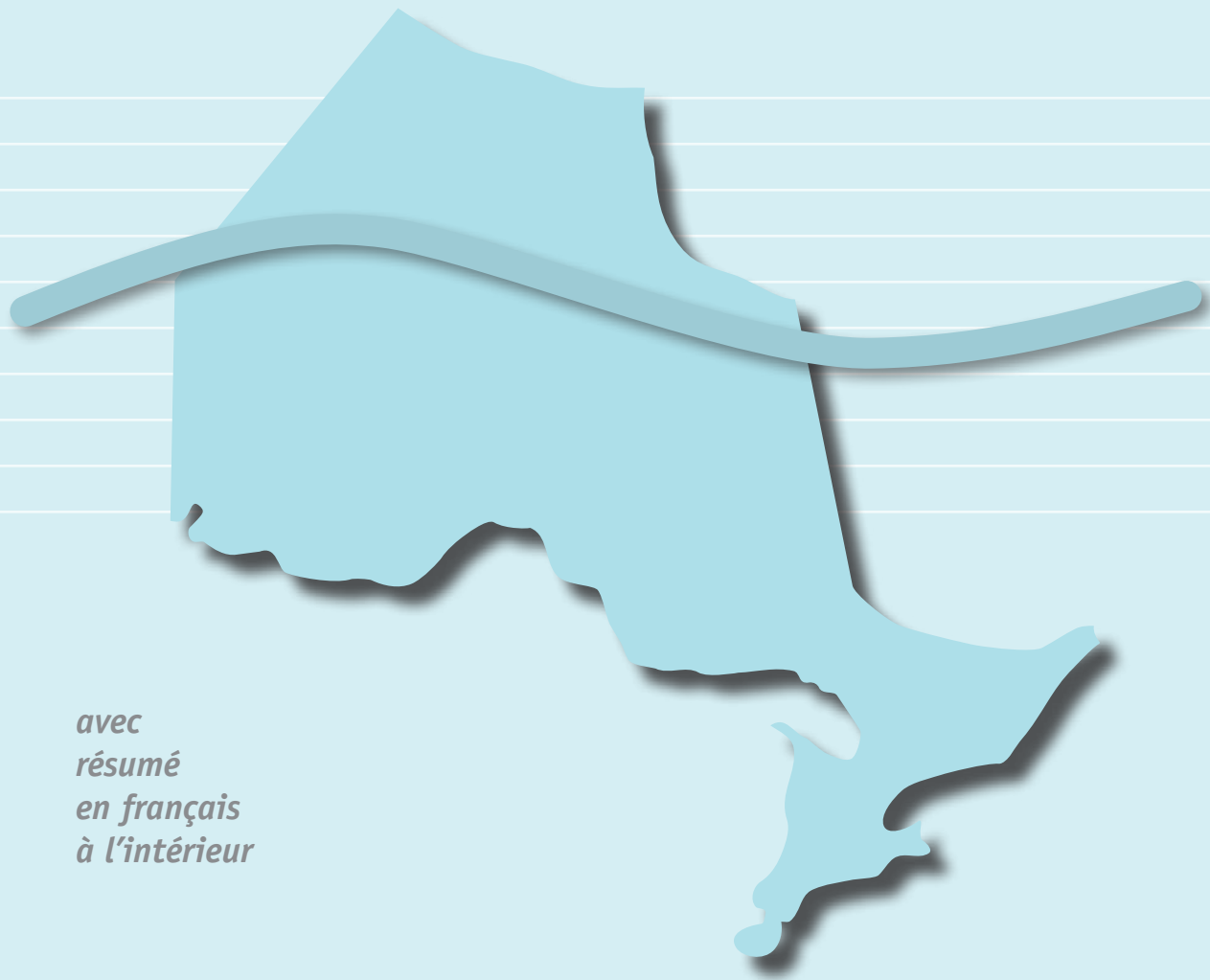


# Drug Use Among Ontario Students

Detailed OSDUHS Findings

# 1977- 2011



*avec  
résumé  
en français  
à l'intérieur*

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ANGELA PAGLIA-BOAK  
EDWARD M. ADLAF  
ROBERT E. MANN



**OSDUHS**  
Ontario Student Drug Use  
and Health Survey

# Drug Use Among Ontario Students 1977–2011

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# The 2011 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. To date, the study is based on 18 survey cycles conducted every two years since 1977. A total of 9,288 students (62% of selected students in participating schools) in grades 7 through 12 from 40 school boards, 181 schools, and 581 classes participated in the 2011 OSDUHS, which was administered by the Institute for Social Research, York University.

This report describes the past year use of alcohol, tobacco, illicit drugs, and the non-medical (NM) use of specific prescription drugs, and changes since 1977. 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 2011 and relatively **recent trends (1999-2011)**, and the second is used to assess **long-term trends (1977-2011)**. All data are based on self-reports derived from anonymous questionnaires administered in classrooms between October 2010 and June 2011.

## Past Year Drug Use (%) for the Total Sample, by Sex, and by Grade, 2011 OSDUHS

	Total	Males	Females	G7	G8	G9	G10	G11	G12	
Alcohol	54.9	54.6	55.1	17.4	26.4	50.5	59.6	73.5	78.4	*
High-Caffeine Energy Drinks	49.5	52.2	46.5	34.1	41.8	48.6	49.0	56.2	58.5	*
Binge Drinking	22.3	22.7	21.8	1.1	4.1	13.7	24.4	35.3	39.7	*
Cannabis	22.0	23.0	21.0	2.4	5.9	11.9	25.5	36.8	36.4	*
Opioid Pain Relievers (NM)	14.0	12.9	15.2	8.5	10.9	13.0	14.9	18.0	16.0	*
Cigarettes	8.7	9.3	8.2	s	2.8	3.7	10.3	14.5	14.4	*
OTC Cough/Cold Medication	6.9	8.0	5.7	3.1	7.5	4.5	8.9	11.7	5.5	*
Inhalants (Glue or Solvents)	5.6	5.3	5.9	12.2	9.2	4.5	3.7	3.6	s	*
Smokeless Tobacco	4.6	7.5	1.6	s	1.3	1.4	7.8	7.2	6.9	*
Stimulants (NM)	4.1	3.0	5.3	s	2.5	3.3	4.0	7.7	4.5	*
Mushrooms (Psilocybin) or Mescaline	3.8	5.0	2.6	s	1.1	1.6	3.5	8.0	6.3	*
Salvia Divinorum	3.7	5.1	2.1	s	s	3.1	5.0	5.2	6.2	*
Ecstasy (MDMA)	3.3	3.5	3.2	s	s	s	2.7	7.9	4.6	*
Cocaine	2.1	2.5	1.6	s	s	s	s	4.9	2.5	*
Tranquillizers/Sedatives (NM)	1.9	1.8	2.1	s	s	0.7	s	3.2	2.3	*
Jimson Weed	1.7	2.2	1.2	s	s	s	2.8	2.8	1.2	
OxyContin (NM)	1.2	1.5	1.0	s	s	s	s	2.9	1.6	*
LSD	1.2	1.8	0.6	s	s	s	1.1	2.8	1.1	*
Methamphetamine (incl. Crystal Meth.)	1.0	1.2	0.8	s	s	s	s	s	s	
ADHD Drugs (NM)	1.0	1.2	0.7	s	s	s	s	s	s	
Ketamine	0.9	1.4	s	s	s	s	s	s	s	
Crack	0.7	0.9	s	s	s	s	s	s	s	
Any NM Use of a Prescription Drug	16.7	15.1	18.5	9.6	12.5	15.0	18.0	23.0	18.8	*
Any Illicit Drug Use, incl. NM Prescr. Drug	37.4	37.7	37.0	21.3	23.2	30.7	43.5	51.4	45.6	*

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

## 2011 Subgroup Differences (Grades 7–12)

- ❑ Males are more likely than females to use:
  - OTC cough/cold medication
  - smokeless tobacco
  - mushrooms/mescaline
  - salvia divinorum
  - jimson weed
  - LSD
  - ketamine.
  
- ❑ Females are more likely than males to use:
  - stimulants (NM)
  - any prescription drug (NM).
  
- ❑ Past year use varies by grade for most of the drug measures:
  - alcohol
  - high-caffeine energy drinks
  - binge drinking
  - cannabis
  - opioid pain relievers (NM)
  - cigarettes
  - OTC cough/cold medication
  - inhalants
  - smokeless tobacco
  - stimulants (NM)
  - mushrooms/mescaline
  - salvia divinorum
  - ecstasy
  - cocaine
  - tranquilizers/sedatives (NM)
  - OxyContin (NM)
  - LSD
  - any prescription drug (NM)
  - any illicit drug, including NM use of a prescription drug.

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 East region do not differ from the provincial average on any drug, students in Toronto, the North and West regions do show differences from the average, as shown in the table below.

Use in Region <i>Below</i> Provincial Average	Use in Region <i>Above</i> Provincial Average
<b>Toronto</b>	
<ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Energy Drinks</li> <li>• Binge Drinking</li> <li>• Cannabis</li> <li>• Cocaine</li> </ul>	
<b>Northern Ontario</b>	
	<ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Energy Drinks</li> <li>• Binge Drinking</li> <li>• Cannabis</li> <li>• Cigarettes</li> <li>• Cocaine</li> </ul>
<b>Western Ontario</b>	
• Smokeless Tobacco	• Energy Drinks

## Changes in Drug Use, 2011 vs. 2009 (Grades 7–12)

No drug showed an increase in use between the previous survey in 2009 and the 2011 survey. Five drug use measures showed significant decreases between 2009 and 2011:

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

## 1999–2011 Trends (Grades 7–12)

There have been 15 significant changes in past year drug use between 1999 and 2011, all of which have been decreases:

- ❑ alcohol: from 66.0% to 54.9%
  - ❑ binge drinking: from 27.6% to 22.3%
  - ❑ cannabis: from 28.0% to 22.0%
  - ❑ opioid pain rel (NM): from 20.6% (2007) to 14.0%
  - ❑ cigarettes: from 28.4% to 8.7%
  - ❑ inhalants: from 8.9% to 5.6%
  - ❑ stimulants (NM): from 7.3% to 4.1%
  - ❑ mushrooms/mesc.: from 12.8% to 3.8%
  - ❑ ecstasy: from 6.0% (2001) to 3.3%
  - ❑ cocaine: from 3.4% to 2.1%
  - ❑ LSD: from 6.8% to 1.2%
  - ❑ methamphetamine: from 5.1% to 1.0%
  - ❑ ketamine: from 2.2% (2003) to 0.9%
  - ❑ crack: from 2.5% to 0.7%
  - ❑ heroin: from 1.9% to <1%.
- ❑ Any use of at least one of 10 illicit drugs (including cannabis) measured over time, significantly decreased between 1999 and 2011 (from 31.7% to 24.8%).
  - ❑ A similar measure to that above, but *excluding* cannabis, also significantly decreased between 1999 and 2011 (from 20.0% to 9.9%).

## 1999–2011 Trends by Subgroup (Grades 7–12)

With the exception of non-medical OxyContin use (which increased among Eastern Ontario students), the changes among the subgroups within the period from 1999 to 2011 show decreases in use.

**Sex:** Both sexes show many decreases in past year drug use in 2011 compared with 2009 and/or 1999. These are listed in the table on the right.

**Grade:** All grades show significant decreases in past year drug use since 1999. These are listed in the table on the right.

Decreases in Past Year Drug Use by Sex 2011 vs. 2009 ( <b>bolded</b> ) and 2011 vs. 1999	
Males	Females
<ul style="list-style-type: none"> <li>• <b>Cigarettes</b></li> <li>• <b>Alcohol</b></li> <li>• Binge Drinking</li> <li>• <b>Cannabis</b></li> <li>• LSD</li> <li>• Mushrooms/Mescaline</li> <li>• Methamphetamine</li> <li>• Crack</li> <li>• Heroin</li> <li>• Ecstasy<sup>†</sup></li> <li>• Opioid Pain Relievers (NM)*</li> <li>• Stimulants (NM)</li> <li>• <b>Any Drug incl. cannabis</b></li> <li>• Any Drug excl. cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• Alcohol</li> <li>• Inhalants</li> <li>• <b>LSD</b></li> <li>• Mushrooms/Mescaline</li> <li>• Methamphetamine</li> <li>• Cocaine</li> <li>• Crack</li> <li>• Ketamine</li> <li>• <b>Opioid Pain Relievers (NM)</b></li> <li>• Stimulants (NM)</li> <li>• Any Drug excl. cannabis</li> </ul>

NM=non-medical use; <sup>†</sup> vs. 2001 estimate; \* vs. 2007 estimate

Decreases in Past Year Drug Use by Grade 2011 vs. 2009 ( <b>bolded</b> ) and 2011 vs. 1999	
<b>7<sup>th</sup>-Graders</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• Alcohol</li> </ul>	<ul style="list-style-type: none"> <li>• Binge Drinking</li> </ul>
<b>8<sup>th</sup>-Graders</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• Cannabis</li> <li>• LSD</li> <li>• Methamphetamine</li> <li>• Stimulants (NM)</li> <li>• Any Drug incl. cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Alcohol</b></li> <li>• Binge Drinking</li> <li>• Mushrooms/Mescaline</li> <li>• Opioid Pain Relievers (NM)*</li> <li>• Any Drug excl. cannabis</li> </ul>
<b>9<sup>th</sup>-Graders</b>	
<ul style="list-style-type: none"> <li>• <b>Cigarettes</b></li> <li>• <b>Cannabis</b></li> <li>• Inhalants</li> <li>• Mushrooms/mescaline</li> <li>• Ecstasy<sup>†</sup></li> <li>• Stimulants (NM)</li> <li>• <b>Any drug incl. cannabis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Binge Drinking</li> <li>• LSD</li> <li>• Methamphetamine</li> <li>• <b>Opioid Pain Relievers (NM)</b></li> <li>• Any drug excl. cannabis</li> </ul>
<b>10<sup>th</sup>-Graders</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• LSD</li> <li>• Methamphetamine</li> <li>• Stimulants (NM)</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Mushrooms/Mescaline</li> <li>• Opioid Pain Relievers (NM)*</li> <li>• Any Drug excl. cannabis</li> </ul>
<b>11<sup>th</sup>-Graders</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• LSD</li> <li>• Crack</li> <li>• Any Drug excl. cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• Cannabis</li> <li>• Mushrooms/Mescaline</li> <li>• Methamphetamine</li> </ul>
<b>12<sup>th</sup>-Graders</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• Inhalants</li> <li>• Mushrooms/Mescaline</li> <li>• Stimulants (NM)</li> <li>• <b>Any Drug incl. cannabis</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Cannabis</b></li> <li>• <b>LSD</b></li> <li>• <b>Methamphetamine</b></li> <li>• Any Drug excl. cannabis</li> </ul>

NM=non-medical use; <sup>†</sup> vs. 2001 estimate; \* vs. 2007 estimate

**Region:** All regions show significant decreases in drug use since 1999. These are listed in the table below.

Decreases in Past Year Drug Use by Region 2011 vs. 2009 ( <b>bolded</b> ) and 2011 vs. 1999	
<b>Toronto</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• Mushrooms/Mescaline</li> <li>• Cocaine</li> <li>• Stimulants (NM)</li> </ul>	<ul style="list-style-type: none"> <li>• LSD</li> <li>• Methamphetamine</li> <li>• <b>Opioid Pain Relievers (NM)</b></li> </ul>
<b>Northern Ontario</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• LSD</li> <li>• Methamphetamine</li> <li>• Any Drug excl. cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Mushrooms/Mescaline</li> <li>• Opioid Pain Relievers (NM)*</li> </ul>
<b>Western Ontario</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• <b>Cannabis</b></li> <li>• LSD</li> <li>• Methamphetamine</li> <li>• Crack</li> <li>• Stimulants (NM)</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol</li> <li>• <b>Binge Drinking</b></li> <li>• Mushrooms/Mescaline</li> <li>• Ecstasy<sup>†</sup></li> <li>• Opioid Pain Relievers (NM)*</li> <li>• <b>Any Drug incl. cannabis</b></li> </ul>
<b>Eastern Ontario</b>	
<ul style="list-style-type: none"> <li>• Cigarettes</li> <li>• LSD</li> <li>• <b>Methamphetamine</b></li> <li>• Crack</li> <li>• Any Drug incl. cannabis</li> <li>• Any Drug excl. cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• Inhalants</li> <li>• <b>Mushrooms/Mescaline</b></li> <li>• Cocaine</li> <li>• Heroin</li> <li>• <b>Opioid Pain Relievers (NM)</b></li> </ul>

NM=non-medical use; <sup>†</sup> vs. 2001 estimate; \* vs. 2007 estimate

## Long-Term Trends: 1977–2011 (Grades 7, 9, and 11 only)

Many past year prevalence estimates for drugs monitored since 1977 show a common pattern: a peak in use during 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 characterized into the following five patterns:

**Pattern 1:** Prevalence has now reached, or very recently reached, an all-time low:

- ◆ cigarettes
- ◆ LSD.

**Pattern 2:** Prevalence in 2011 is significantly lower compared with the peaks found in the late 1970s and late 1990s (and 2003 for tranquilizers/sedatives), and current use is similar to the low levels evident in the early 1990s:

- ◆ alcohol
- ◆ binge drinking
- ◆ cocaine
- ◆ methamphetamine
- ◆ stimulants (NM)
- ◆ tranquilizers/sedatives (NM).

**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 evident in the early 1990s:

- ◆ cannabis
- ◆ inhalants.

**Pattern 4:** Prevalence shows a peak in the late 1990s or early 2000s, a decline during the 2000s, and stability in recent years:

- ◆ mushrooms/mescaline
- ◆ ecstasy
- ◆ crack.

**Pattern 5:** Prevalence has been negligible and stable for decades:

- ◆ heroin.

## Tracking Emerging Drugs

In 2011, three newly emerging drugs – doda (an opioid), mephedrone, and BZP (benzylpiperazine) pills (which are both synthetic stimulant drugs) – were introduced to the OSDUHS. However, all three past year use estimates required suppression because the sample size was not sufficiently large to reliably estimate such small percentages. Although we cannot attach a specific percentage value to the use of these drugs, we have established, nonetheless, that there is no evidence that these drugs have measurably diffused into the middle or high school population.

## Cigarettes Overview

- ❑ In 2011, 9% of students – an estimated 88,000 in Ontario – report smoking cigarettes during the past year. About 4% of students (about 38,900) smoke cigarettes on a daily basis.
- ❑ Males (9%) and females (8%) are equally likely to smoke cigarettes. There are significant differences by grade (ranging from less than 3% of 7<sup>th</sup>- and 8<sup>th</sup>-graders to 14% of 11<sup>th</sup>- and 12<sup>th</sup>-graders). There are also regional differences, with Northern students (16%) most likely to smoke compared with students in the other three regions (about 7%–8%).
- ❑ The most common source of cigarettes reported by students who smoke is a friend or family member, while the second most common source is a store, gas station, or bar.
- ❑ About 4% of all students – an estimated 37,600 in Ontario – report smoking contraband cigarettes in the past year. Among past year smokers, 40% report smoking contraband cigarettes.
- ❑ The OSDUHS asked students about their use of smokeless tobacco (i.e., chewing tobacco, snuff) in the past year. Among all students,

5% – an estimated 46,500 in Ontario – report using smokeless tobacco.

## Alcohol Overview

- ❑ In 2011, 55% of all students – an estimated 551,400 in Ontario – report drinking alcohol (excluding sips to see what it's like) during the past year. Males (55%) and females (55%) are equally likely to drink. Past year drinking varies by grade (increasing from 17% of 7<sup>th</sup>-graders to 78% of 12<sup>th</sup>-graders). Toronto students (47%) are the least likely to drink, whereas students in the North (60%) are the most likely.
- ❑ Drinking among students occurs mostly on special occasions (23%). Twelve percent of students report drinking two or three times a month, while about 7% drink once a week or more often.
- ❑ Just over one-fifth (22%) of all students – an estimated 223,500 in Ontario – report binge drinking (5+ drinks on one occasion) at least once during the four weeks before the survey. About the same percentage (20%) report getting drunk at least once in the past four weeks.
- ❑ Also, 8% of students report binge drinking two or three times in the past four weeks, and 5% report doing so four or more times.
- ❑ About 18% of students (33% of past year drinkers) – an estimated 175,600 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 30% among 11<sup>th</sup>- and 12<sup>th</sup>-graders. Compared with students in the other three regions, Toronto students (13%) are the least likely to drink hazardously/harmfully.
- ❑ One-in-ten (9%) students report injuring themselves or someone else in the past year as a result of their own drinking.

- The most common method past year drinkers use to obtain alcohol is to be given it by another person, while the second most common method is to give someone money to purchase alcohol.

## Cannabis Overview

- Just over one-fifth (22%) of students – an estimated 221,900 in Ontario – report using cannabis in the past year. Males (23%) and females (21%) are equally likely to use cannabis. Use increases with each grade level, increasing from 2% of 7<sup>th</sup>-graders to about 36% of 11<sup>th</sup>- and 12<sup>th</sup>-graders. Among the regions, Toronto students (19%) are the least likely to use cannabis, and students in the North (30%) are the most likely.
- About 2% of students use cannabis daily – an estimated 23,300 students in Ontario.
- One-in-ten (10%) past year cannabis users (2% of all students; an estimated 22,300 in Ontario) report symptoms of a dependence problem, as measured by the *Severity of Dependence Scale* (SDS).

## Non-Medical Use of Prescription Drugs

- OxyContin is a brand name for a highly addictive prescription painkiller containing the opioid oxycodone. In 2011, about 1% – an estimated 12,500 students in Ontario – report using OxyContin non-medically (that is, without a prescription) during the past year. The 2011 estimate is similar in magnitude to the estimates since 2005. There is no significant difference in use between males and females. Use significantly increases with grade, peaking in grade 11 at 3%. No significant difference in OxyContin use among the four regions is evident.
- 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. About 14% of students – an estimated 140,100 in Ontario – report using a prescription opioid pain reliever non-medically at least once in the past year. There is no significant difference in use between males and females. However, there is significant grade variation, with use increasing steadily with grade level, peaking at 18% among 11<sup>th</sup>-graders. Use does not significantly vary by region. The majority (67%) of past year users report obtaining the drug from someone at home.

- About 1% of students – an estimated 9,700 in Ontario – report using a drug typically used to treat Attention Deficit/Hyperactivity Disorder (ADHD) in children (e.g., Ritalin, Concerta, Adderall, Dexedrine) without a prescription. There are no significant differences by sex, grade, or region.

## Non-Medical Use of Over-the-Counter Drugs

- Students were asked about their use of over-the-counter cough and cold medications containing the drug dextromethorphan in order to “get high.” Overall, 7% of students – an estimated 68,600 in Ontario – report using this type of medication to get high during the past year. Males (8%) are significantly more likely than females (6%) to use over-the-counter cough/cold medication to get high. There are significant differences by grade, with use peaking in 11<sup>th</sup>-grade at 12%. There are no significant differences among the four regions.

## Past Year Abstinence

- One-third (33%) of students in grades 7 through 12 – an estimated 324,800 in Ontario – report using no substance at all during the past year (this includes alcohol and tobacco, but excludes high-caffeine energy drinks). Males (32%) and females

(33%) are equally likely to report no substance use. Past year abstinence significantly decreases with grade, from 57% of 7<sup>th</sup>-graders down to 16% of 12<sup>th</sup>-graders. There are no significant differences among the regions.

## High-Caffeine Energy Drinks

- ❑ For the first time in 2011, the OSDUHS asked students about their use of highly-caffeinated energy drinks (e.g., Red Bull, Rockstar, Monster). Half (50%) of all students – an estimated 481,700 in Ontario – report drinking an energy drink at least once in the past year. One-fifth (19%) – an estimated 185,900 in Ontario – report drinking an energy drink at least once during the seven days before the survey.

## Consequences and Problems Related to Alcohol and Other Drug Use

### *Alcohol, Drugs and Vehicles*

- ❑ About 7% of 10<sup>th</sup>- through 12<sup>th</sup>-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 21,500 adolescent drivers in Ontario). The drinking and driving estimate significantly declined between 2009 (12%) and 2011 (7%). Further, the current estimate is significantly lower than the estimates observed a decade ago, and especially than those found in the late 1970s and early 1980s.
- ❑ For the first time in 2011, students were asked if, in the past year, they operated a snowmobile, motor boat, Sea-Doo, or all terrain vehicle (ATV) after drinking alcohol. Among all students in grades 10, 11, and 12, 7% report this activity – an estimated 37,700 students in Ontario).
- ❑ The percentage of 10<sup>th</sup>- through 12<sup>th</sup>-grade drivers reporting driving after cannabis use

is higher than the percentage reporting driving after drinking. About one-in-eight (12%) 10<sup>th</sup>- through 12<sup>th</sup>-grade drivers report driving a vehicle within one hour of using cannabis at least once during the past year (an estimated 38,300 adolescent drivers in Ontario). The current estimate of 12% is significantly lower than the estimate from the first surveillance point in 2001 (20%).

- ❑ The percentage of 10<sup>th</sup>- through 12<sup>th</sup>-grade drivers who report driving a vehicle within an hour of taking a prescription opioid pain reliever (e.g., Percocet, Percodan, OxyContin) at least once in the past year is 6% – an estimated 17,900 adolescent drivers in Ontario.
- ❑ One-quarter (24%) of students in grades 7 through 12 report riding in a vehicle driven by someone who had been drinking alcohol, and 16% report riding in a vehicle driven by someone who had been using drugs. The proportion of students reporting these behaviours has significantly decreased during the past decade.

### *Drug Use Problem*

- ❑ One-in-eight (13%) students – an estimated 130,200 in Ontario – report symptoms of a drug use problem, as measured by the *CRAFT* screener. There are no significant differences by sex or by region. However, there are significant grade differences, with 12<sup>th</sup>-graders (22%) most at risk for a drug use problem.
- ❑ A small proportion (1%) of students – an estimated 8,900 in Ontario – 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 Elevated Psychological Distress*

- ❑ About 9% – an estimated 83,300 students in Ontario – report both hazardous/harmful drinking and elevated psychological distress (i.e., symptoms of anxiety and depression).

- ❑ Females are more likely than males to report these coexisting problems (11% vs. 6%, respectively). There is significant variation by grade, peaking in 12<sup>th</sup>-grade at 16%. There are no significant regional differences.

## Other Highlights

- ❑ About 5% of students – an estimated 51,300 in Ontario – smoke cigarettes, use alcohol, cannabis, *and* at least one other drug.
- ❑ A small proportion (1%) of students report using an illegal drug by injection during the past year. This estimate represents about 12,100 Ontario students.
- ❑ The percentage of students reporting first-time drug use during the past year is as follows: 6% for cigarettes, 17% for alcohol, 8% for cannabis, and 3% for illicit drugs other than cannabis.

## Early Initiation

Fewer students today are using alcohol, tobacco and cannabis at an early age compared with their counterparts from past decades.

- ❑ Less than 2% of 7<sup>th</sup>-graders in 2011 smoked their first whole cigarette before the end of grade 6, compared with 27% in 1997, and 41% in 1981.
- ❑ In 2011, 13% of 7<sup>th</sup>-graders had their first alcoholic drink before the end of grade 6, compared with 31% in 2007, 42% in 2003, and 50% in 1981.
- ❑ In 2011, 2% of 7<sup>th</sup>-graders used cannabis for the first time before the end of grade 7, compared with 8% in 2003, and 9% in 1981.
- ❑ In 2011, the mean age at which 11<sup>th</sup>-grade smokers reported smoking their first cigarette was 14 years. The mean age of first alcoholic drink among 11<sup>th</sup>-grade drinkers was 14 years, and the first time they were drunk was at age

14. The mean age of first cannabis use among 11<sup>th</sup>-grade users was 14 years.

- ❑ The average age of initiation for smoking and drinking has increased during the past decade, while the average age of first cannabis use has remained stable.

## Perceived Risk and Disapproval Associated with Drug Use

- ❑ Among the drug use behaviours assessed, students perceive that the greatest risk of physical harm is associated with regular marijuana use (56%), followed by trying cocaine (41%), trying ecstasy (39%), daily smoking (32%), binge drinking each weekend (26%), and trying marijuana (18%).
- ❑ During the past decade, there have been increases in the perception of great risk of harm associated with trying cocaine, ecstasy, and daily smoking.
- ❑ For the first time in a long while, there has been an increase in disapproval of marijuana use. The percentage strongly disapproving of trying marijuana is significantly higher in 2011 (34%) compared with 2009 (28%) and with 1999 (26%). Similarly, the percentage strongly disapproving of regular marijuana use is significantly higher in 2011 (56%) compared with 2009 (45%) and 1999 (43%).
- ❑ Strong disapproval of trying cocaine and trying ecstasy is also significantly higher in 2011 compared with estimates from a decade ago.

## Perceived Availability of Drugs

- ❑ In 2011, among all students, the substance perceived to be most readily available is alcohol (56% report that it would be “fairly easy” or “very easy” to obtain), followed by cigarettes (52%), cannabis (42%), a prescription opioid pain reliever (19%), ecstasy (13%), cocaine (10%), and LSD (8%).

- ❑ Trend data on perceived availability show that alcohol, cigarettes, cannabis, cocaine, LSD, and ecstasy are perceived to be more difficult to obtain in 2011 than a decade ago.

### *School and Neighbourhood*

- ❑ Of all grades, 9<sup>th</sup>-graders are most likely to report receiving education at school about alcohol, cannabis, and another drug.
- ❑ One-quarter (25%) of students indicate that drug use in their school is a “big problem,” 50% feel that it is a “small problem,” and 25% said drug use is “not a problem” in their school.
- ❑ About 16% of students – an estimated 157,300 in Ontario – report being drunk or high at school at least once in the past year.
- ❑ One-in-five (20%) students – an estimated 200,100 in Ontario – report having been offered, sold, or given an illegal drug at school at least once in the past year.
- ❑ Just over one-quarter (27%) of students – an estimated 262,300 in Ontario – report that someone tried to sell them drugs anywhere, at least once in the past year. Among the regions, Toronto students (21%) are the least likely to report that someone tried to sell them drugs.
- ❑ One-quarter (26%) of students – an estimated 254,900 in Ontario – report seeing drug selling in their own neighbourhood in the past year. Among the regions, Toronto students (19%) are the least likely to report seeing drug selling in their neighbourhood.

# Résumé du rapport détaillé sur la consommation de drogues – SCDSEO 2011

Réalisé tous les deux ans 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. Le présent sondage est le 18<sup>e</sup> depuis 1977. Au total, 9 288 élèves (62 % des élèves choisis dans les écoles participantes) de la 7<sup>e</sup> à la 12<sup>e</sup> année répartis dans 40 conseils scolaires, 181 écoles et 581 classes ont participé au SCDSEO 2011, qui a été administré par l'Institut de recherche sociale de l'Université York. Le rapport décrit la consommation d'alcool, de tabac et de drogues et la prise de

médicaments d'ordonnance à des fins non médicales (NM) en 2011 ainsi que les changements survenus depuis 1977. Les résultats sont fournis pour 2 groupes d'élèves constitués à des fins d'analyse : ceux de la 7<sup>e</sup> à la 12<sup>e</sup> année, d'une part, et ceux des 7<sup>e</sup>, 9<sup>e</sup> et 11<sup>e</sup> années, d'autre part. Le premier groupe sert à évaluer la consommation en 2011 et les **tendances relativement récentes (1999-2011)** et le second à évaluer les **tendances à long terme (1977-2011)**. Toutes les données reposent sur les réponses des élèves à des questionnaires anonymes administrés en classe entre octobre 2010 et juin 2011.

## Consommation de drogues (en pourcentage) au cours de la dernière année parmi l'échantillon total, selon le sexe et l'année d'études, SCDSEO 2011

	Total	Garçons	Filles	7 <sup>e</sup>	8 <sup>e</sup>	9 <sup>e</sup>	10 <sup>e</sup>	11 <sup>e</sup>	12 <sup>e</sup>
Alcool	54,9	54,6	55,1	17,4	26,4	50,5	59,6	73,5	78,4 *
Boissons énergisantes fortement caféinées	49,5	52,2	46,5	34,1	41,8	48,6	49	56,2	58,5 *
Excès occasionnels d'alcool	22,3	22,7	21,8	1,1	4,1	13,7	24,4	35,3	39,7 *
Cannabis	22,0	23,0	21,0	2,4	5,9	11,9	25,5	36,8	36,4 *
Analgésiques opioïdes (usage NM)	14,0	12,9	15,2	8,5	10,9	13	14,9	18,0	16,0 *
Cigarettes	8,7	9,3	8,2	s	2,8	3,7	10,3	14,5	14,4 *
Antitussifs et anti-rhume en vente libre	6,9	8,0	5,7 *	3,1	7,5	4,5	8,9	11,7	5,5 *
Inhalants (colle ou solvants)	5,6	5,3	5,9	12,2	9,2	4,5	3,7	3,6	s *
Produits du tabac sans combustion	4,6	7,5	1,6 *	s	1,3	1,4	7,8	7,2	6,9 *
Stimulants (NM)	4,1	3,0	5,3 *	s	2,5	3,3	4,0	7,7	4,5 *
Champignons (psilocybine) ou mescaline	3,8	5,0	2,6 *	s	1,1	1,6	3,5	8,0	6,3 *
Salvia Divinorum	3,7	5,1	2,1 *	s	s	3,1	5	5,2	6,2 *
Ecstasy (MDMA)	3,3	3,5	3,2	s	s	s	2,7	7,9	4,6 *
Cocaïne	2,1	2,5	1,6	s	s	s	s	4,9	2,5 *
Tranquillisants ou sédatifs (usage NM)	1,9	1,8	2,1	s	s	0,7	s	3,2	2,3 *
Stramoine (Datura Stramonium)	1,7	2,2	1,2 *	s	s	s	2,8	2,8	1,2
OxyContin (usage NM)	1,2	1,5	1,0	s	s	s	s	2,9	1,6 *
LSD	1,2	1,8	0,6 *	s	s	s	1,1	2,8	1,1 *
Méthamphétamine (crystal inclus)	1,0	1,2	0,8	s	s	s	s	s	s
Médicaments pour le TDAH (usage NM)	1,0	1,2	0,7	s	s	s	s	s	s
Kétamine	0,9	1,4	s *	s	s	s	s	s	s
Crack	0,7	0,9	s	s	s	s	s	s	s
Tout médicament d'ordonnance (usage NM)	16,7	15,1	18,5 *	9,6	12,5	15,0	18,0	23,0	18,8 *
Toute substance illégale, y compris usage NM de médicaments d'ordonnance	37,4	37,7	37,0	21,3	23,2	30,7	43,5	51,4	45,6 *

Nota : les estimations pour l'héroïne, la doda, les comprimés de BZP, la méphédrone et le Gravol (en vente libre) ont été supprimées; « Excès occasionnels d'alcool » (≥ 5 consommations par occasion) concerne les 4 semaines précédentes; « Médicaments en vente libre... » : utilisés à des fins non médicales pour « planer »; « Tout médicament d'ordonnance (usage NM) » renvoie à l'usage illégal de l'une quelconque des classes de médicaments suivantes : opioïdes, médicaments pour le TDAH ou autres stimulants, et tranquillisants ou sédatifs; « Toute substance illégale... » renvoie à l'usage de l'une quelconque des 22 drogues (à l'exception de l'alcool, le tabac et les boissons caféinées); s = estimation supprimée pour raison de fiabilité; \* différence statistiquement significative entre les sexes ou années d'études (p < 0,05), sans tenir compte d'autres facteurs.

## Différences entre les sous-groupes pour 2011 (7<sup>e</sup> à 12<sup>e</sup> année)

- ❑ Il y avait plus de garçons qui prenaient :
  - antitussifs et anti-rhume en vente libre
  - des produits du tabac sans combustion
  - des champignons ou de la mescaline
  - de la Salvia divinorum
  - de la stramoine
  - du LSD
  - de la kétamine.
  
- ❑ Il y avait plus de filles qui prenaient :
  - des stimulants (NM)
  - des médicaments sur ordonnance (NM).
  
- ❑ On a noté des variations, liées à l'année d'études, dans le cas de la plupart des paramètres de consommation suivants :
  - alcool
  - boissons énergisantes fortement caféinées
  - excès occasionnels d'alcool
  - cannabis
  - analgésiques opioïdes (NM)
  - cigarettes
  - antitussifs et anti-rhume en vente libre
  - inhalants
  - produits de tabac sans combustion
  - stimulants (NM)
  - champignons ou mescaline
  - Salvia Divinorum
  - ecstasy
  - cocaïne
  - tranquillisants ou sédatifs (NM)
  - OxyContin (NM)
  - LSD
  - tout médicament sur ordonnance (NM)
  - toute substance illégale, y compris l'usage NM de médicaments d'ordonnance.

L'usage de ces substances tendait à augmenter selon l'année d'études, à l'exception des inhalants, dont l'usage diminuait d'une année d'études à l'autre.

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 significatives dans la consommation de nombre de substances intoxicantes au cours de la dernière année. Les élèves de la région de l'Est 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'Ouest, comme le montre le tableau ci-dessous.

Consommation de substances intoxicantes <i>inférieure</i> à la moyenne provinciale	Consommation de substances intoxicantes <i>supérieure</i> à la moyenne provinciale
<b>Toronto</b>	
<ul style="list-style-type: none"> <li>• alcool</li> <li>• boissons énergisantes</li> <li>• excès occasionnels d'alcool</li> <li>• cannabis</li> <li>• cocaïne</li> </ul>	
<b>Nord de l'Ontario</b>	
	<ul style="list-style-type: none"> <li>• alcool</li> <li>• boissons énergisantes</li> <li>• excès occasionnels d'alcool</li> <li>• cannabis</li> <li>• cigarettes</li> <li>• cocaïne</li> </ul>
<b>Ouest de l'Ontario</b>	
<ul style="list-style-type: none"> <li>• produits du tabac sans combustion</li> </ul>	<ul style="list-style-type: none"> <li>• boissons énergisantes</li> </ul>

## Changements dans la consommation de drogues par rapport à 2009 (7<sup>e</sup> à 12<sup>e</sup> année)

On n'a relevé aucune augmentation de la consommation par rapport à 2009, mais il y a eu une baisse marquée de la consommation de cinq substances :

- ❑ cannabis (de 25,6 % à 22,0 %)
- ❑ cigarettes (de 11,7 % à 8,7 %)
- ❑ usage NM d'analgésiques opioïdes (de 17,8 % à 14,0 %)
- ❑ usage NM de tout médicament sur ordonnance (de 20,3 % à 16,7 %)
- ❑ usage de l'une au moins de 10 substances illégales (y compris le cannabis) au cours de la période à l'étude (de 28,0 % à 24,8 %).

## Changements au cours de la période de 1999 à 2011 (7<sup>e</sup> à 12<sup>e</sup> année)

On a relevé 15 changements significatifs dans la consommation de substances intoxicantes de 1999 à 2011, la tendance étant partout à la baisse :

- ❑ alcool : de 66 % à 54,9 %
- ❑ excès d'alcool : de 27,6 % à 22,3 %
- ❑ cannabis : de 28 % à 22,0 %
- ❑ opioïdes (NM) : de 20,6 % (2007) à 14,0 %
- ❑ cigarettes : de 28,4 % à 8,7 %
- ❑ inhalants : de 8,9 % à 5,6 %
- ❑ stimulants (NM) : de 7,3 % à 4,1 %
- ❑ champignons ou mescaline : de 12,8 % à 3,8 %
- ❑ ecstasy : de 6,0 % (2001) à 3,3 %
- ❑ cocaïne : de 3,4 % à 2,1 %
- ❑ LSD : de 6,8 % à 1,2 %
- ❑ méthamphétamine : de 5,1 % à 1,0 %
- ❑ kétamine : de 2,2 % (2003) à 0,9 %
- ❑ crack : de 2,5 % à 0,7 %
- ❑ héroïne : de 1,9 % à < 1 %.
- ❑ Baisse importante de l'usage de 10 drogues illégales (incluant le cannabis) entre 1999 et 2011 (de 31,7 % à 24,8 %).
- ❑ Baisse importante de l'usage de drogues illégales (indice semblable à l'indice ci-dessus, mais *excluant* le cannabis) entre 1999 et 2011 (de 20,0 % à 9,9 %).

## Changements dans les sous-groupes entre 1999 et 2011 (7<sup>e</sup> à 12<sup>e</sup> année)

À l'exception de l'utilisation d'OxyContin à des fins non médicales (qui a augmenté chez les élèves de l'Est de l'Ontario), la consommation de substances intoxicantes a baissé dans les sous-groupes entre 1999 et 2011.

**Sexe :** On a relevé une baisse de la consommation de nombreuses substances intoxicantes au cours de l'année écoulée chez les élèves des deux sexes par rapport à 2009 ou à 1999 ou à ces deux dates (voir ci-contre).

**Année d'études :** On a constaté une baisse significative de la consommation de substances intoxicantes pour toutes les années d'études depuis 1999 (voir ci-contre).

Baisse de la consommation lors de l'année écoulée selon le sexe : 2011 par rapport à <b>2009 (en gras)</b> et à 1999	
Garçons	Filles
<ul style="list-style-type: none"> <li>• <b>cigarettes</b></li> <li>• <b>alcool</b></li> <li>• excès occasionnels d'alcool</li> <li>• <b>cannabis</b></li> <li>• LSD</li> <li>• champignons/mescaline</li> <li>• méthamphétamine</li> <li>• crack</li> <li>• héroïne</li> <li>• ecstasy<sup>†</sup></li> <li>• analgésiques opioïdes (NM)*</li> <li>• stimulants (NM)</li> <li>• <b>toute drogue, cannabis inclus</b></li> <li>• toute drogue, sauf cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• alcool</li> <li>• inhalants</li> <li>• <b>LSD</b></li> <li>• champignons/mescaline</li> <li>• méthamphétamine</li> <li>• cocaïne</li> <li>• crack</li> <li>• kétamine</li> <li>• <b>analgésiques opioïdes (NM)</b></li> <li>• stimulants (NM)</li> <li>• toute drogue, sauf cannabis</li> </ul>

NM = non médical; <sup>†</sup> par rapport à 2001; \* par rapport à 2007

Baisse de la consommation lors de l'année écoulée selon l'année d'études : 2011 par rapport à <b>2009 (en gras)</b> et à 1999	
Élèves de 7 <sup>e</sup> année	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• alcool</li> </ul>	<ul style="list-style-type: none"> <li>• excès occasionnels d'alcool</li> </ul>
Élèves de 8 <sup>e</sup> année	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• cannabis</li> <li>• LSD</li> <li>• méthamphétamine</li> <li>• stimulants (NM)</li> <li>• <b>toute drogue, cannabis inclus</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>alcool</b></li> <li>• excès occasion. d'alcool</li> <li>• champignons/mescaline</li> <li>• analgés. opioïdes (NM)*</li> <li>• toute drogue, sauf cannabis</li> </ul>
Élèves de 9 <sup>e</sup> année	
<ul style="list-style-type: none"> <li>• <b>cigarettes</b></li> <li>• <b>cannabis</b></li> <li>• inhalants</li> <li>• champignons/mescaline</li> <li>• ecstasy<sup>†</sup></li> <li>• stimulants (NM)</li> <li>• <b>toute drogue, cannabis inclus</b></li> </ul>	<ul style="list-style-type: none"> <li>• alcool</li> <li>• excès occasion. d'alcool</li> <li>• LSD</li> <li>• méthamphétamine</li> <li>• <b>analgés. opioïdes (NM)</b></li> <li>• toute drogue, sauf cannabis</li> </ul>
Élèves de 10 <sup>e</sup> année	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• LSD</li> <li>• méthamphétamine</li> <li>• stimulants (NM)</li> </ul>	<ul style="list-style-type: none"> <li>• alcool</li> <li>• champignons/mescaline</li> <li>• analgés. opioïdes (NM)*</li> <li>• toute drogue, sauf cannabis</li> </ul>
Élèves de 11 <sup>e</sup> année	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• LSD</li> <li>• crack</li> <li>• toute drogue, sauf cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• cannabis</li> <li>• champignons/mescaline</li> <li>• méthamphétamine</li> </ul>
Élèves de 12 <sup>e</sup> année	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• inhalants</li> <li>• champignons/mescaline</li> <li>• stimulants (NM)</li> <li>• <b>toute drogue, cannabis inclus</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>cannabis</b></li> <li>• <b>LSD</b></li> <li>• <b>méthamphétamine</b></li> <li>• toute drogue, sauf cannabis</li> </ul>

NM = non médical; <sup>†</sup> par rapport à 2001; \* par rapport à 2007

**Région :** On a relevé des diminutions significatives de la consommation de substances intoxicantes dans toutes les régions depuis 1999. Voir le tableau ci-dessous.

Baisse de la consommation lors de l'année écoulée selon la région : 2011 par rapport à <b>2009 (en gras)</b> et à 1999	
Toronto	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• champignons/mescaline</li> <li>• cocaïne</li> <li>• stimulants (NM)</li> </ul>	<ul style="list-style-type: none"> <li>• LSD</li> <li>• méthamphétamine</li> <li>• <b>analgés. opioïdes (NM)</b></li> </ul>
Nord de l'Ontario	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• LSD</li> <li>• méthamphétamine</li> <li>• toute drogue, sauf cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• alcool</li> <li>• champignons/mescaline</li> <li>• analgés. opioïdes (NM)*</li> </ul>
Ouest de l'Ontario	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• <b>cannabis</b></li> <li>• LSD</li> <li>• méthamphétamine</li> <li>• crack</li> <li>• stimulants (NM)</li> </ul>	<ul style="list-style-type: none"> <li>• alcool</li> <li>• <b>excès occasion. d'alcool</b></li> <li>• champignons/mescaline</li> <li>• ecstasy<sup>†</sup></li> <li>• analgés. opioïdes (NM)*</li> <li>• <b>toute drogue, cannabis inclus</b></li> </ul>
Est de l'Ontario	
<ul style="list-style-type: none"> <li>• cigarettes</li> <li>• LSD</li> <li>• <b>méthamphétamine</b></li> <li>• crack</li> <li>• toute drogue, cannabis inclus</li> <li>• toute drogue, sauf cannabis</li> </ul>	<ul style="list-style-type: none"> <li>• inhalants</li> <li>• <b>champignons/mescaline</b></li> <li>• cocaïne</li> <li>• héroïne</li> <li>• <b>analgés. opioïdes (NM)</b></li> </ul>

NM = non médical; † par rapport à 2001; \* par rapport à 2007

### Changements à long terme de 1977 à 2011 (7<sup>e</sup>, 9<sup>e</sup> et 11<sup>e</sup> 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 : un sommet à la fin des années 1970, suivi d'une diminution graduelle à la fin des années 1980 et au début des années 1990 et d'un deuxième sommet à la fin des années 1990 et 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 :

**1<sup>re</sup> tendance :** La prévalence de la consommation des substances suivantes a actuellement ou très récemment atteint son niveau le plus bas :

- ♦ cigarettes
- ♦ LSD.

**2<sup>e</sup> tendance :** En 2011, la prévalence de la consommation de substances intoxicantes a été significativement inférieure aux sommets atteints à la fin des années 1970 et à la fin des années 1990 (et aux sommets atteints en 2003 pour les tranquillisants ou les sédatifs). Pour les substances suivantes, le taux de consommation actuel est comparable aux faibles taux observés au début des années 1990 :

- ♦ alcool
- ♦ excès occasionnels d'alcool
- ♦ cocaïne
- ♦ méthamphétamine
- ♦ stimulants (NM)
- ♦ tranquillisants ou sédatifs (NM).

**3<sup>e</sup> tendance :** La 3<sup>e</sup> tendance a été semblable à la 2<sup>e</sup>, à une nuance d'importance près : la consommation actuelle des substances suivantes est significativement *supérieure* aux faibles taux observés au début des années 1990 :

- ♦ cannabis
- ♦ inhalants.

**4<sup>e</sup> tendance :** La prévalence de la consommation des substances suivantes, qui avait atteint un sommet à la fin des années 1990 et au début des années 2000 et qui avait graduellement baissé durant les années 2000, s'est stabilisée ces dernières années :

- ♦ champignons ou mescaline
- ♦ ecstasy
- ♦ crack.

**5<sup>e</sup> tendance :** Depuis plusieurs dizaines d'années, la prévalence de la consommation de la substance suivante est négligeable et demeure stable :

- ♦ héroïne.

## Recensement de drogues émergentes

En 2011, des questions sur trois drogues émergentes, notamment la méphédrone et les comprimés de benzylpipérazine (BZP), des stimulants synthétiques, et la doda, un opioïde, ont été ajoutées dans le SCDSEO. Toutefois, il a fallu supprimer les estimations de pourcentages, car la taille des échantillons n'était pas suffisante pour donner des estimations fiables. On a cependant établi qu'il n'y avait aucune preuve que l'usage de ces drogues s'était répandu de façon mesurable chez les élèves de niveau intermédiaire ou secondaire.

## Cigarettes : faits saillants

- ❑ En 2011, 9 % des élèves de l'Ontario (soit environ 88 000 élèves) ont dit avoir fumé la cigarette au cours de la dernière année et environ 4 % (quelque 38 900 élèves) ont déclaré fumer tous les jours.
- ❑ Les fumeurs se répartissaient également entre les deux sexes (9 % de garçons et 8 % de filles). On a cependant relevé des différences significatives selon l'année d'études (allant de moins de 3% des élèves de 7<sup>e</sup> et 8<sup>e</sup> années à 14 % des élèves des 11<sup>e</sup> et 12<sup>e</sup> années). On a également relevé des différences régionales, les élèves du Nord de l'Ontario fumant davantage que ceux des trois autres régions (16 % contre 7 à 8 %, respectivement).
- ❑ La plupart des élèves ont déclaré que les cigarettes qu'ils fumaient leur étaient fournies par un ami ou un membre de la famille. À défaut, la façon la plus courante de s'en procurer était l'achat en magasin, dans des stations service ou dans des bars.
- ❑ Environ 4 % des élèves de l'Ontario (soit environ 37 600 élèves) ont déclaré avoir fumé des cigarettes de contrebande au cours de la dernière année. Parmi les élèves ayant fumé au cours de la dernière année, 40 % ont déclaré avoir fumé des cigarettes de contrebande.

- ❑ On a demandé aux élèves participant au SCDSEO s'ils avaient consommé des produits du tabac sans combustion (c.-à-d. du tabac à chiquer ou à priser) au cours de la dernière année. Sur l'ensemble des élèves, 5 % (soit environ 46 500 élèves) ont déclaré en avoir consommé.

## Alcool : faits saillants

- ❑ En 2011, 55 % des élèves de l'Ontario (soit environ 551 400) ont dit avoir bu de l'alcool (davantage qu'une gorgée prise pour en faire l'essai) au cours de la dernière année. La consommation d'alcool était à proportions égales chez les garçons (55 %) et les filles (55 %). La consommation variait selon l'année d'études (allant de 17 % des élèves de 7<sup>e</sup> année à 78 % des élèves de 12<sup>e</sup> année). Les élèves de la région de Toronto étaient ceux qui consommaient le moins d'alcool (47 % des élèves) tandis que les élèves du Nord de l'Ontario étaient ceux qui en consommaient le plus (60 % des élèves).
- ❑ La consommation d'alcool se produisait surtout lors d'occasions spéciales (23 %). Douze pour cent des élèves ont déclaré avoir consommé de l'alcool deux ou trois fois par mois tandis qu'environ 7 % ont déclaré consommer de l'alcool une fois par semaine ou plus souvent.
- ❑ Un peu plus d'un cinquième des élèves de l'Ontario (22 %) ont déclaré avoir fait un excès d'alcool (au moins cinq verres par occasion) au moins une fois durant les quatre semaines qui ont précédé le sondage. Cela représente environ 223 500 élèves. Environ la même proportion d'élèves (20 %) ont déclaré s'être enivrés au moins une fois au cours du mois écoulé.
- ❑ En outre, 8 % des élèves ont déclaré avoir fait des excès d'alcool à deux ou trois reprises au cours des quatre dernières semaines et 5 % ont déclaré en avoir fait à quatre reprises ou plus.

- ❑ Environ 18 % des élèves de l'Ontario (33 % de ceux qui ont déclaré avoir consommé de l'alcool au cours de la dernière année) ont signalé des pratiques à risque selon les critères de l'épreuve *AUDIT (Alcohol Use Disorders Identification Test*, soit « épreuve de recherche des troubles liés à l'alcool »). Cela représente environ 175 600 élèves. 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 30 % chez les élèves des 11<sup>e</sup> et 12<sup>e</sup> années. Comparativement aux élèves des trois autres régions, ceux de la région de Toronto (13 %) sont ceux qui avaient les scores de consommation à risque ou entraînant des dangers les plus bas.
- ❑ Un élève sur dix (9 %) a déclaré s'être blessé ou avoir blessé quelqu'un au cours de la dernière année en raison de la consommation d'alcool.
- ❑ Dans la plupart des cas, l'alcool avait été fourni aux élèves par des tiers. À défaut, la façon la plus courante de se procurer de l'alcool était de donner de l'argent à quelqu'un pour qu'il en achète.

### Cannabis : faits saillants

- ❑ À peine plus d'un cinquième (22 %) des élèves de l'Ontario (soit environ 221 900 élèves) ont déclaré avoir consommé du cannabis au cours de la dernière année. La consommation était la même chez les garçons (23 %) et les filles (21%). Cette consommation augmentait avec les années d'études, passant de 2 % des élèves de 7<sup>e</sup> année à 36 % des élèves de 11<sup>e</sup> et 12<sup>e</sup> années. Parmi les régions, les élèves de Toronto (19%) sont les moins susceptibles de consommer du cannabis, et ce sont les élèves du Nord de l'Ontario (30 %) qui ont déclaré la plus grosse consommation de cannabis.

- ❑ Environ 2 % des élèves de l'Ontario consomment du cannabis tous les jours, ce qui représente 23 300 élèves.
- ❑ Un usager de cannabis sur dix (10 %) signale des symptômes de dépendance selon les critères de l'échelle *SDS (Severity of Dependence Scale*, soit « échelle de la gravité de la dépendance »). Cela représente 2 % de tous les élèves de l'Ontario, soit 22 300 élèves.

### Prise de médicaments sur ordonnance à des fins non médicales

- ❑ L'OxyContin est le nom de marque d'un analgésique d'ordonnance à base d'oxycodone, un opioïde qui entraîne une forte dépendance. En 2011, environ 1 % des élèves de l'Ontario ont déclaré avoir pris de l'OxyContin à des fins non médicales (c.-à-d. sans ordonnance) au cours de la dernière année, ce qui représente environ 12 500 élèves. L'estimation de 2011 est semblable aux estimations depuis 2005. On n'a pas relevé de différences significatives entre les garçons et les filles. L'usage augmentait de façon significative avec l'année d'études et atteignait un sommet chez les élèves de la 11<sup>e</sup> année (3%). On n'a pas relevé de différences significatives entre les quatre régions sur le plan de la consommation d'OxyContin.
- ❑ 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 No. 3, Demerol et codéine) à des fins non médicales. Environ 14 % des élèves ont déclaré avoir pris un analgésique opioïde à des fins non médicales au moins une fois au cours de la dernière année, ce qui représente 140 100 élèves. On n'a pas relevé de différence significative entre les garçons et les filles. La consommation augmente toutefois de façon significative avec l'année d'études et atteint son niveau le plus élevé chez les élèves de la 11<sup>e</sup> année (18 %). On n'a pas relevé de différences significatives

entre les régions. La majorité des élèves (67 %) qui avaient pris un analgésique opioïde à des fins non médicales ont déclaré se l'être procuré chez eux.

- Environ 1 % des élèves de l'Ontario ont déclaré avoir pris sans ordonnance un médicament prescrit pour traiter le trouble du déficit de l'attention avec ou sans hyperactivité (TDAH) chez les enfants (p.ex. Ritalin, Concerta, Adderall ou Dexedrine). Cela représente 9 700 élèves. On n'a pas relevé de différences significatives selon le sexe, l'année d'études ou la région.

### Prise de médicaments en vente libre à des fins non médicales

- On a posé aux élèves des questions sur leur consommation d'antitussifs et d'anti-rhume en vente libre contenant du dextrométhorphan pour « planer ». Sept pour cent des élèves ont déclaré avoir pris ce type de médicament pour cette raison au cours de la dernière année. Cela représente environ 68 600 élèves en Ontario. Il y a plus de garçons (8 %) que de filles (6 %) à prendre des antitussifs et des anti-rhume en vente libre à des fins non médicales. On a relevé des différences significatives selon l'année d'étude, la consommation atteignant son niveau le plus élevé chez les élèves de la 11<sup>e</sup> année (12 %). Il n'y avait pas de différences significatives parmi les quatre régions.

### Abstinence

- Un tiers (33 %) des élèves de l'Ontario de la 7<sup>e</sup> à la 12<sup>e</sup> année ont déclaré n'avoir pris aucune substance intoxicante au cours de la dernière année (l'alcool et le tabac étaient inclus dans les substances intoxicantes, mais non les boissons énergisantes fortement caféinées). Cela représente 324 800 élèves. L'abstinence était aussi répandue chez les garçons (32 %) que chez les filles (33 %) et les taux d'abstinence diminuaient de façon

significative avec l'année d'études, passant de 57 % des élèves de la 7<sup>e</sup> année à 16 % des élèves de la 12<sup>e</sup> année. On n'a pas relevé de différences significatives entre les régions.

### Boissons énergisantes caféinées

- En 2011, on a demandé pour la première fois aux élèves participant au SCDSEO de répondre à des questions sur leur consommation de boissons énergisantes fortement caféinées (p.ex. Red Bull, Rockstar ou Monster). La moitié (50 %) des élèves ont déclaré avoir consommé une telle boisson au moins une fois au cours de la dernière année. Cela représente environ 481 700 élèves. Un cinquième (19 %) des élèves ont déclaré avoir consommé une boisson énergisante au moins une fois au cours des sept jours précédant le sondage, ce qui représente environ 185 900 élèves.

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

#### *Alcool, drogues et conduite de véhicules*

- Environ 7 % des élèves de la 10<sup>e</sup> à la 12<sup>e</sup> année qui sont titulaires d'un permis de catégorie G ont déclaré avoir, au moins une fois au cours de la dernière année, pris le volant une heure ou moins après avoir bu deux verres d'alcool ou plus. Cela représente environ 21 500 conducteurs adolescents en Ontario. L'estimation du pourcentage d'élèves qui ont conduit en état d'ivresse a diminué de façon significative entre 2009 (12 %) et 2011 (7 %). En outre, l'estimation actuelle est significativement plus basse que les estimations d'il y a dix ans, surtout celles datant de la fin des années 1970 et du début des années 1980.
- Pour la première fois en 2011, on a demandé aux élèves s'ils avaient, au cours de la dernière année, conduit une motoneige, un bateau à moteur, une motomarine ou un

véhicule tout-terrain (VTT) après avoir consommé de l'alcool. Parmi les élèves de la 10<sup>e</sup> à la 12<sup>e</sup> année, 7 % ont déclaré l'avoir fait, ce qui représente 37 700 élèves en Ontario.

- Le pourcentage d'élèves de la 10<sup>e</sup> à la 12<sup>e</sup> 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. Chez les élèves de la 10<sup>e</sup> à la 12<sup>e</sup> année, environ un conducteur sur huit (12 %) a déclaré avoir, au moins une fois au cours de la dernière année, pris le volant une heure après avoir consommé du cannabis ou moins. Cela représente environ 38 300 conducteurs adolescents en Ontario. L'estimation actuelle de 12 % est significativement moindre que la première estimation qui avait été faite en 2001 (20 %).
- Le pourcentage d'élèves de la 10<sup>e</sup> à la 12<sup>e</sup> année ayant déclaré avoir, au moins une fois durant la dernière année, conduit un véhicule dans l'heure suivant la prise d'un analgésique opioïde d'ordonnance (p.ex. Percocet, Percodan ou OxyContin) est de 6 %. Cela représente environ 17 900 conducteurs adolescents en Ontario.
- Un quart (24 %) des élèves de la 7<sup>e</sup> à la 12<sup>e</sup> année ont déclaré avoir été à bord d'un véhicule conduit par une personne qui avait bu et 16 % ont déclaré avoir été à bord d'un véhicule conduit par une personne qui avait pris de la drogue. La fréquence de ces comportements a significativement diminué au cours des dix dernières années.

#### *Problèmes liés à la consommation de drogues*

- Un élève sur huit (13 %) a signalé avoir connu des symptômes liés à l'usage de drogues, selon les critères du questionnaire de dépistage *CRAFFT*. Cela représente 130 200 élèves en Ontario. On n'a relevé aucune différence significative selon le sexe ou la région. Il y avait toutefois des différences significatives selon l'année

d'études, les élèves de la 12<sup>e</sup> année (22 %) étant les plus nombreux à avoir eu des problèmes de ce type.

- Un faible pourcentage des élèves (1 %) ont déclaré avoir suivi un programme de traitement de l'alcoolisme ou de la toxicomanie au cours de la dernière année. Cela représente 8 900 élèves en Ontario.

#### *Concomitance de consommation d'alcool à risque et de troubles psychiques importants*

- Environ 9 % des élèves faisant une consommation d'alcool à risque ont déclaré avoir des troubles psychiques importants (c.-à-d. symptômes d'anxiété et de dépression). Cela représente 83 300 élèves en Ontario.
- Il y avait plus de filles que de garçons dans cette catégorie (11% et 6 %, respectivement). Il y avait également des différences significatives selon l'année d'études, la fréquence de ces problèmes jumelés étant à son maximum en 12<sup>e</sup> année (16 %). On n'a pas relevé de différences régionales.

#### **Autres faits saillants**

- Environ 5% des élèves (ce qui représente environ 51 300 élèves en Ontario) fument des cigarettes, consomment de l'alcool, de cannabis, et au moins un autre drogue.
- Un faible pourcentage (1 %) d'élèves ont déclaré s'être injecté de la drogue durant la dernière année. Cela représente environ 12 100 élèves en Ontario.
- Chez les élèves ayant déclaré avoir pris des substances intoxicantes pour la première fois durant la dernière année, les pourcentages étaient les suivants : 6 % pour la cigarette, 17 % pour l'alcool, 8 % pour le cannabis et 3 % pour des drogues illégales autres que le cannabis.

