6** (21.4-30.2)	**25.2** (22.1-28.7)	**17.9** (15.0-21.2)	**20.8** (16.9-25.4)	**15.3** (12.2-19.0)	**13.0** (10.2-16.3)	**11.6** [b] (9.4-14.1)
Females	**12.6** (8.5-18.4)	**14.1** (11.3-17.6)	**13.4** (10.8-16.4)	**12.7** (9.8-16.4)	**11.4** (8.9-14.6)	**9.0** (6.9-11.7)	**5.8** (4.3-7.8)	**7.6** (5.5-10.5)
Grade								
10	**18.9** (9.6-33.8)	**15.9** (11.3-21.9)	**15.1** (9.7-22.6)	†	**7.8** (4.1-14.4)	†	†	**6.0** [b] (3.4-10.2)
11	**18.9** (12.7-27.3)	**18.0** (14.4-22.3)	**15.4** (12.3-19.1)	**12.8** (10.0-16.3)	**10.8** (8.1-14.3)	**12.3** (8.9-16.7)	**8.0** (5.7-11.3)	**8.6** [b] (6.8-11.0)
12	**21.6** (14.1-31.6)	**23.3** (18.9-28.3)	**23.9** (20.5-27.6)	**18.9** (16.2-21.8)	**21.1** (17.0-25.7)	**13.0** (9.9-16.8)	**11.6** (8.5-15.7)	**10.9** [b] (8.7-13.7)
Region								
Toronto	†	**13.8** (10.0-19.4)	**16.0** (10.8-23.1)	**15.1** (11.0-20.3)	**11.4** (6.1-20.4)	**10.8** (7.4-15.6)	**5.1** (2.6-9.6)	**9.0** (4.7-16.7)
North	**17.5** (10.9-27.1)	**24.7** (16.3-35.6)	**21.6** (17.0-27.0)	**19.0** (12.5-27.7)	**21.1** (13.9-30.6)	**20.2** (15.5-25.9)	**7.2** (3.9-12.8)	**15.8** (10.8-22.7)
West	**23.9** (17.2-32.2)	**21.0** (17.0-25.7)	**24.1** (20.1-28.6)	**14.3** (10.9-18.5)	**17.8** (13.3-23.3)	**12.5** (8.9-17.4)	**9.8** (6.7-14.2)	**8.9** [b] (7.0-11.3)
East	†	**20.3** (15.2-26.6)	**16.3** (12.9-20.3)	**16.7** (13.6-20.3)	**16.0** (11.6-21.7)	**11.5** (9.5-13.9)	**11.7** (9.8-13.9)	**10.0** (7.7-12.9)

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in 2001; (3) no significant differences 2015 vs. 2013; [b] 2015 vs. 2001 significant difference, p<.01; [c] significant linear trend, p<.01.
Q: How often in the last 12 months have you driven a vehicle within an hour of using marijuana or hashish?
Source: OSDUHS, Centre for Addiction & Mental Health

Drug Use Problem (CRAFFT Screener) Among Grades 9–12

(Figure 3.10.9; Tables 3.10.5, 3.10.6)

Starting in 2003, the OSDUHS included the six-item "CRAFFT" screener in order to gauge drug use problems experienced by students (Knight et al., 1999). The six items (shown in Table 3.10.5) pertain to problems stemming from any drug use other than alcohol, including prescription drugs, experienced during the past 12 months. A total score of two or more problems is used as a criterion to identify adolescents with a drug use problem – that is, those who may be in need of further assessment or treatment (α=0.80).

2015: Grades 9–12

- Overall, 16.1% of secondary students report at least two of the six CRAFFT symptoms, and, therefore, meet the criterion for a drug use problem. This percentage represents about 114,600 Ontario students in grades 9–12.

- Males (16.6%) and females (15.5%) are equally likely to meet the criterion for a drug use problem.

- There is significant grade variation. The likelihood of indicating a drug use problem is lowest among 9th graders (6.4%) and highest among 12th graders (23.2%).

- There is no significant regional variation.

2003–2015: Grades 9–12

- The percentage of secondary students who meet the CRAFFT criterion for a drug use problem in 2015 (16.1%) is similar to the percentage from 2013 (16.8%). However, there has been a significant decline over the past decade, from 21.9% in 2003 to 16.1% in 2015, mainly occurring after 2009.

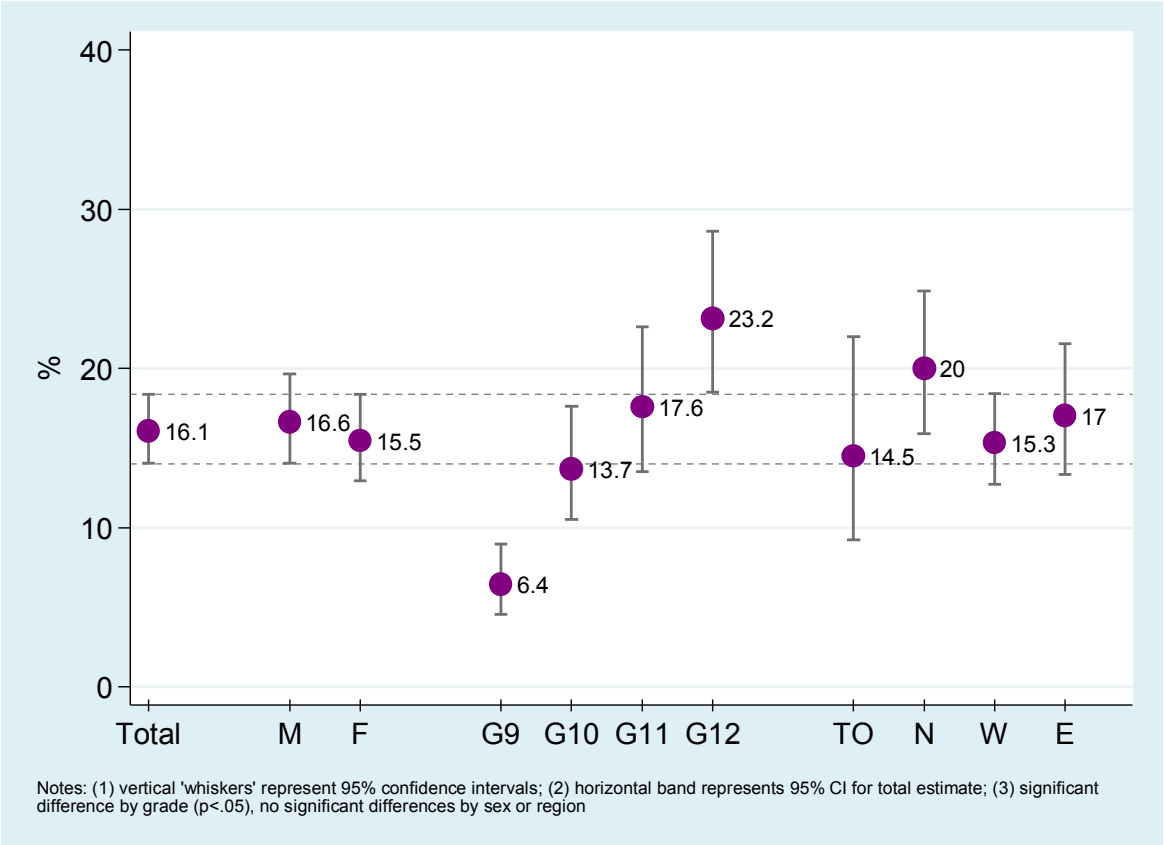
- Among the subgroups, significant declines since 2003 are evident for males, females, 9th graders, 10th graders, and 11th graders.

Table 3.10.5: Percentage Reporting Drug Use Problems Experienced in the Past Year, 2015 OSDUHS (Grades 9–12)

CRAFFT Item	% "yes" among the total sample
"In the last 12 months…."	
1. did you ride in a **c**ar or other vehicle driven by someone who had been using drugs	15.0
2. did you use drugs to **r**elax, feel better about yourself, or fit in?	16.6
3. did you use drugs while you were by yourself (**a**lone)?	12.4
4. did you **f**orget things you did while using drugs?	7.7
5. did your **f**amily or friends tell you that you should cut down on your use of drugs?	5.2
6. did you get into **t**rouble while using drugs?	5.3
% CRAFFT 2+ Score (95% CI)	**16.1** (14.0-18.4)

Notes: (1) those responding "yes" to 2 or more problems on the CRAFFT screener may have a drug use problem that requires treatment; (2) based on a random half sample (*n*=3,426).
Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.10.9
Percentage Indicating a Drug Use Problem (CRAFFT 2+) by Sex, Grade, and Region, 2015 OSDUHS (Grades 9–12)



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant differences by sex or region

Table 3.10.6: Percentage Indicating a Drug Use Problem (CRAFFT 2+), 2003–2015 OSDUHS (Grades 9–12)

(*n*=)	2003 (2455)	2005 (3069)	2007 (2587)	2009 (3055)	2011 (3358)	2013 (3264)	2015 (3426)	
Total	**21.9**	**22.1**	**20.1**	**20.1**	**16.3**	**16.8**	**16.1**	[bc]
(95% CI)	(19.5-24.6)	(19.9-24.5)	(18.1-22.4)	(18.2-22.0)	(13.2-20.0)	(14.5-19.4)	(14.0-18.4)	
Sex								
Males	**23.1** (19.5-27.2)	**23.5** (20.6-26.8)	**20.5** (17.7-23.6)	**22.7** (19.9-25.8)	**17.5** (14.0-21.6)	**19.2** (15.8-23.1)	**16.6** (14.0-19.6)	[b]
Females	**20.9** (18.2-23.8)	**20.6** (18.0-23.4)	**19.8** (17.4-22.4)	**17.3** (15.2-19.7)	**15.1** (12.0-18.8)	**14.3** (11.7-17.3)	**15.5** (12.9-18.4)	[b]
Grade								
9	**14.1** (11.4-17.2)	**13.4** (10.4-17.1)	**14.0** (10.3-18.8)	**11.7** (8.8-15.5)	**7.5** (4.8-11.5)	**7.5** (5.0-11.2)	**6.4** (4.6-9.0)	[b]
10	**20.5** (16.1-25.8)	**21.0** (17.6-24.8)	**18.0** (14.8-21.7)	**18.4** (14.8-22.8)	**15.8** (12.2-20.3)	**13.9** (10.2-18.7)	**13.7** (10.5-17.6)	[b]
11	**27.0** (22.2-32.4)	**25.4** (21.5-29.6)	**23.0** (19.2-27.2)	**19.4** (15.1-24.7)	**18.4** (15.4-21.8)	**18.8** (16.1-22.0)	**17.6** (13.5-22.6)	[b]
12	**26.7** (21.8-32.2)	**28.3** (24.3-32.7)	**24.7** (20.8-29.0)	**28.2** (24.5-32.2)	**21.7** (15.1-30.1)	**24.0** (18.9-30.0)	**23.2** (18.5-28.6)	
Region								
Toronto	**23.3** (19.1-28.1)	**17.8** (13.3-23.4)	**15.2** (9.7-23.2)	**18.3** (14.6-22.7)	**13.8** (10.6-17.7)	**15.9** (8.9-26.6)	**14.5** (9.2-22.0)	
North	**26.3** (20.4-33.1)	**26.1** (21.4-31.5)	**26.0** (20.0-33.0)	**28.0** (22.2-34.6)	**23.0** (17.7-29.3)	**17.1** (13.5-21.4)	**20.0** (15.9-24.9)	
West	**20.7** (17.2-24.8)	**22.8** (18.7-27.6)	**19.3** (16.5-22.4)	**20.3** (17.1-23.9)	**16.0** (10.2-24.2)	**18.8** (15.2-22.9)	**15.3** (12.7-18.4)	
East	**21.7** (16.9-27.3)	**22.4** (19.4-25.6)	**22.2** (18.8-26.0)	**19.3** (16.6-22.4)	**17.0** (14.2-20.1)	**14.8** (12.0-18.1)	**17.0** (13.3-21.6)	

Notes: (1) entries in brackets are 95% confidence intervals; (2) based on a random half sample in each year; (3) no significant differences 2015 vs. 2013; [b] 2015 vs. 2003 significant difference, p<.01; [c] significant linear trend, p<.01.
Source: OSDUHS, Centre for Addiction & Mental Health

Alcohol and Other Drug Treatment Among Grades 9–12

In addition to asking students about alcohol and drug use problems, we surveyed secondary students about their treatment experience. Specifically, the question was: *"Have you been in a treatment program during the last 12 months because of your alcohol or drug use?"*

- In 2015, 0.6% (95% CI: 0.4%-0.9%) of secondary students report that they had received treatment for their alcohol and/or drug use (data not tabled). This estimate represents about 4,200 Ontario students in grades 9 through 12.

- The 2015 estimate (0.6%) of students who report receiving treatment is similar to the 1.2% reported in 2013 (95% CI: 0.6%-2.1%), as well as estimates from previous years (1.1% in 2011; 1.7% in 2009; 1.8% in 2007; and 1.0% in 2005).

Coexisting Alcohol and Mental Health Problems Among Grades 9–12

(Figures 3.10.10, 3.10.11)

In addition to drug use problem indicators, the OSDUHS also contains mental health measures. One of these is the *Kessler 6-Item Psychological Distress Scale* (K6), which is a 6-item screening instrument designed to detect nonspecific psychological distress (symptoms of anxiety and depression) (Kessler et al, 2003). For our present purpose, we examine the percentage of students reporting a moderate-to-serious level of distress as indicated by scoring at least 8 of the maximum 24 on the K6.

Figure 3.10.10 displays the percentage of all students in grades 9 through 12 who report hazardous/harmful drinking according to the AUDIT (those scoring 8 or higher); the percentage reporting moderate-to-serious psychological distress according to the K6; and the percentage reporting both problems.

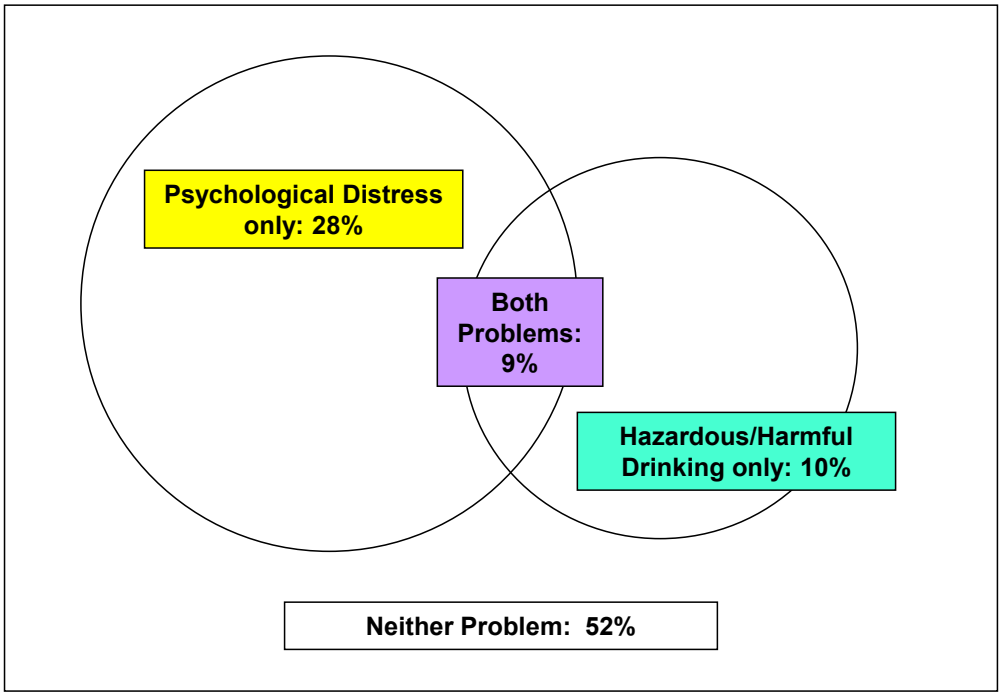
- As seen in Figure 3.10.11, 9.5% (95% CI: 8.0%-11.3%) of secondary students indicate both hazardous/harmful drinking and psychological distress. This estimate represents about 65,400 students in grades 9–12 in Ontario.

- Females are significantly more likely than males to report these two coexisting problems (13.5% vs. 5.7%, respectively).

- Coexisting problems significantly increase with grade, up to a high of about 12%-13% among 11th and 12th graders.

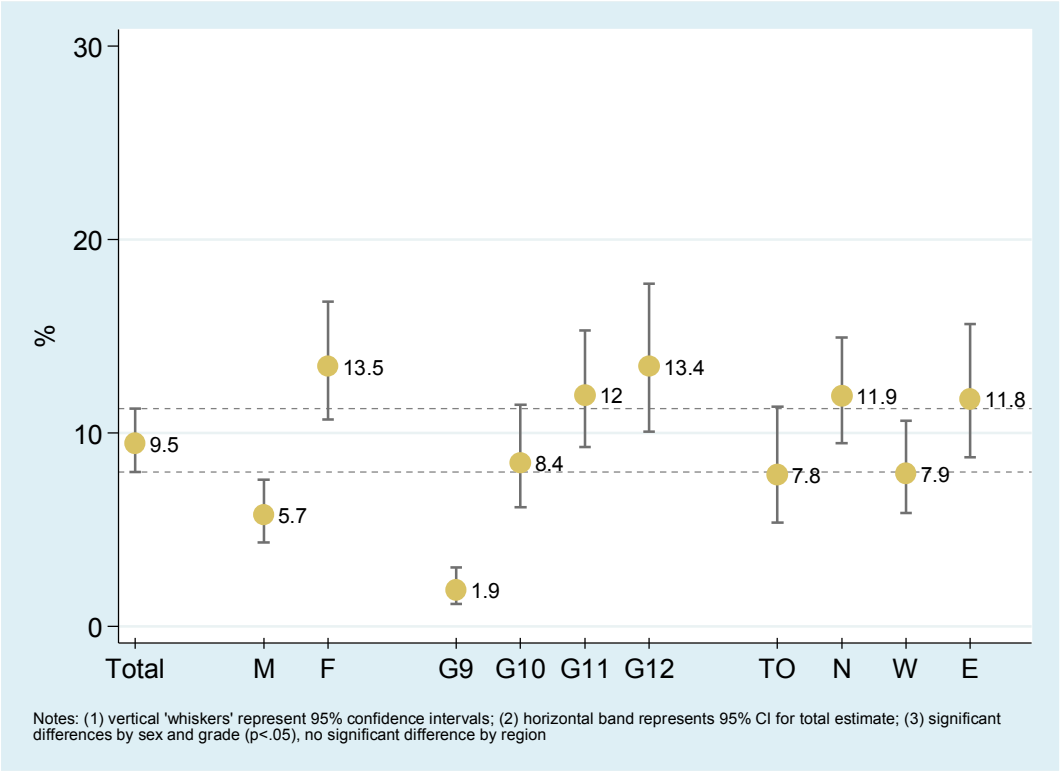
- There are no significant regional differences.

Figure 3.10.10
Coexisting Problems: Hazardous/Harmful Drinking (AUDIT) and Psychological Distress (K6), 2015 OSDUHS (Grades 9–12)



Based on a random half sample of secondary students (n=3426)

Figure 3.10.11
Percentage Reporting Coexisting Hazardous/Harmful Drinking and Psychological Distress by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by sex and grade (p<.05), no significant difference by region

3.11 Attitudes and Perceptions

Perceived Risk and Disapproval

(Figures 3.11.1–3.11.6; Tables 3.11.1, 3.11.2)

Research has shown that drug-related attitudes and beliefs correlate strongly with drug using behaviour (Bachman et al., 2014; Miech et al. 2015). Because the OSDUHS is a cross-sectional study, we cannot necessarily attribute attitudes and beliefs as causal factors in the changing rates of drug use. We can, however, examine the extent to which beliefs and drug use co-vary over time.

In Figure 3.11.1 and Table 3.11.1, we present the percentage of students who believe there is a "great risk" that people will harm themselves if they used various drugs. In Figure 3.11.2 and Table 3.11.2, we present the percentage who "strongly disapprove" of people aged 18 and older using particular drugs. The risk and disapproval questions regarding cocaine and ecstasy were asked of 9th to 12th graders only.

2015: Perceived Risk

- Students in grades 7 and 8 believe that the greatest risk of harm is associated with regular marijuana use, followed by using a prescription opioid nonmedically (NM), whereas the least risk is associated with electronic cigarette use. Students in grades 9–12 believe the greatest risk is associated with NM prescription opioid use, followed by trying cocaine, whereas the least risk is associated with electronic cigarettes and trying marijuana.

- Perceptions of risk significantly increase with grade regarding daily smoking, NM use of a prescription opioid, trying cocaine, and trying ecstasy, but *decrease with grade* regarding marijuana use (trying and regular use) and binge drinking. No grade variation was evident for risk associated with regular waterpipe smoking, or regular electronic cigarette use.

2015: Disapproval

- A majority of students in grades 7 and 8 strongly disapprove of someone using marijuana regularly and trying marijuana. A majority of students in grades 9-12 strongly disapprove of someone trying ecstasy and cocaine.

- Disapproval of marijuana use (trying and regular use) and binge drinking significantly decrease as grade increases. There is no grade variation in the disapproval of trying cocaine or ecstasy.

1999–2015

- The perceived risk associated with **marijuana** use (trying and regular use) among the total sample of grades 7–12 remained stable between 1999 and 2011, and subsequently decreased. However, the percentage strongly disapproving of regular marijuana use has increased since 1999.

- The percentage of students in grades 7–12 who perceive there is great risk associated with **daily smoking** shows a gradual increase since 2003, the first year of monitoring.

- The percentage of students in grades 7–12 who perceive a great risk associated with regular **waterpipe** use significantly decreased between 2013 and 2015.

- Among grades 7–12, there has been no significant change regarding perceived risk associated with **binge drinking** on weekends. However, disapproval of binge drinking is significantly lower in 2015 compared with 2007, the first year of monitoring.

- Among grades 9–12, the perception of great risk of harm associated with trying **cocaine** significantly increased between 1999 and 2009,

and subsequently decreased. However, the current estimate remains higher than that seen in 1999. There has been a slight increase between 1999/2001 and 2015 in the percentage who strongly disapprove of trying cocaine.

☐ Among grades 9–12, the perception of great risk associated with trying **ecstasy** significantly increased between 2001 (the first year of monitoring) and 2009, and has subsequently decreased. The percentage strongly disapproving of trying ecstasy remains higher in 2015 compared with 2001.

1989–2015

☐ Over the long-term, perceptions of great risk associated with trying marijuana was highest in the late 1980s/early 1990s, remained stable during the 1990s and 2000s, and has decreased in recent years.

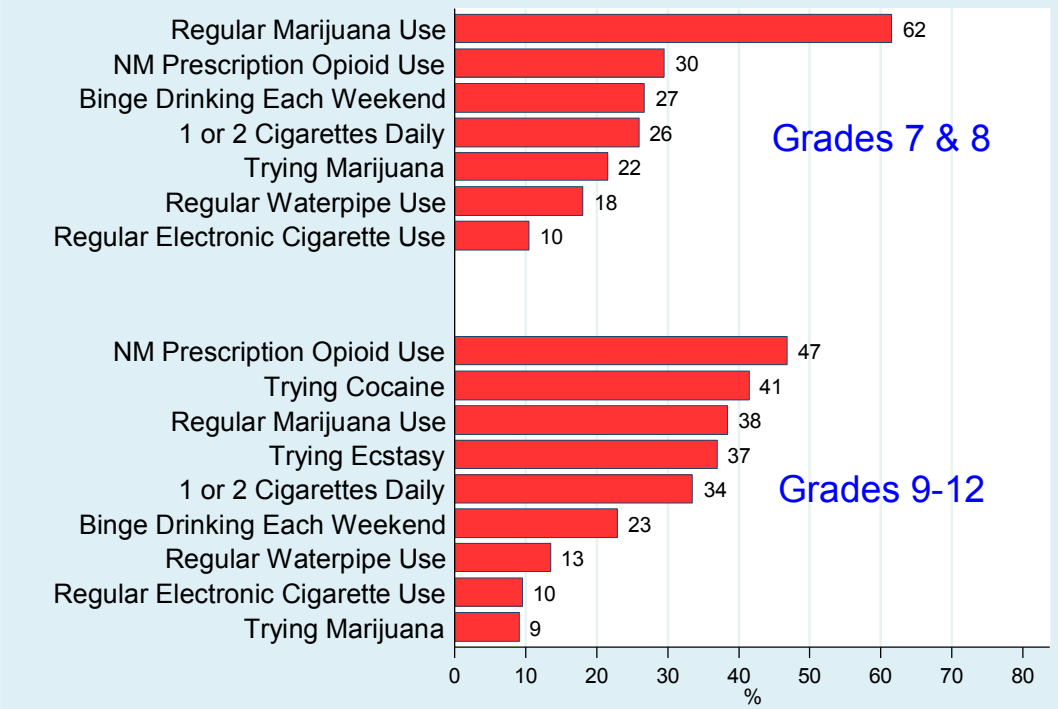
☐ Perceived risk of regular marijuana use decreased between 1989 and 2001, increased up until 2009, and then decreased again in recent years.

☐ Perceived risk of trying cocaine was lowest in 2001, gradually increased until 2009, and decreased again in recent years.

☐ Over the long-term, the disapproval of marijuana use (trying and regular use) was highest in the late 1980s/early 1990s, decreased during the 1990s, increased during the 2000s, and decreased again in recent years.

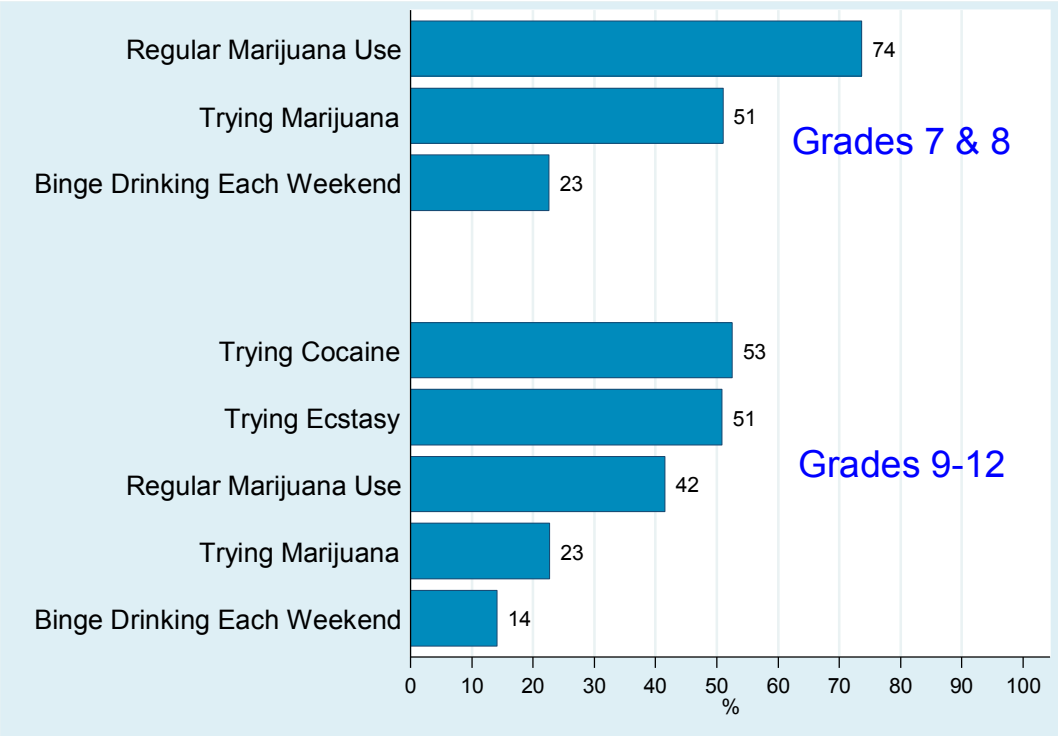
☐ Disapproval of trying cocaine was lowest in 1999/2001 and has since gradually increased.

Figure 3.11.1
Percentage Who Perceive “Great Risk” of Harm Associated with Drug Use, by Grade Level, 2015 OSDUHS



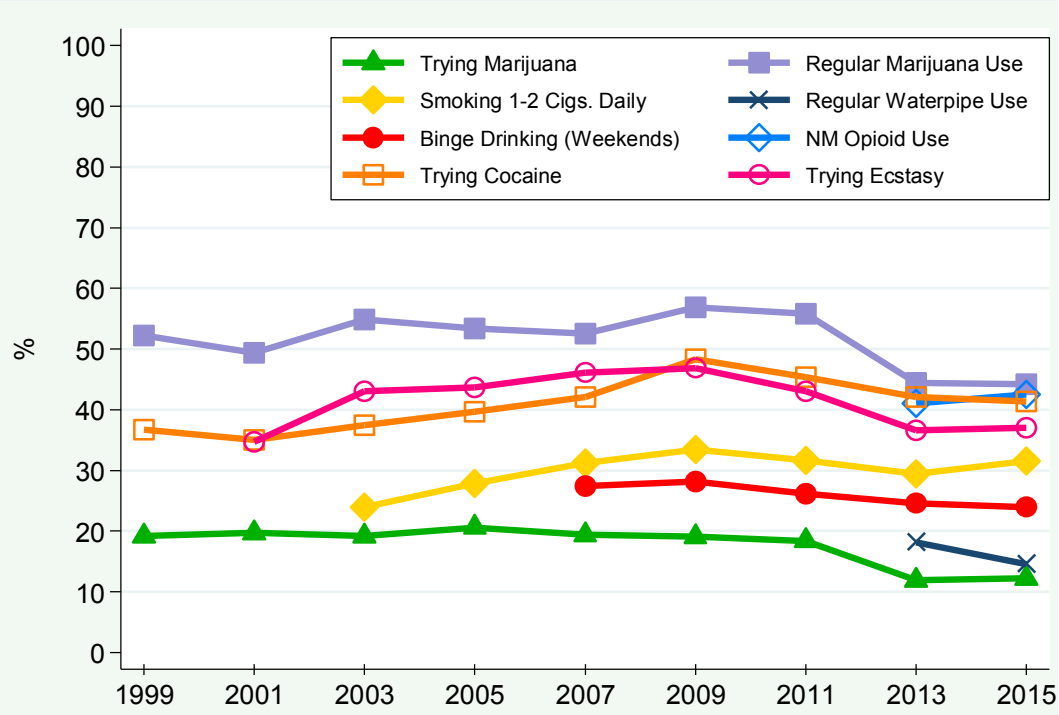
Notes: (1) NM=nonmedical use, without one's own prescription; (2) Binge Drinking=5+ drinks of alcohol on one occasion; (3) Grade 7 and 8 students were not asked about trying cocaine or trying ecstasy

Figure 3.11.2
Percentage Who “Strongly Disapprove” of Drug Use, by Grade Level, 2015 OSDUHS



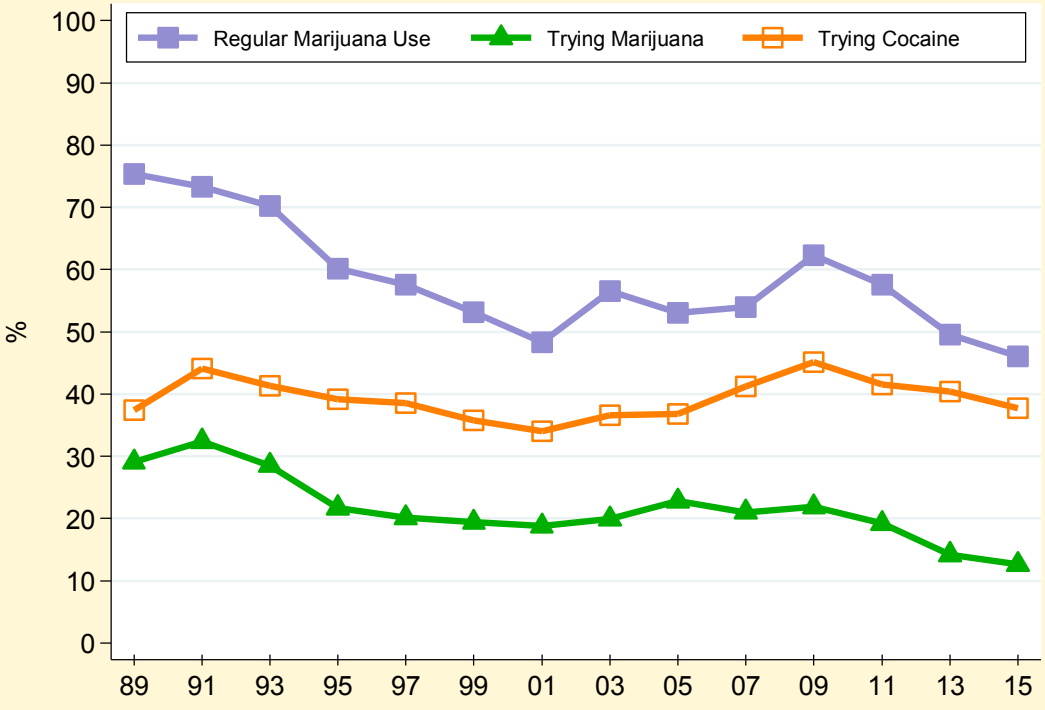
Notes: (1) Binge Drinking=5+ drinks of alcohol on one occasion; (2) Grade 7 and 8 students were not asked about trying cocaine or trying ecstasy

Figure 3.11.3
Percentage Who Perceive “Great Risk” of Harm Associated with Drug Use, 1999–2015 OSDUHS (Grades 7–12)



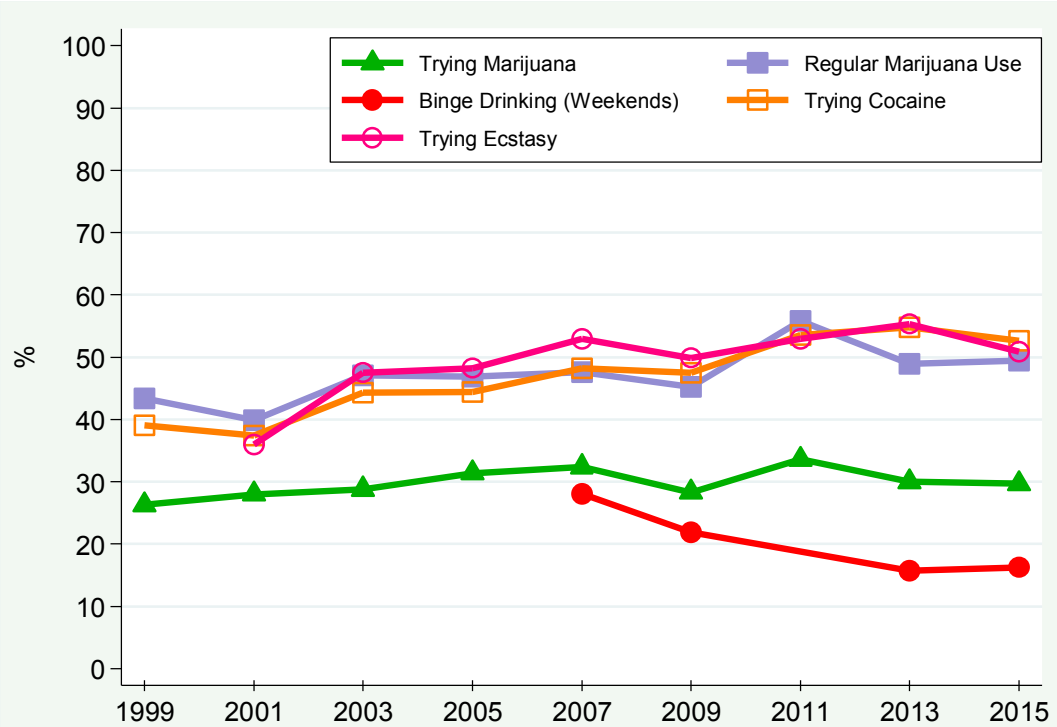
Notes: (1) Binge Drinking=5+ drinks of alcohol on one occasion; (2) NM=nonmedical; (3) Grade 7 and 8 students were not asked about trying cocaine or ecstasy