### *Consommation précoce de substances intoxicantes*

De nos jours, moins d'élèves consomment de l'alcool, du tabac ou du cannabis à un jeune âge.

- ❑ En 2011, moins de 2 % des élèves de 7<sup>e</sup> année avaient fumé leur première cigarette jusqu'au bout avant la fin de la 6<sup>e</sup> année comparativement à 27 % en 1997 et à 41% en 1981.
- ❑ En 2011, 13 % des élèves de 7<sup>e</sup> année avaient consommé leur première boisson alcoolisée avant la fin de la 6<sup>e</sup> année comparativement à 31 % en 2007, à 42 % en 2003 et à 50 % en 1981.
- ❑ En 2011, 2 % des élèves de 7<sup>e</sup> année avaient consommé du cannabis pour la première fois avant la fin de la 7<sup>e</sup> année, comparativement à 8 % en 2003 et à 9 % en 1981.
- ❑ En 2011, l'âge moyen auquel les fumeurs de 11<sup>e</sup> année ont déclaré avoir fumé leur première cigarette était de 14 ans. Les élèves de 11<sup>e</sup> année ont également déclaré avoir pris leur première boisson alcoolisée et s'être enivrés pour la première à l'âge de 14 ans; ils ont également déclaré avoir pris du cannabis pour la première fois à l'âge de 14 ans. L'âge moyen de la première prise de cannabis signalé chez les usagers de 11<sup>e</sup> année était de 14 ans.
- ❑ L'âge moyen où les élèves ont fumé et bu pour la première fois a augmenté au cours des dix dernières années tandis que l'âge moyen de la première prise de cannabis est resté stable.

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

- ❑ Pour les comportements étudiés, les élèves ont jugé que le plus dangereux pour la santé était la consommation régulière de marijuana (56 %), suivie de l'essai de la cocaïne (41 %) et de l'ecstasy (39 %), de l'usage quotidien du tabac (32 %), des excès

d'alcool durant les fins de semaines (26 %), et de l'essai de la marijuana (18 %).

- ❑ Au cours des dix dernières années, la perception du risque associé à l'essai de la cocaïne, de l'ecstasy et de l'usage quotidien du tabac a augmenté.
- ❑ Pour la première fois depuis longtemps, la réprobation associée à l'usage de la marijuana s'est accrue. Le pourcentage d'élèves qui réprovent fortement l'essai de la marijuana est significativement plus élevé en 2011 (34 %) qu'en 2009 (28 %) et en 1999 (26 %). Il en va de même pour le pourcentage d'élèves qui réprovent fortement l'usage de la marijuana, ce pourcentage étant nettement plus élevé en 2011 (56 %) qu'il ne l'était en 2009 (45 %) et en 1999 (43 %).
- ❑ La vive réprobation de l'essai de la cocaïne et de l'ecstasy a aussi été significativement plus élevée en 2011 qu'il y a dix ans.

### *Perception de la facilité d'accès aux drogues*

- ❑ En 2011, les élèves ont trouvé que la substance la plus facile d'accès était l'alcool (56 % des élèves ont déclaré qu'il serait « assez facile » ou « très facile » de s'en procurer), suivi de la cigarette (52 %), du cannabis (42 %), des analgésiques opioïdes d'ordonnance (19 %), de l'ecstasy (13 %), de la cocaïne (10 %) et du LSD (8 %).
- ❑ Les données indiquent que les élèves trouvent plus difficile de se procurer de l'alcool, des cigarettes, du cannabis, de la cocaïne, du LSD et de l'ecstasy en 2011 qu'il y a dix ans.

### *École et quartier*

- ❑ Parmi les élèves de la 7<sup>e</sup> à la 11<sup>e</sup> année, ce sont ceux de la 9<sup>e</sup> 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 ou d'une autre drogue.

- ❑ Un quart (25 %) des élèves ont déclaré que dans leur école, la consommation de drogues était un « gros problème », 50 % ont dit que c'était un « problème mineur » et 25 % ont affirmé qu'elle ne constituait « pas un problème » dans leur école.
- ❑ Environ 16 % des élèves ont déclaré avoir, au moins une fois au cours de la dernière année, été sous l'influence de l'alcool ou de drogues à l'école. Cela représente environ 157 300 élèves en Ontario.
- ❑ Un cinquième (20 %) des élèves de l'Ontario (soit environ 200 100 élèves) ont déclaré qu'au cours de la dernière année on leur avait proposé, vendu ou donné une substance illégale à l'école.
- ❑ Un peu plus d'un quart (27 %) des élèves ont déclaré qu'au cours de la dernière année, quelqu'un avait essayé de leur vendre des drogues à un endroit ou à un autre. Cela représente 262 300 élèves en Ontario. Parmi les régions, les élèves de Toronto (21%) sont les moins susceptibles de déclarer que quelqu'un a essayé de leur vendre des drogues.
- ❑ Un quart (26%) des étudiants (ce qui représente environ 254 900 élèves en Ontario) ont rapporté avoir vu des drogues vendues dans leur propre quartier dans la dernière année. Parmi les régions, les étudiants de Toronto (19%) sont les moins susceptibles de déclarer avoir vu des drogues vendues dans leur quartier.

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Angela Paglia-Boak  
Edward M. Adlaf  
Robert E. Mann

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# 1. INTRODUCTION

This report describes the prevalence and patterns of alcohol and other drug use among Ontario students in grades 7 through 12 in 2011, and changes during a 34-year period since 1977. The findings are based on the 18<sup>th</sup> cycle of the Centre for Addiction and Mental Health’s biennial *Ontario Student Drug Use and Health Survey* (OSDUHS). 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, current, and potentially future patterns of alcohol and other drug use in the adolescent population, the harms stemming from use, and the associated contextual, social, and demographic risk and protective factors.

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

- alcohol, tobacco, and other drug use by students in grades 7–12, and trends in use since 1977;
- the nature of, and trends in, harms related to alcohol and drug use;
- trends in driving after use of alcohol and cannabis;
- exposure to alcohol and other drug use in schools;
- exposure to alcohol and other drug use education in school; and
- attitudes and beliefs about alcohol and other drug use.

The 2011 OSDUHS drug use report includes **new or re-introduced material** on the following issues:

- use of smokeless tobacco;
- use of newly-emerging drugs: doda, mephedrone, and BZP pills;

- use of high-caffeine energy drinks;
- source of alcohol;
- driving a snowmobile, motor boat, Sea-Doo, or all-terrain vehicle after drinking alcohol;
- driving after using a prescription opioid;
- perceived availability of prescription opioid drugs without visiting a doctor; and
- recall of alcohol/drug prevention activities at school.

## History of the OSDUHS

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

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

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

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

This report presents descriptive findings related to alcohol and other drug use. Discussed are the prevalence, frequency, and harms of use, changes in these measures over time, and the associations between drug use<sup>1</sup> and key demographic characteristics (i.e., sex, grade/age, and region).

The scope of the OSDUHS has evolved to also include an array of mental and physical health indicators and other adolescent risk behaviours. The 2011 mental health and well-being findings will be described in a future companion report (Paglia-Boak, Adlaf, Beitchman, Wolfe, & Mann, forthcoming).

## Why Monitor Student Drug Use?

There are important reasons for estimating and monitoring drug use among adolescent students.

- The OSDUHS exemplifies the population health framework promoted by Health Canada and the World Health Organization, which is an evidence-based approach requiring the surveillance of a broad set of health indicators and influences among the general population. The resulting knowledge is applied to develop policies and programs to improve the well-being and reduce the potential harms to the population.
- Monitoring surveys provide a basis for evaluating 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), and health objectives and targets outlined in *Healthy People 2020* (US Department of Health and Human Services, 2011).
- Adolescents are at a pivotal developmental stage in which harms due to drug use could result in negative life trajectories in late

adolescence and adulthood. This is a critical period for initiation, and early initiation of drug use is strongly related to problems experienced later in life, such as abuse and dependence (Agrawal et al., 2006; Behrendt, Wittchen, Höfler, Lieb, & Beesdo, 2009; Chen, O'Brien, & Anthony, 2005; Dawson, Goldstein, Chou, Ruan, & Grant, 2008; DeWit, Adlaf, Offord, & Ogborne, 2000; Hingson, Heeren, & Winter, 2006). Further, alcohol and illicit drug use, along with injuries, are among the leading causes of burden of disease, as measured by disability-adjusted-life-years (DALYs), among young people (Gore et al., 2011; Rehm, Taylor, & Room, 2006).

- Adolescent drug use often signals future drug use among young adults, as the cohort of 12<sup>th</sup>-graders ages. That is, elevated use of a drug among the oldest students is a likely indication that future prevalence rates among adults aged 18-29 in the general population will also increase.
- Adolescent drug use can be a rapidly changing phenomenon. Drugs can rise or fall in popularity from one year to the next, and related harms may occur for youth, their families, their schools, and their communities. Indeed, in a short period we have seen several drug-related “outbreaks” emerge – for example, crack cocaine in the late 1980s, ecstasy, ketamine, and other “club drugs” in the 1990s, and more recent concern over the non-medical use of prescription drugs and the use of high-caffeine energy drinks by young people. The emergence of new drugs or changing modes of administration warrants ongoing surveillance.
- Because population surveys have a scientific basis and a known representativeness and precision, they can provide data that can identify and confirm current or emerging drug-related outbreaks. As well, such data can confirm or challenge anecdotal and media reports regarding the nature of drug use and its consequences. Thus, the results

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<sup>1</sup> Note that our use of the term “drug use” in this report includes the drugs alcohol and tobacco.

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 subpopulations, the OSDUHS data showed that these drugs did not measurably diffuse to the middle and high school population. On the other hand, the OSDUHS data allow groups to take collective action. For example, we recently drew national attention to the problem of driving after cannabis use among young drivers, stimulating a national public awareness campaign by the Canadian Public Health Association.<sup>2</sup>

- 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 population of users can be consuming drugs more or less hazardingly at one point in time than another.

## What Do Drug Use Surveys Tell Us?

Ongoing drug use surveys provide important public health information that can be used to understand the complex aspects of drug use:

- the size of the adolescent student drug-using population (both the percentage and estimated number in the population);
- the identification of high-risk and resilient groups;
- the factors that correlate with drug use, such as demographics, other risk behaviours, and mental health problems;
- the identification and validation of newly-

emerging drugs, their outbreaks, and related harms; and,

- the changes in the extent and nature of drug use and abuse 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 given drug causes significant 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 given 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 balance the relative number of users (the percentage using a drug) and the absolute number of users. Both factors are important, and in some cases, considering only the percentages or the absolute numbers can leave a misleading impression.

Consider, for example, that 1% of the OSDUHS sample represents about 10,000 7<sup>th</sup>- to 12<sup>th</sup>- graders. Clearly, our assessment of harm to public health will differ if this percentage reflects the number of students using cannabis once, versus the number of students sharing needles when injecting drugs, or the number of students reporting serious harms due to their use of alcohol or other drugs.

Because the same students are not surveyed each time, repeated cross-sectional surveys cannot evaluate developmental patterns, or growth curves measuring individual change (e.g., how patterns of drug use change with increasing age), nor can they fully resolve issues of causal order (e.g., whether poor grades cause drug use or whether drug use causes poor grades). However, repeated cross-sectional surveys are especially efficient at identifying aggregate period trends, such as changes over time in the percentage of the population using alcohol and other drugs, while taking into account any population changes.

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<sup>2</sup> See <http://www.potanddriving.cpha.ca>

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

There are important reasons for, and benefits to, estimating drug use among adolescents using a school-based survey:

- School-based surveys are cost efficient and relatively easily administered.
- A wide scope of developmental periods – early, middle, and late-adolescence – is “captured” in a school setting. Students are available in the classrooms during the school day and therefore one can collect data from a large number of students in one class period. 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 questions about drug use and other behaviours that may be illegal in a school setting than at home. Data collected through anonymous, self-administered, school-based surveys often have higher validity than data collected through other methods.
- In addition to drug use, we can monitor exposure to school-based drug prevention education and other activities in schools.
- Schools themselves are worthy of analysis. Certain school characteristics, such as school size, policies, school climate variables, may be associated with rates of student drug use (Kairouz & Adlaf, 2003; Rehm et al., 2005).
- Schools are part of an important hierarchical social structure: students are found in classes, which are nested in schools, nested in neighbourhoods, and nested in larger regions. The character of these linkages can affect rates of drug use.

## What Student Drug Use Surveys Do Not Tell Us?

Because school-based drug use surveys are based on adolescents in school, their data cannot provide a complete picture of adolescent substance 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, drop-outs, and homeless/street youth;
- the nature and changes in drug-related harms in the street drug scene. Student drug use typically plays a small role in indicators such as arrests, convictions, deaths, and treatment. Thus, student drug use trends need not correspond to trends in other drug use indicators (e.g., arrests).

## Strengths and Limitations of Student Drug Use Surveys

Although no single indicator can fully describe the contours of the drug problem, in our view, the strengths of the survey method far outweigh

the limitations in estimating the size of the drug-using population.

Strengths	Limitations
<ul style="list-style-type: none"> <li>■ The survey is based on scientific, random (probability) sampling methods designed to produce representative samples in which the sampling error can be estimated.</li> <li>■ Drug use surveys are often the only feasible means to measure the size of the drug-using population because no other official source exists (e.g., such as for alcohol which can be estimated by sales data).</li> <li>■ The survey is widely dispersed throughout Ontario with typically over 40 school boards, 100 schools, and 200 classrooms participating.</li> <li>■ The survey is administered on a classroom basis by trained staff. Not only is this cost-effective, but it tends to increase the rate of student participation. As well, the questionnaire can be completed in an anonymous setting, which is the most critical factor in reducing the underreporting of drug use. Indeed, school administered surveys typically obtain higher reports of drug use than do personal interview surveys.</li> <li>■ Unlike enforcement data (e.g., arrests, convictions) and treatment data, survey data captures the widest continuum of use, spanning from abstainers to experimenters to active users to former users.</li> <li>■ Because surveys are based on individual responses, they can assess the correlates and predictors of drug use and identify the characteristics of both high-risk and resilient groups.</li> </ul>	<ul style="list-style-type: none"> <li>■ The survey is restricted to adolescent students enrolled in publicly-funded schools. Excluded by design are out-of-scope groups in which drug use is typically higher, such as dropouts and homeless/street youth.</li> <li>■ Enrolled students who do not participate (due to absenteeism or lack of parental consent) may bias estimates <i>if</i> non-participating students differ from participating students on variables of interest.</li> <li>■ Because the reporting of drug use is based on self-reports, there is an unmeasurable potential for the underestimation of drug use caused by intentional (i.e., underreporting) and unintentional errors (e.g., memory errors).</li> <li>■ 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. However, combining multiple survey cycles can produce precise estimates for smaller geographic areas.</li> <li>■ The collection of data in clusters (e.g., schools and classrooms), which is cost-effective, requires the use of specialized statistical software to correct the statistical dependence caused by the naturally-occurring similarities among students in the same schools and classrooms.</li> <li>■ Highly structured self-administered questionnaires do not allow for the probing of rich qualitative information.</li> </ul>

## 2. METHOD

### Sampling Design

#### Target Frame Population

For each of the 18 survey cycles, the target in-scope population consisted of all students enrolled in Ontario’s publicly-funded school system (i.e., public and Catholic schools). Students excluded from the survey population as being out of scope were those enrolled in private

schools or home-schooled, those institutionalized for correctional or health reasons, those schooled on native reserves, military bases, or in the remote northern region of Ontario. These excluded groups represent a small proportion of the Ontario adolescent population (about 7%). Therefore, although our target population represents students, it captures the vast majority of Ontario adolescents ages 12 through 18.

Table 2.1 Thirty-Four Years (18 Cycles) of the OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011		
<b>No. School Boards</b>	20	20	31	31	20	24	25	27	25	20	22	38	41	37	42	43	47	40		
<b>No. Schools</b>	104	87	182	227	193	170	171	179	165	137	168	111	106	126	137	119	181	181		
<b>No. Classes</b>	196	195	198	261	205	215	224	221	233	223	234	285	272	383	445	385	573	581		
<b>No. Students</b>	4686	4794	3270	4737	4154	4267	3915	3945	3571	3870	3990	4894	4211	6616	7726	6323	9112	9288		
<b>Design Features</b>	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; some public health regions oversampled in 2009 (n=6) and in 2011 (n=5); weighted estimates								
												grades 7–13 (OAC)		grades 7–12 (OAC dropped in 2003)						

Note: entries for 2009 and 2011 include public health regions’ oversamples

### Past Survey Designs

As seen in **Table 2.1**, each survey was based on a random probability design. The 1977 and 1979 surveys were based on a stratified (region and grade) three-stage cluster design (school board,

school, class). The proportional allocation of students by grade and region allowed for self-weighted (i.e., unweighted) estimates. To further improve the precision and efficiency of estimates, in 1981 the design was modified to a stratified single-stage cluster design with paired

selection (“two-per-stratum”) of school board clusters. This resulted in the selection of more school boards and schools.

Since 1981, the Institute for Social Research (ISR) at York University has been responsible for the OSDUHS sample design, questionnaire printing, field operations, data processing, data file preparation, and weighting.

### **Current Sampling Design**<sup>3</sup>

Beginning in 1999, the OSDUHS transitioned to a stratified (region by school level<sup>4</sup>), two-stage (school, class) cluster sample design, with oversampling of students in Northern Ontario to provide more precise estimates for that region.<sup>5</sup> 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 change provides greater age variation, and thus more developmentally-based detail on the relationship between drug use and age. It also allows for more direct grade comparisons to American and other international studies. Another design revision introduced in 1999 was to use a probability sample of schools in stage 1, rather than selecting school board clusters. Consequently, more students per school are sampled. The advantages include a greater geographical dispersion of schools and school boards, and more precise school-level estimates.<sup>6</sup>

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<sup>3</sup> In addition to the authors, the 2011 OSDUHS sample design team, headed by Michael Ornstein, also included John Pollard and David Northrup, all from the Institute for Social Research.

<sup>4</sup> In Ontario, 7<sup>th</sup>- and 8<sup>th</sup>-graders can be enrolled in elementary schools, middle schools, or junior high schools.

<sup>5</sup> Prior to 1999, the allocation of students from Northern Ontario was proportional to the population, resulting in smaller samples than the other regions.

<sup>6</sup> The disadvantages of greater school dispersion are: (1) it increases the number of school boards and therefore resources needed to obtain permission; (2) it increases the school fieldwork coordination and travel costs.

### **OSDUHS Regions**

Since 1977, the sample design has divided Ontario into four regional strata based on the following boundaries: City of Toronto; 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).

### **Oversampling Buy-Ins for Ontario Public Health Units in 2011**

In addition to the four base design regions just described, the 2011 OSDUHS included an additional five regional strata oversamples purchased by the respective 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 five areas of the province were oversampled: the City of Ottawa, Durham Region, York Region, Niagara Region, and the North Bay Parry Sound District. In total, there were nine regional strata designed to contain mutually exclusive school samples.

### **School Selection (Stage 1)**

Publicly-funded English and French schools in the public and Catholic school sectors in Ontario were eligible to participate. Schools excluded as being out of scope were private schools, schools on native reserves, on Canadian Forces Bases, and schools in certain geographically inaccessible northern areas.

The 2011 OSDUHS school sample selection occurred as follows:<sup>7</sup>

- 1) The sampling frame used to randomly draw schools was the Ontario Ministry of Education and Training’s 2007/2008 school enrolment data base (most recently available

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<sup>7</sup> School selections for the 2003-2009 cycles were based on a longitudinal sample of schools initially drawn in 2001. In 2011, the school selection was refreshed with a fully independent sample.

at the time). This sampling frame includes all publicly-funded schools in Ontario that include the grades in our target. For logistic reasons, schools that were too small (i.e., fewer than 20 students in schools with grades 7 and 8, and fewer than 80 students in schools with grades 9 through 12) were excluded from the sampling frame.

- 2) Within *each* of the region-by-school level primary-stage strata, a probability proportionate-to-size (PPS) selection of schools was chosen (i.e., larger schools had a greater probability of being selected). Schools were selected with systematic sampling without replacement (WOR).
- 3) If a selected school could not participate, or if it had closed, a replacement school from the same stratum was randomly selected, again with PPS sampling.

### **Class Selection (Stage 2)**

Within each selected school, one class per grade was randomly selected with equal probability and sampling without replacement (WOR). In elementary/middle schools, **two classes** were randomly selected – **one 7<sup>th</sup>-grade and one 8<sup>th</sup>-grade**. In secondary schools, **four classes** were randomly selected, **one in each grade between 9 and 12** from either a list of classes in a required subject (e.g., English), or a required period (e.g., homeroom).

For the public health oversamples, the class selection procedure in the secondary schools did not differ from the standard procedure, except for schools in the North Bay Parry Sound District. (For this district, *two* classes per grade were selected due to a smaller population of secondary schools.) In the elementary/middle schools, rather than the standard selection of one class per grade, *two* 7<sup>th</sup>-grade and *two* 8<sup>th</sup>-grade classes were selected to participate (or all students in these grades if there was fewer than two classes in each).

If a selected class was unable to participate, a replacement class from the same school and same grade was randomly re-selected, time

permitting. Classes excluded as out of scope were special education classes, English as a Second Language (ESL) classes, and classes with fewer than five students. All students in the selected classes were eligible to participate.

### **Procedures**

The 2011 OSDUHS protocol was approved by the Research Ethics Boards (REBs) at CAMH, and York University,<sup>8</sup> as well as 27 school board research review committees (RRC).

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 did not allow their schools to participate, replacement schools from the same stratum were randomly selected and the corresponding boards were contacted for permission to approach the replacement schools. Once a school agreed to participate, the principal provided ISR with a master list of classes by grade, from which a random selection was made.

All participating schools were provided with copies of the **active parental consent form**<sup>9</sup> (see Appendix), which was available in several languages (English, French, Spanish, Portuguese, Russian, Mandarin). Well in advance of the survey date, each school distributed the consent forms to students, who, in turn, sought the signature of one parent/guardian if they were under age 18 (students aged 18 and older did not require

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<sup>8</sup> A protocol review by York University's REB is required for all projects administered by ISR.

<sup>9</sup> *Active* parental consent requires a clear approval for their child to participate from at least one parent indicated by a "I approve" response with a signature. In contrast, *passive* consent allows a student to participate as long as a parent does not indicate objection to their child participating. In practice, active consent results in fewer students participating.

parental consent). Students themselves were also required to provide a signature of assent. Those who did not return a signed consent form before the survey date were not allowed to participate. If a student did not participate, no substitution took place. Instead, the data were statistically weighted to adjust for this unit nonresponse. Administration procedures were designed to protect students' privacy by allowing for anonymous and voluntary participation. The survey was administered across the province by 26 trained ISR field staff in the classrooms of the randomly-selected classes between October 15, 2010 and June 24, 2011.<sup>10</sup> The survey administrators read a standardized script to participating students explaining the history of the study, its purpose, and emphasizing the anonymity of the survey. Students were informed that participation was completely voluntary and anonymous, and were instructed not to write their names on the questionnaires. Student recorded their answers directly on the paper-and-pencil instrument (PAPI). Teachers were not required to remain in the classrooms during administration, although most chose to do so. Schools were not compensated for participation. However, for the first time in 2011, students who participated received a small token of appreciation for their assistance (a \$5 value gift card for downloadable music).<sup>11</sup>

The ISR field staff collected the completed questionnaires, which were then couriered to ISR for data capture by manual keying. The quality of the data entry was verified by re-keying a random sample of about 3% of all the questionnaires.<sup>12</sup> The major editing rule used for processing a valid questionnaire was that at least half of the questions had to be completed. Thirty-five questionnaires failed to meet this requirement and were not entered.

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<sup>10</sup> While some data collection predates 2011, we retain the odd-year designation used in previous cycles for simplicity and to reduce possible confusion.

<sup>11</sup> Two school boards did not permit the use of incentives.

<sup>12</sup> The verification rate was reduced from 100% after multiple cycles showed low rates of data entry errors.

## The OSDUHS Questionnaire

In addition to alcohol and other drug use, the OSDUHS questionnaire covers an array of adolescent health-related content. To include as many content areas as possible in a fixed period, while minimizing the burden on students, we employed two versions of the questionnaire, Form A and Form B (available at [www.camh.net/research/osdus.html](http://www.camh.net/research/osdus.html)). In each classroom, half the students were randomly assigned either Form A or Form B.<sup>13</sup> In 2011, both forms contained 160 items, with about half of the content overlapping.

The 18-page self-administered PAPI questionnaire, printed in a two-column booklet format, took about 25 to 35 minutes to complete. The average completion time was 30 minutes (median was 30 minutes; mode was 30 minutes). A French version of the questionnaire (Form A only) was used in French-speaking schools. By design, question skip patterns were not employed in the questionnaire to protect students' privacy by ensuring that students took about the same time to complete the instrument (i.e., drug-using students would not take longer to complete the questionnaire). This was achieved by having response categories of never used, did not currently use, or did not know what a drug was for the drug-related items. Furthermore, not using skip patterns also reduces the risk of navigational errors (i.e., students skipping to the wrong questions).

To maximize validity and to enhance cross-study comparability, many of the OSDUHS questionnaire items were derived from recommended international guidelines (e.g., Hibell et al., 2003) and other reputable student surveys such as NIDA's *Monitoring the Future* (MTF) survey,<sup>14</sup> the CDC's *Youth Risk Behavior Survey* (YRBS),<sup>15</sup> and the WHO's *Health*

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<sup>13</sup> Although this split-matrix method extends the content coverage of the questionnaire, the disadvantage for analysis based on a single form is a reduced sample size.

<sup>14</sup> See <http://www.monitoringthefuture.org>

<sup>15</sup> See <http://www.cdc.gov/healthyyouth/yrbs>

*Behaviour of School-Aged Children* (HBSC) survey,<sup>16</sup> and have been shown to produce valid responses (Brener et al., 2002; Currie et al., 2008; Johnston, O'Malley, Bachman, & Schulenberg, 2011; O'Malley, Bachman, & Johnston, 1983). Also included were validated screeners and scales, such as the WHO's *Alcohol Use Disorders Identification Test* (AUDIT) to assess hazardous or harmful drinking (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993), the *CRAFFT* screener to assess drug use problems (Knight et al., 1999), and the *Severity of Dependence Scale* (SDS) to assess cannabis use problems (Martin, Copeland, Gates, & Gilmour, 2006).

All new items in the 2011 questionnaire were assessed by both external expert review and pre-tested by ISR, using a small convenience sample of young adolescents. The readability of the 2011 questionnaire showed a 7<sup>th</sup>-grade 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 reported positive assessments: 97% of students (95% of 7<sup>th</sup>-graders) reported that the questionnaire was "fairly" or "very easy" to understand; only 10% of students (11% of 7<sup>th</sup>-graders) reported that the questionnaire was "much too long"; and only 6% of students (9% of 7<sup>th</sup>-graders) reported that questions in the survey would make most students "very uncomfortable." The latter finding provides some confidence that issues of social desirability should not greatly bias our estimates, even among the youngest students.

## Data Quality

### 2011 Sample Participation and Characteristics

Our objective is to provide a representative, unbiased sample of students in grades 7 through 12 in Ontario. The target sample size for the

2011 OSDUHS was calculated to be about 9,000 students.

**Schools.** In total, 255 schools (228 initial selections plus 27 replacements) were invited to participate. Of these, **181 schools** (78 elementary/middle – of which one was French – and 103 secondary – of which six were French) from 40 school boards participated in the survey resulting in a school response rate of 71%. The most common reasons given for school refusals were that they were too busy, or that they had already committed to other external research projects. Schools that could not participate were replaced with randomly selected schools from the same regional stratum to maintain representativeness. Although we could not conduct a systematic follow-up of refusing schools, we do not expect these refusals to have created a considerable bias. Indeed, analysis showed that this group of non-participating schools did not significantly differ from participating schools regarding school level (elementary/middle versus secondary) or public versus Catholic. However, relative to the regional breakdown of the participating schools, there were fewer refusing schools in the Northern region, and more in the Eastern region of the province.

If schools differ substantially regarding student drug use, then which schools participated can greatly influence the survey findings. Some research suggests that school-level variables are important and show relationships between variables such as public vs. Catholic, or socioeconomic status, and student drug use (Kairouz & Adlaf, 2003; O'Malley, Johnston, Bachman, Schulenberg, & Kumar, 2006; Rehm et al., 2005). However, the majority of the variance in student drug use may lie within schools, not *between* schools (Kairouz & Adlaf, 2003; O'Malley et al. 2006). Further, most of the between-school variance can be attributed to differences in region/urbanicity (Johnston et al., 2011) – a factor that is controlled for in the replacement sampling within the same regional stratum. This would imply that if schools are fairly similar in drug use then which particular schools participate in the survey has a small influence on drug use estimates.

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<sup>16</sup> See <http://www.hbsc.org>

**Classes.** A total of **581 classes** participated in the survey (183 from elementary/middle schools, 398 from secondary schools). We must note that 119 classes were not randomly selected. Rather, these classes were convenient same-grade replacements, typically identified by principals, for classes that were originally selected but could not participate for logistic reasons.<sup>17</sup>

**Students.** Finally, of the 15,005 students enrolled in these participating classes, **9,372** completed the survey (**62%** of students in the participating classes).<sup>18</sup> Twelve percent (12%) were lost due to absenteeism and 26% were lost due to either unreturned consent forms or parental refusal.<sup>19</sup> The student response rates according to the four regions were 66% in Toronto, 55% in the North, 63% in the West, and 65% in the East.

While the proportion of absent students has remained constant over the decades, the proportion of consent form loss has been increasing across all grades and all regions (see Appendix Table A2). The reasons for this increase are unclear. One possible explanation is the increasing number of school board RRCs that have mandated the use of an active parental consent/student assent form. 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; Dey, 1997; Galea & Tracy, 2007; Porter, 2004). Still, our student participation rate of 62% is above average for a student survey with active consent (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; White, Hill, Effendi, 2004).

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<sup>17</sup> Statistical tests comparing randomly selected versus non-randomly selected classes showed no significant differences regarding drug prevalence estimates. Further, drug prevalence estimates were evaluated with and without the inclusion of the non-random classes, and results did not differ. Thus, all classes remained in the final data set.

<sup>18</sup> The compound school-student response rate is  $0.71 * 0.62 = 0.44$ .

<sup>19</sup> For further details about the 2011 sample selection and participation rates by the nine regions, please see Pollard, Ornstein, and Northrup (2011).

For example Health Canada's 2008/2009 *Youth Smoking Survey*, which was based on a combination of active and passive consent procedures, had a national student response rate of 73%, although the response rate in Ontario was 55% (University of Waterloo, 2009).

The association between the magnitude of nonresponse and nonresponse *bias* is complex. A low response rate does not necessarily imply that the data are characterized by a high level of 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). A survey can have a high response rate, yet high nonresponse bias (Groves et al., 2004, p. 59). Existing research examining the impact of consent form loss on estimates of student drug use and other risk behaviours has not been conclusive. Some studies have found that students who do not return signed consent forms are more likely to use substances and to engage in risk behaviours than students who return signed forms (Anderman, Cheadle, Curry, & Diehr, 1995; Courser et al., 2009; White et al., 2004), whereas others have found no such differences (Eaton, Lowry, Brener, Grunbaum, & Kann, 2004).

While we could not compare students who returned a signed consent form with those who did not, we did compare demographics and substance use in classes in which the class response rate was below 70% (n=323) with classes in which the class response rate was 70% or higher (n=258). If students who do not return consent forms are indeed "high-risk" youth, then we would expect classes with low participation rates to have lower prevalence estimates (less likely) of risk behaviours such as alcohol, tobacco, and illicit drug use compared with high-participation classes. We found no significant differences between classes with low and high participation rates regarding sex and grade. Of 28 substance use measures compared between the groups, only 3 showed significant differences.<sup>20</sup> This suggests

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<sup>20</sup> Low participation classes had lower prevalence estimates for past year alcohol use, binge drinking, and drunkenness compared with high participation classes. All other substance use measures tested showed no differences.

that students who participated in the survey were not dominantly “low-risk” youth.

One group not represented by the OSDUHS, by design, is dropouts or ‘school leavers.’ We must recall 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 sample was selected. Thus, readers should not attempt to extrapolate the OSDUHS findings to groups outside the target population (e.g., dropouts, homeless youth).

**Data Editing.** Consistent with previous OSDUHS cycles, exclusion criteria were established to enhance data quality. **Students were excluded from the final data set if they** (1) did not report their age; (2) did not report their sex; (3) reported the use of a fictitious drug; (4) reported using 10 or more of 12 illicit drugs (excluding cannabis) 40 or more times during the past year (“faking bad”); or (5) did not respond to half or more of the core substance use questions. If a case met any one of these criteria, then it was excluded from the data set. Note that criteria 3 and 4 address the potential bias due to overreporting drug use.<sup>21</sup> In 2011, only 84 cases were removed from the data set, which is a proportion similar to past survey cycles. This data editing procedure resulted in **9,288 minimally complete cases** used in the data analyses. Form A was completed by 4,816 students, and Form B was completed by 4,472 students.

**Item Missingness.** Both the single item missing rate and the cumulated item missing rate were low. Item missingness averaged less than 1%. Across all the core questions (i.e., both forms), the average proportion of unanswered questions was 1.5%. Valid responses were provided for all core substance use questions by 95% of students. Missing responses to questions were not statistically imputed, but were excluded on a casewise (i.e., listwise) basis for a given analysis.

<sup>21</sup> Our data suggest that any overreporting bias should be minimal given rare reports of fictitious drug use (n=60 cases) and of exaggerated frequent multiple drug use (n=12 cases).

## Dropouts 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,<sup>22</sup> there are some exceptions (e.g., illness, legal emancipation). One challenge in assessing the impact of dropouts on our sample lies with the differing methods of measurement and, therefore differing estimates. The Ministry of Education and Training estimates that the Ontario high school graduation rate in 2009/2010 was 81% (Office of the Premier of Ontario, March 2011). However, we cannot assume that the dropout rate was 19% because some students remain in school without graduating (i.e., take more years to graduate than the norm). 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).

The omission of dropouts from our sample may introduce bias in the demographic characteristics as dropouts 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 problem to some extent. The omission of dropouts would not affect our drug use trends if the proportion remains constant from cycle to cycle. However, both the Ontario Ministry of Education and Training and Statistics Canada indicate that the proportion of high school dropouts has declined over the past two decades, not only in Ontario but in most of Canada. One would assume that because of the decline in dropouts (and therefore retaining a greater number of older males in schools/classrooms 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 dropouts does not substantially affect our trend estimates of drug use.

<sup>22</sup> Prior to 2006, the compulsory age of education in Ontario was 16 years.

**Poststratification.** We compared the 2011 OSDUHS sample to the most current school enrolment figures from the Ministry of Education and Training based on the 2009/2010 academic year. **Table 2.2** shows that there were slight discrepancies between the 2011 OSDUHS sex-by-grade weighted 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, while in

other regions older females were overrepresented. Therefore, we calculated poststratification weight factors for the sex-by-grade distributions within each of the 9 regional strata separately to restore each region's demographic structure to the population structure. The poststratified weighted sample distribution is shown in Table 2.2 (far-right columns). The OSDUHS weighted sample corresponds well to the Ontario enrolment. **Table 2.3** shows the demographic characteristics of the final weighted sample.

Table 2.2 The 2011 OSDUHS Sample vs. Ontario 2009/2010 School Enrolment

	OSDUHS Pre-Adjusted		Population Enrolment		OSDUHS Poststratification Adjusted	
	% Male	% Female	% Male	% Female	% Male	% Female
<b>Grade 7</b>	6.9	7.9	7.3	6.9	6.6	6.3
<b>Grade 8</b>	7.2	8.0	7.6	7.2	6.9	6.6
<b>Grade 9</b>	7.6	8.2	8.3	7.9	8.6	8.1
<b>Grade 10</b>	7.4	9.0	8.4	7.9	8.7	8.2
<b>Grade 11</b>	7.7	8.7	8.5	8.0	8.8	8.3
<b>Grade 12</b>	8.8	12.5	11.8	10.4	12.2	10.7
<b>Total</b>	45.7	54.3	51.8	48.2	51.8	48.2

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 1,009,900 students enrolled in Ontario's publicly-funded schools in the 2009/2010 academic year.

Table 2.3 Sample Characteristics, 2011 OSDUHS

	Final Number in the Sample	Weighted %
<b>Total</b>	<b>9,288</b>	
<b>Males</b>	4,334	51.8
<b>Females</b>	4,954	48.2
<b>Grade 7</b>	1,446	13.0
<b>Grade 8</b>	1,459	13.5
<b>Grade 9</b>	1,684	16.7
<b>Grade 10</b>	1,547	16.8
<b>Grade 11</b>	1,539	17.1
<b>Grade 12</b>	1,613	22.9
<b>Toronto</b>	1,243	16.9
<b>North</b>	993	4.3
<b>West</b>	1,255	41.4
<b>East</b>	974	16.5
<b>Ottawa (OS)</b>	1,015	6.0
<b>Durham Region (OS)</b>	944	5.6
<b>York Region (OS)</b>	927	5.6
<b>Niagara Region (OS)</b>	1,137	2.8
<b>North Bay Parry Sound District (OS)</b>	800	0.9

Notes: (1) OS=oversample for the public health unit/department; (2) mean age was 15.1 years (SD=1.9); (3) the 9 regional strata were mutually exclusive; (4) for the regional drug use estimates presented in this report, the "North" region includes North Bay Parry Sound District (combined n=1,793), the "West" region includes Niagara (combined n=2,392), and the "East" region includes Ottawa, Durham Region, and York Region (combined n=3,860).

## Data Analysis, Interpretation, and Presentation

### Data Weighting

For several reasons, including the oversampling of schools/students in various regions, the sample design requires sample (or selection) weights to ensure the proper representation of students to the Ontario student population. For each student, **the final weight is based on the product of five factors**: (1) the probability of a school being selected; (2) the probability of a class being selected; (3) a student unit nonresponse correction factor; (4) a regional post-stratification adjustment to restore regional representation; and (5) a final post-stratification adjustment to restore the sex-by-grade distribution, using the most currently available provincial enrolment figures. Our weighted estimates are representative of all students in grades 7 through 12 enrolled in publicly-funded schools in Ontario. In other words, our sample of 9,288 students represents about 1,009,900 Ontario students in grades 7 through 12.<sup>23</sup>

### Survey Estimates

Before turning to the survey results, we will first briefly discuss 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 who report using a given drug. Because we do not survey 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. 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. Our goal is to obtain estimates with high precision and low bias.

*Precision* refers to the “probable accuracy” of a percentage; those summarized in the present report include a range, or confidence interval (CI), around a percentage value. The reason for employing confidence intervals arises 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 overlap 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 coverage, problems of respondent memory and recall, and underreporting.

The confidence interval around a percentage 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 had used alcohol in the past year was 54.9% (52.1%-57.6%), we mean that with repeated sampling 95% of the CIs would contain the true population value (ignoring bias). Narrower confidence intervals imply greater precision, or less sampling error; wider intervals imply less precision, or greater sampling error.

In our case, the width of the interval depends on three factors: the number of students surveyed – other things being equal, the larger the sample size the narrower or more precise is the interval; second, the size of the percentage – other things being equal, percentages around 50% have the widest interval (i.e., maximum variance) while percentages approaching 0% and 100% have the narrowest interval;<sup>24</sup> and third, design effects – in our design, other things being equal, the greater the similarity (or correlation) of responses within schools and classrooms the wider is the interval.

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<sup>23</sup> One intuitive way of thinking of the sampling weight is that each student in the sample represents or “stands in” for about 109 students in the population.

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<sup>24</sup> This is because very large and very small percentages have the lowest variability, as most students are either in the “yes” category or in the “no” category.

Changes in any of these three factors combine to affect the width of the confidence interval. Also, because of this last factor the confidence intervals can vary, even though both the size of sample and percentage remain constant. All CIs reported in this study are design-adjusted, that is, corrected for features of the complex sample design, and logit transformed to ensure that the lower and upper limits do not exceed 0% or 100%.

**Bias**, in contrast to precision, refers to sources of error that may inflate or deflate estimates from the true percentage. Such sources of non-sampling error include underreporting of drug use, memory effects, nonresponse, and other sources of systematic error. Thus, a percentage may have a high degree of precision (a narrow confidence interval) but may still be biased (not close to the true value). The degree of survey error we present in this report is restricted to precision and not bias. That is, the margins of error, or confidence intervals, we present in this report include only sampling error. Confidence intervals do not include errors due to non-sampling factors such as the underreporting of drug use, or errors of memory or recall.

The data collection features of the OSDUHS (i.e., in-school, self-administered, anonymous, voluntary) are the optimal conditions under which to survey adolescents about sensitive topics such as drug use, illegal behaviours, and mental health (Brener et al., 2006; Gfroerer, Wright, & Kopstein, 1997; Hibell et al., 2003; O'Malley, Johnston, Bachman, & Schulenberg, 2000; Rootman & Smart, 1985; Tourangeau & Yan, 2007). We made full effort to elicit truthful responses by repeatedly ensuring students of complete anonymity and confidentiality of the results. Still, the research evidence suggests that self-reported drug use estimates and related problems are generally underreported 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; Johnston et al., 2011; Tourangeau & Yan, 2007). Further, students absent from class are somewhat more likely to use or have used substances versus students who are consistently 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). **Therefore, the survey results should be viewed as conservative, that is, underestimated.**

However, assuming that underreporting and absenteeism remains more or less constant across years, then the biases in the estimates should remain constant across time. Therefore, trend estimates should not be greatly affected by any such biases (Cochran, 1977; Groves et al., 2004). Indeed, the steady and consistent nature of our trend curves provides support for this assertion.

## 2011 Analysis

The OSDUHS design featuring stratification, clustering, and weighting requires the use of complex sample survey software for analysis. Standard statistical software cannot correctly estimate variance from such complex designs.<sup>25</sup>

All 2011 percentage estimates and confidence intervals presented in this report were design-adjusted for characteristics of the complex sampling design (i.e., stratification, clustering, weighting) using Taylor series linearization (TSL) routines available in Stata 11 (Heeringa et al., 2010; StataCorp, 2009). The design-based analysis was based on 15 strata (region by school level),<sup>26</sup> 181 primary sampling units (schools), and 9,288 students. The design-based degrees of freedom (*df*) for our complex sample was 166 ( $df=181$  [# school PSUs] – 15 [# strata]). We restrict design specification to stage 1 primary

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<sup>25</sup> Standard simple random sample (SRS) software packages underestimate variances of complex samples because the latter violates some key assumptions of SRS-based software, namely the independence of observations. The consequence of this (and other) violations is underestimated variances and CIs, as well as overstated statistical inference.

<sup>26</sup> Elementary/middle schools were not oversampled in three public health regional strata.

sampling units (schools) given that stage 2 (classes) variances “roll-up” into stage 1 PSUs (Heeringa et al., 2010, pp. 66-67).<sup>27</sup>

The statistical significance of subgroup (i.e., sex, grade, region) differences in 2011 was tested using bivariate second-order design-adjusted Rao-Scott Pearson chi-square tests at the  $p < .05$  level of significance.

### Why do cluster samples “lose data”?

One means of understanding the loss of data due to clustering is to first consider a simple random sample (SRS) of students, each selected independently throughout the province. In this scenario, each student represents a count of 1 because each provides unique 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 fairly similar. Because of the high similarity, each student is no longer providing unique 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 students, for example.

The reduction in effective sample size depends on the degree of similarity – greater similarity within clusters results in greater data loss.

One unique feature of complex sample analysis is the estimation among subpopulations (e.g., drinking problems among drinkers, or drinking-driving among drivers). If the analysis was to employ a simple selection filter (e.g., select if drinker), the software would not correctly identify the survey design elements and, consequently, would underestimate the error. In this report, we employ unconditional subclass analysis by specifying a command (*subpop* in Stata) that properly accounts for the sampling plan. 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).

### Trend Analysis

The tests contrasting 2009 and 2011 estimates and also estimates from 1999 versus those from 2011 are based on grades 7 through 12. However, to ensure grade comparability across time, the long-term trend tests (1977–2011) are based on only grades 7, 9 and 11. These three grades are common to all survey cycles.

Although we highlight dominant long-term trends, we pay particular attention to changes since the previous survey (i.e., 2011 versus 2009), and since 1999 because this was the year the survey first included all grades in 7 through 12. To examine the nature of the trends in drug use estimates, a merged data set was employed.<sup>28</sup> All estimates spanning back to 1977 were corrected for the respective survey design effects. For the trend analyses, overall change was first assessed using the Wald statistic from logistic regression analysis. Second, we assess whether changes over time show significant linear and non-linear trends. A linear trend indicates a significant increase or decrease over the entire time period. A non-linear (or quadratic) trend indicates a levelling-off and/or a change in direction over time. A

<sup>27</sup> In addition, we have ignored the finite population correction (fpc) factor, an adjustment for the expected reduction in the sampling variance due to sampling without replacement, because the proportion of our sampling units is small ( $< 5\%$ ) relative to the population units.

<sup>28</sup> All trend data are based on a data set cumulated for the years 1977 through 2011 (18 survey cycles). The data set is represented by 82,900 students enrolled in 2,055 schools (stage 1 PSU clusters) distributed among 223 region-by-school level-by-year strata.

trend can show both linear and non-linear trends. Only trends among the total sample were assessed in the long-term (1977–2011) trend analyses.

For all statistical tests comparing percentages across time, we used the more conservative  $p < .01$  significance level. Because only a sample of all students in Ontario is surveyed, sampling error is involved in every drug use estimate. Consequently, as discussed earlier, absolute differences between two percentages cannot necessarily be interpreted as indicating true or real differences in the population. Therefore, if a test comparing estimates between two years reached statistical significance, we also examined whether the two 95% confidence intervals overlapped. If they did not overlap, this provided confirmational evidence that the two percentages differed beyond chance. For example, 58.2% (55.7%–60.6%) of students reported drinking alcohol in 2009. This percentage decreased to 54.9% (52.1%–57.6%) in 2011, showing a decrease of three percentage points. However, because these two confidence intervals overlap, we cannot be confident that they are different in the population (Fleiss, 1981). Using this conservative approach increases the confidence of our findings about temporal changes.

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

- Statistically significant differences must be carefully evaluated. First, our analysis does not consider the large number of statistical tests performed. Indeed, for every 20 statistical tests, one “significant difference” could occur solely by chance. Second, outcomes that are statistically significant tell us only that the difference is probably not due to chance. Whether a statistically significant difference is of public health importance is a matter that requires both statistical and non-statistical judgement.
- 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 in drug use exists and describe the pattern of differences. Because other factors may underlie regional differences (e.g., socio-economic status), we cannot causally attribute such differences solely to the geographical location of students.

- Although most estimates presented are based on percentages, we occasionally present total population or expansion estimates.
- All analyses are based on casewise deletion (also known as listwise) resulting in complete case analysis. In casewise deletion, if a student has at least one missing value for items used in the analysis, all information from this student is temporarily removed from the analysis.
- Small percentages and estimates based on a small number of students produce wide confidence intervals (i.e., large error) and are likely unstable. In this report, **estimates were suppressed due to unreliability** (unstable) if they met any *one* of the following conditions:

- (1) the estimate was less than 0.5%;
- (2) the base sample size (i.e., the denominator) was less than 50 students; or
- (3) the relative standard error, measured by the coefficient of variation<sup>29</sup> (CV), was greater than a value of 33.3.

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<sup>29</sup> The coefficient of variation is the ratio of the standard error to its estimate (i.e.,  $CV = SE/Estimate$ ). This measure is especially useful when comparing the precision of measures with different percentage magnitudes and different sample sizes. In survey practice, the CV is typically used to identify potentially unstable estimates requiring cautious interpretation or suppression.

Table 2.4 Definitions of Terms Used in the Report

Term	Definition
<b>95% Confidence Interval (CI)</b>	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.
<b>Past Year Cigarette Use (Smokers)</b>	Smoking at least one cigarette daily or smoking occasionally during the past 12 months. Those who smoked a few puffs or less than one cigarette in the past 12 months are not considered to be smokers.
<b>Daily Smoking</b>	Smoking at least one whole cigarette daily during the past 12 months.
<b>Past Year Alcohol Use (Drinkers)</b>	Any alcohol consumed during the past 12 months. Use includes consumption on special occasions, but excludes sips.
<b>Heavy Drinking</b>	Two indicators are used: (1) <b>Binge drinking</b> : drinking 5 or more drinks on the same occasion during the past 4 weeks; (2) <b>Becoming drunk</b> during the past 4 weeks.
<b>Hazardous/Harmful Drinking</b>	Scoring at least 8 of 40 (Likert scoring) on the World Health Organization’s <i>Alcohol Use Disorders Identification Test</i> (AUDIT) screen, which identifies the percentage drinking hazardously or harmfully. Hazardous drinking is a pattern of drinking that increases the likelihood of future physical and mental health problems, including dependence. Harmful drinking is a pattern that is already causing harms (e.g., injuries).
<b>Past Year Drug Use (Users)</b>	Used the drug at least once during the past 12 months. Cases that responded “don’t know what [the drug] is” were considered non-users and assigned to the denominator.
<b>Frequent Drug Use</b>	Used the drug 6 or more times during the past 12 months. Cases that responded “don’t know what [the drug] is” were considered non-users and assigned to the denominator.
<b>Non-Medical Use (NM)</b>	Used the drug without a prescription, or without a doctor’s supervision.
<b>Any Drug Use, including Non-Medical Prescription Drug Use</b>	This binary measure indicates past year use of one or more of the following 22 drugs asked about in the 2011 survey (Form B only): cannabis, inhalants, LSD, mushrooms/mescaline, cocaine, crack, methamphetamine, heroin, doda, ecstasy, ketamine, jimson weed, salvia divinorum, BZP pills, mephedrone, stimulants (NM), tranquilizers/sedatives (NM), OxyContin (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), over-the-counter cough/cold medication (to “get high”), and Gravol (to “get high”). Excluded from this count are tobacco, alcohol, and high-caffeine energy drinks.
<b>Any Illicit Drug Use (for trends)</b>	To examine trends in any illicit drug use we use two measures based on drugs that were common to all surveys since 1977. The first measures past year use of one or more of the following 10 drugs: cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, stimulants (NM), and tranquilizers/sedatives (NM). A second measure for any illicit drug use excludes cannabis from the count.
<b>Any Non-Medical Prescription Drug Use</b>	Non-medical use of one or more of the following five prescription drugs or drug classes once or more often during the past 12 months: OxyContin, other prescription opioid pain relievers, ADHD drugs, other stimulants, or tranquilizers/sedatives.
<b>Drug Use Problem</b>	Reporting 2 or more of the 6 items on the <i>CRAFFT</i> screener, which measures a drug use problem that may require intervention (past 12 month period).
<b>Cannabis Dependence</b>	Scoring at least 4 of 15 (Likert scoring) on the cannabis <i>Severity of Dependence Scale</i> (SDS). The SDS is a validated 5-item instrument used to screen for drug dependence in adolescent and general populations.
<b>Elevated Psychological Distress</b>	Reporting 3 or more of the 12 items on the <i>General Health Questionnaire</i> (GHQ12). The GHQ12 measures symptoms of anxiety, depression, and social dysfunction during the past few weeks.

Table 2.5 2011 OSDUHS Method and Sample Summary

<b>2011 OSDUHS Method and Sample Summary</b>	
<b>Design</b>	<ul style="list-style-type: none"> <li>▪ Target sample consisted of 7<sup>th</sup>- to 12<sup>th</sup>-graders enrolled in the English and French publicly-funded school system (public and Catholic) in Ontario during the 2010/2011 school year. Students excluded as being out-of-scope were those enrolled in private schools, those schooled in correctional or health facilities, those schooled on native reserves, military bases, those schooled in the remote areas of Northern Ontario, and those home-schooled.</li> <li>▪ Sample selected by a stratified (region by school level), two-stage cluster design. Stage 1: <u>schools</u> selected by probability-proportionate-to-school size (PPS). Stage 2: <u>classes</u> selected, with equal probability. Both stages employed sampling without replacement (WOR).</li> <li>▪ The stratification, which included both a design component (4 regions × 2 school levels) and an optional public health oversample (5 regions × 2 school levels), resulted in a total of 15 (18-3) region-by-school level strata (elementary/middle schools were not oversampled in 3 public health regions).</li> <li>▪ Schools were selected within each primary stage stratum by systematic random sampling according to PPS using the 2007/2008 Ministry of Education and Training school data base. Within selected schools, typically one class per grade was randomly selected with equal probability of selection (EPSEM).</li> </ul>
<b>Participation</b>	<ul style="list-style-type: none"> <li>▪ 9,372 of 7<sup>th</sup>- to 12<sup>th</sup>-grade students sampled from 181 schools, 581 classes, and who provided active parental consent and student assent, completed questionnaires from Oct. 2010 to June 2011.</li> <li>▪ 71% of selected schools, and 62% of eligible students in those schools, participated.</li> <li>▪ The final (edited) sample of 9,288 students is representative of the 1,009,900 7<sup>th</sup>- to 12<sup>th</sup>-graders enrolled in Ontario's publicly-funded schools.</li> </ul>
<b>Questionnaire</b>	<ul style="list-style-type: none"> <li>▪ The 18-page, anonymous, self-administered, paper-and-pencil instrument (PAPI), which averaged 30 minutes to complete, was administered in classrooms by trained staff from the Institute for Social Research.</li> </ul>
<b>Student Characteristics</b>	<ul style="list-style-type: none"> <li>▪ Males (4,334; 52%);      Females (4,954; 48%)</li> <li>▪ 7<sup>th</sup>-graders (1,446; 13%);    8<sup>th</sup>-graders (1,459; 13%);    9<sup>th</sup>-graders (1,684; 17%); 10<sup>th</sup>-graders (1,547; 17%);    11<sup>th</sup>-graders (1,539; 17%);    12<sup>th</sup>-graders (1,613; 23%).</li> <li>▪ Toronto (1,243; 17%);    North (1,793; 5%);    West (2,392; 44%);    East (3,860; 34%).</li> </ul>
<b>Data Quality</b>	<ul style="list-style-type: none"> <li>▪ Data editing rules were applied, resulting in 84 'incomplete' questionnaires removed from the final data set.</li> <li>▪ Nonresponse analysis comparing classes with response rates of 70% or higher versus classes with lower rates showed no significant differences in most drug use measures.</li> </ul>
<b>Analysis</b>	<ul style="list-style-type: none"> <li>▪ Sample weights were employed to account for sampling probabilities and to restore the sample to the corresponding population distribution. The sample was poststratified to correspond to the Ontario Ministry of Education and Training's 2009/2010 enrolment for sex-by-grade groupings.</li> <li>▪ The complex sample analysis model is based on a design with 181 primary sampling unit clusters (schools), 581 secondary sampling unit clusters (classes) distributed among 15 region-by-school level strata. Only stage 1 primary sampling units (schools) were required to be specified in the survey analysis.</li> </ul>

Note: percentages shown are weighted percentages

## 3. RESULTS

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### 3.1 Overview of Drug Use in 2011

#### Drug Use in the Past Year

(Figure 3.1.1; Table 3.1.1)

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

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

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

#### Lifetime Drug Use

(Figure 3.1.1; Table 3.1.1)

Estimates for lifetime drug use show that alcohol, cannabis, and tobacco are the three most common drugs students have ever tried. About 59% of students have ever consumed alcohol (more than just a sip), over one-quarter (26%) have ever used cannabis, and 22% have smoked

cigarettes. About one-sixth (16.2%) have used prescription opioid pain relievers (e.g., codeine, Percocet, Percodan, Demerol, Tylenol #3) non-medically in their lifetime. About one-in-ten have used over-the-counter cough or cold medication recreationally in their lifetime. The remaining drugs were used by less than 10% of students in their lifetime.

#### Frequency of Drug Use

(Figures 3.1.2, 3.1.3)

Frequent drug use, defined as using **six or more times** during the past 12 months, is shown in Figure 3.1.2. Of all the illicit drugs (which excludes alcohol and tobacco) cannabis is, by far, the most frequently used. About 13% of students report using cannabis six or more times during the past year. Frequent non-medical use of prescription opioid pain relievers is reported by about 5% of all students. All other drugs in the survey are used this frequently by about 2% of students or fewer.

Figure 3.1.3 displays the number of times *past year users* used an illicit drug during the 12 months before the survey (excluded are alcohol and tobacco). Again, we can readily see that use of most drugs is infrequent. For the majority of the 15 drugs shown (those with more than 50 users), use is only once or twice in the past year. Cannabis, however, is used much more frequently.

Figure 3.1.1  
 Percentage Reporting Lifetime and Past Year Drug Use, 2011 OSDUHS (Grades 7–12)

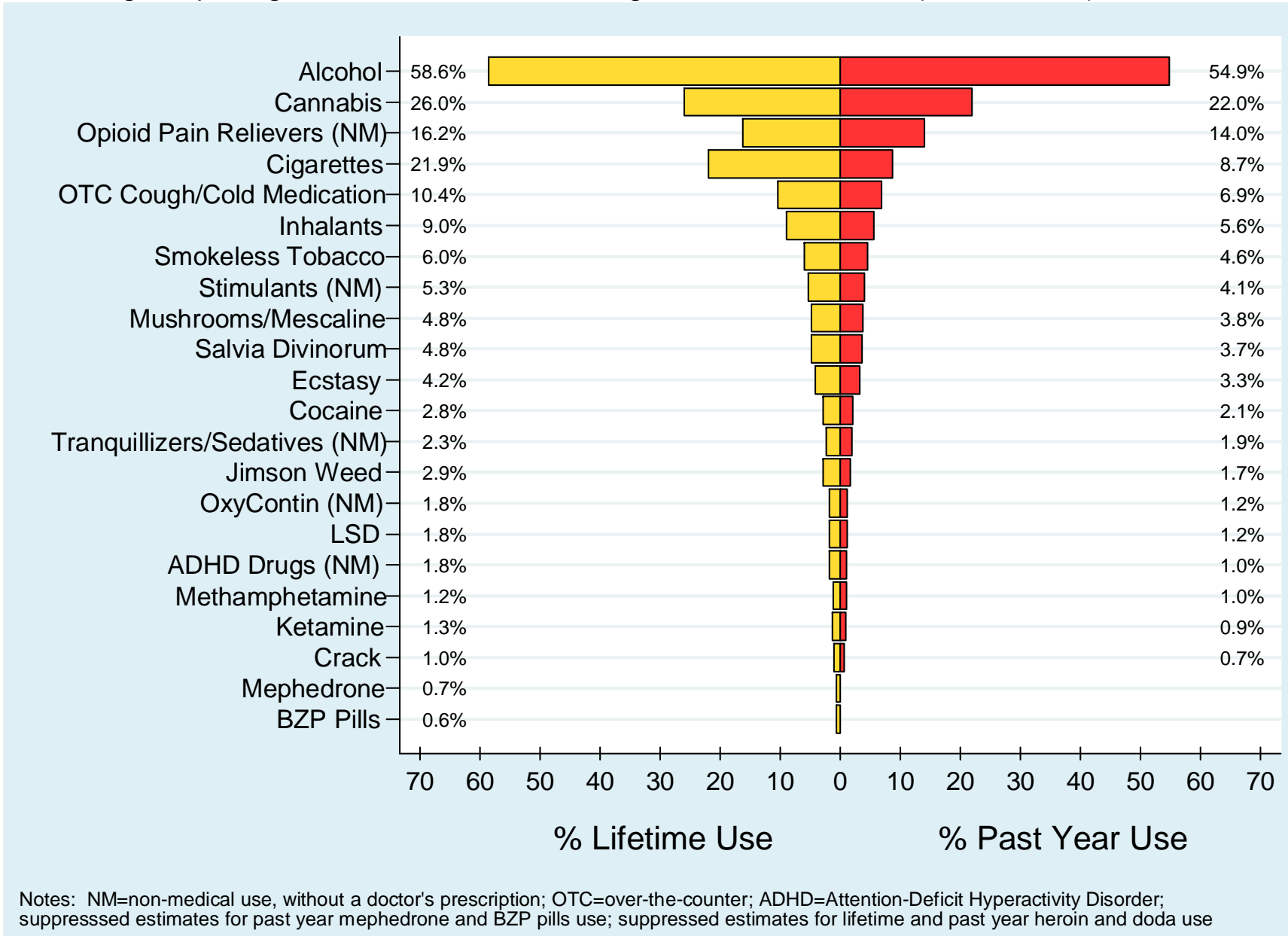
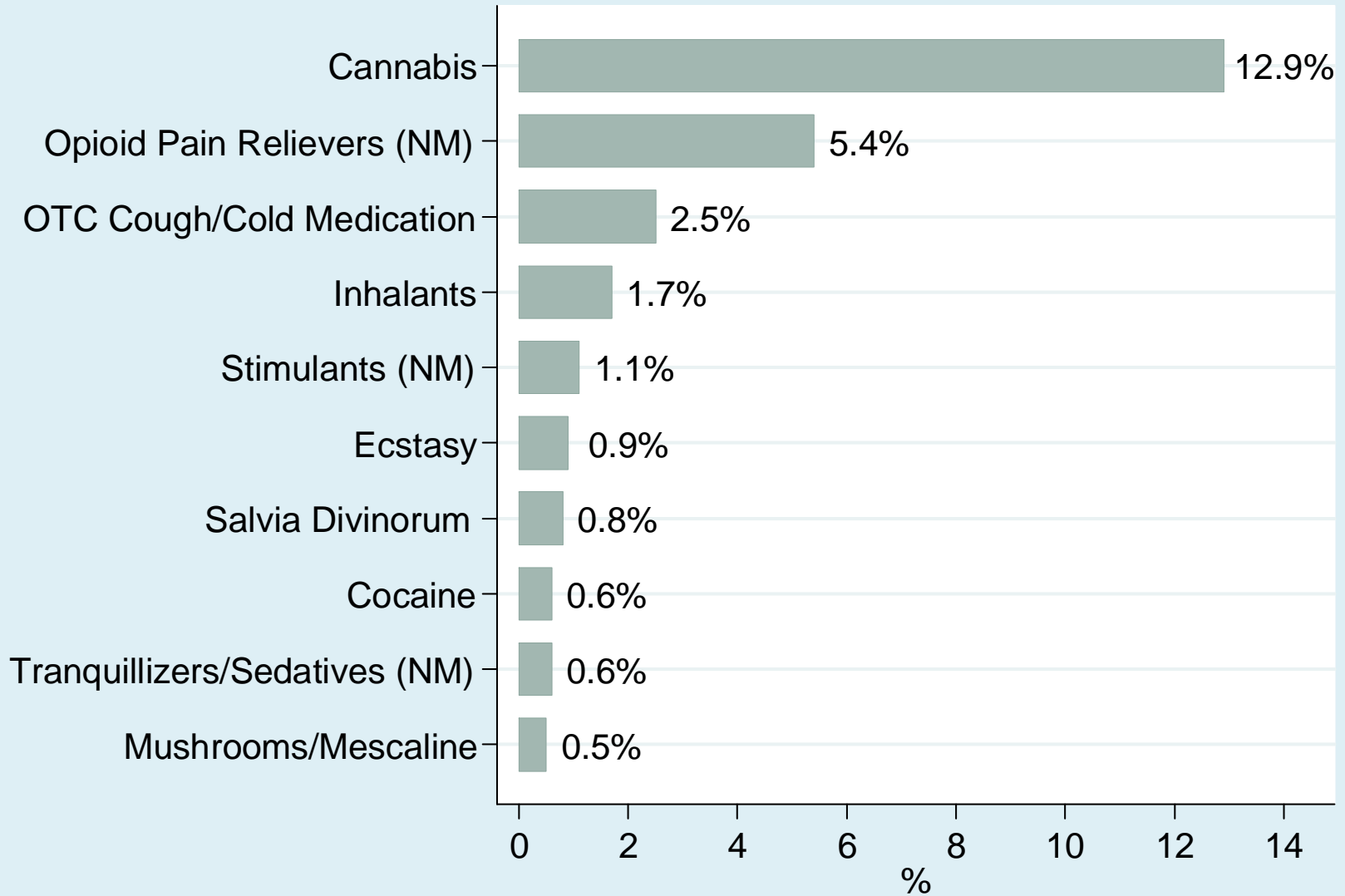
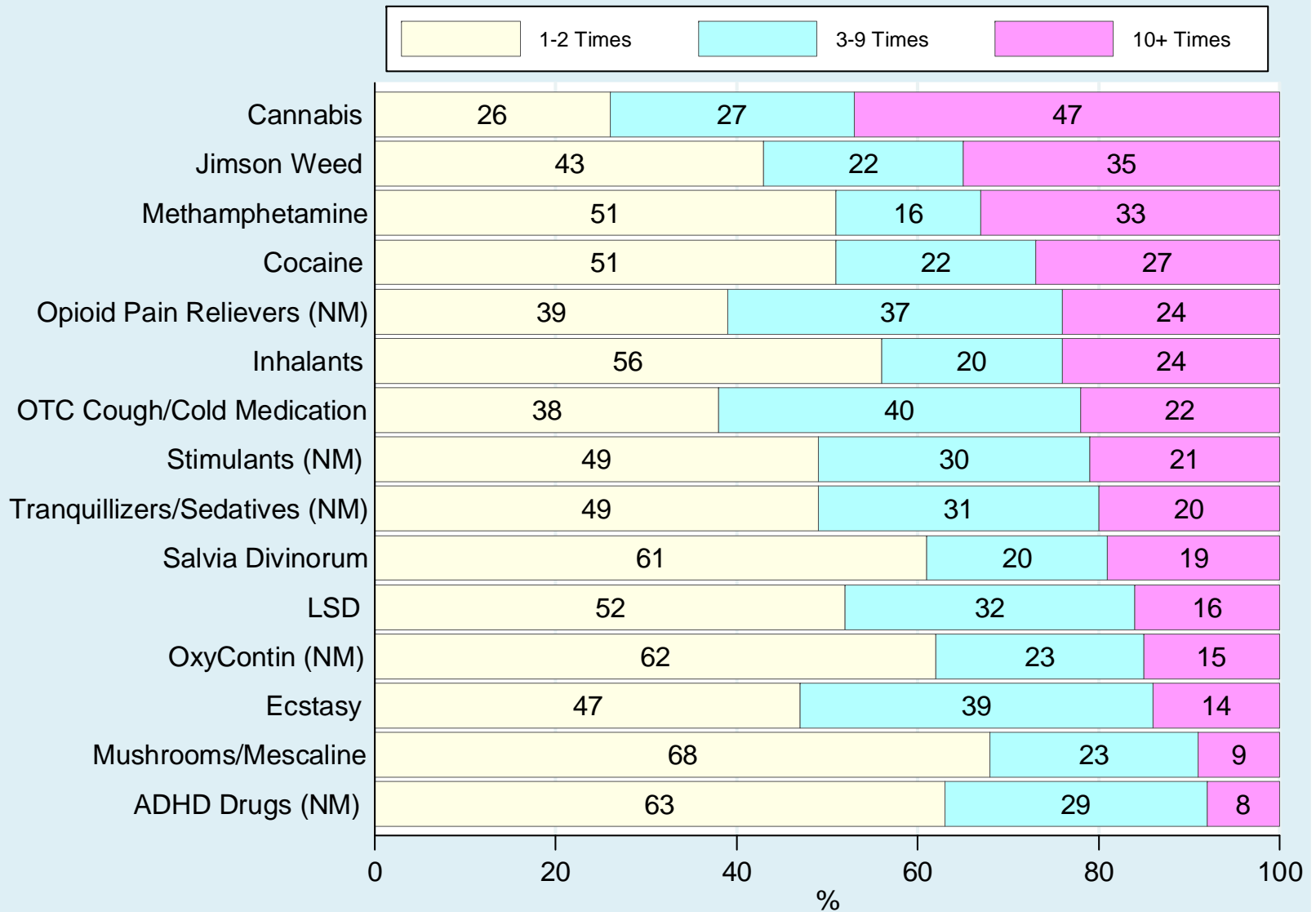


Figure 3.1.2  
Percentage Reporting Frequent Drug Use (Six Times or More) in the Past Year, 2011  
OSDUHS (Total Sample, Grades 7–12)



Notes: NM=non-medical use, without a doctor's prescription; drugs with estimates less than 0.5% are not shown

Figure 3.1.3  
 Frequency of Drug Use in the Past Year, Among Users, 2011 OSDUHS (Grades 7–12)



Notes: NM=non-medical use, without a doctor's prescription; 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, 2011 OSDUHS (Grades 7–12)

	Lifetime Use			Past Year Use					
	Lower Estimate <sup>a</sup>	%	Upper Estimate <sup>a</sup>	Lower Estimate <sup>a</sup>	%	Upper Estimate <sup>a</sup>	Lower Estimate	Approx. Users <sup>b</sup>	Upper Estimate
Cigarettes	20.2	<b>21.9</b>	23.7	7.5	<b>8.7</b>	10.2	75,700	<b>88,000</b>	100,300
Smokeless Tobacco	5.1	<b>6.0</b>	7.1	3.9	<b>4.6</b>	5.5	38,300	<b>46,500</b>	54,700
Alcohol	56.0	<b>58.6</b>	61.2	52.1	<b>54.9</b>	57.6	470,000	<b>551,400</b>	632,700
Cannabis	23.9	<b>26.0</b>	28.2	20.5	<b>22.0</b>	23.7	195,000	<b>221,900</b>	248,800
Inhalants (Glue or Solvents)	7.7	<b>9.0</b>	10.5	4.5	<b>5.6</b>	7.0	43,800	<b>55,300</b>	66,900
LSD	1.2	<b>1.8</b>	2.7	0.9	<b>1.2</b>	1.7	8,400	<b>12,300</b>	16,200
Mushrooms (Psilocybin) or Mescaline	3.8	<b>4.8</b>	6.0	3.1	<b>3.8</b>	4.8	29,700	<b>38,500</b>	29,700
Jimson Weed	2.0	<b>2.9</b>	4.2	1.1	<b>1.7</b>	2.8	9,200	<b>17,200</b>	25,100
Salvia Divinorum	3.9	<b>4.8</b>	6.0	2.8	<b>3.7</b>	4.8	27,300	<b>36,600</b>	45,900
Methamphetamine (incl. Crystal Meth)	0.8	<b>1.2</b>	1.8	0.6	<b>1.0</b>	1.6	4,400	<b>9,800</b>	15,300
Cocaine	2.3	<b>2.8</b>	3.4	1.7	<b>2.1</b>	2.6	15,900	<b>20,700</b>	25,400
Crack	0.8	<b>1.0</b>	1.4	0.5	<b>0.7</b>	1.1	4,200	<b>6,900</b>	9,700
Heroin		†			†				
Doda		†			†				
Ecstasy (MDMA)	3.4	<b>4.2</b>	5.2	2.6	<b>3.3</b>	4.2	24,000	<b>33,400</b>	42,700
Ketamine	0.7	<b>1.3</b>	2.3	0.5	<b>0.9</b>	1.6	4,200	<b>9,100</b>	13,900
BZP Pills	0.3	<b>0.6</b>	1.0		†				
Mephedrone	0.4	<b>0.7</b>	1.3		†				
OxyContin (NM)	1.4	<b>1.8</b>	2.3	0.9	<b>1.2</b>	1.7	8,500	<b>12,500</b>	16,600
Opioid Pain Relievers (NM)	14.8	<b>16.2</b>	17.6	12.8	<b>14.0</b>	15.3	116,500	<b>140,100</b>	163,600
ADHD Drugs (NM)	1.4	<b>1.8</b>	2.3	0.7	<b>1.0</b>	1.3	5,700	<b>9,700</b>	13,700
Other Stimulants (NM)	4.2	<b>5.3</b>	6.6	3.3	<b>4.1</b>	5.0	29,400	<b>41,000</b>	52,500
Tranquillizers/Sedatives (NM)	1.8	<b>2.3</b>	3.0	1.5	<b>1.9</b>	2.6	12,800	<b>19,400</b>	26,000
OTC Cough/Cold Medication	8.7	<b>10.4</b>	12.3	5.5	<b>6.9</b>	8.7	46,000	<b>68,600</b>	91,200
OTC Gravol		†			†				
Steroids (lifetime use only)	0.8	<b>1.2</b>	1.8						
Any NM Use of a Prescription Drug				15.1	<b>16.7</b>	18.4	136,000	<b>168,800</b>	201,600
Any Illicit Drug, including NM Prescription Drug				35.9	<b>37.4</b>	38.8	328,100	<b>372,200</b>	416,200

Notes: (1) <sup>a</sup>based on 95% confidence interval; (2) <sup>b</sup>based on a population of approximately 1,009,900 students in grades 7–12. Numbers are based on survey weights and have been truncated; (3) † estimate suppressed due to unreliability (most are <0.5%); (4) “Lifetime Use” refers to ever using at least once; (5) “Past Year Use” refers to use at least once during the 12 months before the survey; (6) NM = non-medical use, without a doctor’s prescription; (7) OTC = over-the-counter drug used for non-medical purposes or to “get high”; (8) “Any NM Use of a Prescription Drug” refers to non-medical use of any one of the prescription drugs; (9) “Any Illicit Drug Use, including NM Prescription Drug” refers to use of any one of the drugs listed except for tobacco, alcohol, and steroids.

Source: OSDUHS, Centre for Addiction & Mental Health

## 3.2 Overview of Drug Use Trends

### 2011 vs. 2009 (Grades 7–12)

(Table 3.2.1a)

Of the 21 drugs monitored in both the 2009 and 2011 surveys, no drug shows an increase in past year prevalence among the total sample of students. However, three drugs show a statistically significant decrease in past year prevalence between these two years:

- cigarette smoking significantly decreased between 2009 and 2011 (from 11.7% in 2009 to 8.7% in 2011);
- cannabis use (from 25.6% to 22.0%); and
- non-medical (NM) use of prescription opioid pain relievers (from 17.8% to 14.0%).

The measure for any prescription drug use (NM) in the past year also showed a significant decrease between 2009 and 2011, from 20.3% to 16.7% – most likely due to the decrease in prescription opioid pain relievers shown above.

The measure for any illicit drug use out of 10 drugs, including cannabis, asked about over time significantly decreased between 2009 and 2011 (from 28.0% to 24.8%) – most likely due to the decrease in cannabis use shown above.

### 1999–2011 Trends (Grades 7–12)

(Table 3.2.1a)

Table 3.2.1a presents drug use prevalence estimates for the years 1999 through 2011 among all students in grades 7 through 12. There are 15 drugs that have decreased:

- cigarette smoking significantly decreased between 1999 and 2011 (from 28.4% to 8.7%)
- alcohol (from 66.0% to 54.9%)
- cannabis (from 28.0% to 22.0%)
- inhalants (from 8.9% to 5.6%)
- LSD (from 6.8% to 1.2%)
- mushrooms/mescaline (from 12.8% to 3.8%)
- methamphetamine (from 5.1% to 1.0%)
- cocaine (from 3.4% to 2.1%)

- crack (from 2.5% to 0.7%)
- heroin (from 1.9% to suppressed estimate)
- ecstasy (from 6.0% in 2001 to 3.3%)
- ketamine (from 2.2% in 2003 to 0.9%)
- opioid pain relievers (NM) (from 20.6% in 2007 to 14.0%)
- stimulants (NM) (from 7.3% to 4.1%)
- lifetime steroid use (from 3.4% to 1.2%).

An index measuring any illicit drug use out of 10 drugs, including cannabis, asked about over time significantly decreased between 1999 and 2011 (from 31.7% down to 24.8%). A second index similar to that above, but excluding cannabis, also significantly decreased between 1999 and 2011 (from 20.0% down to 9.9%).

### Long-Term Trends, 1977–2011 (Grades 7, 9, 11 only)

(Figures 3.2.1–3.2.5; 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 characterized into the following five patterns:

**Pattern 1:** Prevalence has now reached, or very recently reached, an all-time low:

- cigarettes
- LSD.

**Pattern 2:** Prevalence in 2011 is significantly lower compared with the peaks found in the late 1970s and late 1990s (and 2003 for tranquilizers/sedatives), and current use is similar to the lows evident in the early 1990s:

- alcohol
- binge drinking
- cocaine
- methamphetamine
- stimulants (NM)
- tranquilizers/sedatives (NM).

**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 evident in the early 1990s:

- cannabis
- inhalants.

**Pattern 4:** Prevalence shows a peak in the late 1990s or early 2000s, a decline during the 2000s, and has stabilized in recent years:

- mushrooms/mescaline
- ecstasy
- crack.

**Pattern 5:** Prevalence has been negligible and stable for decades:

- ◆ heroin.

Figure 3.2.1  
Pattern 1: Long-Term Drug Use Trends, 1977–2011 OSDUHS  
(Grades 7, 9, and 11 only)

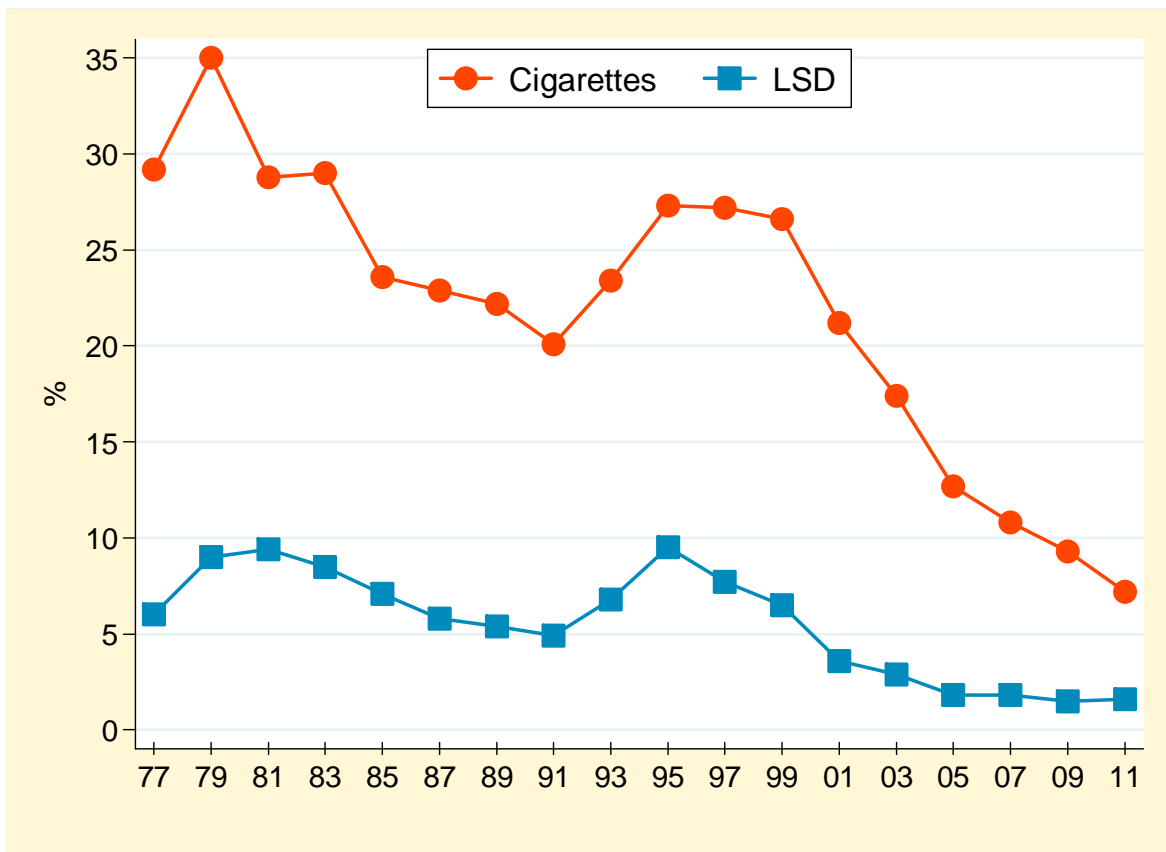


Figure 3.2.2  
 Pattern 2: Long-Term Drug Use Trends, 1977–2011 OSDUHS  
 (Grades 7, 9, and 11 only)

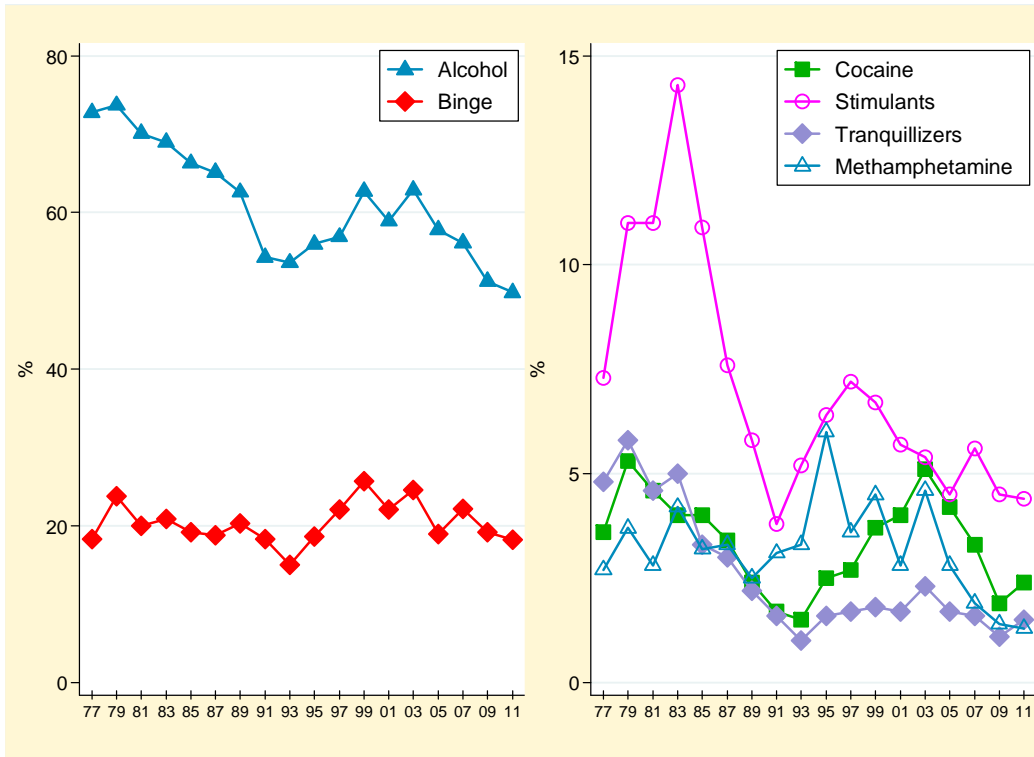


Figure 3.2.3  
 Pattern 3: Long-Term Drug Use Trends, 1977–2011 OSDUHS  
 (Grades 7, 9, and 11 only)

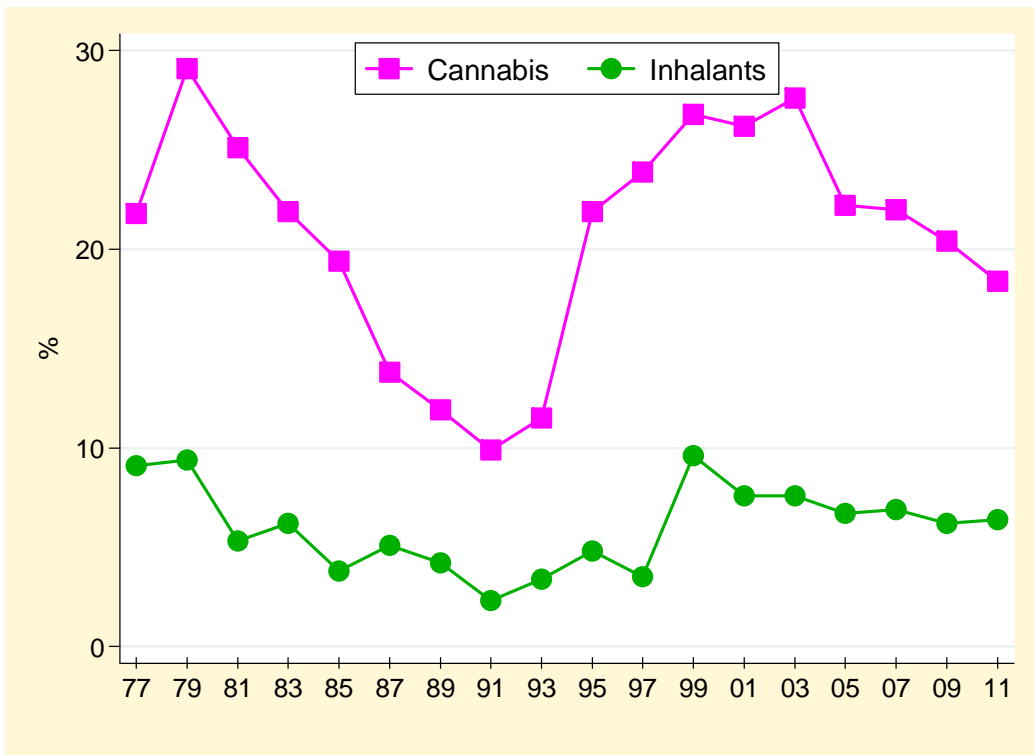


Figure 3.2.4  
 Pattern 4: Long-Term Drug Use Trends, 1977–2011 OSDUHS  
 (Grades 7, 9, and 11 only)

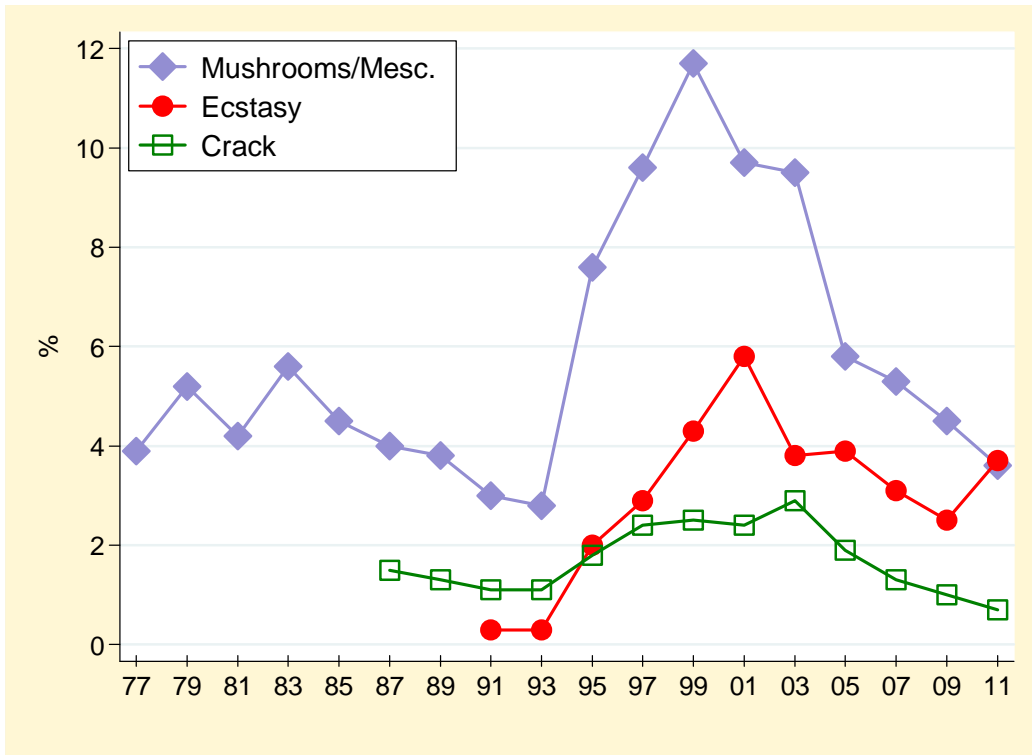


Figure 3.2.5  
 Pattern 5: Long-Term Drug Use Trends, 1977–2011 OSDUHS  
 (Grades 7, 9, and 11 only)

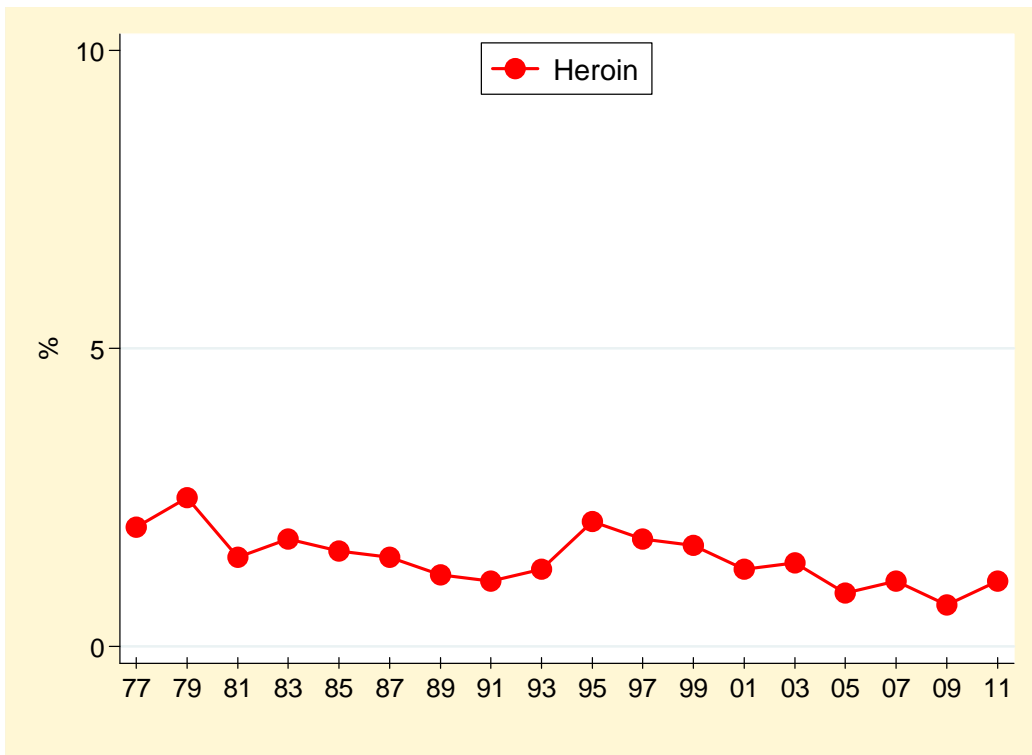


Table 3.2.1a: Percentage Using Drug Once or More in the Past Year, 1999–2011 OSDUHS (Grades 7–12)

	1999 (N)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9112)	2011 (9288)
Cigarettes	28.4 (26.1-30.7)	23.1 (20.3-26.1)	19.2 (17.7-20.8)	14.4 (13.0-15.9)	11.9 (10.7-13.2)	11.7 (10.6-13.0)	8.7 <sup>ab</sup> (7.5-10.2)
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 <sup>b</sup> (52.1-57.6)
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 <sup>ab</sup> (20.5-23.7)
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 <sup>b</sup> (4.5-7.0)
LSD	6.8 (6.7-8.1)	4.8 (3.9-5.9)	2.9 (2.4-3.5)	1.7 (1.3-2.3)	1.6 (1.2-2.2)	1.8 (1.5-2.3)	1.2 <sup>b</sup> (0.9-1.7)
Mushrooms (Psilocybin)/ Mescaline	12.8 (11.4-14.4)	11.1 (9.6-12.9)	10.0 (8.8-11.4)	6.7 (5.6-8.0)	5.5 (4.6-6.5)	5.0 (4.2-5.9)	3.8 <sup>b</sup> (3.1-4.8)
Jimson Weed	—	—	—	—	2.6 (1.9-3.4)	2.3 (1.8-3.1)	1.7 (1.1-2.8)
Salvia Divinorum	—	—	—	—	—	4.4 (3.3-5.7)	3.7 (2.8-4.8)
Methamphetamine (includes crystal methamphetamine)	5.1 (3.9-6.7)	4.1 (2.9-5.8)	4.4 (3.7-5.3)	2.7 (2.1-3.4)	1.8 (1.4-2.3)	1.6 (1.2-2.2)	1.0 <sup>b</sup> (0.6-1.6)
Cocaine	3.4 (2.8-4.2)	4.4 (3.6-5.4)	4.8 (4.2-5.5)	4.4 (3.7-5.2)	3.4 (2.8-3.9)	2.6 (2.1-3.2)	2.1 <sup>b</sup> (1.7-2.6)
Crack	2.5 (1.9-3.2)	2.1 (1.6-2.8)	2.7 (2.2-3.3)	2.0 (1.6-2.4)	1.0 (0.8-1.4)	1.1 (0.8-1.4)	0.7 <sup>b</sup> (0.5-1.1)
Heroin	1.9 (1.5-2.5)	1.1 (0.8-1.5)	1.4 (1.1-1.7)	0.9 (0.7-1.2)	0.9 (0.7-1.3)	0.7 (0.5-0.9)	† <sup>b</sup>
Ecstasy (MDMA)	4.0 (3.1-5.2)	6.0 (5.0-7.1)	4.1 (3.5-4.8)	4.5 (3.7-5.3)	3.5 (2.9-4.1)	3.2 (2.6-3.8)	3.3 <sup>b</sup> (2.6-4.2)
Ketamine	—	—	2.2 (1.8-2.9)	1.3 (0.9-1.7)	1.1 (0.7-1.7)	1.6 (1.1-2.3)	0.9 <sup>b</sup> (0.5-1.6)
OxyContin (NM)	—	—	—	1.0 (0.7-1.5)	1.8 (0.3-2.4)	1.6 (1.3-2.0)	1.2 (0.9-1.7)
Opioid Pain Relievers (NM)	—	—	—	—	20.6 (18.9-23.5)	17.8 (16.6-18.9)	14.0 <sup>ab</sup> (12.8-15.3)
Stimulants (NM)	7.3 (6.4-8.4)	6.3 (5.4-7.4)	5.8 (5.0-6.6)	4.8 (4.1-5.6)	5.7 (5.0-6.5)	4.8 (4.1-5.5)	4.1 <sup>b</sup> (3.3-5.0)
Tranquillizers/Sedatives (NM)	2.0 (1.6-2.6)	2.2 (1.6-3.1)	2.2 (1.8-2.7)	1.6 (1.3-2.0)	1.8 (1.4-2.3)	1.6 (1.2-2.0)	1.9 (1.5-2.6)
ADHD Drugs (NM)	—	—	—	—	1.0 (0.7-1.5)	1.6 (1.3-2.1)	1.0 (0.7-1.3)
OTC Cough/Cold Medication (NM)	—	—	—	—	—	7.2 (6.1-8.5)	6.9 (5.5-8.7)
Steroids (lifetime use)	3.4 (2.7-4.2)	3.8 (3.0-4.8)	3.0 (2.4-3.7)	2.3 (1.9-2.9)	1.3 (0.9-1.9)	1.1 (0.7-1.6)	1.2 <sup>b</sup> (0.8-1.8)
Any NM Use of a Prescription Drug	—	—	—	—	—	20.3 (19.2-21.5)	16.7 <sup>a</sup> (15.1-18.4)
Any Illicit Drug, Including Cannabis	31.7 (29.2-34.2)	31.9 (29.2-34.8)	32.0 (29.9-34.1)	28.6 (26.6-30.8)	28.8 (26.9-30.8)	28.0 (26.4-29.6)	24.8 <sup>ab</sup> (23.5-26.2)
Any Illicit Drug, Excluding Cannabis	20.0 (18.1-22.1)	17.8 (16.2-19.5)	15.1 (13.7-16.7)	12.3 (11.0-13.8)	12.2 (11.1-13.4)	10.6 (9.7-11.6)	9.9 <sup>b</sup> (8.7-11.2)

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

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.2.1b: Percentage Using Drug Once or More in the Past Year, 1977–2011 OSDUHS (Grades 7, 9, and 11 only)

	1977 (N)	1979 (3927)	1981 (3920)	1983 (3010)	1985 (3614)	1987 (3146)	1987 (3376)	1989 (3040)	1991 (2961)	1993 (2617)	1995 (2907)	1997 (3072)	1999 (2421)	2001 (2013)	2003 (3389)	2005 (3969)	2007 (3215)	2009 (4424)	2011 (4669)
Cigarettes	29.2 (26.7-31.8)	35.0 (32.3-37.7)	28.8 (25.4-32.5)	29.0 (25.6-32.6)	23.6 (21.1-26.2)	22.9 (21.1-24.8)	22.2 (20.3-24.2)	20.1 (18.4-22.0)	23.4 (21.8-25.2)	27.3 (25.2-29.5)	27.2 (25.4-29.0)	26.6 (23.5-30.0)	21.2 (17.7-25.2)	17.4 (15.3-19.7)	12.7 (11.1-14.5)	10.8 (9.3-12.6)	9.3 (8.0-10.9)	7.2 (6.0-8.4)	
Alcohol	72.8 (70.4-75.1)	73.7 (71.6-75.8)	70.1 (67.7-72.3)	69.0 (66.1-71.9)	66.3 (64.7-67.9)	65.1 (63.0-67.3)	62.6 (58.8-66.3)	54.3 (51.6-57.0)	53.6 (50.4-56.6)	56.0 (53.4-58.4)	56.9 (53.3-60.4)	62.7 (59.4-66.0)	58.9 (54.1-63.5)	62.9 (60.2-64.4)	57.8 (54.9-60.5)	56.1 (53.0-59.0)	51.2 (47.9-54.4)	49.8 (44.7-54.9)	
Cannabis	21.8 (19.5-24.3)	29.1 (26.1-32.4)	25.1 (22.2-28.2)	21.9 (19.7-24.3)	19.4 (16.4-22.9)	13.8 (10.9-17.3)	11.9 (9.7-14.4)	9.9 (8.7-11.3)	11.5 (10.7-12.4)	21.9 (18.8-25.4)	23.9 (21.9-26.0)	26.8 (23.7-30.1)	26.2 (22.1-30.8)	27.8 (25.4-30.3)	22.2 (20.1-24.5)	22.0 (19.5-24.7)	20.4 (18.4-22.6)	18.4 (16.3-20.7)	
Inhalants (Glue or Solvents)	9.1 (8.1-10.1)	9.4 (8.3-10.5)	5.3 (4.1-6.9)	6.2 (5.5-6.9)	3.8 (3.1-4.6)	5.1 (3.9-6.8)	4.2 (3.6-5.0)	2.3 (1.6-3.2)	3.4 (2.7-4.1)	4.8 (4.1-5.6)	3.5 (3.0-4.1)	9.6 (8.0-11.4)	7.6 (6.1-9.5)	7.6 (6.4-9.0)	6.7 (5.4-8.4)	6.9 (5.2-9.0)	6.2 (4.7-7.9)	6.4 (5.1-8.1)	
LSD	6.0 (5.1-7.1)	9.0 (7.7-10.5)	9.4 (7.6-11.6)	8.5 (7.2-9.9)	7.1 (5.6-8.9)	5.8 (4.2-7.9)	5.4 (3.8-7.4)	4.9 (4.2-5.9)	6.8 (5.8-7.9)	9.5 (7.2-12.5)	7.7 (7.0-8.5)	6.5 (4.8-8.6)	3.6 (2.7-4.7)	2.9 (2.3-3.6)	1.8 (1.3-2.6)	1.8 (1.2-2.5)	1.5 (1.1-2.2)	1.6 (0.9-2.6)	
Mushrooms or Mescaline	3.9 (3.2-4.7)	5.2 (4.3-6.4)	4.2 (2.9-6.1)	5.6 (4.4-7.1)	4.5 (3.5-5.8)	4.0 (2.6-6.1)	3.8 (2.7-5.4)	3.0 (2.4-3.7)	2.8 (2.2-3.4)	7.6 (5.5-10.4)	9.6 (8.3-11.2)	11.7 (9.4-14.4)	9.7 (7.7-12.1)	9.5 (8.0-11.2)	5.8 (4.7-7.2)	5.3 (4.4-6.4)	4.4 (3.4-5.8)	3.6 (2.6-4.8)	
Methamphetamine (incl. crystal meth)	2.7 (2.2-3.2)	3.7 (3.0-4.4)	2.8 (2.0-3.9)	4.2 (2.4-7.0)	3.2 (2.7-3.9)	3.3 (2.5-4.2)	2.5 (2.0-3.2)	3.1 (2.1-4.7)	3.3 (2.3-4.9)	6.0 (4.4-8.2)	3.6 (2.7-4.9)	4.5 (2.8-7.2)	2.8 (1.9-4.1)	4.6 (3.6-5.8)	2.8 (2.1-3.8)	1.9 (1.4-2.6)	1.4 (1.0-2.0)	†	
Cocaine	3.6 (3.0-4.3)	5.3 (4.4-6.2)	4.6 (3.8-5.6)	4.0 (3.1-5.3)	4.0 (3.1-5.3)	3.4 (2.5-4.7)	2.4 (1.7-3.4)	1.7 (1.2-2.4)	1.5 (0.9-2.4)	2.5 (2.1-3.0)	2.7 (2.4-3.1)	3.7 (2.8-4.9)	4.0 (3.1-5.3)	5.1 (4.2-6.1)	4.2 (3.5-5.2)	3.3 (2.6-4.1)	1.9 (1.5-2.6)	2.4 (1.7-3.3)	
Crack	—	—	—	—	—	1.5 (1.0-2.2)	1.3 (0.8-2.0)	1.1 (0.6-1.9)	1.1 (0.6-2.0)	1.8 (1.5-2.3)	2.4 (1.7-3.3)	2.5 (1.7-3.6)	2.4 (1.7-3.2)	3.0 (2.2-3.8)	1.9 (1.5-2.5)	1.3 (1.0-1.8)	1.0 (0.7-1.5)	0.7 (0.4-1.2)	
Heroin	2.0 (1.6-2.6)	2.5 (1.9-3.2)	1.5 (1.0-2.2)	1.8 (1.3-2.5)	1.6 (1.2-2.3)	1.5 (1.0-2.3)	1.2 (0.8-1.9)	1.1 (0.7-1.7)	1.3 (0.9-1.8)	2.1 (1.4-2.9)	1.8 (1.6-2.2)	1.7 (1.2-2.4)	1.3 (0.9-2.0)	1.4 (1.0-1.9)	0.9 (0.7-1.3)	1.1 (0.8-1.7)	0.7 (0.4-1.1)	†	
Ecstasy (MDMA)	—	—	—	—	—	—	—	†	†	2.0 (1.2-3.3)	2.9 (1.7-5.1)	4.3 (3.0-6.2)	5.8 (4.7-7.3)	3.8 (3.2-4.7)	3.9 (3.0-4.9)	3.1 (2.4-4.0)	2.5 (1.9-3.3)	3.7 (2.7-5.1)	
Stimulants (NM)	7.3 (6.4-8.3)	11.0 (9.5-12.6)	11.0 (9.4-12.8)	14.3 (12.2-16.8)	10.9 (9.4-12.5)	7.6 (6.4-8.9)	5.8 (5.0-6.6)	3.8 (2.9-4.8)	5.2 (3.7-7.4)	6.4 (5.3-7.7)	7.2 (6.2-8.3)	6.7 (5.3-8.5)	5.7 (4.6-7.2)	5.4 (4.6-6.3)	4.5 (3.6-5.6)	5.6 (4.8-6.6)	4.5 (3.7-5.6)	4.4 (3.1-6.1)	
Tranquillizers (NM)	4.8 (4.0-5.7)	5.8 (5.0-6.8)	4.6 (3.8-5.6)	5.0 (3.8-6.4)	3.3 (2.6-4.2)	3.0 (2.2-4.0)	2.2 (1.9-2.7)	1.6 (1.2-2.2)	1.0 (0.6-1.7)	1.6 (1.0-2.4)	1.7 (1.4-2.2)	1.8 (1.2-2.6)	1.7 (1.1-2.7)	2.3 (1.8-3.0)	1.7 (1.2-2.3)	1.6 (1.2-2.2)	1.1 (0.8-1.5)	1.5 (0.9-2.6)	
Steroids (lifetime)	—	—	—	—	—	—	1.3 (0.9-1.8)	1.7 (1.4-2.1)	1.6 (1.1-2.4)	1.4 (1.0-2.0)	1.4 (1.0-2.0)	3.1 (2.2-4.3)	3.4 (2.4-4.6)	2.4 (1.8-3.3)	1.7 (1.2-2.5)	1.1 (0.6-1.8)	1.0 (0.5-1.8)	1.3 (0.7-2.5)	
Any Illicit Drug, Incl. Cannabis	25.9 (23.5-28.4)	33.2 (30.1-36.4)	27.8 (25.3-30.6)	26.4 (23.9-29.2)	24.0 (20.7-27.6)	19.0 (15.9-22.5)	16.2 (14.2-18.5)	13.8 (11.9-16.0)	17.9 (15.1-21.0)	27.7 (23.6-32.2)	28.2 (25.6-31.0)	29.8 (26.4-33.4)	29.8 (25.8-34.0)	30.1 (27.7-32.6)	24.2 (22.0-26.5)	25.6 (23.2-28.2)	22.8 (20.8-24.9)	21.2 (18.9-23.8)	
Any Illicit Drug, Excl. Cannabis	14.5 (13.0-16.1)	19.7 (17.7-21.8)	16.6 (15.0-18.3)	19.7 (17.5-22.0)	16.2 (14.0-18.7)	13.4 (11.5-15.6)	11.3 (9.9-12.9)	9.1 (7.5-11.0)	12.9 (10.4-15.9)	18.1 (14.6-22.2)	17.3 (15.0-20.0)	18.4 (15.3-21.9)	16.8 (14.7-19.2)	14.0 (12.3-15.9)	11.1 (9.7-12.7)	11.8 (10.5-13.3)	9.4 (8.1-10.9)	9.7 (7.7-12.2)	

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

Source: OSDUHS, Centre for Addiction & Mental Health

## Changes in Frequent Drug Use

(Tables 3.2.2a, 3.2.2b)

Frequent drug use, defined as using six times or more often during the past year, is shown in Tables 3.2.2a (recent changes) and 3.2.2b (long-term changes). Between 1999 and 2011, frequent use of the following drugs significantly decreased: LSD (from 1.9% in 1999 to less than 0.5% in 2011), mushrooms/mescaline (from 4.1% to 0.5%); non-medical use of opioid pain relievers (from 8.0% in 2007 to 5.4%); and non-medical use of stimulants (from 2.3% to 1.1%).

Over the long-term, only cannabis has shown marked fluctuations in frequent use. 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 3.2.2a: Frequent Drug Use: Percentage Using Drug Six Times or More in the Past Year, 1999–2011 OSDUHS (Total Sample in Grades 7–12)

	1999 (N)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9112)	2011 (9288)
Cannabis	<b>15.5</b> (14.0-17.1)	<b>16.4</b> (14.4-18.6)	<b>16.5</b> (14.8-18.4)	<b>14.9</b> (13.4-16.6)	<b>14.2</b> (12.6-15.9)	<b>14.5</b> (13.1-16.0)	<b>12.9</b> (11.4-14.6)
Inhalants (Glue or Solvents)	<b>1.8</b> (1.3-2.4)	<b>1.0</b> (0.7-1.6)	<b>1.6</b> (1.2-2.0)	<b>1.3</b> (0.8-2.0)	<b>1.7</b> (1.2-2.4)	<b>1.0</b> (0.7-1.6)	<b>1.7</b> (1.3-2.3)
LSD	<b>1.9</b> (1.3-2.8)	<b>0.9</b> (0.5-1.6)	<b>0.6</b> (0.4-1.0)	†	†	†	† <sup>b</sup>
Mushrooms (Psilocybin)/Mescaline	<b>4.1</b> (3.3-5.1)	<b>3.1</b> (2.4-3.8)	<b>2.6</b> (2.1-3.1)	<b>1.4</b> (1.0-1.9)	<b>1.0</b> (0.7-1.3)	<b>1.0</b> (0.7-1.5)	<b>0.5</b> <sup>b</sup> (0.3-0.8)
Jimson Weed	—	—	—	—	<b>1.0</b> (0.6-1.6)	<b>0.7</b> (0.4-1.2)	†
Salvia Divinorum	—	—	—	—	—	<b>1.2</b> (0.7-2.2)	<b>0.8</b> (0.5-1.5)
Methamphetamine (includes crystal methamphetamine)	<b>1.2</b> (0.8-1.9)	<b>0.9</b> (0.6-1.5)	<b>0.7</b> (0.5-1.1)	†	†	†	†
Cocaine	<b>1.1</b> (0.8-1.6)	<b>1.0</b> (0.7-1.6)	<b>1.6</b> (1.2-2.1)	<b>1.6</b> (1.2-2.1)	<b>1.3</b> (0.9-1.8)	<b>0.9</b> (0.6-1.2)	<b>0.6</b> (0.5-0.9)
Ecstasy (MDMA)	<b>1.0</b> (0.6-1.6)	<b>1.6</b> (1.1-2.4)	<b>1.2</b> (0.9-1.5)	<b>1.5</b> (1.1-2.1)	<b>1.2</b> (0.9-1.5)	<b>1.0</b> (0.8-1.4)	<b>0.9</b> (0.6-1.2)
Opioid Pain Relievers (NM)	—	—	—	—	<b>8.0</b> (6.8-9.3)	<b>6.9</b> (6.2-7.6)	<b>5.4</b> <sup>b</sup> (4.6-6.4)
Stimulants (NM)	<b>2.3</b> (1.7-3.0)	<b>1.9</b> (0.4-2.6)	<b>2.3</b> (0.9-2.8)	<b>1.8</b> (1.4-2.2)	<b>1.6</b> (1.3-2.0)	<b>1.5</b> (1.2-2.0)	<b>1.1</b> <sup>b</sup> (0.7-1.6)
Tranquillizers/Sedatives (NM)	<b>0.5</b> (0.3-0.8)	<b>0.8</b> (0.4-1.4)	<b>0.6</b> (0.4-0.8)	†	<b>0.5</b> (0.3-0.8)	<b>0.5</b> (0.3-0.7)	<b>0.6</b> (0.3-1.2)
OTC Cough/Cold Medication (NM)	—	—	—	—	—	<b>2.5</b> (1.8-3.4)	<b>2.5</b> (1.7-3.6)

Notes: (1) entries in brackets are 95% confidence intervals; (2) no significant difference 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference,  $p < .01$  (vs. 2007 for opioid pain relievers); (3) † estimate suppressed due to unreliability ( $< 0.5\%$ ); (4) NM = non-medical use, without a doctor's prescription; (5) OTC = over-the-counter drug used for non-medical purposes or to "get high"; (6) estimates for heroin, crack, ketamine, and OxyContin (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 Drug Six Times or More in the Past Year, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N)	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2424)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Cannabis	<b>12.8</b> (11.1-14.7)	<b>18.0</b> (15.5-20.8)	<b>15.2</b> (12.4-18.5)	<b>11.6</b> (10.1-13.3)	<b>9.4</b> (7.7-11.5)	<b>6.2</b> (4.6-8.2)	<b>4.8</b> (3.5-6.4)	<b>4.6</b> (3.7-5.7)	<b>4.9</b> (3.7-6.6)	<b>11.4</b> (9.3-14.0)	<b>15.2</b> (13.1-17.7)	<b>14.9</b> (12.8-17.3)	<b>15.4</b> (12.4-18.8)	<b>16.0</b> (13.8-18.4)	<b>12.8</b> (11.3-14.6)	<b>12.0</b> (10.2-14.0)	<b>11.2</b> (9.6-13.1)	<b>11.0</b> (8.8-13.4)
Inhalants (Glue or Solvents)	<b>1.4</b> (1.0-2.0)	<b>1.6</b> (1.1-2.2)	<b>1.2</b> (0.8-1.6)	<b>0.7</b> (0.5-0.9)	†	†	†	<b>0.6</b> (0.3-1.0)	<b>0.5</b> (0.3-0.8)	<b>0.7</b> (0.4-1.0)	<b>0.7</b> (0.4-1.3)	<b>2.0</b> (1.3-3.0)	<b>1.1</b> (0.6-1.7)	<b>1.8</b> (1.3-2.4)	<b>1.5</b> (0.9-2.5)	<b>1.8</b> (1.1-2.7)	†	<b>1.9</b> (1.2-2.9)
LSD	<b>1.6</b> (1.2-2.0)	<b>2.4</b> (1.9-3.2)	<b>3.4</b> (2.1-5.4)	<b>3.5</b> (2.6-4.6)	<b>2.4</b> (1.6-3.8)	<b>2.2</b> (1.5-3.1)	<b>1.6</b> (1.1-2.4)	<b>1.8</b> (1.3-2.5)	<b>2.7</b> (2.2-3.3)	<b>3.3</b> (2.4-4.7)	<b>2.6</b> (1.7-3.8)	<b>2.2</b> (1.3-3.7)	†	<b>0.7</b> (0.4-1.0)	†	†	†	†
Mushrooms/Mesc.	<b>0.9</b> (0.6-1.3)	<b>1.4</b> (1.0-1.9)	<b>1.0</b> (0.5-2.1)	<b>1.2</b> (0.7-2.2)	<b>0.7</b> (0.4-1.0)	<b>0.8</b> (0.4-1.6)	<b>0.9</b> (0.5-1.8)	<b>0.6</b> (0.4-0.8)	<b>0.6</b> (0.3-1.0)	<b>1.5</b> (0.9-2.6)	<b>2.7</b> (1.8-4.1)	<b>4.1</b> (2.9-5.7)	<b>3.1</b> (2.2-4.4)	<b>2.5</b> (2.0-3.2)	<b>1.3</b> (0.9-1.9)	<b>1.2</b> (0.8-1.7)	<b>0.8</b> (0.5-1.3)	<b>0.6</b> (0.3-1.0)
Methamphetamine (incl. Crystal Meth)	<b>0.6</b> (0.4-1.0)	<b>0.7</b> (0.5-1.1)	<b>0.6</b> (0.4-1.0)	†	<b>0.5</b> (0.3-1.0)	<b>0.8</b> (0.4-1.6)	<b>0.5</b> (0.3-0.8)	<b>1.0</b> (0.5-1.9)	†	<b>1.2</b> (0.6-2.1)	†	<b>1.3</b> (0.7-2.5)	†	†	<b>0.8</b> (0.4-1.3)	<b>0.6</b> (0.3-0.9)	<b>0.5</b> (0.2-0.9)	†
Cocaine	<b>0.8</b> (0.6-1.1)	<b>1.0</b> (0.7-1.5)	<b>0.9</b> (0.6-1.2)	<b>0.9</b> (0.6-1.3)	<b>1.0</b> (0.7-1.3)	<b>1.0</b> (0.6-1.6)	<b>0.6</b> (0.4-1.2)	<b>0.6</b> (0.3-1.3)	<b>0.9</b> (0.5-1.5)	<b>0.8</b> (0.5-1.1)	<b>0.8</b> (0.4-1.3)	<b>1.2</b> (0.7-2.2)	<b>1.4</b> (0.8-2.2)	<b>1.8</b> (1.3-2.5)	<b>1.4</b> (1.1-1.9)	<b>1.1</b> (0.8-1.7)	<b>0.6</b> (0.4-0.9)	<b>1.0</b> (0.7-1.5)
Heroin	<b>0.5</b> (0.3-0.9)	<b>0.6</b> (0.4-1.0)	†	<b>0.6</b> (0.4-0.8)	†	†	†	<b>0.8</b> (0.5-1.3)	<b>0.7</b> (0.5-1.1)	<b>0.9</b> (0.6-1.4)	<b>1.1</b> (0.9-1.4)	<b>0.6</b> (0.4-1.1)	†	<b>0.5</b> (0.3-0.8)	†	†	†	†
Ecstasy (MDMA)	—	—	—	—	—	—	—	†	†	†	†	<b>1.2</b> (0.7-2.3)	<b>1.4</b> (0.8-2.3)	<b>1.3</b> (0.9-2.0)	<b>1.4</b> (1.0-2.2)	<b>1.2</b> (0.8-1.7)	<b>0.8</b> (0.5-1.4)	<b>1.4</b> (0.9-2.0)
Stimulants (NM)	<b>1.8</b> (1.4-2.4)	<b>3.2</b> (2.6-4.0)	<b>3.6</b> (2.5-5.1)	<b>5.3</b> (4.1-6.8)	<b>2.9</b> (2.3-3.7)	<b>2.0</b> (1.4-3.0)	<b>1.7</b> (1.3-2.4)	<b>1.0</b> (0.7-1.3)	<b>1.6</b> (0.7-3.6)	<b>1.3</b> (0.9-2.0)	<b>2.0</b> (1.7-2.4)	<b>2.1</b> (1.3-3.4)	<b>1.8</b> (1.2-2.7)	<b>2.3</b> (1.8-3.0)	<b>1.8</b> (1.2-2.6)	<b>1.4</b> (1.0-1.9)	<b>1.3</b> (0.9-1.8)	<b>1.2</b> (0.6-2.3)
Tranquillizers (NM)	<b>0.9</b> (0.6-1.3)	<b>1.0</b> (0.7-1.5)	<b>0.8</b> (0.5-1.5)	<b>1.3</b> (0.9-2.0)	<b>0.5</b> (0.4-0.7)	<b>0.7</b> (0.4-1.3)	†	†	†	†	†	<b>0.5</b> (0.3-1.0)	<b>0.6</b> (0.2-1.3)	<b>0.6</b> (0.3-0.9)	†	†	†	†

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 half sample between 1991 and 1999; (4) NM = non-medical 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

### Past Year Cigarette Smoking

(Figures 3.3.1–3.3.3; Table 3.3.1)

	Cigarette Smoking in 2011 (Grades 7–12)	Trends in Cigarette Smoking
Total Sample	<ul style="list-style-type: none"> <li>Overall, 8.7% of students report smoking cigarettes during the 12 months before the survey. This estimate includes daily and occasional smoking, but excludes those who tried a cigarette. We estimate that the actual percentage of all students who smoke falls between 7.5% and 10.2% (95% CI). The percentage of 8.7% represents about 88,000 Ontario students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>Past year smoking among students in grades 7–12 significantly decreased between 2009 (11.7%) and 2011 (8.7%). The 2011 smoking prevalence estimate is the lowest on record among the total sample of students in grades 7–12 (i.e., since 1999 when the estimate was 28.4%).</li> <li>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 a downward trend after 1999, and is now at its lowest level on record.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>In 2011, males (9.3%) and females (8.2%) are equally likely to smoke cigarettes.</li> </ul>	<ul style="list-style-type: none"> <li>Between 2009 and 2011, smoking significantly decreased among males (from 12.9% to 9.3%). Smoking remained stable among females (10.5% in 2009, 8.2% in 2011). Smoking is currently lower for both sexes compared with the respective 1999 estimates (males: from 29.0% to 9.3%; females: from 27.7% to 8.2%).</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Rates of smoking significantly increase with grade, from less than 3% of 7<sup>th</sup>- and 8<sup>th</sup>-graders up to about 14% of 11<sup>th</sup>- and 12<sup>th</sup>-graders.</li> </ul>	<ul style="list-style-type: none"> <li>Only 9<sup>th</sup>-graders show a statistically significant decrease in smoking between 2009 and 2011 (7.5% vs. 3.7%, respectively). However, smoking is currently significantly lower among students in all grades, compared with their respective estimates from 1999.</li> </ul>
Region	<ul style="list-style-type: none"> <li>Smoking significantly differs by region, with students in the North (15.6%) most likely to smoke compared with students in the three other regions (about 7%-8%).</li> </ul>	<ul style="list-style-type: none"> <li>No region shows a significant change in past year smoking between 2009 and 2011. However, decreases since 1999 are significant in all four regions.</li> </ul>

Figure 3.3.1  
 Past Year Cigarette Smoking by Sex, Grade, and Region, 2011 OSDUHS

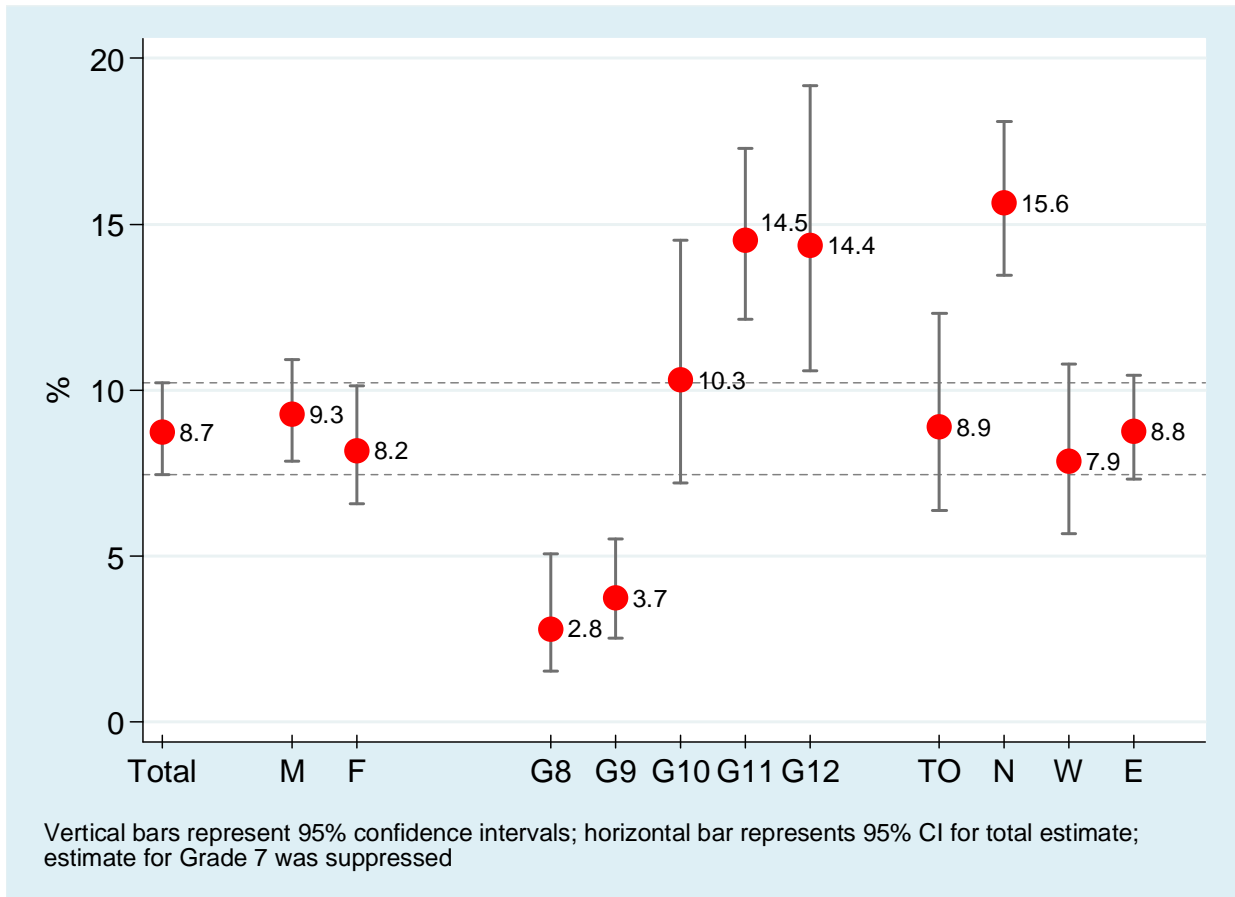


Figure 3.3.2  
 Past Year Cigarette Smoking, 1999–2011 OSDUHS (Grades 7–12)