Figure 3.11.4
Percentage Who Perceive “Great Risk” of Harm Associated with Drug Use, 1989–2015 OSDUHS (Grades 7, 9, and 11 only)



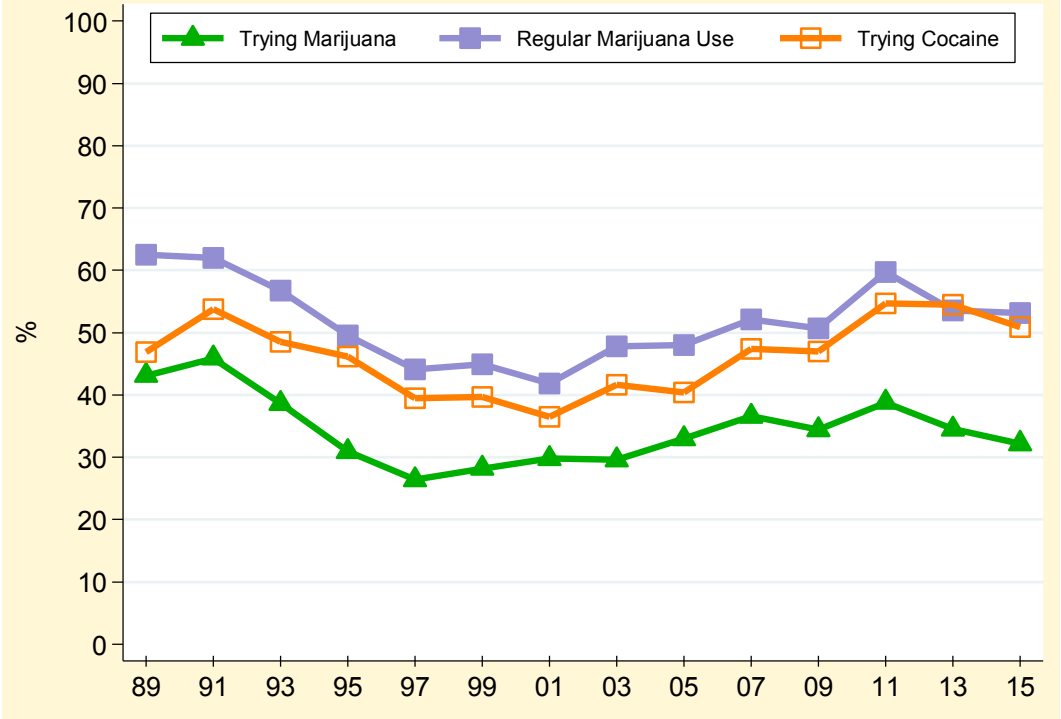
Note: Grade 7 students were not asked about trying cocaine

Figure 3.11.5
Percentage Who “Strongly Disapprove” of Drug Use, 1999–2015 OSDUHS
(Grades 7–12)



Notes: (1) Grade 7 and 8 students were not asked about trying cocaine or trying ecstasy; (2) Binge drinking not asked about in 2011

Figure 3.11.6
Percentage Who “Strongly Disapprove” of Drug Use, 1989–2015 OSDUHS
(Grades 7, 9, and 11 only)



Note: Grade 7 students were not asked about trying cocaine

Table 3.11.1: Percentage Who Perceive "Great Risk" of Harm Associated with Drug Use, by Grade, 1989–2015 OSDUHS

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
AMONG GRADES 7–12															
(n^1)						(4447)	(1837)	(3152)	(3648)	(2935)	(4262)	(4472)	(4974)	(5023)	
(n^2)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)	
Great Risk in Trying Marijuana Once or Twice															
Total [1]	—	—	—	—	—	**19.2**	**19.7**	**19.2**	**20.6**	**19.4**	**19.1**	**18.4**	**11.9**	**12.2**	bcd
Total [2]	**29.1**	**32.4**	**28.5**	**21.7**	**20.1**	**19.4**	**18.8**	**19.9**	**22.8**	**21.0**	**21.9**	**19.2**	**14.2**	**12.6**	cd
Grade 7	39.3	37.0	35.3	34.1	33.4	28.4	27.0	30.8	32.7	29.7	34.6	27.7	26.0	20.7	
Grade 8	—	—	—	—	—	27.7	30.5	29.4	24.7	27.0	27.1	24.8	13.9	22.3	
Grade 9	29.4	35.4	29.6	21.4	17.6	16.6	18.5	18.8	21.8	20.0	19.7	16.0	12.8	12.2	
Grade 10	—	—	—	—	—	13.9	16.6	13.3	18.9	14.6	17.4	19.1	12.2	10.7	
Grade 11	18.0	25.2	21.8	11.6	11.6	15.2	11.1	12.4	14.9	14.0	14.2	15.7	7.5	7.4	b
Grade 12	—	—	—	—	—	13.8	16.0	14.6	12.9	14.2	9.6	12.4	6.1	7.0	b
Great Risk in Smoking Marijuana Regularly															
Total [1]	—	—	—	—	—	**52.2**	**49.4**	**54.9**	**53.4**	**52.5**	**56.9**	**55.8**	**44.4**	**44.2**	bd
Total [2]	**75.4**	**73.3**	**70.2**	**60.1**	**57.6**	**53.2**	**48.3**	**56.5**	**53.0**	**54.0**	**62.3**	**57.6**	**49.6**	**46.0**	cd
Grade 7	72.3	72.0	69.9	67.6	65.9	63.6	61.1	69.4	59.2	61.9	74.0	67.0	68.0	61.2	
Grade 8	—	—	—	—	—	60.2	58.7	66.8	59.5	59.8	67.0	63.8	54.5	62.0	
Grade 9	78.8	74.0	73.7	64.1	59.4	53.1	47.8	55.4	53.6	55.7	64.5	61.0	51.1	50.3	
Grade 10	—	—	—	—	—	45.5	48.2	48.4	54.9	50.6	52.4	52.3	39.0	44.3	
Grade 11	74.6	73.8	66.9	50.0	49.2	44.9	36.8	47.4	46.8	45.3	51.5	46.8	35.8	31.8	b
Grade 12	—	—	—	—	—	45.2	44.4	46.8	47.8	45.2	42.3	50.1	32.8	31.3	b
Great Risk in Smoking 1 or 2 Tobacco Cigarettes Daily															
Total [1]	—	—	—	—	—	—	—	**24.0**	**27.9**	**31.2**	**33.4**	**31.7**	**29.4**	**31.6**	bcd
Grade 7								20.4	23.2	24.0	30.3	24.7	24.0	20.5	
Grade 8								21.4	19.6	28.3	26.2	25.6	19.6	31.1	a
Grade 9								22.5	28.0	28.9	35.4	25.5	29.5	31.3	b
Grade 10								23.8	31.4	31.6	33.8	35.2	32.5	30.2	
Grade 11								26.0	28.8	34.5	35.7	32.8	29.6	32.2	
Grade 12								29.2	34.6	37.4	36.2	40.5	34.7	38.4	b

(cont'd)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Great Risk in Having 5 Drinks of Alcohol (Binge Drinking) Once or Twice Each Weekend														
Total [1]	—	—	—	—	—	—	—	—	—	**27.4**	**28.2**	**26.2**	**24.6**	**23.9**
Grade 7										32.2	31.6	30.3	27.9	24.8
Grade 8										26.4	28.0	30.9	22.0	28.7
Grade 9										27.3	33.1	24.3	28.1	26.6
Grade 10										27.1	28.3	29.5	26.2	27.7
Grade 11										29.8	27.6	25.1	25.3	22.6
Grade 12										23.2	23.1	21.0	20.5	17.2
Great Risk in Taking a Prescription Opioid Pain Reliever* Without a Prescription														
Total [1]	—	—	—	—	—	—	—	—	—	—	—	—	**41.0**	**42.5**
Grade 7													35.6	26.0
Grade 8													33.9	33.0
Grade 9													40.9	41.4
Grade 10													41.3	46.1
Grade 11													43.2	47.6
Grade 12													45.8	50.5
Great Risk in Smoking a Waterpipe (Hookah) Regularly														
Total [1]	—	—	—	—	—	—	—	—	—	—	—	—	**18.2**	**14.6** [a]
Grade 7													21.0	16.8
Grade 8													20.6	19.3
Grade 9													18.9	15.0
Grade 10													19.1	12.5
Grade 11													13.7	9.3
Grade 12													18.0	16.3
Great Risk in Using Electronic Cigarettes Regularly														
Total [1]	—	—	—	—	—	—	—	—	—	—	—	—	—	**9.8**
Grade 7														10.4
Grade 8														10.6
Grade 9														11.1
Grade 10														8.3
Grade 11														7.2
Grade 12														11.0

(cont'd)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
AMONG GRADES 9–12 ONLY															
(n[1])						(2883)	(1179)	(2238)	(2725)	(2247)	(2728)	(3025)	(2895)	(3171)	
(n[2])	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(607)	(1168)	(1409)	(1150)	(1320)	(1536)	(1459)	(1656)	
Great Risk in Trying Cocaine Once or Twice															
Total [1]	—	—	—	—	—	**36.7**	**35.0**	**37.5**	**39.7**	**42.1**	**48.3**	**45.4**	**42.1**	**41.4**	bcd
Total [2]	**37.4**	**44.1**	**41.3**	**39.2**	**38.5**	**35.8**	**34.0**	**36.6**	**36.8**	**41.2**	**45.1**	**41.5**	**40.4**	**37.7**	d
Grade 9	40.7	41.3	37.1	34.8	33.0	27.8	30.0	32.0	34.8	33.0	41.1	34.7	36.7	31.7	
Grade 10	—	—	—	—	—	35.4	34.3	33.7	37.6	38.2	48.8	41.8	38.9	43.8	
Grade 11	33.2	46.8	45.6	43.6	43.8	45.1	38.8	41.2	38.8	49.4	48.7	48.4	43.7	43.2	
Grade 12	—	—	—	—	—	40.8	40.2	44.0	46.6	46.9	52.9	53.4	46.8	45.2	
Great Risk in Trying Ecstasy Once or Twice															
Total [1]	—	—	—	—	—	—	**34.7**	**43.0**	**43.7**	**46.1**	**46.9**	**43.0**	**36.6**	**37.0**	d
Grade 9							31.7	38.7	39.7	40.4	40.7	35.1	29.1	29.7	
Grade 10							31.3	43.5	42.9	42.0	45.5	40.6	36.4	39.9	
Grade 11							39.4	43.4	42.8	51.2	45.8	42.1	37.2	35.9	
Grade 12							39.8	46.9	48.8	50.2	53.2	51.0	41.2	40.6	

Notes: (1) based on all grades (full sample); (2) based on limited grades (long-term sample); (3) based on a random half sample since 2001; (4) * such as Percocet, Percodan, Tylenol #3, Demerol, OxyNEO, OxyContin, or codeine; (5) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 1999 significant difference, p<.01 (vs. 2001 for ecstasy, vs. 2003 for daily smoking); [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: How much do you think people risk harming themselves (physically or in other ways) if they…[behaviour]?

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.11.2: Percentage Who Strongly Disapprove of Drug Use, by Grade, 1989–2015 OSDUHS

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
AMONG GRADES 7–12															
(n^1)						(4447)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4974)	(5023)	
(n^2)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)	
Strongly Disapprove of Trying Marijuana Once or Twice															
Total [1]	—	—	—	—	—	**26.3**	**28.0**	**28.8**	**31.4**	**32.4**	**28.3**	**33.6**	**30.0**	**29.7**	cd
Total [2]	**43.1**	**45.9**	**38.6**	**30.9**	**26.4**	**28.2**	**29.8**	**29.6**	**33.0**	**36.6**	**34.4**	**38.8**	**34.5**	**32.2**	cd
Grade 7	59.1	57.9	48.7	47.6	44.0	44.3	48.2	47.3	49.1	58.1	57.4	58.2	59.9	52.2	
Grade 8	—	—	—	—	—	35.0	38.6	38.6	43.2	46.2	38.6	46.2	44.3	49.9	b
Grade 9	37.9	48.4	39.0	30.5	22.3	25.7	23.7	26.4	28.8	30.5	27.9	38.1	33.6	33.0	
Grade 10	—	—	—	—	—	18.4	19.0	27.5	31.0	28.3	22.2	29.9	27.8	27.0	b
Grade 11	32.8	32.5	30.1	17.7	15.5	18.2	19.4	18.9	22.8	23.8	23.0	24.4	18.4	18.1	
Grade 12	—	—	—	—	—	16.1	22.5	19.0	18.0	16.0	13.6	18.7	15.8	16.2	
Strongly Disapprove of Smoking Marijuana Regularly															
Total [1]	—	—	—	—	—	**43.4**	**39.9**	**47.1**	**46.9**	**47.6**	**45.2**	**55.8**	**48.9**	**49.4**	bcd
Total [2]	**62.5**	**62.0**	**56.8**	**49.6**	**44.1**	**44.9**	**41.8**	**47.8**	**48.0**	**52.1**	**50.7**	**59.7**	**53.6**	**53.0**	cd
Grade 7	73.7	72.1	66.8	65.0	61.3	63.6	64.0	66.6	63.7	72.2	75.1	74.3	76.5	75.5	b
Grade 8	—	—	—	—	—	53.5	53.5	62.3	57.8	61.4	60.4	68.2	62.5	72.0	b
Grade 9	59.5	62.5	54.6	50.5	40.8	43.6	34.3	47.7	45.7	48.8	47.0	63.3	57.8	56.2	b
Grade 10	—	—	—	—	—	35.7	30.6	42.4	44.4	43.8	37.0	54.5	47.6	44.2	
Grade 11	54.6	52.4	50.8	36.4	32.8	31.2	29.8	33.0	36.4	37.8	35.6	44.8	34.5	35.2	
Grade 12	—	—	—	—	—	33.2	30.1	36.8	37.1	30.5	30.2	41.6	33.8	34.5	
Strongly Disapprove of Having 5 Drinks of Alcohol (Binge Drinking) Once or Twice Each Weekend															
Total [1]	—	—	—	—	—	—	—	—	—	**28.1**	**21.9**	—	**15.7**	**16.2**	bc
Grade 7										49.7	36.9	—	29.1	24.5	b
Grade 8										37.1	29.2	—	19.1	20.8	b
Grade 9										26.3	23.8	—	18.7	18.2	b
Grade 10										23.6	18.3	—	13.2	16.1	b
Grade 11										21.6	19.5	—	12.1	12.2	b
Grade 12										16.7	11.7	—	9.9	11.4	

(cont'd)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
AMONG GRADES 9–12 ONLY															
(n[1])						(2883)	(1179)	(2238)	(2725)	(2247)	(2728)	(3025)	(2895)	(3171)	
(n[2])	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(607)	(1168)	(1409)	(1150)	(1320)	(1536)	(1459)	(1656)	
Strongly Disapprove of Trying Cocaine Once or Twice															
Total [1]	—	—	—	—	—	**39.1**	**37.4**	**44.3**	**44.4**	**48.2**	**47.5**	**53.6**	**54.8**	**52.6**	bc
Total [2]	**46.9**	**53.8**	**48.5**	**46.2**	**39.5**	**39.7**	**36.5**	**41.6**	**40.4**	**47.4**	**47.0**	**54.7**	**54.5**	**50.9**	d
Grade 9	48.5	54.5	46.4	42.6	37.3	35.5	34.9	41.5	38.8	42.6	43.3	55.2	55.6	54.5	b
Grade 10	—	—	—	—	—	35.0	37.6	46.3	46.3	47.9	44.5	51.1	53.3	53.8	b
Grade 11	44.9	53.1	50.6	49.8	41.7	44.7	38.4	41.7	42.0	52.1	50.5	54.2	53.4	47.6	
Grade 12	—	—	—	—	—	41.5	40.2	48.4	49.6	49.8	50.5	53.9	56.3	54.0	b
Strongly Disapprove of Trying Ecstasy Once or Twice															
Total [1]	—	—	—	—	—	—	**36.0**	**47.5**	**48.2**	**52.9**	**49.9**	**52.9**	**55.3**	**50.9**	bcd
Grade 9							35.1	48.5	45.2	52.3	46.9	58.9	56.7	54.4	b
Grade 10							35.6	51.1	47.7	51.8	48.0	49.1	57.2	50.3	b
Grade 11							35.7	43.0	47.6	53.1	54.0	51.3	50.5	46.9	b
Grade 12							38.8	47.4	51.9	53.9	50.2	52.4	56.6	51.8	b

Notes: (1) based on all grades (full sample); (2) based on limited grades (long-term sample); (3) based on a random half sample since 2001; (4) "having 5 drinks each weekend" was not asked in 2011; (5) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01 (vs. 2007 for binge drinking, vs. 2001 for ecstasy).

Q: Do you disapprove of people (18 or older) doing the following…[behaviour]?

Source: OSDUHS, Centre for Addiction & Mental Health

Perceived Drug Availability

(Figures 3.11.7-3.11.9; Table 3.11.3)

In this section, we present the percentage reporting that it is "**fairly easy**" or "**very easy**" to get alcohol, tobacco cigarettes, cannabis, cocaine, ecstasy, LSD, and prescription opioid pain relievers without visiting a doctor. Note the questions about the availability of cocaine, ecstasy, and LSD were asked of 9th to 12th graders only.

2015

- In 2015, the three drugs most readily available to elementary students are alcohol, tobacco cigarettes, and opioids. The three drugs most readily available to secondary students are alcohol, tobacco cigarettes, and cannabis.

- Not surprisingly, as grade level increases, students are much more likely to report that drugs are easy to obtain.

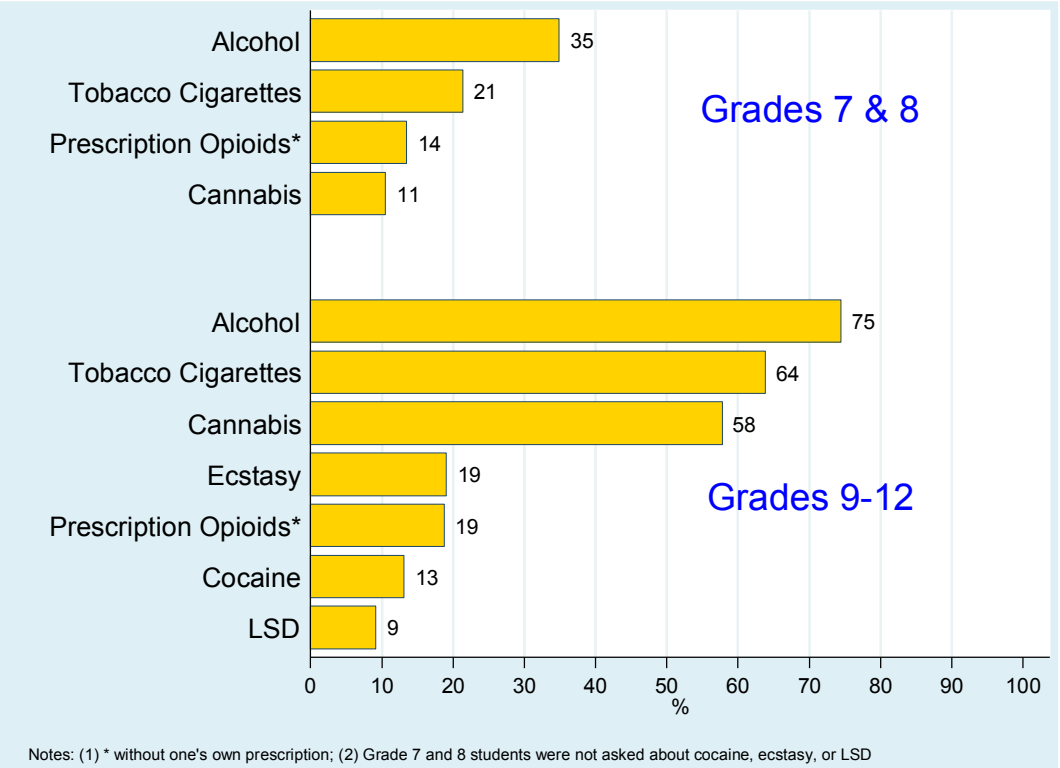
1999–2015

☐ Between 2013 and 2015, the perceived availability of cigarettes decreased, whereas the availability of ecstasy increased. The perceived availability of cannabis, cocaine, LSD, and ecstasy is lower in 2015 compared with estimates from 1999/2001. The perceived availability of alcohol was lowest between 2005 and 2011, but subsequently increased back to high levels seen in the late 1990s/early 2000s.

1981–2015

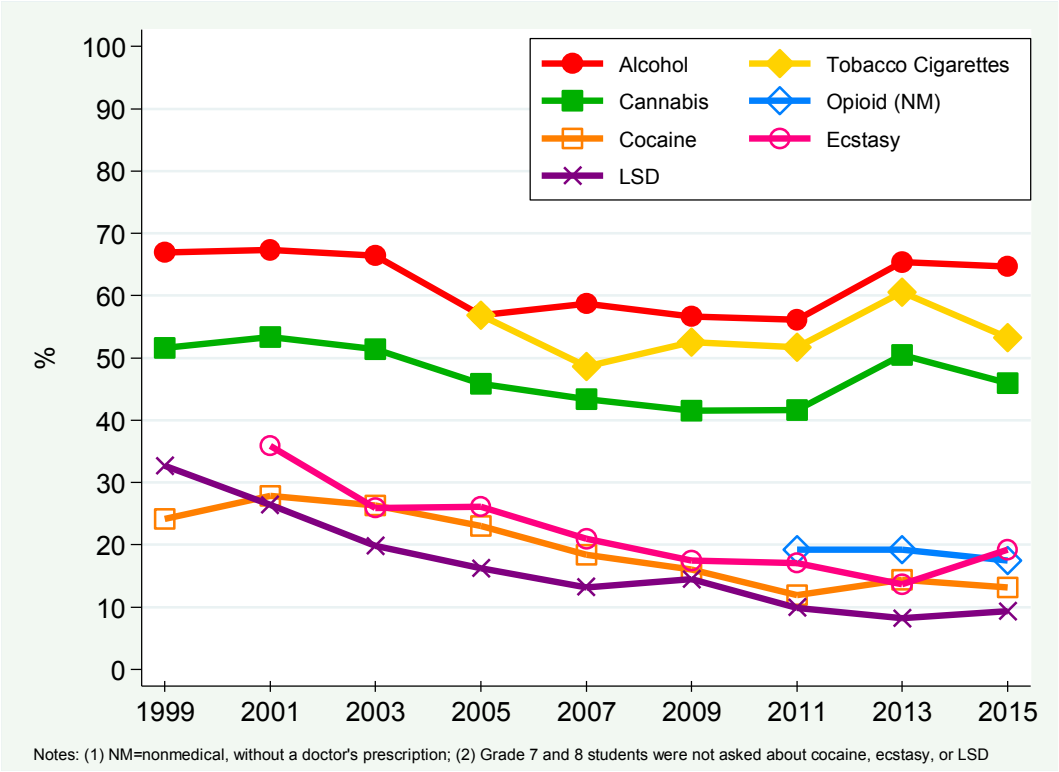
☐ The perceived availability of alcohol increased during the late 1980s/early 1990s, peaked in the late 1990s, followed by a decrease, and another increase in recent years. The perceived availability of cannabis was elevated in the early-to-mid 1980s, decreased in the late 1980/early 1990s, peaked again up until 2001, decreased during the 2000s, and increased again in recent years. The availability of cocaine increased between 1989 and 2001, followed by a downward trend. The availability of LSD has been on a downward trend since 1995.

Figure 3.11.7
Percentage Reporting it is "Fairly Easy" or "Very Easy" to Obtain the Drug, by Grade Level, 2015 OSDUHS



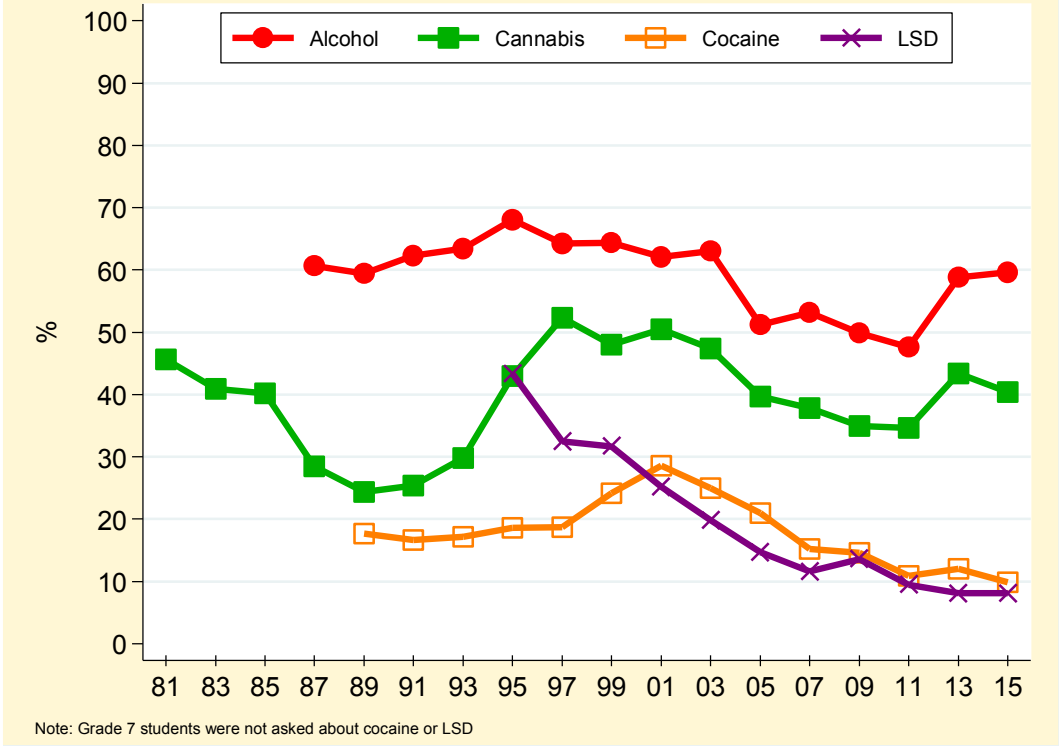
Notes: (1) * without one's own prescription; (2) Grade 7 and 8 students were not asked about cocaine, ecstasy, or LSD

Figure 3.11.8
Percentage Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug, 1999–2015 OSDUHS (Grades 7–12)



Notes: (1) NM=nonmedical, without a doctor's prescription; (2) Grade 7 and 8 students were not asked about cocaine, ecstasy, or LSD

Figure 3.11.9
Percentage Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug, 1981–2015 OSDUHS (Grades 7, 9, and 11 only)



Note: Grade 7 students were not asked about cocaine or LSD

Table 3.11.3: Percentage Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug, by Grade, 1981–2015 OSDUHS

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
AMONG GRADES 7–12																			
(n^1)										(4447)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4974)	(5023)	
(n^2)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)	
Alcohol																			
Total [1]	—	—	—	—	—	—	—	—	—	**66.9**	**67.3**	**66.4**	**56.9**	**58.7**	**56.6**	**56.1**	**65.4**	**64.6**	cd
Total [2]				**60.7**	**59.4**	**62.3**	**63.4**	**68.1**	**64.3**	**64.4**	**62.1**	**63.0**	**51.2**	**53.2**	**49.9**	**47.6**	**58.8**	**59.6**	cd
Grade 7				37.0	38.1	40.1	42.8	43.7	40.8	33.8	31.9	33.8	24.6	29.4	19.7	21.0	23.0	29.1	
Grade 8				—	—	—	—	—	—	47.9	52.3	43.9	32.8	35.5	32.8	34.8	45.0	40.5	
Grade 9				61.6	60.1	62.6	64.8	69.1	63.8	66.6	68.8	66.2	53.0	54.2	50.0	48.1	63.5	59.2	
Grade 10				—	—	—	—	—	—	79.2	80.0	75.1	66.0	63.8	62.1	56.3	68.3	70.2	b
Grade 11				80.6	80.8	81.7	78.4	87.2	84.5	87.2	85.1	82.6	74.5	74.6	73.0	68.6	78.4	80.7	
Grade 12				—	—	—	—	—	—	87.6	89.6	86.7	83.8	84.5	82.0	85.8	86.8	83.3	
Cannabis																			
Total [1]	—	—	—	—	—	—	—	—	—	**51.6**	**53.4**	**51.4**	**45.8**	**43.4**	**41.5**	**41.6**	**50.5**	**46.0**	bcd
Total [2]	**45.6**	**40.9**	**40.2**	**28.5**	**24.4**	**25.4**	**29.8**	**43.0**	**52.3**	**48.0**	**50.5**	**47.4**	**39.7**	**37.8**	**35.0**	**34.6**	**43.4**	**40.4**	cd
Grade 7	16.1	14.2	12.7	7.4	5.1	4.8	7.1	12.7	17.3	12.2	14.9	14.5	8.9	10.6	4.2	5.7	5.4	7.8	
Grade 8	—	—	—	—	—	—	—	—	—	30.9	27.6	28.4	21.4	15.7	13.5	15.6	22.0	13.2	b
Grade 9	51.8	49.1	39.4	28.9	26.9	22.3	28.0	45.1	51.1	50.3	59.5	51.6	43.8	39.0	35.3	32.4	43.4	35.6	b
Grade 10	—	—	—	—	—	—	—	—	—	66.7	68.6	63.5	58.1	54.0	54.0	43.7	56.5	52.8	b
Grade 11	69.4	68.6	67.6	47.2	42.0	47.7	50.2	66.4	77.3	75.2	76.6	70.6	64.2	62.3	58.5	60.2	68.8	67.0	
Grade 12	—	—	—	—	—	—	—	—	—	76.2	73.6	70.9	71.3	68.1	63.8	69.6	74.4	69.6	
Tobacco Cigarettes																			
Total [1]	—	—	—	—	—	—	—	—	—	—	—	—	**56.9**	**48.6**	**52.5**	**51.7**	**60.6**	**53.3**	ad
Grade 7													18.5	17.7	12.2	14.0	19.0	16.1	
Grade 8													29.4	24.3	26.2	28.9	34.6	26.4	
Grade 9													58.1	46.1	48.2	45.3	53.5	43.6	ab
Grade 10													67.8	52.8	61.6	52.5	64.4	61.8	
Grade 11													76.1	67.0	72.0	69.7	76.1	70.2	
Grade 12													83.6	73.3	74.8	78.0	85.1	74.4	ab
Prescription Opioid Pain Reliever*																			
Total [1]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**19.2**	**19.2**	**17.5**	
Grade 7																6.6	13.4	13.6	
Grade 8																13.7	11.0	13.5	
Grade 9																22.1	14.4	14.9	
Grade 10																19.5	17.3	18.3	
Grade 11																24.4	25.6	19.6	
Grade 12																23.7	26.0	21.4	

(cont’d)

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
AMONG GRADES 9–12 ONLY																			
(n^1)										(2883)	(1179)	(2238)	(2725)	(2247)	(2728)	(3025)	(2895)	(3171)	
(n^2)				(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(607)	(1168)	(1409)	(1150)	(1350)	(1156)	(1459)	(1656)	
Cocaine																			
Total [1]	—	—	—	—	—	—	—	—	—	**24.2**	**27.9**	**26.3**	**23.0**	**18.4**	**16.0**	**11.9**	**14.4**	**13.2**	bcd
Total [2]				**19.2**	**17.7**	**16.6**	**17.2**	**18.6**	**18.7**	**24.2**	**28.6**	**25.0**	**21.0**	**15.2**	**14.6**	**10.9**	**12.0**	**9.9**	cd
Grade 9				17.0	14.4	12.5	12.9	15.7	15.1	19.6	26.3	21.2	15.8	10.6	9.9	5.4	7.9	4.7	b
Grade 10				—	—	—	—	—	—	23.6	24.4	24.4	20.6	18.5	13.6	10.7	11.6	9.4	b
Grade 11				21.3	21.9	20.6	21.6	21.5	22.1	29.5	31.4	28.8	26.3	19.8	18.9	16.4	15.7	14.8	b
Grade 12				—	—	—	—	—	—	25.1	32.5	31.5	28.5	23.7	20.1	14.4	19.7	20.5	
LSD																			
Total [1]	—	—	—	—	—	—	—	—	—	**32.7**	**26.4**	**19.8**	**16.2**	**13.2**	**14.5**	**9.9**	**8.2**	**9.3**	bcd
Total [2]								**43.4**	**32.5**	**31.7**	**25.2**	**19.8**	**14.7**	**11.6**	**13.6**	**9.5**	**8.1**	**8.1**	c
Grade 9								29.7	23.1	23.6	21.3	13.9	10.6	8.7	8.4	4.9	4.5	3.3	b
Grade 10								—	—	33.3	24.9	19.3	17.4	13.6	12.4	8.9	6.5	6.6	b
Grade 11								56.9	41.6	40.9	30.6	25.7	18.9	14.4	18.2	14.1	11.3	12.5	b
Grade 12								—	—	35.2	34.3	20.1	17.6	15.6	17.2	11.3	9.6	12.8	b
Ecstasy																			
Total [1]	—	—	—	—	—	—	—	—	—	—	**35.9**	**25.9**	**26.1**	**21.0**	**17.5**	**17.1**	**13.7**	**19.2**	abcd
Grade 9											28.7	14.4	16.8	12.8	9.7	8.2	7.4	6.9	b
Grade 10											37.4	22.3	23.8	18.7	15.9	12.0	9.3	12.6	b
Grade 11											36.8	33.3	32.2	22.7	20.8	25.0	16.1	26.4	ab
Grade 12											46.0	34.7	30.9	28.3	21.9	21.6	19.3	26.7	b

Notes: (1) based on all grades (full sample); (2) based on limited grades (long-term sample); (3) based on a random half sample in each year; (4) † indicates estimate suppressed due to unreliability; (5) * such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin/OxyNEO, codeine, without visiting a doctor; (6) [a] 2015 vs. 2013 significant difference, p<.01; [b] 2015 vs. 1999 significant difference, p<.01 (vs. 2001 for ecstasy, vs. 2005 for cigarettes); [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: How easy or difficult would it be for you to get [drug] if you wanted some?

Source: OSDUHS, Centre for Addiction & Mental Health

Source of Cigarettes

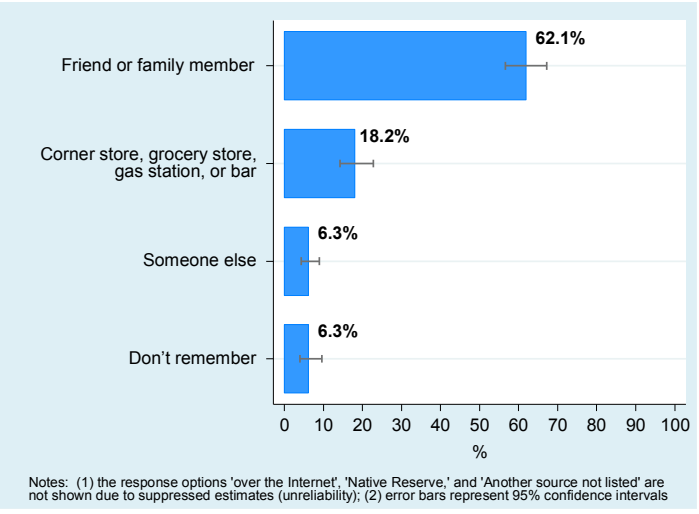
(Figure 3.11.10)

The OSDUHS included a question about where students obtained cigarettes, if they smoked at least one whole cigarette in the past 12 months: "*Thinking about the last time you smoked a whole tobacco cigarette in the past 12 months, where did you get it from? (Please choose only one answer.)*" The response options were: *A corner store, small grocery store, supermarket, gas station, or bar; Over the Internet; A friend or family member; Someone else; a Native Reserve; Another source not listed;* or *Don't remember*. Students also had the option of responding that they did not smoke cigarettes. We restricted our analysis to students who were under age 19.