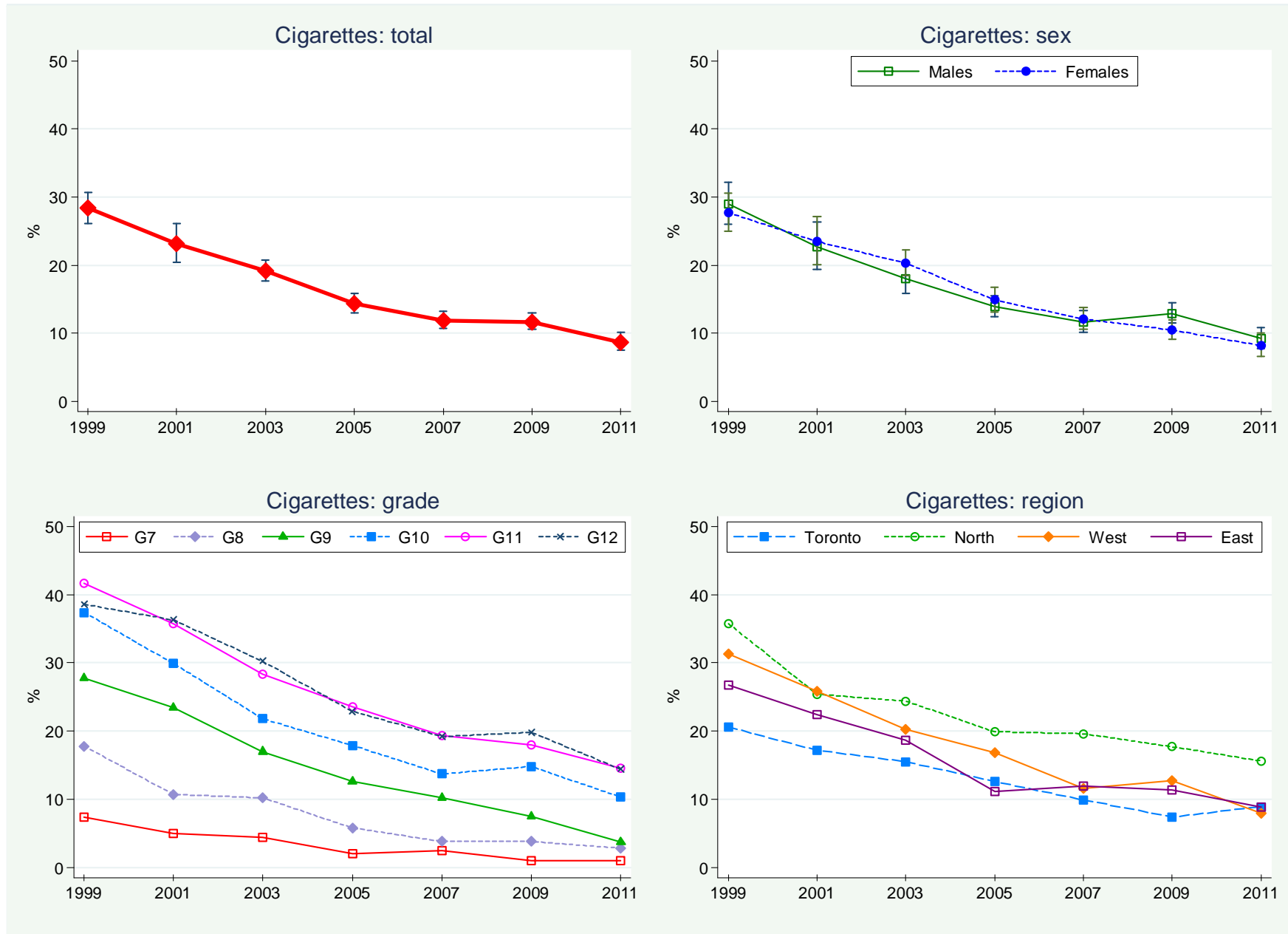


Figure 3.3.3  
 Past Year Cigarette Smoking, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

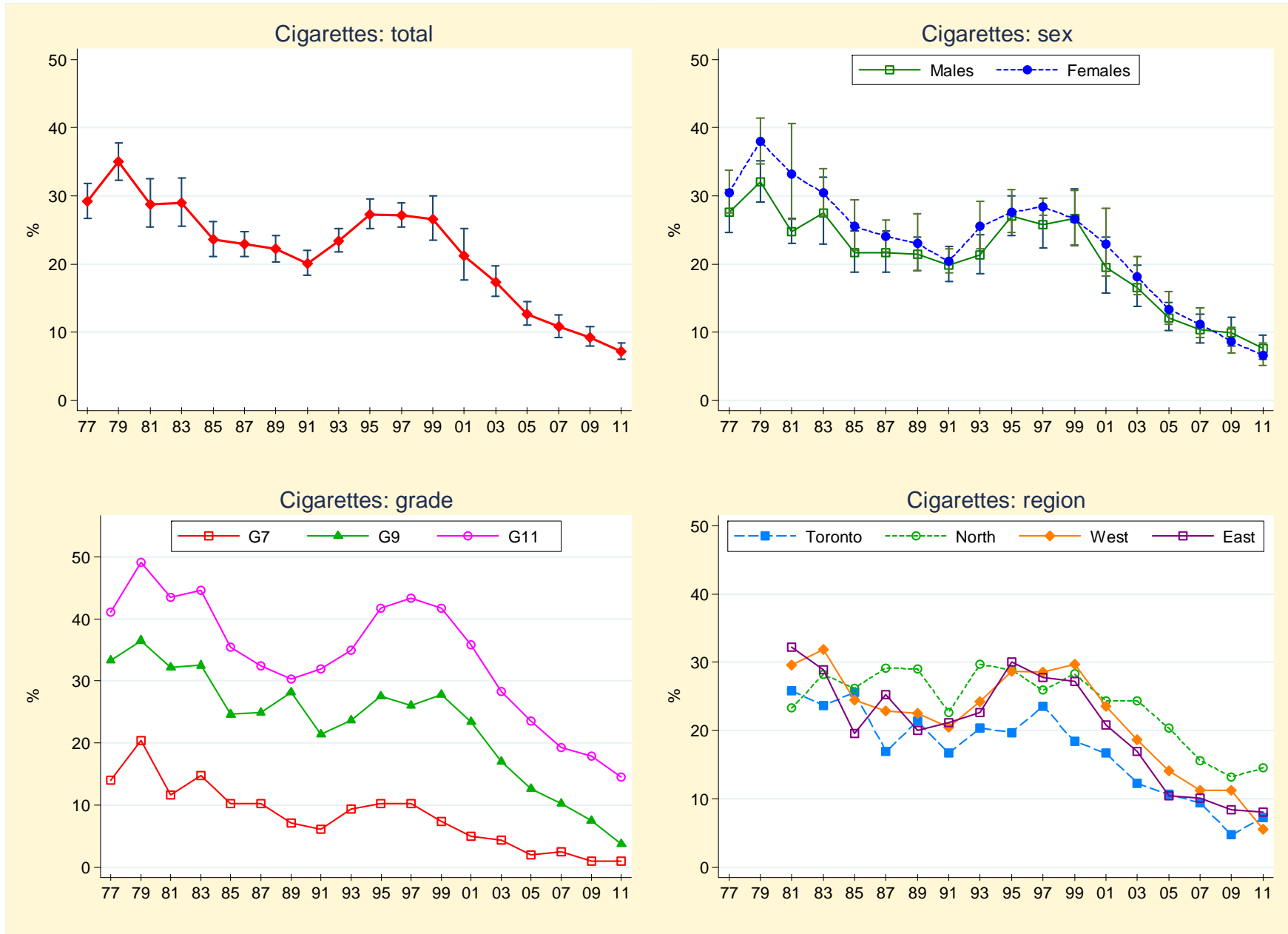


Table 3.3.1: Percentage Reporting Cigarette Smoking in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>28.4</b> (26.1-30.7)	<b>23.1</b> (20.4-26.1)	<b>19.2</b> (17.7-20.8)	<b>14.4</b> (13.0-15.9)	<b>11.9</b> (10.7-13.2)	<b>11.7</b> (10.6-13.0)	<b>8.7</b> <sup>ab</sup> (7.5-10.2)
Total <sup>2</sup>	<b>29.2</b> (26.7-31.8)	<b>35.0</b> (32.3-37.7)	<b>28.8</b> (25.4-32.5)	<b>29.0</b> (25.6-32.6)	<b>23.6</b> (21.1-26.2)	<b>22.9</b> (21.1-24.8)	<b>22.2</b> (20.3-24.2)	<b>20.1</b> (18.4-22.0)	<b>23.4</b> (21.8-25.2)	<b>27.3</b> (25.2-29.5)	<b>27.2</b> (25.4-29.0)	<b>26.6</b> (23.5-30.0)	<b>21.2</b> (17.7-25.2)	<b>17.4</b> (15.3-19.7)	<b>12.7</b> (11.1-14.5)	<b>10.8</b> (9.3-12.6)	<b>9.3</b> (8.0-10.9)	<b>7.2</b> <sup>cd</sup> (6.0-8.4)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>29.0</b> (26.0-32.2)	<b>22.7</b> (19.4-26.4)	<b>18.0</b> (15.9-20.4)	<b>13.9</b> (12.4-15.5)	<b>11.7</b> (10.2-13.4)	<b>12.9</b> (11.5-14.5)	<b>9.3</b> <sup>ab</sup> (7.8-10.9)
Males <sup>2</sup>	<b>27.6</b> (24.6-30.9)	<b>32.0</b> (29.1-35.1)	<b>24.8</b> (23.0-26.7)	<b>27.5</b> (22.9-32.7)	<b>21.7</b> (18.8-24.9)	<b>21.7</b> (18.8-24.9)	<b>21.4</b> (19.1-23.9)	<b>19.9</b> (17.4-22.6)	<b>21.3</b> (18.6-24.3)	<b>27.0</b> (24.2-30.0)	<b>25.8</b> (22.4-29.6)	<b>26.7</b> (22.7-31.0)	<b>19.5</b> (15.7-24.0)	<b>16.6</b> (13.8-19.8)	<b>12.1</b> (10.3-14.1)	<b>10.4</b> (8.5-12.7)	<b>9.9</b> (8.0-12.2)	<b>7.6</b> (6.1-9.6)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>27.7</b> (25.0-30.6)	<b>23.5</b> (20.1-27.2)	<b>20.3</b> (18.5-22.3)	<b>14.9</b> (13.1-16.8)	<b>12.1</b> (10.6-13.8)	<b>10.5</b> (9.1-12.0)	<b>8.2</b> <sup>b</sup> (6.6-10.1)
Females <sup>2</sup>	<b>30.5</b> (27.5-33.8)	<b>38.0</b> (34.7-41.4)	<b>33.2</b> (26.6-40.6)	<b>30.4</b> (27.0-34.0)	<b>25.5</b> (22.0-29.4)	<b>24.1</b> (21.8-26.5)	<b>23.0</b> (19.1-27.4)	<b>20.4</b> (18.7-22.2)	<b>25.5</b> (22.2-29.2)	<b>27.6</b> (24.6-30.9)	<b>28.4</b> (27.1-29.7)	<b>26.6</b> (22.8-30.8)	<b>22.9</b> (18.3-28.2)	<b>18.1</b> (15.5-21.1)	<b>13.4</b> (11.2-16.0)	<b>11.2</b> (9.2-13.6)	<b>8.7</b> (7.0-10.7)	<b>6.6</b> (5.2-8.5)
Grade																		
7	<b>14.0</b> (11.1-17.7)	<b>20.4</b> (17.2-23.9)	<b>11.6</b> (10.8-12.5)	<b>14.8</b> (8.9-23.7)	<b>10.3</b> (7.3-14.4)	<b>10.2</b> (7.4-13.9)	<b>7.1</b> (4.6-11.0)	<b>6.1</b> (4.4-8.4)	<b>9.4</b> (7.7-11.3)	<b>10.3</b> (7.2-14.4)	<b>10.2</b> (8.1-12.7)	<b>7.4</b> (5.2-10.3)	<b>5.0</b> (3.2-7.6)	<b>4.4</b> (2.8-6.8)	<b>2.0</b> (1.2-3.4)	<b>2.5</b> (1.2-5.3)	<b>1.0</b> (0.6-1.8)	<b>†</b> <sup>b</sup>
8	—	—	—	—	—	—	—	—	—	—	—	<b>17.8</b> (14.3-21.9)	<b>10.7</b> (8.3-13.8)	<b>10.2</b> (7.2-14.4)	<b>5.8</b> (4.3-7.7)	<b>3.8</b> (2.4-6.1)	<b>3.8</b> (2.5-5.8)	<b>2.8</b> <sup>b</sup> (1.5-5.1)
9	<b>33.3</b> (28.9-38.1)	<b>36.5</b> (32.2-41.0)	<b>32.2</b> (27.0-37.9)	<b>32.5</b> (30.8-34.3)	<b>24.6</b> (19.8-30.1)	<b>24.9</b> (21.3-28.9)	<b>28.2</b> (26.2-30.4)	<b>21.4</b> (18.5-24.5)	<b>23.7</b> (22.8-24.8)	<b>27.5</b> (25.8-29.1)	<b>26.0</b> (23.5-28.6)	<b>27.8</b> (23.6-32.5)	<b>23.4</b> (17.5-30.6)	<b>17.0</b> (13.9-20.6)	<b>12.6</b> (10.4-15.1)	<b>10.2</b> (8.1-12.9)	<b>7.5</b> (5.5-10.2)	<b>3.7</b> <sup>ab</sup> (2.5-5.5)
10	—	—	—	—	—	—	—	—	—	—	—	<b>37.4</b> (32.0-43.1)	<b>29.9</b> (25.6-34.6)	<b>21.8</b> (18.4-25.6)	<b>17.9</b> (15.2-20.8)	<b>13.7</b> (11.4-16.5)	<b>14.8</b> (12.1-17.9)	<b>10.3</b> <sup>b</sup> (7.2-14.5)
11	<b>41.1</b> (36.6-45.7)	<b>49.1</b> (44.4-53.9)	<b>43.5</b> (37.6-49.5)	<b>44.6</b> (38.4-51.0)	<b>35.4</b> (31.1-40.0)	<b>32.4</b> (28.1-37.0)	<b>30.3</b> (26.4-34.5)	<b>31.9</b> (28.7-35.3)	<b>34.9</b> (30.6-39.5)	<b>41.7</b> (36.7-46.8)	<b>43.4</b> (39.3-47.6)	<b>41.7</b> (35.4-48.4)	<b>35.8</b> (29.8-42.2)	<b>28.3</b> (24.3-32.6)	<b>23.5</b> (20.0-27.2)	<b>19.3</b> (16.3-22.7)	<b>17.9</b> (14.9-21.5)	<b>14.5</b> <sup>b</sup> (12.1-17.3)
12	—	—	—	—	—	—	—	—	—	—	—	<b>38.6</b> (33.3-44.2)	<b>36.3</b> (27.6-46.1)	<b>30.2</b> (25.7-35.2)	<b>22.9</b> (19.2-27.1)	<b>19.2</b> (16.8-21.8)	<b>19.8</b> (16.9-23.0)	<b>14.4</b> <sup>b</sup> (10.6-19.2)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	20.6	17.2	15.5	12.6	9.9	7.4	8.9 <sup>b</sup>
												(15.7-26.6)	(11.0-25.7)	(12.2-19.4)	(10.1-15.7)	(6.6-14.5)	(5.0-11.0)	(6.4-12.3)
Toronto <sup>2</sup>	—	—	25.8	23.7	25.6	16.9	21.4	16.7	20.4	19.7	23.6	18.4	16.7	12.3	10.7	9.4	4.7	7.2
			(17.7-36.0)	(17.7-31.0)	(21.6-30.0)	(13.1-21.6)	(16.1-27.9)	(12.7-21.6)	(16.7-24.6)	(13.5-27.9)	(20.3-27.3)	(13.6-24.5)	(9.2-28.2)	(8.4-17.6)	(8.0-14.2)	(5.3-16.0)	(2.6-8.3)	(4.6-10.9)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	35.8	25.4	24.4	19.9	19.6	17.7	15.6 <sup>b</sup>
												(30.3-41.6)	(20.3-31.2)	(19.7-29.7)	(16.4-24.0)	(16.4-23.2)	(15.5-20.2)	(13.5-18.1)
North <sup>2</sup>	—	—	23.3	28.2	26.2	29.2	29.0	22.7	29.7	28.9	25.9	28.3	24.4	24.3	20.4	15.6	13.2	14.5
			(14.2-35.8)	(22.3-35.0)	(22.1-30.6)	(21.1-38.9)	(22.2-36.8)	(15.5-31.9)	(22.0-38.9)	(19.2-41.0)	(23.9-27.9)	(19.4-39.2)	(17.4-33.2)	(18.5-31.1)	(15.6-26.3)	(11.2-21.3)	(9.2-18.5)	(10.0-20.7)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	31.3	25.8	20.2	16.8	11.6	12.7	7.9 <sup>b</sup>
												(27.8-35.0)	(21.6-30.4)	(17.9-22.8)	(14.4-19.5)	(9.9-13.5)	(10.7-15.1)	(5.7-10.8)
West <sup>2</sup>	—	—	29.6	31.9	24.5	22.9	22.5	20.5	24.2	28.7	28.6	29.7	23.6	18.6	14.1	11.3	11.3	5.5
			(24.3-35.6)	(25.2-39.4)	(22.8-26.2)	(20.3-25.8)	(20.2-25.0)	(18.2-23.0)	(21.9-26.8)	(26.0-31.6)	(25.5-31.9)	(24.3-35.7)	(19.2-28.7)	(15.7-21.8)	(11.5-17.1)	(9.0-14.0)	(9.0-14.1)	(3.9-7.7)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	26.7	22.4	18.7	11.1	11.9	11.4	8.8 <sup>b</sup>
												(22.9-31.0)	(17.6-28.1)	(16.2-21.6)	(9.0-13.6)	(10.0-14.1)	(9.7-13.5)	(7.3-10.4)
East <sup>2</sup>	—	—	32.2	28.9	19.6	25.3	20.0	21.2	22.6	30.1	27.8	27.2	20.8	17.0	10.4	10.1	8.4	8.1
			(27.2-37.6)	(24.6-33.6)	(12.9-28.7)	(23.6-27.1)	(16.3-24.3)	(18.1-24.7)	(20.3-25.1)	(28.5-31.7)	(24.6-31.3)	(22.1-33.1)	(14.3-29.3)	(12.8-22.2)	(7.9-13.6)	(7.7-13.1)	(6.4-11.0)	(6.2-10.5)

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) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.001; <sup>d</sup> significant long-term non-linear trend, p<.001.

Q: In the last 12 months, how often did you smoke cigarettes? (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 Daily Cigarette Smoking

(Figures 3.3.4–3.3.6; Table 3.3.2)

	Daily Smoking in 2011 (Grades 7–12)	Trends in Daily Smoking
Total Sample	<ul style="list-style-type: none"> <li>Overall, 3.9% (95% CI: 3.1%–4.8%) of students report smoking one or more cigarettes on a daily basis during the past 12 months. This percentage represents about 38,900 students in grades 7 through 12 across Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>Overall, daily smoking among grades 7 through 12 remained stable between 2009 (5.1%) and 2011 (3.9%). However, the current estimate is significantly lower than that found in 1999 (22.0%).</li> <li>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, and is now at its lowest level on record.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>Daily smoking significantly differs between males (4.7%) and females (2.9%).</li> </ul>	<ul style="list-style-type: none"> <li>Daily smoking among both males and females remained stable between 2009 and 2011. However, the current daily smoking estimates for both males and females are significantly lower compared with their respective 1999 estimates.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Daily smoking is significantly related to grade level, with the highest proportions among students in grades 10 through 12 (at about 6%).</li> </ul>	<ul style="list-style-type: none"> <li>Daily smoking remained stable between 2009 and 2011 within all grade levels. However, all grades show a significant decrease in 2011 compared with their respective 1999 estimates.</li> </ul>
Region	<ul style="list-style-type: none"> <li>Daily smoking significantly differs by region, with students in the North (8.0%) most likely to smoke daily compared with students in the other three regions (at about 3% or 4%).</li> </ul>	<ul style="list-style-type: none"> <li>Between 2009 and 2011, daily smoking remained stable within all regions. However, rates are significantly lower in 2011 compared with estimates from a decade ago.</li> </ul>

Figure 3.3.4  
 Past Year Daily Smoking by Sex, Grade, and Region, 2011 OSDUHS

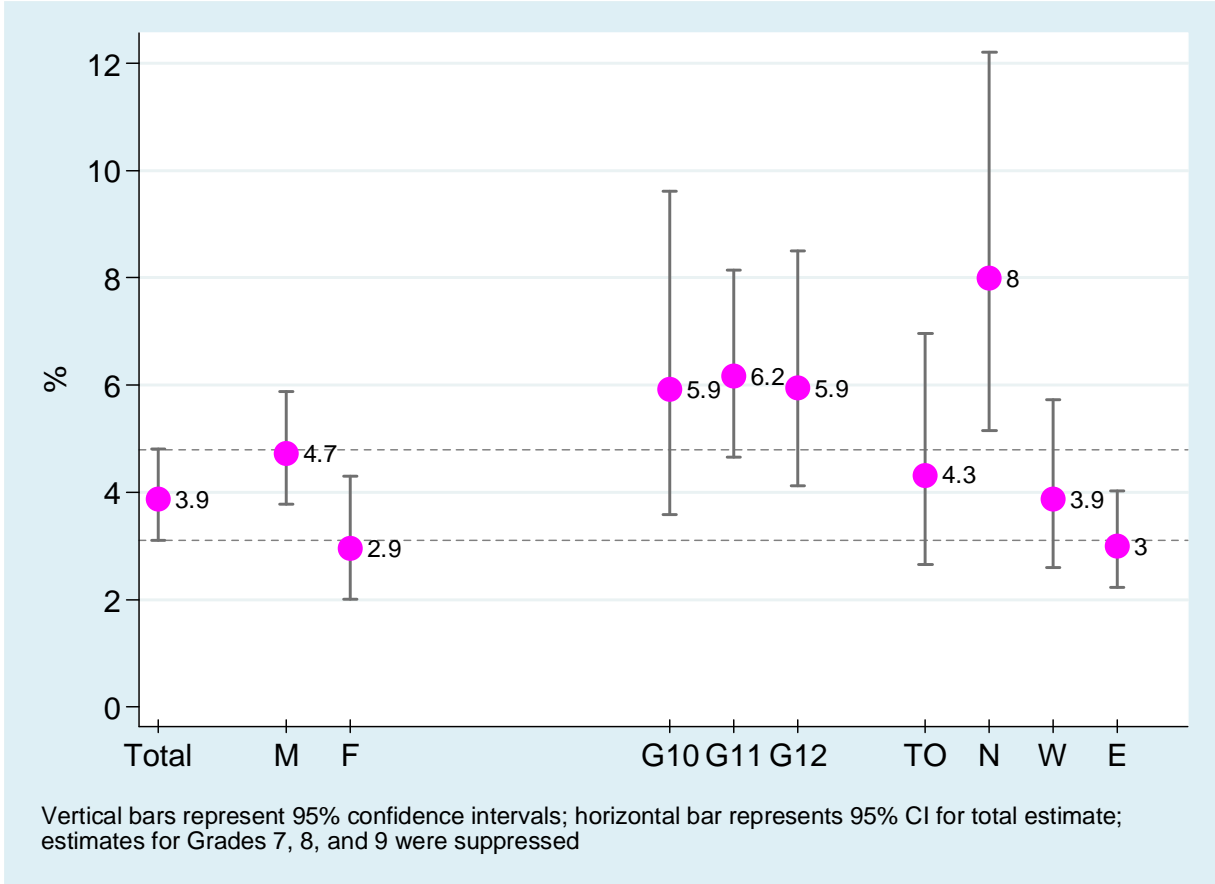


Figure 3.3.5  
 Past Year Daily Smoking, 1999–2011 OSDUHS (Grades 7–12)

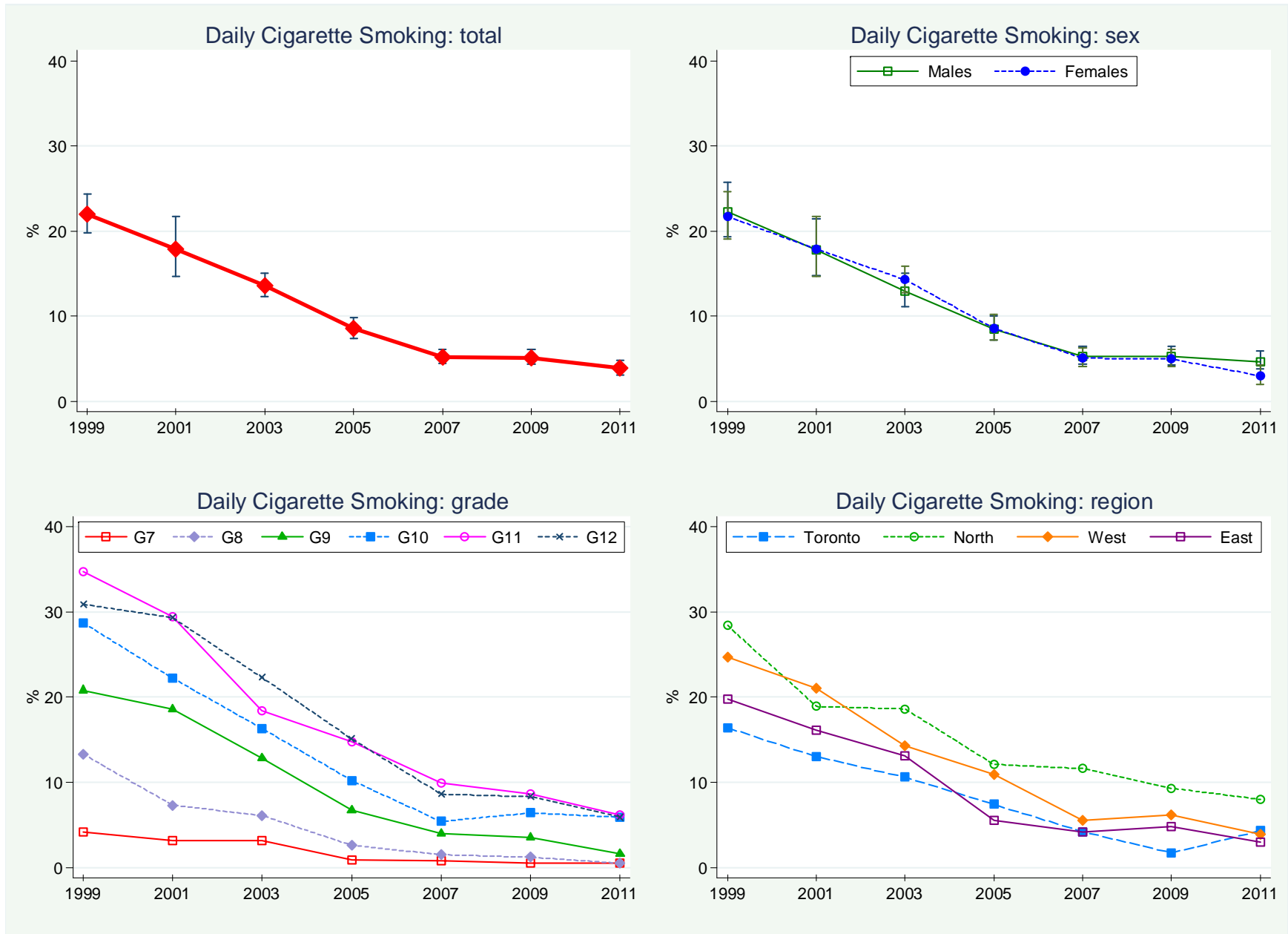


Figure 3.3.6  
 Past Year Daily Smoking, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

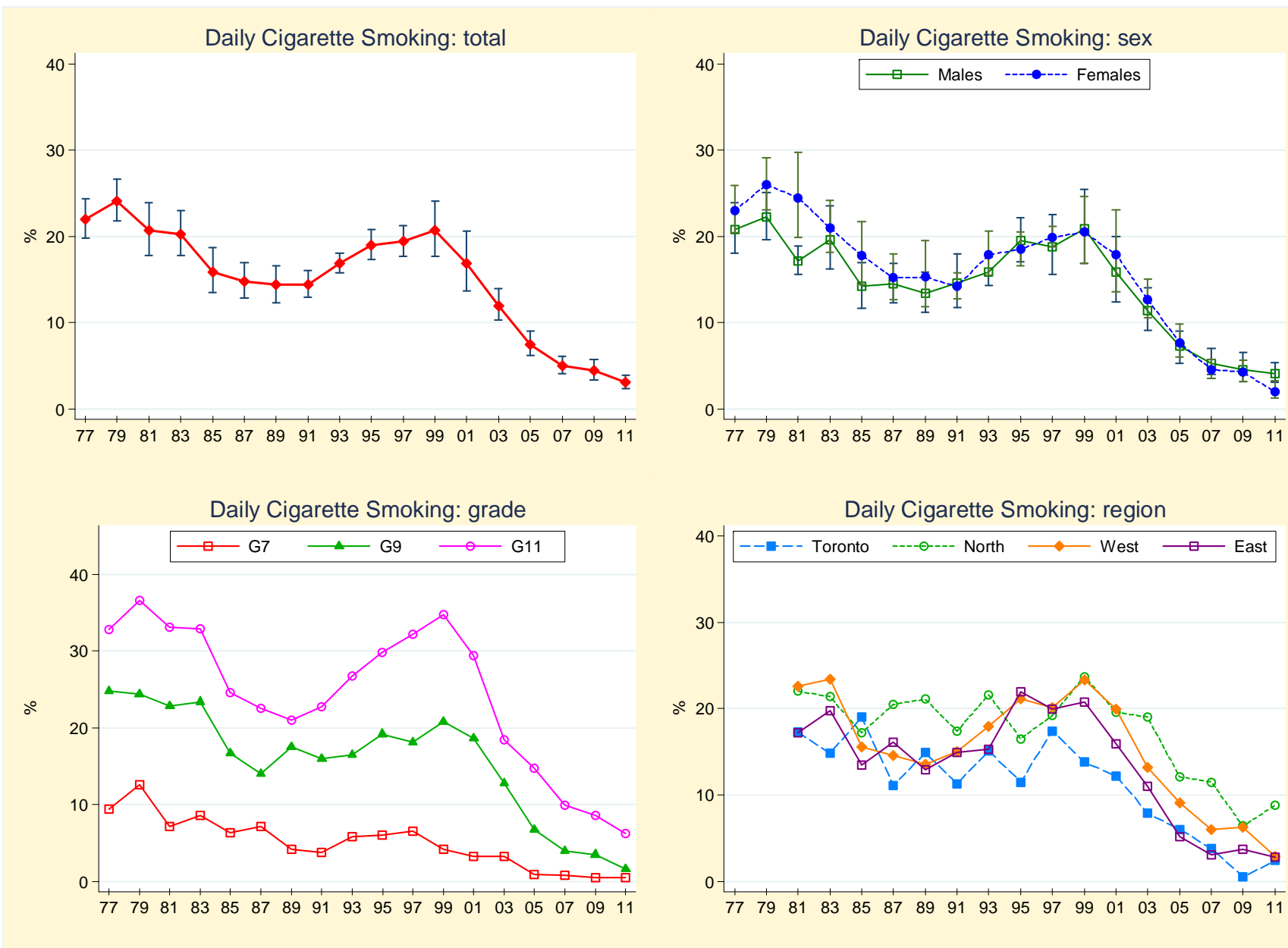


Table 3.3.2: Percentage Reporting Daily Smoking in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>22.0</b> (19.8-24.4)	<b>17.9</b> (14.7-21.7)	<b>13.6</b> (12.3-15.1)	<b>8.6</b> (7.4-9.9)	<b>5.2</b> (4.5-6.1)	<b>5.1</b> (4.4-6.1)	<b>3.9</b> <sup>b</sup> (3.1-4.8)
Total <sup>2</sup>	<b>22.0</b> (19.8-24.4)	<b>24.1</b> (21.8-26.6)	<b>20.7</b> (17.8-23.9)	<b>20.3</b> (17.8-23.0)	<b>15.9</b> (13.5-18.7)	<b>14.8</b> (12.9-17.0)	<b>14.4</b> (12.3-16.6)	<b>14.4</b> (13.0-16.1)	<b>16.9</b> (15.8-18.1)	<b>19.0</b> (17.3-20.8)	<b>19.4</b> (17.7-21.3)	<b>20.7</b> (17.7-24.1)	<b>16.9</b> (13.7-20.6)	<b>12.0</b> (10.3-14.0)	<b>7.5</b> (6.2-9.0)	<b>5.0</b> (4.1-6.1)	<b>4.5</b> (3.4-5.8)	<b>3.1</b> <sup>cd</sup> (2.4-3.9)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>22.3</b> (19.3-25.7)	<b>17.8</b> (14.8-21.4)	<b>13.0</b> (11.1-15.1)	<b>8.5</b> (7.2-10.0)	<b>5.3</b> (4.4-6.5)	<b>5.3</b> (4.3-6.5)	<b>4.7</b> <sup>b</sup> (3.8-5.9)
Males <sup>2</sup>	<b>20.8</b> (18.1-23.9)	<b>22.3</b> (19.6-25.1)	<b>17.2</b> (15.6-18.9)	<b>19.6</b> (16.2-23.5)	<b>14.2</b> (11.7-17.0)	<b>14.5</b> (12.3-16.9)	<b>13.4</b> (11.2-15.9)	<b>14.6</b> (11.8-18.0)	<b>15.9</b> (14.3-17.6)	<b>19.5</b> (17.1-22.2)	<b>18.8</b> (15.6-22.5)	<b>20.9</b> (16.9-25.5)	<b>15.9</b> (12.4-20.0)	<b>11.4</b> (9.1-14.1)	<b>7.3</b> (5.8-9.0)	<b>5.3</b> (4.0-7.0)	<b>4.6</b> (3.2-6.6)	<b>4.1</b> (3.1-5.4)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>21.7</b> (19.1-24.6)	<b>17.9</b> (14.7-21.7)	<b>14.3</b> (12.8-15.9)	<b>8.6</b> (7.2-10.2)	<b>5.1</b> (4.1-6.3)	<b>5.0</b> (4.1-6.1)	<b>3.0</b> <sup>b</sup> (2.0-4.3)
Females <sup>2</sup>	<b>23.0</b> (20.4-25.9)	<b>26.0</b> (23.1-29.1)	<b>24.5</b> (19.9-29.7)	<b>21.0</b> (18.2-24.2)	<b>17.8</b> (14.4-21.7)	<b>15.2</b> (12.7-18.0)	<b>15.3</b> (11.9-19.5)	<b>14.2</b> (12.8-15.8)	<b>17.9</b> (15.5-20.6)	<b>18.5</b> (16.6-20.5)	<b>19.9</b> (18.8-21.2)	<b>20.5</b> (16.9-24.6)	<b>17.9</b> (13.6-23.1)	<b>12.7</b> (10.6-15.1)	<b>7.7</b> (6.0-9.9)	<b>4.6</b> (3.6-5.8)	<b>4.3</b> (3.2-5.7)	<b>2.0</b> (1.3-3.3)
Grade																		
7	<b>9.4</b> (7.1-12.4)	<b>12.6</b> (10.3-15.4)	<b>7.1</b> (5.4-9.2)	<b>8.6</b> (4.9-14.9)	<b>6.3</b> (3.9-10.0)	<b>7.1</b> (4.9-10.2)	<b>4.2</b> (2.7-6.3)	<b>3.8</b> (1.9-7.6)	<b>5.8</b> (4.4-7.7)	<b>6.0</b> (3.2-11.0)	<b>6.5</b> (4.5-9.3)	<b>4.2</b> (2.8-6.2)	<b>3.2</b> (1.6-6.0)	<b>3.2</b> (1.8-5.6)	<b>0.9</b> (0.5-1.7)	<b>0.8</b> (0.4-1.8)	†	† <sup>b</sup>
8	—	—	—	—	—	—	—	—	—	—	—	<b>13.3</b> (10.1-17.2)	<b>7.3</b> (5.2-10.2)	<b>6.1</b> (4.0-9.4)	<b>2.6</b> (1.7-3.7)	<b>1.5</b> (0.7-3.2)	†	† <sup>b</sup>
9	<b>24.8</b> (20.9-29.2)	<b>24.4</b> (20.7-28.5)	<b>22.8</b> (18.7-27.4)	<b>23.4</b> (20.3-26.9)	<b>16.7</b> (12.0-22.8)	<b>14.0</b> (11.3-17.3)	<b>17.5</b> (14.3-21.3)	<b>16.0</b> (14.9-17.1)	<b>16.5</b> (14.9-18.1)	<b>19.2</b> (16.6-22.0)	<b>18.1</b> (16.0-20.4)	<b>20.8</b> (16.8-25.5)	<b>18.6</b> (13.0-25.8)	<b>12.8</b> (10.0-16.3)	<b>6.7</b> (5.2-8.7)	<b>4.0</b> (2.8-5.6)	<b>3.5</b> (2.1-6.0)	† <sup>b</sup>
10	—	—	—	—	—	—	—	—	—	—	—	<b>28.7</b> (23.6-34.4)	<b>22.2</b> (17.9-27.2)	<b>16.3</b> (13.3-20.0)	<b>10.2</b> (8.0-12.9)	<b>5.4</b> (4.0-7.3)	<b>6.4</b> (4.8-8.5)	<b>5.9</b> <sup>b</sup> (3.6-9.6)
11	<b>32.8</b> (28.6-37.3)	<b>36.6</b> (31.6-41.8)	<b>33.1</b> (27.5-39.3)	<b>32.9</b> (28.4-37.7)	<b>24.6</b> (20.1-29.8)	<b>22.5</b> (18.1-27.7)	<b>21.0</b> (16.8-26.0)	<b>22.7</b> (19.4-26.5)	<b>26.7</b> (23.6-30.1)	<b>29.8</b> (27.4-32.4)	<b>32.2</b> (28.1-36.6)	<b>34.7</b> (28.5-41.5)	<b>29.4</b> (24.1-35.4)	<b>18.4</b> (15.0-22.3)	<b>14.7</b> (11.6-18.4)	<b>9.9</b> (8.0-12.3)	<b>8.6</b> (6.2-11.7)	<b>6.2</b> <sup>b</sup> (4.6-8.1)
12	—	—	—	—	—	—	—	—	—	—	—	<b>30.9</b> (25.9-36.4)	<b>29.3</b> (20.3-40.2)	<b>22.3</b> (18.0-27.4)	<b>15.1</b> (12.1-18.6)	<b>8.6</b> (6.8-10.9)	<b>8.3</b> (6.3-10.7)	<b>5.9</b> <sup>b</sup> (4.1-8.5)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>16.4</b> (12.2-21.7)	<b>13.0</b> (8.3-19.9)	<b>10.6</b> (8.2-13.7)	<b>7.4</b> (5.6-9.7)	<b>4.2</b> (3.2-5.5)	†	<b>4.3</b> <sup>b</sup> (2.6-7.0)
Toronto <sup>2</sup>	—	—	<b>17.3</b> (12.1-24.1)	<b>14.8</b> (10.2-20.9)	<b>19.0</b> (14.9-23.8)	<b>11.1</b> (7.2-16.7)	<b>14.9</b> (10.6-20.6)	<b>11.3</b> (7.2-17.2)	<b>15.1</b> (12.2-18.6)	<b>11.5</b> (8.3-15.9)	<b>17.4</b> (14.2-21.0)	<b>13.8</b> (9.9-18.9)	<b>12.2</b> (6.6-21.6)	<b>7.9</b> (5.1-12.2)	<b>6.0</b> (4.0-8.8)	<b>3.8</b> (2.4-6.0)	†	<b>2.4</b> (1.4-4.1)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>28.4</b> (22.9-34.6)	<b>18.9</b> (14.1-24.9)	<b>18.6</b> (13.4-25.2)	<b>12.1</b> (9.0-16.1)	<b>11.6</b> (8.9-15.0)	<b>9.3</b> (7.4-11.6)	<b>8.0</b> <sup>b</sup> (5.1-12.2)
North <sup>2</sup>	—	—	<b>22.0</b> (17.0-28.0)	<b>21.4</b> (16.1-28.0)	<b>17.2</b> (15.2-19.5)	<b>20.5</b> (9.4-39.1)	<b>21.1</b> (13.4-31.7)	<b>17.4</b> (14.7-20.6)	<b>21.6</b> (14.9-30.1)	<b>16.5</b> (12.8-21.0)	<b>19.2</b> (17.3-21.2)	<b>23.7</b> (15.4-34.7)	<b>19.6</b> (13.4-27.9)	<b>19.0</b> (13.1-26.8)	<b>12.1</b> (8.1-17.7)	<b>11.5</b> (8.1-16.1)	<b>6.4</b> (3.4-11.9)	<b>8.8</b> (4.6-16.1)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>24.7</b> (20.9-29.0)	<b>21.0</b> (16.8-26.0)	<b>14.3</b> (12.4-16.6)	<b>10.9</b> (8.7-13.6)	<b>5.5</b> (4.2-7.2)	<b>6.2</b> (5.0-8.1)	<b>3.9</b> <sup>b</sup> (2.6-5.7)
West <sup>2</sup>	—	—	<b>22.6</b> (17.8-28.3)	<b>23.4</b> (18.2-29.4)	<b>15.6</b> (14.2-17.1)	<b>14.6</b> (13.6-15.7)	<b>13.6</b> (11.0-16.7)	<b>15.0</b> (13.8-16.2)	<b>17.9</b> (17.4-18.4)	<b>21.1</b> (18.5-23.9)	<b>20.1</b> (16.8-23.8)	<b>23.3</b> (17.9-29.8)	<b>19.9</b> (15.2-25.6)	<b>13.2</b> (10.6-16.2)	<b>9.1</b> (6.7-12.3)	<b>6.0</b> (4.3-8.2)	<b>6.3</b> (4.2-9.2)	<b>2.9</b> (2.0-4.1)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>19.8</b> (16.4-23.7)	<b>16.1</b> (11.4-22.3)	<b>13.1</b> (10.8-15.7)	<b>5.5</b> (4.2-7.3)	<b>4.2</b> (3.1-5.7)	<b>4.8</b> (3.8-6.1)	<b>3.0</b> <sup>b</sup> (2.2-4.0)
East <sup>2</sup>	—	—	<b>17.2</b> (11.8-24.4)	<b>19.8</b> (17.8-21.8)	<b>13.5</b> (7.1-24.1)	<b>16.1</b> (13.6-18.9)	<b>12.9</b> (9.2-17.9)	<b>14.9</b> (11.5-19.1)	<b>15.3</b> (13.4-17.4)	<b>21.9</b> (18.7-25.4)	<b>19.9</b> (17.6-22.4)	<b>20.8</b> (16.1-26.6)	<b>15.9</b> (10.4-23.6)	<b>11.0</b> (8.0-14.9)	<b>5.2</b> (3.7-7.1)	<b>3.1</b> (2.0-4.6)	<b>3.7</b> (2.7-5.2)	<b>2.8</b> (1.8-4.3)

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; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.001; <sup>d</sup> significant long-term non-linear trend, p<.001.

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 Cigarette Smoking

(Figure 3.3.7)

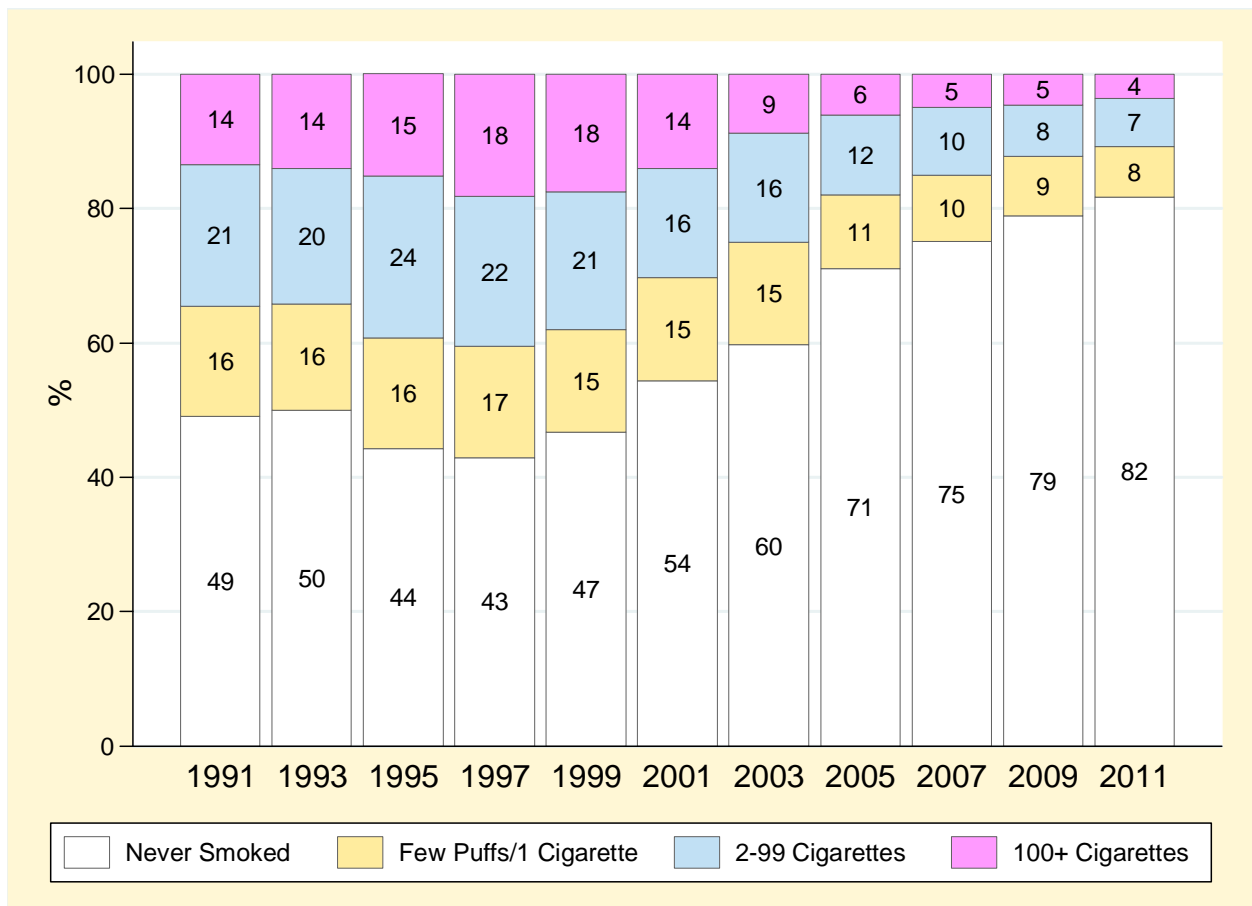
2011: Grades 7–12

■ Although 9% of all students in grades 7 through 12 are considered to be smokers, about one-quarter (22%) have tried a cigarette at some point in their life. About 8% of students have smoked a few puffs or one whole cigarette, while 10% have consumed less than 100 cigarettes, and 4% have consumed 100 or more cigarettes in their lifetime.

1991–2011: 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 almost half of students in 1991 to well over three-quarters of students in 2011).

Figure 3.3.7  
Trends in Lifetime Smoking, 1991–2011 OSDUHS (Grades 7, 9, 11 only)



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

(Table 3.3.3)

We asked smokers about their attempts to quit smoking. Specifically, among a random half sample of about 4,400 students, we asked: (1) whether they tried to quit smoking during the 12 months before the survey; and (2) the number of times they tried to quit smoking.

2011: Grades 7–12

- In 2011, about two-thirds (63%) of smokers in all grades reported at least one quit attempt during the 12 months before the survey. Among the 207 smokers who attempted to quit, most report attempting to do so more than once.

Table 3.3.3: Attempts to Quit Smoking Cigarettes in the Past Year, 1999–2011 (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011
<b>(Among Smokers)</b>	(n=549)	(n=397)	(n=591)	(n=556)	(n=349)	(n=322)	(n=365)
% tried to quit smoking	66.2	64.1	62.4	57.6	52.7	53.9	63.1
<b>(Among Quitters)</b>	(n=363)	(n=269)	(n=373)	(n=323)	(n=190)	(n=179)	(n=207)
Number of times tried to quit:							
Once	29.9	38.9	42.7	45.2	45.9	32.4	43.6
Twice	26.4	25.3	27.0	22.4	19.8	28.1	21.6
Three or more times	43.6	35.8	30.3	32.4	34.3	39.5	34.8

Notes: (1) entries are percentages; (2) based on a random half-sample in each year.

Source: OSDUHS, Centre for Addiction & Mental Health

## 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 native reserves during the 12 months preceding the survey. These cigarettes usually come in clear plastic bags, although some are professionally packaged with standard health warnings. 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.

A random half sample of about 4,400 students was asked: “*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)?*” Use is defined here as smoking at least one whole cigarette (more than just a few puffs).

- Among all students, 3.9% (95% CI: 2.8%-5.3%) report smoking contraband cigarettes during the past year. This percentage represents about 37,600 students in Ontario. Among past year smokers, the proportion reporting smoking contraband cigarettes is 40% (95% CI: 30%-51%).
- Males (4.2%) and females (3.5%) are equally likely to report smoking contraband cigarettes.
- There are significant grade differences, with the likelihood of smoking contraband cigarettes highest among 11<sup>th</sup>-graders (7.5%).
- Despite the variation, there are no statistically significant differences among the four regions.
- The percentage of students smoking contraband cigarettes in 2011 (3.9%) does not statistically significantly differ from the estimate from 2009 (6.4%). There was a significant decline, however, among 12<sup>th</sup>-graders.

Figure 3.3.8  
Past Year Contraband Cigarette Smoking by Sex, Grade, and Region, 2011 OSDUHS

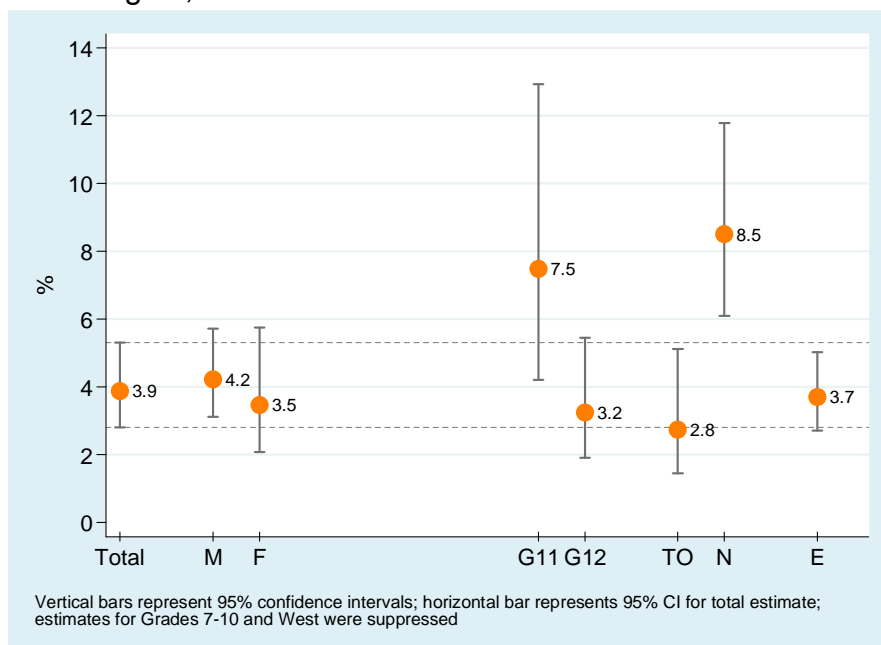


Table 3.3.4: Percentage Reporting Smoking Contraband Cigarettes in the Past Year, 2009–2011 OSDUHS

		<b>2009</b> (N=4261)	<b>2011</b> (N=4472)
<b>Total</b> (95% CI)		<b>6.4</b> (5.1-7.9)	<b>3.9</b> (2.8-5.3)
<b>Sex</b>			
Males		<b>6.7</b> (5.1-8.8)	<b>4.2</b> (3.1-5.7)
Females		<b>6.0</b> (4.6-7.7)	<b>3.5</b> (2.1-5.7)
<b>Grade</b>			
7		†	†
8		†	†
9		†	†
10		<b>7.6</b> (5.2-10.9)	†
11		<b>11.7</b> (8.5-15.9)	<b>7.5</b> (4.2-12.9)
12		<b>9.9</b> (6.6-14.5)	<b>3.2</b> <sup>a</sup> (1.9-5.4)
<b>Region</b>			
Toronto		†	<b>2.8</b> (1.5-5.1)
North		<b>8.9</b> (6.1-12.8)	<b>8.5</b> (6.1-11.8)
West		<b>7.9</b> (5.6-11.1)	†
East		<b>6.0</b> (4.7-7.6)	<b>3.7</b> (2.7-5.0)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) <sup>a</sup> 2011 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

## Smokeless Tobacco Use

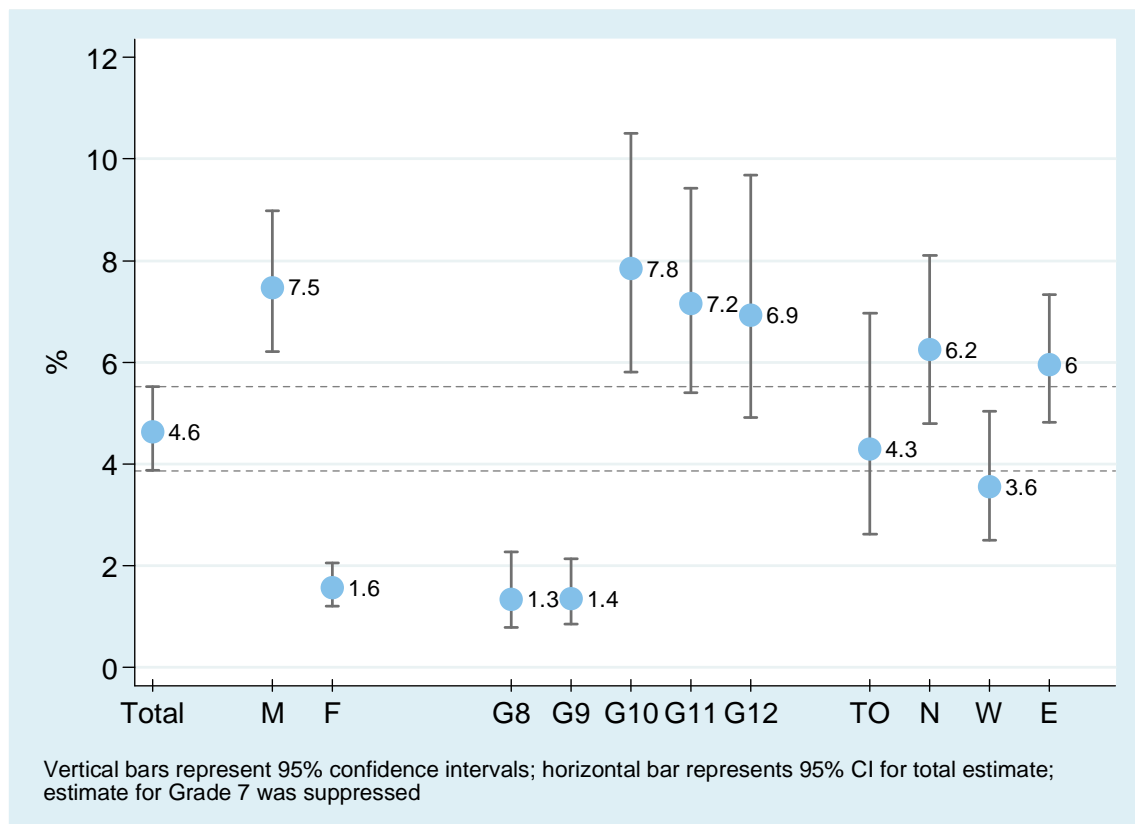
(Figure 3.3.9)

In the 2011 survey 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.

To assess smokeless tobacco use, students were asked: “*In the last 12 months, how often did you use smokeless tobacco (also known as chewing tobacco, snuff, plug, dipping tobacco)?*”

- Among all students, 4.6% (95% CI: 3.9%-5.5%) report using smokeless tobacco in the past year. This estimate represents about 46,500 students in Ontario.
- Males (7.5%) are significantly more likely than females (1.6%) to use smokeless tobacco.
- There is significant grade variation, showing students in grades 10–12 more likely to use than younger students (about 7% vs. 1%, respectively).
- There are significant regional differences, with students in the North and East regions (about 6%) most likely to use smokeless tobacco.

Figure 3.3.9  
Past Year Smokeless Tobacco Use by Sex, Grade, and Region, 2011 OSDUHS



## 3.4 Alcohol Use

### Past Year Alcohol Use

(Figures 3.4.1–3.4.3; Table 3.4.1)

	Alcohol Use in 2011 (Grades 7–12)	Trends in Alcohol Use
Total Sample	<ul style="list-style-type: none"> <li>Overall, 54.9% of students report drinking alcohol during the 12 months before the survey. This estimate excludes those who only had a sip/tried alcohol, but does include those who drank only on a special occasion. We estimate that between 52.1% and 57.6% of all students drink alcohol (95% CI). The percentage of 54.9% represents about 551,400 students in grades 7–12 in Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>The percentage of all students drinking in the past year did not statistically significantly change between 2009 (58.2%) and 2011 (54.9%). However, the 2011 estimate is significantly lower than that found in 1999 (66.0%).</li> <li>Over the long-term, rates of drinking among grades 7, 9, and 11 declined steadily between 1977 and 1993. Between 1993 and 2003 drinking steadily increased, and has since decreased. The current level is significantly lower than the peaks seen in the late 1970s and late 1990s/early 2000s, and is similar to the low levels seen in the early 1990s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>The prevalence of drinking does not significantly differ between males (54.6%) and females (55.1%).</li> </ul>	<ul style="list-style-type: none"> <li>Between 2009 and 2011, alcohol use significantly decreased among males (from 60.0% to 54.6%, respectively). Females showed no significant change (56.3% vs 55.1%, respectively). Both sexes show a significant decrease in 2011 compared with their respective 1999 estimates.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Drinking significantly increases with grade: rates climb by ten or more percentage points with each grade level, between grades 7 and 11 (from 17.4% to 73.5%). The prevalence climbs again slightly in 12<sup>th</sup>-grade, to 78.4%.</li> </ul>	<ul style="list-style-type: none"> <li>Only 8<sup>th</sup>-graders show a significant decrease in drinking between 2009 and 2011 (from 36.5% to 26.4%). Drinking among students in grades 7 through 10 is currently lower compared with their respective 1999 estimates.</li> </ul>
Region	<ul style="list-style-type: none"> <li>Rates of drinking significantly differ by region. Toronto students (47.2%) are least likely to drink, while Northern students are the most likely (59.5%). Students in the West and East regions fall in between.</li> </ul>	<ul style="list-style-type: none"> <li>No region shows a significant change between 2009 and 2011. Students in the North and West show a significant decline in drinking in 2011 compared with their respective 1999 estimates.</li> </ul>

Figure 3.4.1  
 Past Year Alcohol Use by Sex, Grade, and Region, 2011 OSDUHS

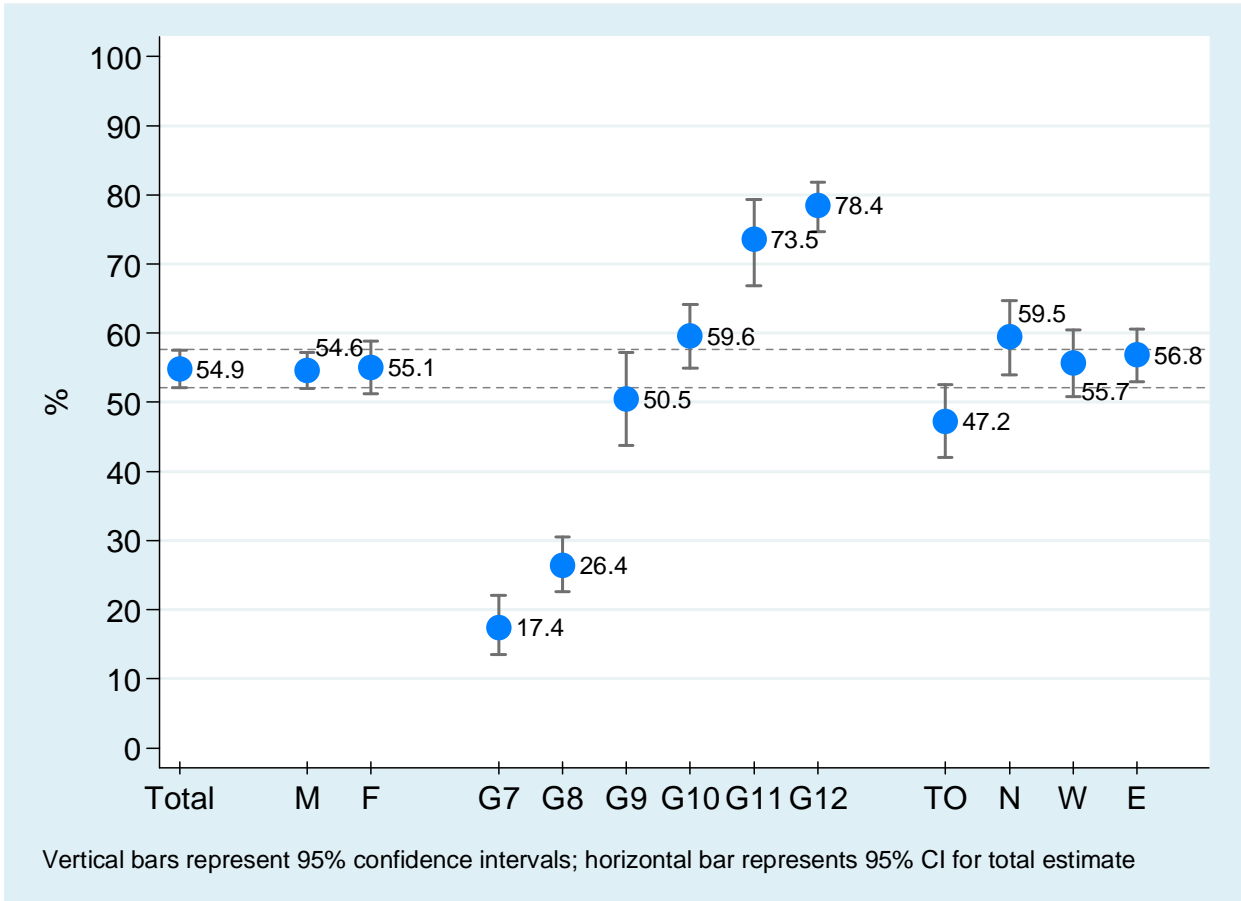


Figure 3.4.2  
 Past Year Alcohol Use, 1999–2011 OSDUHS (Grades 7–12)

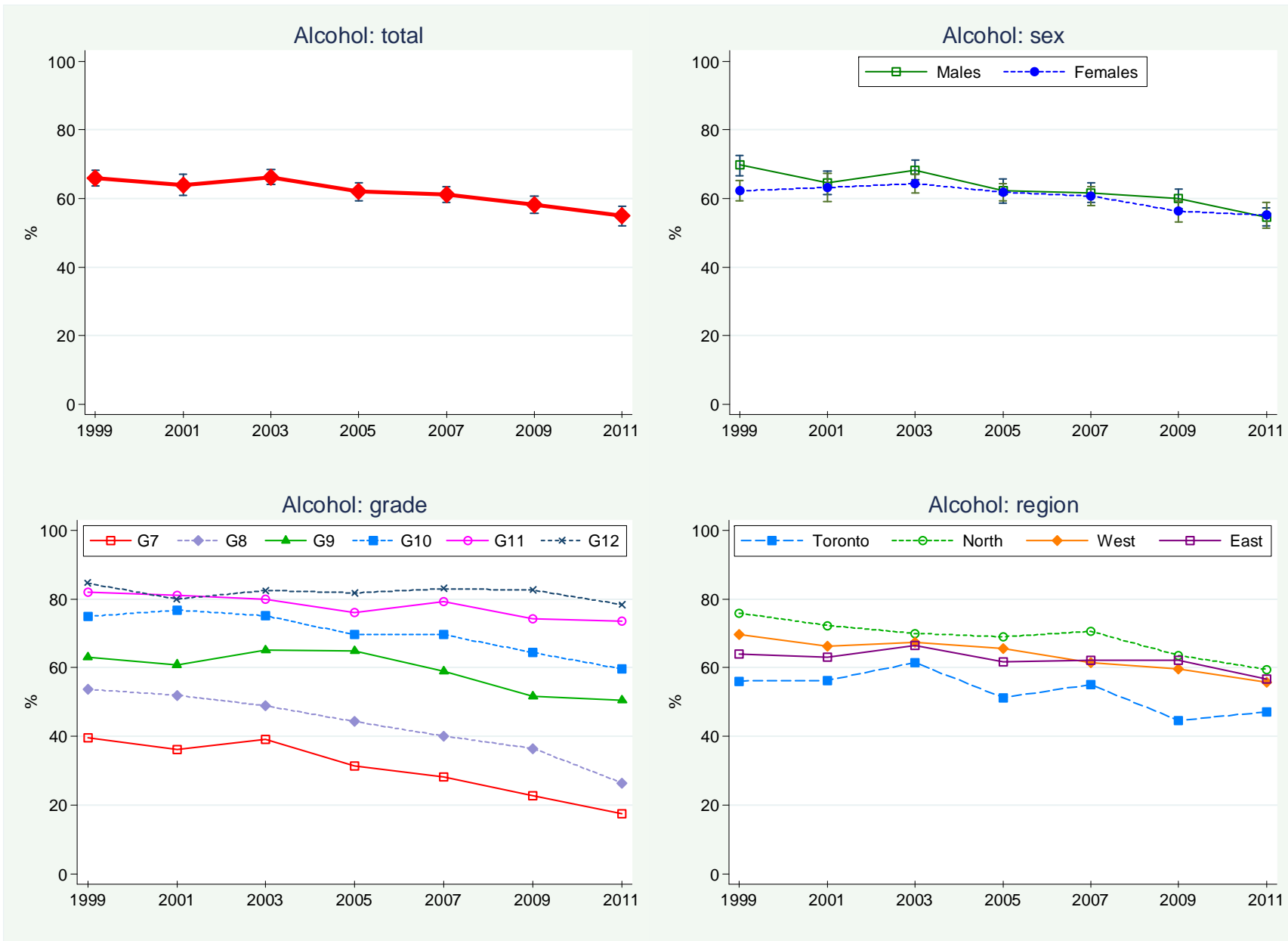


Figure 3.4.3  
 Past Year Alcohol Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)



Table 3.4.1: Percentage Reporting Drinking Alcohol 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 <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>66.0</b> (63.6-68.3)	<b>63.9</b> (60.8-67.0)	<b>66.2</b> (64.1-68.4)	<b>62.0</b> (59.4-64.6)	<b>61.2</b> (58.9-63.5)	<b>58.2</b> (55.7-60.6)	<b>54.9</b> <sup>b</sup> (52.1-57.6)
Total <sup>2</sup>	<b>72.8</b> (70.4-75.1)	<b>73.7</b> (71.6-75.8)	<b>70.1</b> (67.7-72.3)	<b>69.0</b> (66.1-71.9)	<b>66.3</b> (64.7-67.9)	<b>65.1</b> (63.0-67.3)	<b>62.6</b> (58.8-66.3)	<b>54.3</b> (51.6-57.0)	<b>53.6</b> (50.4-56.6)	<b>56.0</b> (53.4-58.4)	<b>56.9</b> (53.3-60.4)	<b>62.7</b> (59.4-66.0)	<b>58.9</b> (54.1-63.5)	<b>62.9</b> (60.3-65.4)	<b>57.8</b> (54.9-60.5)	<b>56.1</b> (53.0-59.0)	<b>51.2</b> (47.9-54.4)	<b>49.8</b> <sup>cd</sup> (44.7-54.9)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>69.7</b> (66.6-72.6)	<b>64.6</b> (61.1-68.0)	<b>68.3</b> (65.4-71.1)	<b>62.3</b> (58.7-65.7)	<b>61.7</b> (58.8-64.5)	<b>60.0</b> (57.2-62.8)	<b>54.6</b> <sup>ab</sup> (52.0-57.2)
Males <sup>2</sup>	<b>75.1</b> (72.5-77.6)	<b>75.9</b> (73.6-78.0)	<b>70.3</b> (68.0-72.5)	<b>69.9</b> (66.4-73.2)	<b>68.1</b> (65.1-71.0)	<b>65.9</b> (63.6-68.2)	<b>65.0</b> (60.5-69.3)	<b>54.1</b> (50.8-57.4)	<b>53.6</b> (50.4-56.9)	<b>56.9</b> (53.8-59.9)	<b>56.8</b> (52.6-60.9)	<b>65.6</b> (61.5-69.6)	<b>59.0</b> (54.2-63.7)	<b>67.4</b> (64.2-70.5)	<b>58.1</b> (54.0-62.1)	<b>56.9</b> (52.7-61.0)	<b>52.4</b> (48.6-56.1)	<b>50.4</b> (46.1-54.6)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>62.2</b> (59.2-65.2)	<b>63.2</b> (59.0-67.2)	<b>64.3</b> (61.6-67.0)	<b>61.8</b> (59.2-64.4)	<b>60.7</b> (58.0-63.5)	<b>56.3</b> (53.2-59.4)	<b>55.1</b> <sup>b</sup> (51.3-58.8)
Females <sup>2</sup>	<b>70.7</b> (67.5-73.8)	<b>71.5</b> (68.6-74.2)	<b>69.8</b> (66.0-73.3)	<b>68.2</b> (65.4-70.9)	<b>64.4</b> (62.1-66.6)	<b>64.4</b> (61.2-67.5)	<b>60.3</b> (56.3-64.2)	<b>54.6</b> (51.4-57.7)	<b>53.5</b> (48.5-58.4)	<b>55.1</b> (51.6-58.6)	<b>57.0</b> (53.3-60.6)	<b>59.8</b> (55.5-63.9)	<b>58.8</b> (52.2-65.1)	<b>58.5</b> (54.9-61.9)	<b>57.4</b> (54.3-60.4)	<b>55.2</b> (51.6-58.7)	<b>49.9</b> (46.0-53.8)	<b>49.2</b> (41.8-56.5)
Grade																		
7	<b>57.3</b> (53.5-61.0)	<b>57.0</b> (53.6-60.4)	<b>51.1</b> (48.5-53.7)	<b>53.0</b> (46.3-60.0)	<b>43.1</b> (39.6-46.6)	<b>43.6</b> (39.5-47.8)	<b>42.5</b> (38.5-46.6)	<b>30.1</b> (26.8-33.6)	<b>32.0</b> (25.6-39.1)	<b>30.5</b> (27.8-33.3)	<b>31.9</b> (26.1-38.3)	<b>39.7</b> (33.8-45.9)	<b>36.1</b> (29.6-43.1)	<b>39.1</b> (35.0-43.4)	<b>31.4</b> (28.1-35.0)	<b>28.1</b> (23.7-33.1)	<b>22.7</b> (18.6-27.4)	<b>17.4</b> <sup>b</sup> (13.5-22.1)
8	—	—	—	—	—	—	—	—	—	—	—	<b>53.7</b> (49.2-58.3)	<b>52.0</b> (45.5-58.4)	<b>48.9</b> (44.5-53.4)	<b>44.3</b> (39.4-49.4)	<b>40.1</b> (34.8-45.7)	<b>36.5</b> (31.5-41.7)	<b>26.4</b> <sup>ab</sup> (22.6-30.5)
9	<b>75.5</b> (72.7-78.1)	<b>75.6</b> (72.9-78.1)	<b>75.3</b> (71.4-78.9)	<b>71.5</b> (68.6-74.3)	<b>68.0</b> (65.8-70.1)	<b>64.8</b> (59.0-70.2)	<b>64.5</b> (58.1-70.5)	<b>56.0</b> (52.1-59.8)	<b>52.0</b> (49.2-54.7)	<b>57.8</b> (54.5-61.0)	<b>55.3</b> (47.4-63.0)	<b>63.1</b> (58.0-67.9)	<b>60.9</b> (54.3-67.1)	<b>65.1</b> (60.5-69.3)	<b>64.8</b> (60.4-68.9)	<b>58.9</b> (53.8-63.8)	<b>51.6</b> (46.3-56.8)	<b>50.5</b> <sup>b</sup> (43.8-57.2)
10	—	—	—	—	—	—	—	—	—	—	—	<b>74.9</b> (69.2-79.8)	<b>76.8</b> (73.0-80.2)	<b>75.1</b> (71.1-78.7)	<b>69.6</b> (65.7-73.3)	<b>69.6</b> (65.2-73.6)	<b>64.5</b> (59.8-68.9)	<b>59.6</b> <sup>b</sup> (54.9-64.2)
11	<b>87.4</b> (85.1-89.3)	<b>89.9</b> (87.0-92.2)	<b>83.9</b> (80.3-87.0)	<b>88.9</b> (86.3-91.1)	<b>87.4</b> (84.7-89.7)	<b>84.8</b> (81.1-87.9)	<b>81.8</b> (73.1-88.2)	<b>75.0</b> (69.7-79.6)	<b>73.2</b> (68.7-77.3)	<b>75.8</b> (69.3-81.3)	<b>80.6</b> (76.3-84.3)	<b>82.0</b> (77.7-85.6)	<b>81.0</b> (75.1-85.8)	<b>79.9</b> (76.3-83.1)	<b>76.1</b> (72.3-79.5)	<b>79.2</b> (75.5-82.4)	<b>74.3</b> (70.0-78.2)	<b>73.5</b> (66.8-79.3)
12	—	—	—	—	—	—	—	—	—	—	—	<b>84.6</b> (80.8-87.8)	<b>80.0</b> (72.5-85.9)	<b>82.5</b> (77.7-86.4)	<b>81.8</b> (77.7-85.4)	<b>83.0</b> (79.5-86.0)	<b>82.6</b> (79.0-85.8)	<b>78.4</b> (74.6-81.8)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	56.1	56.3	61.5	51.3	55.1	44.6	47.2
												(49.4-62.5)	(44.7-67.3)	(55.8-66.9)	(43.8-58.8)	(46.9-63.1)	(37.0-52.4)	(42.0-52.5)
Toronto <sup>2</sup>	—	—	68.2	68.8	66.6	64.1	55.5	50.4	47.3	49.4	49.8	55.0	56.4	57.6	48.4	48.9	36.2	40.9
			(60.5-75.0)	(61.1-75.6)	(62.0-71.0)	(58.1-69.7)	(40.9-69.2)	(44.1-56.8)	(41.3-53.4)	(40.3-58.5)	(39.5-60.1)	(47.6-62.2)	(41.4-70.3)	(50.1-64.7)	(40.5-56.4)	(38.2-59.7)	(27.1-46.5)	(35.7-46.4)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	75.9	72.3	70.0	69.0	70.6	63.6	59.5 <sup>b</sup>
												(69.3-81.5)	(68.2-76.0)	(65.7-73.9)	(64.8-73.0)	(65.1-75.6)	(58.1-68.8)	(54.0-64.7)
North <sup>2</sup>	—	—	72.6	70.8	68.8	66.3	70.9	59.4	64.4	54.5	59.5	69.7	66.1	65.7	64.5	64.0	58.3	55.5
			(61.9-81.2)	(65.7-75.4)	(64.6-72.7)	(62.1-70.2)	(58.2-81.0)	(50.4-67.8)	(50.3-76.4)	(49.4-59.6)	(54.7-64.1)	(60.6-77.5)	(60.6-71.3)	(60.3-70.8)	(59.0-69.7)	(55.9-71.3)	(52.164.3)	(49.7-61.1)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	69.7	66.2	67.3	65.6	61.5	59.6	55.7 <sup>b</sup>
												(66.1-73.2)	(62.3-70.0)	(63.4-71.0)	(62.1-69.0)	(58.2-64.7)	(55.6-63.4)	(50.8-60.5)
West <sup>2</sup>	—	—	70.9	69.0	67.1	63.1	62.7	54.4	54.0	56.0	58.3	66.4	59.8	63.8	60.0	57.0	52.5	51.9
			(68.4-73.3)	(64.9-72.9)	(64.5-69.6)	(59.2-66.8)	(57.5-67.7)	(51.9-57.0)	(48.2-60.0)	(52.8-59.2)	(52.9-63.5)	(61.1-71.4)	(54.6-64.8)	(59.3-68.1)	(56.4-63.5)	(52.4-61.5)	(47.3-57.5)	(41.7-62.0)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	63.9	63.0	66.6	61.8	62.2	62.1	56.8
												(59.8-67.8)	(58.7-67.2)	(63.9-69.2)	(56.5-66.9)	(58.7-65.6)	(58.5-65.6)	(53.0-60.6)
East <sup>2</sup>	—	—	68.7	68.7	63.9	68.8	64.4	55.3	54.0	60.9	58.8	61.3	57.8	64.0	58.4	57.0	55.5	50.6
			(64.7-72.4)	(62.4-74.3)	(61.6-66.2)	(66.7-70.8)	(60.6-68.0)	(48.6-61.8)	(50.7-57.3)	(57.4-64.3)	(52.8-64.6)	(55.5-66.8)	(50.8-64.4)	(60.8-67.0)	(52.9-63.6)	(52.4-61.5)	(50.5-60.4)	(46.0-55.2)

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) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, <.001; <sup>d</sup> significant long-term non-linear trend, p<.001.

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 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)

2011: Grades 7–12

■ As seen in Table 3.4.2, 23.3% of all students restrict their drinking to special occasions. Less than 10% of students drink alcohol once a week or more often.

1987–2011: Grades 7, 9, 11

□ Figure 3.4.4 presents trends in the frequency of past year drinking between 1987 and 2011 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 or month or less often is currently lower.

Table 3.4.2: Frequency of Drinking Alcohol in the Past Year Among the Total Sample, 1999–2011 OSDUHS (Grades 7–12)

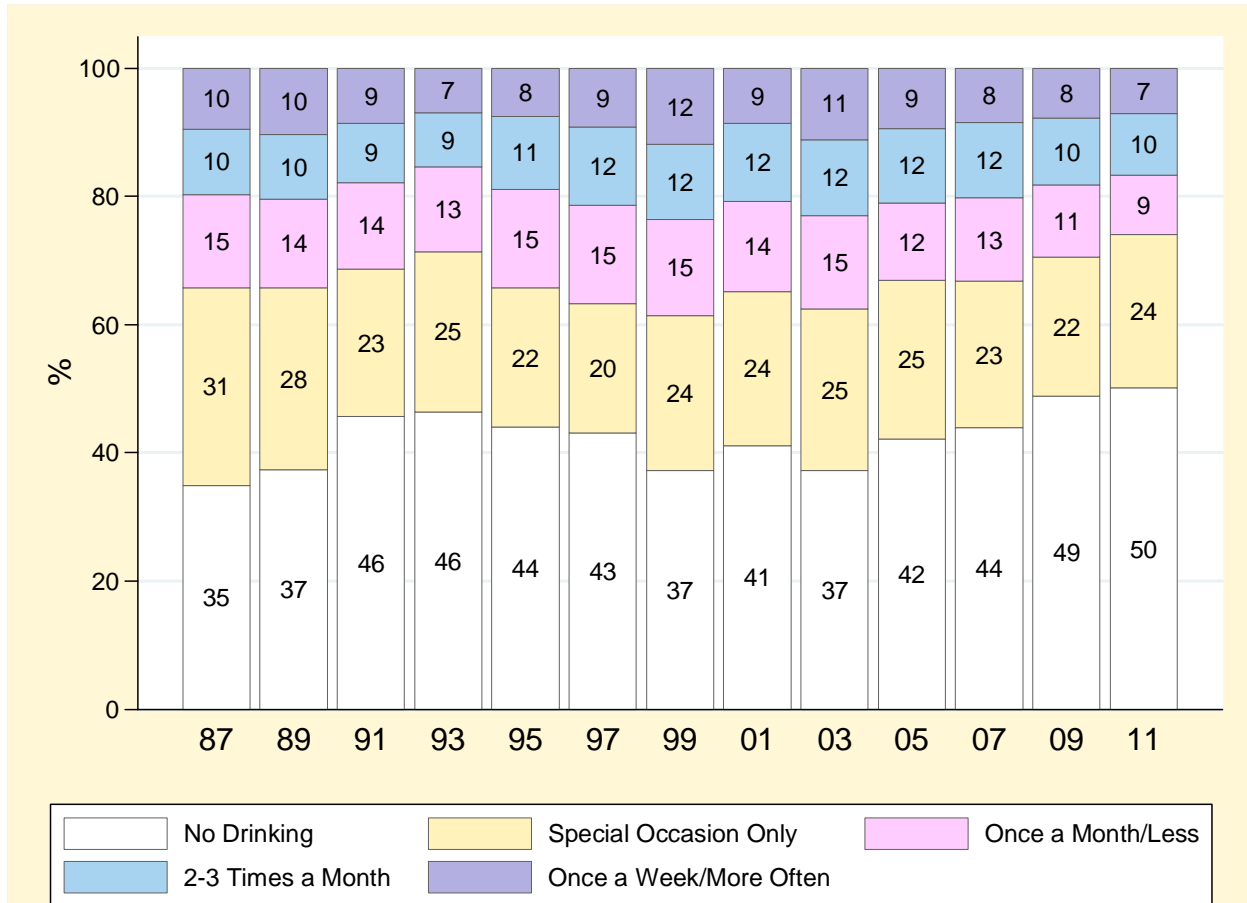
		(N)	1999 (4447)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9112)	2011 (9288)
<b>No Drinking</b>									
Total			34.0	36.1	33.8	38.0	38.8	41.8	45.1
Sex	Males		30.3	35.4	31.7	37.7	38.3	40.0	45.4
	Females		37.8	36.8	35.7	38.2	39.3	43.7	44.9
<b>On Special Occasions Only</b>									
Total			23.7	24.6	25.1	24.3	23.0	21.5	23.3
Sex	Males		23.8	22.4	25.2	24.0	23.3	22.0	23.5
	Females		23.6	26.9	24.9	24.6	22.8	21.0	23.0
<b>Once a Month or Less Often</b>									
Total			16.1	14.7	16.0	13.9	15.1	14.0	12.5
Sex	Males		16.0	14.1	14.9	12.4	13.3	13.4	11.9
	Females		16.3	15.4	17.3	15.5	17.1	14.6	13.0
<b>2-3 Times a Month</b>									
Total			13.0	14.2	13.0	13.5	12.9	13.0	11.6
Sex	Males		13.3	14.8	11.9	12.8	13.6	12.8	11.6
	Females		12.6	13.6	14.2	14.2	12.1	13.3	11.6
<b>At Least Once a Week</b>									
Total			12.3	10.0	11.7	10.1	9.8	9.5	7.2
Sex	Males		15.1	13.0	14.0	12.7	11.0	11.4	7.1
	Females		9.4	7.1	9.6	7.3	8.6	7.4	7.2
<b>Almost Daily</b>									
Total			0.9	†	†	†	†	†	†
Sex	Males		1.5	†	†	†	†	†	†
	Females		†	†	†	†	†	†	†

Notes: (1) † 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, 1987–2011 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.

### 2011: Grades 7–12

- As seen in Table 3.4.3, 65.3% of students did not drink alcohol during the month before the survey (thus, 34.7% did drink). About one-quarter (23.3%) of students drank only once or twice in the past month; 8.2% drank once or twice per week; while 3.1% drank three or more times per week during the past month.

- There is no significant difference between males and females regarding frequency of drinking in the past month.

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

### 1999–2011: Grades 7–12

Table 3.4.3 also presents the past month drinking frequencies from 1999 to 2011. The percentage of students reporting not drinking at all in the past month in 2011 (65.3%) is significantly higher than the percentage found in 2009 (58.1%), as well as that found in 1999 (48.3%).

### 1987–2011: Grades 7, 9, 11

Figure 3.4.5 presents the past month drinking frequency from 1987 to 2011, 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, 1987–2011 OSDUHS  
(Grades 7, 9, 11 only)

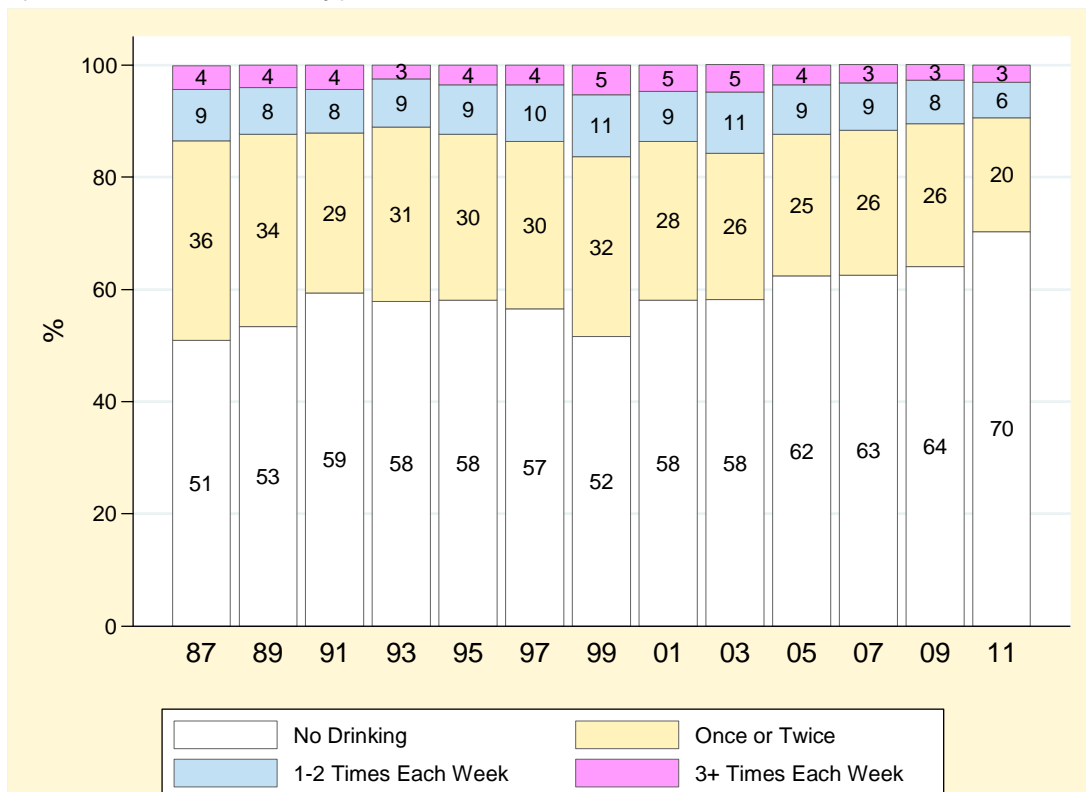


Table 3.4.3: Frequency of Drinking Alcohol in the Past Month Among the Total Sample, 1999–2011 OSDUHS (Grades 7–12)

	1999 (N) (4447)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9112)	2011 (9288)
<b>Total</b>							
Not in Past 4 Weeks	48.3	53.7	54.7	57.3	57.5	58.1	65.3 <sup>ab</sup>
Once or Twice	33.5	30.0	28.7	28.6	28.6	28.4	23.3 <sup>ab</sup>
Once or Twice a Week	12.5	11.5	11.6	10.2	9.9	9.4	8.2
3 + Times a Week	5.7	4.8	5.0	3.9	4.0	4.0	3.1
<b>Males</b>							
Not in Past 4 Weeks	44.3	50.7	53.4	56.0	57.5	56.2	66.1
Once or Twice	33.9	28.6	27.6	27.3	27.2	28.2	22.2
Once or Twice a Week	13.5	14.5	12.7	11.3	10.5	10.2	8.3
3 + Times a Week	8.3	6.2	6.3	5.4	4.7	5.3	3.3
<b>Females</b>							
Not in Past 4 Weeks	52.5	56.6	56.0	58.7	57.4	60.1	64.4
Once or Twice	33.1	31.4	29.7	30.1	30.1	28.7	24.5
Once or Twice a Week	11.4	8.6	10.6	8.9	9.2	8.5	8.2
3 + Times a Week	3.1	3.4	3.7	2.3	3.3	2.6	2.9
<b>Grade 7</b>							
Not in Past 4 Weeks	76.4	83.0	82.4	85.4	85.6	88.6	93.5
Once or Twice	20.1	14.2	13.0	13.1	12.4	9.8	5.8
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	†	†
<b>Grade 8</b>							
Not in Past 4 Weeks	58.8	69.2	74.9	72.6	77.4	79.9	87.1
Once or Twice	31.7	24.5	20.1	22.6	18.3	17.0	11.0
Once or Twice a Week	6.2	4.7	3.5	2.7	2.7	1.9	1.2
3 + Times a Week	3.3	1.6	1.5	2.1	1.6	1.2	†
<b>Grade 9</b>							
Not in Past 4 Weeks	50.8	54.9	55.7	59.9	62.4	63.0	69.9
Once or Twice	33.4	32.9	30.2	28.0	26.7	28.9	23.4
Once or Twice a Week	10.3	9.0	8.9	8.7	7.7	5.7	4.5
3 + Times a Week	5.5	3.2	5.2	3.4	3.2	2.3	†
<b>Grade 10</b>							
Not in Past 4 Weeks	42.0	40.9	47.3	52.1	51.0	54.3	63.2
Once or Twice	34.9	33.2	34.5	33.6	33.3	32.3	26.1
Once or Twice a Week	15.0	19.4	13.1	10.4	11.1	9.7	6.9
3 + Times a Week	8.0	6.6	5.1	3.9	4.6	3.6	3.8
<b>Grade 11</b>							
Not in Past 4 Weeks	31.6	35.6	41.0	42.3	41.2	44.5	53.0
Once or Twice	40.5	37.6	32.5	34.2	37.1	35.1	28.4
Once or Twice a Week	19.1	16.8	19.4	16.5	16.4	15.1	12.3
3 + Times a Week	8.8	9.9	7.1	6.9	5.3	5.3	6.3
<b>Grade 12</b>							
Not in Past 4 Weeks	29.2	34.9	34.1	35.5	35.6	34.0	43.9
Once or Twice	40.2	39.8	38.3	38.5	39.4	39.5	34.5
Once or Twice a Week	22.6	18.9	19.4	19.9	17.6	17.6	17.4
3 + Times a Week	8.0	6.4	8.2	6.1	7.4	8.9	4.2

Notes: (1) † estimate suppressed due to unreliability; (2) <sup>a</sup> 2011 vs. 2009 significant difference  $p < .01$ ; <sup>b</sup> 2011 vs. 1999 significant difference  $p < .01$ .

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

Source: OSDUHS, Centre for Addiction & Mental Health

## Heavy 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 drinking in this report: consuming 5 or more drinks on a single occasion (“binge drinking”), and becoming 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 Drinking in 2011 (Grades 7–12)	Trends in Heavy Drinking
Total Sample	<ul style="list-style-type: none"> <li>■ Just over one-fifth (22.3%) of students report binge drinking at least once during the 4 weeks before the survey. This percentage represents about 223,500 students in grades 7 through 12 in Ontario.</li> <li>■ A similar proportion (19.9%) reported becoming drunk at least once during the past month, representing about 200,100 students in Ontario.</li> <li>■ About 8.2% of all students report binge drinking two to three times during the month before the survey. Another 4.8% report binge drinking four or more times (see Table 3.4.5a).</li> </ul>	<ul style="list-style-type: none"> <li>□ 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 2009 and 2011. However, both estimates are significantly lower in 2011 compared with their respective estimates from 1999. Frequent binge drinking (i.e., four or more times in the past month) has not changed during the past decade.</li> <li>□ Over the long-term, binge drinking among grades 7, 9, and 11 was elevated in the late 1970s, decreased in the late 1980s and early 1990s, increased again in the late 1990s and 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, and is similar to the lows levels seen in the early 1990s. Frequent binge drinking has not significantly changed over the long-term (see Figure 3.4.10).</li> <li>□ Over the long-term, drunkenness remained stable between 1977 and the early 1990s, increased during the second half of the 1990s, and has since declined. The current level is significantly lower than the peak seen in the late 1990s/early 2000s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Binge drinking does not significantly differ between males (22.7%) and females (21.8%). Nor is there a difference in reported drunkenness between males (19.6%) and females (20.3%).</li> </ul>	<ul style="list-style-type: none"> <li>□ Between 1999 and 2011, males show a significant decrease in binge drinking (from 32.1% down to 22.7%), and drunkenness (from 27.4% to 19.6%). Heavy drinking among females remained stable over the past decade.</li> </ul>

Grade ■ Heavy drinking significantly increases with grade level: binge drinking is lowest among 7<sup>th</sup>-graders (1.1%) and climbs to a high of 39.7% among 12<sup>th</sup>-graders. Drunkenness is lowest among 7<sup>th</sup>-graders (1.5%) and peaks in 11<sup>th</sup>- and 12<sup>th</sup>-grade at about 33%.

□ 7<sup>th</sup>-graders show a decrease in drunkenness between 2009 (4.3%) and 2011 (1.5%). Both 7<sup>th</sup>- and 8<sup>th</sup>-graders show significant decreases in binge drinking and drunkenness in 2011 compared with their 1999 levels. Students in grade 9 show a decrease in binge drinking since 1999, while students in grade 10 show a decrease in drunkenness. Students in grade 12 show a significant decrease in drunkenness between 2009 (43.3%) and 2011 (33.8%).

Region ■ Heavy drinking varies significantly by region. Toronto students are the least likely to report binge drinking (15.4%) and drunkenness (13.2%). Northern students are the most likely to report binge drinking (30.1%) and drunkenness (26.2%).

□ Only students in the West show a significant decrease in binge drinking in 2011 (21.8%) compared with 2009 (26.9%), and with 1999 (32.4%). Western students also show a significant decrease in drunkenness since 1999.

Figure 3.4.6  
Binge Drinking in the Past Month by Sex, Grade, and Region, 2011 OSDUHS

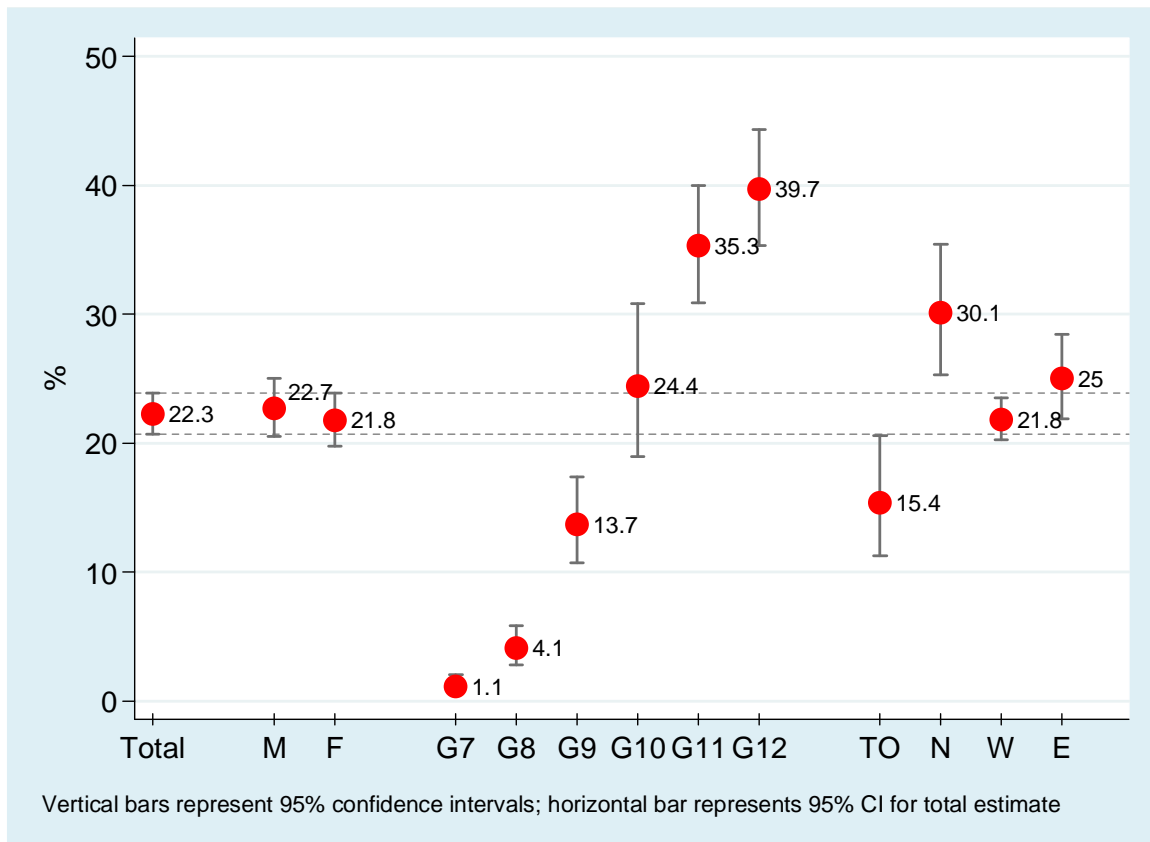


Figure 3.4.7  
 Drunkenness in the Past Month by Sex, Grade, and Region, 2011 OSDUHS

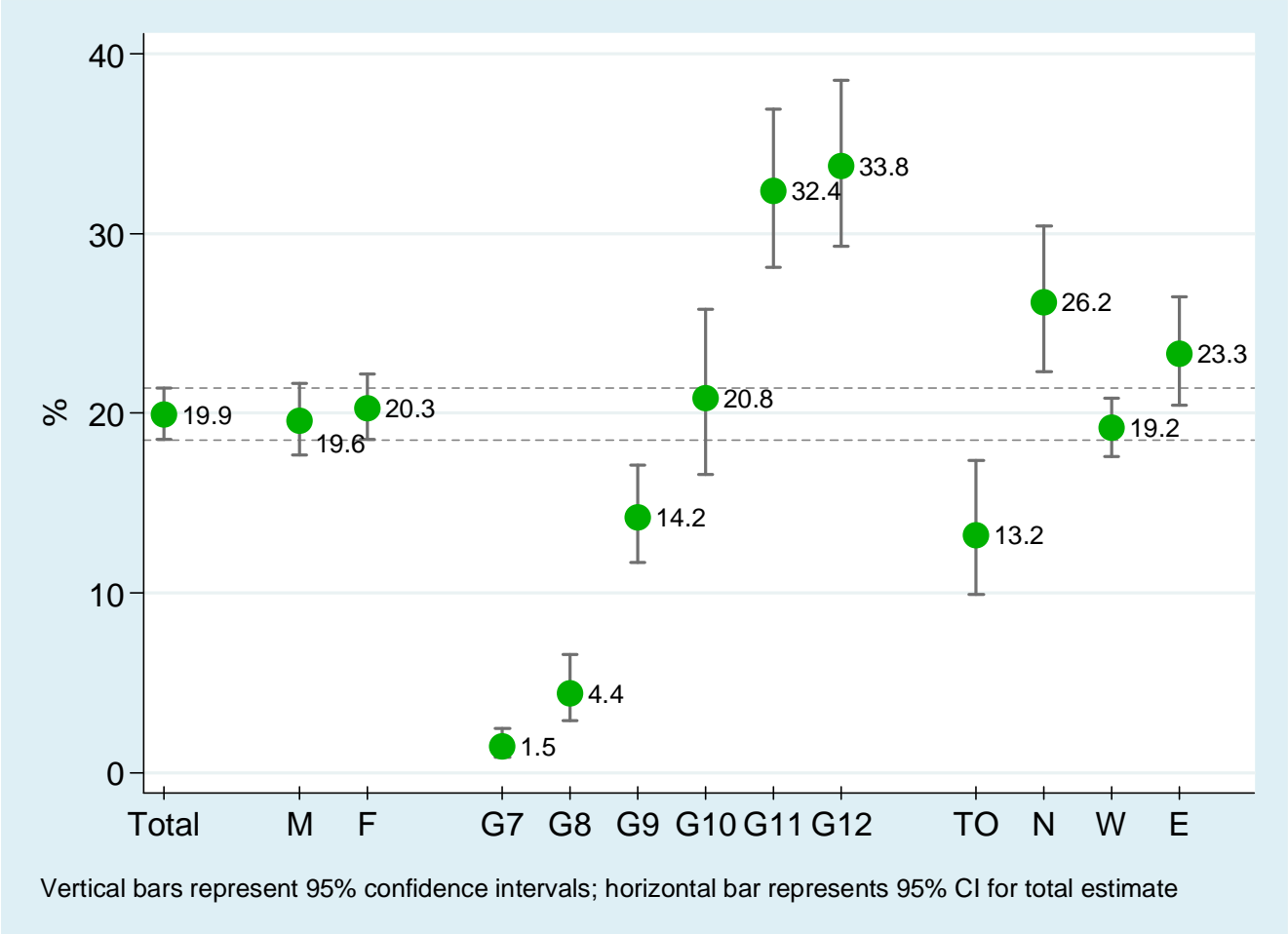


Figure 3.4.8  
 Binge Drinking in the Past Month, 1999–2011 OSDUHS (Grades 7–12)

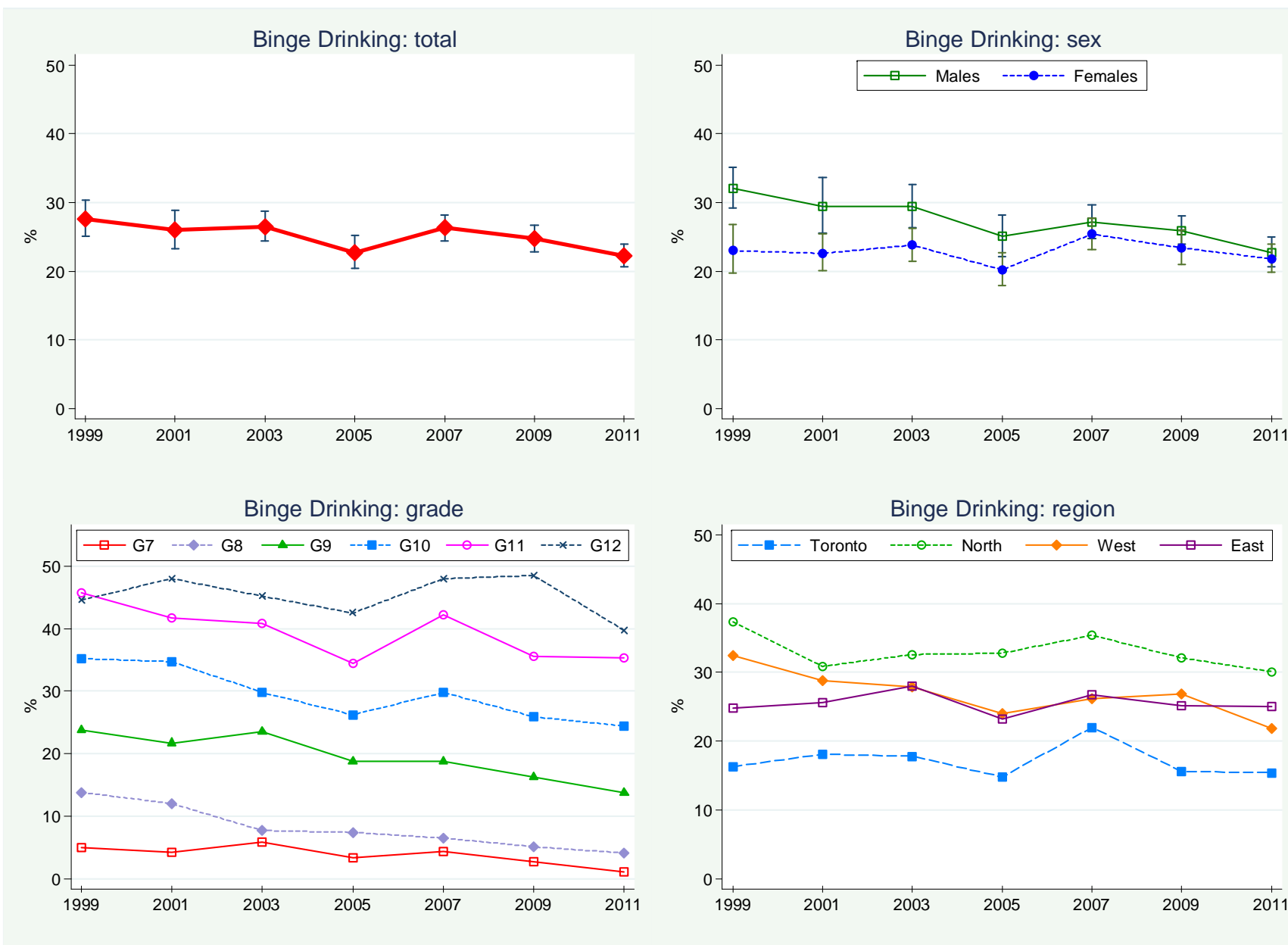


Figure 3.4.9  
 Binge Drinking in the Past Month, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

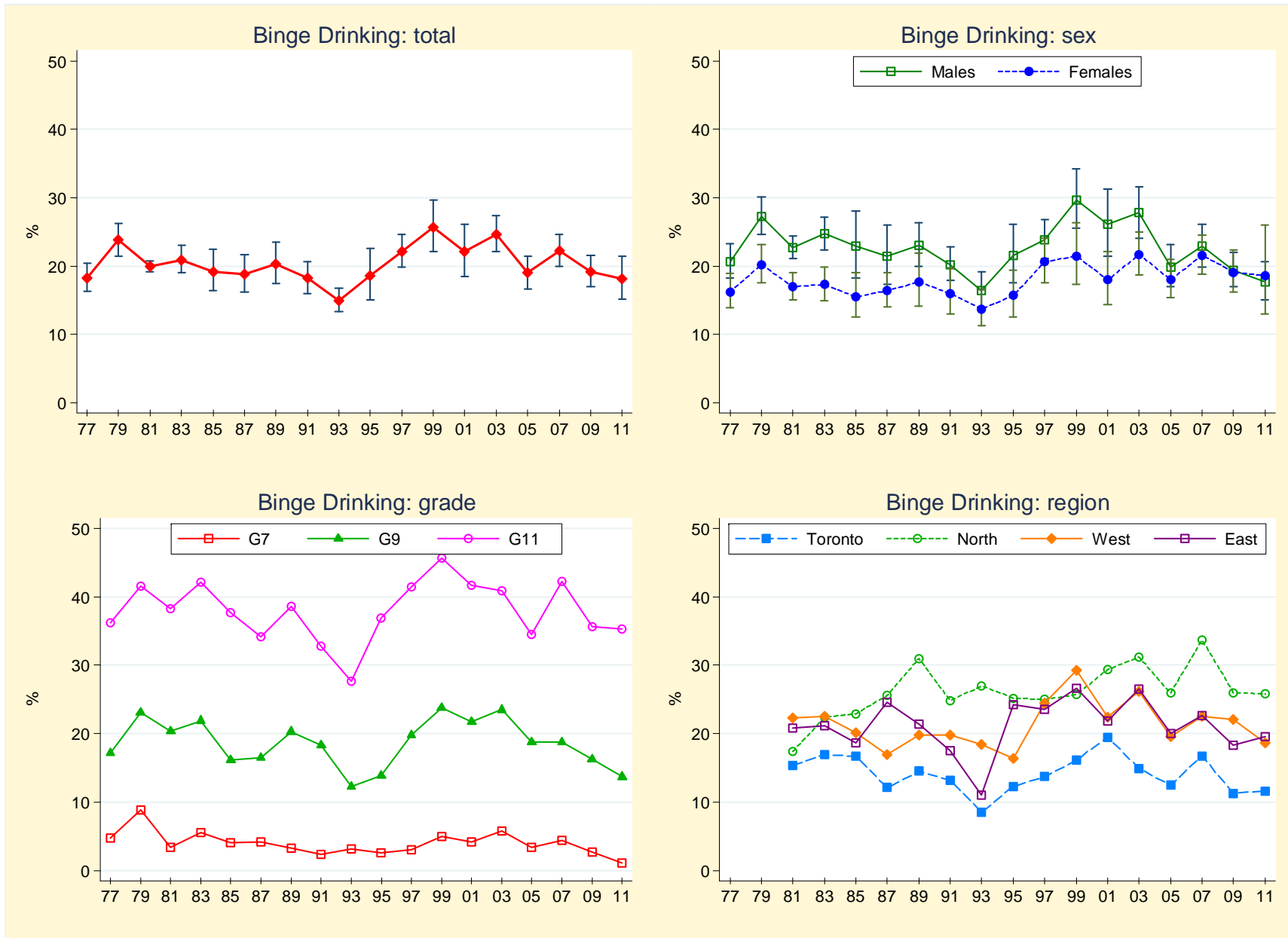


Figure 3.4.10  
 Frequency of Binge Drinking in the Past Month, 1979–2011 OSDUHS  
 (Grades 7, 9, 11 only)

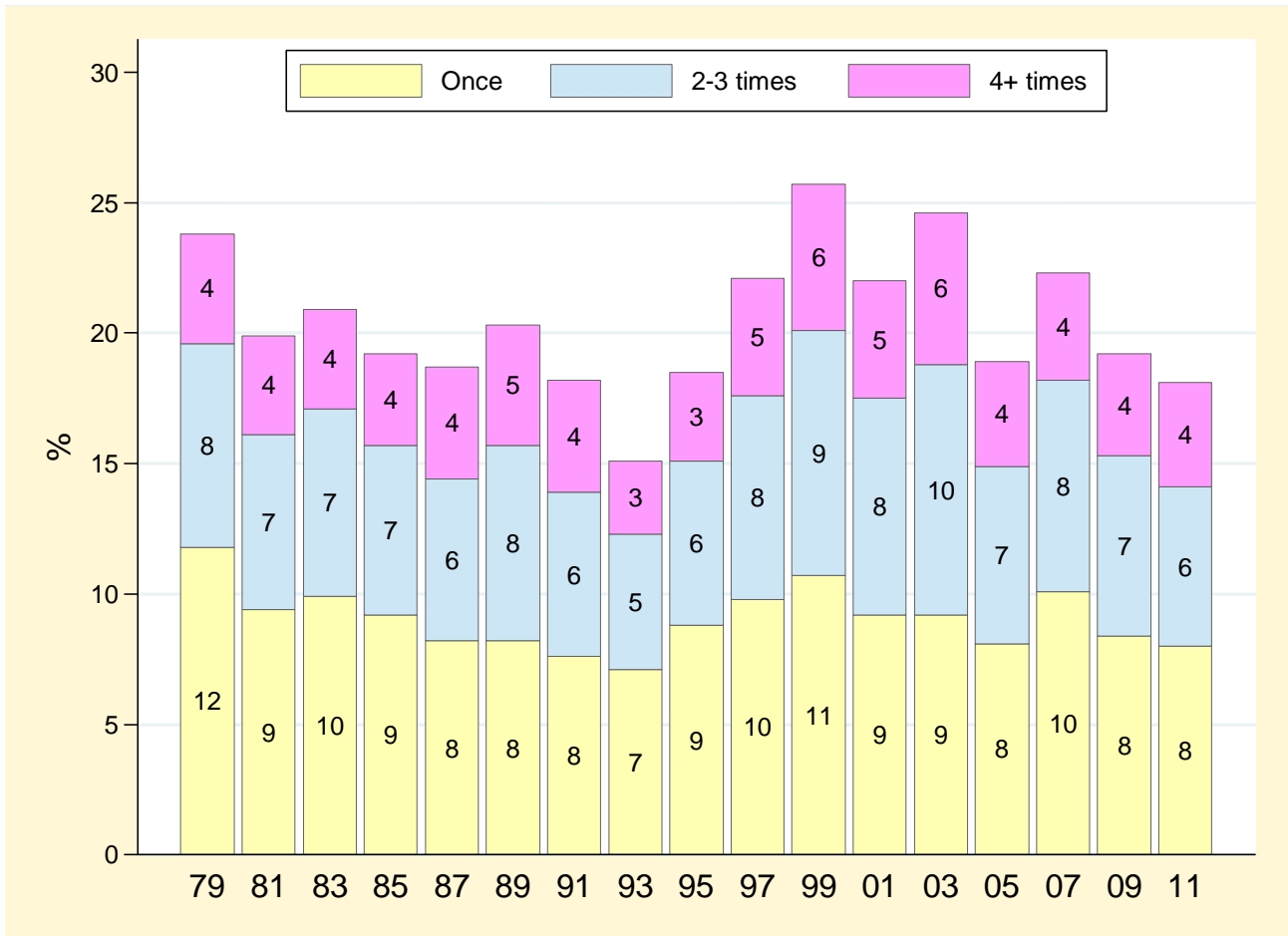


Figure 3.4.11  
 Drunkenness in the Past Month, 1999–2011 OSDUHS (Grades 7–12)

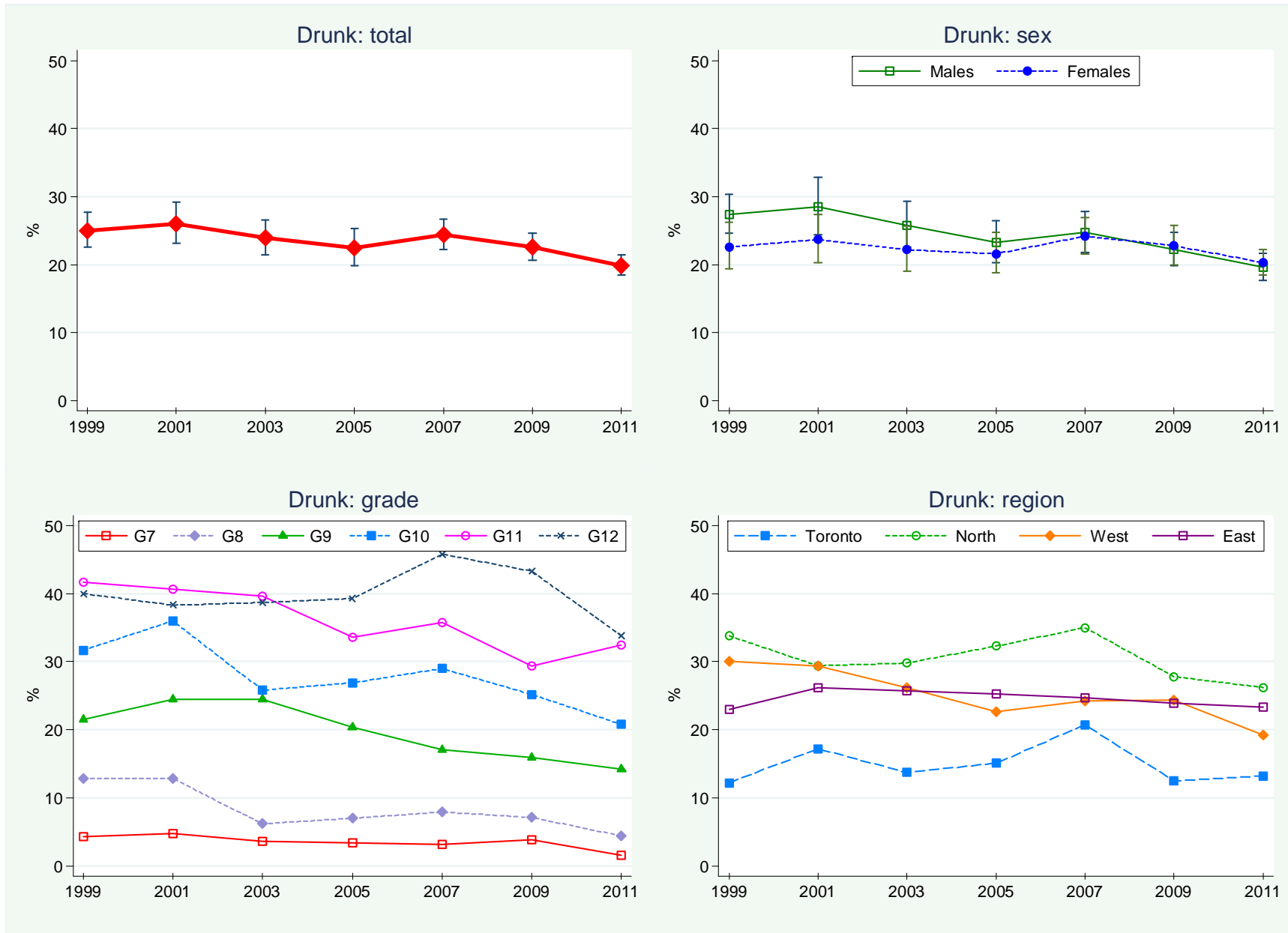


Figure 3.4.12  
 Drunkenness in the Past Month, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

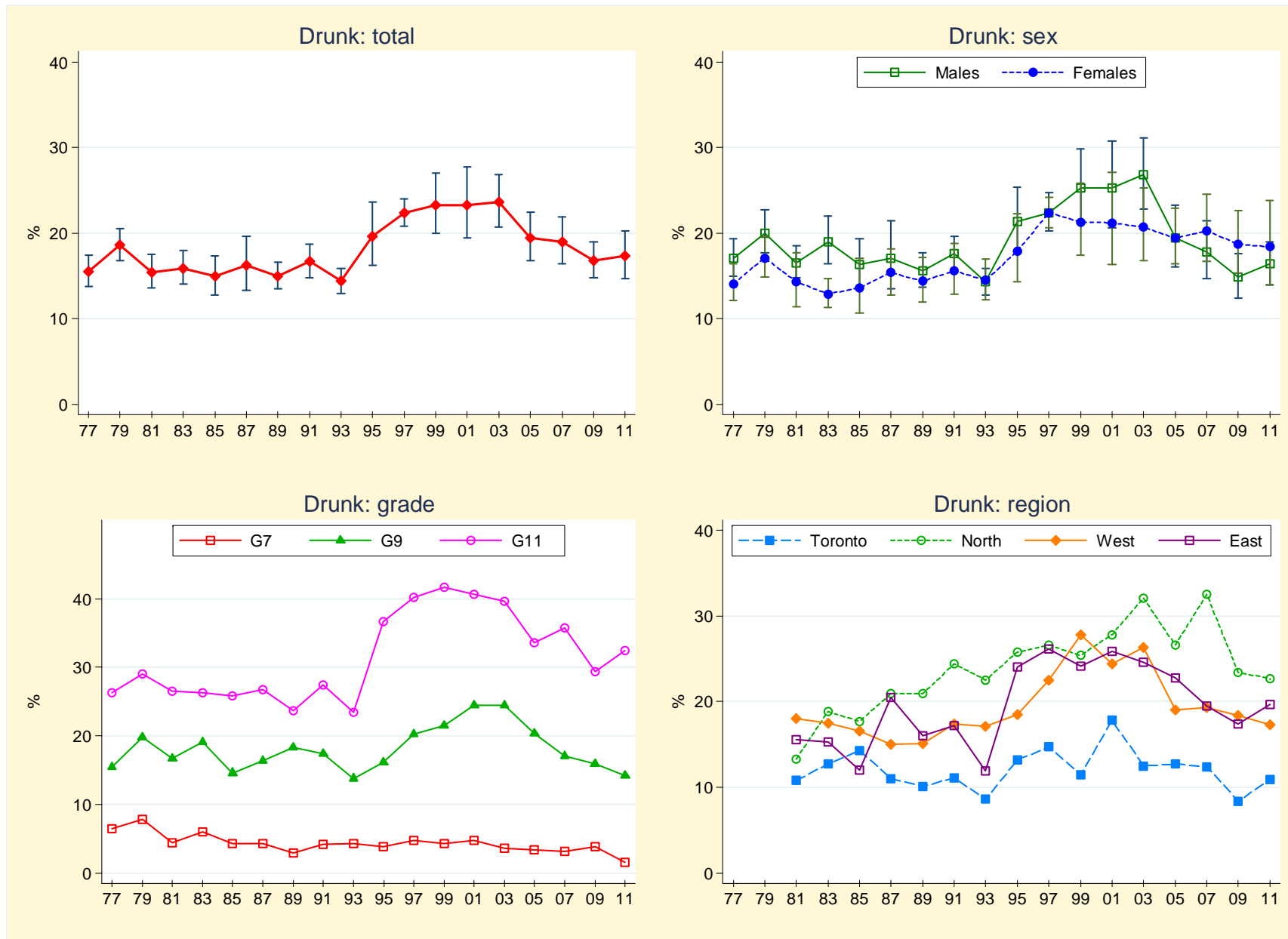


Table 3.4.4: Percentage Reporting Binge Drinking in the Past Month, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (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)
Total <sup>2</sup>	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)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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)
Males <sup>2</sup>	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)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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)
Females <sup>2</sup>	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)
Grade																		
7	4.7 (3.4-6.5)	8.8 (6.8-11.2)	3.4 (2.5-4.5)	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)
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)
9	17.2 (14.3-20.6)	23.1 (20.0-26.5)	20.4 (19.1-21.7)	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)
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)
11	36.2 (32.2-40.5)	41.6 (36.8-46.5)	38.3 (32.3-44.9)	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)
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)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	
Region																			
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>16.3</b>	<b>18.1</b>	<b>17.8</b>	<b>14.8</b>	<b>22.0</b>	<b>15.6</b>	<b>15.4</b>
													(13.0-20.3)	(12.0-26.4)	(14.5-21.7)	(11.4-19.1)	(16.4-28.7)	(10.7-22.1)	(11.3-20.6)
Toronto <sup>2</sup>	—	—	<b>15.4</b>	<b>16.9</b>	<b>16.7</b>	<b>12.1</b>	<b>14.5</b>	<b>13.2</b>	<b>8.5</b>	<b>12.3</b>	<b>13.7</b>	<b>16.1</b>	<b>19.5</b>	<b>14.9</b>	<b>12.5</b>	<b>16.7</b>	<b>11.3</b>	<b>11.6</b>	
			(13.1-17.9)	(12.4-22.5)	(10.1-26.2)	(8.5-16.8)	(7.4-26.3)	(10.3-16.7)	(6.4-11.1)	(6.9-21.1)	(11.8-15.8)	(12.6-20.4)	(11.7-30.8)	(11.0-19.7)	(9.7-15.8)	(11.0-24.4)	(5.9-20.5)	(9.3-14.4)	
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>37.4</b>	<b>30.9</b>	<b>32.6</b>	<b>32.8</b>	<b>35.4</b>	<b>32.1</b>	<b>30.1</b>
													(31.1-44.2)	(26.0-36.3)	(28.2-37.3)	(28.5-37.4)	(31.3-39.6)	(28.1-36.5)	(25.3-35.4)
North <sup>2</sup>	—	—	<b>17.4</b>	<b>22.4</b>	<b>22.9</b>	<b>25.6</b>	<b>31.0</b>	<b>24.8</b>	<b>27.0</b>	<b>25.2</b>	<b>25.0</b>	<b>25.7</b>	<b>29.4</b>	<b>31.2</b>	<b>25.9</b>	<b>33.7</b>	<b>26.0</b>	<b>25.8</b>	
			(14.2-21.3)	(18.2-27.4)	(18.6-27.9)	(17.0-36.6)	(22.2-41.4)	(15.8-36.9)	(21.5-33.2)	(18.4-33.4)	(20.4-30.2)	(19.0-33.8)	(23.4-36.1)	(25.6-37.3)	(21.6-30.7)	(27.2-41.0)	(20.2-32.7)	(18.0-35.5)	
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>32.4</b>	<b>28.8</b>	<b>27.9</b>	<b>24.0</b>	<b>26.2</b>	<b>26.9</b>	<b>21.8</b>
													(27.9-37.3)	(24.6-33.4)	(24.3-31.8)	(20.5-27.8)	(23.5-29.1)	(23.8-30.2)	(20.2-23.5)
West <sup>2</sup>	—	—	<b>22.3</b>	<b>22.5</b>	<b>20.1</b>	<b>17.0</b>	<b>19.8</b>	<b>19.8</b>	<b>18.4</b>	<b>16.4</b>	<b>24.5</b>	<b>29.3</b>	<b>22.4</b>	<b>26.2</b>	<b>19.6</b>	<b>22.5</b>	<b>22.1</b>	<b>18.6</b>	
			(21.5-23.1)	(18.9-26.6)	(17.0-23.8)	(12.5-22.6)	(15.3-25.3)	(16.9-23.2)	(15.4-21.9)	(10.0-25.7)	(22.1-27.1)	(22.6-37.0)	(17.8-27.9)	(22.1-30.8)	(16.2-23.5)	(19.6-25.6)	(18.6-26.2)	(13.2-25.7)	
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>24.8</b>	<b>25.6</b>	<b>28.0</b>	<b>23.2</b>	<b>26.7</b>	<b>25.1</b>	<b>25.0</b>
													(21.1-28.9)	(21.5-30.3)	(24.2-32.1)	(18.5-28.8)	(23.9-29.7)	(22.3-28.0)	(21.9-28.4)
East <sup>2</sup>	—	—	<b>20.8</b>	<b>21.2</b>	<b>18.6</b>	<b>24.6</b>	<b>21.4</b>	<b>17.5</b>	<b>11.0</b>	<b>24.2</b>	<b>23.5</b>	<b>26.6</b>	<b>21.8</b>	<b>26.5</b>	<b>20.0</b>	<b>22.6</b>	<b>18.3</b>	<b>19.6</b>	
			(18.9-22.9)	(18.9-23.6)	(12.5-26.8)	(21.2-28.4)	(18.6-24.5)	(13.0-23.1)	(8.9-13.6)	(22.0-26.5)	(17.3-31.2)	(21.1-33.0)	(15.2-30.3)	(21.6-32.2)	(15.3-25.9)	(18.7-26.9)	(15.2-21.7)	(16.4-23.1)	

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) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>d</sup> significant long-term non-linear trend, p<.001.