2015: Smokers in Grades 7–12

- Among underage students who reported smoking at least one whole cigarette in the past 12 months, (*n*=585), the most common source was a friend or relative, followed by a store/gas station/bar. The least common sources were the Internet, a Native Reserve, and another source not listed (all estimates suppressed).

Figure 3.11.10
Source of Previous Whole Tobacco Cigarette Among Smokers Under Age 19, 2015 OSDUHS (Grades 7–12)



Notes: (1) the response options 'over the Internet', 'Native Reserve,' and 'Another source not listed' are not shown due to suppressed estimates (unreliability); (2) error bars represent 95% confidence intervals

Source of Alcohol

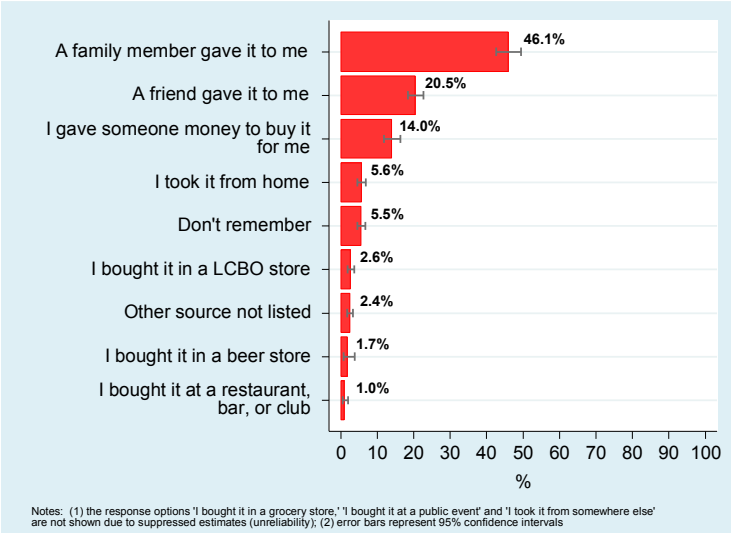
(Figure 3.11.11)

Students were asked how they usually obtain alcohol with the question: "*In the last 12 months, how did you usually get the alcohol you drank? (Please choose one answer only.)*" The response options were: *A friend gave it to me; A family member gave it to me; I took it from home; I took it from somewhere else; I bought it in a LCBO store; I bought it in a beer store; I bought it in a grocery store; I bought it at a restaurant, bar, or club; I bought it at a public event such as a concert or sporting event; I gave someone else money to buy it for me; I got it some other way;* or *Don't remember.* Students also had the option of responding that they did not drink alcohol in the last 12 months, or in their lifetime. We restricted our analysis to students who were under age 19.

2015: Drinkers in Grades 7–12

- Among underage students who reported drinking in the past year (*n*=2,626), the most common methods of obtaining alcohol were receiving it from a family member or a friend. The least common methods of obtaining alcohol were purchasing it in a grocery store or at a public event, or taking it from somewhere else other than home (all estimates suppressed).

Figure 3.11.11
Usual Source of Alcohol Among Drinkers Under Age 19, 2015 OSDUHS (Grades 7–12)



Notes: (1) the response options 'I bought it in a grocery store,' 'I bought it at a public event' and 'I took it from somewhere else' are not shown due to suppressed estimates (unreliability); (2) error bars represent 95% confidence intervals

Parental Permission to Drink Alcohol at Home

(Figure 3.11.12)

For the first time in 2015, students in grades 9–12 were asked if they are allowed to drink alcohol at home. A random half sample was asked the following question: "*Do your parents (or guardians) allow you and your friends to drink alcohol in your home while you are having a party or get-together?*" The response options were yes or no. Students also had the option of responding that they did not drink alcohol in the last 12 months, or in their lifetime.

2015: Grades 9–12

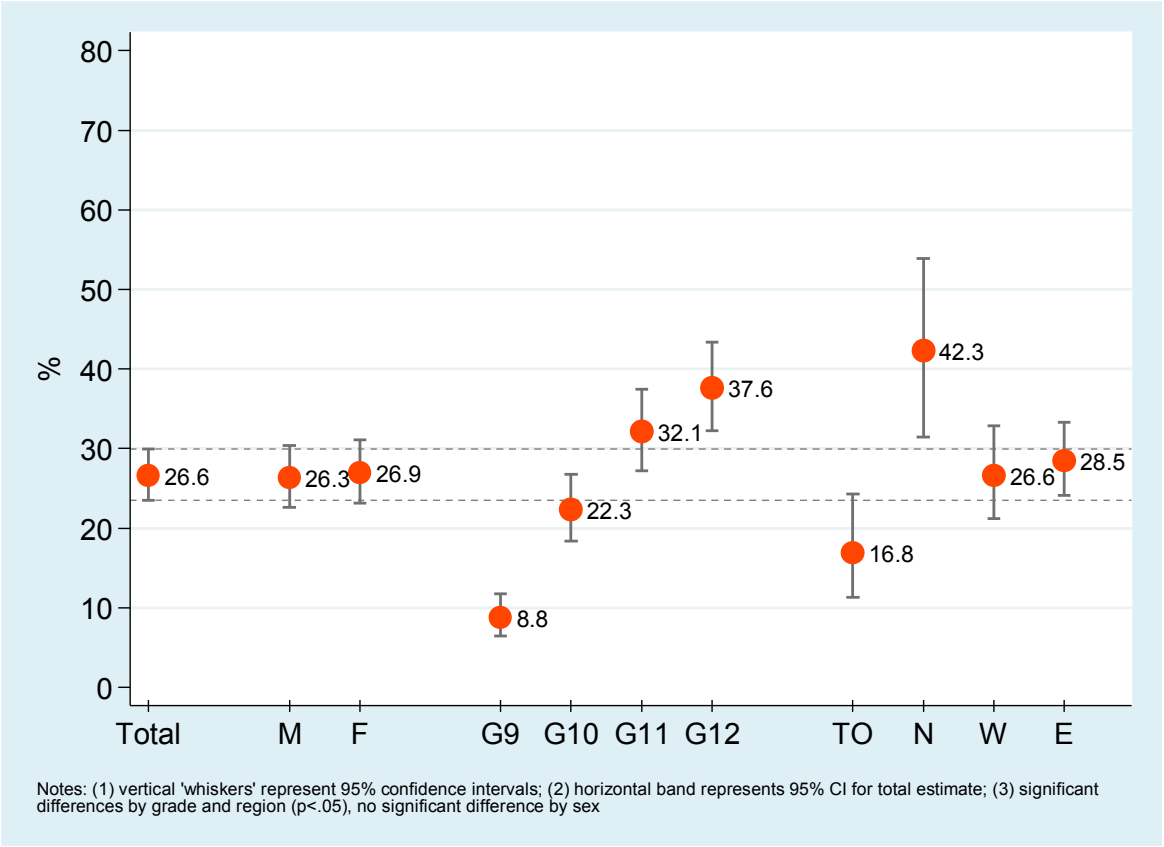
- About one-quarter (26.6%; 95% CI: 23.5%-30.0%) of secondary students report that they are allowed to drink at home with their friends. This percentage represents about188,700 students in grades 9–12.

- There is no significant sex difference.

- There is significant grade variation, ranging from 8.8% of 9th graders to 37.6% of 12th graders.

- There is significant regional variation, with students in Toronto (16.8%) least likely, and students in the North (42.3%) most likely, to report that they are allowed to drink alcohol at home with friends.

Figure 3.11.12
Percentage Reporting Parental Permission to Drink Alcohol at Home with Friends by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by grade and region (p<.05), no significant difference by sex

Source of Cannabis

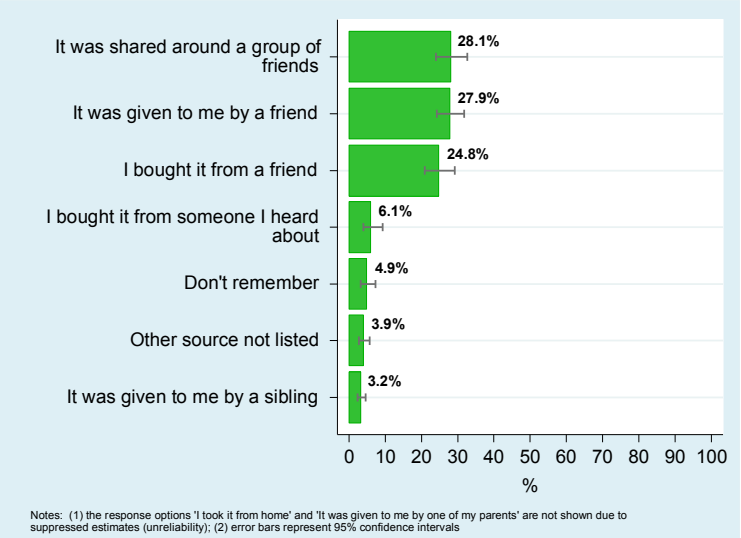
(Figure 3.11.13)

Students were asked about how they usually obtain cannabis. A random half sample was asked: "*In the last 12 months, how did you usually get the cannabis you used? (Please choose one answer only.)*" The response options were: *Given to me by a brother or sister*; *Given to me by a friend; It was shared around a group of friends; Bought it from a friend; Bought it from someone I have heard about, but did not know personally; Given to me by one of my parents; Took it from home without my parents' permission; I got it some other way;* or *Don't remember*. Students also had the option of responding that they did not use cannabis in the last 12 months, or in their lifetime.

2015: Cannabis Users in Grades 7–12

- Among those who reported using cannabis in the past year (*n*=992), the vast majority reported obtaining the drug through friends. The least common methods of obtaining cannabis were from parents or taking it from home (estimates suppressed).

Figure 3.11.13
Usual Source of Cannabis Among Users, 2015 OSDUHS (Grades 7–12)



Notes: (1) the response options 'I took it from home' and 'It was given to me by one of my parents' are not shown due to suppressed estimates (unreliability); (2) error bars represent 95% confidence intervals

Source of Diverted Prescription Opioid Pain Relievers

The OSDUHS included a question about where students obtained prescription opioids, without having their own prescription. A random half sample was asked the following question: "*If you used pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, OxyNEO, codeine) in the last 12 months without a doctor's prescription, who did you get them from? (If you used them more than once think about who you usually got them from.)*" The response options were: *Got them from a parent/brother/sister; From someone else I live with; From a friend; From someone else I know; From someone at a party; From someone at a bar/club; From someone on "the street"; From another source not listed;* or *Don't remember*. Students also had the option of responding that they have never used this type of drug at all, or never used without their own prescription.

2015: Users in Grades 7–12

- Among those who used opioid pain relievers nonmedically in the past year (*n*=404), the most common source was someone at home. The least common sources were someone at a party and someone on the "street."

All sources are listed below:

• a parent or sibling	55.7%
• someone else I live with	3.2%
• a friend	11.6%
• someone else I know	3.3%
• someone at a party	1.1%
• someone on the "street" or at a bar/club	< 0.5%
• other source not listed	6.1%
• don't remember	18.4%

3.12 School and Neighbourhood Factors

Recall of Substance Education at School

(Figure 3.12.1)

In 1998, substance use education was mandated for Ontario students in grades 1 through 8 as part of the Health and Physical Education curriculum (Ontario Ministry of Education). In 1999, Ontario introduced a curriculum for high school students stipulating that at least one Health and Physical Education credit is needed in order to graduate. Most students fulfill this requirement in 9th or 10th grade. Substance use education is a course component in both grades 9 and 10.[65]

The OSDUHS asked a random half sample of students about the number of classes/lectures they received about alcohol, cannabis, and other illicit drugs during the current academic year. Typically, the majority of schools that participate in the survey do so between March and June. Specifically, the questions were: (1) "*Since September, how many classes or presentations did you have that talked about alcohol?*"; and (2) "*Since September, how many classes or presentations did you have that talked about cannabis ("weed," "pot," "hash") or other types of drugs?*"

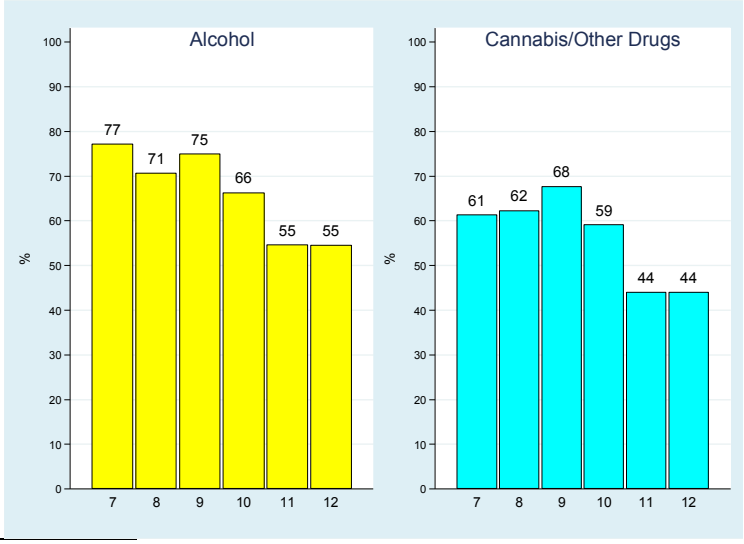
We present the percentage of students who recall receiving **at least one class or presentation** about substances. (Note that students who completed the survey in November and December were excluded from this analysis.)

2015: Grades 7–12

- In 2015, 64.2% (95% CI: 61.4%-67.0%) of students could recall receiving at least one class about alcohol since the start of the school year. Younger students are significantly more likely to recall receiving education about alcohol.

- In 2015, 54.5% (95% CI: 51.2%-57.8%) of students could recall at least one class about drugs, such as cannabis, since the start of the school year. Younger students are significantly more likely to recall receiving education about drugs.

Figure 3.12.1
Percentage Recalling at Least One Class/Presentation About Alcohol or Other Drugs Since September, by Grade, 2015 OSDUHS



[65] The revised Health and Physical Education curriculum in Ontario took effect in September 2015.

Drug Problem at School

(Figure 3.12.2; Table 3.12.1)

Since 1993, the OSDUHS has asked students about their perception of the magnitude of the drug problem, if at all, at their school. The question was "*In your school, is drug use a big problem, a small problem, or no problem at all?*"

2015: Grades 7–12

- In 2015, 25.5% of students believe that drug use in their school is a big problem, 49.1% believe it is a small problem, and 25.4% believe that drug use is not a problem in their school.

- Males (23.8%) and females (27.4%) are equally likely to believe that drug use is a big problem in their school.

- Not surprisingly, 7th and 8th graders are least likely to believe that drug use is a "big problem" in their school.

- There are no significant differences among the regions regarding the perception that drug use in school is a "big problem."

Trends:

- Since 1999, there has been no significant change in the perception that drug use is a "big problem" at school.

- However, this perception is significantly higher now than in 1993 (14.8%), the first year of monitoring.

Figure 3.12.2
Percentage Reporting that Drug Use at Their School is a Big Problem, Small Problem, or Not a Problem, 2015 OSDUHS (Grades 7–12)

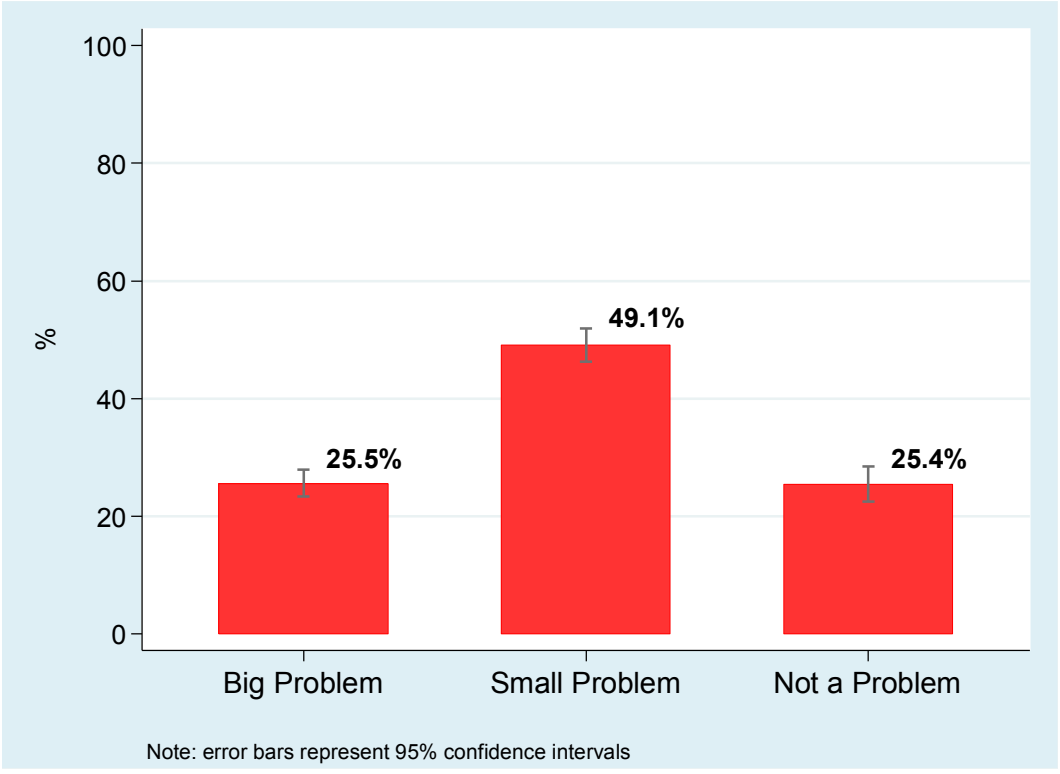


Table 3.12.1: Percentage Reporting the Perception that Drug Use at School is a "Big Problem," 1993–2015 OSDUHS

	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n^1)				(2148)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
(n^2)	(1241)	(1453)	(1527)	(1168)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)
Total[1] (95% CI)	—	—	—	**23.5** (20.5-26.7)	**26.6** (23.1-30.5)	**27.8** (25.2-30.5)	**24.9** (22.4-27.6)	**25.0** (22.2-28.0)	**23.7** (21.4-26.2)	**24.8** (22.2-27.6)	**24.7** (21.8-28.0)	**25.5** (23.3-27.9)
Total[2]	**14.8** (11.4-19.0)	**26.2** (21.5-31.5)	**25.4** (22.1-29.1)	**25.9** (22.2-30.0)	**25.5** (20.7-31.0)	**28.2** (25.0-31.6)	**24.1** (21.4-27.1)	**23.5** (20.5-26.7)	**22.6** (19.7-25.8)	**23.5** (20.8-26.5)	**23.6** (20.5-26.9)	**23.9** (21.1-27.0)
Sex												
Males[1]	—	—	—	22.3	26.7	25.7	23.2	22.2	20.2	21.5	21.3	23.8
Males[2]	12.7	23.3	23.9	25.8	26.9	26.3	25.6	20.8	19.7	21.2	19.7	22.6
Females[1]	—	—	—	24.6	26.5	29.7	26.9	28.1	27.7	28.5	28.3	27.4
Females[2]	16.9	28.9	26.8	26.1	24.1	30.0	22.7	26.4	25.8	26.0	27.7	25.2
Grade												
7	9.0	13.7	14.5	17.9	8.1	14.2	12.4	10.9	9.8	8.9	12.7	12.9
8	—	—	—	14.6	8.0	14.8	11.3	13.3	9.6	11.4	11.2	10.2
9	18.0	31.8	29.1	29.9	35.0	32.6	28.9	27.8	26.6	30.4	24.5	23.2
10	—	—	—	21.4	37.0	35.7	34.4	30.3	35.5	34.2	31.5	31.6
11	16.5	31.0	31.2	27.8	31.2	34.7	30.3	30.3	26.4	28.2	30.0	32.1
12	—	—	—	26.1	37.4	28.8	29.8	32.8	25.8	28.7	29.2	32.7
Region												
Toronto[1]	—	—	—	21.8	21.1	25.6	23.6	23.4	22.1	20.5	23.4	27.8
Toronto[2]	16.5	21.5	24.9	23.7	21.0	22.8	23.0	22.9	19.8	20.6	21.9	25.7
North[1]	—	—	—	26.6	30.7	31.4	30.8	32.0	28.4	33.2	28.3	32.8
North[2]	35.5	10.4	35.4	24.2	32.3	32.0	31.7	32.6	29.3	35.1	27.2	30.5
West[1]	—	—	—	25.5	29.4	29.0	28.1	27.1	23.3	26.1	24.7	24.1
West[2]	11.9	32.7	26.2	30.1	27.8	32.2	27.2	24.7	24.2	20.0	23.4	25.3
East[1]	—	—	—	20.6	25.0	26.3	20.3	21.1	24.3	24.2	25.1	25.2
East[2]	15.4	23.7	19.3	21.9	24.6	24.2	19.3	19.6	20.7	27.5	24.5	19.9

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) question asked of a random half sample in each year; (5) no significant change between 1999 and 2015 among the total sample.
Q: In your school, is drug use a big problem, a small problem, or no problem at all?
Source: OSDUHS, Centre for Addiction & Mental Health

Intoxication at School

(Figure 3.12.3; Table 3.12.2)

Starting in 2005, the OSDUHS asked students about being intoxicated at school. The question used was *"In the last 12 months, how many times (if ever) have you been drunk or high at school?"* Here we present the percentage reporting being drunk or high at least once in the past year.

2015: Grades 7–12

- Among all students, 12.1% report that they were intoxicated at school at least once during the 12 months before the survey. This percentage represents about 110,400 Ontario students in grades 7 through 12.

- Males (12.3%) and females (11.8%) are equally likely to report being drunk or high at school.

- Students in grades 11 and 12 (about 21%-22%) are significantly more likely than students in the younger grades to report being intoxicated at school.

- Despite some variation, there are no significant differences among the regions.

2005–2015: Grades 7–12

☐ Between 2013 and 2015, there was no significant change in the percentage of students who reported being intoxicated at school at least once in the past year (both years 12.1%). However, there has been a significant downward trend since 2005, the first year of monitoring. Students today are less likely than their counterparts in 2005 to report being intoxicated at school (12.1% vs. 16.6%, respectively).

Getting Drugs at School

(Figure 3.12.4; Table 3.12.3)

Starting in 2005, the OSDUHS asked students 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?"*

2015: Grades 7–12

- Among all students, 17.3% report that they had been offered, sold, or given a drug at school during the 12 months before the survey. This percentage represents about 158,200 Ontario students in grades 7 through 12.

- Males are significantly more likely than females to report having been offered, sold, or given a drug at school (20.6% vs. 13.8%, respectively).

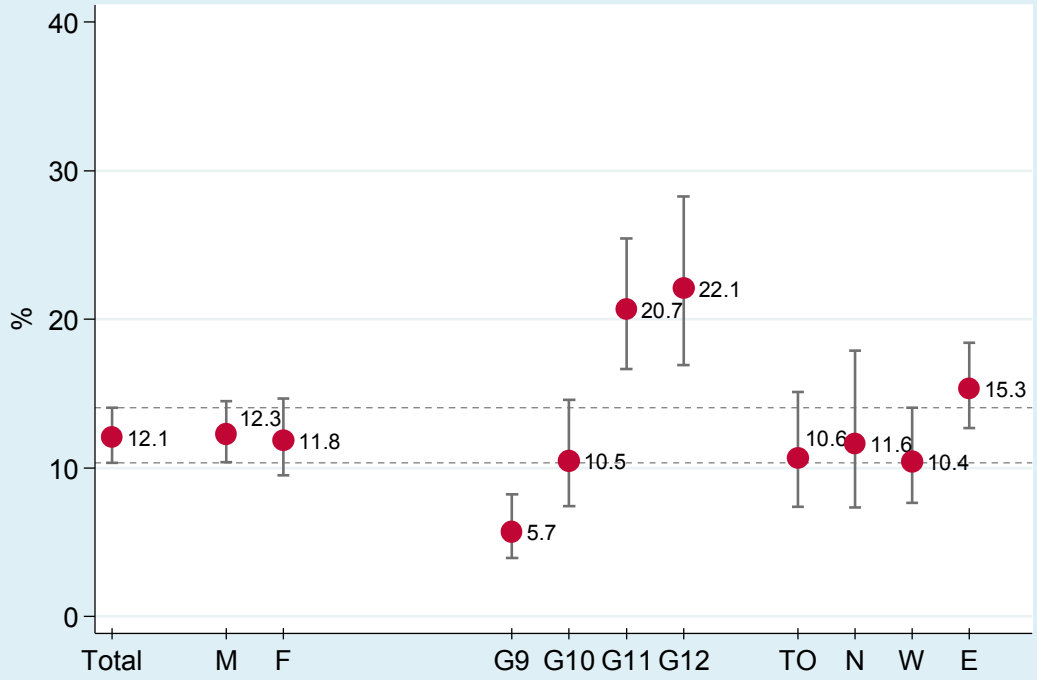
- With increasing grade, students are more likely to be offered, sold, or given a drug, peaking in grade 11 at 27.3%.

- There are significant differences among the regions showing that students in the East region (21.6%) are most likely to be offered, sold, or given a drug at school.

2005–2015: Grades 7–12

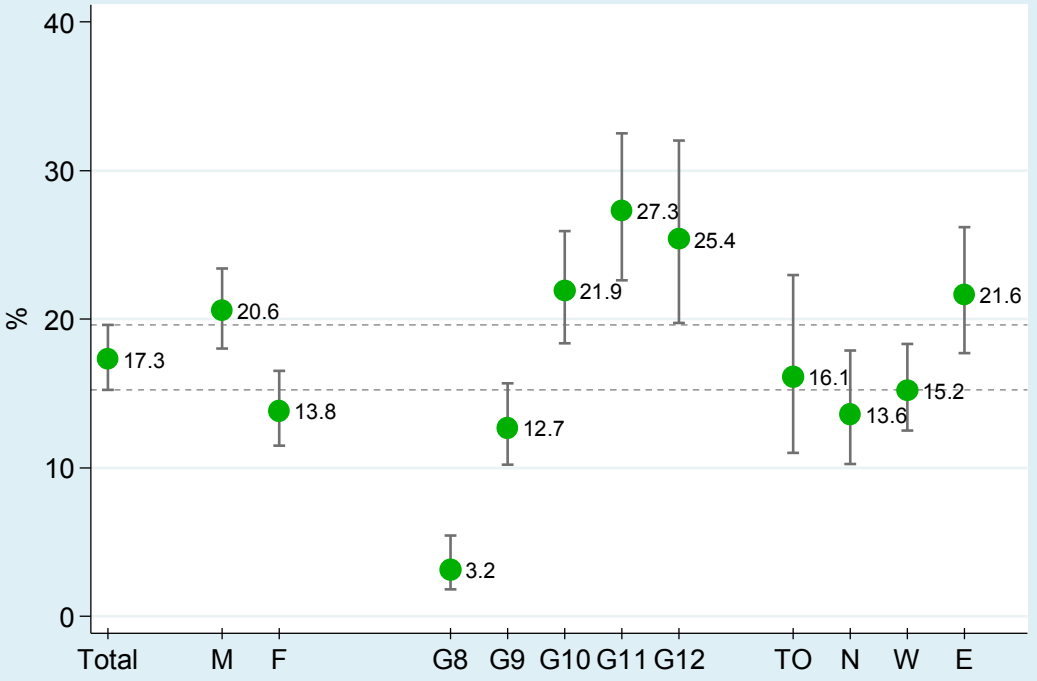
☐ Among the total sample, the 2015 estimate (17.3%) does not significantly differ from the 2013 estimate (18.5%). However, there has been a significant downward trend since 2005, the first year of monitoring. Students today are less likely than their counterparts in 2005 to report that someone offered, sold, or gave them a drug on school property (17.3% vs. 23.1%, respectively).

Figure 3.12.3
Percentage Reporting Being Drunk or High at School in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

Figure 3.12.4
Percentage Reporting Having Been Offered, Given, or Sold an Illegal Drug at School in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 7 was suppressed; (4) significant differences by sex, grade, and region (p<.05)

Table 3.12.2: Percentage Reporting Being Drunk or High at School in the Past Year, 2005–2015 OSDUHS

		2005	2007	2009	2011	2013	2015
	(*n*=)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
Total		**16.6**	**15.4**	**15.8**	**16.0**	**12.1**	**12.1** [bc]
(95% CI)		(14.9-18.5)	(13.5-17.4)	(14.0-17.8)	(13.9-18.4)	(10.3-14.1)	(10.3-14.1)
Sex							
	Males	**18.5** (16.4-21.0)	**17.2** (14.7-20.0)	**17.3** (15.0-19.8)	**17.0** (14.4-19.9)	**12.4** (9.5-16.1)	**12.3** [b] (10.4-14.5)
	Females	**14.5** (12.5-16.8)	**13.3** (11.1-15.8)	**14.1** (12.0-16.4)	**14.9** (12.5-17.6)	**11.8** (9.8-14.0)	**11.8** (9.5-14.7)
Grade							
	7	†	**3.6** (2.0-6.5)	†	†	†	†
	8	**3.7** (2.2-6.4)	**4.0** (2.2-7.2)	**3.8** (2.5-5.8)	**4.7** (2.9-7.6)	†	†
	9	**16.6** (13.4-20.3)	**15.5** (11.7-20.1)	**10.6** (7.8-14.2)	**10.3** (7.0-14.8)	**5.5** (3.5-8.3)	**5.7** [b] (4.0-8.2)
	10	**22.0** (18.4-25.9)	**18.4** (13.7-24.3)	**21.4** (16.8-26.9)	**20.4** (14.6-27.7)	**15.3** (12.0-19.3)	**10.5** [b] (7.4-14.6)
	11	**27.8** (22.7-33.5)	**21.8** (17.7-26.6)	**22.9** (18.4-28.1)	**25.1** (19.4-32.0)	**18.8** (14.0-24.9)	**20.7** (16.6-25.4)
	12	**24.3** (20.6-28.4)	**24.4** (20.2-29.0)	**26.2** (21.5-31.6)	**24.4** (18.1-32.2)	**18.3** (13.7-24.0)	**22.1** (16.9-28.3)
Region							
	Toronto	**13.8** (11.0-17.3)	**14.0** (9.6-20.0)	**13.3** (9.6-18.0))	**12.4** (8.9-17.0)	**12.2** (8.2-17.8)	**10.6** (7.4-15.1)
	North	**18.0** (13.4-23.6)	**21.2** (17.1-26.0)	**17.7** (11.8-25.8)	**18.7** (15.9-21.9)	**9.2** (5.5-14.8)	**11.6** (7.3-17.9)
	West	**17.9** (15.2-21.0)	**15.8** (13.2-18.8)	**16.9** (13.8-20.7)	**19.2** (15.5-23.6)	**12.2** (9.4-15.6)	**10.4** [b] (7.7-14.1)
	East	**16.3** (13.1-20.0)	**14.1** (10.9-18.1)	**15.1** (12.9-17.6)	**13.4** (11.6-15.4)	**12.4** (10.0-15.3)	**15.3** (12.7-18.4)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in each year; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 2005 significant difference, p<.01; [c] significant linear trend, p<.01.

Q: In the last 12 months, how many times (if ever) have you been drunk or "high" on school property?

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.12.3: Percentage Reporting Being Offered, Sold, or Given a Drug at School in the Past Year, 2005–2015 OSDUHS

		2005	2007	2009	2011	2013	2015
	(*n*=)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
Total		**23.1**	**21.1**	**22.7**	**20.3**	**18.5**	**17.3** [bc]
(95% CI)		(21.0-25.4)	(18.8-23.6)	(20.8-24.7)	(18.5-22.3)	(16.2-21.0)	(15.2-19.6)
Sex							
	Males	**26.1** (23.4-29.0)	**24.2** (20.8-27.9)	**26.1** (23.5-29.0)	**23.6** (20.7-26.7)	**22.2** (18.1-26.9)	**20.6** [b] (18.0-23.4)
	Females	**19.9** (17.5-22.6)	**17.7** (15.5-20.1)	**18.8** (16.8-21.1)	**16.7** (13.8-20.0)	**14.6** (12.2-17.4)	**13.8** [b] (11.5-16.5)
Grade							
	7	**3.3** (2.0-5.6)	**4.6** (2.6-8.0)	†	†	**2.5** (1.4-4.2)	†
	8	**5.5** (3.5-8.4)	**5.2** (3.2-8.3)	**4.9** (3.1-7.5)	**6.2** (3.5-10.8)	**6.6** (4.4-9.6)	**3.2** (1.8-5.4)
	9	**26.2** (21.8-31.2)	**22.5** (17.9-27.8)	**23.2** (18.4-28.9)	**17.9** (14.5-21.8)	**17.4** (12.4-24.0)	**12.7** [b] (10.2-15.7)
	10	**30.1** (25.3-35.3)	**26.1** (20.4-32.7)	**31.5** (27.1-36.4)	**28.0** (22.1-34.8)	**23.0** (18.8-27.8)	**21.9** [b] (18.4-25.9)
	11	**34.4** (29.5-39.8)	**32.4** (27.8-37.4)	**35.9** (30.5-41.7)	**30.9** (25.7-36.7)	**26.8** (21.4-33.0)	**27.3** (22.6-32.5)
	12	**35.1** (30.3-40.2)	**30.3** (26.0-35.0)	**28.9** (23.5-35.0)	**27.0** (23.8-30.4)	**24.2** (18.7-30.7)	**25.4** (19.7-32.0)
Region							
	Toronto	**21.2** (16.0-27.7)	**20.0** (14.3-27.4)	**18.0** (13.6-23.3)	**18.9** (14.6-24.1)	**18.9** (13.9-25.0)	**16.1** (11.0-23.0)
	North	**22.4** (17.9-27.8)	**22.7** (16.8-30.0)	**27.3** (21.8-33.5)	**20.1** (17.0-23.6)	**13.2** (8.4-20.2)	**13.6** [b] (10.3-17.9)
	West	**25.3** (22.1-28.8)	**20.5** (17.0-24.5)	**24.4** (21.2-27.8)	**21.1** (18.2-24.4)	**17.6** (14.4-21.4)	**15.2** [b] (12.5-18.3)
	East	**21.3** (17.8-25.3)	**22.2** (18.6-26.4)	**22.0** (19.3-25.0)	**20.1** (17.2-23.4)	**20.6** (16.2-25.8)	**21.6** (17.7-26.2)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in each year; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 2005 significant difference, p<.01; [c] significant linear trend, p<.01.

Q: In the last 12 months, has anyone offered, sold, or given you an illegal drug on school property?

Source: OSDUHS, Centre for Addiction & Mental Health

Friends' Use of Drugs

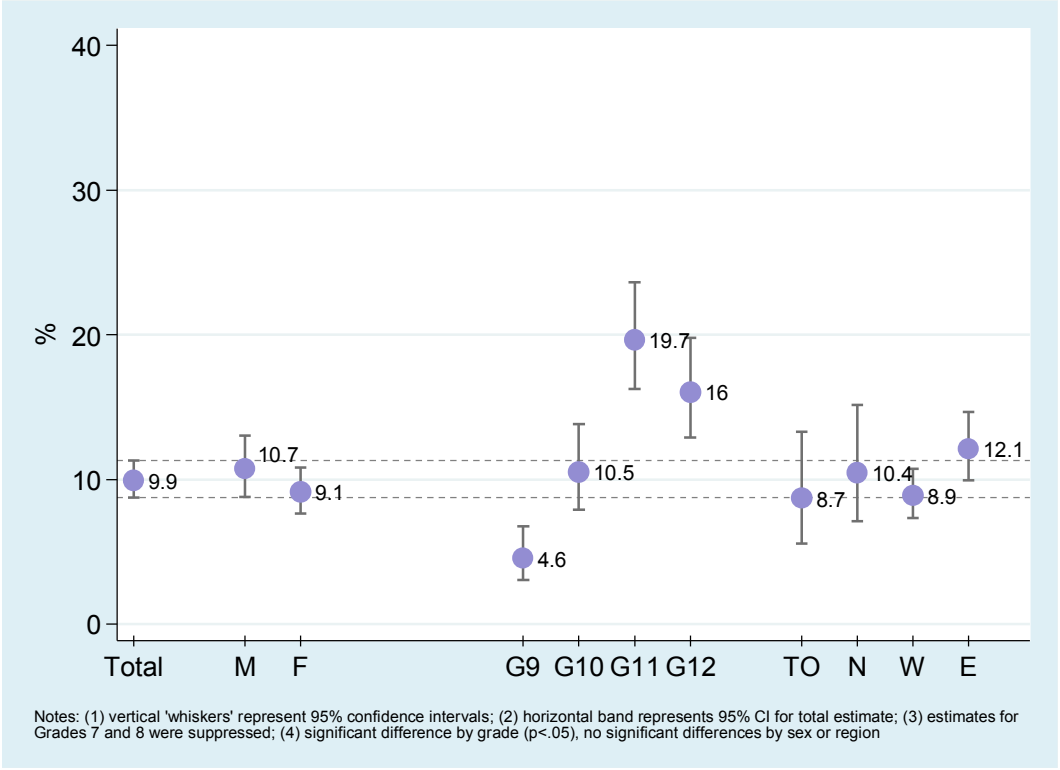
(Figure 3.12.5)

Students were asked how many of their closest friends use illegal drugs. Specifically, the question was: "*How many of your closest friends use cannabis ('weed') or other illegal drugs?*" The response options were: (1) *None of my friends*; (2) *Some of my friends*; (3) *About half of my friends*; (4) *Most of my friends*; (5) *All of my friends*; or (6) *Don't know*. Here we present the percentage of students who report that most or all of their closest friends use drugs.

2015: Grades 7–12

- Among the total sample, 9.9% (95% CI: 8.7%-11.3%) of students in grades 7 through 12 report that most or all of their friends use drugs.
- Males (10.7%) and females (9.1%) are equally likely to report that their friends use drugs.
- There is significant grade variation showing that students in grade 11 (19.7%) are most likely to have friends who use drugs.
- There are no significant regional differences.

Figure 3.12.5
Percentage Reporting that Most or All of Their Closest Friends Use an Illegal Drug by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7 and 8 were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

Exposure to Drug Selling

(Figures 3.12.6, 3.12.7; Tables 3.12.4, 3.12.5)

Starting in 1995, students were asked whether anyone had tried to sell them drugs anywhere, and whether or not they had seen drug selling in their neighbourhood. Both questions referred to the past 12 months.

2015: Grades 7–12

- One-quarter (24.8%) of students report that someone had tried to sell them drugs during the past year. This estimate represents about 226,900 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. Despite some regional variation, there are no significant differences among the four regions.

- Just over one-fifth (21.9%) of students – an estimated 200,000 in Ontario – report seeing someone selling drugs in their neighbourhood in the past year.

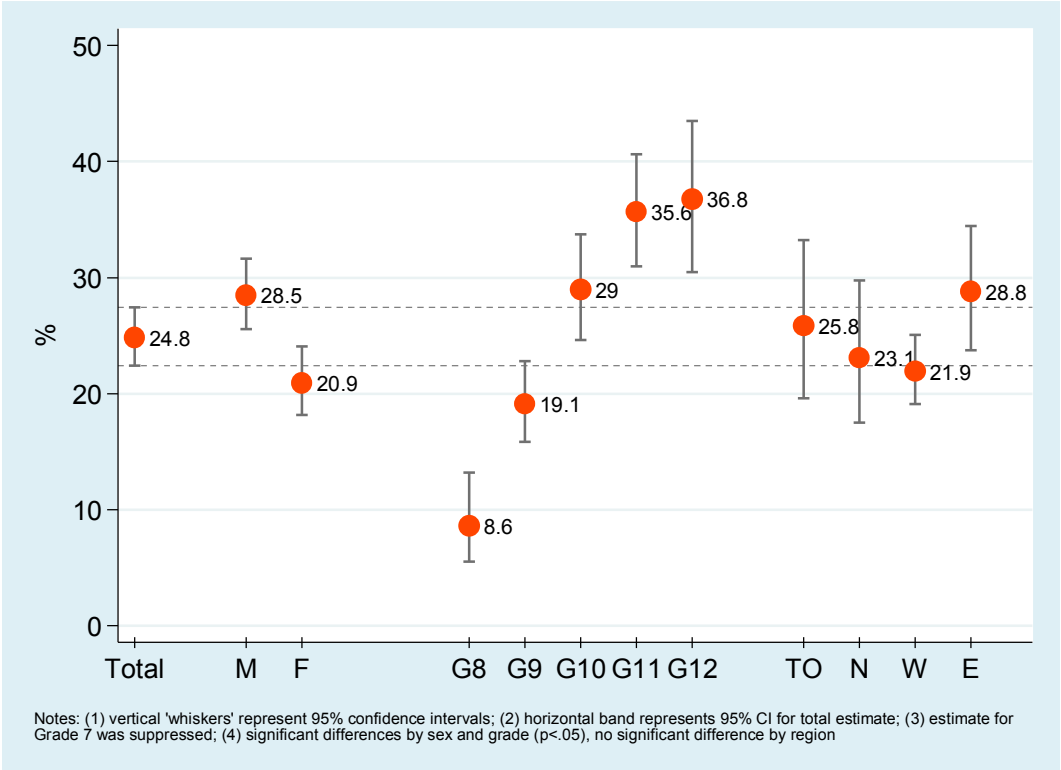
- Males and older students are more likely to witness drug selling in the neighbourhood. Despite some regional variation, there are no significant differences among the four regions in witnessing drug selling in the neighbourhood.

1999–2015: Grades 7–12

- Among the total sample, the percentage reporting that someone had tried to sell them drugs in 2015 (24.8%) is similar to the percentage from 2013 (25.2%). The percentage was relatively stable between 1999 and 2009, and has since significantly decreased.

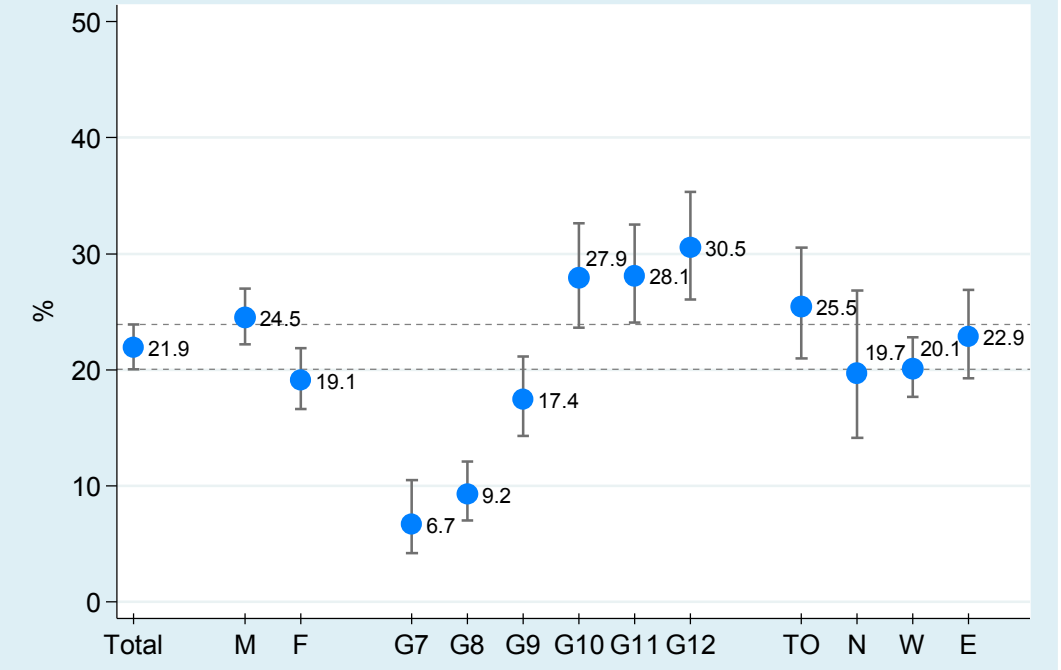
- The percentage of students in 2015 (21.9%) witnessing drug selling in their neighbourhood is similar to the percentage from 2013 (21.1%). The percentage remained fairly stable between 1999 and 2003 decreased in 2005, followed by stability, and another decrease between 2011 and 2015.

Figure 3.12.6
Percentage Reporting that Someone Had Tried to Sell Them Drugs in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 7 was suppressed; (4) significant differences by sex and grade (p<.05), no significant difference by region

Figure 3.12.7
Percentage Reporting Witnessing Drug Selling in Their Neighbourhood in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by sex and grade (p<.05), no significant difference by region

Table 3.12.4: Percentage Reporting that Someone Tried to Sell Drugs to Them in the Past Year, 1995–2015 OSDUHS

	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])			(2148)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)	
(n[2])	(2907)	(1527)	(1168)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)	
Total[1] (95% CI)	—	—	**35.4** (32.7-38.3)	**38.8** (35.3-42.5)	**36.7** (34.4-39.1)	**33.0** (30.8-35.2)	**31.0** (28.1-34.0)	**32.2** (30.2-34.2)	**26.8** (24.2-29.5)	**25.2** (22.8-27.8)	**24.8** (22.4-27.4)	bcd
Total[2]	**30.6** (28.0-33.3)	**31.0** (28.8-33.2)	**34.5** (31.2-38.0)	**37.3** (32.4-42.6)	**34.8** (31.9-37.8)	**30.5** (27.5-33.7)	**27.1** (23.9-30.6)	**28.3** (25.6-31.1)	**22.8** (20.4-25.3)	**21.3** (18.1-25.0)	**21.7** (18.9-24.7)	cd
Sex												
Males[1]	—	—	42.8	45.6	45.3	37.8	35.6	38.7	30.0	30.8	28.5	b
Males[2]	35.1	38.9	42.5	43.9	44.6	34.2	30.6	34.6	24.9	28.1	24.2	
Females[1]	—	—	27.9	32.4	28.7	27.6	25.8	24.9	23.1	19.4	20.9	b
Females[2]	26.4	24.1	26.4	31.0	25.8	26.8	23.2	21.2	20.5	14.1	19.1	
Grade												
7	11.3	11.7	11.5	13.1	11.9	8.5	10.8	5.7	5.4	3.1	†	b
8	—	—	23.1	20.2	21.0	16.2	14.2	14.0	10.1	13.7	8.6	b
9	30.4	33.5	36.8	46.6	36.8	35.1	29.0	28.1	20.9	17.8	19.1	b
10	—	—	45.2	53.7	47.2	43.7	41.5	41.2	33.5	29.0	29.0	b
11	46.9	45.3	51.2	50.8	51.2	46.4	39.9	45.4	38.3	37.0	35.6	b
12	—	—	44.9	42.0	44.8	43.6	43.4	45.4	39.8	36.0	36.8	
Region												
Toronto[1]	—	—	27.8	29.3	32.6	24.4	29.1	27.0	20.9	20.3	25.8	
Toronto[2]	27.8	26.7	29.7	32.0	30.5	23.6	21.2	19.4	17.9	18.2	23.0	
North[1]	—	—	36.0	34.9	35.8	36.2	35.2	44.2	33.1	23.7	23.1	b
North[2]	31.4	35.6	32.4	31.1	39.2	33.0	28.9	38.5	28.6	19.2	17.5	
West[1]	—	—	38.9	43.3	39.0	35.1	29.5	32.2	26.4	25.7	21.9	b
West[2]	32.4	32.5	37.6	43.5	37.2	30.7	27.0	29.9	21.3	20.0	19.8	
East[1]	—	—	34.7	39.7	36.1	34.8	33.6	32.8	29.3	28.1	28.8	
East[2]	29.5	30.2	33.6	34.5	32.7	34.0	30.6	29.2	26.1	26.4	24.2	

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) question asked of a random half sample in each year except 1995; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, has anyone tried to sell you any illegal drug anywhere?

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.12.5: Percentage Reporting Witnessing Drug Selling in Their Neighbourhood in the Past Year, 1995–2015 OSDUHS

	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n[1])			(2148)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)	
(n[2])	(2907)	(1527)	(1168)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)	(2433)	(2566)	
Total[1] (95% CI)	—	—	**31.4** (28.5-34.4)	**32.1** (29.0-35.3)	**32.0** (29.9-34.3)	**27.0** (25.0-29.2)	**28.0** (25.6-30.5)	**28.3** (26.1-30.7)	**26.0** (23.9-28.1)	**21.1** (19.2-23.1)	**21.9** (20.0-23.9)	bcd
Total[2]	**24.5** (21.8-27.5)	**25.5** (22.8-28.4)	**29.3** (25.2-33.7)	**31.9** (27.3-36.8)	**31.5** (28.8-34.2)	**24.7** (22.1-27.4)	**26.7** (24.0-29.6)	**23.6** (21.0-26.5)	**21.9** (19.5-24.5)	**18.8** (16.5-21.4)	**18.7** (16.7-20.9)	cd
Sex												
Males[1]	—	—	36.2	37.6	37.7	29.9	29.4	30.8	27.4	21.8	24.5	b
Males[2]	26.7	30.6	35.2	36.9	38.5	27.0	28.2	26.9	22.5	22.0	19.7	
Females[1]	—	—	26.5	26.8	26.7	23.9	26.4	25.6	24.4	20.3	19.1	b
Females[2]	22.6	21.0	23.2	27.0	25.0	22.3	25.0	20.0	21.3	15.5	17.7	
Grade												
7	8.7	12.8	12.2	14.2	14.3	7.8	12.5	10.2	5.8	5.9	6.7	b
8	—	—	22.8	17.8	22.3	13.4	13.1	14.0	10.6	11.2	9.2	b
9	24.4	26.4	27.5	36.6	30.8	28.1	30.0	26.3	21.2	16.4	17.4	b
10	—	—	43.8	39.9	36.7	34.0	35.3	34.8	30.6	23.6	27.9	b
11	38.0	35.6	45.8	44.2	46.2	36.9	36.2	31.4	35.4	29.9	28.1	b
12	—	—	38.7	36.7	37.2	38.2	35.7	42.6	39.6	28.7	30.5	
Region												
Toronto[1]	—	—	26.3	31.1	30.7	23.6	28.9	28.0	19.3	22.4	25.5	
Toronto[2]	26.2	26.8	26.7	34.4	30.3	22.6	23.8	24.4	18.5	18.5	18.8	
North[1]	—	—	33.0	26.0	27.6	27.8	29.9	24.1	26.8	16.0	19.7	b
North[2]	27.7	24.4	29.0	21.2	28.4	23.8	29.4	21.5	22.1	14.1	15.5	
West[1]	—	—	32.5	33.0	33.7	27.5	27.4	28.4	28.6	19.8	20.1	b
West[2]	25.2	26.3	29.4	33.8	34.3	24.2	27.6	24.2	21.8	18.7	18.3	
East[1]	—	—	32.3	33.0	31.5	28.4	27.9	29.2	25.9	23.2	22.9	b
East[2]	21.5	23.8	30.7	29.3	28.4	26.8	26.5	22.8	23.7	20.1	19.7	

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) question asked of a random half sample in each year except 1995; (4) no significant differences 2015 vs. 2013; [b] 2015 vs. 1999 significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: In the last 12 months, have you seen anyone selling illegal drugs in your neighbourhood?

Source: OSDUHS, Centre for Addiction & Mental Health

3.13 Overview of Drug Use in the Ontario LHIN Areas

(Table 3.13.1)

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 **www.lhins.on.ca**). This section provides the 2015 estimates for most drug use measures **among secondary school students only (grades 9 through 12)** according to the LHINs. Students in grade 7 and 8 were excluded from the analysis because of a considerable imbalance of the number of elementary/middle schools across the LHINs. For the present analysis, students were assigned to LHINs using the six-digit postal code of the school. Due to small sample sizes, some adjacent LHINs were merged. The 12 LHIN areas presented here are:

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

Figure 3.13.1
Local Health Integration Networks of Ontario

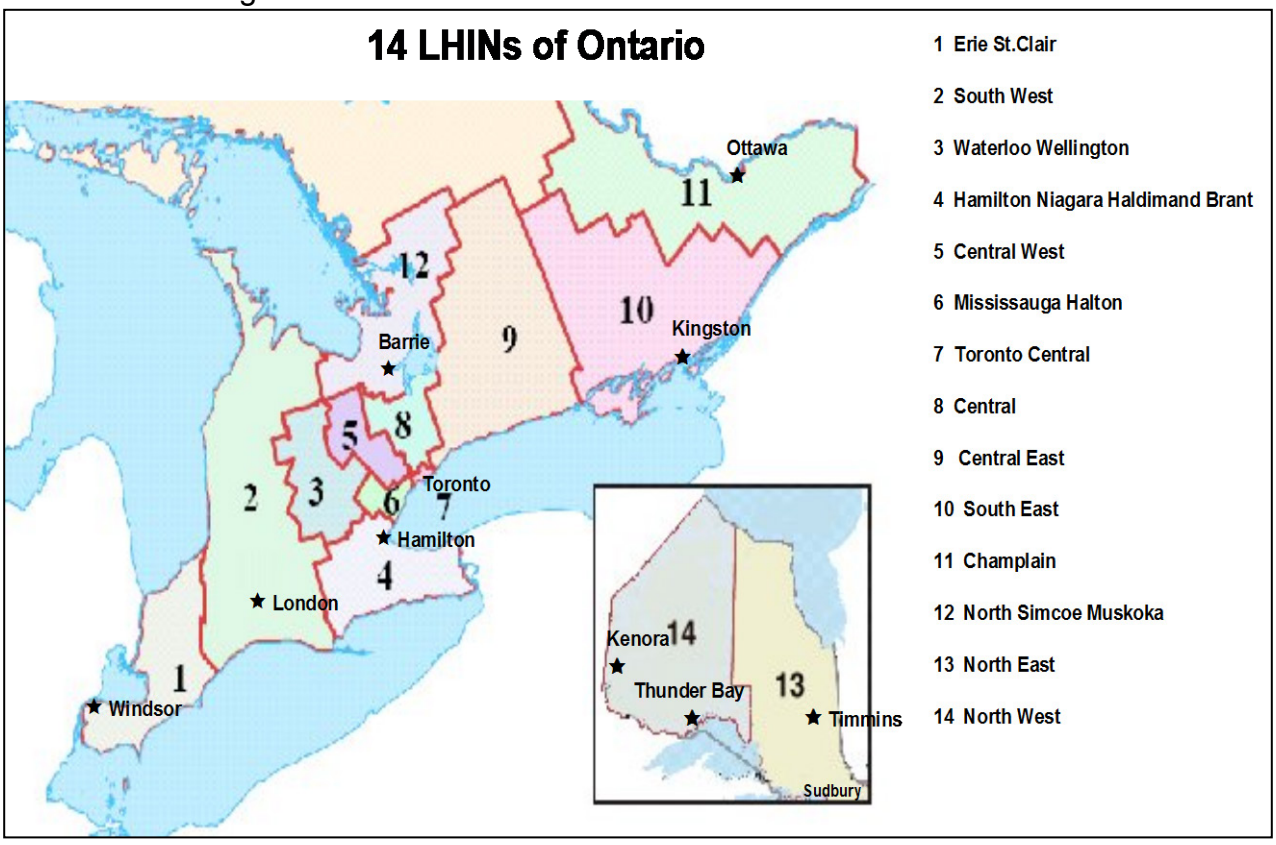


Table 3.13.1: Percentage of Secondary Students (**Grades 9–12**) Reporting Drug Use in the Past Year and Other Selected Indicators, by Local Health Integration Network (LHIN) Area, 2015 OSDUHS

	Erie St. Clair + South West	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=) *(School n=)*	*(559)* *(8)*	*(255)* *(4)*	*(1,022)* *(19)*	*(548)* *(10)*	*(323)* *(6)*	*(279)* *(5)*	*(1,293)* *(21)*	*(689)* *(12)*	*(302)* *(5)*	*(559)* *(9)*	*(498)* *(13)*	*(270)* *(5)*	*(6,597)* *(117)*
Tobacco Cigarettes (95% CI)	†	**11.3** (6.5-18.9)	**12.8** (8.7-18.4)	**7.3** (4.4-12.0)	†	**7.1*** (4.8-10.3)	**11.4** (8.9-14.5)	**11.3** (7.7-16.2)	**14.8** (11.0-19.5)	**13.0** (9.4-17.6)	**16.1*** (11.6-21.9)	**14.1** (8.6-22.5)	**11.1** (9.7-12.7)
Smokeless (Chewing) Tobacco	**5.0** (2.8-8.8)	**14.0*** (7.1-25.8)	**10.2** (5.6-17.8)	†	†	†	**4.0*** (2.2-7.0)	**8.4** (5.6-12.4)	†	**7.8** (4.4-13.4)	**8.3** (5.1-13.4)	†	**8.2** (6.3-10.6)
Waterpipe (Hookah)	†	**7.7** (4.6-12.5)	**11.3** (7.7-16.4)	**14.3*** (10.6-19.1)	**13.4** (8.2-21.2)	†	**11.3** (8.4-15.0)	**10.9** (8.9-13.2)	**10.2** (6.0-17.0)	**12.4** (7.4-19.8)	†	†	**10.6** (9.1-12.4)
Electronic Cigarettes	†	**21.6*** (14.4-31.2)	**14.9** (9.9-21.9)	**12.4** (9.1-16.6)	†	**7.3*** (4.1-12.4)	**14.7** (10.7-20.0)	**13.8** (11.3-16.9)	**25.1**** (17.6-34.5)	**22.0*** (15.7-29.8)	**16.7** (11.8-23.3)	†	**14.8** (12.9-17.1)
Cannabis Oil/Liquid in an Electronic Cigarette	**2.5*** (1.4-4.6)	**8.3** (4.9-13.5)	**6.7** (4.1-10.7)	†	†	†	**6.1** (4.2-8.8)	**5.1** (3.3-7.9)	**5.4** (2.8-10.2)	**8.6** (5.0-14.5)	**7.8** (4.1-14.4)	**10.9**** (6.7-17.2)	**5.1** (4.2-6.2)
Alcohol	**58.5** (48.5-67.8)	**70.6** (55.7-82.0)	**54.6** (43.3-65.6)	**50.6** (40.7-60.5)	**50.7** (33.5-67.8)	**56.4** (46.5-65.9)	**59.3** (52.9-65.3)	**53.4** (44.4-62.2)	**63.4** (51.0-74.3)	**60.7** (55.0-66.1)	**69.0*** (62.0-75.2)	**67.2*** (60.9-73.0)	**58.2** (54.7-61.6)
Alcohol Mixed with an Energy Drink	**11.4*** (7.4-17.0)	**19.3** (12.6-28.4)	**18.4** (13.1-25.4)	**13.2** (9.7-17.7)	**12.3** (6.8-21.2)	**18.9** (12.7-27.4)	**16.8** (11.7-23.4)	**15.7** (11.1-21.7)	**27.6*** (18.3-39.2)	**21.7** (15.0-30.3)	**13.9** (10.2-18.6)	**18.9** (10.3-32.1)	**17.4** (15.2-19.7)
Binge Drinking (Past Month)	**23.3** (16.5-32.0)	**31.2** (20.1-45.0)	**24.9** (18.8-32.3)	**15.2**** (13.2-17.4)	**16.2** (8.9-27.7)	**24.8** (12.8-42.6)	**18.4** (13.4-24.8)	**21.8** (15.8-29.2)	**30.3** (20.7-42.0)	**24.3** (19.0-30.4)	**28.5** (24.0-33.5)	**32.9** (22.8-44.8)	**23.3** (20.7-26.1)
Drunkenness (Past Month)	**20.8** (13.9-30.0)	**28.0** (19.0-39.3)	**22.5** (17.4-28.6)	**13.1**** (10.8-15.9)	**15.0** (8.6-24.9)	**24.7** (15.7-36.7)	**17.3** (12.4-23.6)	**17.7** (12.2-25.0)	**29.0*** (21.5-37.8)	**21.3** (14.5-30.0)	**22.8** (18.8-27.4)	**29.9*** (22.8-38.1)	**21.0** (18.7-23.5)
Cannabis	**26.4** (18.0-37.0)	**32.0** (23.9-41.5)	**29.7** (22.0-38.8)	**27.5** (23.7-31.6)	†	**28.8** (17.8-43.0)	**26.7** (19.8-35.0)	**28.0** (22.9-33.7)	**30.0** (20.5-41.6)	**31.0** (26.3-36.3)	**31.1** (26.0-36.7)	**29.4** (21.6-38.7)	**28.1** (25.4-31.0)
Synthetic Cannabis ("Spice," "K2")	†	**1.2** (0.6-2.2)	†	**2.9*** (1.6-5.2)	†	†	**2.2** (1.3-3.8)	**2.1** (1.2-3.7)	†	**1.9** (1.0-3.4)	†	**2.4*** (1.3-4.3)	**1.6** (1.1-2.1)
Mushrooms/Mesc.	†	**3.8** (2.8-5.0)	**3.6** (2.2-5.6)	†	†	†	**2.8** (1.8-4.2)	**2.7** (1.9-3.9)	†	**3.2** (1.7-5.9)	**4.3** (2.8-6.6)	†	**3.2** (2.4-4.3)
Cocaine	**2.5** (1.5-4.1)	**3.8*** (2.8-5.2)	†	†	†	†	**2.9** (1.8-4.6)	**1.9** (1.1-3.3)	†	**3.6** (2.0-6.4)	**4.4** (2.4-7.8)	†	**2.5** (2.0-3.2)
Ecstasy	**3.1*** (2.0-4.7)	**4.6** (3.8-5.5)	**5.5** (3.2-9.3)	**4.7** (3.5-6.3)	†	†	**6.3** (4.1-9.4)	**6.0** (4.1-8.7)	**5.5** (3.1-9.7)	**5.4** (3.0-9.7)	**6.3** (4.1-9.5)	**5.3** (2.7-9.9)	**5.4** (4.5-6.4)
Opioid Pain Relievers (NM)	**5.9** (3.2-10.7)	**9.3** (4.9-16.9)	**12.8*** (11.1-14.8)	**10.8** (7.7-15.1)	**14.0** (9.3-20.6)	**10.6** (6.6-16.4)	**10.6** (9.0-12.5)	**11.8** (9.8-14.2)	**11.4** (8.8-14.7)	**8.8** (6.8-11.1)	**10.8** (8.3-13.9)	†	**10.6** (9.5-11.7)
Tranquillizers (NM)	†	**2.2** (1.2-4.2)	**1.8** (1.2-2.9)	**1.7** (1.0-3.0)	**1.7** (1.2-2.3)	†	**2.3** (1.4-3.8)	**2.1** (1.3-3.3)	†	†	†	†	**2.1** (1.7-2.7)
OTC Cough/Cold Medication (NM)	**4.3*** (3.3-5.5)	†	**5.1** (3.1-8.5)	**7.7** (5.2-11.5)	†	**4.5** (2.8-7.0)	**6.2** (4.6-8.1)	**6.7** (5.3-8.2)	**8.5** (5.6-12.7)	**6.9** (3.8-12.0)	**8.0** (5.6-11.4)	**4.9** (3.2-7.5)	**6.4** (5.6-7.4)
High-Caffeine Energy Drinks	**39.6** (33.6-45.9)	**37.3** (28.7-46.8)	**40.3** (32.8-48.3)	**39.3** (33.9-45.0)	**38.4** (33.9-43.2)	**35.5** (30.3-41.0)	**36.7** (32.3-41.4)	**37.0** (32.4-41.9)	**47.0** (38.6-55.7)	**37.5** (31.2-44.2)	**44.8*** (41.5-48.2)	**44.8** (38.4-51.4)	**39.7** (37.5-41.9)

(continued)

	Erie St. Clair + South West	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=)	*(559)*	*(255)*	*(1,022)*	*(548)*	*(323)*	*(279)*	*(1,293)*	*(689)*	*(302)*	*(559)*	*(498)*	*(270)*	*(6,597)*
(School n=)	*(8)*	*(4)*	*(19)*	*(10)*	*(6)*	*(5)*	*(21)*	*(12)*	*(5)*	*(9)*	*(13)*	*(5)*	*(117)*
Any NM Prescription Drug Use	**6.5*** (3.8-10.7)	**10.7** (6.4-17.5)	**15.2*** (12.6-18.2)	**11.9** (8.8-16.0)	**14.5** (9.5-21.4)	**13.4** (8.3-21.1)	**12.6** (10.7-14.7)	**13.2** (11.1-15.6)	**13.4** (10.2-17.5)	**10.9** (8.2-14.5)	**12.7** (9.3-17.0)	**10.8** (5.9-19.0)	**12.1** (11.0-13.4)
Any Drug Use incl. Cannabis	**31.4** (24.7-39.0)	**41.0** (34.1-48.2)	**41.8** (33.7-50.4)	**35.6** (28.9-43.0)	**33.4** (22.7-46.1)	**34.2** (23.9-46.3)	**34.8** (29.0-41.1)	**39.3** (30.9-48.3)	**39.6** (27.2-53.3)	**42.2** (31.9-53.2)	**34.5** (29.0-40.4)	**32.4** (25.0-40.8)	**36.9** (33.9-39.9)
Any Drug Use excl. Cannabis	**15.0*** (12.6-17.7)	**20.7** (12.5-32.1)	**25.5** (19.8-32.2)	**21.0** (15.2-28.4)	**23.8** (18.0-30.7)	**22.5** (13.1-35.7)	**19.4** (15.0-24.7)	**24.6** (17.4-33.6)	**24.4** (18.3-31.8)	**21.8** (14.6-31.3)	**17.6** (12.8-23.6)	**17.3** (11.8-24.5)	**21.5** (19.3-23.9)
Hazardous/Harmful Drinking (AUDIT)	**24.3** (16.6-34.1)	**18.5** (11.0-29.2)	**18.1** (11.9-26.4)	**11.2*** (6.6-18.6)	**14.6** (7.9-25.3)	**19.8** (11.7-31.5)	**15.4** (11.5-20.2)	**16.9** (10.7-25.6)	**32.0*** (20.0-46.9)	**15.6** (11.6-20.8)	**26.0*** (21.4-31.1)	**28.7*** (19.8-39.6)	**19.8** (17.0-23.0)
Drug Use Problem (CRAFFT)	**17.1** (11.3-25.1)	**11.3*** (9.3-13.6)	**13.9** (11.2-17.1)	**16.4** (12.0-22.2)	**15.9** (8.9-26.7)	†	**15.8** (11.1-22.1)	**13.6** (10.4-17.6)	**18.8** (11.0-30.4)	**15.4** (13.1-18.0)	**18.4** (14.5-23.1)	**23.1** (15.8-32.6)	**16.1** (14.0-18.3)
Passenger/Alcohol	**17.3** (12.2-23.9)	**17.1** (13.5-21.3)	**17.8** (15.6-20.2)	**16.9** (14.0-20.3)	**13.0** (7.9-20.8)	**13.4** (7.0-24.4)	**14.9** (12.5-17.6)	**20.8** (16.5-25.8)	**19.6** (15.0-25.2)	**14.7** (12.6-17.0)	**17.9** (11.4-27.0)	**17.5** (13.3-22.6)	**17.2** (15.6-18.9)
Passenger/Drugs	**15.5** (8.9-25.6)	**14.5** (10.0-20.4)	**16.3** (13.1-20.1)	**14.6** (9.9-20.9)	**9.2** (4.7-17.4)	**12.8** (5.8-25.7)	**15.0** (11.3-19.6)	**15.2** (12.6-18.3)	**18.9** (11.4-29.6)	**16.8** (13.0-21.6)	**19.4** (12.7-28.6)	**19.9** (14.1-27.4)	**15.5** (13.5-17.6)
Cannabis-Driving (Drivers Grades 10-12)	**9.7** (6.3-14.7)	**13.7*** (10.8-17.3)	**9.0** (5.0-15.4)	†	**7.6** (4.2-13.6)	†	**12.6** (8.8-17.7)	**9.8** (5.8-16.1)	**9.0** (5.5-14.5)	†	**12.5** (8.0-19.0)	**21.5**** (11.8-36.0)	**9.8** (8.3-11.4)
Intoxicated at School	**10.7** (5.8-19.1)	**11.2** (7.4-16.6)	**24.0** (13.4-39.2)	**17.1** (12.1-23.7)	**7.0**** (4.5-10.6)	**15.7** (9.0-25.9)	**13.4** (9.4-18.8)	**16.4** (11.9-22.0)	**20.4** (14.6-27.8)	**17.1** (11.3-25.1)	**14.7** (7.2-27.8)	**14.8** (8.3-24.9)	**15.6** (13.3-18.1)
Was Given/Offered/ Sold a Drug at School	**13.1*** (8.4-19.9)	**17.6** (12.0-25.0)	**27.4*** (22.1-33.4)	**22.3** (16.0-30.2)	**24.6** (16.1-35.7)	**20.4** (12.7-30.9)	**19.9** (12.8-29.6)	**26.7** (20.1-34.5)	**27.4** (17.9-39.5)	**26.7** (20.4-34.3)	**20.3** (14.5-27.6)	**16.5** (9.9-26.1)	**22.3** (19.6-25.2)
Drug Use at School is a "Big Problem"	**25.1** (17.9-34.0)	**20.5** (12.1-32.7)	**39.9*** (32.7-47.6)	**29.2** (21.5-38.3)	**33.0** (23.0-44.7)	**29.2** (20.1-40.4)	**26.6** (22.0-31.9)	**30.9** (23.2-39.9)	**33.4** (27.2-40.2)	**27.6** (21.0-35.4)	**38.4** (27.3-50.8)	**40.3**** (34.3-46.5)	**30.2** (27.3-33.3)
Was Offered/Sold a Drug Anywhere	**26.8** (21.0-33.4)	**30.5** (20.2-43.1)	**30.0** (22.8-38.4)	**29.7** (21.5-39.5)	**28.0** (22.1-34.8)	**37.1** (23.5-53.1)	**27.6** (21.6-34.5)	**35.7** (27.9-44.4)	**33.9** (21.5-49.0)	**33.1** (24.3-43.3)	**27.2** (17.1-40.2)	**30.2** (22.3-39.4)	**30.9** (27.8-34.1)
Seen Drug Selling in Neighbourhood	**24.8** (19.1-31.6)	**19.4** (14.2-25.9)	**25.0** (21.4-28.9)	**31.7** (23.3-41.4)	**25.3** (19.8-31.8)	**28.5** (22.9-34.9)	**25.4** (19.5-32.4)	**31.6*** (26.0-37.8)	**26.8** (18.6-37.1)	**22.3** (15.1-31.6)	**21.2** (11.8-34.9)	**23.8** (14.4-36.7)	**26.5** (24.2-28.9)
Easy or Very Easy to Get Cigarettes	**69.8** (60.3-77.8)	**63.5** (52.2-73.5)	**68.0** (62.4-73.0)	**55.5*** (48.9-61.9)	**64.4** (57.4-70.9)	**55.0*** (44.9-64.6)	**60.5** (53.5-67.1)	**64.1** (57.9-69.9)	**64.2** (55.2-72.4)	**72.5** (58.8-82.9)	**66.7** (63.6-69.7)	**73.9** (53.7-87.3)	**63.8** (61.3-66.3)
Easy or Very Easy to Get Alcohol	**77.8** (70.9-83.5)	**84.2*** (76.8-89.6)	**72.8** (66.7-78.2)	**65.8*** (58.4-72.5)	**73.0** (61.3-82.2)	**72.4** (65.7-78.2)	**68.1*** (62.6-73.1)	**77.7** (71.6-82.9)	**77.4** (67.9-84.8)	**74.2** (61.0-84.1)	**76.3** (68.6-82.6)	**81.7** (70.5-89.3)	**74.5** (72.1-76.8)
Easy or Very Easy to Get Cannabis	**62.7** (53.1-71.3)	**63.3** (57.2-69.0)	**58.2** (53.1-63.1)	**54.8** (45.8-63.5)	**58.3** (47.8-68.0)	**56.9** (36.0-75.7)	**51.5*** (45.3-57.7)	**53.2** (47.0-59.2)	**59.7** (45.3-72.6)	**67.1** (56.6-76.1)	**60.2** (52.2-67.6)	**62.0** (49.4-73.2)	**57.8** (54.5-61.0)

Notes: (1) due to small sample sizes, the Erie St. Clair and the South West LHINs were merged, and the South East and the Champlain LHINs were merged; (2) binge drinking is defined as drinking 5 or more drinks on one occasion; (3) NM=nonmedical use, without a doctor's prescription; (4) "Any NM Use of a Prescription Drug" refers to the nonmedical use of prescription opioids, ADHD drugs, or tranquillizers/ sedatives; (5) "Any Drug Use Including Cannabis" refers to the past year use of any one of the 18 drugs asked about in the survey (excludes tobacco cigarettes, electronic cigarettes, waterpipe, alcohol, and energy drinks); (6) "Passenger/Alcohol" refers to being a passenger in a vehicle with a driver who had been drinking alcohol; (7) "Passenger/Drugs" refers to being a passenger in a vehicle with a driver who had been using drugs; (8) estimates for daily cigarette smoking, inhalants, salvia, jimson weed, methamphetamine, crack, heroin, mephedrone ("bath salts"), ADHD drugs, modafinil, cannabis dependence, and drinking and driving are not presented due to suppressed estimates in most of the LHIN areas; (9) entries in brackets are 95% confidence intervals; (10) † estimate suppressed due to unreliability; (11) *p<.05, **p<.01 significant difference, LHIN area vs. Ontario.