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, 1999–2011 OSDUHS (Grades 7–12)

		Percentage of Total Sample						
	(N)	1999 (4447)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9112)	2011 (9288)
<b>Total</b>								
	Never	72.4	74.0	73.5	77.3	73.7	75.3	77.8
	Once	11.3	10.7	10.1	9.3	11.4	9.7	9.2
	2 to 3 times	10.2	9.9	9.9	8.5	9.6	9.2	8.2
	4 + times	6.1	5.4	6.4	4.9	5.2	5.8	4.8
<b>Males</b>								
	Never	67.9	70.6	70.6	74.9	72.9	74.1	77.3
	Once	11.0	10.8	10.7	9.1	11.3	9.4	9.1
	2 to 3 times	12.8	11.4	10.2	9.6	9.5	9.6	8.4
	4 + times	8.3	7.1	8.4	6.3	6.3	6.9	5.2
<b>Females</b>								
	Never	77.0	77.4	76.2	79.8	74.6	76.6	78.2
	Once	11.7	10.6	9.6	9.5	11.5	10.0	9.3
	2 to 3 times	7.5	8.4	9.6	7.3	9.7	8.8	8.0
	4 + times	3.9	3.6	4.5	3.4	4.1	4.6	4.4
<b>Grade 7</b>								
	Never	95.0	95.8	94.2	96.6	95.6	97.3	98.9
	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	†	†	†	†	†	†	†
<b>Grade 8</b>								
	Never	86.2	88.0	92.3	92.6	93.5	95.0	95.9
	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	†	†	†	†	†	†
<b>Grade 9</b>								
	Never	76.2	78.3	76.5	81.2	81.2	83.7	86.3
	Once	11.4	10.6	10.3	8.5	8.8	9.0	6.5
	2 to 3 times	8.8	7.9	9.3	7.2	6.6	5.0	5.7
	4 + times	3.6	3.2	3.9	3.0	3.3	2.3	1.4
<b>Grade 10</b>								
	Never	64.8	65.3	70.2	73.8	70.2	74.1	75.6
	Once	12.6	12.9	11.5	11.9	14.0	10.9	10.0
	2 to 3 times	16.3	14.6	11.0	10.2	10.7	10.4	9.7
	4 + times	6.4	7.1	7.3	4.1	5.2	4.7	4.6
<b>Grade 11</b>								
	Never	54.3	58.3	59.1	65.5	57.8	64.4	64.7
	Once	16.3	15.0	13.0	13.1	18.2	13.6	15.0
	2 to 3 times	17.1	16.1	15.8	12.5	15.9	13.5	10.8
	4 + times	12.3	10.5	12.1	8.9	8.2	8.4	9.6
<b>Grade 12</b>								
	Never	55.4	52.0	54.8	57.5	52.0	51.6	60.3
	Once	17.4	16.5	16.2	15.5	18.0	16.0	14.8
	2 to 3 times	14.2	18.5	16.6	15.9	18.4	18.3	15.7
	4 + times	13.1	13.0	12.4	11.1	11.6	14.1	9.2

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, 1987–2011 OSDUHS (Grades 7, 9, 11 only)

		Percentage of Total Sample												
	(N)	1987 (3376)	1989 (3040)	1991 (2961)	1993 (2617)	1995 (2907)	1997 (3072)	1999 (2421)	2001 (2013)	2003 (3389)	2005 (3969)	2007 (3215)	2009 (4424)	2011 (4469)
<b>Total</b>														
	Never	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
	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
	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
	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
<b>Males</b>														
	Never	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
	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
	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
	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
<b>Females</b>														
	Never	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
	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
	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 + 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
<b>Grade 7</b>														
	Never	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
	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	†	†	†	†	†	†	†	†	†	†	†	†	†
<b>Grade 9</b>														
	Never	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
	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
	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
	4 + times	3.3	3.1	3.2	†	†	2.9	3.6	3.2	3.9	3.0	3.3	2.3	1.4
<b>Grade 11</b>														
	Never	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
	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
	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
	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

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 Becoming Drunk in the Past Month, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	
(N <sup>1</sup> )												(2148)	(1837)	(3152)	(3648)	(2935)	(4851)	(9288)	
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(1168)	(953)	(1618)	(1862)	(1488)	(2355)	(4669)	
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	—	25.0 (22.6-27.7)	26.0 (23.1-29.2)	23.9 (21.4-26.6)	22.5 (19.9-25.3)	24.4 (22.3-26.7)	22.6 (20.6-24.6)	19.9 <sup>b</sup> (18.5-21.4)
Total <sup>2</sup>	15.5 (13.8-17.4)	18.6 (16.8-20.5)	15.4 (13.6-17.5)	15.9 (14.1-18.0)	15.0 (12.8-17.3)	16.2 (13.3-19.6)	15.0 (13.5-16.6)	16.7 (14.8-18.7)	14.4 (13.0-15.9)	19.6 (16.2-23.6)	22.4 (20.8-24.0)	23.3 (20.0-27.0)	23.3 (19.4-27.7)	23.6 (20.7-26.8)	19.4 (16.8-22.4)	19.0 (16.4-21.9)	16.8 (14.8-19.0)	17.3 <sup>d</sup> (14.7-20.3)	
Sex																			
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	27.4 (24.6-30.3)	28.5 (24.4-32.9)	25.8 (22.6-29.3)	23.3 (20.3-26.5)	24.7 (21.8-27.8)	22.3 (19.9-24.8)	19.6 <sup>b</sup> (17.7-21.7)
Males <sup>2</sup>	17.1 (15.0-19.3)	20.0 (17.7-22.7)	16.5 (14.8-18.5)	19.0 (16.4-22.0)	16.3 (13.6-19.3)	17.1 (13.5-21.4)	15.6 (13.7-17.7)	17.6 (15.7-19.6)	14.3 (12.8-15.9)	21.4 (17.9-25.4)	22.4 (20.3-24.7)	25.3 (21.2-29.8)	25.3 (20.6-30.7)	26.8 (22.8-31.1)	19.4 (16.1-23.3)	17.8 (14.7-21.4)	14.9 (12.4-17.6)	16.4 (14.0-19.0)	
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	22.6 (19.4-26.2)	23.7 (20.3-27.4)	22.2 (19.0-25.7)	21.6 (18.8-24.7)	24.2 (21.6-26.9)	22.8 (20.0-25.8)	20.3 (18.5-22.2)
Females <sup>2</sup>	14.1 (12.1-16.4)	17.1 (14.9-19.6)	14.3 (11.4-17.7)	12.9 (11.3-14.7)	13.6 (10.7-17.1)	15.4 (12.8-18.2)	14.4 (12.0-17.2)	15.6 (12.9-18.8)	14.5 (12.2-17.0)	17.9 (14.3-22.3)	22.4 (20.6-24.2)	21.3 (17.4-25.8)	21.2 (16.3-27.1)	20.7 (16.8-25.3)	19.4 (16.4-22.9)	20.3 (16.7-24.5)	18.7 (15.3-22.6)	18.4 (14.0-23.8)	
Grade																			
7	6.5 (4.9-8.5)	7.8 (6.0-10.1)	4.4 (3.8-5.1)	6.0 (3.8-9.4)	4.3 (2.6-7.2)	4.3 (2.8-6.6)	2.9 (2.3-3.6)	4.2 (3.5-5.1)	4.3 (2.8-6.6)	3.8 (3.0-4.9)	4.8 (3.1-7.4)	4.3 (2.8-6.6)	4.8 (2.8-8.1)	3.6 (2.0-6.5)	3.4 (2.1-5.3)	3.2 (1.6-6.6)	3.8 (2.4-5.9)	1.5 <sup>ab</sup> (0.9-2.4)	
8	—	—	—	—	—	—	—	—	—	—	—	—	12.8 (9.7-16.6)	12.8 (6.5-23.5)	6.2 (4.3-9.0)	7.0 (5.0-9.7)	7.9 (4.9-12.5)	7.1 (4.7-10.5)	4.4 <sup>b</sup> (2.9-6.6)
9	15.5 (12.8-18.6)	19.8 (17.0-22.9)	16.7 (13.6-20.4)	19.1 (17.7-20.5)	14.6 (11.1-19.2)	16.4 (12.4-21.4)	18.3 (15.2-21.8)	17.4 (13.9-21.5)	13.8 (11.0-17.0)	16.1 (10.9-23.1)	20.2 (17.7-22.8)	21.5 (16.7-27.1)	24.5 (19.2-30.8)	24.5 (20.6-28.8)	20.4 (16.4-25.0)	17.1 (13.2-22.0)	15.9 (12.5-20.1)	14.2 (11.7-17.1)	
10	—	—	—	—	—	—	—	—	—	—	—	—	31.7 (26.4-37.4)	36.0 (31.2-41.2)	25.8 (21.0-31.2)	26.9 (22.8-31.4)	29.0 (24.4-33.9)	25.2 (21.1-29.8)	20.8 <sup>b</sup> (16.6-25.8)
11	26.3 (22.9-30.0)	29.0 (25.4-33.0)	26.5 (20.2-33.8)	26.3 (21.4-31.8)	25.8 (21.5-30.7)	26.7 (18.5-36.9)	23.7 (21.3-26.2)	27.4 (23.9-31.1)	23.4 (20.6-26.4)	36.7 (28.9-45.5)	40.2 (37.0-43.4)	41.7 (35.3-48.4)	40.7 (32.5-49.4)	39.6 (33.4-46.1)	33.6 (28.7-39.0)	35.8 (30.8-41.1)	29.4 (25.3-34.0)	32.4 <sup>a</sup> (28.1-36.9)	
12	—	—	—	—	—	—	—	—	—	—	—	—	40.0 (33.5-46.8)	38.3 (25.4-53.1)	38.7 (32.7-45.1)	39.3 (33.9-44.9)	45.8 (40.8-50.9)	43.3 (38.5-48.2)	33.8 <sup>a</sup> (29.3-38.5)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(2148)	(1837)	(3152)	(3648)	(2935)	(4851)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(1168)	(953)	(1618)	(1862)	(1488)	(2355)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	12.2	17.2	13.7	15.1	20.7	12.5	13.2
												(8.8-16.6)	(10.8-26.2)	(8.9-20.5)	(10.4-21.2)	(14.5-28.7)	(7.8-19.5)	(9.9-17.4)
Toronto <sup>2</sup>	—	—	10.8	12.7	14.3	11.0	10.1	11.1	8.6	13.2	14.7	11.5	17.8	12.5	12.7	12.4	8.4	10.9
			(7.8-14.5)	(7.4-20.8)	(11.4-17.7)	(7.2-16.4)	(6.4-15.6)	(7.0-17.0)	(6.5-11.2)	(6.8-24.2)	(14.2-15.2)	(7.9-16.5)	(9.5-30.8)	(7.6-20.1)	(8.1-19.2)	(7.0-21.1)	(4.0-16.9)	(8.4-13.9)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	33.8	29.4	29.8	32.3	35.0	27.8	26.2
												(28.6-39.3)	(25.2-33.9)	(24.2-36.0)	(27.0-38.0)	(30.0-40.4)	(22.6-33.6)	(22.3-30.4)
North <sup>2</sup>	—	—	13.3	18.8	17.7	20.9	20.9	24.4	22.5	25.8	26.6	25.4	27.8	32.1	26.6	32.5	23.4	22.7
			(9.2-19.0)	(15.2-22.9)	(12.6-24.3)	(16.4-26.3)	(14.3-29.4)	(14.9-37.2)	(16.6-29.7)	(19.1-34.0)	(22.9-30.7)	(18.0-34.4)	(23.1-33.1)	(25.0-40.1)	(21.2-32.8)	(25.5-40.4)	(17.0-31.2)	(16.0-31.2)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	30.1	29.4	26.2	22.6	24.2	24.4	19.2 <sup>ab</sup>
												(25.6-35.0)	(24.8-34.6)	(22.0-30.9)	(19.0-26.6)	(21.5-27.1)	(21.3-27.8)	(17.6-20.8)
West <sup>2</sup>	—	—	18.0	17.5	16.6	15.0	15.1	17.4	17.1	18.5	22.5	27.8	24.4	26.3	19.0	19.3	18.4	17.3
			(15.3-21.0)	(14.9-20.5)	(14.6-18.8)	(10.2-21.6)	(13.4-17.0)	(15.2-19.8)	(15.3-19.1)	(12.4-26.6)	(21.2-23.9)	(21.9-34.6)	(19.5-30.1)	(21.6-31.7)	(15.3-23.3)	(15.9-23.3)	(15.3-21.9)	(12.4-23.6)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	23.0	26.2	25.7	25.3	24.7	23.9	23.3
												(19.3-27.2)	(22.0-31.0)	(21.9-29.8)	(20.2-31.0)	(20.8-29.2)	(21.1-27.0)	(20.4-26.5)
East <sup>2</sup>	—	—	15.6	15.3	12.0	20.5	16.0	17.2	11.9	24.0	26.1	24.1	25.9	24.6	22.8	19.5	17.4	19.7
			(14.9-16.4)	(13.1-17.8)	(6.8-20.4)	(15.1-27.3)	(13.5-19.0)	(14.0-20.8)	(8.9-15.8)	(20.5-27.9)	(21.6-31.2)	(18.6-30.6)	(18.8-34.6)	(19.8-30.2)	(17.5-29.2)	(14.5-25.7)	(14.2-21.2)	(16.5-23.4)

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) question asked of a random half sample starting in 1999; (6) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>d</sup> significant long-term non-linear trend, p<.001.

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

## Hazardous or Harmful Drinking (AUDIT Screener)

(Figure 3.4.13; Tables 3.4.7, 3.4.8)

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 is designed to detect 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 medical and physical problems (e.g., dependence), whereas *harmful* drinking refers to a pattern of drinking that is already causing damage to one's health (e.g., alcohol-related injuries). Those with a score of 8 or more (out of 40) are considered to be drinking at a hazardous or harmful level (Cronbach's  $\alpha=.87$ ).

### 2011: Grades 7–12

The ten AUDIT items are presented in Table 3.4.7, while Figure 3.4.13 presents the percentage reaching the criteria for hazardous/harmful drinking (that is, scoring 8 or more on the screener).

- As presented in Table 3.4.7, almost one-fifth (18.1%) of all 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 about one-tenth (9.0%) of students report that they were injured or someone else was injured because of their drinking, during the past 12 months.

- Overall, 17.8% of students report hazardous/harmful drinking (that is, scoring 8 or more). This represents about 175,600 students in grades 7 through 12 in Ontario. Among past-year drinkers, 33.4% drink at this level.

- Males (18.1%) and females (17.6%) are equally likely to report hazardous/harmful drinking.

- There is significant variation by grade, with students in grades 11 and 12 most likely to report hazardous/harmful drinking (about 30%).

- There is significant variation among the regions, with Toronto students (12.5%) least likely to drink hazardously/harmfully and students in the North most likely (23.7%).

### 1999–2011: Grades 7–12

Table 3.4.8 presents trends in hazardous/harmful drinking between 1999 and 2011, for the total sample and by subgroup.

- There was no significant change in hazardous/harmful drinking between 2009 (20.8%) and 2011 (17.8%). The 2011 percentage is also similar to that found in 1999 (18.0%).

- Neither sex shows a statistically significant change in 2011 compared with their respective 2009 estimates, or their respective 1999 estimates.

- None of the grades shows a statistically significant change in 2011 compared with their respective 2009 estimates, or their respective 1999 estimates.

- None of the four regions shows a significant change over the past decade.

Table 3.4.7: Percentage of the Total Sample, and of Past Year Drinkers, Reporting AUDIT Indicators, 2011 OSDUHS (Grades 7–12)

AUDIT Item	% “yes”	
	Total Sample (n=4816)	Past Year Drinkers (n=2501)
<b><i>Alcohol Intake</i></b>		
1. Consumed alcohol during the past 12 months	53.6	--
2. Number of drinks usually have on typical day when drink (% reporting 2+ drinks)	35.8	64.6
3. Consumed 5 or more drinks on one occasion during the past 12 months	30.9	56.1
<b><i>Dependence Indicators (past 12 months)</i></b>		
4. Were not able to stop drinking once you had started	9.1	16.6
5. Failed to do what was normally expected from you because of your drinking	12.4	22.9
6. Needed a first alcoholic drink in the morning to get yourself going after a heavy drinking session	3.9	7.2
<b><i>Adverse Consequences</i></b>		
7. Had a feeling of guilt or remorse after drinking, during the past 12 months	10.9	20.0
8. Been unable to remember what happened the night before because you had been drinking, during the past 12 months	18.1	33.1
9. You or someone else been injured as a result of your drinking		
Yes, but not in the past 12 months:	4.7	7.2
Yes, in the past 12 months:	9.0	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:	0.5	0.8
Yes, in the past 12 months:	2.2	3.8
<b>AUDIT 8+ Score</b> (95% CI)	<b>17.8</b> (15.9-20.0)	<b>33.4</b> (29.8-37.2)

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.

Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.4.13  
 Percentage of the Total Sample Reporting Hazardous/Harmful Drinking  
 (AUDIT 8+) by Sex, Grade, and Region, 2011 OSDUHS

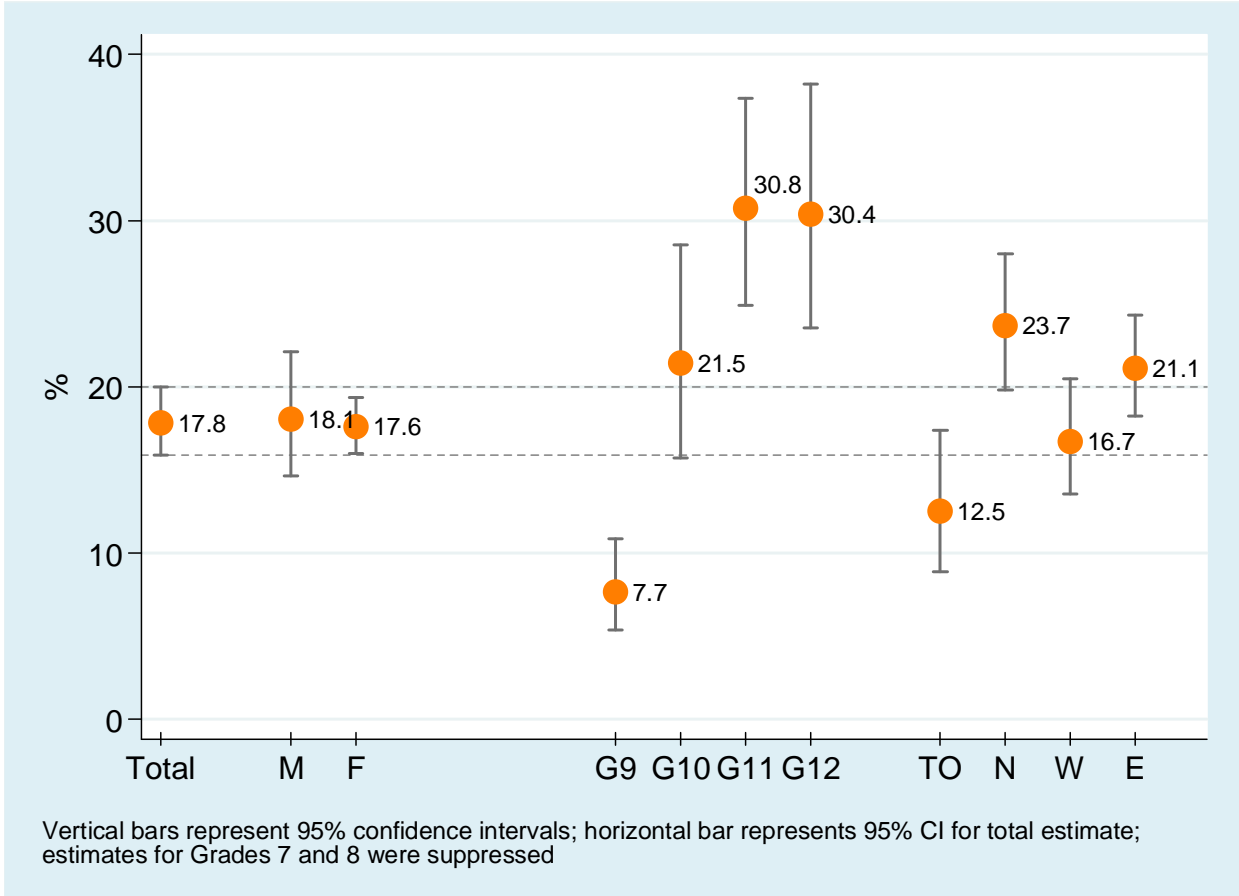


Table 3.4.8: Percentage of the Total Sample Reporting Hazardous/Harmful Drinking (AUDIT 8+), 1999–2011 OSDUHS (Grades 7–12)

	(N)	1999 (2299)	2001 (2061)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)
Total (95% CI)		<b>18.0</b> (15.8-20.4)	<b>14.6</b> (12.2-17.3)	<b>18.8</b> (16.7-21.1)	<b>15.9</b> (13.6-18.5)	<b>18.6</b> (16.8-20.6)	<b>20.8</b> (18.8-22.9)	<b>17.8</b> (15.9-20.0)
Sex								
Males		<b>20.3</b> (17.3-23.6)	<b>17.3</b> (14.0-21.1)	<b>21.1</b> (17.8-24.9)	<b>17.7</b> (14.4-21.5)	<b>18.8</b> (16.5-21.4)	<b>20.9</b> (18.3-23.7)	<b>18.1</b> (14.6-22.1)
Females		<b>15.7</b> (13.0-18.7)	<b>11.9</b> (9.6-14.6)	<b>16.7</b> (14.6-19.0)	<b>14.1</b> (12.0-16.4)	<b>18.4</b> (16.2-20.8)	<b>20.6</b> (18.3-23.2)	<b>17.6</b> (16.0-19.4)
Grade								
7		†	†	†	†	†	†	†
8		<b>8.5</b> (6.4-11.3)	<b>5.3</b> (3.0-9.2)	†	<b>5.5</b> (3.2-9.4)	<b>4.0</b> (2.2-7.0)	<b>4.8</b> (2.8-8.0)	†
9		<b>15.1</b> (10.6-21.0)	<b>10.4</b> (7.2-14.8)	<b>13.2</b> (10.8-16.2)	<b>11.3</b> (8.0-15.5)	<b>15.3</b> (11.6-20.0)	<b>10.9</b> (8.0-14.8)	<b>7.7</b> (5.4-10.8)
10		<b>25.5</b> (19.5-32.6)	<b>21.2</b> (16.0-27.4)	<b>23.3</b> (18.8-28.5)	<b>17.7</b> (14.4-21.6)	<b>19.7</b> (16.6-23.2)	<b>21.3</b> (17.4-25.7)	<b>21.5</b> (15.7-28.6)
11		<b>29.5</b> (23.8-36.0)	<b>27.0</b> (20.5-34.5)	<b>29.6</b> (24.5-35.2)	<b>26.3</b> (22.3-30.8)	<b>31.8</b> (27.0-37.0)	<b>31.1</b> (25.2-37.6)	<b>30.8</b> (24.9-37.3)
12		<b>28.2</b> (21.1-36.6)	<b>28.0</b> (21.9-34.9)	<b>32.6</b> (27.0-38.7)	<b>30.2</b> (25.2-35.6)	<b>33.5</b> (28.9-38.4)	<b>41.5</b> (37.2-46.1)	<b>30.4</b> (23.5-38.2)
Region								
Toronto		<b>7.8</b> (5.4-11.0)	<b>6.1</b> (2.5-13.9)	<b>13.7</b> (10.1-18.4)	<b>9.4</b> (7.0-12.6)	<b>13.2</b> (8.6-19.8)	<b>11.9</b> (7.9-17.6)	<b>12.5</b> (8.9-17.4)
North		<b>30.7</b> (24.5-37.6)	<b>20.9</b> (16.5-26.1)	<b>21.7</b> (17.7-26.4)	<b>22.2</b> (19.4-25.3)	<b>26.4</b> (21.0-32.7)	<b>23.7</b> (18.4-30.0)	<b>23.7</b> (19.8-28.0)
West		<b>20.0</b> (16.2-24.4)	<b>16.4</b> (12.6-21.1)	<b>20.5</b> (17.2-24.3)	<b>17.4</b> (14.2-21.3)	<b>19.0</b> (16.1-22.2)	<b>21.6</b> (18.6-25.0)	<b>16.7</b> (13.6-20.5)
East		<b>17.6</b> (14.0-22.0)	<b>15.3</b> (11.2-20.5)	<b>18.6</b> (14.6-23.4)	<b>15.8</b> (11.2-21.8)	<b>19.3</b> (16.7-22.2)	<b>23.2</b> (19.8-26.8)	<b>21.1</b> (18.2-24.3)

Notes: (1) entries in brackets are 95% confidence intervals; (2) based on a random half sample in each year; (3) † estimate suppressed due to unreliability; (4) no significant differences 2011 vs. 2009 or 2011 vs. 1999.

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 2011 (Grades 7–12)	Trends in Cannabis Use
Total Sample	<ul style="list-style-type: none"> <li>Overall, 22.0% of students report using cannabis at least once during the 12 months before the survey. With the sampling error, we estimate that between 20.5% and 23.7% of Ontario students in grades 7 through 12 use cannabis. The percentage of 22.0% represents about 221,900 students.</li> </ul>	<ul style="list-style-type: none"> <li>Among grades 7 through 12, cannabis use significantly decreased between 2009 (25.6%) and 2011 (22.0%). Use is currently lower than it was in 1999 (28.0%), and the years since then. That is, among the total sample of students in grades 7 through 12, the 2011 estimate is the lowest since 1999.</li> <li>Over the long-term (grades 7, 9, 11 only), the 2011 level 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.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>Males (23.0%) and females (21.0%) are equally likely to use cannabis.</li> </ul>	<ul style="list-style-type: none"> <li>Cannabis use among males significantly decreased between 2009 (28.8%) and 2011 (23.0%). Use among males is also significantly lower today than in 1999 (31.9%). Females show no significant change since 1999.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Cannabis use significantly increases with grade, increasing from 2.4% among 7<sup>th</sup>-graders to about 36% among 11<sup>th</sup>- and 12<sup>th</sup>-graders.</li> </ul>	<ul style="list-style-type: none"> <li>Only students in grade 9 and grade 12 show a significant decline in cannabis use between 2009 and 2011. Among students in grades 8, 9, and 11, use is currently significantly lower compared with their respective estimates from 1999.</li> </ul>
Region	<ul style="list-style-type: none"> <li>There are significant regional differences, with students in Toronto (18.6%) least likely to use, whereas students in the North (29.8%) are most likely.</li> </ul>	<ul style="list-style-type: none"> <li>Only the West region shows a significant decline in cannabis use between 2009 (27.2%) and 2011 (20.8%). The 2011 estimate is also lower than that found in 1999 (31.1%). No other region showed a significant change in cannabis use since 1999.</li> </ul>

Figure 3.5.1  
 Past Year Cannabis Use by Sex, Grade, and Region, 2011 OSDUHS

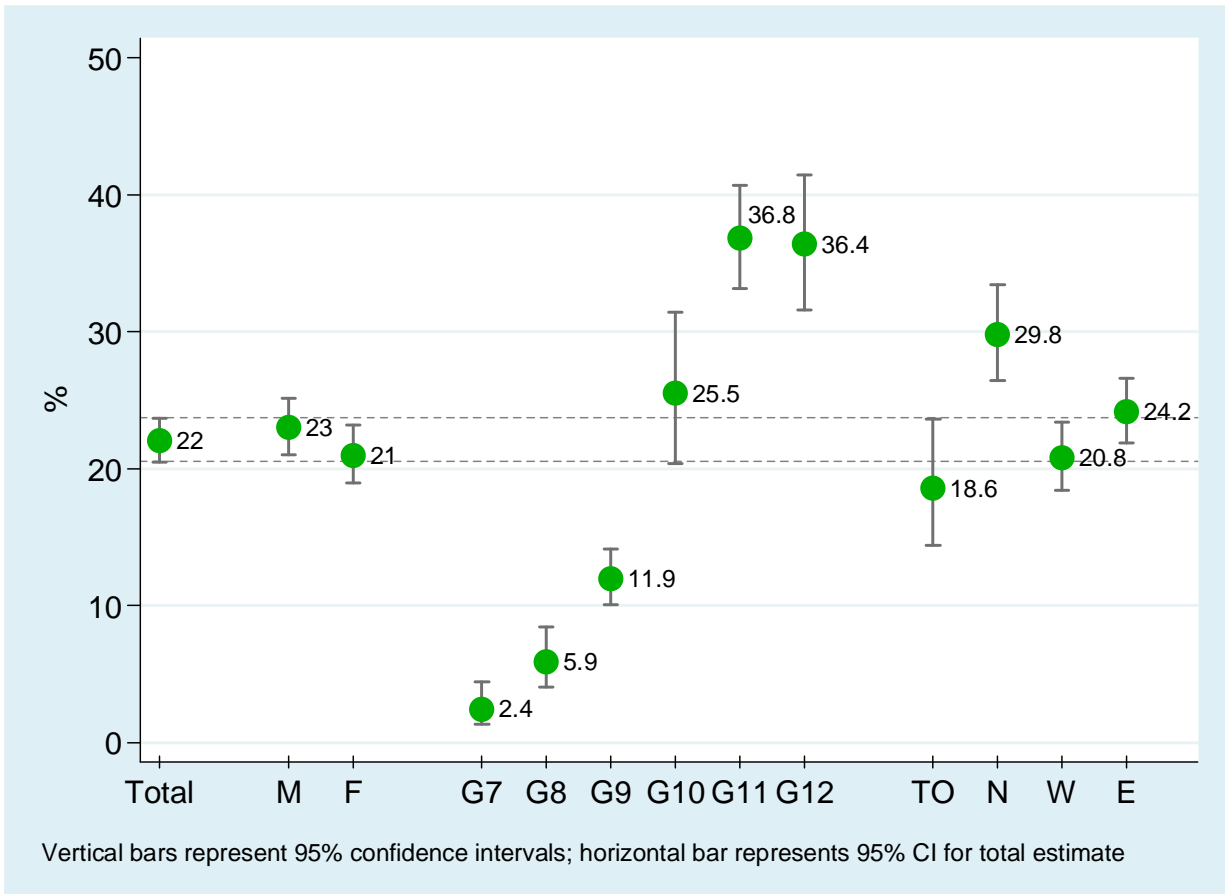


Figure 3.5.2  
 Past Year Cannabis Use, 1999–2011 OSDUHS (Grades 7–12)

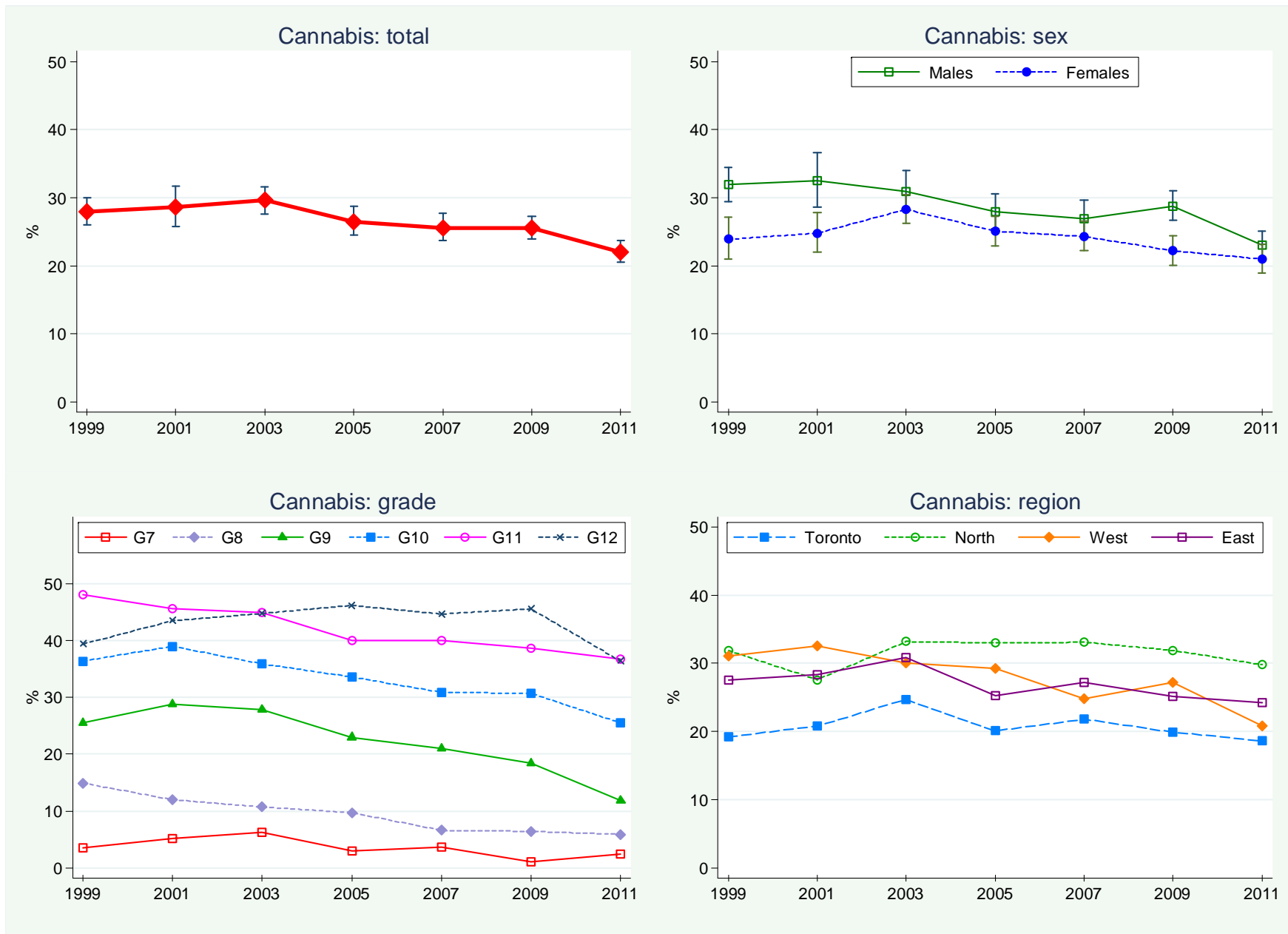


Figure 3.5.3  
 Past Year Cannabis Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

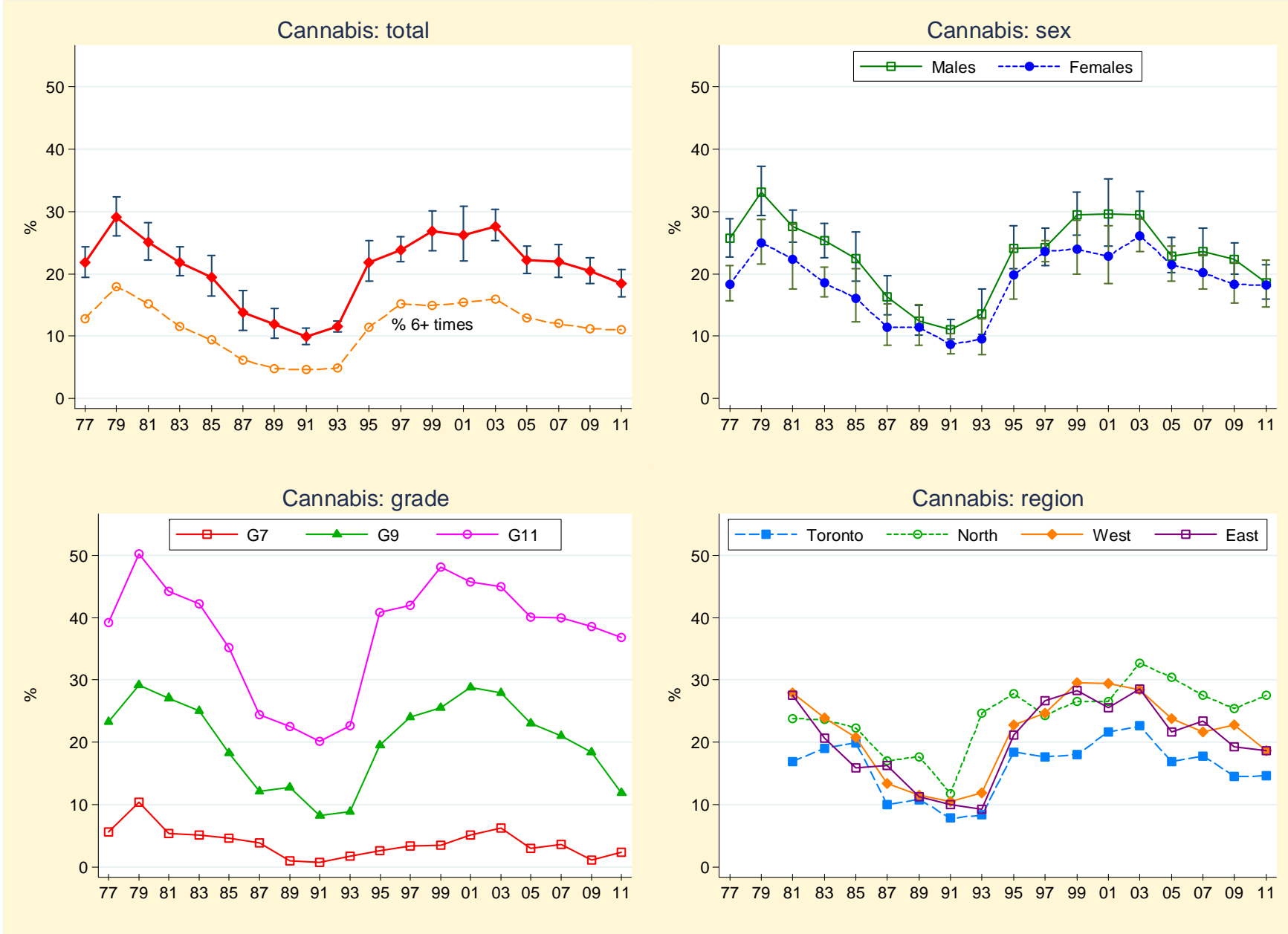


Table 3.5.1: Percentage Reporting Cannabis Use in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (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)
Total <sup>2</sup>	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)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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)
Males <sup>2</sup>	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)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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)
Females <sup>2</sup>	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)
Grade																		
7	5.6 (4.1-7.5)	10.4 (8.2-13.0)	5.4 (4.3-6.7)	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)
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)
9	23.3 (19.3-27.8)	29.2 (24.1-34.8)	27.1 (24.0-30.4)	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)
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)
11	39.2 (34.4-44.1)	50.2 (44.3-56.1)	44.2 (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)
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)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	19.2	20.8	24.7	20.1	21.8	19.9	18.6
												(16.2-22.6)	(13.2-31.3)	(20.3-29.8)	(16.2-24.6)	(14.9-30.8)	(15.2-25.5)	(14.4-23.6)
Toronto <sup>2</sup>	—	—	16.9	19.0	19.9	10.0	10.8	7.8	8.3	18.4	17.7	18.0	21.6	22.6	16.9	17.8	14.5	14.6
			(12.8-21.9)	(12.8-27.2)	(16.8-23.4)	(4.8-19.8)	(5.1-21.3)	(7.3-8.2)	(7.8-8.6)	(10.5-30.2)	(14.1-21.9)	(14.2-22.6)	(11.4-37.1)	(16.9-29.6)	(12.8-22.0)	(9.4-31.2)	(8.7-23.2)	(11.7-18.0)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	31.9	27.6	33.2	33.0	33.1	31.9	29.8
												(26.2-38.2)	(22.4-33.6)	(27.9-39.0)	(29.6-36.6)	(28.9-37.7)	(27.8-36.2)	(26.4-33.4)
North <sup>2</sup>	—	—	23.8	23.6	22.3	17.0	17.7	11.8	24.7	27.8	24.3	26.6	26.6	32.7	30.4	27.5	25.4	27.5
			(18.5-30.1)	(18.6-29.4)	(18.0-27.4)	(8.9-29.9)	(14.2-22.0)	(6.6-20.2)	(18.9-31.6)	(22.5-33.8)	(23.1-25.5)	(16.6-39.7)	(18.8-36.2)	(26.8-39.2)	(25.6-35.8)	(21.2-35.0)	(19.6-32.4)	(21.2-34.7)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	31.1	32.6	30.0	29.3	24.8	27.2	20.8 <sup>ab</sup>
												(27.6-34.8)	(28.5-37.1)	(26.7-33.5)	(26.0-32.8)	(22.6-27.3)	(24.7-29.9)	(18.4-23.4)
West <sup>2</sup>	—	—	27.9	23.9	20.8	13.4	11.5	10.5	11.9	22.8	24.7	29.6	29.4	28.5	23.8	21.7	22.8	18.7
			(22.7-33.7)	(20.3-28.0)	(17.1-25.0)	(8.8-20.0)	(8.5-15.3)	(9.0-12.2)	(10.8-13.1)	(18.0-28.4)	(21.8-28.0)	(24.0-35.8)	(24.6-34.6)	(24.8-32.6)	(20.4-27.4)	(18.9-24.7)	(19.9-26.1)	(14.9-23.2)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	27.6	28.4	30.9	25.3	27.2	25.2	24.2
												(24.1-31.4)	(24.1-33.1)	(28.2-33.8)	(21.7-29.2)	(24.1-30.4)	(22.9-27.6)	(21.9-26.6)
East <sup>2</sup>	—	—	27.5	20.7	15.9	16.2	11.3	10.0	9.2	21.2	26.7	28.3	25.6	28.5	21.3	23.4	19.3	18.6
			(23.2-32.3)	(18.6-23.1)	(8.4-28.0)	(13.2-19.7)	(8.0-15.6)	(7.2-13.8)	(7.6-11.1)	(16.8-26.5)	(22.4-31.5)	(23.9-33.3)	(18.7-33.9)	(24.6-32.7)	(17.7-25.3)	(19.8-27.3)	(16.5-22.5)	(16.0-21.5)

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) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.01; <sup>d</sup> significant long-term non-linear 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 3.5.3–3.5.5; Tables 3.2.2a, 3.2.2b, 3.5.2a–3.5.3b)

### 2011: Grades 7–12

- Among all students, 12.9% report using cannabis six times or more during the past year (see Tables 3.2.2a and 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, 13.4% (95% CI: 11.4%–15.7%) of students used cannabis. About 2.3% used on a daily basis – representing about 23,300 Ontario students. Daily cannabis use is more prevalent among males, and among older students. There are no significant differences in daily cannabis use among the regions.

### 1999–2011: Grades 7–12

- The percentage reporting any cannabis use in the past month is significantly lower in 2011 (13.4%) versus 2009 (17.2%), and 1999 (20.9%). There have been no significant changes in daily cannabis use between 1999 and 2011.

### 1981–2011: Grades 7, 9, 11

- Among students in grades 7, 9, and 11 only, cannabis use six times or more 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 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 2011 is significantly higher compared with estimates from the late 1980s and early 1990s, but lower than the peak evident in the late 1990s/early 2000s.

Figure 3.5.4  
Daily Cannabis Use in the Past Month by Sex, Grade, and Region, 2011 OSDUHS

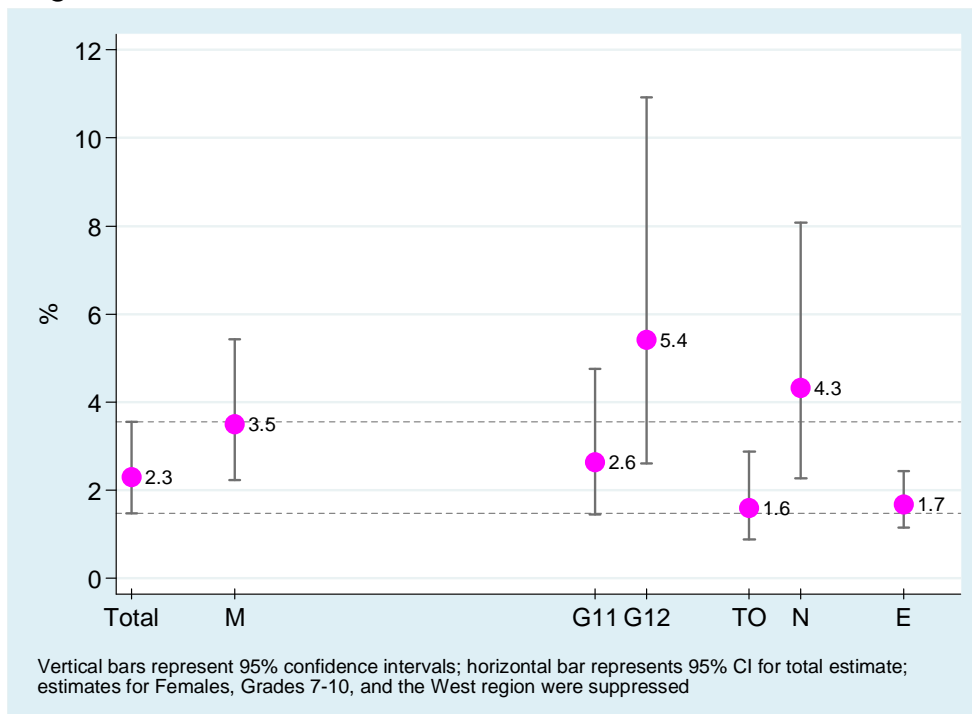


Table 3.5.2a: Frequency of Cannabis Use in the Past Year, 1999–2011 OSDUHS (Grades 7–12)

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
Frequency:							
<b>Not Used</b>	72.0	71.4	70.4	73.5	74.4	74.4	78.0
<b>1-2 times</b>	8.1	7.0	8.6	7.4	6.9	6.6	5.6
<b>3-5 times</b>	4.3	5.2	4.5	4.2	4.6	4.6	3.4
<b>6-9 times</b>	3.6	3.5	3.4	2.6	3.0	2.7	2.6
<b>10-19 times</b>	3.4	3.6	3.3	3.3	3.2	3.3	2.8
<b>20-39 times</b>	2.8	2.8	2.6	2.3	2.2	2.3	1.7
<b>40+ times</b>	5.8	6.6	7.2	6.7	5.7	6.2	5.8

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, 1981–2011 OSDUHS (Grades 7, 9, 11 only)

	<b>1981</b>	<b>1983</b>	<b>1985</b>	<b>1987</b>	<b>1989</b>	<b>1991</b>	<b>1993</b>	<b>1995</b>	<b>1997</b>	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Frequency:																
<b>Not Used</b>	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
<b>1-2 times</b>	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
<b>3-5 times</b>	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
<b>6-9 times</b>	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
<b>10-19 times</b>	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
<b>20-39 times</b>	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
<b>40+ times</b>	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

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

Table 3.5.3a: Frequency of Cannabis Use in the Past Month, 1999–2011 OSDUHS (Grades 7–12)

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

Notes: (1) † estimate suppressed due to unreliability; (2) estimates since 2001 are based on a random half sample in each year; (2) <sup>a</sup> 2011 vs. 2009 significant difference,  $p < .01$ ; <sup>b</sup> 2011 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 3.5.5  
Frequency of Cannabis Use in the Past Month, 1983–2011  
OSDUHS (Grades 7, 9, 11 only)

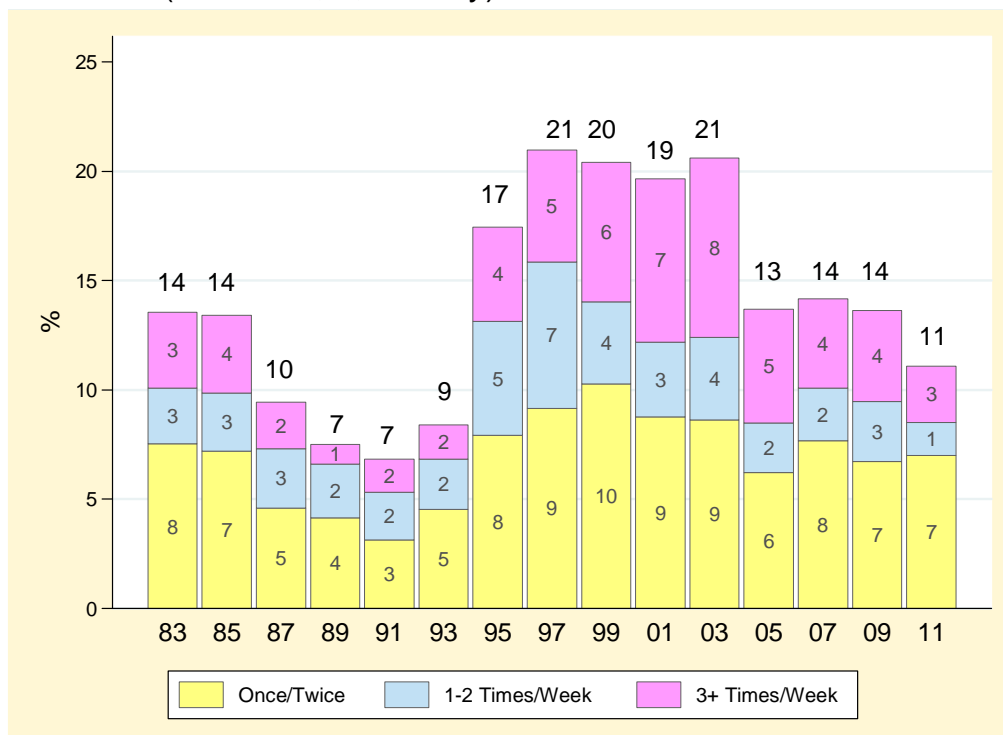


Table 3.5.3b: Frequency of Cannabis Use in the Past Month, 1983–2011 OSDUHS (Grades 7, 9, 11 only)

		1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
	(N)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(2544)	(2421)	(953)	(1618)	(2107)	(1727)	(2355)	(2415)
<b>Not Used in Past Month</b>																
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
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
	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
<b>1-2 Times</b>																
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
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
	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
<b>1-2 Times Each Week</b>																
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
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
	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
<b>3-6 Times Each Week</b>																
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
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
	Females	†	1.5	†	†	†	†	2.4	2.1	2.0	4.2	2.3	1.9	†	1.4	1.0
<b>Daily Use</b>																
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
Sex	Males	†	†	†	†	†	†	2.1	2.8	3.3	4.8	6.3	4.2	3.2	3.2	1.7
	Females	†	†	†	†	†	†	†	†	1.6	†	2.4	1.4	1.4	1.6	†

Notes: (1) † estimate suppressed due to unreliability; (2) estimates since 2001 are based on a random half sample in each year.

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

## Number of Marijuana Joints Consumed (Among Past Year Users)

(Table 3.5.4)

2011: Grades 7–12

■ In 2011, roughly 15% of past year cannabis users in grades 7 through 12 smoked less than one joint per occasion during the past four weeks; 18.8% smoked about one joint; 16.6% smoked two to three joints; and 13.8% smoked four or more joints. Just over one-third of past year users did not use marijuana during the four weeks before the survey.

1999–2011: Grades 7–12

□ The percentage of past year users reporting a high quantity of marijuana (i.e., four or more joints) consumed per occasion did not substantially change over the past decade.

Table 3.5.4: Number of Marijuana Joints Smoked Per Occasion in the Past Month, Among Past Year Cannabis Users, 1999–2011 OSDUHS (Grades 7–12)

	Percentage of Past Year Cannabis Users							
	(N)	1999 (1137)	2001 (497)	2003 (930)	2005 (1180)	2007 (950)	2009 (1117)	2011 (1019)
No marijuana in the past 4 weeks		13.1	26.4	29.4	32.8	32.9	29.2	36.0
Less than 1 joint		23.8	13.8	14.9	15.6	18.6	17.1	14.8
About 1 joint		23.8	19.6	21.9	22.2	22.3	24.9	18.8
2 to 3 joints		24.9	23.6	18.4	18.3	17.7	17.3	16.6
4 + joints		14.4	16.6	15.4	11.1	8.6	11.5	13.8

Note: Question asked of a random half sample since 2001.

Q: During the last 4 weeks, on occasions when you have used marijuana, how many joints did you typically smoke? (If you shared joints with others, count only the amount that *you* smoked.)

Source: OSDUHS, Centre for Addiction & Mental Health

## Cannabis Dependence

(Tables 3.5.5, 3.5.6)

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 five questions used 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 always. 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 scores were summed. A total score of 4 or more (out of 15) indicates potential cannabis dependence ( $\alpha=0.81$ ).

*2011: Grades 7–12 (among the Total Sample)*

- About 2.2% (95% CI: 1.5%-3.3%) of students in grades 7 through 12 report symptoms of cannabis dependence. This percentage represents about 22,300 Ontario students. Males (3.0%) are significantly more likely than females (1.3%) to report symptoms of dependence.

*2011: Grades 7–12 (among Cannabis Users)*

- When we look at results among users only, about 10.1% (95% CI: 7.0%-14.4%) of past year cannabis users in grades 7 through 12 report symptoms of a dependence problem.

*2007–2011: Grades 7–12*

- The percentage of students reporting symptoms of cannabis dependence has not significantly changed since 2007. Looking at past year cannabis users only, the estimate remained stable during these years (10.2% in 2007, 10.6% in 2009, and 10.1% in 2011).

**Table 3.5.5: Percentage of the Total Sample, and of Past Year Cannabis Users, Reporting Severity of Dependence (SDS) Indicators Experienced in the Past 3 Months, 2011 OSDUHS (Grades 7–12)**

	Total Sample (n=4816)	Past Year Users (n=1019)
1. Your cannabis use was out of control *	2.7	12.6
2. Idea of missing a smoke of cannabis made you very anxious or worried *	4.5	21.0
3. Worried about your use of cannabis †	3.8	17.6
4. Wished you could stop using cannabis *	3.5	16.0
5. Would be difficult for you to stop or go without using cannabis ‡	2.8	12.7
<b>SDS Score 4+</b> (95 % CI)	<b>2.2</b> (1.5-3.3)	<b>10.1</b> (7.0-14.4)

Notes: based on a random half sample; \* 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 3.5.6: Percentage of Total Sample Reporting Symptoms of Cannabis Dependence as Measured by the Severity of Dependence Scale (SDS), 2007–2011 OSDUHS

	<b>2007</b> (N=3388)	<b>2009</b> (N=4851)	<b>2011</b> (N=4816)
<b>Total</b> (95% CI)	<b>2.7</b> (2.2-3.4)	<b>2.8</b> (2.2-3.7)	<b>2.2</b> (1.5-3.3)
<b>Sex</b>			
Males	<b>3.4</b> (2.5-4.5)	<b>3.5</b> (2.4-5.1)	<b>3.0</b> (1.8-5.1)
Females	<b>2.0</b> (1.4-2.9)	<b>2.2</b> (1.4-3.2)	<b>1.3</b> (0.8-2.1)
<b>Grade</b>			
7	†	†	†
8	†	†	†
9	<b>2.3</b> (1.3-4.1)	†	†
10	<b>3.4</b> (2.1-5.4)	†	†
11	<b>4.5</b> (2.9-7.1)	†	†
12	<b>3.8</b> (2.4-5.9)	<b>4.5</b> (2.9-6.9)	<b>4.0</b> (2.4-6.7)
<b>Region</b>			
Toronto	†	†	<b>2.2</b> (1.4-3.4)
North	<b>5.5</b> (3.2-9.1)	†	<b>3.3</b> (2.0-5.3)
West	<b>2.5</b> (1.7-3.6)	<b>2.1</b> (1.3-3.4)	†
East	<b>2.9</b> (2.2-3.9)	<b>4.4</b> (3.0-6.3)	<b>2.5</b> (1.6-3.9)

Notes: (1) entries in brackets are 95% confidence intervals; (2) cannabis dependence is indicated by a score of 4 or higher on the SDS scale; (3) scale asked of a random half sample in each year; (4) † estimate suppressed due to unreliability; (5) no significant changes over time.