Source: OSDUHS, Centre for Addiction & Mental Health

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

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

Table 3.14.1: Percentage of Students in the Greater Toronto Area (GTA) Reporting Past Year Drug Use, 2011–2015 OSDUHS

Past Year Drug Use	2011 GTA % (95% CI)	2013 GTA % (95% CI)	2015 GTA % (95% CI)		2015 Ontario % (95% CI)
AMONG GRADES 7–12	(*n*=3,726)	(*n*=4,806)	(*n*=4,288)		(*n*=10,426)
Tobacco Cigarette Smoking	9.2 (7.3-11.4)	8.3 (6.2-10.9)	6.7 (5.4-8.4)	*	8.6 (7.5-9.9)
Daily Tobacco Cigarette Smoking	4.1 (3.1-5.3)	2.9 (1.8-4.6)	2.1 (1.4-3.0)		3.1 (2.5-3.8)
Smokeless (Chewing) Tobacco	4.3 (3.1-5.9)	4.8 (3.4-6.8)	3.8 (2.8-5.1)	*	6.3 (4.9-8.1)
Waterpipe (Hookah)	--	10.6 (8.3-13.5)	8.6 (7.0-10.6)		8.3 (7.1-9.6)
Electronic Cigarettes (Vape Pens)	--	--	9.3 (7.7-11.3)	*	11.7 (10.2-13.4)
Alcohol	49.6 (44.5-54.7)	43.6 (38.3-49.0)	41.9 (37.7-46.2)	*	45.8 (42.9-48.7)
Alcohol mixed with an Energy Drink	--	14.5 (11.3-18.4)	12.1 (10.0-14.4)	*	14.0 (12.3-15.9)
Binge Drinking (past month)	18.9 (15.5-22.8)	15.6 (12.4-19.5)	13.6 (11.2-16.4)	*	17.6 (15.6-19.7)
Drunkenness (past month)	16.1 (13.4-19.2)	14.2 (10.8-18.4)	12.4 (10.2-14.9)	*	15.9 (14.2-17.8)
Cannabis	19.7 (16.6-23.2)	21.8 (17.7-26.5)	19.2 (16.3-22.5)		21.3 (19.2-23.6)
Synthetic Cannabis (“Spice,” “K2”)	--	2.3 (1.3-3.9)	1.3 (0.9-1.9)		1.3 (0.9-1.7)
Inhalants (Glue or Solvents)	6.7 (5.2-8.4)	4.6 (3.5-6.1)	3.8 (2.9-4.9)	*	2.8 (2.2-3.4)
Salvia Divinorum	2.5 (1.7-3.6)	2.8 (1.6-4.7)	1.6 (1.0-2.5)		1.6 (1.1-2.3)
OTC Cough/Cold Medication	6.9 (5.7-8.4)	10.1 (8.7-11.6)	5.9 (5.0-7.1)		6.4 (5.3-7.6)
Opioid Pain Relievers (NM)	14.5 (12.5-16.8)	14.2 (12.3-16.2)	10.8 (9.6-12.1)		10.0 (9.0-11.0)
ADHD Drugs (NM)	0.6 (0.4-1.0)	1.2 (0.7-1.9)	1.6 (1.1-2.3)		2.1 (1.6-2.7)
High-Caffeine Energy Drinks	42.9 (39.0-47.0)	36.7 (33.4-40.1)	33.0 (31.0-35.2)		34.8 (32.8-36.9)
AMONG GRADES 9–12 ONLY	(*n*=2,578)	(*n*=3,330)	(*n*=2,966)		(*n*=6,597)
Cannabis Oil in an Electronic Cigarette	--	--	4.5 (3.2-6.1)		5.1 (4.2-6.2)
LSD	2.1 (1.3-3.2)	1.7 (1.1-2.8)	1.1 (0.8-1.6)		1.5 (1.1-2.0)
Mushrooms/Mescaline	4.1 (2.6-6.6)	3.5 (2.1-5.9)	2.5 (1.8-3.3)		3.2 (2.4-4.3)
Jimson Weed	--	--	1.0 (0.5-1.7)	*	1.8 (1.3-2.6)
Methamphetamine (incl. Crystal Meth.)	0.9 (0.5-1.4)	0.5 (0.3-0.9)	0.8 (0.5-1.2)		1.1 (0.7-1.8)
Cocaine	1.9 (1.3-2.7)	2.3 (1.6-3.2)	2.0 (1.4-2.7)		2.5 (2.0-3.2)
Ecstasy (MDMA)	3.6 (2.2-5.8)	2.9 (1.8-4.6)	6.1 (4.8-7.7)		5.4 (4.5-6.4)
Tranquillizers/Sedatives (NM)	2.4 (1.8-3.3)	2.0 (1.3-3.0)	2.0 (1.5-2.6)		2.1 (1.7-2.7)
Any NM Use of a Prescription Drug	17.1 (14.6-19.9)	17.3 (15.1-19.7)	13.0 (11.4-14.7)		12.1 (11.0-13.4)
Any Drug Use including Cannabis	--	--	35.4 (31.5-39.6)		36.9 (33.9-39.9)
Any Drug Use excluding Cannabis	--	--	22.3 (18.8-26.2)		21.5 (19.3-23.9)

Notes: (1) NM=nonmedical use, without a doctor’s prescription; (2) ADHD=Attention-Deficit Hyperactivity Disorder; (3) “Any NM Use of a Prescription Drug” refers to nonmedical use of prescription opioids, ADHD drugs, or tranquillizers/sedatives; (4) “Any Drug Including Cannabis” refers to the use of any one of 18 drugs asked about in the 2015 survey (excludes alcohol, tobacco and electronic cigarettes, waterpipe, and high-caffeine energy drinks); (5) crack, heroin, mephedrone (“bath salts”), and modafinil are not presented due to suppressed estimates in 2015; (6) * 2015 GTA estimate differs from the 2015 Ontario estimate, p<.05 (not controlling for other factors).
Source: OSDUHS, Centre for Addiction & Mental Health

4. SUMMARY AND DISCUSSION

The Public Health Approach Toward Drug Use

Tobacco, alcohol, and illicit drug use are leading causes of morbidity and mortality, both during adolescence and in adulthood. The OSDUHS performs several public health functions, including: 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, evaluating the efficacy of a policy or program on a population level, and disseminating trustworthy information to health and education professionals and the general public.

Study Limitations and Data Interpretation

Before discussing our findings, we must first remind readers of some of the limitations of this study. Although sample surveys are the most feasible means to monitor drug use in the student population, those interpreting the OSDUHS results should consider the following limitations. First, these data are based on self-reports, which cannot be readily verified, nor are they based on clinical assessment. Respondents may unintentionally misreport their responses due to various errors in the response process. Respondents may err in their reporting of a behaviour or event due to such factors as the event not being stored in memory; not understanding the question; being unable to retrieve the information; and difficulty in formatting a response based on provided categories (Biemer & Lyberg, 2003).

Second, self-reports of drug use, other illegal behaviours, and sensitive issues likely underestimate the true rate by some unknown magnitude (Adlaf, 2005; Brener, Billy, & Grady, 2003; Delaney-Black et al., 2010; Hibell et al., 2003; McCambridge & Strang, 2006). However, there is evidence that conditions of anonymity and an in-class survey setting yield reasonably accurate reports of drug use (Bjarnason & Adalbjarnardottir, 2000; Brener, Billy, & Grady, 2003; Gfroerer et al., 1997; Griesler et al., 2008; Hibell et al., 2003; O'Malley et al., 2000). Further, the extent of underreporting is not likely to vary over time. Thus, estimates of change should remain valid and unaffected by bias.

Third, another factor that can deflate drug use estimates is the bias caused by nonrespondents. We do not know whether, or by how much, nonrespondents (i.e., absent students, suspended students, and those who were not allowed or refused to participate) differ from respondents. Research has shown that students who are absent from school report higher rates of drug use than those who attend regularly (Bovet et al., 2006; Eaton et al., 2008; Michaud et al., 1998; Weitzman et al., 2003). However, the rate of student absenteeism in the OSDUHS has remained fairly stable across time, and so the trends reported should, again, remain valid. More compelling, our analysis comparing high-responding classes to low-responding classes found few differences in the reporting of drug use and related measures (see the Methods chapter).

Fourth, our findings cannot be generalized to adolescents who are not attending school (e.g., dropouts, street youth, those in the military or in an institutionalized health or correctional setting). Drug use in such groups can be appreciably different from what is found in the mainstream student population (Smart, Adlaf, Walsh, & Zdanowicz, 1992; Smart, Adlaf, Walsh, & Zdanowicz, 1994). However, the bias

caused by such noncoverage depends not only on the difference in drug use between those surveyed and those not, but also on the size of the group missed. Thus, although drug use may be more likely among these adolescents excluded because they are out-of-scope, if the size of the excluded group is small relative to the total population, the bias may not be substantial (Heeringa et al., 2010). In our case, the non-school group excluded from our target constitutes only about 8% of the total adolescent population between the ages of 12 and 18 in Ontario.

Fifth, the data reflect a snapshot in time and because we do not follow the same students across time, we cannot identify causes of individual change or the temporal ordering of risk factors (i.e., whether X causes Y, or Y causes X). In addition, we cannot determine from these data to what extent our findings are adolescent-limited – that is, whether drug use changes with the transition into emerging adulthood.

Sixth and finally, the findings in such a large study are numerous and complex, and some findings are more reliable than others. For example, random variation causes us to be cautious in interpreting change between two points in time. Therefore, we place greater emphasis on change occurring over multiple survey time points.

Despite these limitations, population surveillance studies such as the OSDUHS excel at identifying the extent of various health behaviours that have important current and future implications for adolescent well-being. Population health surveys help to identify which population groups are at the greatest risk of poor health outcomes, help to identify areas requiring more research, and help to identify potential future trends that have implications for future service and programming needs.

Although a majority of drugs examined in the 2015 OSDUHS had past year prevalence estimates below 5%, we should not dismiss these rates as unimportant. Whether a given drug poses significant problems in the population depends not only on the percentage using, but also on the likelihood of becoming dependent and of other hazards as well. Thus, it would be irresponsible to ignore the harm caused by drugs that are used by a small proportion. Even low prevalence rates represent large numbers of students. If we extrapolate our estimates to the total population of students in grades 7 through 12 in Ontario's publicly funded schools (approximately 961,500 students), we estimate that about 20,000 (2.1%) use cannabis daily, and about 12,100 (1.3%) used synthetic cannabis ("spice," "K2") at least once in the past year.

Encouraging Findings

This report presented findings about the past year use of alcohol, tobacco and alternative devices, illicit drugs, and the nonmedical (NM) use of prescription drugs, and changes since 1977. There are many encouraging findings from the 2015 OSDUHS, as described below.

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

- **Alcohol**: Past year drinking reached a historical low in 2013 and remained stable in 2015. Drinking has declined over time, and the current estimate shows that less than half of the student population drinks alcohol. The magnitude of the decline has been even greater over the long-term, since the late 1970s when roughly three-quarters of students drank. More importantly, **binge drinking** (five or more drinks on one occasion) is significantly lower today compared with elevated levels evident during the two peak periods seen in the late 1970s and the late 1990s.

- The past year **nonmedical use of prescription opioids** (e.g., Percocet, Percodan, Tylenol #3, OxyNEO) significantly declined between 2013 and 2015, continuing on a downward trend that began a few years ago.

- The past year use of highly **caffeinated energy drinks** (such as Red Bull, Monster, Rockstar, Amp) continued to decline, showing a significant drop between 2013 and 2015.

- The past year use of **over-the-counter cough and cold medication with dextromethorphan** (also known as "dex," "robos," "sizzurp") used to "get high" significantly declined between 2013 and 2015, returning to a level seen in 2009, when monitoring first began.

- **Driving after drinking alcohol** among licensed students is lower in 2015 than estimates from about a decade ago, and markedly lower than rates evident in the late 1970s and early 1980s. It is worth noting that the declines in drinking and driving seen earlier this decade followed the introduction of several new initiatives designed to prevent impaired driving in Ontario, including requiring a 0 Blood Alcohol Content (BAC) among all drivers up to age 21, and increasing the sanctions for drivers who are apprehended with BACs in the "warn range" (.05% to .08%).

- **Driving after cannabis use** among licensed students is also lower in 2015 compared with estimates from about a decade ago. This reduction corresponds with the introduction of public education initiatives by organizations, such as MADD Canada, to address this behaviour.

- 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 declined during the past decade.

- Almost half (42%) of students **used no drug** in the past year, including alcohol and cigarettes. This proportion is significantly higher than the estimates from about a decade ago and substantially higher than the estimates from the late 1970s and early 1980s, when only about 20% to 25% of students were abstinent during the past year.

- The **age of initiation** for drinking alcohol, smoking cigarettes, and using cannabis has increased. Our data show that students today initiate smoking cigarettes, drinking alcohol, and using cannabis later in adolescence than students did decades ago. Beginning use at a later age predicts fewer substance-related problems later on in life.

- Despite recent media attention given to the use of so-called "street drugs" such as **methamphetamine** (including crystal methamphetamine), **crack**, and **heroin** in various populations, there is no evidence that these drugs have measurably diffused into the student population, as the 2015 prevalence estimates are very low.

- One function of the OSDUHS is to track the **emergence of new drugs**. For example, in recent years we have seen the emergence of nonmedical use of prescription opioids and salvia divinorum. Starting in 2011, the OSDUHS asked students about the use **mephedrone** (4-methylmethcathinone, more commonly known as "bath salts"). Starting in 2013, we asked about **synthetic cannabis** ("spice" or "K2") use. These are relatively new synthetic drugs available for purchase over the Internet and are dangerous because of their unknown chemical compounds. These drugs have appeared in other countries, but only anecdotal evidence exists for use in Canada. The 2015 survey shows that synthetic cannabis ("spice," "K2") appears to have surfaced among Ontario students as about 1% of students (2% of 12th graders) report past year use, but there has been no change since the previous survey. The prevalence estimate for mephedrone ("bath salts") was very low and there has been no change over time. 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 eventually increase in popularity.

- Past year use of almost all **illicit drugs** monitored (e.g., cannabis, cocaine, ecstasy) is lower in 2015 compared with estimates from about a decade or so ago.

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

- Reported **intoxication at school** and **drug availability at school** are currently lower than estimates seen a decade ago.

Some Public Health Concerns

Several findings should be viewed as public health concerns. Tobacco and alcohol remain topics of concern because these legal drugs are responsible for greater harm to the physical and social well-being of youth, as well as to the population as a whole, compared with illicit drugs.

- **Tobacco cigarette smoking** is the leading preventable cause of disease. Although student smoking has substantially declined over time, there is still a significant proportion – about one-in-ten (9%) – that smoke cigarettes (about 82,700 students in Ontario). The consistent decline in smoking seen throughout the 2000s appears to have levelled off as no further decline has occurred since 2011.

- For the first time in 2015, students in grades 7–12 were asked about the use of **electronic cigarettes** (e-cigarettes) *in the past year*. E-cigarettes are battery-operated devices that look like cigarettes and are designed to deliver nicotine and/or other chemicals to the lungs without burning tobacco. A vapour or mist is inhaled to simulate the act of smoking. The liquid that is vaporized comes in hundreds of flavours, which are attractive to youth. Little is yet known about the health implications of using e-cigarettes, with or without nicotine. Potential harms include adverse health effects from inhaling e-cigarette vapour, which may contain nicotine and other toxins, and concerns about the "renormalization" of cigarette smoking (Rigotti, 2015; Stanbrook, 2013; Stanwick, 2015). Still, others suggest that e-cigarettes are less harmful than tobacco cigarettes and could possibly be beneficial in smoking cessation efforts (Bullen et al., 2013; Etter & Bullen, 2014; Hajek, Etter, Benowitz, Eissenberg, & McRobbie, 2014). About 12% of students (an estimated 92,300 in Ontario) use e-cigarettes, either with or without nicotine. It is worth noting that more students in Ontario use e-cigarettes than tobacco cigarettes, and more students tried e-cigarettes for the first time in the past year than tobacco cigarettes. Further, students perceive "regular" e-cigarette use to be less physically harmful than smoking one or two tobacco cigarettes daily.

- The OSDUHS asked about past year use of a **waterpipe** (hookah, shisha), which is a large apparatus typically used to smoke flavoured tobacco in a group setting. Waterpipe smoking is linked to health risks and diseases similar to tobacco cigarette smoking, and infectious diseases may be transmitted due to the sharing of the mouthpiece (Akl et al., 2010; Martinasek, McDermott, & Martini, 2011). We found that about 8% of students in grades 7–12 use a waterpipe (an estimated 76,200 in Ontario). Students' perception of potential risk of harm associated with regular waterpipe use decreased between 2013 and 2015.

- About 6% of students (an estimated 58,200 in Ontario) report using **smokeless tobacco**, also known as chewing tobacco, dipping tobacco, or snuff, and among males the prevalence is similar to cigarette smoking.

- **Alcohol** is the substance most widely used by Ontario students. Despite the recent decline, just under half (46%) of all students drink alcohol, and this increases to 72% among 12th graders. **Binge drinking** remains at an elevated level, as about one-in-six students (18% or an estimated 168,100 in Ontario) report drinking five or more drinks on the same occasion once in the past month. Among 12th graders, one-third (33%) binge drink at least once a month.

- One-in-five (20%) students in grades 9–12 **drink hazardously/harmfully** (about 138,500 high school students Ontario), meaning that their drinking increases their risk of current or future physical and social problems.

- One-in-five (19%) students in grades 9–12 **could not remember what happened when they were drinking** on at least one occasion in the past year, and one-in-ten (9%) were injured or injured someone in the past year due to their drinking.

- About one-in-four (27%) students in grades 9–12 report that they are **allowed to drink alcohol at home** with their friends (about 188,700 high school students in Ontario). This percentage increases to 38% among 12th graders.

- **Vehicles**: Despite long-term declines in drinking and driving, there are still about 5% of licensed students in grades 10 through 12 who report drinking and driving at least once in the past year (an estimated 15,300 in Ontario). A higher percentage (10%) of licensed students report driving after using cannabis (an estimated 29,500). Both of these behaviours have not significantly declined since the previous survey. About 15% of all students report being a passenger with a driver who had been drinking, and 12% 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-in-five 12th graders report these behaviours). All these behaviours increase the risk of unintentional injuries – the leading cause of death among young people. An important message from these data is that crash risk is not restricted to drivers.

- Over one-third (37%) of students in grades 9–12 report past year use of **at least one drug**, including a prescription drug or an OTC drug used for nonmedical purposes. The proportion increases with grade, reaching 46% by grade 12.

- **Cannabis** is the most common illegal drug used by students. About one-in-five (21%) students in grades 7–12 use cannabis (an estimated 203,900 in Ontario). This prevalence reaches 37% among 12th graders. Although the prevalence declined during the mid-to-late 2000s and is currently lower than the two historical peak periods, no further decline has occurred since 2011. The perceived risk of harm from using cannabis either experimentally or regularly has decreased in recent years.

- For the first time in 2015, high school students were asked if they used **cannabis liquid/oil/wax in an electronic cigarette** in the past year. About 5% of high school students (an estimated 35,300 in Ontario) vaporize cannabis in an e-cigarette. Vaporizing cannabis concentrates in an e-cigarette device, commonly called “vaping cannabis,” is a relatively new method of consuming cannabis and is gaining popularity (Budney, Sargent, & Lee, 2015). The degree to which vaping cannabis decreases or increases the health risks, compared with smoking cannabis, is not yet known, although some research suggests the THC content in vaporized oils and waxes is much higher than in a traditional marijuana joint (Budney et al., 2015; Morean, Kong, Camenga, Cavallo, & Krishnan-Sarin, 2015). Further, the perception of greater safety with using e-cigarettes rather than smoking cannabis, and the greater discretion due to minimal odour, may increase the likelihood of use in more places (Budney et al., 2015; Giroud, de Cesare, Berthet, Morean et al., 2015; Varlet, Concha-Lozano, & Favrat, 2015).

- Roughly 2% of secondary students (7% of past year cannabis users) report symptoms of **cannabis dependence**, characterized by loss of control and withdrawal. About 2% of students (an estimated 20,000 in Ontario) use **cannabis daily**. Short-term problems from regular cannabis use include memory impairment, reduced attention and motivation, which negatively affect school and family life (Hall, 2015; Hall & Degenhardt, 2009; Lisdahl & Price, 2012; Silins et al., 2014). Frequent or heavy cannabis use during adolescence is also worrisome due to potential long-term consequences. Research has shown a link to respiratory illnesses (Hall & Degenhardt, 2009), cancers (Calabria, Degenhardt, Hall, & Lynskey, 2010; Hall, 2015; Zhang et al., 1999), neuropsychological impairment (Meier et al., 2012; Raver, Haughwout, & Keller, 2013), depression (Horwood et al., 2012; Lev-Ran et al., 2014), anxiety (Degenhardt et al., 2012), and dependence (Hall, 2015; Silins et al., 2014) in adulthood. Further, research is accumulating that suggests an association between heavy or early cannabis use and the onset of psychotic symptoms in individuals who possess an underlying vulnerability to psychosis (Griffith-Lendering et al., 2013; Kuepper et al., 2011; Large, Sharma, Compton, Slade, & Nielssen, 2011; McLaren, Silins, Hutchinson, Mattick, & Hall, 2010; van Os et al., 2002).

- One-in-ten (10%) students report using a **prescription opioid pain reliever** without their own prescription at least once in the past year (representing about 95,000 in Ontario). The nonmedical use of this class of drugs, which includes Tylenol #3, codeine, Percocet, Percodan, and Demerol, ranks just after cannabis and electronic cigarette 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 use of opioids can lead to addiction (Manchikanti, Fellows, Ailinani, & Pampati, 2010; Okie, 2010).

- The one drug to show an increase in past year use since the previous survey is **ecstasy**, from 3% in 2013 to 5% in 2015 (among grades 9–12 only). The current level of use resembles levels seen a decade ago. The perceived availability of ecstasy also increased between 2013 and 2015, thus suggesting it has become easier to obtain.

- The current prevalence of **nonmedical use of drugs typically used to treat Attention-Deficit-Hyperactivity Disorder (ADHD)**, such as Ritalin and Adderall, is slightly but significantly higher than the estimate from 2007, the first year of monitoring (2% vs. 1%, respectively). The increase over time is evident only among females and not males. These stimulant drugs are typically misused to improve concentration and academic performance, or for weight control (Jeffers, Benotsch, & Koester, 2013; Wilens et al., 2008).

- One-in-eight (12%) students report having been **drunk or high at school** and this estimate reaches about 20% among grade 11 and 12 students. One-in-six (17%) students report being **offered, sold, or given a drug at school**, and this estimate reaches 25% among grade 11 and 12 students.

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

- The medical community has expressed concern about children and adolescents consuming **highly caffeinated energy drinks**, and have called for restrictions on the labelling, sales and marketing of these beverages (MacDonald, Stanbrook, & Hébert, 2010; Reissig, Strain, & Griffiths, 2009; Seifert, Schaechter, Hershorin, & Lipshultz,, 2011; Sepkowitz, 2013; Wolk, Ganetsky & Babu, 2012). Although the consumption of energy drinks does show a significant decline since the last survey, use remains quite high with about

35% of all students (an estimated 326,800 in Ontario) reporting past year use. One-in-eight (12% or an estimated 112,400) students report drinking an energy drink in the past week. An additional concern is the approximately 14% of students who reported drinking alcohol mixed with energy drinks in the past year. There are concerns that adolescents who mix these beverages increase their risk of harm (Arria et al., 2011; Howland & Rohsenow, 2013; O'Brien, McCoy, Rhodes, Wagoner, & Wolfson, 2008).

Overlapping Alcohol and Mental Health Problems

There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2015 OSDUHS founds that about 10% of students in grades 9–12 (an estimated 65,400 high school students in Ontario) report both hazardous/harmful drinking *and* moderate-to-serious psychological distress (symptoms of anxiety and depression). This percentage ranges from 2% among 9th graders to 13% among 12th graders, and is more prevalent among females (14%) than males (6%).

The link between substance use problems and mental health problems during adolescence is complex and there are several plausible explanations for the association. Some research shows that mental health problems such as anxiety and depression increase the risk of a substance use problem (Marmorstein, 2009; Wittchen et al., 2007; Wolitzky-Taylor, Bobova, Zinbarg, Mineka, & Craske, 2012). This is sometimes attributed to the "self-medication hypothesis," which suggests that the substance is used to cope with emotional distress (Khantzian, 1997). Conversely, other research shows that a substance use problem increases the risk of a mental health problem possibly due to the effects the substance has on brain functioning (Fergusson, Boden, & Horwood, 2009). Finally, the two problems could both be attributable to common risk factors (such as abuse, neglect) or other confounding factors (Goodwin, Fergusson, & Horwood, 2004). Regardless of etiology and sequence, early detection and treatment of substance use and mental health problems can ease the progression and severity of these concurrent problems.

Demographic Correlates of Drug Use

The strongest correlate of drug use found in this report was grade or age (see Table 4.2 for an overview). Generally, drug use is more likely to occur as grade level increases, typically peaking in grade 11 (ages 16/17) or grade 12 (ages 17/18). The exception to this is inhalant use, which is most prevalent among 7th and 8th graders, and declines by grade 9.

Sex is also associated with use of certain drugs. As summarized in Figure 4.1 and Table 4.2, males are significantly more likely to use energy drinks, electronic cigarettes, smokeless (chewing) tobacco, cannabis oil in an electronic cigarette, mushrooms, and salvia divinorum. Females are more likely to use tranquillizers/sedatives nonmedically.

There are important differences in student drug use according to region of the province. These are summarized in Figure 4.2 and Table 4.2.

Compared with the provincial average:

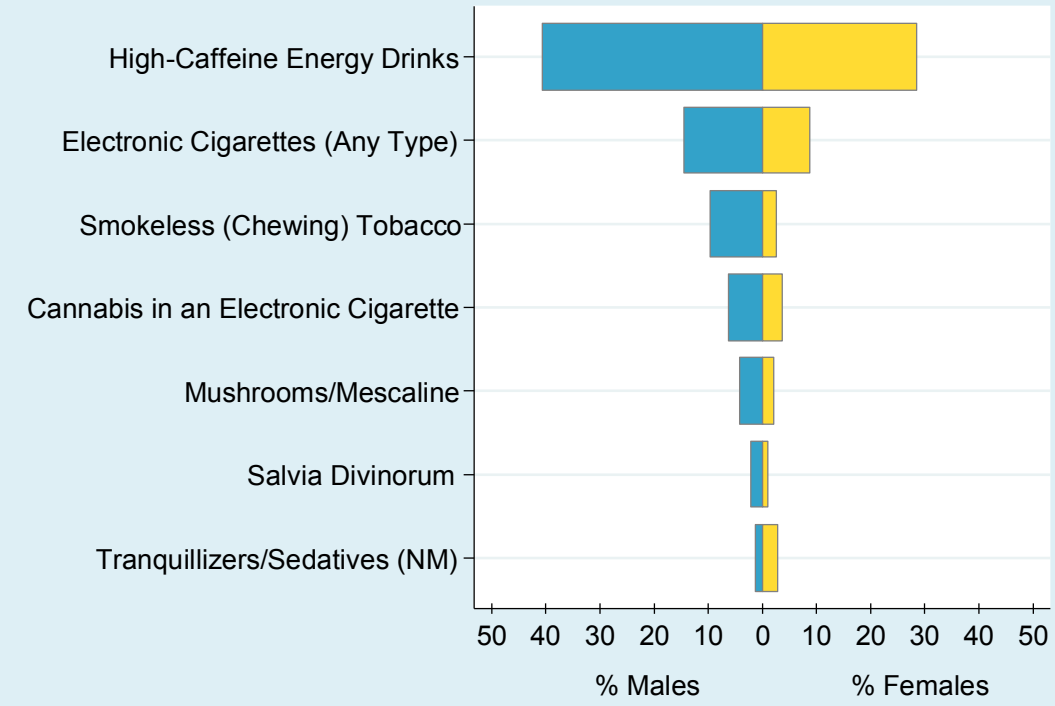
- Toronto students are less likely to drink alcohol and use smokeless (chewing) tobacco. They are more likely to use inhalants (i.e., inhale glue or solvents).

- Northern Ontario students are more likely to smoke tobacco cigarettes, drink alcohol, and to binge drink.

- Western Ontario students do not differ from the province as a whole on any drug use measure.

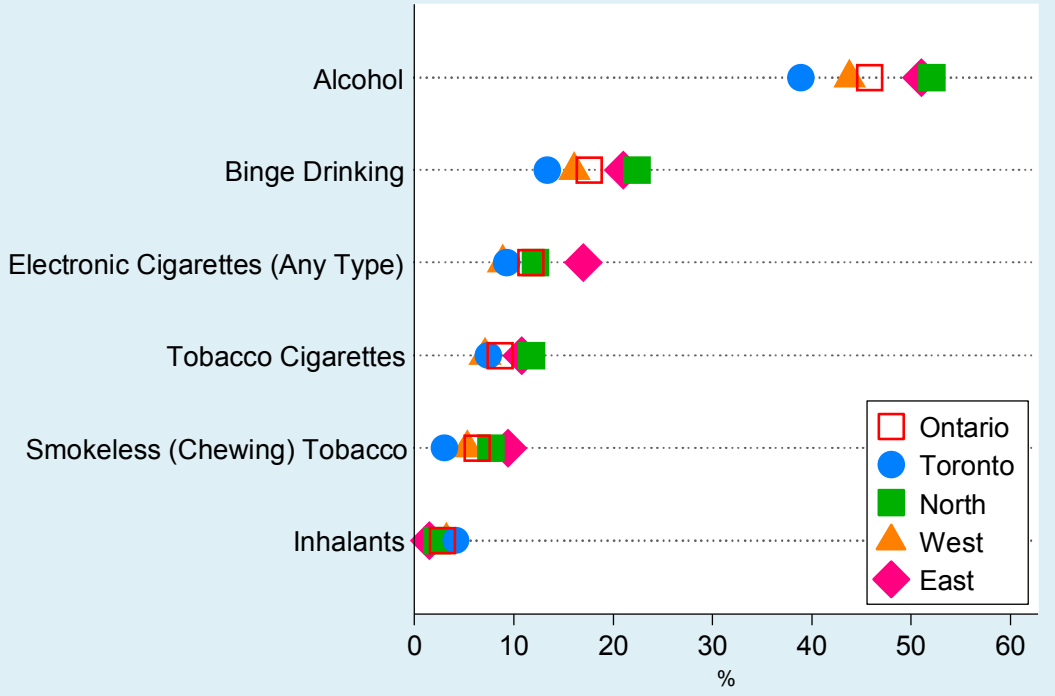
- Eastern Ontario students are more likely to smoke tobacco cigarettes and use electronic cigarettes. They are less likely to use inhalants (i.e., inhale glue or solvents).

Figure 4.1
Significant Sex Differences in Past Year Drug Use, 2015 OSDUHS



Notes: (1) cannabis in electronic cigarette, mushrooms, and tranquillizers were asked of Grades 9-12 only; (2) NM=nonmedical use, without a doctor's prescription

Figure 4.2
Significant Regional Differences in Past Year Drug Use, 2015 OSDUHS



Notes: (1) West region does not significantly differ from Ontario on any drug; (2) binge drinking refers to the past 4 weeks

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 (Nicholson, Duncan, White, & Stickle, 2013; Paglia-Boak & Adlaf, 2007; Toumbourou et al., 2007).

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.

The results also highlight the emergence of alternative methods of tobacco and nicotine use (electronic cigarettes, waterpipe), which are perceived as less harmful than traditional tobacco products. Public education about the potential hazards associated with these devices should be considered, especially as "vaping" substances seems to be increasing in popularity.

Our findings show that, except for cannabis and ecstasy, a relatively smaller percentage of youth use so-called "street" drugs such as cocaine, hallucinogenic drugs (e.g., mushrooms or LSD), or methamphetamine when compared with the percentage that use prescription drugs (e.g., opioid pain relievers) or over-the-counter cough/cold medications nonmedically. Similar changes in the "drug landscape" over the past decade have been seen in the United States (Miech et al., 2015). One likely explanation for this shift is that young people perceive these medications to be less harmful than "street" drugs given that they are legal and have therapeutic purposes (Friedman, 2006; Levine, 2007). Any prevention program should address the use and abuse of medication to "get high" by educating youth and parents about the risks of harm associated with the nonmedical use of these drugs.