Source: OSDUHS, Centre for Addiction & Mental Health

## 3.6 Illicit Drug Use

### Past Year Use of Inhalants: 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 they are 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 2011 (Grades 7–12)	Trends in Inhalant Use
Total Sample	<ul style="list-style-type: none"> <li>Overall, 5.6% 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 4.5% and 7.0% of students in Ontario inhaled glue or solvents. The current estimate of 5.6% represents about 55,300 students in grades 7 through to 12.</li> </ul>	<ul style="list-style-type: none"> <li>The percentage of students in grades 7 through 12 that inhale glue or solvents did not significantly change between 2009 (6.0%) and 2011 (5.6%). However, use in 2011 is significantly lower than use in 1999 (8.9%).</li> <li>Over the long-term (among grades 7, 9, and 11 only), inhalant use is currently lower than the peak years of use seen in the late 1970s and again in 1999. However, current use remains higher than the low levels evident in the late 1980s and early 1990s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>Males (5.3%) and females (5.9%) are equally likely to report using inhalants to get high.</li> </ul>	<ul style="list-style-type: none"> <li>Only females show a significant change in inhalant use over the past decade, declining from 9.8% in 1999 to 5.9% in 2011.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Inhaling glue or solvents significantly decreases with grade, from 12.2% among 7<sup>th</sup>-graders to about 4% among students in the older grades.</li> </ul>	<ul style="list-style-type: none"> <li>Only 9<sup>th</sup>-graders show a significant decline in inhalant use since 1999 (from 9.5% to 4.5%).</li> </ul>
Region	<ul style="list-style-type: none"> <li>There are no significant differences in inhalant use among the regions.</li> </ul>	<ul style="list-style-type: none"> <li>Only students in the East region show a significant decline since 1999 (from 8.8% to 4.2%).</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>Inhaling glue or solvents six times or more often in the past year was reported by 1.7% of the total sample (see Figure 3.1.2).</li> <li>Most (56%) past year users report using inhalants only once or twice in the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.6.1  
 Past Year Inhalant Use (Glue or Solvents) by Sex, Grade, and Region, 2011 OSDUHS

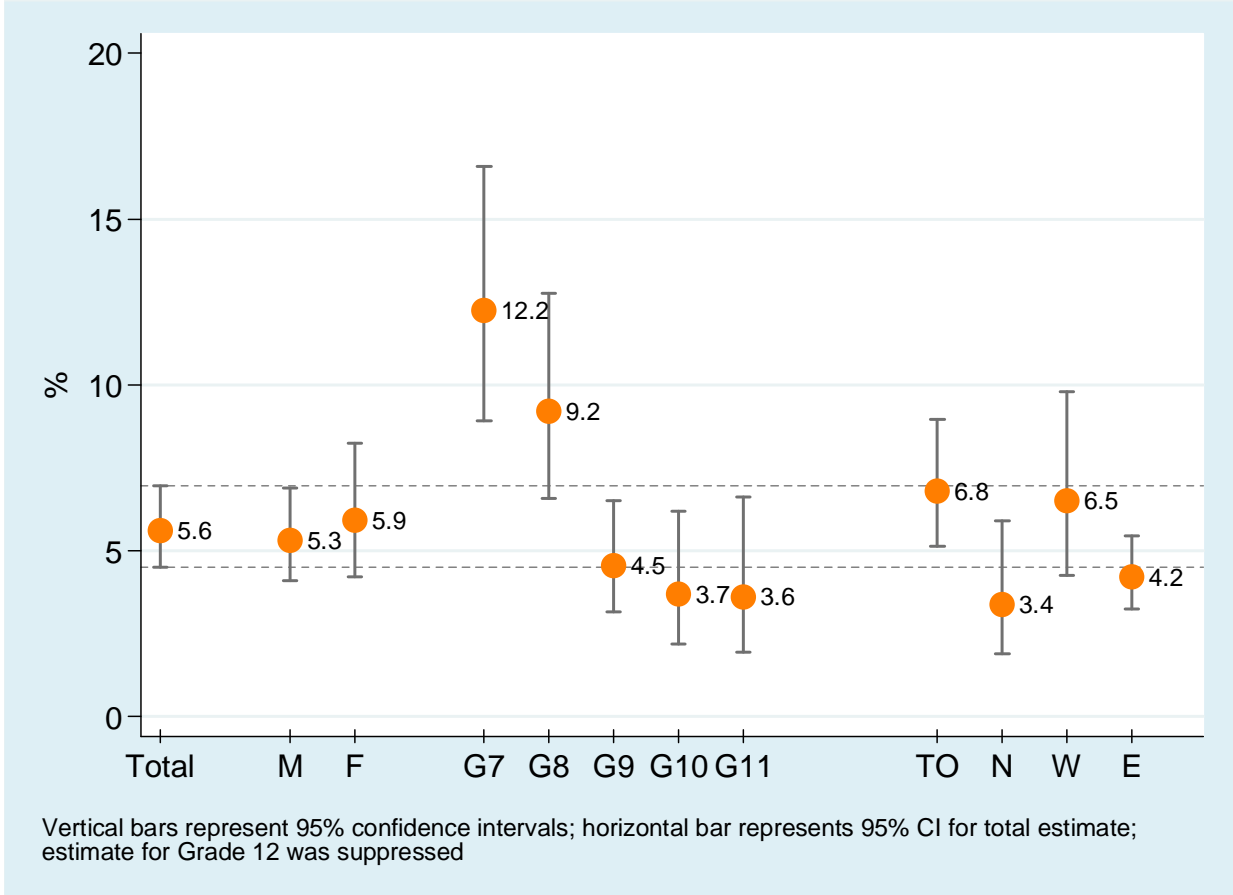


Figure 3.6.2  
 Past Year Inhalant Use (Glue or Solvents), 1999–2011 OSDUHS (Grades 7–12)

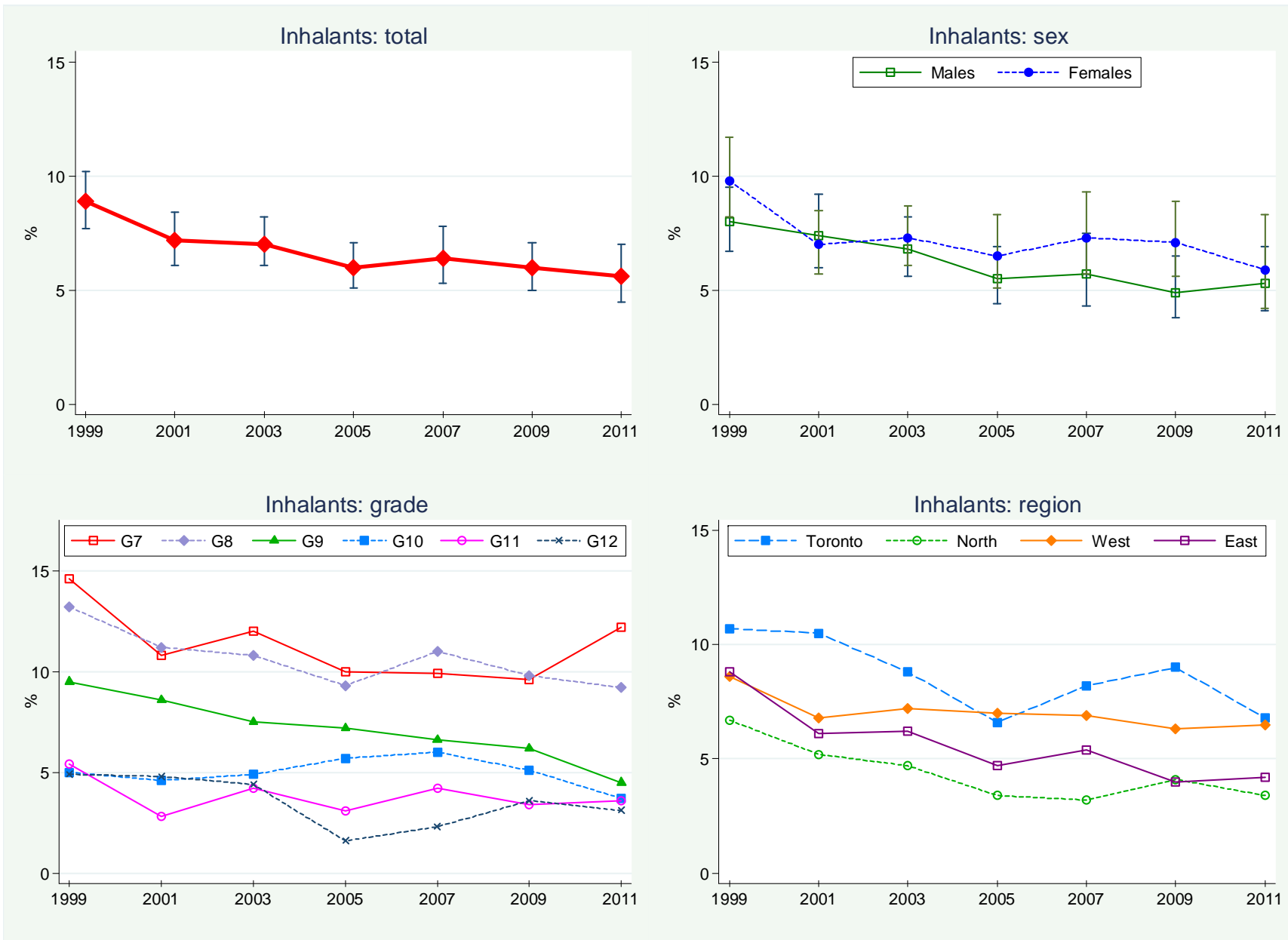


Figure 3.6.3  
 Past Year Inhalant Use (Glue or Solvents), 1977–2011 OSDUHS (Grades 7, 9, 11 only)

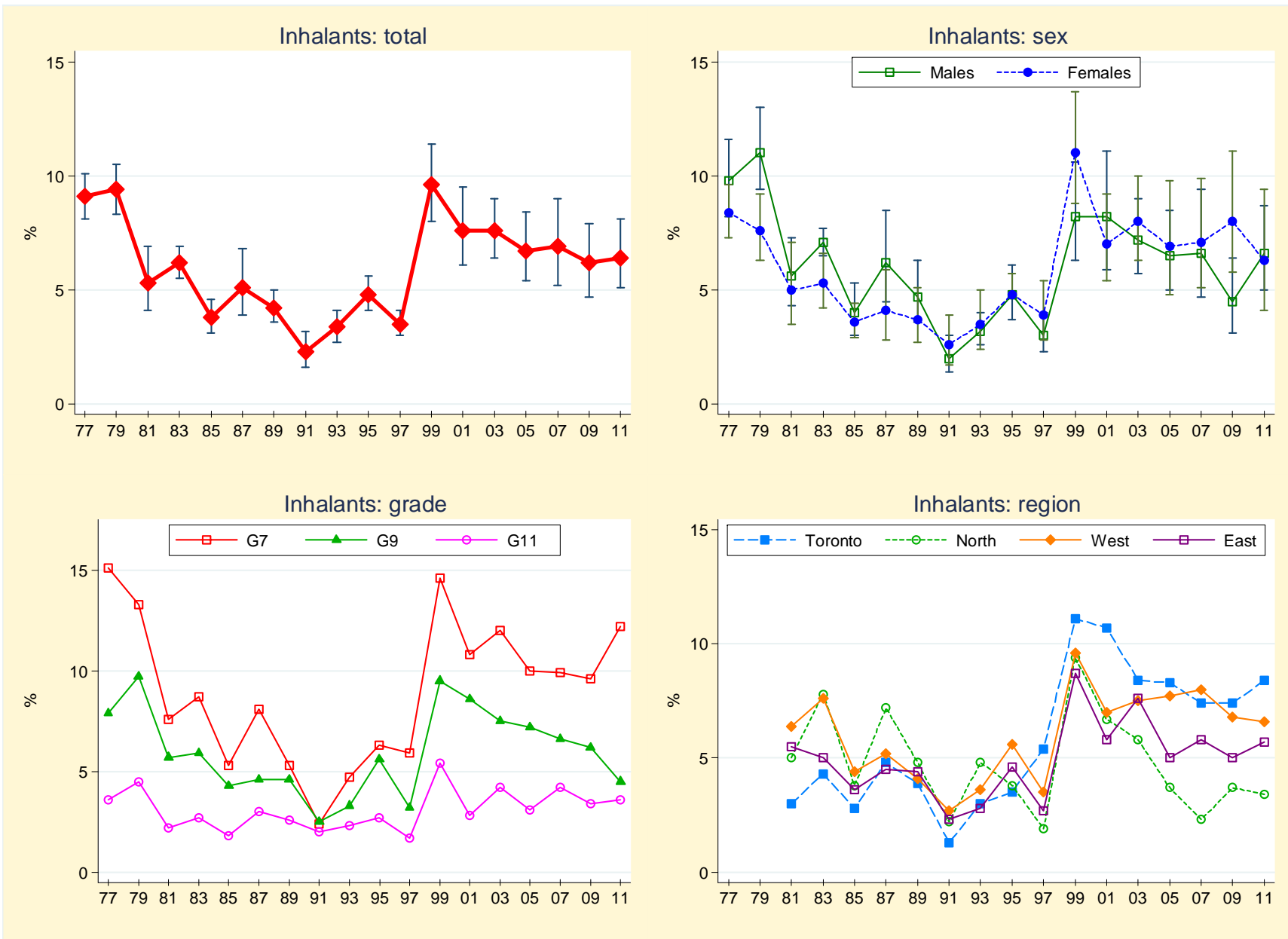


Table 3.6.1: Percentage Reporting Inhalant Use (Glue or Solvents) During the Past Year, 1977–2011

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(1862)	(1488)	(2069)	(2254)
Total <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>8.9</b> (7.7-10.2)	<b>7.2</b> (6.1-8.4)	<b>7.0</b> (6.1-8.2)	<b>6.0</b> (5.1-7.1)	<b>6.4</b> (5.3-7.8)	<b>6.0</b> (5.0-7.1)	<b>5.6</b> (4.5-7.0) <sup>b</sup>
Total <sup>2</sup> (95% CI)	<b>9.1</b> (8.1-10.1)	<b>9.4</b> (8.3-10.5)	<b>5.3</b> (4.1-6.9)	<b>6.2</b> (5.5-6.9)	<b>3.8</b> (3.1-4.6)	<b>5.1</b> (3.9-6.8)	<b>4.2</b> (3.6-5.0)	<b>2.3</b> (1.6-3.2)	<b>3.4</b> (2.7-4.1)	<b>4.8</b> (4.1-5.6)	<b>3.5</b> (3.0-4.1)	<b>9.6</b> (8.0-11.4)	<b>7.6</b> (6.1-9.5)	<b>7.6</b> (6.4-9.0)	<b>6.7</b> (5.4-8.4)	<b>6.9</b> (5.2-9.0)	<b>6.2</b> (4.7-7.9)	<b>6.4</b> (5.1-8.1) <sup>d</sup>
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>8.0</b> (6.7-9.5)	<b>7.4</b> (6.0-9.2)	<b>6.8</b> (5.6-8.2)	<b>5.5</b> (4.4-6.9)	<b>5.7</b> (4.3-7.5)	<b>4.9</b> (3.8-6.5)	<b>5.3</b> (4.1-6.9)
Males <sup>2</sup>	<b>9.8</b> (8.2-11.6)	<b>11.0</b> (9.4-13.0)	<b>5.6</b> (4.3-7.3)	<b>7.1</b> (6.5-7.7)	<b>4.0</b> (3.0-5.3)	<b>6.2</b> (4.5-8.5)	<b>4.7</b> (3.6-6.3)	<b>2.0</b> (1.4-3.0)	<b>3.2</b> (2.6-4.0)	<b>4.8</b> (3.7-6.1)	<b>3.0</b> (2.3-4.0)	<b>8.2</b> (6.3-10.6)	<b>8.2</b> (5.9-11.1)	<b>7.2</b> (5.7-9.0)	<b>6.5</b> (5.0-8.5)	<b>6.6</b> (4.7-9.4)	<b>4.5</b> (3.1-6.4)	<b>6.6</b> (5.0-8.7)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>9.8</b> (8.2-11.7)	<b>7.0</b> (5.7-8.5)	<b>7.3</b> (6.1-8.7)	<b>6.5</b> (5.1-8.3)	<b>7.3</b> (5.7-9.3)	<b>7.1</b> (5.6-8.9)	<b>5.9</b> (4.2-8.2) <sup>b</sup>
Females <sup>2</sup>	<b>8.4</b> (7.3-9.6)	<b>7.6</b> (6.3-9.2)	<b>5.0</b> (3.5-7.1)	<b>5.3</b> (4.2-6.6)	<b>3.6</b> (2.9-4.4)	<b>4.1</b> (2.8-5.9)	<b>3.7</b> (2.7-5.1)	<b>2.6</b> (1.7-3.9)	<b>3.5</b> (2.4-5.0)	<b>4.8</b> (4.9-5.7)	<b>3.9</b> (2.8-5.4)	<b>11.0</b> (8.8-13.7)	<b>7.0</b> (5.4-9.2)	<b>8.0</b> (6.3-10.0)	<b>6.9</b> (4.8-9.8)	<b>7.1</b> (5.1-9.9)	<b>8.0</b> (5.8-11.1)	<b>6.3</b> (4.1-9.4)
Grade																		
7	<b>15.1</b> (13.2-17.1)	<b>13.3</b> (11.5-15.3)	<b>7.6</b> (4.6-12.6)	<b>8.7</b> (7.4-10.3)	<b>5.3</b> (3.9-7.2)	<b>8.1</b> (5.2-12.4)	<b>5.3</b> (3.9-7.1)	<b>2.4</b> (1.2-4.46)	<b>4.7</b> (3.4-6.4)	<b>6.3</b> (4.8-8.1)	<b>5.9</b> (4.7-7.3)	<b>14.6</b> (11.6-18.1)	<b>10.8</b> (8.4-13.8)	<b>12.0</b> (8.6-16.4)	<b>10.0</b> (7.0-14.2)	<b>9.9</b> (6.3-15.4)	<b>9.6</b> (6.4-14.1)	<b>12.2</b> (8.9-16.6)
8	—	—	—	—	—	—	—	—	—	—	—	<b>13.2</b> (10.5-16.5)	<b>11.2</b> (8.9-14.1)	<b>10.8</b> (8.1-14.3)	<b>9.3</b> (7.1-12.3)	<b>11.0</b> (8.4-14.5)	<b>9.8</b> (7.3-13.2)	<b>9.2</b> (6.6-12.8)
9	<b>7.9</b> (6.7-9.4)	<b>9.7</b> (7.9-11.9)	<b>5.7</b> (4.6-7.2)	<b>5.9</b> (5.0-7.0)	<b>4.3</b> (3.2-5.8)	<b>4.6</b> (3.3-6.2)	<b>4.6</b> (3.7-5.8)	<b>2.5</b> (1.7-3.8)	<b>3.3</b> (3.1-3.5)	<b>5.6</b> (4.5-6.8)	<b>3.2</b> (2.5-4.2)	<b>9.5</b> (7.3-12.3)	<b>8.6</b> (6.3-11.6)	<b>7.5</b> (6.0-9.3)	<b>7.2</b> (5.1-10.1)	<b>6.6</b> (4.2-10.4)	<b>6.2</b> (3.9-9.8)	<b>4.5</b> (3.2-6.5) <sup>b</sup>
10	—	—	—	—	—	—	—	—	—	—	—	<b>5.0</b> (3.3-7.6)	<b>4.6</b> (2.9-7.4)	<b>4.9</b> (3.6-6.6)	<b>5.7</b> (4.0-8.2)	<b>6.0</b> (4.1-8.7)	<b>5.1</b> (3.5-7.6)	<b>3.7</b> (2.2-6.2)
11	<b>3.6</b> (2.5-5.0)	<b>4.5</b> (3.3-6.2)	<b>2.2</b> (1.3-3.6)	<b>2.7</b> (2.1-3.6)	<b>1.8</b> (1.1-2.9)	<b>3.0</b> (1.9-4.8)	<b>2.6</b> (2.0-3.4)	<b>2.0</b> (1.0-3.6)	<b>2.3</b> (1.3-4.0)	<b>2.7</b> (1.7-4.2)	<b>1.7</b> (1.0-2.8)	<b>5.4</b> (3.4-8.6)	†	<b>4.2</b> (3.0-5.9)	<b>3.1</b> (1.9-5.2)	<b>4.2</b> (2.6-6.8)	<b>3.4</b> (2.0-5.8)	<b>3.6</b> (1.9-6.6)
12	—	—	—	—	—	—	—	—	—	—	—	<b>4.9</b> (3.1-7.7)	<b>4.8</b> (3.0-7.5)	<b>4.4</b> (3.1-6.3)	<b>1.6</b> (0.8-2.9)	<b>2.3</b> (1.4-4.0)	†	†

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(1862)	(1488)	(2069)	(2254)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>10.7</b>	<b>10.5</b>	<b>8.8</b>	<b>6.6</b>	<b>8.2</b>	<b>9.0</b>	<b>6.8</b>
												(7.9-14.4)	(7.0-15.6)	(6.4-12.1)	(4.7-9.0)	(6.6-10.0)	(6.2-13.1)	(5.1-9.0)
Toronto <sup>2</sup>	—	—	<b>3.0</b>	<b>4.3</b>	<b>2.8</b>	<b>4.8</b>	<b>3.9</b>	†	<b>3.0</b>	†	<b>5.4</b>	<b>11.1</b>	<b>10.7</b>	<b>8.4</b>	<b>8.3</b>	<b>7.4</b>	<b>7.4</b>	<b>8.4</b>
			(1.6-5.2)	(2.6-7.2)	(1.4-5.5)	(3.5-6.7)	(2.8-5.4)		(1.9-4.5)		(4.0-7.2)	(7.6-15.9)	(6.4-17.5)	(5.2-13.1)	(5.7-12.0)	(4.6-11.6)	(4.2-12.8)	(5.9-11.9)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>6.7</b>	<b>5.2</b>	<b>4.7</b>	†	<b>3.2</b>	<b>4.1</b>	<b>3.4</b>
												(4.5-9.9)	(3.8-7.2)	(3.6-6.2)		(1.9-5.3)	(2.3-7.2)	(1.9-5.9)
North <sup>2</sup>	—	—	†	<b>7.8</b>	<b>3.8</b>	<b>7.2</b>	<b>4.8</b>	†	<b>4.8</b>	<b>3.8</b>	<b>1.9</b>	<b>9.4</b>	<b>6.7</b>	<b>5.8</b>	†	†	†	<b>3.4</b>
				(6.6-9.1)	(2.1-6.5)	(5.5-9.5)	(2.7-8.2)		(3.2-7.1)	(3.2-4.3)	(1.2-3.0)	(5.1-16.7)	(4.7-9.4)	(4.2-8.0)				(1.9-6.2)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>8.6</b>	<b>6.8</b>	<b>7.2</b>	<b>7.0</b>	<b>6.9</b>	<b>6.3</b>	<b>6.5</b>
												(6.9-10.6)	(5.4-8.5)	(5.7-9.2)	(5.4-8.9)	(4.9-9.5)	(4.8-8.3)	(4.3-9.8)
West <sup>2</sup>	—	—	<b>6.4</b>	<b>7.6</b>	<b>4.4</b>	<b>5.2</b>	<b>4.1</b>	<b>2.7</b>	<b>3.6</b>	<b>5.6</b>	<b>3.5</b>	<b>9.6</b>	<b>7.0</b>	<b>7.5</b>	<b>7.7</b>	<b>8.0</b>	<b>6.8</b>	<b>6.6</b>
			(4.2-9.6)	(7.0-8.3)	(3.7-5.2)	(2.9-9.2)	(3.1-5.4)	(1.7-4.2)	(2.8-4.6)	(4.9-6.4)	(2.6-4.7)	(7.2-12.7)	(5.1-9.6)	(5.8-9.7)	(5.4-10.7)	(5.1-12.3)	(4.7-9.8)	(4.2-10.4)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>8.8</b>	<b>6.1</b>	<b>6.2</b>	<b>4.7</b>	<b>5.4</b>	<b>4.0</b>	<b>4.2</b> <sup>b</sup>
												(6.9-11.2)	(4.6-7.9)	(4.8-8.2)	(3.4-6.5)	(3.8-7.7)	(3.0-5.4)	(3.2-5.5)
East <sup>2</sup>	—	—	<b>5.5</b>	<b>5.0</b>	<b>3.6</b>	<b>4.5</b>	<b>4.4</b>	<b>2.3</b>	<b>2.8</b>	<b>4.6</b>	<b>2.7</b>	<b>8.7</b>	<b>5.8</b>	<b>7.6</b>	<b>5.0</b>	<b>5.8</b>	<b>5.0</b>	<b>5.7</b>
			(5.0-6.1)	(3.9-6.4)	(2.3-5.7)	(2.9-6.8)	(3.4-5.8)	(1.3-4.3)	(1.5-5.1)	(3.5-6.1)	(2.2-3.4)	(6.2-11.9)	(3.7-8.9)	(5.6-10.3)	(3.2-7.8)	(3.8-8.7)	(3.0-8.0)	(4.1-7.8)

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 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>d</sup> significant long-term non-linear trend, p<.01.

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

Source: OSDUHS, Centre for Addiction & Mental Health

## Past Year Use of LSD

(Figures 3.6.4–3.6.6; Table 3.6.2)

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.

	LSD Use in 2011 (Grades 7–12)	Trends in LSD Use
Total Sample	<ul style="list-style-type: none"> <li>■ LSD use is reported by 1.2% of Ontario students in grades 7 through 12 (representing about 12,300 students). With the sampling error, we estimate that between 0.9% and 1.7% of students in Ontario use LSD.</li> </ul>	<ul style="list-style-type: none"> <li>□ Among the total sample, the past year prevalence of LSD did not significantly change between 2009 (1.8%) and 2011 (1.2%). However, current use is significantly lower than the estimate of 6.8% found in 1999.</li> <li>□ Over the long-term (among grades 7, 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. Indeed, the lowest point was reached in 2005 and estimates since then have been low and stable.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ LSD use significantly differs between males (1.8%) and females (0.6%).</li> </ul>	<ul style="list-style-type: none"> <li>□ Females show a significant decline in LSD use between 2009 (1.5%) and 2011 (0.6%), while use among males has remained stable between these two years. Since 1999, both sexes have shown significant declines.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ LSD use significantly differs by grade, with use most likely among 11<sup>th</sup>-graders (2.8%).</li> </ul>	<ul style="list-style-type: none"> <li>□ 12<sup>th</sup>-graders show a significant decline in LSD use in 2011 (1.1%) compared with 2009 (3.3%). All grades, except 7<sup>th</sup>-graders, show a significant decline compared with their respective 1999 estimates.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ LSD use does not significantly differ by region.</li> </ul>	<ul style="list-style-type: none"> <li>□ All four regions show significantly lower LSD use in 2011 compared with their respective 1999 estimates.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ The majority (52%) of LSD users report using only once or twice during the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.6.4  
 Past Year LSD Use by Sex, Grade, and Region, 2011 OSDUHS

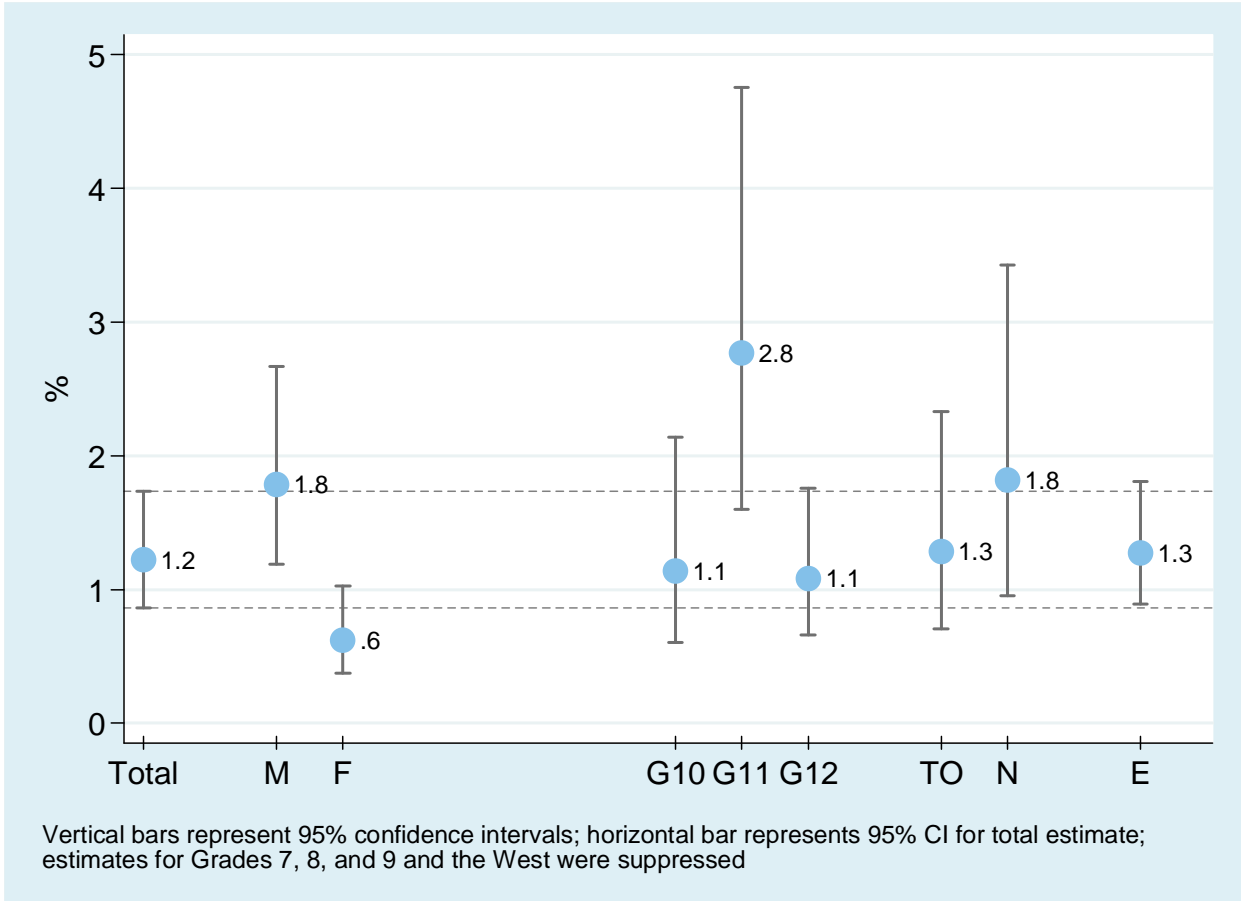
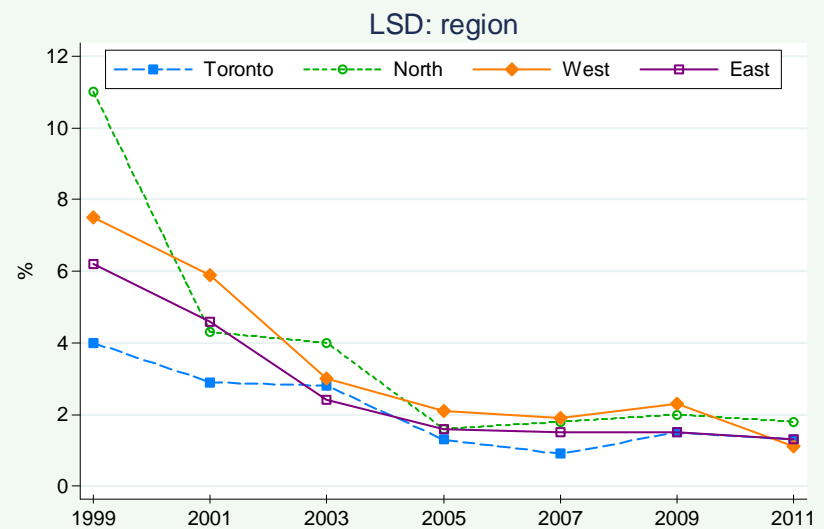
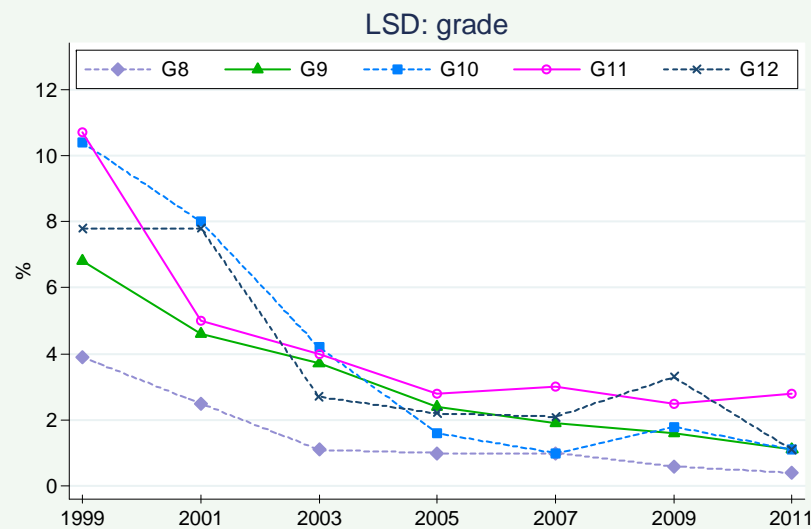
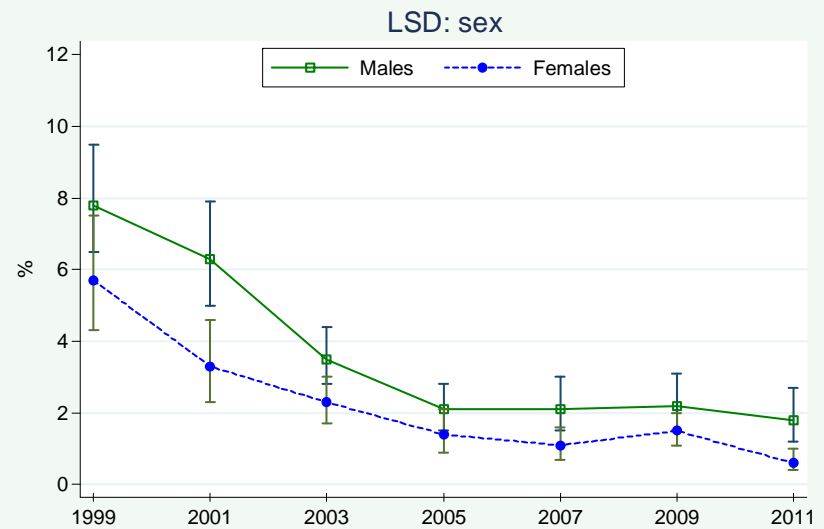
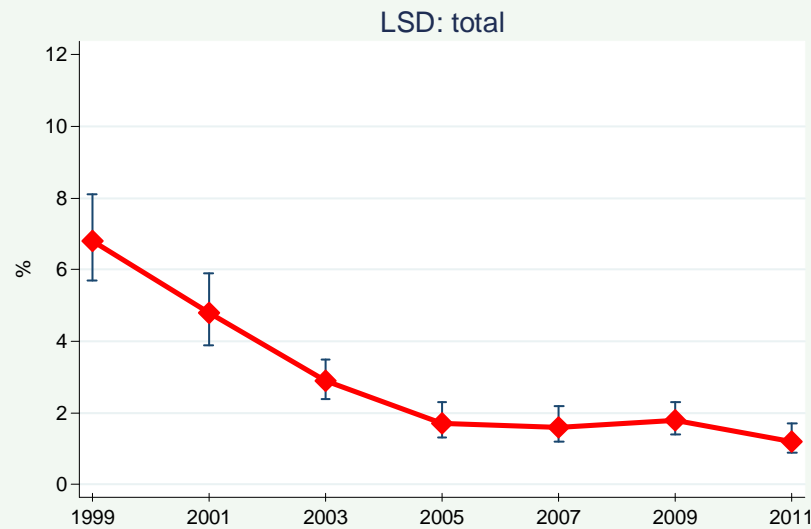
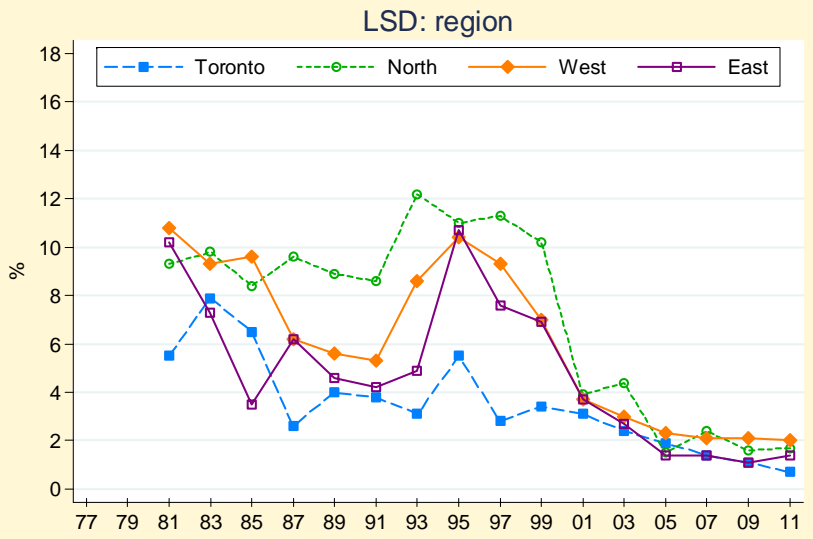
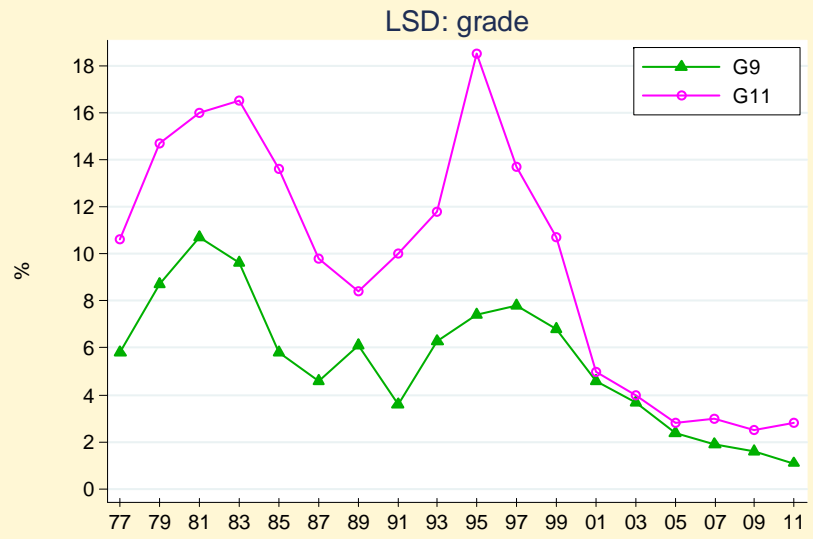
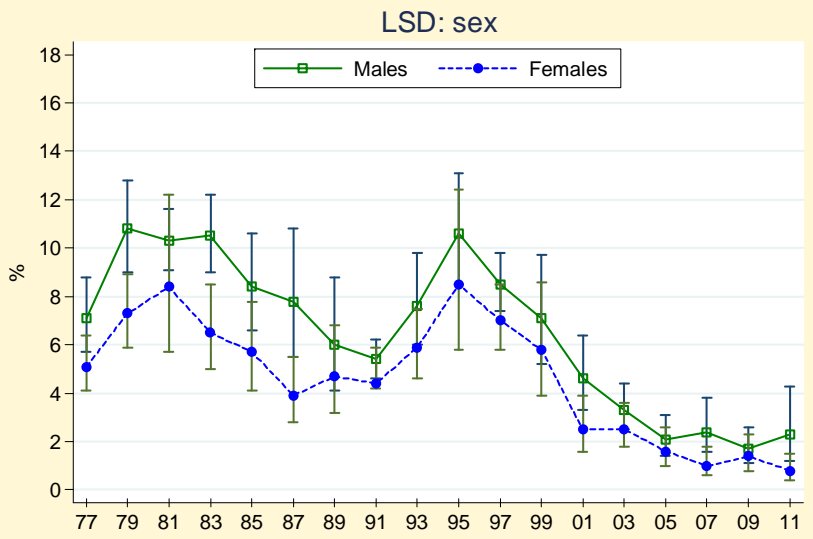
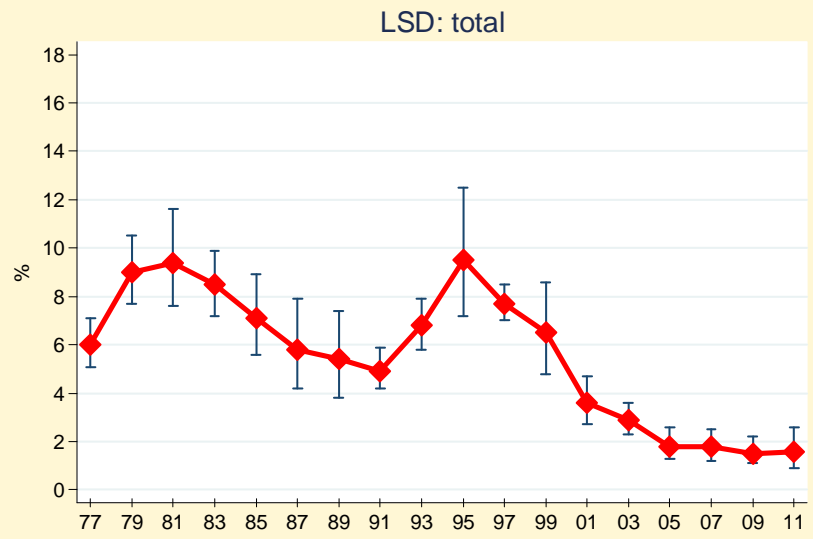


Figure 3.6.5  
Past Year LSD Use, 1999–2011 OSDUHS (Grades 7–12)



Note: Trends for Grade 7 not presented due to suppressed estimates

Figure 3.6.6  
 Past Year LSD Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)



Note: Trends for Grade 7 not presented due to suppressed estimates

Table 3.6.2: Percentage Reporting LSD 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 <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>6.8</b> (5.7-8.1)	<b>4.8</b> (3.9-5.9)	<b>2.9</b> (2.4-3.5)	<b>1.7</b> (1.3-2.3)	<b>1.6</b> (1.2-2.2)	<b>1.8</b> (1.4-2.3)	<b>1.2</b> (0.9-1.7)
Total <sup>2</sup>	<b>6.0</b> (5.1-7.1)	<b>9.0</b> (7.7-10.5)	<b>9.4</b> (7.6-11.6)	<b>8.5</b> (7.2-9.9)	<b>7.1</b> (5.6-8.9)	<b>5.8</b> (4.2-7.9)	<b>5.4</b> (3.8-7.4)	<b>4.9</b> (4.2-5.9)	<b>6.8</b> (5.8-7.9)	<b>9.5</b> (7.2-12.5)	<b>7.7</b> (7.0-8.5)	<b>6.5</b> (4.8-8.6)	<b>3.6</b> (2.7-4.7)	<b>2.9</b> (2.3-3.6)	<b>1.8</b> (1.3-2.6)	<b>1.8</b> (1.2-2.5)	<b>1.5</b> (1.1-2.2)	<b>1.6</b> (0.9-2.6)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>7.8</b> (6.5-9.5)	<b>6.3</b> (5.0-7.9)	<b>3.5</b> (2.8-4.4)	<b>2.1</b> (1.5-2.8)	<b>2.1</b> (1.5-3.0)	<b>2.2</b> (1.5-3.1)	<b>1.8</b> (1.2-2.7)
Males <sup>2</sup>	<b>7.1</b> (5.7-8.8)	<b>10.8</b> (9.0-12.8)	<b>10.3</b> (9.1-11.6)	<b>10.5</b> (9.0-12.2)	<b>8.4</b> (6.6-10.6)	<b>7.8</b> (5.5-10.8)	<b>6.0</b> (4.1-8.8)	<b>5.4</b> (4.6-6.2)	<b>7.6</b> (6.0-9.8)	<b>10.6</b> (8.5-13.1)	<b>8.5</b> (7.4-9.8)	<b>7.1</b> (5.2-9.7)	<b>4.6</b> (3.3-6.4)	<b>3.3</b> (2.5-4.4)	<b>2.1</b> (1.4-3.1)	<b>2.4</b> (1.6-3.8)	<b>1.7</b> (1.1-2.6)	<b>2.3</b> (1.2-4.3)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>5.7</b> (4.3-7.5)	<b>3.3</b> (2.3-4.6)	<b>2.3</b> (1.7-3.0)	<b>1.4</b> (0.9-2.1)	<b>1.1</b> (0.7-1.6)	<b>1.5</b> (1.1-2.0)	<b>0.6</b> (0.4-1.0)
Females <sup>2</sup>	<b>5.1</b> (4.1-6.4)	<b>7.3</b> (5.9-8.9)	<b>8.4</b> (5.7-12.2)	<b>6.5</b> (5.0-8.5)	<b>5.7</b> (4.1-7.8)	<b>3.9</b> (2.8-5.5)	<b>4.7</b> (3.2-6.8)	<b>4.4</b> (4.2-5.9)	<b>5.9</b> (4.6-7.5)	<b>8.5</b> (5.8-12.4)	<b>7.0</b> (5.8-8.5)	<b>5.8</b> (3.9-8.6)	<b>2.5</b> (1.6-3.9)	<b>2.5</b> (1.8-3.6)	<b>1.6</b> (1.0-2.6)	<b>1.0</b> (0.6-1.8)	<b>1.4</b> (0.8-2.3)	<b>0.8</b> (0.4-1.5)
Grade																		
7	<b>2.5</b> (1.6-4.0)	<b>4.3</b> (3.3-5.6)	<b>1.9</b> (0.9-3.9)	<b>2.0</b> (1.1-3.7)	<b>2.0</b> (1.1-3.8)	<b>2.7</b> (1.6-4.3)	<b>1.6</b> (1.2-2.2)	<b>0.8</b> (0.4-1.7)	<b>1.2</b> (0.6-2.3)	<b>1.6</b> (0.9-2.9)	<b>0.9</b> (0.7-1.2)	†	†	†	†	†	†	†
8	—	—	—	—	—	—	—	—	—	—	—	<b>3.9</b> (2.3-6.5)	<b>2.5</b> (1.3-4.6)	<b>1.1</b> (0.6-2.2)	<b>1.0</b> (0.5-2.0)	<b>1.0</b> (0.4-2.1)	†	†
9	<b>5.8</b> (4.4-7.6)	<b>8.7</b> (6.9-11.1)	<b>10.7</b> (8.5-13.4)	<b>9.6</b> (8.2-11.1)	<b>5.8</b> (4.0-8.2)	<b>4.6</b> (2.3-8.9)	<b>6.1</b> (3.4-10.8)	<b>3.6</b> (2.9-4.6)	<b>6.3</b> (5.0-8.0)	<b>7.4</b> (4.4-12.2)	<b>7.8</b> (6.3-9.8)	<b>6.8</b> (4.8-9.4)	<b>4.6</b> (3.3-6.4)	<b>3.7</b> (2.6-5.2)	<b>2.4</b> (1.6-3.6)	<b>1.9</b> (1.2-3.0)	<b>1.7</b> (0.9-3.1)	†
10	—	—	—	—	—	—	—	—	—	—	—	<b>10.4</b> (7.4-14.3)	<b>8.0</b> (5.7-11.2)	<b>4.2</b> (2.8-6.3)	<b>1.6</b> (1.0-2.6)	<b>1.0</b> (0.5-2.1)	<b>1.8</b> (1.1-2.9)	<b>1.1</b> (0.6-2.1)
11	<b>10.6</b> (8.5-13.3)	<b>14.7</b> (11.6-18.5)	<b>16.0</b> (11.7-21.5)	<b>16.5</b> (12.9-20.7)	<b>13.6</b> (10.1-18.0)	<b>9.8</b> (6.0-15.5)	<b>8.4</b> (5.5-12.5)	<b>10.0</b> (8.2-12.1)	<b>11.8</b> (9.2-15.0)	<b>18.5</b> (12.9-25.7)	<b>13.7</b> (12.3-15.2)	<b>10.7</b> (7.2-15.6)	<b>5.0</b> (2.9-8.6)	<b>4.0</b> (2.8-5.5)	<b>2.8</b> (1.8-4.3)	<b>3.0</b> (1.8-4.9)	<b>2.5</b> (1.5-4.1)	<b>2.8</b> (1.6-4.8)
12	—	—	—	—	—	—	—	—	—	—	—	<b>7.8</b> (5.9-10.2)	<b>7.8</b> (4.1-14.3)	<b>2.7</b> (1.7-4.2)	<b>2.2</b> (1.2-3.9)	<b>2.1</b> (1.2-3.7)	<b>3.3</b> (2.1-5.3)	<b>1.1</b> (0.7-1.8)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>4.0</b> (2.7-5.9)	<b>2.9</b> (1.5-5.5)	<b>2.8</b> (1.7-4.7)	<b>1.3</b> (0.8-2.3)	<b>0.9</b> (0.5-1.7)	†	<b>1.3</b> (0.7-2.3) <sup>b</sup>
Toronto <sup>2</sup>	—	—	<b>5.5</b> (2.5-11.5)	<b>7.9</b> (4.3-14.2)	<b>6.5</b> (4.4-9.4)	<b>2.6</b> (0.9-7.6)	<b>4.0</b> (3.0-5.4)	<b>3.8</b> (2.1-6.8)	<b>3.1</b> (1.7-5.6)	<b>5.5</b> (1.7-16.0)	<b>2.8</b> (2.0-3.9)	<b>3.4</b> (1.9-5.9)	<b>3.1</b> (1.8-5.3)	<b>2.4</b> (1.4-4.4)	<b>1.9</b> (1.0-3.4)	†	†	†
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>11.0</b> (7.0-16.8)	<b>4.3</b> (2.9-6.2)	<b>4.0</b> (2.8-5.6)	<b>1.6</b> (1.0-2.5)	†	<b>2.0</b> (0.9-4.3)	<b>1.8</b> (1.0-3.4) <sup>b</sup>
North <sup>2</sup>	—	—	<b>9.3</b> (6.3-13.6)	<b>9.8</b> (7.0-13.7)	<b>8.4</b> (6.1-11.6)	<b>9.6</b> (3.8-22.1)	<b>8.9</b> (4.2-17.7)	<b>8.6</b> (4.6-15.4)	<b>12.2</b> (7.2-20.0)	<b>11.0</b> (8.1-14.8)	<b>11.3</b> (8.5-14.7)	<b>10.2</b> (4.2-23.1)	<b>3.9</b> (2.3-6.5)	<b>4.4</b> (3.0-6.4)	<b>1.5</b> (0.8-2.9)	†	†	†
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>7.5</b> (5.4-10.4)	<b>5.9</b> (4.4-7.8)	<b>3.0</b> (2.2-4.0)	<b>2.1</b> (1.3-3.3)	<b>1.9</b> (1.2-3.1)	<b>2.3</b> (1.6-3.2)	† <sup>b</sup>
West <sup>2</sup>	—	—	<b>10.8</b> (7.6-15.1)	<b>9.3</b> (8.1-10.8)	<b>9.6</b> (6.8-13.4)	<b>6.2</b> (3.6-10.7)	<b>5.6</b> (3.2-9.8)	<b>5.3</b> (4.5-6.2)	<b>8.6</b> (7.7-9.5)	<b>10.4</b> (6.3-16.7)	<b>9.3</b> (8.1-10.8)	<b>7.0</b> (4.1-11.9)	<b>3.7</b> (2.4-5.8)	<b>3.0</b> (2.2-4.1)	<b>2.3</b> (1.4-3.9)	<b>2.1</b> (1.3-3.5)	<b>2.1</b> (1.3-3.3)	†
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>6.2</b> (5.1-7.5)	<b>4.6</b> (3.1-6.8)	<b>2.4</b> (1.6-3.5)	<b>1.6</b> (1.0-2.4)	<b>1.5</b> (0.9-2.4)	<b>1.5</b> (0.9-2.3)	<b>1.3</b> (0.9-1.8) <sup>b</sup>
East <sup>2</sup>	—	—	<b>10.2</b> (8.3-12.4)	<b>7.3</b> (5.4-9.6)	<b>3.5</b> (1.7-6.9)	<b>6.2</b> (5.4-7.1)	<b>4.6</b> (2.3-8.9)	<b>4.2</b> (2.7-6.4)	<b>4.9</b> (2.9-8.1)	<b>10.7</b> (8.5-13.2)	<b>7.6</b> (6.3-9.2)	<b>6.9</b> (5.0-9.5)	<b>3.7</b> (2.1-6.3)	<b>2.7</b> (1.7-4.4)	<b>1.4</b> (0.8-2.4)	†	<b>1.1</b> (0.6-2.0)	<b>1.4</b> (0.9-2.2)

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) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.01; <sup>d</sup> significant long-term non-linear 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 Use of Mushrooms (Psilocybin) or Mescaline

(Figures 3.6.7–3.6.9; Table 3.6.3)

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.

	Mushroom/Mescaline Use in 2011 (Grades 7–12)	Trends in Mushroom/Mescaline Use
Total Sample	<ul style="list-style-type: none"> <li>■ Psilocybin (“mushroom”) or mescaline use is reported by 3.8% of Ontario students in grades 7 through 12. This estimate represents about 38,500 students in Ontario. With the sampling error, we estimate that between 3.1% and 4.8% of students use these hallucinogens.</li> </ul>	<ul style="list-style-type: none"> <li>□ Mushroom/mescaline use did not significantly change in 2011 (3.8%) compared with the estimate from 2009 (5.0%). However, current use is significantly lower compared with 1999 (12.8%).</li> <li>□ Over the long-term (among grades 7, 9, and 11 only), use remained low and stable during the 1980s and early 1990s, increased during the 1990s, reaching an all-time peak in 1999, and has subsequently been on a steady decline.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Males (5.0%) are significantly more likely than females (2.6%) to use mushrooms/mescaline.</li> </ul>	<ul style="list-style-type: none"> <li>□ Between 1999 and 2011, use among both males and females significantly decreased.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ Use ranges from about 1% of 8<sup>th</sup>-graders to 8.0% of 11<sup>th</sup>-graders and drops only slightly to 6.3% of 12<sup>th</sup>-graders.</li> </ul>	<ul style="list-style-type: none"> <li>□ All grades, except 7<sup>th</sup>-graders, show a significant decline in the use of mushrooms/mescaline in 2011 compared with their respective 1999 estimates.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ There are no significant differences among the regions.</li> </ul>	<ul style="list-style-type: none"> <li>□ Eastern students show a significant decline in 2011 (3.4%) versus 2009 (5.3%). Use is currently significantly lower in all regions compared with their respective 1999 estimates.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ Less than 1% of students use these hallucinogenic drugs on a frequent basis (see Figure 3.1.2).</li> <li>■ Over two-thirds (68%) of users used only once or twice in the past year (see Figure 3.1.3).</li> </ul>	<ul style="list-style-type: none"> <li>□ Frequent use of these hallucinogens (six times or more often in the past year) remained low from the late 1970s until the mid-1990s, peaked in 1999, and has since decreased.</li> </ul>

Figure 3.6.7  
 Past Year Use of Mushrooms/Mescaline by Sex, Grade, and Region, 2011 OSDUHS

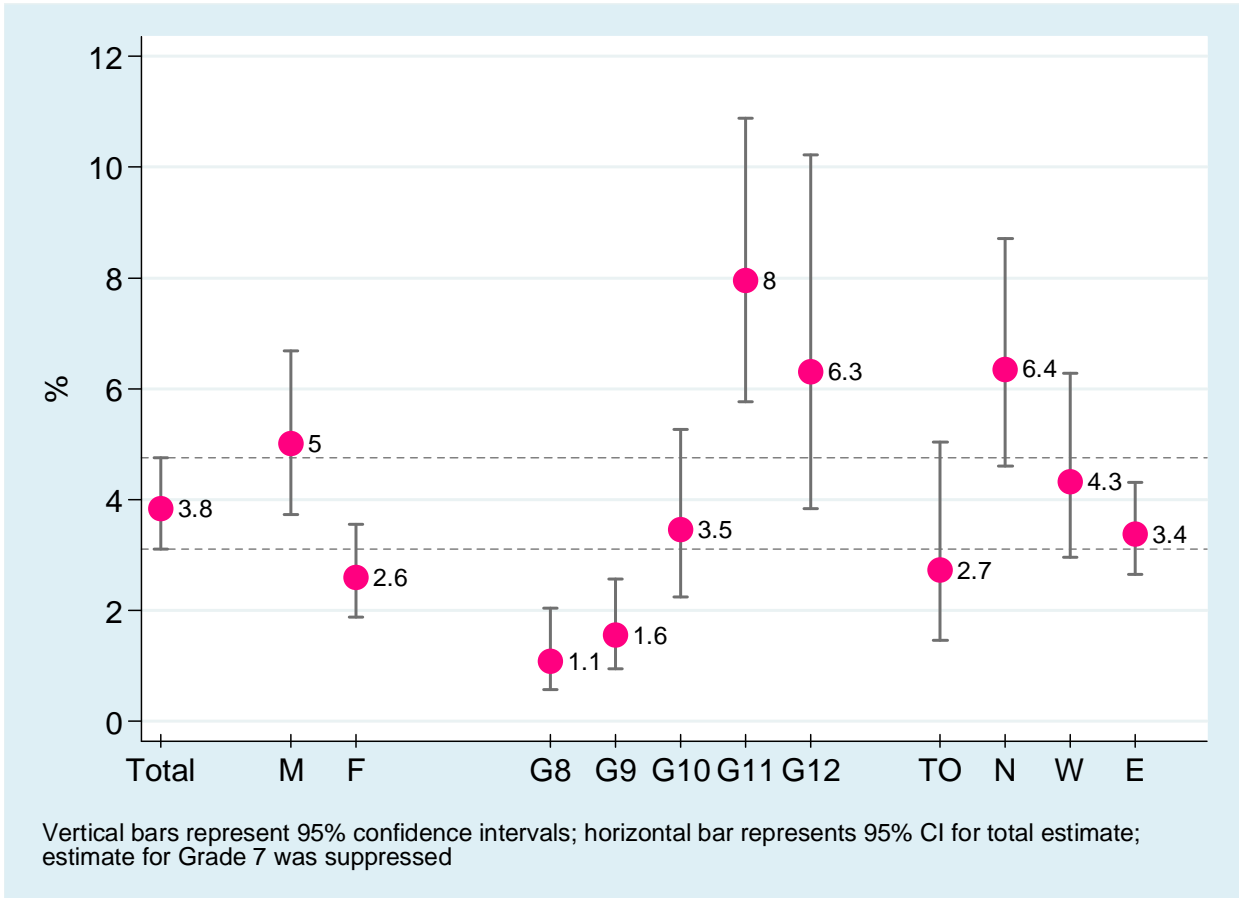
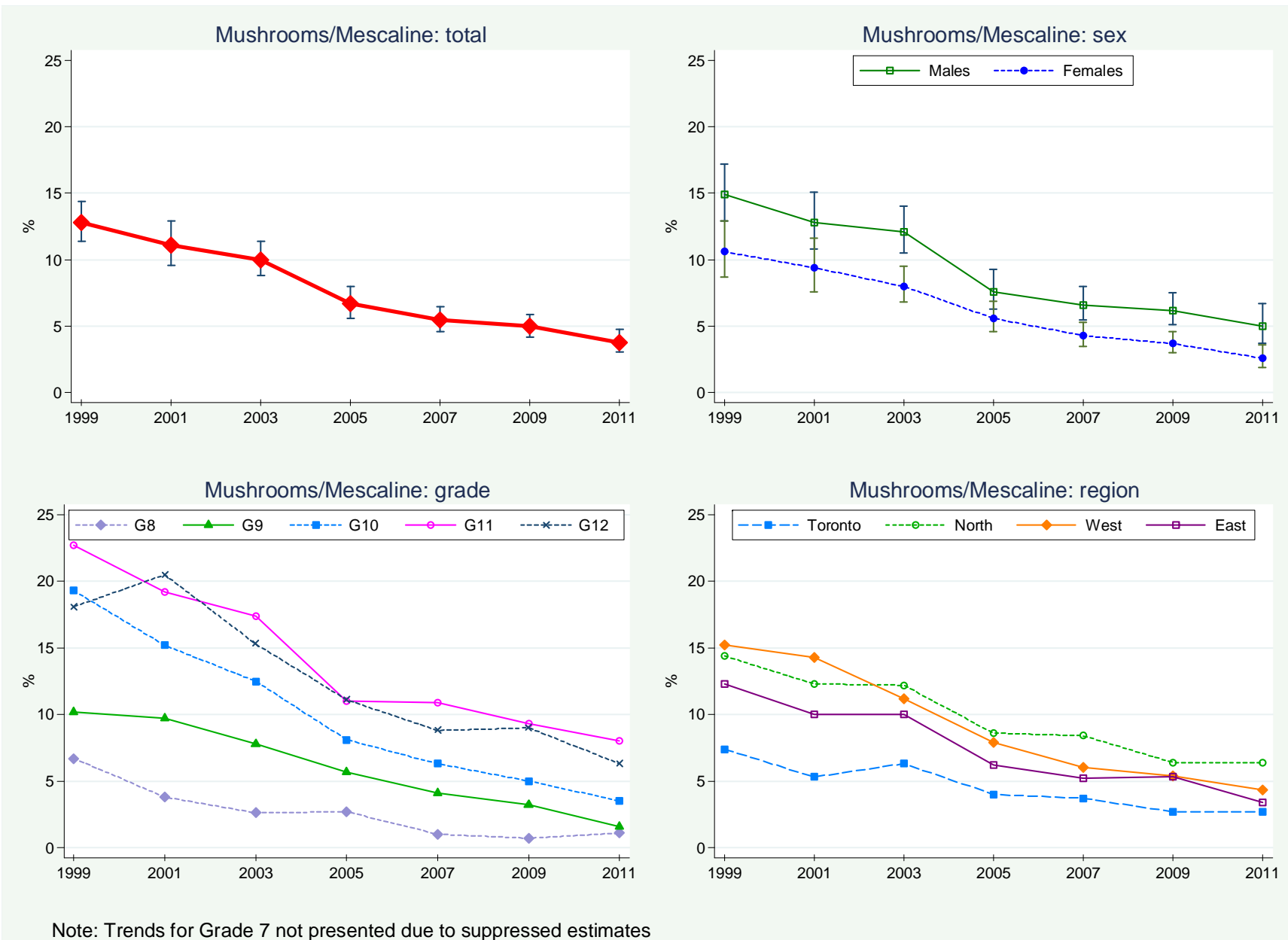
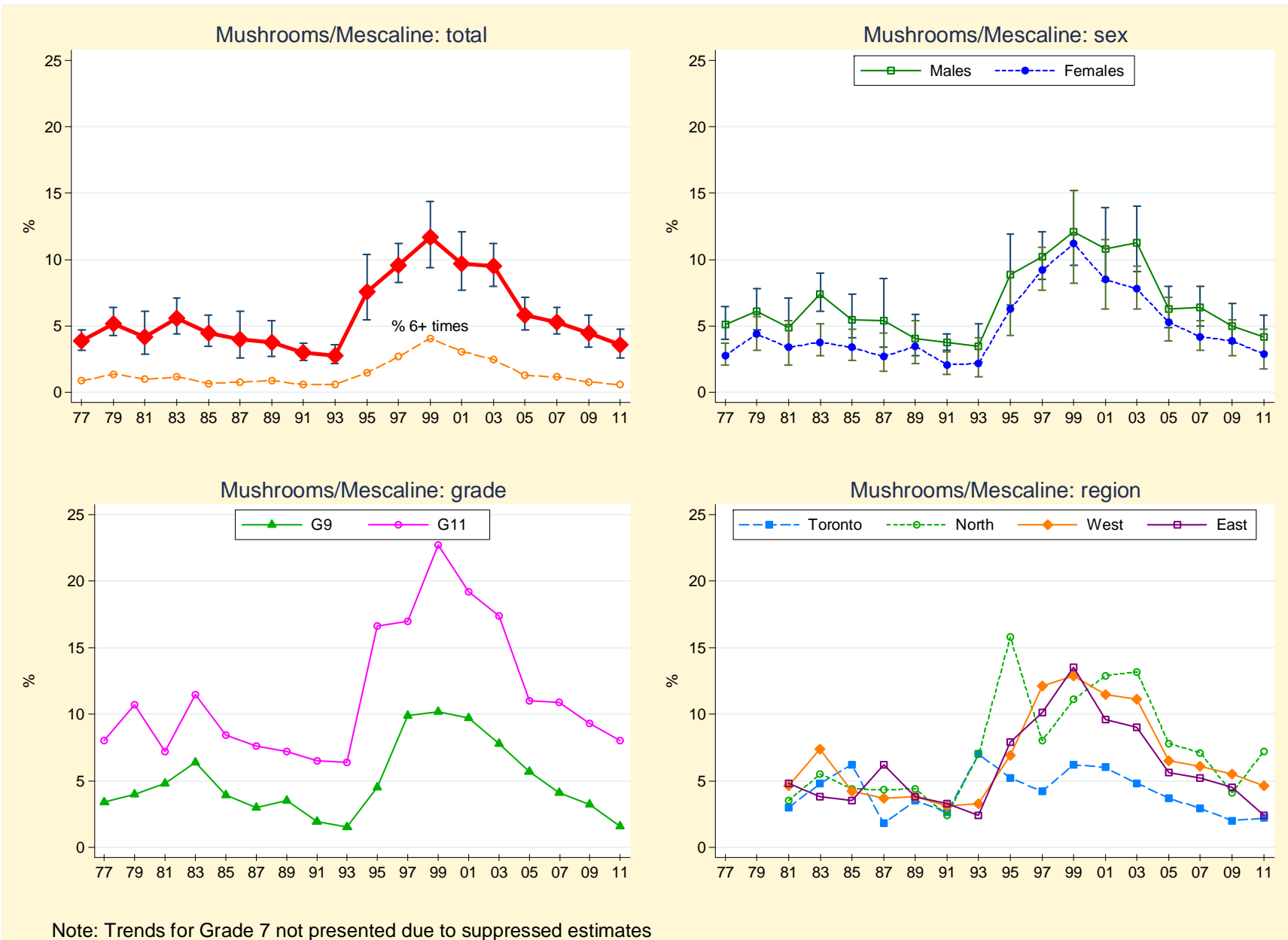


Figure 3.6.8  
 Past Year Mushroom/Mescaline Use, 1999–2011 OSDUHS (Grades 7–12)



Note: Trends for Grade 7 not presented due to suppressed estimates

Figure 3.6.9  
 Past Year Mushroom/Mescaline Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)