Other findings in this report suggest that the prime period for prevention programs is between grades 7 and 10 (ages 12–15), as this is the most likely time for the initiation of substance use. However, the use of many drugs continues to increase in 11th grade, and drinking and binge drinking continue to increase in 12th grade, suggesting that prevention efforts should extend into the older grades as well.

Prevention efforts should include a component that targets young people's beliefs and attitudes about drugs, specifically the risks of physical harms that can occur from use. Increases over time in the perceived risk of harm from using a substance are associated with concurrent and subsequent decreases in the rate of use, and vice versa (Miech et al., 2015). Our data show that attitudes and beliefs about risk of harm and disapproval are drug-specific. This, combined with the divergence in historical trajectories of past year use of the various drugs studied over time, suggests that any prevention effort should provide drug-specific information.

Finally, the OSDUHS data also suggest a relationship between the use and availability of certain drugs such as alcohol, cannabis, ecstasy, and LSD. That is, past year use and perceived availability have been decreasing in tandem over time. While prevention efforts cannot control access to drugs through peer groups, the availability and accessibility of cigarettes and alcohol can be controlled through enhanced government policies. There is strong research evidence showing that reducing access through regulations such as increased taxes, enforcing minimum drinking age laws, and reducing the number of sales outlets can reduce use among youth (Babor et al., 2010; Richardson et al., 2009; Stockwell et al., 2005).

Future OSDUHS Monitoring

Cigarette, alcohol, and other drug use by young people are constantly changing, requiring ongoing monitoring and evaluation. As new drugs and new methods of use emerge, it is important to assess their use, related harms, and perceptions. Monitoring health risk behaviours, such as drug use, provides valuable information about determinants, co-occurrences, and changes in 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.

Measuring change in student drug use, age at initiation, and perceptions over the past four decades has been one of the most important contributions of the OSDUHS to drug research, policy, and prevention in Canada. We showed that important strides were made during the 1980s in reducing drug use among Ontario students, only to be followed by substantial increases in the late 1990s and early 2000s. The past decade has seen a second decline in prevalence rates for most drugs measured in the survey. This decline in drug use over the past decade or so has also been shown in other regions such as the U.S. (Miech et al., 2015) and Europe (Hibell et al., 2012).

Despite this progress, we should not be complacent. History has shown that the values and lifestyles of adolescents can change quickly, and so too can the character of drug use. Not only do new drugs emerge regularly, but old ones are rediscovered by a new generation of young people who may not be aware of their adverse effects. Although we cannot be certain what the near future holds for student drug use, we can closely monitor changes to ensure that programmatic responses are based not on sensationalized fears, but rather on sound scientific information.

Readers should note that there is a companion OSDUHS report entitled *The Mental Health and Well-Being of Ontario Students*, which addresses trends in other important public health issues such as mental health, bullying, physical activity, obesity, gambling, video gaming, and violence. The next release of this companion report will be in the summer of 2016.

Table 4.1: Significant Changes in Past Year Drug Use by Subgroup, 2015 vs. 2013 and 2015 vs. 1999

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

Notes: (1) ↑↓ significant increase or decrease in 2015 vs. 2013, p<.01; (2)△▽ significant increase or decrease in 2015 vs. 1999, p<.01 (vs. 2001 for ecstasy; vs. 2003 for cocaine; vs. 2007 for opioid pain relievers, ADHD drugs, and Any NM Prescription Drug Use; vs. 2009 for salvia and cough/cold medication; vs. 2011 for energy drinks); (3) -- indicates question not asked of that grade; (4) binge drinking refers to drinking five or more alcoholic drinks on one occasion at least once in the past month; (5) NM = nonmedical use, without one's own doctor's prescription; (6) "Any Drug Use Excluding Cannabis" index is based on eight drugs asked about over time; (7) no significant year differences were found for waterpipe, smokeless tobacco, synthetic cannabis, jimson weed, tranquillizers/sedatives (NM), therefore these drugs are not presented.

Table 4.2: Significant Subgroup Differences in Past Year Drug Use, 2015 OSDUHS

	Tobacco Cigarettes	Smokeless Tobacco	Waterpipe	Electronic Cigarette (Any)	Cannabis in E-Cigarette	Alcohol	Binge Drinking	Alcohol Mixed with an Energy Drink	Cannabis	Synthetic Cannabis	Inhalants	Salvia Divinorum	Mushrooms/Mesc	LSD	Ecstasy	Cocaine	Opioid Pain Relievers (NM)	ADHD Drug (NM)	Tranquillizers/ Sedatives (NM)	Any NM Prescription Drug Use	Any Drug Use excl. Cannabis	High-Caffeine Energy Drinks
Sex Effect	ns	***	ns	***	**	ns	ns	ns	ns	ns	ns	*	***	ns	ns	ns	ns	ns	***	ns	ns	***
		M ↑		M ↑	M ↑							M ↑	M ↑						F ↑			M ↑
Grade Effect	***	***	***	***	***	***	***	***	***	**	**	*	***	**	**	***	**	***	***	***	***	***
(compared with previous grade)					--	8 ↑ 7	8 ↑ 7		8 ↑ 7				--	--	--	--			--	--	--	
		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			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			11 ↑ 10	
						12 ↑ 11									12 ↑ 11							12 ↑ 11
Region Effect	*	*	ns	***	ns	**	**	*	ns	ns	*	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
(region compared with Ontario)		T ↓				T ↓					T ↑											
	N ↑					N ↑	N ↑															
	E ↑			E ↑				E ↑			E ↓											

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

5. REFERENCES

Adlaf, E. M. (2005). Collecting drug use data from different populations. In Z. Sloboda (Ed.), *Epidemiology of drug abuse* (pp. 99-111). New York: Springer.

Agrawal, A., Grant, J. D., Waldron, M., Duncan, A. E., Scherrer, J. F., Lynskey, M. T., . . . Heath, A. C. (2006). Risk for initiation of substance use as a function of age of onset of cigarette, alcohol and cannabis use: Findings in a Midwestern female twin cohort. *Preventive Medicine, 43*(2), 125-128. doi:10.1016/j.ypmed.2006.03.022

Akl, E. A., Gaddam, S., Gunukula, S. K., Honeine, R., Jaoude, P. A., & Irani, J. (2010). The effects of waterpipe tobacco smoking on health outcomes: A systematic review. *International Journal of Epidemiology, 39*(3), 834-857. doi:10.1093/ije/dyq002

American Academy of Pediatrics, Committee on Substance Abuse. (2010). Alcohol use by youth and adolescents: A pediatric concern. *Pediatrics, 125*(5), 1078-1087. doi:10.1542/peds.2010-0438

Anderman, C., Cheadle, A., Curry, S., Diehr, P., Shultz, L., & Wagner, E. (1995). Selection bias related to parental consent in school-based survey research. *Evaluation Review, 19*(6), 663-674. doi:10.1177/0193841x9501900604

Arria, A. M., Caldeira, K. M., Kasperski, S. J., Vincent, K. B., Griffiths, R. R., & O'Grady, K. E. (2011). Energy drink consumption and increased risk for alcohol dependence. *Alcoholism: Clinical and Experimental Research, 35*(2), 365-375. doi:10.1111/j.1530-0277.2010.01352.x

Babor, T. F., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., . . . Rossow, I. (2010). *Alcohol: No ordinary commodity. Research and public policy* (2nd ed.). New York: Oxford University Press.

Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Bryant, A. L., & Merline, A. C. (2014). *The decline of substance use in young adulthood: Changes in social activities, roles, and beliefs*. New York: Psychology Press.

Behrendt, S., Wittchen, H. U., Höfler, M., Lieb, R., & Beesdo, K. (2009). Transitions from first substance use to substance use disorders in adolescence: Is early onset associated with a rapid escalation? *Drug and Alcohol Dependence, 99*(1–3), 68-78. doi:http://dx.doi.org/10.1016/j.drugalcdep.2008.06.014

Biemer, P. P., & Lyberg, L. E. (2003). *Introduction to survey quality*. Hoboken, NJ: John Wiley & Sons.

Bjarnason, T., & Adalbjarnardottir, S. (2000). Anonymity and confidentiality in school surveys on alcohol, tobacco, and cannabis use. *Journal of Drug Issues, 30*(2), 335-344.

Bovet, P., Viswanathan, B., Faeh, D., & Warren, W. (2006). Comparison of smoking, drinking, and marijuana use between students present or absent on the day of a school-based survey. *Journal of School Health, 76*(4), 133-137. doi:10.1111/j.1746-1561.2006.00081.x

Brener, N. D., Billy, J. O. G., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*(6), 436-457. doi:http://dx.doi.org/10.1016/S1054-139X(03)00052-1

Brener, N. D., Eaton, D. K., Kann, L., Grunbaum, J. A., Gross, L. A., Kyle, T. M., & Ross, J. G. (2006). The association of survey setting and mode with self-reported health risk behaviors among high school students. *Public Opinion Quarterly, 70*(3), 354-374. doi:10.1093/poq/nfl003

Brener, N. D., Kann, L., McManus, T., Kinchen, S. A., Sundberg, E. C., & Ross, J. G. (2002). Reliability of the 1999 Youth Risk Behavior Survey Questionnaire. *Journal of Adolescent Health, 31*(4), 336-342. doi:http://dx.doi.org/10.1016/S1054-139X(02)00339-7

Budney, A. J., Sargent, J. D., & Lee, D. C. (2015). Vaping cannabis (marijuana): Parallel concerns to e-cigs? *Addiction, 110*(11), 1699-1704. doi:10.1111/add.13036

Bullen, C., Howe, C., Laugesen, M., McRobbie, H., Parag, V., Williman, J., & Walker, N. (2013). Electronic cigarettes for smoking cessation: A randomised controlled trial. *The Lancet, 382*(9905), 1629-1637. doi:http://dx.doi.org/10.1016/S0140-6736(13)61842-5

Burkhalter, R., Cumming, T., Rynard, V., & Manske, S. (2013). *2012/2013 Youth Smoking Survey Microdate User Guide*. Retrieved from Waterloo, Ontario:

Calabria, B., Degenhardt, L., Hall, W., & Lynskey, M. (2010). Does cannabis use increase the risk of death? Systematic review of epidemiological evidence on adverse effects of cannabis use. *Drug and Alcohol Review, 29*(3), 318-330. doi:10.1111/j.1465-3362.2009.00149.x

Canadian Centre on Substance Abuse (CCSA). (2007). *A drug prevention strategy for Canada's youth*. Ottawa, ON: CCSA.

Centers for Disease Control and Prevention (CDC). (1994). Health risk behaviors among adolescents who do and do not attend school -- United States, 1992. *Morbidity and Mortality Weekly Report (MMWR), 43*(8), 129-132.

Centers for Disease Control and Prevention (CDC). (2010). Youth Risk Behavior Surveillance -- United States, 2009. Surveillance summaries. *Morbidity and Mortality Weekly Report (MMWR), 59*(No. SS-5), 1-142.

Chartier, M., Stoep, A. V., McCauley, E., Herting, J. R., Tracy, M., & Lymp, J. (2008). Passive versus active parental permission: Implications for the ability of school-based depression screening to reach youth at risk. *Journal of School Health, 78*(3), 157-164. doi:10.1111/j.1746-1561.2007.00278.x

Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York: Wiley.

Cook, S., Turner, N. E., Ballon, B., Paglia-Boak, A., Murray, R., Adlaf, E. M., . . . Mann, R. E. (2014). Problem gambling among Ontario students: Associations with substance abuse, mental health problems, suicide attempts, and delinquent behaviours. *Journal of Gambling Studies*, 1-14. doi:10.1007/s10899-014-9483-0

Courser, M. W., Shamblen, S. R., Lavrakas, P. J., Collins, D., & Ditterline, P. (2009). The impact of active consent procedures on nonresponse and nonresponse error in youth survey data: Evidence from a new experiment. *Evaluation Review, 33*(4), 370-395. doi:10.1177/0193841x09337228

Currie, C., Zanotti, C., Morgan, A., Currie, D., de Looze, M., Roberts, C., . . . Barnekow, V. (Eds.). (2012). *Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: International report from the 2009/2010 survey*. Copenhagen: WHO Regional Office for Europe.

Dawson, D. A., Goldstein, R. B., Patricia Chou, S., June Ruan, W., & Grant, B. F. (2008). Age at first drink and the first incidence of adult-onset DSM-IV alcohol use disorders. *Alcoholism: Clinical and Experimental Research, 32*(12), 2149-2160. doi:10.1111/j.1530-0277.2008.00806.x

de Leeuw, E., & de Heer, W. (2002). Trends in household survey nonresponse: A longitudinal and international comparison. In R. M. Groves, D. A. Dillman, J. L. Eltinge, & R. J. A. Little (Eds.), *Survey nonresponse* (pp. 41-54). New York: Wiley.

de Winter, A. F., Oldehinkel, A. J., Veenstra, R., Brunnekreef, J. A., Verhulst, F. C., & Ormel, J. (2005). Evaluation of non-response bias in mental health determinants and outcomes in a large sample of pre-adolescents. *European Journal of Epidemiology, 20*(2), 173-181. doi:10.1007/s10654-004-4948-6

Degenhardt, L., Coffey, C., Romaniuk, H., Swift, W., Carlin, J. B., Hall, W. D., & Patton, G. C. (2012). The persistence of the association between adolescent cannabis use and common mental disorders into young adulthood. *Addiction, 108*(1), 124-133. doi:10.1111/j.1360-0443.2012.04015.x

Delaney-Black, V., Chiodo, L. M., Hannigan, J. H., Greenwald, M. K., Janisse, J., Patterson, G., . . . Sokol, R. J. (2010). Just say "I Don't": Lack of concordance between teen report and biological measures of drug use. *Pediatrics, 126*(5), 887-893. doi:10.1542/peds.2009-3059

Denniston, M. M., Brener, N. D., Kann, L., Eaton, D. K., McManus, T., Kyle, T. M., . . . Ross, J. G. (2010). Comparison of paper-and-pencil versus Web administration of the Youth Risk Behavior Survey (YRBS): Participation, data quality, and perceived privacy and anonymity. *Computers in Human Behavior, 26*(5), 1054-1060. doi:http://dx.doi.org/10.1016/j.chb.2010.03.006

Dodou, D., & de Winter, J. C. F. (2014). Social desirability is the same in offline, online, and paper surveys: A meta-analysis. *Computers in Human Behavior, 36*(0), 487-495. doi:http://dx.doi.org/10.1016/j.chb.2014.04.005

Eaton, D. K., Brener, N., & Kann, L. K. (2008). Associations of health risk behaviors with school absenteeism. Does having permission for the absence make a difference? *Journal of School Health, 78*(4), 223-229. doi:10.1111/j.1746-1561.2008.00290.x

Eaton, D. K., Brener, N. D., Kann, L., Denniston, M. M., McManus, T., Kyle, T. M., . . . Ross, J. G. (2010). Comparison of paper-and-pencil versus web administration of the Youth Risk Behavior Survey (YRBS): Risk behavior prevalence estimates. *Evaluation Review, 34*(2), 137-153. doi:10.1177/0193841x10362491

Eaton, D. K., Lowry, R., Brener, N. D., Grunbaum, J. A., & Kann, L. (2004). Passive versus active parental permission in school-based survey research: Does the type of permission affect prevalence estimates of risk behaviors? *Evaluation Review, 28*(6), 564-577. doi:10.1177/0193841x04265651

Erskine, H. E., Moffitt, T. E., Copeland, W. E., Costello, E. J., Ferrari, A. J., Patton, G., . . . Scott, J. G. (2015). A heavy burden on young minds: The global burden of mental and substance use disorders in children and youth. *Psychological Medicine, 45*(07), 1551-1563. doi:doi:10.1017/S0033291714002888

Esbensen, F.-A., Melde, C., Taylor, T. J., & Peterson, D. (2008). Active parental consent in school-based research: How much is enough and how do we get it? *Evaluation Review, 32*(4), 335-362. doi:10.1177/0193841x08315175

Etter, J.-F., & Bullen, C. (2014). A longitudinal study of electronic cigarette users. *Addictive Behaviors, 39*(2), 491-494. doi:http://dx.doi.org/10.1016/j.addbeh.2013.10.028

Fergusson, D. M., Boden, J. M., & Horwood, L. (2009). Tests of causal links between alcohol abuse or dependence and major depression. *Archives of General Psychiatry, 66*(3), 260-266. doi:10.1001/archgenpsychiatry.2008.543

Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2015). Psychosocial sequelae of cannabis use and implications for policy: Findings from the Christchurch Health and Development Study. *Social Psychiatry and Psychiatric Epidemiology*, 1-10. doi:10.1007/s00127-015-1070-x

Fischer, B., Ialomiteanu, A., Boak, A., Adlaf, E. M., Rehm, J., & Mann, R. E. (2013). Prevalence and key covariates of non-medical prescription opioid use among the general secondary student and adult populations in Ontario, Canada. *Drug and Alcohol Review, 32*(3), 276-287. doi:10.1111/dar.12025

Fleiss, J. L. (1981). *Statistical methods for rates and proportions* (2nd ed.). New York: Wiley.

Fosse, N. E., & Haas, S. A. (2009). Validity and stability of self-reported health among adolescents in a longitudinal, nationally representative survey. *Pediatrics, 123*(3), e496-e501 doi:10.1542/peds.2008-1552

Friedman, R. A. (2006). The changing face of teenage drug abuse — The trend toward prescription drugs. *New England Journal of Medicine, 354*(14), 1448-1450. doi:doi:10.1056/NEJMp068010

Galea, S., & Tracy, M. (2007). Participation rates in epidemiologic studies. *Annals of Epidemiology, 17*(9), 643-653. doi:http://dx.doi.org/10.1016/j.annepidem.2007.03.013

Gfroerer, J., Wright, D., & Kopstein, A. (1997). Prevalence of youth substance use: The impact of methodological differences between two national surveys. *Drug and Alcohol Dependence, 47*(1), 19-30. doi:http://dx.doi.org/10.1016/S0376-8716(97)00063-X

Gilmore, J. (2010). Trends in dropout rates and the labour market outcomes of young dropouts. *Education Matters: Insights on Education, Learning and Training in Canada, 7*(4), Statistics Canada Catalogue no. 81-004-X.

Giroud, C., de Cesare, M., Berthet, A., Varlet, V., Concha-Lozano, N., & Favrat, B. (2015). E-cigarettes: A review of new trends in cannabis use. *International Journal of Environmental Research and Public Health, 12*(8), 9988-10008. doi:10.3390/ijerph120809988

Goldberg, D. P., Oldehinkel, T., & Ormel, J. (1998). Why GHQ threshold varies from one place to another. *Psychological Medicine, 28*(4), 915-921.

Goodwin, R. D., Fergusson, D. M., & Horwood, L. J. (2004). Association between anxiety disorders and substance use disorders among young persons: Results of a 21-year longitudinal study. *Journal of Psychiatric Research, 38*(3), 295-304. doi:http://dx.doi.org/10.1016/j.jpsychires.2003.09.002

Gore, F. M., Bloem, P. J. N., Patton, G. C., Ferguson, J., Joseph, V., Coffey, C., . . . Mathers, C. D. (2011). Global burden of disease in young people aged 10–24 years: A systematic analysis. *The Lancet, 377*(9783), 2093-2102. doi:http://dx.doi.org/10.1016/S0140-6736(11)60512-6

Griesler, P. C., Kandel, D. B., Schaffran, C., Hu, M.-C., & Davies, M. (2008). Adolescents' inconsistency in self-reported smoking: A comparison of reports in school and in household settings. *Public Opinion Quarterly, 72*(2), 260-290. doi:10.1093/poq/nfn016

Griffith-Lendering, M. F. H., Wigman, J. T. W., Prince van Leeuwen, A., Huijbregts, S. C. J., Huizink, A. C., Ormel, J., . . . Vollebergh, W. A. M. (2013). Cannabis use and vulnerability for psychosis in early adolescence — a TRAILS study. *Addiction, 108*(4), 733-740. doi:10.1111/add.12050

Groves, R. M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly, 70*(5), 646-675. doi:10.1093/poq/nfl033

Groves, R. M., Fowler, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology* (2nd ed.). New York: Wiley.

Hajek, P., Etter, J.-F., Benowitz, N., Eissenberg, T., & McRobbie, H. (2014). Electronic cigarettes: Review of use, content, safety, effects on smokers and potential for harm and benefit. *Addiction, 109*(11), 1801-1810. doi:10.1111/add.12659

Hall, W. (2015). What has research over the past two decades revealed about the adverse health effects of recreational cannabis use? *Addiction, 110*(1), 19-35. doi:10.1111/add.12703

Hall, W., & Degenhardt, L. (2009). Adverse health effects of non-medical cannabis use. *The Lancet, 374*(9698), 1383-1391. doi:http://dx.doi.org/10.1016/S0140-6736(09)61037-0

Hallfors, D., Khatapoush, S., Kadushin, C., Watson, K., & Saxe, L. (2000). A comparison of paper vs computer-assisted self interview for school alcohol, tobacco, and other drug surveys. *Evaluation and Program Planning, 23*(2), 149-155. doi:10.1016/S0149-7189(00)00011-2

Hamilton, H. A., Danielson, A. M., Mann, R. E., & Paglia-Boak, A. (2012). The roles of family, peer, school, and attitudinal factors in cannabis use across immigrant generations of youth. *Journal of Drug Issues, 42*(1), 46-58. doi:10.1177/0022042612436652

Harrison, L. D. (2001). Understanding the differences in youth drug prevalence rates produced by the MTF, NHSDA, and YRBS studies. *Journal of Drug Issues, 31*(3), 665-694.

Heeringa, S. G., West, B. T., & Berglund, P. A. (2010). *Applied survey data analysis*. Boca Raton: Taylor & Francis Group.

Hibell, B., Adlaf, E. M., Andersson, B., Bjarnason, T., Delapenha, C., Hasbun, J., . . . Sathianathan, R. (2003). *Conducting school surveys on drug abuse. Toolkit module 3*. Vienna: United Nations Office on Drugs and Crime.

Hibell, B., Guttormsson, U., Ahlström, S., Balakireva, O., Bjarnason, T., Kokkevi, A., & Kraus, L. (2012). *The 2011 ESPAD Report: Substance use among students in 36 European countries.* Stockholm: Swedish Council for Information on Alcohol and Other Drugs (CAN).

Hingson, R. W., Heeren, T., & Winter, M. R. (2006). Age at drinking onset and alcohol dependence: Age at onset, duration, and severity. *Archives of Pediatrics & Adolescent Medicine, 160*(7), 739-746. doi:10.1001/archpedi.160.7.739

Hingson, R. W., & Zha, W. (2009). Age of drinking onset, alcohol use disorders, frequent heavy drinking, and unintentionally injuring oneself and others after drinking. *Pediatrics, 123*(6), 1477-1484. doi:10.1542/peds.2008-2176

Horwood, L. J., Fergusson, D. M., Coffey, C., Patton, G. C., Tait, R., Smart, D., . . . Hutchinson, D. M. (2012). Cannabis and depression: An integrative data analysis of four Australasian cohorts. *Drug and Alcohol Dependence, 126*(3), 369-378. doi:http://dx.doi.org/10.1016/j.drugalcdep.2012.06.002

Howland, J., & Rohsenow, D. J. (2013). Risks of energy drinks mixed with alcohol. *JAMA, 309*(3), 245-246. doi:10.1001/jama.2012.187978

Ilie, G., Boak, A., Adlaf, E. M., Asbridge, M., & Cusimano, M. D. (2013). Prevalence and correlates of traumatic brain injuries among adolescents. *JAMA, 309*(24), 2550-2552. doi:10.1001/jama.2013.6750

Jeffers, A., Benotsch, E. G., & Koester, S. (2013). Misuse of prescription stimulants for weight loss, psychosocial variables, and eating disordered behaviors. *Appetite, 65*, 8-13. doi:http://dx.doi.org/10.1016/j.appet.2013.01.008

Jelsma, J., Burgess, T., & Henley, L. (2012). Does the requirement of getting active consent from parents in school-based research result in a biased sample? An empirical study. *Journal of Empirical Research on Human Research Ethics, 7*(5), 56-62. Retrieved from http://europepmc.org/abstract/MED/23324204

Johnson, T. P., & Wislar, J. S. (2012). Response rates and nonresponse errors in surveys. *JAMA, 307*(17), 1805-1806. doi:10.1001/jama.2012.3532

Kairouz, S., & Adlaf, E. M. (2003). Schools, students and heavy drinking: A multilevel analysis. *Addiction Research & Theory, 11*(6), 427-439. doi:10.1080/1606635021000058485

Kann, L., Brener, N. D., Warren, C. W., Collins, J. L., & Giovino, G. A. (2002). An assessment of the effect of data collection setting on the prevalence of health risk behaviors among adolescents. *Journal of Adolescent Health, 31*(4), 327-335. doi:http://dx.doi.org/10.1016/S1054-139X(02)00343-9

Kessler, R. C., Adler, L., Ames, M., Demler, O., Faraone, S., Hiripi, E., . . . Walters, E. E. (2005). The World Health Organization adult ADHD self-report scale (ASRS): A short screening scale for use in the general population. *Psychological Medicine, 35*(2), 245-256. doi:10.1017/S0033291704002892

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., . . . Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184-189. doi:10.1001/archpsyc.60.2.184

Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry, 4*(5), 231-244. doi:10.3109/10673229709030550

Kish, L. (1965). *Survey sampling*. New York: Wiley.

Knight, J. R., Shrier, L. A., Bravender, T. D., Farrell, M., Vander Bilt, J., & Shaffer, H. J. (1999). A new brief screen for adolescent substance abuse. *Archives of Pediatrics & Adolescent Medicine, 153*(6), 591-596. doi:10.1001/archpedi.153.6.591

Korn, E. L., & Graubard, B. I. (1999). *Analysis of health surveys*. New York: Wiley.

Kreuter, F. (2013). Facing the nonresponse challenge. *The ANNALS of the American Academy of Political and Social Science, 645*(1), 23-35. doi:10.1177/0002716212456815

Kuepper, R., van Os, J., Lieb, R., Wittchen, H. U., Höfler, M., & Henquet, C. (2011). Continued cannabis use and risk of incidence and persistence of psychotic symptoms: 10 year follow-up cohort study. *BMJ, 342*. doi:10.1136/bmj.d738

Large, M., Sharma, S., Compton, M. T., Slade, T., & Nielssen, O. (2011). Cannabis use and earlier onset of psychosis: A systematic meta-analysis. *Archives of General Psychiatry, 68*(6), 555-561. doi:10.1001/archgenpsychiatry.2011.5

Levine, D. A. (2007). 'Pharming': The abuse of prescription and over-the-counter drugs in teens. *Current Opinion in Pediatrics, 19*(3), 270-274 doi:10.1097/MOP.0b013e32814b09cf

Lev-Ran, S., Roerecke, M., Le Foll, B., George, T. P., McKenzie, K., & Rehm, J. (2014). The association between cannabis use and depression: A systematic review and meta-analysis of longitudinal studies. *Psychological Medicine, 44*(4), 797-810. doi:10.1017/S0033291713001438

Lisdahl, K. M., & Price, J. S. (2012). Increased marijuana use and gender predict poorer cognitive functioning in adolescents and emerging adults. *Journal of the International Neuropsychological Society, 18*(04), 678-688. doi:doi:10.1017/S1355617712000276

MacDonald, N., Stanbrook, M., & Hébert, P. C. (2010). “Caffeinating” children and youth. *Canadian Medical Association Journal, 182*(15), 1597. doi:10.1503/cmaj.100953

Manchikanti, L., Fellows, B., Ailinani, H., & Pampati, V. (2010). Therapeutic use, abuse, and nonmedical use of opioids: A ten-year perspective. *Pain Physician, 13*, 401-435.

Marmorstein, N. R. (2009). Longitudinal associations between alcohol problems and depressive symptoms: Early adolescence through early adulthood. *Alcoholism: Clinical and Experimental Research, 33*(1), 49-59. doi:doi:10.1111/j.1530-0277.2008.00810.x

Martin, G., Copeland, J., Gates, P., & Gilmour, S. (2006). The Severity of Dependence Scale (SDS) in an adolescent population of cannabis users: Reliability, validity and diagnostic cut-off. *Drug and Alcohol Dependence, 83*(1), 90-93. doi:http://dx.doi.org/10.1016/j.drugalcdep.2005.10.014

Martinasek, M. P., McDermott, R. J., & Martini, L. (2011). Waterpipe (hookah) tobacco smoking among youth. *Current Problems in Pediatric and Adolescent Health Care, 41*(2), 34-57. doi:http://dx.doi.org/10.1016/j.cppeds.2010.10.001

Mawani, F. N., & Gilmour, H. (2010). Validation of self-rated mental health. *Health Reports (Statistics Canada, Catalogue no. 82-003-XPE), 21*(3), 1-15.

May, A., & Klonsky, E. D. (2011). Validity of suicidality items from the Youth Risk Behavior Survey in a high school sample. *Assessment, 18*(3), 379-381. doi:10.1177/1073191110374285

McCambridge, J., & Strang, J. (2006). The reliability of drug use data collected in the classroom: What is the problem, why does it matter and how should it be approached? *Drug and Alcohol Review, 25*(5), 413-418. doi:10.1080/09595230600868496

McLaren, J. A., Silins, E., Hutchinson, D., Mattick, R. P., & Hall, W. (2010). Assessing evidence for a causal link between cannabis and psychosis: A review of cohort studies. *International Journal of Drug Policy, 21*(1), 10-19. doi:10.1016/j.drugpo.2009.09.001

McMullen, K., & Gilmore, J. (2010). A note on high school graduation and school attendance, by age and province, 2009/2010. *Education Matters: Insights on Education, Learning and Training in Canada, 7*(4), Statistics Canada Catalogue no. 81-004-X.

Meier, M. H., Caspi, A., Ambler, A., Harrington, H., Houts, R., Keefe, R. S. E., . . . Moffitt, T. E. (2012). Persistent cannabis users show neuropsychological decline from childhood to midlife. *Proceedings of the National Academy of Sciences, 109*(40), E2657–E2664. doi:10.1073/pnas.1206820109

Meiklejohn, J., Connor, J., & Kypri, K. (2012). The effect of low survey response rates on estimates of alcohol consumption in a general population survey. *PLoS One, 7*(4), e35527. doi:10.1371/journal.pone.0035527

Michaud M.D, P.-A., Delbos-Piot M.Sc, I., & Narring M.D, M. P. H. F. (1998). Silent dropouts in health surveys: Are nonrespondent absent teenagers different from those who participate in school-based health surveys? *Journal of Adolescent Health, 22*(4), 326-333. doi:http://dx.doi.org/10.1016/S1054-139X(97)00240-1

Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2015). *Monitoring the Future national survey results on drug use, 1975–2014: Volume I, secondary school students*. Ann Arbor: Institute for Social Research, The University of Michigan. Available at http://monitoringthefuture.org/pubs.html#monograp

Morean, M. E., Kong, G., Camenga, D. R., Cavallo, D. A., & Krishnan-Sarin, S. (2015). High school students’ use of electronic cigarettes to vaporize cannabis. *Pediatrics, 136*(4), 611-616. doi:10.1542/peds.2015-1727

Nicholson, T., Duncan, D. F., White, J., & Stickle, F. (2013). Focusing on abuse, not use, in drug education. *Journal of Substance Use, 18*(6), 431-439. doi:10.3109/14659891.2012.689922

O’Brien, M. C., McCoy, T. P., Rhodes, S. D., Wagoner, A., & Wolfson, M. (2008). Caffeinated cocktails: Energy drink consumption, high-risk drinking, and alcohol-related consequences among college students. *Academic Emergency Medicine, 15*(5), 453-460. doi:10.1111/j.1553-2712.2008.00085.x

Okie, S. (2010). A flood of opioids, a rising tide of deaths. *New England Journal of Medicine, 363*(21), 1981-1985. doi:10.1056/NEJMp1011512

O’Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *Substance Use & Misuse, 18*(6), 805-824. doi:10.3109/10826088309033049

O’Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. (2000). A comparison of confidential versus anonymous survey procedure: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30*(1), 35-54. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=pbh&AN=3017838&site=ehost-live DP - EBSCOhost DB

O'Malley, P. M., Johnston, L. D., Bachman, J. G., Schulenberg, J. E., & Kumar, R. (2006). How substance use differs among American secondary schools. *Prevention Science, 7*(4), 409-420. doi:10.1007/s11121-006-0050-5
Ontario Government. (2015). Smoke-Free Ontario Strategy. Retrieved from http://www.ontario.ca/page/smoke-free-ontario.
Ontario Ministry of Children and Youth Services. (2012). *Ontario's youth action plan*. Toronto, ON: Government of Ontario. Retrieved from http://www.children.gov.on.ca/htdocs/English/documents/topics/youthandthelaw/youthactionplan/yap.pdf
Ontario Ministry of Education. (2013). Health and Physical Education Curriculum. Retrieved from http://www.edu.gov.on.ca/eng/curriculum
Ontario Ministry of Education. (2015, April). News Release - More Ontario Students Graduating High School Than Ever Before. Retrieved from http://news.ontario.ca/opo/en/2015/04/more-ontario-students-graduating-high-school-than-ever-before.html
Paglia-Boak, A., & Adlaf, E. M. (2007). Substance use and harm in the general youth population *Substance abuse in Canada: Youth in focus*. Ottawa, ON: Canadian Centre on Substance Abuse.
Park, S. (2015). *The design and implementation of the Ontario Student Drug Use and Health Survey (OSDUHS) 2015; Technical documentation for Centre for Addiction and Mental Health (CAMH)*. Toronto, ON: Institute for Social Research, York University.
Patton, G. C., Ross, D. A., Santelli, J. S., Sawyer, S. M., Viner, R. M., & Kleinert, S. (2014). Next steps for adolescent health: A Lancet Commission. *The Lancet, 383*(9915), 385-386. doi:http://dx.doi.org/10.1016/S0140-6736(14)60039-8
Peytcheva, E., & Groves, R. M. (2009). Using variation in response rates of demographic subgroups as evidence of nonresponse bias in survey estimates. *Journal of Official Statistics, 25*(2), 193.
Raver, S. M., Haughwout, S. P., & Keller, A. (2013). Adolescent cannabinoid exposure permanently suppresses cortical oscillations in adult mice. *Neuropsychopharmacology, 38*(12), 2338-2347. doi:10.1038/npp.2013.164
Rehm, J., Monga, N., Adlaf, E. M., Taylor, B., Bondy, S. J., & Fallu, J. S. (2005). School matters: Drinking dimensions and their effects on alcohol-related problems among Ontario secondary school students. *Alcohol and Alcoholism, 40*(6), 569-574. doi:10.1093/alcalc/agh212
Rehm, J., Taylor, B., & Room, R. (2006). Global burden of disease from alcohol, illicit drugs and tobacco. *Drug and Alcohol Review, 25*(6), 503-513. doi:10.1080/09595230600944453
Reissig, C. J., Strain, E. C., & Griffiths, R. R. (2009). Caffeinated energy drinks — A growing problem. *Drug and Alcohol Dependence, 99*(1–3), 1-10. doi:http://dx.doi.org/10.1016/j.drugalcdep.2008.08.001
Richardson, L., Hemsing, N., Greaves, L., Assanand, S., Allen, P., McCullough, L., . . . Amos, A. (2009). Preventing smoking in young people: A systematic review of the impact of access interventions. *International Journal of Environmental Research and Public Health, 6*(4), 1485-1514. Retrieved from http://www.mdpi.com/1660-4601/6/4/1485
Rigotti, N. A. (2015). E-cigarette use and subsequent tobacco use by adolescents: New evidence about a potential risk of e-cigarettes. *JAMA, 314*(7), 673-674. doi:10.1001/jama.2015.8382
Rootman, I., & Smart, R. G. (1985). A comparison of alcohol, tobacco and drug use as determined from household and school surveys. *Drug and Alcohol Dependence, 16*(2), 89-94. Retrieved from http://www.sciencedirect.com/science/article/pii/0376871685901085
Saunders, J. B., Aasland, O. G., Babor, T. F., De La Fuente, J. R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction, 88*(6), 791-804. doi:10.1111/j.1360-0443.1993.tb02093.x
Seifert, S. M., Schaechter, J. L., Hershorin, E. R., & Lipshultz, S. E. (2011). Health effects of energy drinks on children, adolescents, and young adults. *Pediatrics, 127*(3), 511-528. doi:10.1542/peds.2009-3592
Sepkowitz, K. A. (2013). Energy drinks and caffeine-related adverse effects. *JAMA, 309*(3), 243-244. doi:10.1001/jama.2012.173526
Shaw, T., Cross, D., Thomas, L. T., & Zubrick, S. R. (2014). Bias in student survey findings from active parental consent procedures. *British Educational Research Journal*. doi:10.1002/berj.3137
Silins, E., Horwood, L. J., Patton, G. C., Fergusson, D. M., Olsson, C. A., Hutchinson, D. M., . . . Mattick, R. P. (2014). Young adult sequelae of adolescent cannabis use: An integrative analysis. *Lancet Psychiatry, 1*(4), 286-293. doi:http://dx.doi.org/10.1016/S2215-0366(14)70307-4
Smart, R. G., Adlaf, E. M., Walsh, G. W., & Zdanowicz, Y. (1994). Similarities in drug use and depression among runaway students and street youth. *Canadian Journal of Public Health, 85*(1), 17-18.
Smart, R. G., Adlaf, E. M., Walsh, G. W., & Zdanowicz, Y. M. (1992). *Drifting and doing: Changes in drug use among Toronto street youth, 1990-1992*. Toronto, ON: Addiction Research Foundation.
Smart, R. G., & Fejer, D. (1975). Six years of cross-sectional surveys of student drug use in Toronto. *Bulletin on Narcotics, 27*(2), 11-22.
Stanbrook, M. B. (2013). Regulate e-cigarettes as drug-delivery devices. *Canadian Medical Association Journal, 185*(16), 1379. doi:10.1503/cmaj.131469
Stanwick, R. (2015). E-cigarettes: Are we renormalizing public smoking? Reversing five decades of tobacco control and revitalizing nicotine dependency in children and youth in Canada. *Paediatrics & Child Health, 20*(2), 101-105. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4373571/
StataCorp. (2013). Stata Statistical Software: Release 13.0. College Station, TX: StataCorp LP.
Statistics Canada. (2014). Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual, CANSIM (database). Retrieved from http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&pattern=&csid=
Stockwell, T., Gruenewald, P. J., Toumbourou, J. W., & Loxley, W. (Eds.). (2005). *Preventing harmful substance use: The evidence base for policy and practice*. West Sussex, England: Wiley.
Tejeiro Salguero, R. A., & Morán, R. M. B. (2002). Measuring problem video game playing in adolescents. *Addiction, 97*(12), 1601-1606. doi:10.1046/j.1360-0443.2002.00218.x

The Lancet. (2012). Putting adolescents at the centre of health and development. *The Lancet, 379*(9826), 1561. Retrieved from http://linkinghub.elsevier.com/retrieve/pii/S0140673612605364
Tigges, B. B. (2003). Parental consent and adolescent risk behavior research. *Journal of Nursing Scholarship, 35*(3), 283-289. doi:10.1111/j.1547-5069.2003.00283.x
Toumbourou, J. W., Stockwell, T., Neighbors, C., Marlatt, G., Sturge, J., & Rehm, J. (2007). Interventions to reduce harm associated with adolescent substance use. *The Lancet, 369*(9570), 1391-1401. doi:http://dx.doi.org/10.1016/S0140-6736(07)60369-9
Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin, 133*(5), 859-883. doi:10.1037/0033-2909.133.5.859
U.S. Department of Health and Human Services. (2007). *The Surgeon General's call to action to prevent and reduce underage drinking*. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General.
U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. (2011). Healthy People 2020. Retrieved from http://healthypeople.gov/2020/
van Os, J., Bak, M., Hanssen, M., Bijl, R. V., de Graaf, R., & Verdoux, H. (2002). Cannabis use and psychosis: A longitudinal population-based study. *American Journal of Epidemiology, 156*(4), 319-327. doi:10.1093/aje/kwf043
Vingilis, E., Smart, R. G., Mann, R. E., Paglia-Boak, A., Stoduto, G., & Adlaf, E. M. (2011). Prevalence and correlates of street racing among Ontario high school students. *Traffic Injury Prevention, 12*(5), 443-450. doi:10.1080/15389588.2011.602148
Weitzman, B. C., Guttmacher, S., Weinberg, S., & Kapadia, F. (2003). Low response rate schools in surveys of adolescent risk taking behaviours: Possible biases, possible solutions. *Journal of Epidemiology and Community Health, 57*(1), 63-67. doi:10.1136/jech.57.1.63
White, V. M., Hill, D. J., & Effendi, Y. (2004). How does active parental consent influence the findings of drug-use surveys in schools? *Evaluation Review, 28*(3), 246-260. doi:10.1177/0193841x03259549
Wilens, T. E., Adler, L. A., Adams, J., Sgambati, S., Rotrosen, J., Sawtelle, R., . . . Fusillo, S. (2008). Misuse and diversion of stimulants prescribed for ADHD: A systematic review of the literature. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(1), 21-31. doi:http://dx.doi.org/10.1097/chi.0b013e31815a56f1
Winters, K. C., Stinchfield, R. D., & Fulkerson, J. (1993). Toward the development of an adolescent gambling problem severity scale. *Journal of Gambling Studies, 9*(1), 63-84. doi:10.1007/BF01019925
Wittchen, H.-U., Fröhlich, C., Behrendt, S., Günther, A., Rehm, J., Zimmermann, P., . . . Perkonigg, A. (2007). Cannabis use and cannabis use disorders and their relationship to mental disorders: A 10-year prospective-longitudinal community study in adolescents. *Drug and Alcohol Dependence, 88*(Suppl. 1), S60-S70. doi:http://dx.doi.org/10.1016/j.drugalcdep.2006.12.013
Wolitzky-Taylor, K., Bobova, L., Zinbarg, R. E., Mineka, S., & Craske, M. G. (2012). Longitudinal investigation of the impact of anxiety and mood disorders in adolescence on subsequent substance use disorder onset and vice versa. *Addictive Behaviors, 37*(8), 982-985. doi:http://dx.doi.org/10.1016/j.addbeh.2012.03.026
Wolk, B. J., Ganetsky, M., & Babu, K. M. (2012). Toxicity of energy drinks. *Current Opinion in Pediatrics, 24*(2), 243-251. doi: 10.1097/MOP.0b013e3283506827
World Health Organization. (2014). *Health for the world's adolescents: A second chance in the second decade*. Geneva: WHO. Retrieved from http://apps.who.int/adolescent/second-decade.
Zhang, Z.-F., Morgenstern, H., Spitz, M. R., Tashkin, D. P., Yu, G.-P., Marshall, J. R., . . . Schantz, S. P. (1999). Marijuana use and increased risk of squamous cell carcinoma of the head and neck. *Cancer Epidemiology Biomarkers & Prevention, 8*(12), 1071-1078. Retrieved from http://cebp.aacrjournals.org/content/8/12/1071.

6. APPENDIX

Table A1
District School Boards in Ontario by Region

TORONTO

TORONTO CATHOLIC DISTRICT
TORONTO DISTRICT

EASTERN ONTARIO

ALGONQUIN AND LAKESHORE CATHOLIC DISTRICT
CATHOLIC DISTRICT OF EASTERN ONTARIO
CONSEIL CATHOLIQUE CENTRE-SUD *
CONSEIL CATHOLIQUE DE L'EST ONTARIEN
CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO
CONSEIL DES ÉCOLES CATHOLIQUE DU CENTRE-EST
DURHAM CATHOLIC DISTRICT
DURHAM DISTRICT
HASTINGS AND PRINCE EDWARD DISTRICT
KAWARTHA PINE RIDGE DISTRICT
LIMESTONE DISTRICT
OTTAWA CATHOLIC
OTTAWA-CARLETON DISTRICT
PENETANGUISHENE PROTESTANT SEPARATE
PETERBOROUGH VICTORIA NORTHUMBERLAND & CLARINGTON CATHOLIC DISTRICT
RENFREW COUNTY CATHOLIC DISTRICT
RENFREW COUNTY DISTRICT
SIMCOE COUNTY DISTRICT
SIMCOE MUSKOKA CATHOLIC DISTRICT
TRILLIUM LAKELANDS DISTRICT
UPPER CANADA DISTRICT
YORK CATHOLIC DISTRICT
YORK REGION DISTRICT

WESTERN ONTARIO

AVON MAITLAND DISTRICT
BLUEWATER DISTRICT
BRANT HALDIMAND NORFOLK CATHOLIC DISTRICT
BRUCE-GREY CATHOLIC DISTRICT
CONSEIL SCOLAIRE CATHOLIQUE PROVIDENCE *
CONSEIL SCOLAIRE VIAMONDE *
DISTRICT OF NIAGARA
DUFFERIN-PEEL CATHOLIC DISTRICT
GRAND ERIE DISTRICT
GREATER ESSEX COUNTY DISTRICT
HALTON CATHOLIC DISTRICT
HALTON DISTRICT
HAMILTON-WENTWORTH CATHOLIC DISTRICT
HAMILTON-WENTWORTH DISTRICT
HURON PERTH CATHOLIC DISTRICT
LAMBTON KENT DISTRICT
LONDON DISTRICT CATHOLIC
NIAGARA CATHOLIC DISTRICT
PEEL DISTRICT
ST. CLAIR CATHOLIC DISTRICT
THAMES VALLEY DISTRICT
UPPER GRAND DISTRICT
WATERLOO CATHOLIC DISTRICT
WATERLOO REGION DISTRICT
WELLINGTON CATHOLIC DISTRICT
WINDSOR-ESSEX CATHOLIC DISTRICT

NORTHERN ONTARIO

ALGOMA DISTRICT
CONSEIL CATHOLIQUE FRANCO-NORD
CONSEIL CATHOLIQUE DES GRANDES RIVIÈRES
CONSEIL CATHOLIQUE DU NOUVEL ONTARIO
CONSEIL DU GRAND NORD DE L'ONTARIO
CONSEIL DU NORD-EST DE L'ONTARIO
CONSEIL CATHOLIQUE DES AURORES BORÉALES
DISTRICT ONTARIO NORTH EAST
HURON-SUPERIOR CATHOLIC DISTRICT
KEEWATIN-PATRICIA DISTRICT
KENORA CATHOLIC DISTRICT
LAKEHEAD DISTRICT
NEAR NORTH DISTRICT
NIPISSING-PARRY SOUND CATHOLIC DISTRICT
NORTHEASTERN CATHOLIC DISTRICT
NORTHWEST CATHOLIC DISTRICT
RAINBOW DISTRICT
RAINY RIVER DISTRICT
SUDBURY CATHOLIC DISTRICT
SUPERIOR-GREENSTONE DISTRICT
SUPERIOR NORTH CATHOLIC DISTRICT
THUNDER BAY CATHOLIC DISTRICT

* board with schools in another region

Table A2
Ontario Public Health Regions Sponsoring Oversamples in the OSDUHS, 2009–2015

Public Health Region	2009	2011	2013	2015
Brant County	--	--	--	●
City of Hamilton	●	--	--	--
City of Ottawa	●	●	●	--
Durham Region	●	●	●	●
Haliburton, Kawartha, Pine Ridge District	●	--	●	--
Leeds, Grenville and Lanark District	●	--	●	--
Niagara Region	--	●	--	●
North Bay Parry Sound District	--	●	--	●
Peel Region	--	--	●	●
Simcoe Muskoka District	--	--	--	●
Sudbury and District	--	--	●	--
York Region	●	●	●	●

Table A3
Student Participation Rate by Year of Survey

		1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Total	Selected (N)	(5077)	(5092)	(4832)	(4781)	(4640)	(5167)	(5231)	(6564)	(6094)	(9411)	(10922)	(9497)	(14196)	(15005)	(16535)	(17804)
	Participated %	**82**	**84**	**81**	**83**	**77**	**76**	**77**	**76**	**71**	**72**	**72**	**68**	**65**	**62**	**63**	**59**
	Absent (%)	14	12	15	14	13	15	15	12	13	12	12	13	13	12	11	11
	No consent (%)	4	4	4	3	9	9	8	12	16	16	16	19	22	26	26	29
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Grade 7	Selected (N)	(1257)	(1440)	(1340)	(1106)	(1083)	(1165)	(1054)	(1030)	(1016)	(1446)	(1273)	(1104)	(2632)	(2434)	(3287)	(3260)
	Participated (%)	84	86	84	86	83	80	81	76	75	68	76	66	63	60	65	58
	Absent (%)	7	6	7	5	8	6	5	10	7	7	9	9	9	8	8	7
	No consent (%)	9	7	9	9	9	13	14	14	18	25	14	25	27	32	27	35
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Grade 8	Selected (N)								(1061)	(1038)	(1449)	(1301)	(1085)	(2711)	(2467)	(3245)	(3349)
	Participated (%)								76	68	68	75	72	63	60	63	59
	Absent (%)								10	8	9	7	9	10	9	9	9
	No consent (%)								14	24	23	18	19	26	31	29	31
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Grade 9	Selected (N)	(1315)	(1206)	(1265)	(1029)	(1248)	(1366)	(1442)	(1201)	(1017)	(1671)	(2110)	(1820)	(2111)	(2664)	(2536)	(2978)
	Participated (%)	82	84	83	88	81	78	80	77	70	75	71	68	68	64	61	61
	Absent (%)	13	11	13	10	8	11	12	9	12	12	9	11	11	10	11	11
	No consent (%)	5	5	4	2	10	11	7	14	18	13	20	20	21	26	28	28
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
Grade 10	Selected (N)								(855	(1177)	(1654)	(2120)	(1727)	(2332)	(2597)	(2417)	(2760)
	Participated (%)								76	70	73	68	65	67	60	65	63
	Absent (%)								10	16	14	13	15	13	14	11	11
	No consent (%)								14	14	13	19	20	19	25	24	25
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Grade 11	Selected (N)	(1280)	(1341)	(1115)	(1392)	(1068)	(1270)	(1075)	(1046)	(874)	(1672)	(2128)	(1876)	(2140)	(2384)	(2604)	(2853)
	Participated (%)	80	84	79	81	68	74	75	73	68	72	73	69	65	65	61	55
	Absent (%)	17	14	20	16	17	18	15	17	18	14	14	15	15	14	15	13
	No consent (%)	3	2	1	2	15	7	10	10	14	14	13	16	20	20	24	31
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Grade 12	Selected (N)								(789)	(584)	(1519)	(1990)	(1885)	(2270)	(2459)	(2446)	(2604)
	Participated (%)								76	68	72	69	66	65	66	62	60
	Absent (%)								19	23	19	18	19	19	15	16	14
	No consent (%)								5	9	9	13	14	15	19	22	26
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0

(cont'd)

		1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
Toronto	Selected (N)	(1140)	(1187)	(856)	(1060)	(1117)	(1113)	(1273)	(1139)	(734)	(1617)	(1609)	(1316)	(1415)	(1886)	(1312)	(1972)
	Participated (%)	75	78	77	81	80	70	77	74	76	69	74	73	60	66	59	54
	Absent (%)	18	14	19	16	13	23	16	15	12	15	12	14	15	13	13	11
	No consent (%)	7	7	4	3	7	7	7	11	12	16	14	13	25	20	27	35
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
North	Selected (N)	(626)	(584)	(426)	(327)	(253)	(386}	(490)	(1223)	(1448)	(1868)	(1965)	(1364)	(1079)	(3268)	(2305)	(2594)
	Participated (%)	84	86	87	86	81	76	79	77	76	70	64	60	61	55	56	53
	Absent (%)	13	14	12	12	14	16	13	13	14	13	12	16	16	11	13	10
	No consent (%)	3	0	0	2	5	8	9	10	10	17	24	24	23	33	31	36
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
West	Selected (N)	(1914)	(1917)	(2211)	(2054)	(2061)	(2261)	(1992)	(2321)	(2360)	(3628)	(4052)	(4030)	(4447)	(3841)	(5132)	(7469)
	Participated (%)	84	85	81	82	74	77	78	73	66	71	72	67	65	63	65	60
	Absent (%)	12	12	14	10	14	13	15	13	14	11	12	13	14	12	9	11
	No consent (%)	4	3	5	4	12	10	7	13	20	18	16	20	21	25	26	29
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
East	Selected (N)	(1397)	(1404)	(1339)	(1340)	(1209)	(1407)	(1476)	(1881)	(1552)	(2298)	(3296)	(2787)	(7255)	(6010)	(7786)	(5769)
	Participated (%)	83	85	82	85	77	78	74	79	70	76	75	70	67	65	64	63
	Absent (%)	14	11	14	12	13	13	13	10	12	12	12	12	11	11	11	10
	No consent (%)	3	4	4	2	9	8	12	11	17	12	13	17	22	24	13	26
	Other (%)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1

Notes: Surveys from 1985–1997 included grades 7, 9, 11, and 13 only; surveys in 1999 and 2001 included grades 7–13; surveys from 2003–2015 included grades 7–12; "No consent" refers to either lack of parental consent or no returned signed consent form by the date of the survey (the latter made up the majority of this category); "Other" refers to students who were teacher-assisted, could not complete the questionnaire due to comprehension issues, or withdrew from the survey.

Source: OSDUHS, Centre for Addiction & Mental Health; tabulated by the Institute for Social Research, York University

Table A4
Sample Demographics by Year of Survey

	1977		1979		1981		1983		1985		1987		1989		1991		1993		1995		1997	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
M	(1841)	46.9	(1988)	50.7	(1530)	52.5	(1784)	49.5	(1603)	51.2	(1663)	48.9	(1509)	49.6	(1554)	52.8	(1270)	49.4	(1412)	48.9	(1438)	47.3
F	(2086)	53.1	(1932)	49.3	(1461)	47.5	(1830)	50.5	(1543)	48.8	(1713)	51.1	(1531)	50.4	(1407)	47.2	(1347)	50.6	(1495)	51.1	(1634)	52.7
G7	(1287)	32.8	(1267)	32.3	(1097)	32.7	(1539)	38.9	(1054)	32.4	(1239)	31.9	(1121)	32.3	(941)	32.1	(894)	29.5	(927)	30.3	(851)	31.1
G8																						
G9	(1578)	40.2	(1545)	39.4	(1001)	38.7	(1149)	34.4	(1078)	35.1	(1017)	32.9	(1042)	38.1	(897)	33.2	(1003)	35.4	(1050)	34.7	(1152)	34.0
G10																						
G11	(1062)	27.0	(1108)	28.3	(894)	28.6	(926)	26.7	(1014)	32.5	(1120)	35.2	(877)	29.7	(1123)	34.6	(720)	35.1	(930)	35.0	(1069)	34.9
G12																						
Age (sd)	n/a		n/a		n/a		14.1 (1.8)		14.5 (1.8)		14.5 (1.8)		14.4 (1.7)		14.6 (1.9)		14.6 (1.7)		15.0 (1.9)		14.4 (1.7)	
TO	(1486)	37.8	(1115)	28.4	(490)	21.9	(759)	21.2	(574)	22.3	(706)	21.4	(453)	18.0	(601)	19.4	(642)	20.4	(647)	20.2	(715)	19.6
North	(509)	13.0	(624)	15.9	(355)	8.9	(351)	8.7	(401)	11.0	(417)	9.7	(256)	9.0	(256)	7.8	(156)	8.5	(220)	8.4	(291)	8.0
West	(1089)	27.7	(1403)	35.8	(1133)	46.6	(1469)	40.3	(1254)	39.1	(1305)	42.2	(1405)	44.8	(1252)	43.7	(1122)	42.9	(1242)	42.7	(1163)	42.8
East	(843)	21.5	(778)	19.5	(1013)	22.6	(1035)	29.8	(917)	27.5	(948)	26.8	(926)	28.2	(852)	29.2	(697)	28.2	(798)	28.8	(903)	29.5
Total N	**3927**		**3920**		**2991**		**3614**		**3146**		**3376**		**3040**		**2961**		**2617**		**2707**		**3072**	

	1999		2001		2003		2005		2007		2009		2011		2013		2015	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
M	(2252)	50.8	(1917)	49.8	(3163)	48.3	(3720)	51.8	(3068)	51.8	(4341)	51.8	(4334)	51.8	(4651)	51.8	(4782)	51.8
F	(2195)	49.2	(1981)	50.2	(3453)	51.7	(4006)	48.2	(3255)	48.2	(4771)	48.2	(4954)	48.2	(5621)	48.2	(5644)	48.2
G7	(766)	16.0	(750)	17.1	(947)	14.9	(961)	15.8	(721)	15.1	(1632)	14.1	(1446)	13.0	(2100)	12.2	(1874)	13.2
G8	(798)	16.0	(691)	14.6	(976)	14.3	(971)	16.1	(768)	15.6	(1697)	14.3	(1459)	13.5	(2013)	12.5	(1955)	13.7
G9	(905)	21.7	(702)	20.8	(1254)	18.4	(1471)	17.0	(1221)	16.5	(1414)	16.3	(1684)	16.7	(1537)	16.4	(1794)	16.0
G10	(638)	13.7	(806)	21.6	(1181)	18.0	(1427)	16.4	(1105)	16.6	(1534)	16.7	(1547)	16.8	(1544)	17.0	(1702)	16.4
G11	(750)	18.7	(561)	15.7	(1188)	18.3	(1537)	16.1	(1273)	16.2	(1378)	16.9	(1539)	17.1	(1574)	17.9	(1557)	17.1
G12	(590)	13.8	(388)	10.2	(1070)	16.1	(1359)	18.6	(1235)	20.0	(1457)	21.7	(1613)	22.9	(1504)	24.0	(1544)	23.6
Age (sd)	15.0 (1.8)		14.8 (1.7)		15.0 (1.8)		15.0 (1.8)		15.0 (1.9)		15.0 (1.9)		15.1 (1.9)		15.2 (1.8)		15.1 (1.9)	
TO	(740)	18.0	(533)	19.8	(1097)	18.3	(1172)	17.9	(943)	17.0	(836)	16.7	(1243)	16.9	(769)	17.8	(1053)	17.0
North	(808)	8.5	(1014)	9.0	(1285)	7.9	(1245)	7.0	(797)	6.4	(649)	6.4	(1793)	5.2	(1264)	5.6	(1355)	5.6
West	(1532)	42.7	(1425)	43.0	(2513)	44.4	(2865)	41.8	(2639)	42.8	(2861)	43.0	(2392)	44.2	(3305)	46.8	(4407)	44.7
East	(1367)	30.7	(926)	28.2	(1721)	29.4	(2444)	33.4	(1944)	33.8	(4766)	34.0	(3860)	33.7	(4934)	29.7	(3611)	32.7
Total N	**4447**		**3898**		**6616**		**7726**		**6323**		**9112**		**9288**		**10272**		**10426**	

Notes: The sample size (N) is the number surveyed (unweighted); percentages are based on weighted data; mean age and standard deviation (sd) is shown; the seven regions sampled in 1977 and 1979 correspond approximately to the four regions sampled since 1981; n/a = not available

Source: OSDUHS, Centre for Addiction & Mental Health

Table A5
Design Effects (Deffs) for Estimates by Year of Survey

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011*	2013*	2015
Sex	1.84	5.21	1.20	2.60	1.36	2.62	1.79	1.58	3.28	3.82	3.60	4.94	6.22	3.68	4.47	17.75	4.94	6.84
Grade 7	4.81	0.73	1.62	4.79	2.75	4.38	1.56	0.01	0.00	0.72	2.81	4.65	5.14	1.87	2.89	6.68	13.91	5.06
Grade 8	--	--	--	--	--	--	--	--	--	14.6	1.55	3.11	4.96	3.12	2.12	6.70	11.17	2.45
Grade 9	4.09	1.16	1.50	7.33	3.44	8.34	2.26	0.01	0.00	19.8	20.4	2.22	2.97	1.86	4.29	5.23	4.46	2.11
Grade 10	--	--	--	--	--	--	--	--	--	12.5	20.4	2.17	1.55	2.80	3.14	2.52	4.25	3.23
Grade 11	16.72	1.29	1.02	6.58	3.72	4.27	2.52	0.02	0.01	17.1	32.8	1.92	1.36	1.11	6.37	4.67	3.39	1.24
Grade 12	--	--	--	--	--	--	--	--	--	12.6	23.0	3.18	2.90	1.59	3.69	5.50	6.37	5.85
Grade 13	6.63	1.39	1.31	5.80	1.38	13.49	0.77	0.01	0.00	8.8	25.8	--	--	--	--	--	--	--
Toronto	18.15	0.67	1.62	7.92	1.72	5.63	3.27	0.02	0.00	0.56	3.50	4.80	9.69	6.69	3.33	9.73	17.84	3.77
North	1.11	2.79	3.24	2.46	2.17	3.62	1.14	0.01	0.00	0.38	0.52	3.39	3.94	1.74	1.64	3.92	4.34	2.59
West	6.79	0.93	1.11	6.31	3.10	6.91	1.73	0.02	0.00	0.73	2.89	7.07	9.39	6.85	6.23	37.35	14.07	4.90
East	3.05	1.14	1.36	5.69	4.26	5.82	2.61	0.01	0.01	0.72	2.67	4.41	9.51	5.11	6.73	19.17	10.88	4.23
Cigarettes	4.20	4.56	2.29	1.38	1.50	1.31	1.04	1.46	1.22	3.73	4.65	2.63	3.42	2.46	3.44	5.69	6.07	5.09
Alcohol	1.63	3.20	1.01	1.76	3.97	2.95	2.27	1.72	3.47	2.94	3.58	3.46	5.99	3.62	5.81	7.06	9.76	9.00
Binge Drinking	0.50	2.10	3.64	3.45	4.06	3.98	1.21	6.19	2.26	4.33	3.58	4.07	6.65	2.95	4.63	3.42	7.71	7.53
Been Drunk	1.71	2.30	2.61	5.09	1.45	3.08	0.96	5.96	1.22	4.52	1.93	2.94	3.76	1.95	2.87	3.02	8.44	6.51
Cannabis	2.78	2.22	4.06	5.40	3.42	1.19	0.62	4.09	1.47	3.60	3.67	3.24	4.47	3.46	3.30	3.57	9.01	7.79
Inhalants	2.54	0.63	1.02	3.24	0.81	1.59	0.91	0.91	0.70	2.09	2.02	2.84	1.69	1.95	2.16	3.23	2.93	1.64
Heroin	1.32	1.52	1.36	1.94	1.48	1.50	0.82	1.84	0.41	1.54	1.05	1.34	1.34	1.63	1.98	8.99	1.74	1.46
Methamphetamine	2.06	9.92	0.82	1.50	0.85	1.69	1.57	2.09	1.21	3.44	2.72	1.23	1.46	1.62	3.34	5.18	3.09	3.99
Tranquillizers (NM)	1.12	2.57	1.23	2.04	0.59	1.14	1.68	1.96	0.72	3.74	2.49	1.56	1.55	1.67	2.18	3.50	3.26	2.04
Tranquillizers (M)	0.89	1.15	0.71	2.22	1.16	1.25	1.92	1.28	0.84	1.71	1.20	1.11	1.84	1.28	2.59	3.41	2.75	1.03
LSD	2.94	1.81	2.78	4.20	3.92	1.24	0.99	5.04	0.89	3.42	2.26	1.85	2.73	2.33	2.49	3.59	2.83	2.12
Mushrooms/Mescal	3.80	2.65	2.00	4.54	3.52	0.96	0.88	5.19	1.57	4.21	2.48	3.22	4.40	2.62	3.50	4.28	6.14	4.58
Cocaine	1.36	2.27	2.27	2.51	1.74	1.52	2.10	0.68	0.41	3.13	1.90	1.61	2.53	1.50	2.72	2.20	4.43	2.37
Total (average)	**4.09**	**2.37**	**1.81**	**4.03**	**2.38**	**3.57**	**1.57**	**1.82**	**0.90**	**5.39**	**6.94**	**3.04**	**4.14**	**2.73**	**3.58**	**7.35**	**6.82**	**4.06**

Notes: 1981–1997 deffs are based on grades 7, 9, 11, and 13; 1999 and 2001 deffs are based on grades 7–13; 2003–2013 deffs are based on grades 7–12; NM=nonmedical use; M=medical/prescription use; Mescal.=mescaline; *elevated deffs in 2011 and 2013 are attributed to the oversampling of students in the public health regions.

Source: OSDUHS, Centre for Addiction & Mental Health

2015 OSDUHS

PARENTAL CONSENT/STUDENT ASSENT FORM

&

INFORMATION SHEET

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

33 Russell Street, Toronto, Ontario, Canada M5S 2S1 Tel: 416 535-8501
33, rue Russell, Toronto (Ontario) Canada M5S 2S1 Tél. : 416 535-8501
www.camh.ca

The 2015 Ontario Student Drug Use and Health Survey

Parent-Student Information and Consent Form

Dear Parents/Guardians and Students:

The Centre for Addiction and Mental Health (CAMH) conducts the longest ongoing school survey in Canada and one of the longest in the world. Since 1977, Ontario students have been asked about their beliefs and use (if any) of tobacco, alcohol and other drugs (for example, cannabis, cocaine, and medical drugs). The survey also covers topics about physical and mental well-being, bullying, illegal activities (for example, theft and gambling), and video gaming.

This year, about 11,000 Ontario students in grades 7 to 12 will be asked to complete a pen-and-paper questionnaire in their classrooms. Your child's class has been asked to participate. Both the school and the class were randomly selected (by chance). **Students do not write their names on the questionnaires** and **neither students nor classes can ever be identified or linked to school records**. Because we are interested in both the use and non-use of drugs, **there is no assumption that students who complete this anonymous survey have ever used any drug**.

Participation in the survey is voluntary, students do not have to answer every question, and they can stop at any time – if they do so, we will destroy their questionnaires. Refusal to participate or to answer certain questions, or stopping the survey, will not affect students' relationship with CAMH, their school or teacher, or any research group associated with the project. There are no expected risks in completing the survey. The survey results will be reported in a way that ensures complete confidentiality to the fullest extent possible by law. Data will be stored in a password-protected computer at CAMH and York University (who is administering the survey) for an indefinite period. For your interest, past survey reports and the 2015 questionnaire are posted on our website at **www.camh.ca/research/osduhs.aspx**. The back of this sheet has additional information about the survey.

The OSDUHS results are used by health and school organizations to identify key issues and develop health and education programs, and are widely reported in the media. I sincerely appreciate your co-operation. If you would like to receive more information about the study, please contact me at 416-535-8501 ext. 34496 or robert.mann@camh.ca. If you would like to discuss your child's rights regarding participation in this survey, please contact Dr. Padraig Darby, Chair, Research Ethics Board, CAMH at 416-535-8501 ext. 36876.

Robert E. Mann, Ph.D.
Study Director

Please sign and return the section below.

.....

We (parent/guardian and student) have read the request for participation in the *2015 Ontario Student Drug Use and Health Survey*. We have discussed it and...

- ☐ I (parent) **give permission** for my son/daughter to participate.
- ☐ I (parent) **do not give permission** for my son/daughter to participate.
- ☐ I (student) **agree** to participate.
- ☐ I (student) **do not agree** to participate.

Signature of Parent/Guardian: _____

Signature of Student: _____

Name of Student (please print): _____

camh OSDUHS

Ontario Student Drug Use and Health Survey

Every two years students across Ontario are asked to participate in this important survey: *The Ontario Student Drug Use and Health Survey* (OSDUHS). This flyer answers questions you may have, and it includes the **consent form on the back**.

What is the OSDUHS?

The OSDUHS is an anonymous student survey that has been going on since 1977. About 11,000 students in grades 7–12 in big cities, small towns, and rural areas across the province take part. Questions in the survey cover a range of issues facing young people today, such as smoking, drinking, drug use, mental health, bullying, violence, gambling, and physical health.

Why Should Students Participate?

Many adults have impressions about young people that are not based on fact, but on stereotypes and media headlines. It's important to know about young people's own experiences, their problems, and their beliefs. The survey results provide an accurate picture of what it's like growing up in today's world.

Do Students Have a Choice?

Of course they do. Participation in the survey is completely voluntary. Plus, if a student begins the survey, he/she can stop at anytime. We think once students know that their opinions count, they will agree that this is an important study to be part of.

What Do Students Have to Do?

Students under age 18 must get one parent/guardian to sign the consent form before they can participate. Then, on the day of the survey, they complete a questionnaire in their classrooms. It takes about 30-40 minutes. They do not write their name anywhere on the questionnaire, so they cannot be identified.

Who Will See the Answers?

Students' answers are only seen by the researchers. The answers cannot be connected to individual students. Teachers and principals will not see students' answers. All information gathered in the study is confidential.

How Are the Results Used?

Results are presented in two OSDUHS reports, one about trends in drug use, and the other about trends in mental health and well-being. Both reports are available at: **www.camh.ca/research/osduhs.aspx.** Results are used by education and health professionals to identify areas of concern and emerging trends, and to create programs and policies. The media also use the results when covering issues affecting youth.

How Are the Schools Selected?

About 200 elementary/middle schools and high schools are selected to represent students in grades 7 through 12 in Ontario. All schools are selected randomly (by chance) from a list of all public and Catholic schools in Ontario provided by the Ministry of Education. After schools are selected, a few classes in those schools are randomly selected. Just because a school or class is selected does not mean that there is a problem in that school or class.

4603 / 07-2012

Please read, sign, and return the consent form on the other side.

Institute for Social Research
York University

UNIVERSITY of TORONTO

Drugs No Longer Monitored by the OSDUHS

In 2011, certain drugs were removed from active surveillance largely due to negligible or suppressed estimates. These were PCP, GHB, Rohypnol, and over-the-counter sleeping medication.

In 2013, we removed the question about the nonmedical use of prescription stimulants as a drug class (included both diet pills and stay-awake pills), over-the counter Gravol (nonmedical use), and doda.

In 2015, we removed the questions about the use of ketamine, methoxetamine, BZP (benzylpiperazine) pills, and OxyContin/OxyNeo (specific brand of opioid).

The following tables present the historic data on the past year prevalence for some of these drugs.

Table A6
Percentage Reporting PCP Use in the Past Year, 1981–2009 OSDUHS

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	
(n^1)										(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	
(n^2)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	**3.0** (2.4-3.9)	**2.8** (2.2-3.7)	**2.2** (1.9-2.7)	**1.1** (0.8-1.5)	**0.7** (0.5-1.0)	**0.8** (0.5-1.3)	[b]
Total[2]	**2.4** (1.7-3.4)	**2.2** (1.6-2.8)	**1.7** (1.3-2.2)	**1.4** (0.8-2.3)	**1.2** (0.8-1.8)	**0.6** (0.3-1.1)	**0.6** (0.3-1.2)	**1.8** (1.0-3.1)	**2.1** (1.4-3.0)	**3.2** (2.2-4.5)	**2.6** (1.9-3.5)	**2.0** (1.6-2.6)	**1.1** (0.7-1.6)	**0.8** (05-1.2)	**0.7** (0.4-1.1)	[cd]
Sex																
Males[1]	—	—	—	—	—	—	—	—	—	**3.2** (2.4-4.2)	**3.3** (2.3-4.6)	**2.9** (2.4-3.6)	**1.4** (0.9-2.0)	**0.9** (0.6-1.3)	**1.0** (0.6-1.9)	[b]
Males[2]	**2.9** (1.9-4.4)	**2.5** (1.7-3.6)	**2.2** (1.6-3.1)	**2.1** (1.3-3.5)	**1.6** (0.9-2.7)	**0.9** (0.4-2.2)	**0.6** (0.4-1.0)	**2.3** (1.3-4.0)	**2.4** (1.9-3.2)	**3.2** (2.0-4.9)	**2.8** (1.7-4.4)	**2.5** (1.9-3.4)	**1.2** (0.8-2.0)	**1.3** (0.8-2.1)	**0.7** (0.4-1.4)	
Females[1]	—	—	—	—	—	—	—	—	—	**2.9** (1.9-4.2)	**2.3** (1.6-3.4)	**1.6** (1.2-2.2)	**0.7** (0.4-1.2)	**0.5** (0.3-0.9)	**0.5** (0.3-0.9)	[b]
Females[2]	**1.9** (1.2-2.9)	**1.8** (1.2-2.7)	**1.2** (0.8-1.8)	**0.6** (0.2-1.8)	**0.8** (0.4-1.5)	†	**0.6** (0.2-2.2)	**1.4** (0.8-2.6)	**1.7** (0.9-3.3)	**3.2** (1.8-5.5)	**2.4** (1.5-3.8)	**1.6** (1.0-2.5)	**0.9** (0.5-1.6)	†	**0.7** (0.3-1.4)	
Grade																
7	**1.1** (0.5-2.6)	**1.0** (0.6-1.6)	**1.4** (0.6-3.6)	**1.2** (0.4-3.3)	**0.7** (0.4-1.1)	†	†	**0.6** (0.1-3.6)	**0.6** (0.2-2.0)	**0.7** (0.3-1.6)	**0.8** (0.3-1.8)	**1.3** (0.6-2.6)	†	†	†	
8	—	—	—	—	—	—	—	—	—	**2.7** (1.6-4.4)	**1.2** (0.5-2.7)	**0.8** (0.4-1.5)	**1.0** (0.3-3.2)	†	†	[b]
9	**2.8** (1.4-5.4)	**3.0** (2.8-3.4)	**1.3** (1.1-1.6)	**1.3** (0.5-3.5)	**1.6** (0.9-2.8)	**1.0** (0.3-2.8)	†	**1.7** (0.8-3.2)	**1.8** (0.7-4.4)	**3.1** (1.9-5.1)	**3.8** (2.5-5.8)	**2.1** (1.4-3.1)	**1.5** (0.9-2.4)	**0.7** (0.3-1.5)	†	[b]
10	—	—	—	—	—	—	—	—	—	**3.5** (2.0-6.0)	**3.7** (2.0-6.7)	**3.6** (2.4-5.2)	**1.0** (0.6-1.9)	**0.7** (0.3-1.4)	†	[b]
11	**3.4** (2.6-4.5)	**2.7** (1.2-5.7)	**2.4** (2.0-3.0)	**1.6** (0.7-3.2)	**1.0** (0.4-3.0)	**0.6** (0.2-1.4)	**1.1** (0.5-2.8)	**3.1** (1.4-6.6)	**3.6** (2.4-5.3)	**5.4** (3.3-8.7)	**2.9** (1.9-4.5)	**2.6** (1.8-3.8)	**1.4** (0.8-2.8)	**1.3** (0.7-2.4)	**1.3** (0.7-2.3)	[b]
12	—	—	—	—	—	—	—	—	—	**2.3** (1.3-4.2)	**4.4** (2.4-8.0)	**2.7** (1.8-4.0)	**1.1** (0.6-2.0)	**0.8** (0.4-1.6)	**1.6** (0.8-3.1)	

(cont'd)

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009
(n^1)										(4447)	(3898)	(6616)	(7726)	(6323)	(9112)
(n^2)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)
Region															
Toronto[1]	—	—	—	—	—	—	—	—	—	**2.4** (1.4-4.2)	**2.3** (1.4-3.8)	**1.6** (0.9-2.8)	**1.4** (0.6-3.4)	**0.6** (0.2-1.6)	† [b]
Toronto[2]	**0.9** (0.3-2.9)	**1.9** (0.8-4.2)	**2.0** (1.8-2.2)	**1.0** (0.2-4.1)	**0.6** (0.1-3.8)	**1.1** (0.3-4.3)	**0.5** (0.1-2.1)	**1.0** (0.6-1.6)	**0.8** (0.2-3.1)	**2.4** (1.1-5.3)	**2.9** (2.0-4.2)	**1.2** (0.5-2.7)	**1.0** (0.4-3.0)	**0.7** (0.2-2.2)	†
North[1]	—	—	—	—	—	—	—	—	—	**2.6** (1.7-3.9)	**2.0** (1.1-3.5)	**3.1** (2.2-4.2)	**1.2** (0.6-2.3)	**0.8** (0.3-2.3)	† [b]
North[2]	**2.4** (0.7-7.8)	**1.4** (0.3-6.3)	**2.2** (0.7-6.8)	**2.0** (1.1-3.7)	**1.3** (0.5-3.6)	**2.3** (1.0-5.3)	†	**1.0** (0.1-8.4)	**1.8** (0.4-8.5)	**2.9** (1.7-5.0)	**1.7** (0.7-4.0)	**3.4** (2.1-5.6)	**1.2** (0.4-3.0)	†	†
West[1]	—	—	—	—	—	—	—	—	—	**3.5** (2.3-5.1)	**3.0** (2.1-4.3)	**2.0** (1.6-2.6)	**1.3** (0.8-1.9)	**0.7** (0.4-1.0)	**1.0** (0.5-2.0) [b]
West[2]	**2.8** (1.6-4.8)	**2.2** (1.7-2.8)	**2.0** (1.3-3.1)	**1.7** (0.8-3.6)	**1.1** (0.6-2.1)	†	**0.7** (0.4-1.3)	**2.4** (1.0-5.5)	**2.5** (1.5-4.0)	**4.1** (2.4-6.9)	**2.8** (1.8-4.4)	**2.0** (1.4-2.8)	**1.4** (0.8-2.5)	**1.1** (0.6-1.8)	**0.8** (0.4-1.6)
East[1]	—	—	—	—	—	—	—	—	—	**2.9** (1.9-4.4)	**3.2** (1.7-5.6)	**2.7** (1.9-3.8)	**0.6** (0.3-1.2)	**0.8** (0.4-1.3)	**0.7** (0.3-1.7) [b]
East[2]	**3.1** (2.0-5.0)	**2.5** (1.5-4.2)	**0.8** (0.4-1.4)	**0.8** (0.2-3.0)	**1.5** (0.8-2.8)	†	**0.7** (0.1-3.8)	**1.9** (0.8-4.2)	**2.4** (1.2-4.7)	**2.6** (1.4-4.5)	**2.2** (0.9-5.1)	**2.3** (1.4-3.6)	**0.7** (0.3-1.3)	**0.6** (0.2-1.8)	**0.7** (0.3-1.6)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) entries in brackets are 95% confidence intervals; (4) † estimate suppressed due to unreliability; (5) no significant differences 2009 vs. 2007; [b] 2007 vs. 1999 significant difference, p<.01; [c] significant long-term linear trend, p<.01; [d] significant long-term nonlinear trend, p<.01.

Q: In the last 12 months, how often did you use the drug PCP (also known as “angel dust”, “dust”, “horse tranquillizer”, etc.)?

Source: OSDUHS, Centre for Addiction & Mental Health

Table A7
Percentage Reporting GHB Use, Rohypnol Use, and OTC Sleeping Medication Nonmedical Use in the Past Year, 2001–2009 OSDUHS (Grades 7–12)

		GHB					Rohypnol					OTC Sleep Medication	
	(n=)	**2001** (1837)	**2003** (3152)	**2005** (3648)	**2007** (2935)	**2009** (4261)	**2001** (1837)	**2003** (3152)	**2005** (3648)	**2007** (2935)	**2009** (4261)	**2007** (2935)	**2009** (4261)
Total (95% CI)		**1.3** (0.8-2.1)	**0.7** (0.4-1.1)	**0.5** (0.3-0.9)	**0.5** (0.3-1.0)	**0.5** (0.3-0.9)	**3.1** (2.0-4.8)	**1.6** (1.2-2.2)	**1.0** (0.7-1.4)	**0.6** (0.3-0.9)	**0.7** (0.4-1.2)	**4.0** (3.2-5.0)	**2.6** (2.0-3.4)
Sex	Males	**1.8** (1.0-3.4)	**0.8** (0.4-1.5)	**0.6** (0.3-1.3)	†	**0.7** (0.3-1.6)	**3.5** (1.6-7.3)	**1.7** (1.1-2.8)	**1.2** (0.8-1.9)	†	**0.7** (0.4-1.4)	**3.2** (2.3-4.4)	**2.2** (1.4-3.3)
	Females	**0.7** (0.3-1.5)	**0.6** (0.3-1.2)	**0.5** (0.3-0.9)	**0.7** (0.3-1.6)	†	**2.7** (1.6-4.7)	**1.5** (1.0-2.3)	**0.7** (0.4-1.2)	**0.8** (0.4-1.4)	**0.7** (0.3-1.5)	**4.9** (3.7-6.5)	**3.1** (2.2-4.2)
Grade	7	†	†	†	†	†	**1.6** (0.6-4.4)	**1.2** (0.5-2.9)	**0.6** (0.2-1.9)	†	†	†	†
	8	†	†	†	†	†	**2.6** (1.0-6.5)	**1.2** (0.5-2.7)	**1.1** (0.3-3.6)	†	†	†	**1.9** (1.1-3.5)
	9	**1.2** (0.4-3.3)	†	**0.7** (0.3-1.6)	†	†	**5.2** (3.4-7.9)	**1.4** (0.8-2.8)	**2.1** (1.2-3.6)	†	†	**5.6** (3.5-8.9)	**2.6** (1.3-4.8)
	10	**3.6** (1.7-7.1)	**0.9** (0.3-2.3)	**0.5** (0.2-1.2)	†	†	**3.0** (1.3-6.9)	**2.0** (1.0-4.0)	**1.4** (0.7-2.5)	†	†	**2.3** (1.4-3.9)	**2.8** (1.6-4.7)
	11	†	**1.7** (0.8-3.4)	**0.6** (0.3-1.5)	**1.0** (0.4-2.3)	†	**1.2** (0.4-3.5)	**2.3** (1.3-4.0)	**0.6** (0.2-1.6)	**0.8** (0.3-1.8)	**2.0** (0.8-5.0)	**5.0** (3.5-7.0)	**3.9** (2.4-6.4)
	12	**1.2** (0.3-3.8)	†	**0.5** (0.2-1.6)	**1.0** (0.3-2.9)	†	**5.4** (1.3-19.9)	**1.3** (0.5-3.2)	†	†	†	**4.4** (2.8-7.0)	**2.3** (1.1-4.6)
Region	Toronto	**1.6** (0.6-4.2)	**0.8** (0.3-2.1)	†	†	†	**2.9** (1.6-5.1)	**0.9** (0.4-2.0)	**0.8** (0.2-2.8)	†	†	†	†
	North	**0.7** (0.2-2.0)	**1.2** (0.6-2.6)	**0.7** (0.3-1.5)	**0.6** (0.1-4.2)	†	**1.6** (0.6-4.1)	**3.5** (1.9-6.5)	**1.5** (0.7-3.3)	**1.7** (0.6-4.4)	†	**5.4** (3.5-8.1)	**3.6** (2.0-6.3)
	West	**1.5** (0.7-3.1)	**0.5** (0.2-1.0)	**0.6** (0.3-1.1)	**0.5** (0.2-1.6)	†	**4.2** (2.1-8.1)	**1.4** (0.8-2.3)	**1.4** (0.9-2.1)	**0.6** (0.3-1.1)	**0.9** (0.4-2.0)	**4.2** (3.2-5.5)	**2.0** (1.2-3.4)
	East	**0.9** (0.3-2.3)	**0.8** (0.3-1.9)	†	**0.6** (0.3-1.5)	**0.9** (0.3-2.3)	**2.0** (0.9-4.5)	**2.0** (1.1-3.4)	†	**0.6** (0.2-1.6)	**0.7** (0.3-1.9)	**4.2** (2.7-6.6)	**2.8** (2.0-3.9)

Notes: (1) entries in brackets are 95% confidence intervals; (2) OTC = over-the-counter; (3) † estimate suppressed due to unreliability; (4) each drug based on a random half-sample in each year; (5) GHB: no significant changes between 2001 and 2009; Rohypnol: significant difference 2009 vs. 2001 ($p<.01$) for the total sample, males, females, and west region; OTC Sleeping Medication: no significant differences, 2009 vs. 2007.

Q: In the last 12 months, how often did you use GHB (also known as "G", "goop", "grevious bodily harm", "liquid ecstasy")?

Q: In the last 12 months, how often did you use Rohypnol (also known as "roach", "roofies")?

Q: In the last 12 months, how often did you use sleeping medicine from a drugstore, such as Nytol, Sleep-Eze D, Unisom or Sominex, for purposes other than sleeping?"

Source: OSDUHS, Centre for Addiction & Mental Health

Table A8
Percentage Reporting Nonmedical Stimulant Use in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**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
Total[2]	**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)	cd
Sex																			
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**5.3** (4.3-6.6)	**4.5** (3.4-6.0)	**4.7** (4.0-5.7)	**4.3** (3.5-5.2)	**4.0** (3.2-5.0)	**3.4** (2.6-4.4)	**3.0** (2.3-3.9)	b
Males[2]	**7.6** (6.4-9.1)	**12.4** (10.7-14.5)	**10.8** (9.4-12.4)	**14.1** (11.6-17.0)	**10.6** (8.6-13.0)	**7.1** (5.4-9.4)	**5.0** (3.6-6.9)	**2.9** (1.8-4.6)	**3.4** (1.9-6.0)	**5.1** (3.8-6.8)	**5.0** (4.1-6.0)	**4.7** (3.4-6.4)	**4.0** (2.6-5.9)	**4.8** (3.8-6.1)	**3.9** (2.9-5.1)	**4.0** (3.1-5.3)	**2.8** (1.9-4.1)	**3.4** (2.4-4.9)	
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**9.4** (8.0-11.0)	**8.0** (6.7-9.6)	**6.7** (5.7-7.8)	**5.4** (4.5-6.5)	**7.5** (6.3-8.8)	**6.3** (5.4-7.2)	**5.3** (4.0-6.9)	b
Females[2]	**7.0** (5.8-8.4)	**9.4** (7.6-11.6)	**11.2** (8.4-14.8)	**14.6** (12.3-17.3)	**11.2** (9.0-13.8)	**8.0** (6.7-9.4)	**6.5** (4.9-8.6)	**4.7** (3.6-6.2)	**7.0** (5.0-9.8)	**7.6** (5.2-11.0)	**9.1** (7.8-10.7)	**8.8** (6.7-11.5)	**7.5** (5.9-9.6)	**5.9** (4.7-7.4)	**5.1** (3.8-7.0)	**7.3** (5.9-8.9)	**6.4** (5.2-7.8)	**5.3** (3.4-8.3)	
Grade																			
7	**3.1** (2.2-4.4)	**4.2** (3.2-5.6)	**2.2** (1.5-3.1)	**3.4** (2.2-5.3)	**3.0** (1.3-6.7)	**2.3** (1.6-3.2)	**1.4** (0.9-2.1)	**0.9** (0.3-2.5)	**1.4** (0.8-2.4)	**2.1** (1.3-3.5)	**2.3** (0.6-8.5)	**1.8** (1.1-3.0)	**1.9** (1.1-3.3)	**1.6** (0.9-2.6)	†	**1.9** (1.0-3.6)	†	†	
8	—	—	—	—	—	—	—	—	—	—	—	**6.3** (4.1-9.4)	**3.3** (2.2-5.0)	**3.7** (2.5-5.5)	**3.9** (2.5-5.8)	**3.3** (2.1-5.0)	**3.6** (2.7-4.8)	**2.5** (1.5-4.0)	b
9	**9.0** (7.5-10.8)	**10.5** (8.6-12.7)	**13.2** (12.5-14.0)	**15.5** (12.6-18.9)	**10.6** (9.1-12.3)	**6.9** (4.6-10.2)	**7.5** (6.0-9.4)	**2.5** (1.9-3.2)	**4.8** (3.4-6.8)	**6.3** (4.2-9.2)	**7.0** (6.0-8.1)	**6.9** (5.3-9.0)	**5.5** (3.6-8.3)	**5.6** (4.2-7.5)	**5.7** (4.0-8.2)	**6.4** (5.1-8.2)	**4.5** (3.2-6.3)	**3.3** (2.3-4.7)	b
10	—	—	—	—	—	—	—	—	—	—	—	**8.4** (6.2-11.3)	**7.8** (5.7-10.6)	**6.6** (4.8-9.1)	**5.3** (3.9-7.2)	**5.4** (3.9-7.4)	**5.1** (3.7-6.9)	**4.0** (2.9-5.6)	b
11	**9.7** (7.6-12.3)	**19.1** (15.5-23.4)	**18.3** (13.8-23.9)	**28.9** (22.8-35.9)	**18.9** (15.8-22.4)	**13.0** (10.2-16.2)	**8.3** (7.5-9.1)	**7.6** (5.6-10.3)	**8.9** (5.1-15.0)	**10.2** (8.2-12.6)	**11.2** (9.9-12.8)	**10.7** (7.5-14.9)	**10.3** (7.4-14.1)	**8.2** (6.4-10.4)	**6.5** (4.9-8.4)	**8.2** (6.7-10.0)	**7.5** (5.8-9.8)	**7.7** (4.7-12.2)	
12	—	—	—	—	—	—	—	—	—	—	—	**10.0** (7.9-12.7)	**10.4** (6.9-15.4)	**7.8** (5.9-10.1)	**6.0** (4.6-7.9)	**7.9** (6.0-10.4)	**5.7** (4.2-7.8)	**4.5** (2.9-6.9)	b

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(n[1])												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(n[2])	(3927)	(3920)	(2991)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**5.3** (3.9-7.2)	**5.0** (4.0-6.3)	**3.8** (2.8-5.2)	**2.9** (2.0-4.2)	**3.8** (2.4-6.0)	**2.8** (1.7-4.5)	**2.8** [b] (2.1-3.8)
Toronto[2]	—	—	**4.9** (3.3-7.4)	**13.3** (8.6-20.1)	**12.6** (11.1-14.4)	**5.3** (3.3-8.4)	**5.6** (3.1-9.7)	**3.3** (1.8-6.1)	**3.4** (1.4-7.9)	**4.0** (2.1-7.5)	**3.6** (2.5-5.2)	**5.3** (3.5-8.0)	**5.4** (3.6-8.0)	**3.3** (2.0-5.5)	**3.2** (1.8-5.8)	**2.9** (1.5-5.6)	**2.9** (1.2-6.9)	**2.7** (1.7-4.2)
North[1]	—	—	—	—	—	—	—	—	—	—	—	**8.4** (6.5-10.8)	**6.6** (4.9-8.8)	**7.8** (6.1-10.0)	**7.5** (4.5-12.2)	**7.2** (5.7-9.1)	**7.0** (5.2-9.3)	**5.3** (3.4-8.1)
North[2]	—	—	**7.8** (5.0-11.8)	**16.0** (14.7-17.3)	**13.0** (8.7-19.1)	**11.0** (7.1-16.7)	**7.3** (3.9-13.5)	**3.5** (1.1-10.5)	**7.7** (1.6-29.5)	**9.2** (5.2-15.6)	**8.1** (4.8-13.3)	**6.1** (4.3-8.6)	**6.2** (3.9-9.7)	**7.4** (5.3-10.1)	**9.6** (4.9-18.2)	**6.7** (4.3-10.3)	**6.3** (3.8-10.5)	**6.5** (3.8-11.0)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**8.6** (6.8-10.9)	**7.2** (5.5-9.3)	**6.3** (5.1-7.6)	**5.5** (4.4-6.9)	**5.8** (4.8-7.2)	**5.3** (4.2-6.7)	**4.0** [b] (2.7-6.0)
West[2]	—	—	**13.8** (11.0-17.3)	**15.8** (12.5-19.8)	**12.0** (9.1-15.7)	**7.2** (5.3-9.6)	**5.4** (4.8-5.9)	**4.1** (3.0-5.6)	**6.7** (4.3-10.2)	**5.8** (4.2-8.0)	**9.2** (7.4-11.4)	**7.7** (5.1-11.6)	**6.0** (4.0-8.7)	**6.5** (5.1-8.2)	**4.3** (3.0-6.1)	**5.7** (4.6-6.9)	**5.1** (3.7-7.0)	**5.1** (2.8-9.1)
East[1]	—	—	—	—	—	—	—	—	—	—	—	**6.4** (5.0-8.1)	**5.8** (4.1-8.0)	**5.6** (4.3-7.3)	**4.3** (3.3-5.8)	**6.1** (4.9-7.6)	**4.6** (3.8-5.5)	**4.6** (3.6-5.8)
East[2]	—	—	**12.6** (11.7-13.6)	**12.6** (8.7-18.0)	**7.0** (5.4-8.9)	**8.6** (7.2-10.4)	**6.1** (5.2-7.0)	**3.7** (2.2-6.3)	**3.6** (1.9-6.7)	**8.1** (6.2-10.6)	**6.2** (5.1-7.5)	**6.4** (4.6-8.8)	**5.6** (3.5-8.9)	**4.4** (3.3-5.8)	**4.2** (3.2-5.6)	**6.7** (5.1-8.8)	**4.3** (3.2-5.8)	**3.8** (2.9-5.0)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (4) entries in brackets are 95% confidence intervals; (5) † estimate suppressed due to unreliability; (6) no significant differences 2011 vs. 2009; [b] 2011 vs. 1999 significant difference, p<.01; [c] significant long-term linear trend; [d] significant long-term nonlinear trend.

Q: In the last 12 months, how often did you use stimulants such as diet pills and stay-awake pills (also known as “uppers”, “bennies”, “dexies”, “pep pills”, etc.) without a prescription?

Source: OSDUHS, Centre for Addiction & Mental Health

Table A9
Percentage Reporting Ketamine Use in the Past Year, 2003–2013 OSDUHS (Grades 9–12)

	(*n*=)	**2003** (2238)	**2005** (2725)	**2007** (2247)	**2009** (2728)	**2011** (3025)	**2013** (2895)
Total (95% CI)		**2.9** (2.3-3.7)	**1.6** (1.1-2.2)	**1.4** (0.9-2.3)	**1.9** (1.3-3.0)	**1.1** (0.6-2.0)	† [bc]
Sex							
	Males	**3.6** (2.6-5.0)	**2.1** (1.4-3.1)	**1.6** (0.9-2.7)	**2.2** (1.4-3.3)	†	† [b]
	Females	**2.1** (1.4-3.3)	**1.0** (0.6-1.8)	†	**1.7** (0.9-3.2)	†	† [b]
Grade							
	9	†	†	†	†	†	†
	10	†	†	†	†	†	†
	11	**4.7** (3.1-6.9)	**1.9** (1.1-3.3)	**2.0** (1.1-3.8)	**2.3** (1.4-4.0)	†	† [b]
	12	**3.7** (2.1-6.5)	**1.4** (0.7-2.5)	**2.5** (1.4-4.4)	**2.8** (1.6-5.1)	†	† [b]
Region							
	Toronto	†	†	†	†	†	†
	North	†	**1.9** (1.0-3.4)	†	†	†	†
	West	**3.8** (2.7-5.2)	**2.2** (1.5-3.4)	**1.0** (0.6-1.9)	**2.5** (1.3-4.8)	†	† [b]
	East	**2.1** (1.3-3.4)	†	†	**1.6** (0.8-3.1)	**0.8** (0.5-1.4)	† [b]

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in each year; (4) no significant differences 2013 vs. 2011; [b] 2013 vs. 2003 significant difference, p<.01; [c] significant linear trend, p<.01.
Q: In the last 12 months, how often did you use the drug ketamine (also known as "vitamin K", "special K")?
Source: OSDUHS, Centre for Addiction & Mental Health

Table A10
Percentage Reporting Nonmedical Use of OxyContin/OxyNEO in the Past Year,
2005–2013 OSDUHS

		2005	2007	2009	2011	2013
	(*n*=)	(7726)	(6323)	(9112)	(9288)	(10272)
Total		**1.0**	**1.8**	**1.6**	**1.2**	**1.6**
(95% CI)		(0.7-1.5)	(1.3-2.4)	(1.3-2.0)	(0.9-1.7)	(1.2-2.1)
Sex						
	Males	**0.9**	**1.7**	**1.7**	**1.5**	**1.9**
		(0.6-1.4)	(1.2-2.3)	(1.3-2.3)	(1.0-2.3)	(1.2-2.9)
	Females	**1.2**	**1.9**	**1.6**	**1.0**	**1.3**
		(0.7-1.9)	(1.3-2.8)	(1.2-2.1)	(0.6-1.5)	(0.8-2.0)
Grade						
	7	†	†	†	†	†
	8	†	†	†	†	†
	9	†	**0.8**	†	†	†
			(0.4-1.4)			
	10	†	**1.9**	**2.4**	†	†
			(1.2-3.2)	(1.6-3.5)		
	11	**1.2**	**3.2**	**2.9**	**2.9**	**1.8**
		(0.7-2.3)	(1.9-5.3)	(2.0-4.2)	(1.8-4.5)	(1.1-3.0)
	12	**1.4**	**2.2**	**1.9**	**1.6**	**2.7**
		(0.7-2.7)	(1.3-3.6)	(1.2-3.1)	(0.9-2.6)	(1.6-4.7)
Region						
	Toronto	†	**1.3**	†	†	†
			(0.8-2.2)			
	North	**3.3**	**3.2**	**3.2**	**1.4**	†
		(1.8-6.1)	(1.8-5.5)	(2.4-4.4)	(0.9-2.2)	
	West	**1.2**	**1.7**	**1.7**	**1.1**	**2.0**
		(0.7-1.9)	(1.1-2.7)	(1.2-2.4)	(0.7-1.9)	(1.4-2.8)
	East	**0.6**	**1.9**	**1.6**	**1.7**	**1.2**
		(0.3-1.0)	(1.3-2.4)	(1.2-2.1)	(1.1-2.7)	(0.8-1.7)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant changes over time.
Q: In the last 12 months, how often did you use OxyContin or OxyNEO (also known as "oxy", "OC") without a prescription or without a doctor telling you to take it? (Note that "OxyNEO" was added to the question in 2013.)
Source: OSDUHS, Centre for Addiction & Mental Health

Selected OSDUHS Peer-Reviewed Publications

Hamilton, H. A., Ferrence, R., Boak, A., O'Connor, S., Mann, R. E., Schwartz, R., & Adlaf, E. M. (2015). Waterpipe use among high school students in Ontario: Demographic and substance use correlates. *Canadian Journal of Public Health, 106*(3), e121-e126. doi:10.17269/CJPH.106.4764

Hamilton, H. A., Ferrence, R., Boak, A., Schwartz, R., Mann, R. E., O'Connor, S., & Adlaf, E. M. (2014). Ever use of nicotine and non-nicotine electronic cigarettes among high school students in Ontario, Canada. *Nicotine & Tobacco Research*. doi:10.1093/ntr/ntu234

Hamilton, H. A., van der Maas, M., Boak, A., & Mann, R. E. (2014). Subjective social status, immigrant generation, and cannabis and alcohol use among adolescents. *Journal of Youth and Adolescence, 43*(7), 1163-1175.

Ilie, G., Mann, R. E., Boak, A., Adlaf, E. M., Hamilton, H., Asbridge, M., . . . Cusimano, M. D. (2014). Suicidality, bullying and other conduct and mental health correlates of traumatic brain injury in adolescents. *PLoS One, 9*(4), e94936. doi:10.1371/journal.pone.0094936

Fischer, B., Ialomiteanu, A., Boak, A., Adlaf, E. M., Rehm, J., & Mann, R. E. (2013). Prevalence and key covariates of non-medical prescription opioid use among the general secondary student and adult populations in Ontario, Canada. *Drug and Alcohol Review, 32*(3), 276-287. doi: 10.1111/dar.12025

Hamilton, H. A., Boak, A., Ilie, G., & Mann, R. E. (2013). Energy drink consumption and associations with demographic characteristics, drug use and injury among adolescents. *Canadian Journal of Public Health, 104*(7), e496-e501.

Hamilton, H. A., Boak, A., & Mann, R. E. (2013). Involvement with child protective services: Is this a useful question in population-based surveys? *Child Abuse & Neglect, 37*(9), 712-715.

Ilie, G., Boak, A., Adlaf, E. M., Asbridge, M., & Cusimano, M. D. (2013). Prevalence and correlates of traumatic brain injuries among adolescents. *JAMA, 309*(24), 2550-2552. doi: 10.1001/jama.2013.6750

Hamilton, H. A., Danielson, A. M., Mann, R. E., & Paglia-Boak, A. (2012). The roles of family, peer, school, and attitudinal factors in cannabis use across immigrant generations of youth. *Journal of Drug Issues, 42*(1), 46-58. doi: 10.1177/0022042612436652

Hamilton, H. A., Wekerle, C., Paglia-Boak, A., & Mann, R. E. (2012). The role of school connectedness in the link between family involvement with child protective services and adolescent adjustment. *Advances in Mental Health, 11*(1), 25-34. doi: 10.5172/jamh.2012.11.1.25

Turner, N. E., Paglia-Boak, A., Ballon, B., Cheung, J. T. W., Adlaf, E. M., Henderson, J., . . . Mann, R. E. (2012). Prevalence of problematic video gaming among Ontario adolescents. *International Journal of Mental Health and Addiction, 10*(6), 877-889. doi: 10.1007/s11469-012-9382-5

Hamilton, H., Paglia-Boak, A., Wekerle, C., Danielson, A., & Mann, R. (2011). Psychological distress, service utilization, and prescribed medications among youth with and without histories of involvement with child protective services. *International Journal of Mental Health and Addiction, 9*(4), 398-409.

Mann, R. E., Paglia-Boak, A., Adlaf, E. M., Beitchman, J., Wolfe, D., Wekerle, C., . . . Rehm, J. (2011). Estimating the prevalence of anxiety and mood disorders in an adolescent general population: An evaluation of the GHQ12. *International Journal of Mental Health and Addiction, 9*(4), 410-420. doi: 10.1007/s11469-011-9334-5

Turner, N. E., Ialomiteanu, A., Paglia-Boak, A., & Adlaf, E. M. (2011). A typological study of gambling and substance use among adolescent students. *Journal of Gambling Issues, 25,* 88-107. doi: 10.4309/jgi.2011.25.7

Brands, B., Paglia-Boak, A., Sproule, B. A., Leslie, K., & Adlaf, E. M. (2010). Nonmedical use of opioid analgesics among Ontario students. *Canadian Family Physician, 56*(3), 256-262.

Mohapatra, S., Irving, H., Paglia-Boak, A., Wekerle, C., Adlaf, E., & Rehm, J. (2010). History of family involvement with child protective services as a risk factor for bullying in Ontario schools. *Child and Adolescent Mental Health, 15*(3), 157-163. doi: 10.1111/j.1475-3588.2009.00552.x

Adlaf, E. M., Hamilton, H. A., Wu, F., & Noh, S. (2009). Adolescent stigma towards drug addiction: Effects of age and drug use behaviour. *Addictive Behaviors, 34*(4), 360-364. doi: http://dx.doi.org/10.1016/j.addbeh.2008.11.012

Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Adolescent risk behaviours and psychological distress across immigrant generations. *Canadian Journal of Public Health, 100*(3), 221-225.

Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Perceived financial status, health, and maladjustment in adolescence. *Social Science & Medicine, 68*(8), 1527-1534. doi: http://dx.doi.org/10.1016/j.socscimed.2009.01.037

MacKay, S., Paglia-Boak, A., Henderson, J., Marton, P., & Adlaf, E. (2009). Epidemiology of firesetting in adolescents: Mental health and substance use correlates. *Journal of Child Psychology and Psychiatry, 50*(10), 1282-1290.

Zhang, B., Cartmill, C., & Ferrence, R. (2008). The role of spending money and drinking alcohol in adolescent smoking. *Addiction, 103*(2), 310-319. doi: 310.1111/j.1360-0443.2007.02058.x.

Allison, K. R., Adlaf, E. M., Dwyer, J. J. M., Lysy, D. C., & Irving, H. M. (2007). The decline in physical activity among adolescent students: A cross-national comparison. *Canadian Journal of Public Health, 98*(2), 97-100.

Chaiton, M. O., & Zhang, B. (2007). Environment modifies the association between depression symptoms and smoking among adolescents. *Psychology of Addictive Behaviors, 21*(3), 420-424.

Faulkner, G., Goodman, J., Adlaf, E., Irving, H., Allison, K., & Dwyer, J. (2007). Participation in high school physical education -- Ontario, Canada, 1999-2005. *MMWR: Morbidity & Mortality Weekly Report, 56*(3), 52-54.

Faulkner, G. E. J., Adlaf, E. M., Irving, H. M., Allison, K. R., Dwyer, J. J. M., & Goodman, J. (2007). The relationship between vigorous physical activity and juvenile delinquency: A mediating role for self-esteem? *Journal of Behavioral Medicine, 30*(2), 155-163. doi: 10.1007/s10865-006-9091-2

Adlaf, E. M., Paglia-Boak, A., & Brands, B. (2006). Use of OxyContin by adolescent students. *Canadian Medical Association Journal, 174*(9), 1303.

Adlaf, E. M., Paglia-Boak, A., & Ialomiteanu, A. (2006). Underage gambling in Ontario casinos. *Journal of Gambling Issues, 16*, doi: 10.4309/jgi.2006.4316.4303.

Allison, K. R., Adlaf, E. M., Irving, H. M., Hatch, J. L., Smith, T. F., Dwyer, J. J. M., & Goodman, J. (2005). Relationship of vigorous physical activity to psychological distress among adolescents. *Journal of Adolescent Health, 37*(2), 164-166. doi: http://dx.doi.org/10.1016/j.jadohealth.2004.08.017

Rehm, J., Monga, N., Adlaf, E., Taylor, B., Bondy, S. J., & Fallu, J. S. (2005). School matters: Drinking dimensions and their effects on alcohol-related problems among Ontario secondary school students. *Alcohol and Alcoholism, 40*(6), 569-574.

Adlaf, E. M., Mann, R. E., & Paglia, A. (2003). Drinking, cannabis use and driving among Ontario students. *Canadian Medical Association Journal, 168*(5), 565-566.

Kairouz, S., & Adlaf, E. M. (2003). Schools, students and heavy drinking: A multilevel analysis. *Addiction Research & Theory, 11*(6), 427-439. doi: 10.1080/1606635021000058485

Paglia, A., & Adlaf, E. M. (2003). Secular trends in self-reported violent activity among Ontario students, 1983-2001. *Canadian Journal of Public Health, 94*, 212-217.

Waller, B. J., Cohen, J., Ferrence, R., Bull, S., & Adlaf, E. M. (2003). The early 1990s cigarette price decrease and trends in youth smoking in Ontario. *Canadian Journal of Public Health, 94*, 31-35.

This publication may be available in other formats. For information about alternate formats or other CAMH publications, or to place an order, please contact Sales and Distribution:

Toll-free: 1 800 661-1111
Toronto: 416 595-6059
E-mail: publications@camh.ca
Online store: http://store.camh.ca

Website: www.camh.ca

camh OSDUHS
Ontario Student Drug Use and Health Survey

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

 5277a / 11-2015