Note: Trends for Grade 7 not presented due to suppressed estimates

Table 3.6.3: Percentage Reporting Mushroom/Mescaline 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 <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>12.8</b> (11.4-14.4)	<b>11.1</b> (9.6-12.9)	<b>10.0</b> (8.8-11.4)	<b>6.7</b> (5.6-8.0)	<b>5.5</b> (4.6-6.5)	<b>5.0</b> (4.2-5.9)	<b>3.8</b> (3.1-4.8)
Total <sup>2</sup>	<b>3.9</b> (3.2-4.7)	<b>5.2</b> (4.3-6.4)	<b>4.2</b> (2.9-6.1)	<b>5.6</b> (4.4-7.1)	<b>4.5</b> (3.5-5.8)	<b>4.0</b> (2.6-6.1)	<b>3.8</b> (2.7-5.4)	<b>3.0</b> (2.4-3.7)	<b>2.8</b> (2.2-3.6)	<b>7.6</b> (5.5-10.4)	<b>9.6</b> (8.3-11.2)	<b>11.7</b> (9.4-14.4)	<b>9.7</b> (7.7-12.1)	<b>9.5</b> (8.0-11.2)	<b>5.8</b> (4.7-7.2)	<b>5.3</b> (4.4-6.4)	<b>4.4</b> (3.4-5.8)	<b>3.6</b> (2.6-4.8)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>14.9</b> (12.9-17.2)	<b>12.8</b> (10.8-15.1)	<b>12.1</b> (10.5-14.0)	<b>7.6</b> (6.3-9.3)	<b>6.6</b> (5.5-8.0)	<b>6.2</b> (5.1-7.5)	<b>5.0</b> (3.7-6.7)
Males <sup>2</sup>	<b>5.1</b> (4.0-6.5)	<b>6.1</b> (4.7-7.8)	<b>4.9</b> (3.4-7.1)	<b>7.4</b> (6.1-9.0)	<b>5.5</b> (4.1-7.4)	<b>5.4</b> (3.4-8.6)	<b>4.1</b> (2.8-5.9)	<b>3.8</b> (3.2-4.4)	<b>3.5</b> (2.3-5.2)	<b>8.9</b> (6.6-11.9)	<b>10.2</b> (8.5-12.1)	<b>12.1</b> (9.6-15.2)	<b>10.8</b> (8.4-13.9)	<b>11.3</b> (9.1-14.0)	<b>6.3</b> (4.9-8.0)	<b>6.4</b> (5.0-8.0)	<b>5.0</b> (3.7-6.7)	<b>4.2</b> (3.0-5.8)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>10.6</b> (8.7-12.9)	<b>9.4</b> (7.6-11.6)	<b>8.0</b> (6.8-9.5)	<b>5.6</b> (4.6-6.9)	<b>4.3</b> (3.5-5.3)	<b>3.7</b> (3.0-4.6)	<b>2.6</b> (1.9-3.6)
Females <sup>2</sup>	<b>2.8</b> (2.1-3.7)	<b>4.4</b> (3.2-5.7)	<b>3.4</b> (2.1-5.4)	<b>3.8</b> (2.8-5.2)	<b>3.4</b> (2.4-4.8)	<b>2.7</b> (1.6-4.5)	<b>3.5</b> (2.2-5.4)	<b>2.1</b> (1.4-3.1)	<b>2.2</b> (1.2-4.1)	<b>6.3</b> (4.3-9.1)	<b>9.2</b> (7.7-10.9)	<b>11.2</b> (8.2-15.2)	<b>8.5</b> (6.3-11.5)	<b>7.8</b> (6.3-9.5)	<b>5.3</b> (3.9-7.2)	<b>4.2</b> (3.2-5.4)	<b>3.9</b> (2.8-5.5)	<b>2.9</b> (1.8-4.8)
Grade																		
7	<b>1.1</b> (0.7-1.7)	<b>2.0</b> (1.1-3.4)	<b>0.7</b> (0.6-1.0)	<b>0.9</b> (0.3-2.8)	<b>1.1</b> (0.8-1.6)	<b>1.2</b> (0.7-2.1)	<b>1.0</b> (0.7-1.2)	†	†	<b>0.8</b> (0.3-2.1)	<b>1.0</b> (0.4-2.8)	†	†	†	†	†	†	†
8	—	—	—	—	—	—	—	—	—	—	—	<b>6.7</b> (4.4-10.1)	<b>3.8</b> (2.4-6.0)	<b>2.6</b> (1.6-4.2)	<b>2.7</b> (1.9-4.0)	†	<b>0.7</b> (0.4-1.4)	<b>1.1</b> (0.6-2.0)
9	<b>3.4</b> (2.4-4.6)	<b>4.0</b> (3.0-5.3)	<b>4.8</b> (2.4-9.2)	<b>6.4</b> (4.6-8.8)	<b>3.9</b> (2.5-6.0)	<b>3.0</b> (1.2-6.9)	<b>3.5</b> (1.5-7.8)	<b>1.9</b> (1.5-2.4)	<b>1.5</b> (0.6-3.6)	<b>4.5</b> (3.1-6.4)	<b>9.9</b> (6.9-14.1)	<b>10.2</b> (7.6-13.5)	<b>9.7</b> (7.0-13.4)	<b>7.8</b> (6.1-10.0)	<b>5.7</b> (4.4-7.5)	<b>4.1</b> (2.9-5.7)	<b>3.2</b> (2.0-5.0)	<b>1.6</b> (0.9-2.6)
10	—	—	—	—	—	—	—	—	—	—	—	<b>19.3</b> (15.0-24.4)	<b>15.2</b> (11.9-19.2)	<b>12.5</b> (9.9-15.7)	<b>8.1</b> (6.0-10.7)	<b>6.3</b> (4.7-8.4)	<b>5.0</b> (3.7-6.7)	<b>3.5</b> (2.2-5.3)
11	<b>8.0</b> (6.2-10.3)	<b>10.7</b> (8.2-14.0)	<b>7.2</b> (4.9-10.5)	<b>11.5</b> (8.1-16.0)	<b>8.4</b> (6.1-11.5)	<b>7.6</b> (4.3-13.1)	<b>7.2</b> (5.4-9.6)	<b>6.5</b> (5.0-8.4)	<b>6.4</b> (5.1-7.9)	<b>16.6</b> (11.0-24.1)	<b>17.0</b> (14.9-19.2)	<b>22.7</b> (17.9-28.3)	<b>19.2</b> (14.9-24.5)	<b>17.4</b> (14.3-21.0)	<b>11.1</b> (8.8-13.9)	<b>10.9</b> (8.8-13.5)	<b>9.3</b> (6.6-12.9)	<b>8.0</b> (5.8-10.9)
12	—	—	—	—	—	—	—	—	—	—	—	<b>18.1</b> (14.1-22.9)	<b>20.5</b> (13.9-29.2)	<b>15.3</b> (12.3-18.8)	<b>11.1</b> (8.7-14.0)	<b>8.8</b> (6.7-11.5)	<b>9.0</b> (6.7-12.0)	<b>6.3</b> (3.8-10.2)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>7.4</b> (5.4-10.0)	†	<b>6.3</b> (4.6-8.5)	<b>4.0</b> (2.5-6.4)	<b>3.7</b> (2.3-5.8)	<b>2.7</b> (1.6-4.7)	<b>2.7</b> (1.5-5.0)
Toronto <sup>2</sup>	—	—	<b>3.0</b> (0.8-10.6)	<b>4.8</b> (2.9-7.7)	<b>6.2</b> (3.6-10.5)	<b>1.8</b> (0.3-9.6)	<b>3.5</b> (2.0-6.3)	<b>2.6</b> (1.7-4.0)	<b>0.7</b> (0.2-3.6)	<b>5.2</b> (1.9-13.4)	<b>4.2</b> (3.1-5.7)	<b>6.2</b> (3.9-9.8)	†	<b>4.8</b> (2.8-8.2)	<b>3.7</b> (2.4-5.8)	<b>2.9</b> (1.6-5.1)	†	†
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>14.4</b> (11.4-18.0)	<b>12.3</b> (9.4-16.0)	<b>12.2</b> (9.3-15.8)	<b>8.6</b> (6.7-10.9)	<b>8.4</b> (6.4-11.1)	<b>6.4</b> (4.2-9.7)	<b>6.4</b> (4.6-8.7)
North <sup>2</sup>	—	—	<b>3.5</b> (1.1-10.4)	<b>5.5</b> (3.3-9.2)	<b>4.4</b> (3.0-6.4)	<b>4.3</b> (2.5-7.2)	<b>4.4</b> (2.0-9.3)	<b>2.4</b> (0.6-9.4)	<b>7.0</b> (4.5-10.5)	<b>15.8</b> (4.5-42.4)	<b>8.0</b> (4.2-14.6)	<b>11.1</b> (7.4-16.4)	<b>12.9</b> (9.5-17.4)	<b>13.2</b> (9.9-17.4)	<b>7.8</b> (5.1-11.9)	<b>7.1</b> (4.0-12.1)	†	<b>7.2</b> (4.3-11.6)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>15.2</b> (12.6-18.1)	<b>14.3</b> (11.8-17.2)	<b>11.2</b> (9.2-13.5)	<b>7.9</b> (6.0-10.3)	<b>6.0</b> (4.5-8.1)	<b>5.4</b> (4.0-7.2)	<b>4.3</b> (3.0-6.3)
West <sup>2</sup>	—	—	<b>4.6</b> (2.6-7.9)	<b>7.4</b> (5.0-10.8)	<b>4.2</b> (2.6-6.8)	<b>3.7</b> (2.4-5.6)	<b>3.8</b> (2.2-6.4)	<b>3.1</b> (2.8-3.4)	<b>3.3</b> (2.3-4.7)	<b>6.9</b> (4.5-10.5)	<b>12.1</b> (9.8-15.0)	<b>12.9</b> (8.9-18.2)	<b>11.5</b> (8.4-15.5)	<b>11.1</b> (8.9-13.8)	<b>6.5</b> (4.5-9.5)	<b>6.1</b> (4.5-8.2)	<b>5.5</b> (3.7-7.9)	<b>4.6</b> (2.9-7.1)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>12.3</b> (10.0-15.0)	<b>10.0</b> (7.7-12.8)	<b>10.0</b> (7.6-13.0)	<b>6.2</b> (4.5-8.5)	<b>5.2</b> (4.1-6.5)	<b>5.3</b> (4.3-6.6)	<b>3.4</b> (2.6-4.3)
East <sup>2</sup>	—	—	<b>4.8</b> (2.9-8.0)	<b>3.8</b> (2.5-5.8)	<b>3.5</b> (2.6-4.8)	<b>6.2</b> (2.7-13.6)	<b>3.8</b> (1.7-8.2)	<b>3.3</b> (1.9-5.7)	<b>2.4</b> (1.6-3.4)	<b>7.9</b> (5.6-11.2)	<b>10.1</b> (7.7-13.0)	<b>13.5</b> (10.0-18.0)	<b>9.6</b> (6.5-13.9)	<b>9.0</b> (6.2-12.9)	<b>5.6</b> (4.1-7.5)	<b>5.2</b> (3.8-7.1)	<b>4.5</b> (2.8-7.0)	<b>2.4</b> (1.6-3.4)

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) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) † estimate suppressed or less than 0.5%; (6) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>d</sup> significant long-term non-linear 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 Use of Jimson Weed

(Figure 3.6.10; Table 3.6.4)

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.

	Jimson Weed Use in 2011 (Grades 7–12)	Trends in Jimson Weed Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>Overall, 1.7% (95% CI: 1.1%-2.8%) of students report using jimson weed at least once during the past year. This represents about 17,200 Ontario students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>The 2011 (1.7%) estimate for jimson weed use is not significantly different from that found in 2009 (2.3%) nor 2007 (2.6%).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>There is a significant difference in use between males (2.2%) and females (1.2%).</li> </ul>	<ul style="list-style-type: none"> <li>Use did not significantly change among males nor females between 2007 and 2011.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>There is no significant grade variation in the likelihood of using jimson weed.</li> </ul>	<ul style="list-style-type: none"> <li>No grade shows a significant change in jimson weed use between 2007 and 2011.</li> </ul>
Region	<ul style="list-style-type: none"> <li>Despite some variation, there are no significant differences in jimson weed use among the regions.</li> </ul>	<ul style="list-style-type: none"> <li>No region shows a significant change in jimson weed use between 2007 and 2011.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>Over one-third (35%) of past year jimson weed users reporting using the drug ten times or more often during the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.6.10  
 Past Year Jimson Weed Use by Sex, Grade, and Region, 2011 OSDUHS

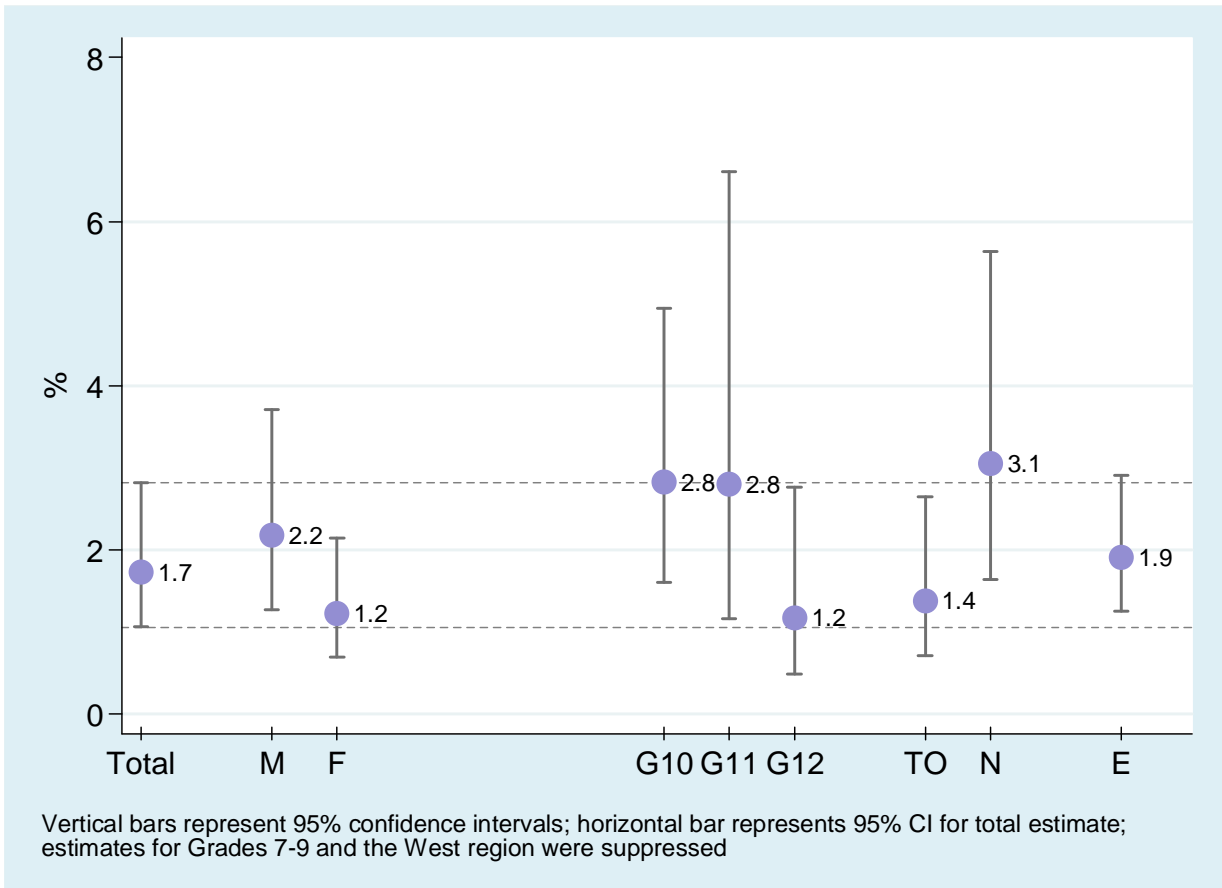


Table 3.6.4: Percentage Reporting Jimson Weed Use in the Past Year, 2007–2011 OSDUHS

	<b>2007</b> (N=2935)	<b>2009</b> (N=4220)	<b>2011</b> (N=4472)
Total (95% CI)	<b>2.6</b> (1.9-3.4)	<b>2.3</b> (1.8-3.0)	<b>1.7</b> (1.1-2.8)
<b>Sex</b>			
Males	<b>2.7</b> (1.8-4.1)	<b>2.8</b> (1.9-4.0)	<b>2.2</b> (1.3-3.7)
Females	<b>2.4</b> (1.7-3.4)	<b>1.8</b> (1.2-2.8)	<b>1.2</b> (0.7-2.1)
<b>Grade</b>			
7	†	†	†
8	†	†	†
9	†	†	†
10	<b>3.1</b> (1.8-5.4)	<b>2.5</b> (1.4-4.3)	<b>2.8</b> (1.6-4.9)
11	<b>3.3</b> (2.1-5.0)	<b>4.2</b> (2.6-6.9)	<b>2.8</b> (1.2-6.6)
12	<b>3.4</b> (1.9-6.0)	<b>3.4</b> (1.9-6.0)	<b>1.2</b> (0.5-2.7)
<b>Region</b>			
Toronto	<b>1.7</b> (1.0-3.0)	†	<b>1.4</b> (0.7-2.6)
North	<b>4.3</b> (2.4-7.7)	†	<b>3.1</b> (1.6-5.6)
West	<b>2.6</b> (1.6-4.2)	<b>2.9</b> (2.0-4.3)	†
East	<b>2.7</b> (1.7-4.2)	<b>1.7</b> (1.1-2.6)	<b>1.9</b> (1.2-2.9)

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 Use of Salvia Divinorum

(Figure 3.6.11; Table 3.6.5)

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 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 surveyed in 2009.

	Salvia Divinorum Use in 2011 (Grades 7–12)	Trends in Salvia Divinorum Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>■ In 2011, 3.7% (95% CI: 2.8%-4.8%) of students in grades 7 through 12 report using salvia divinorum at least once in the past year. This percentage represents roughly 36,600 students in Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>□ Past year use of salvia remained stable between 2009 (4.4%) and 2011 (3.7%).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Males (5.1%) are significantly more likely than females (2.1%) to use salvia divinorum.</li> </ul>	<ul style="list-style-type: none"> <li>□ Neither sex shows a significant change between 2009 and 2011.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ There is significant grade variation, with salvia use most likely among 12<sup>th</sup>-graders (6.2%).</li> </ul>	<ul style="list-style-type: none"> <li>□ None of the grades shows a significant change between 2009 and 2011.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ There is no significant regional variation in salvia use.</li> </ul>	<ul style="list-style-type: none"> <li>□ None of the four regions shows a significant change between 2009 and 2011.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ Less than 1% of all students report using salvia six times or more often in the past year (see Figure 3.1.2).</li> <li>■ Most users (61%) used only once or twice in the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.6.11  
 Past Year Salvia Divinorum Use by Sex, Grade, and Region,  
 2011 OSDUHS

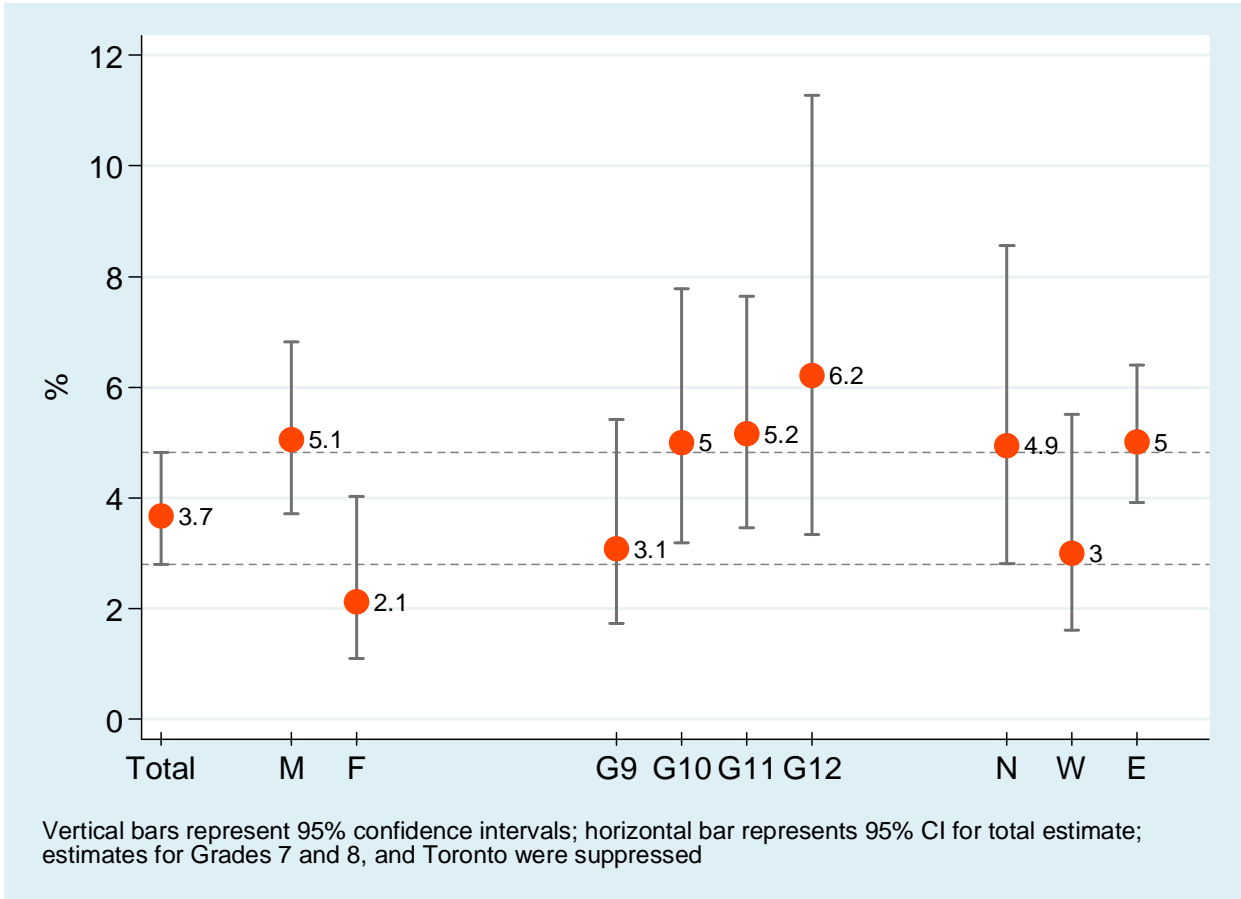


Table 3.6.5: Percentage Reporting Salvia Divinorum Use in the Past Year, 2009–2011 OSDUHS

	<b>2009</b> (N=4220)	<b>2011</b> (N=4472)
<b>Total</b> (95% CI)	<b>4.4</b> (3.3-5.7)	<b>3.7</b> (2.8-4.8)
<b>Sex</b>		
Males	<b>6.2</b> (4.7-8.2)	<b>5.1</b> (3.7-6.8)
Females	<b>2.3</b> (1.5-3.5)	<b>2.1</b> (1.1-4.0)
<b>Grade</b>		
7	†	†
8	†	†
9	†	<b>3.1</b> (1.7-5.4)
10	<b>4.7</b> (2.9-7.3)	<b>5.0</b> (3.2-7.8)
11	<b>8.6</b> (6.4-11.4)	<b>5.2</b> (3.5-7.6)
12	<b>8.4</b> (5.4-12.7)	<b>6.2</b> (3.3-11.3)
<b>Region</b>		
Toronto	†	†
North	<b>9.2</b> (6.5-12.8)	<b>4.9</b> (2.8-8.6)
West	<b>4.7</b> (2.8-7.6)	<b>3.0</b> (1.6-5.5)
East	<b>4.0</b> (3.0-5.4)	<b>5.0</b> (3.9-6.4)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant differences 2011 vs. 2009.

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

## Past Year Use of Methamphetamine or Crystal Methamphetamine

(Figures 3.6.12, 3.6.13; 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.

	Methamphetamine Use in 2011 (Grades 7–12)	Trends in Methamphetamine Use
Total Sample	<ul style="list-style-type: none"> <li>Overall, 1.0% of students report using methamphetamine at least once during the 12 months before the survey. We estimate that between 0.6% and 1.6% of Ontario students use methamphetamine. The percentage of 1.0% represents about 9,800 Ontario students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>Methamphetamine use did not significantly change between 2009 (1.6%) and 2011 (1.0%). However, use is lower in 2011 than in 1999 (5.1%).</li> <li>Over the long-term, 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 (among students in grades 7, 9, and 11).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>Males (1.2%) and females (0.8%) are equally likely to report methamphetamine use.</li> </ul>	<ul style="list-style-type: none"> <li>Methamphetamine use among males and females has not changed since the last survey in 2009. However, both sexes show a significant decline in 2011 compared with their respective 1999 estimates.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Estimates by grade were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>12<sup>th</sup>-graders show a significant decline in methamphetamine use between 2009 and 2011. All of the grades, except 11<sup>th</sup>-grade, show a significant decline since 1999.</li> </ul>
Region	<ul style="list-style-type: none"> <li>There is no significant regional variation in methamphetamine use.</li> </ul>	<ul style="list-style-type: none"> <li>Students in the East show a significant decrease in methamphetamine use in 2011 (0.7%) compared with 2009 (1.9%). Students in all regions, show declines relative to their 1999 estimates.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>The majority (51%) of users report using once or twice in the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.6.12  
Past Year Methamphetamine Use (includes Crystal Methamphetamine),  
1999–2011 OSDUHS (Grades 7–12)

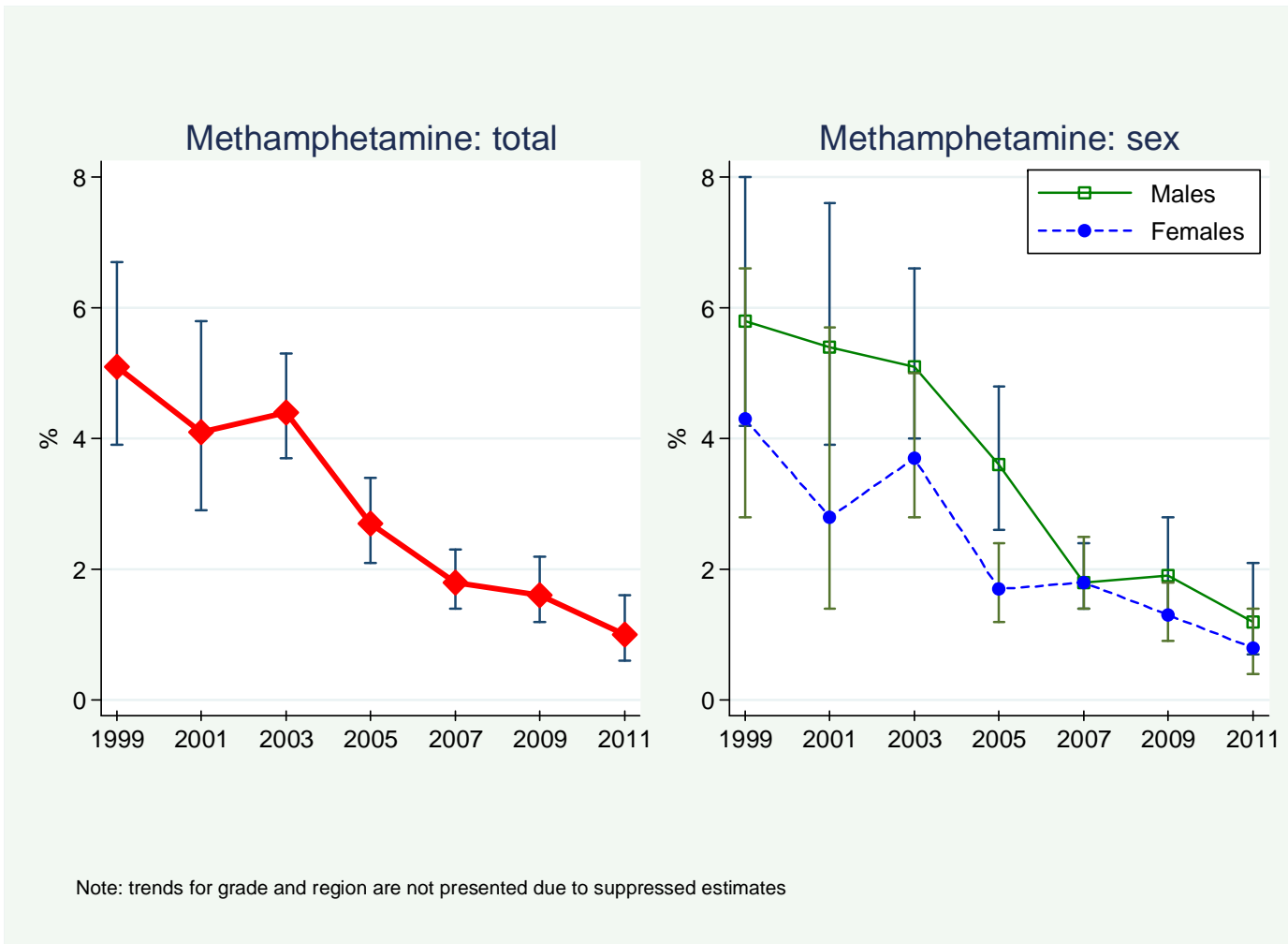


Figure 3.6.13  
Past Year Methamphetamine Use (includes Crystal Methamphetamine),  
1977–2011 OSDUHS (Grades 7, 9, 11 only)

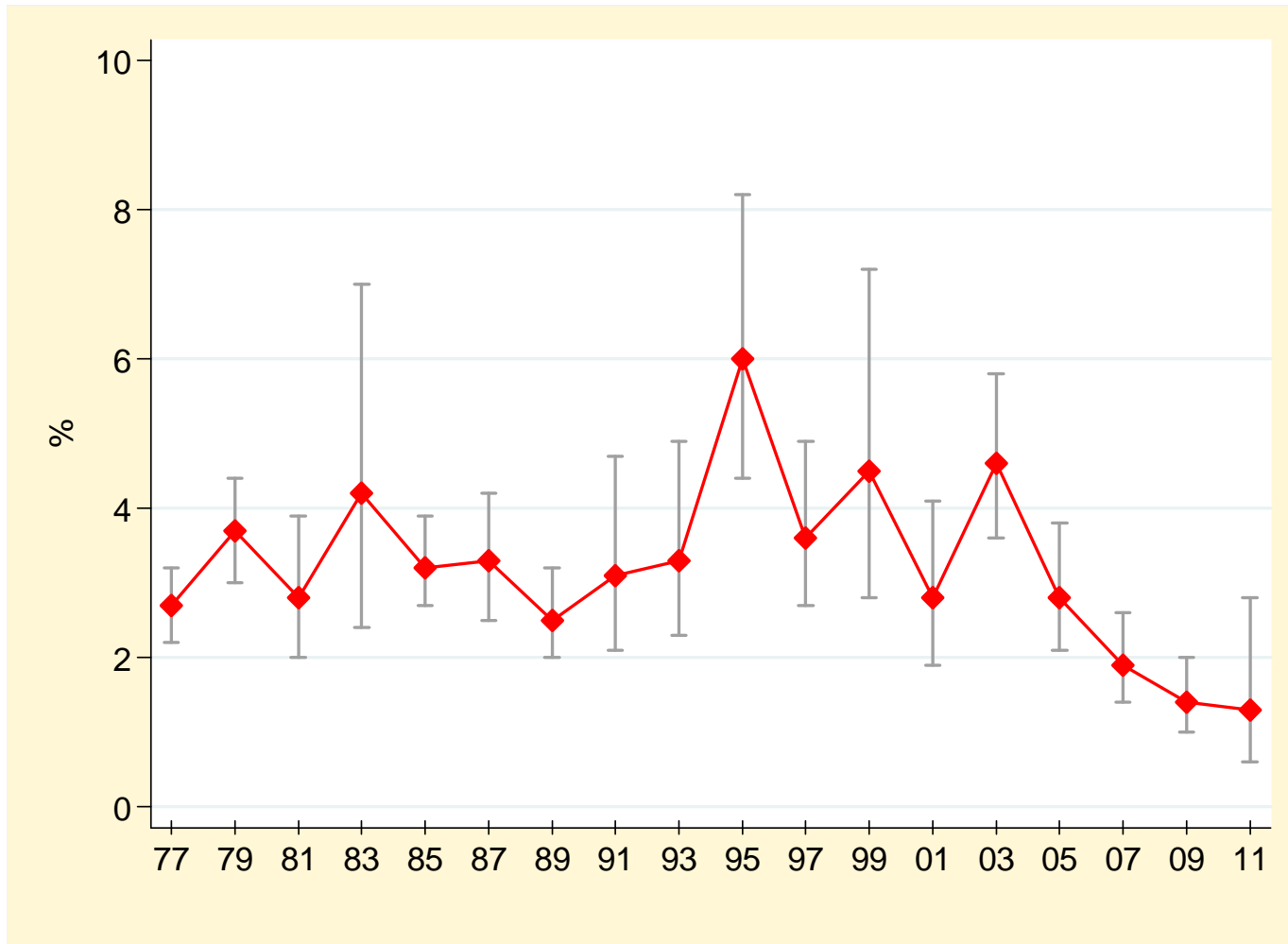


Table 3.6.6: Percentage Reporting Methamphetamine Use (includes Crystal Methamphetamine) in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(2299)	(2061)	(3152)	(3648)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(1405)	(1376)	(1454)	(1545)	(1253)	(1060)	(1618)	(1862)	(3215)	(4424)	(4669)
Total <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	5.1	4.1	4.4	2.7	1.8	1.6	1.0 <sup>b</sup>
												(3.9-6.7)	(2.9-5.8)	(3.7-5.3)	(2.1-3.4)	(1.4-2.3)	(1.2-2.2)	(0.6-1.6)
Total <sup>2</sup> (95% CI)	2.7	3.7	2.8	4.2	3.2	3.3	2.5	3.1	3.3	6.0	3.6	4.5	2.8	4.6	2.8	1.9	1.4	1.3 <sup>cd</sup>
	(2.2-3.2)	(3.0-4.4)	(2.0-3.9)	(2.4-7.0)	(2.7-3.9)	(2.5-4.2)	(2.0-3.2)	(2.1-4.7)	(2.3-4.9)	(4.4-8.2)	(2.7-4.9)	(2.8-7.2)	(1.9-4.1)	(3.6-5.8)	(2.1-3.8)	(1.4-2.6)	(1.0-2.0)	(0.6-2.8)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	5.8	5.4	5.1	3.6	1.8	1.9	1.2 <sup>b</sup>
												(4.2-8.0)	(3.9-7.6)	(4.0-6.6)	(2.6-4.8)	(1.4-2.4)	(1.3-2.8)	(0.7-2.1)
Males <sup>2</sup>	3.5	4.5	2.7	5.5	3.3	4.1	2.9	3.5	4.4	7.1	3.7	4.8	4.2	5.2	3.3	2.0	1.2	†
	(2.7-4.5)	(3.6-5.7)	(1.8-4.1)	(3.4-8.9)	(2.7-4.1)	(3.0-5.6)	(1.9-4.4)	(2.2-5.4)	(2.9-6.8)	(5.0-10.0)	(2.4-5.5)	(2.6-8.8)	(2.7-6.4)	(3.7-7.2)	(2.3-4.8)	(1.4-2.9)	(0.8-2.0)	
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	4.3	2.8	3.7	1.7	1.8	1.3	0.8 <sup>b</sup>
												(2.8-6.6)	(1.4-5.7)	(2.8-5.0)	(1.2-2.4)	(1.4-2.5)	(0.9-1.8)	(0.4-1.4)
Females <sup>2</sup>	2.0	2.8	2.9	2.8	3.1	2.5	2.1	†	2.3	5.0	3.6	4.2	†	4.0	2.3	1.8	1.6	†
	(1.4-2.7)	(2.0-3.7)	(2.0-4.3)	(1.5-5.2)	(2.3-4.2)	(1.6-3.7)	(1.4-3.1)		(1.2-4.3)	(3.1-7.9)	(2.3-5.5)	(2.4-7.2)		(2.8-5.7)	(1.4-3.7)	(1.1-2.7)	(1.0-2.5)	
Grade																		
7	2.7	2.5	†	1.0	1.4	1.5	1.0	†	†	3.9	†	†	†	†	†	†	†	†
	(2.1-3.4)	(1.6-3.8)		(0.6-1.8)	(1.0-2.0)	(0.8-2.8)	(0.6-1.6)			(2.9-5.2)								
8	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†	† <sup>b</sup>
9	2.8	4.0	3.8	†	3.2	3.0	2.9	4.3	3.1	6.0	3.2	3.8	2.8	4.5	3.8	1.8	1.4	† <sup>b</sup>
	(2.1-3.8)	(3.0-5.3)	(2.1-6.7)		(2.6-4.0)	(1.9-4.6)	(2.0-4.3)	(2.6-7.1)	(1.9-4.8)	(3.0-11.7)	(1.9-5.3)	(2.3-6.4)	(1.7-4.6)	(2.9-7.1)	(2.5-5.8)	(1.0-3.2)	(0.8-2.4)	
10	—	—	—	—	—	—	—	—	—	—	—	6.3	8.9	4.8	1.7	1.8	0.9	† <sup>b</sup>
												(4.1-9.6)	(5.0-15.2)	(3.2-7.1)	(1.0-2.9)	(1.1-2.7)	(0.5-1.6)	
11	2.5	4.5	3.7	5.3	5.0	5.2	3.6	4.9	5.3	7.8	6.4	8.1	†	6.8	3.0	3.3	2.0	†
	(1.6-4.0)	(3.4-5.9)	(2.6-5.2)	(3.8-7.0)	(3.6-7.0)	(3.5-7.7)	(2.7-4.8)	(2.4-9.6)	(2.9-9.6)	(5.1-11.8)	(4.6-8.8)	(4.3-14.8)		(4.8-9.6)	(1.7-5.2)	(2.3-4.7)	(1.1-3.6)	
12	—	—	—	—	—	—	—	—	—	—	—	7.9	†	6.0	3.7	2.2	3.1	† <sup>ab</sup>
												(4.5-13.6)		(3.7-9.5)	(2.4-5.6)	(1.4-3.4)	(1.9-5.0)	

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(2299)	(2061)	(3152)	(3648)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(1405)	(1376)	(1454)	(1545)	(1253)	(1060)	(1618)	(1862)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	†	†	<b>2.7</b> (1.8-4.2)	<b>2.3</b> (1.3-4.0)	<b>0.9</b> (0.5-1.7)	<b>1.6</b> (0.9-2.8)	† <sup>b</sup>
Toronto <sup>2</sup>	—	—	†	†	<b>3.9</b> (2.4-6.4)	<b>2.8</b> (2.0-4.1)	<b>2.7</b> (1.6-4.5)	<b>2.9</b> (1.7-5.1)	†	<b>5.2</b> (3.8-7.3)	<b>2.2</b> (1.2-4.0)	†	†	†	†	†	†	†
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>5.3</b> (3.5-8.1)	<b>4.1</b> (2.6-6.4)	<b>7.2</b> (4.8-10.5)	<b>3.0</b> (1.7-5.2)	†	†	<b>1.3</b> (0.8-2.2)
North <sup>2</sup>	—	—	<b>2.7</b> (1.9-4.0)	<b>4.9</b> (2.6-9.1)	<b>2.8</b> (2.6-3.1)	<b>3.8</b> (2.4-5.9)	†	<b>3.2</b> (1.6-6.3)	†	†	†	<b>4.6</b> (2.4-8.6)	†	<b>8.4</b> (4.4-15.4)	<b>4.0</b> (2.1-7.4)	†	†	†
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>6.7</b> (4.5-10.0)	<b>4.7</b> (2.9-7.6)	<b>5.0</b> (3.8-6.6)	<b>3.0</b> (2.2-4.1)	<b>1.6</b> (1.1-2.3)	<b>1.4</b> (0.8-2.3)	† <sup>b</sup>
West <sup>2</sup>	—	—	<b>3.7</b> (2.3-6.0)	†	<b>3.6</b> (2.7-4.7)	<b>2.8</b> (1.7-4.6)	<b>3.1</b> (2.3-4.2)	<b>4.4</b> (2.1-8.8)	<b>4.2</b> (2.9-6.0)	<b>6.1</b> (3.4-10.6)	<b>4.5</b> (3.0-6.7)	†	<b>2.7</b> (1.5-4.7)	<b>5.3</b> (3.7-7.4)	<b>2.9</b> (1.9-4.4)	<b>1.7</b> (1.1-2.4)	<b>1.5</b> (0.8-2.8)	†
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>3.8</b> (2.2-6.3)	†	<b>3.8</b> (2.7-5.4)	<b>2.3</b> (1.4-4.0)	<b>2.1</b> (1.4-3.0)	<b>1.9</b> (1.2-3.1)	<b>0.7</b> (0.4-1.2)
East <sup>2</sup>	—	—	<b>2.4</b> (1.7-3.3)	<b>3.3</b> (2.2-4.9)	<b>2.3</b> (1.7-3.1)	<b>4.1</b> (2.6-6.4)	<b>1.6</b> (0.9-2.7)	<b>1.7</b> (1.0-2.7)	<b>1.4</b> (0.8-2.2)	<b>4.7</b> (3.4-6.4)	<b>3.5</b> (2.1-5.8)	†	†	<b>3.4</b> (2.2-5.0)	<b>2.5</b> (1.3-4.6)	<b>2.0</b> (1.1-3.6)	<b>1.6</b> (1.0-2.4)	†

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) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) based on 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) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.01; <sup>d</sup> significant long-term non-linear 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 Use of Cocaine

(Figures 3.6.14–3.6.16; Table 3.6.7)

	Cocaine Use in 2011 (Grades 7–12)	Trends in Cocaine Use
Total Sample	<ul style="list-style-type: none"> <li>Overall, 2.1% of Ontario students report using cocaine at least once during the 12 months before the survey. Accounting for sampling error, we project that between 1.7% and 2.6% of Ontario students use cocaine. The 2.1% estimate represents roughly 20,700 students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>Cocaine use did not significantly change between 2009 (2.6%) and 2011 (2.1%). There was a significant increase between 1999 (3.4%) and 2003 (4.8%), and the level has since declined. The 2011 estimate is significantly lower than the 1999 and the 2003 estimate.</li> <li>Over the long-term (among grades 7, 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 of use is lower than the peak years of 1979 and 2003, and similar to the lows evident in the early 1990s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>Cocaine use does not significantly differ between males (2.5%) and females (1.6%).</li> </ul>	<ul style="list-style-type: none"> <li>Neither males nor females show a significant change in cocaine use since 2009. However, both sexes show a decline compared with their respective 2003 (peak year) estimates. Use among females is also currently lower compared with 1999.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Cocaine use significantly varies by grade. Use is most prevalent among students in 11<sup>th</sup>-grade (4.9%), and drops to 2.5% in 12<sup>th</sup>-grade.</li> </ul>	<ul style="list-style-type: none"> <li>Cocaine use among students in grade 9, 10, and 12 is currently lower compared with the respective estimates from 2003 (peak year).</li> </ul>
Region	<ul style="list-style-type: none"> <li>Cocaine use significantly differs by region, with students in the North (4.1%) most likely to use, and Toronto students (1.3%) least likely.</li> </ul>	<ul style="list-style-type: none"> <li>Students in Toronto, the West, and the East show declines in cocaine use compared with their estimates from 1999 and/or 2003. Students in the North show no significant change.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>Cocaine use six or more times during the past year is reported by less than 1% of all students (see Figure 3.1.2).</li> <li>Half (51%) of cocaine users report using once or twice, while one-quarter (27%) report using ten or more times in the past year (Figure 3.1.3).</li> </ul>	

Figure 3.6.14  
 Past Year Cocaine Use by Sex, Grade, and Region, 2011 OSDUHS

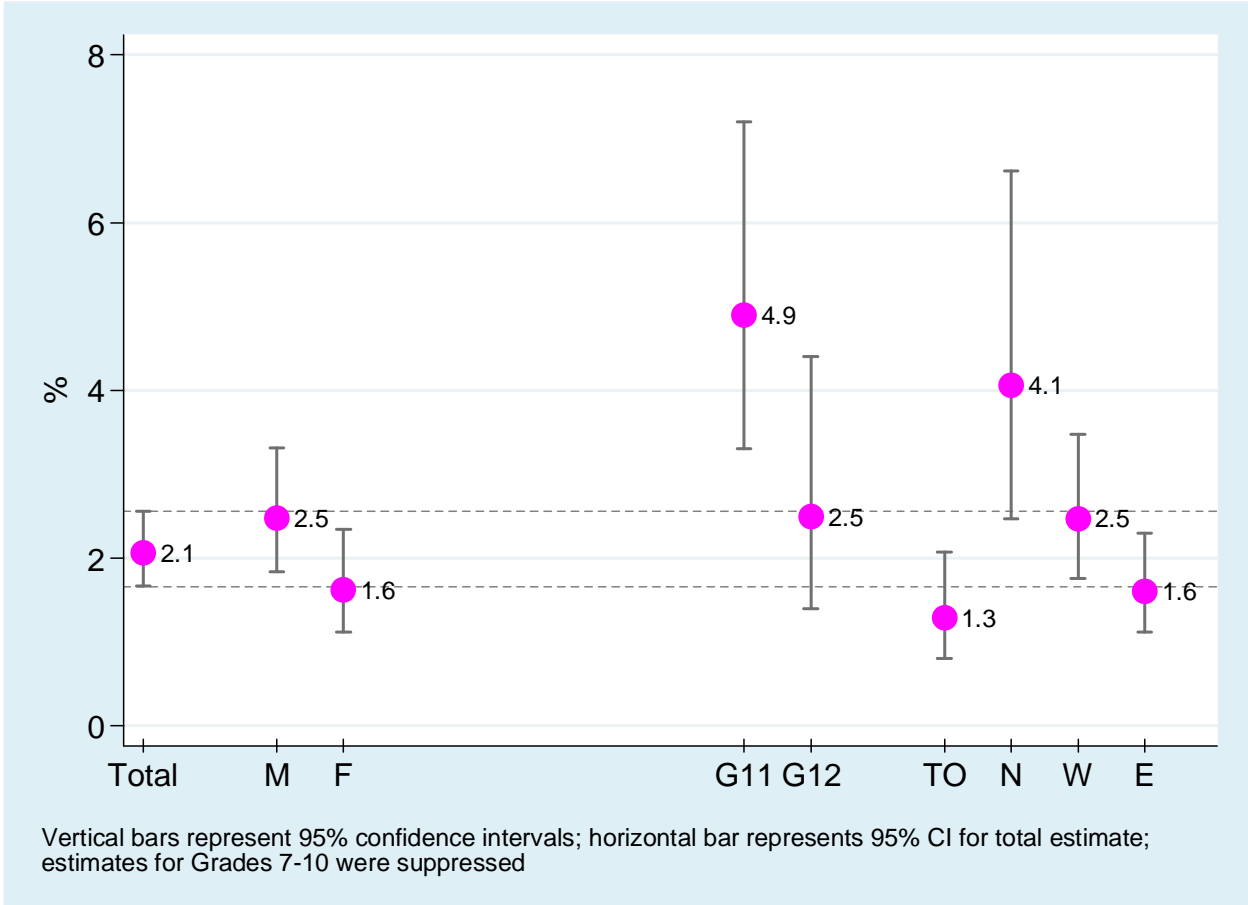


Figure 3.6.15  
 Past Year Cocaine Use, 1999–2011 OSDUHS (Grades 7–12)

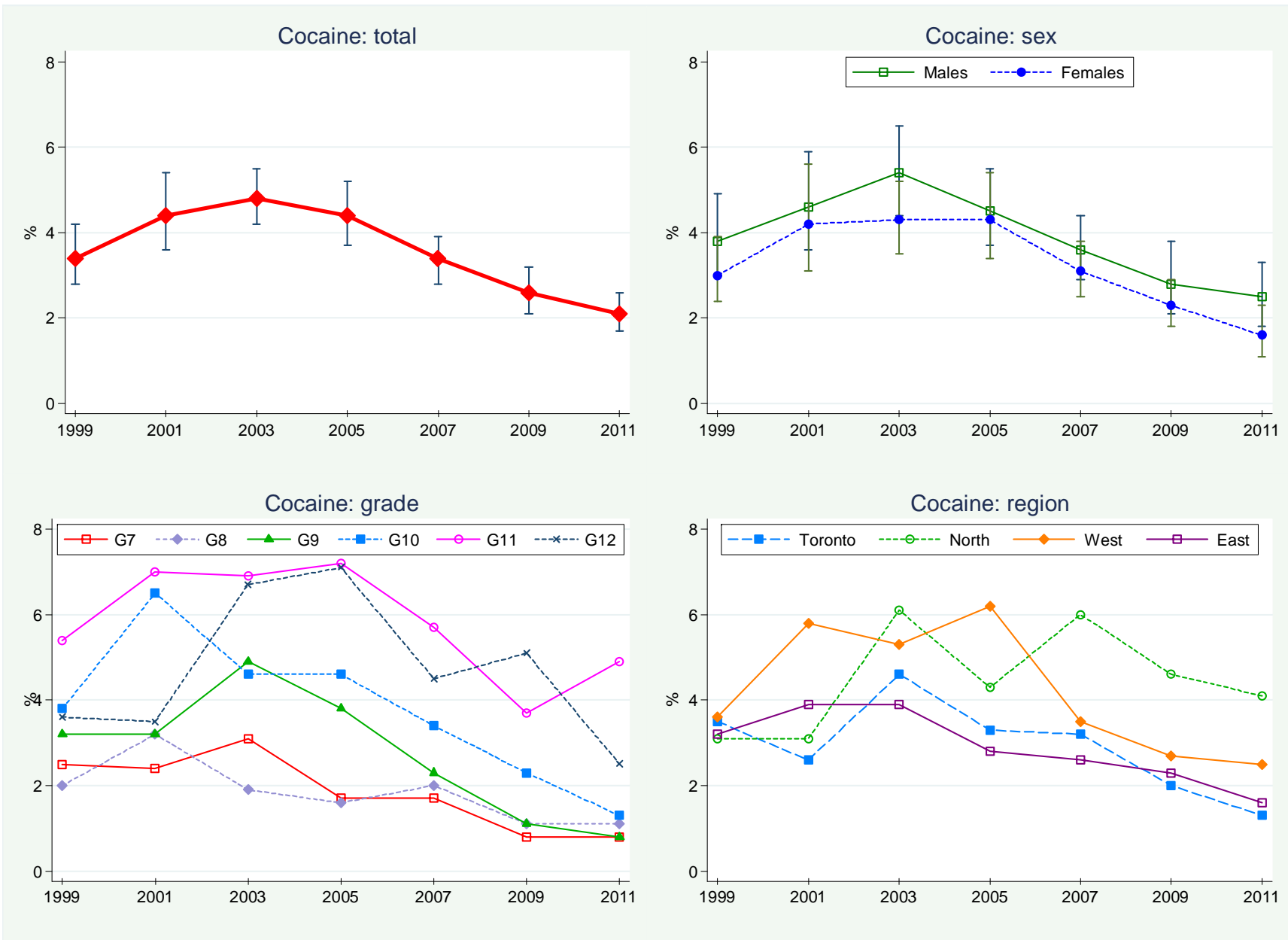


Figure 3.6.16  
 Past Year Cocaine Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

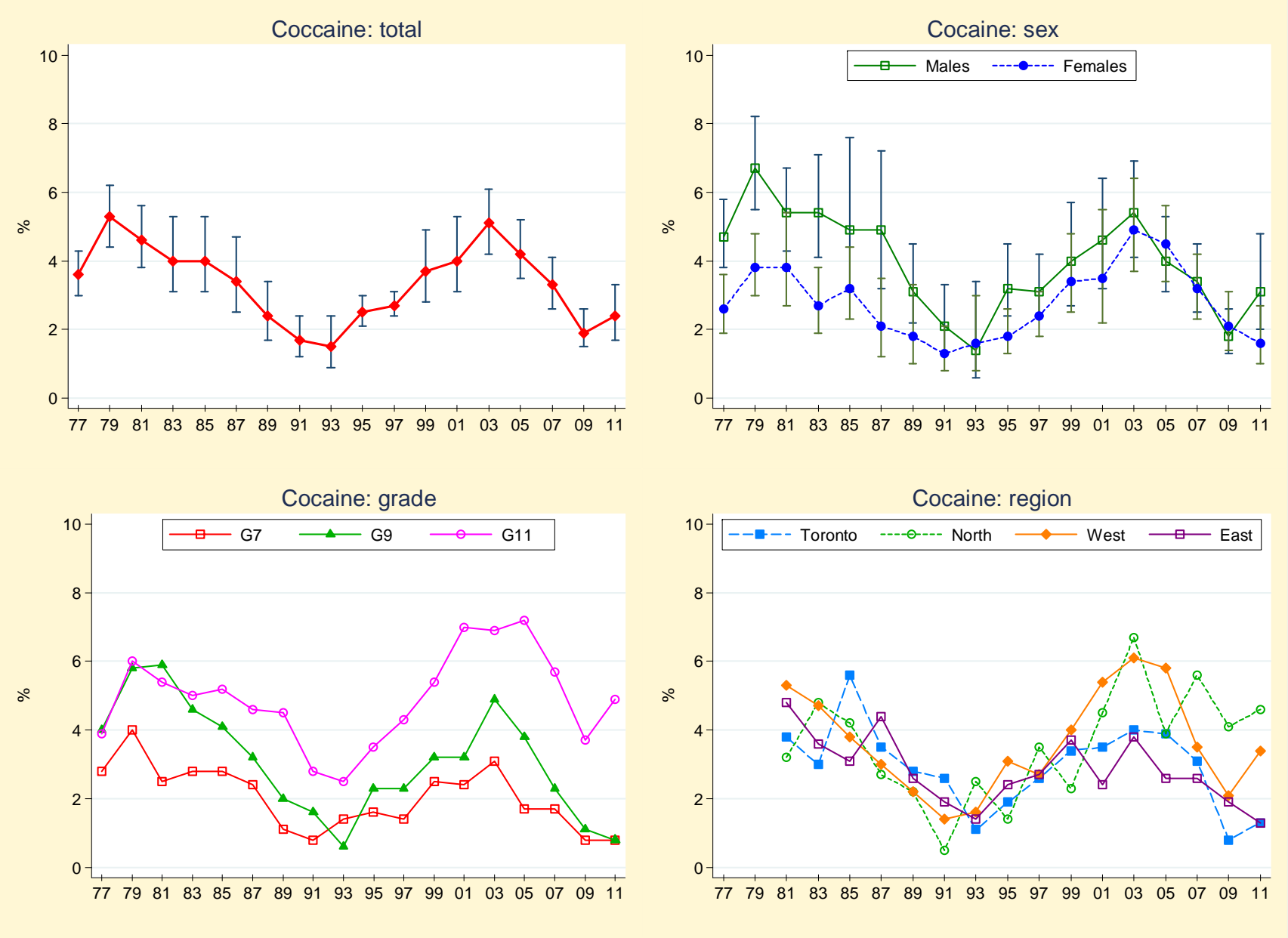


Table 3.6.7: Percentage Reporting Cocaine Use in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	3.4 (2.8-4.2)	4.4 (3.6-5.4)	4.8 (4.2-5.5)	4.4 (3.7-5.2)	3.4 (2.8-3.9)	2.6 (2.1-3.2)	2.1 (1.7-2.6)
Total <sup>2</sup>	3.6 (3.0-4.3)	5.3 (4.4-6.2)	4.6 (3.8-5.6)	4.0 (3.1-5.3)	4.0 (3.1-5.3)	3.4 (2.5-4.7)	2.4 (1.7-3.4)	1.7 (1.2-2.4)	1.5 (0.9-2.4)	2.5 (2.1-3.0)	2.7 (2.4-3.1)	3.7 (2.8-4.9)	4.0 (3.1-5.3)	5.1 (4.2-6.1)	4.2 (3.5-5.2)	3.3 (2.6-4.1)	1.9 (1.5-2.6)	2.4 (1.7-3.3)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	3.8 (3.0-4.9)	4.6 (3.6-5.9)	5.4 (4.4-6.5)	4.5 (3.7-5.5)	3.6 (2.9-4.4)	2.8 (2.1-3.8)	2.5 (1.8-3.3)
Males <sup>2</sup>	4.7 (3.8-5.8)	6.7 (5.5-8.2)	5.4 (4.3-6.7)	5.4 (4.1-7.1)	4.9 (3.1-7.6)	4.9 (3.2-7.2)	3.1 (2.2-4.5)	2.1 (1.3-3.3)	1.4 (0.6-3.4)	3.2 (2.4-4.5)	3.1 (2.4-4.2)	4.0 (2.7-5.7)	4.6 (3.2-6.4)	5.4 (4.1-6.9)	4.0 (3.1-5.3)	3.4 (2.5-4.5)	1.8 (1.2-2.6)	3.1 (2.0-4.8)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	3.0 (2.4-3.9)	4.2 (3.1-5.6)	4.3 (3.5-5.2)	4.3 (3.4-5.4)	3.1 (2.5-3.8)	2.3 (1.8-2.9)	1.6 (1.1-2.3)
Females <sup>2</sup>	2.6 (1.9-3.6)	3.8 (3.0-4.8)	3.8 (2.7-5.4)	2.7 (1.9-3.8)	3.2 (2.3-4.4)	2.1 (1.2-3.5)	1.8 (1.0-3.3)	1.3 (0.8-2.1)	1.6 (0.8-3.0)	1.8 (1.3-2.6)	2.4 (1.8-3.1)	3.4 (2.5-4.8)	3.5 (2.2-5.5)	4.9 (3.7-6.4)	4.5 (3.4-5.8)	3.2 (2.4-4.2)	2.1 (1.4-3.1)	1.6 (1.0-2.7)
Grade																		
7	2.8 (2.0-3.9)	4.0 (2.8-5.5)	2.5 (1.8-3.3)	2.8 (1.7-4.5)	2.8 (1.2-6.2)	2.4 (1.7-3.2)	1.1 (0.6-1.8)	0.8 (0.2-2.9)	1.4 (0.6-3.4)	1.6 (1.2-2.3)	1.4 (1.0-2.0)	2.5 (1.4-4.3)	2.4 (1.3-4.1)	3.1 (2.0-5.0)	1.7 (1.0-2.8)	1.7 (0.9-3.2)	†	†
8	—	—	—	—	—	—	—	—	—	—	—	2.0 (1.1-3.6)	3.2 (2.0-5.1)	1.9 (1.1-3.1)	1.7 (1.0-2.7)	2.0 (1.0-3.8)	1.1 (0.6-2.0)	†
9	4.0 (3.1-5.3)	5.8 (4.3-7.6)	5.9 (4.6-7.6)	4.6 (3.0-7.1)	4.1 (2.6-6.5)	3.2 (1.6-6.6)	2.0 (1.0-3.7)	1.6 (1.0-2.5)	0.6 (0.3-1.1)	2.3 (1.5-3.5)	2.3 (2.0-2.7)	3.2 (2.1-4.7)	3.2 (2.0-5.2)	4.9 (3.6-6.8)	3.8 (2.8-5.1)	2.3 (1.6-3.5)	1.1 (0.6-1.9)	† <sup>c</sup>
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 (1.4-3.5)	† <sup>c</sup>
11	3.9 (2.8-5.6)	6.0 (4.6-7.8)	5.4 (3.7-7.9)	5.0 (3.1-8.1)	5.2 (3.8-6.9)	4.6 (2.9-7.3)	4.5 (2.9-6.9)	2.8 (1.7-4.4)	2.5 (1.3-4.8)	3.5 (2.7-4.5)	4.3 (3.6-5.1)	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)
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)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	3.5 (2.1-5.6)	2.6 (1.4-4.8)	4.6 (3.2-6.7)	3.3 (2.2-4.8)	3.2 (2.2-4.7)	†	1.3 (0.8-2.1) <sup>bc</sup>
Toronto <sup>2</sup>	—	—	3.8 (1.7-8.1)	3.0 (1.7-5.3)	5.6 (3.8-8.1)	3.5 (1.5-8.1)	2.8 (1.5-5.4)	2.6 (1.2-5.6)	1.1 (0.4-3.0)	1.9 (1.1-3.4)	2.6 (1.8-3.9)	3.4 (1.8-6.4)	3.5 (1.8-6.6)	4.0 (2.6-6.0)	3.9 (2.4-6.1)	3.1 (1.8-5.3)	†	†
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	3.1 (1.8-5.1)	3.1 (1.9-5.3)	6.1 (4.6-8.0)	4.3 (3.0-6.1)	6.0 (4.0-9.0)	4.6 (2.9-7.0)	4.1 (2.5-6.6)
North <sup>2</sup>	—	—	3.2 (1.8-5.7)	4.8 (3.8-6.1)	4.2 (2.1-8.2)	2.7 (1.7-4.2)	2.2 (0.8-6.0)	0.5 (0.1-3.6)	2.5 (0.5-11.1)	1.4 (0.2-7.2)	3.5 (1.7-7.0)	2.3 (0.8-6.2)	4.5 (2.2-9.1)	6.7 (4.7-9.4)	3.9 (2.2-6.6)	5.6 (3.0-10.2)	4.1 (2.4-6.9)	4.6 (2.7-7.7)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	3.6 (2.6-5.0)	5.8 (4.4-7.6)	5.3 (4.3-6.5)	6.2 (5.0-7.7)	3.5 (2.7-4.7)	2.7 (1.9-3.7)	2.5 (1.8-3.5) <sup>c</sup>
West <sup>2</sup>	—	—	5.3 (4.2-6.6)	4.7 (2.8-7.7)	3.8 (2.3-6.3)	3.0 (2.2-4.1)	2.2 (1.7-2.9)	1.4 (0.7-2.7)	1.6 (0.8-3.1)	3.1 (2.7-3.5)	2.7 (2.3-3.1)	4.0 (2.5-6.5)	5.4 (3.7-7.9)	6.1 (4.6-8.2)	5.8 (4.4-7.6)	3.5 (2.4-5.1)	2.1 (1.4-3.2)	3.4 (2.1-5.3)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	3.2 (2.4-4.3)	3.9 (2.6-5.9)	3.9 (2.9-5.1)	2.8 (1.9-4.1)	2.6 (2.0-3.4)	2.3 (1.6-3.4)	1.6 (1.1-2.3) <sup>bc</sup>
East <sup>2</sup>	—	—	4.8 (3.1-7.3)	3.6 (2.5-5.2)	3.1 (1.6-5.9)	4.4 (2.2-8.5)	2.6 (1.0-6.7)	1.9 (1.3-2.7)	1.4 (0.5-3.7)	2.4 (1.5-3.9)	2.7 (2.4-3.0)	3.7 (2.5-5.4)	2.4 (1.5-3.7)	3.8 (2.8-5.2)	2.6 (1.6-3.9)	2.6 (1.8-3.8)	1.9 (1.2-2.9)	1.3 (0.8-2.1)

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) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) † estimate suppressed due to unreliability; (6) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> 2011 vs. 2003 (peak) significant difference, p<.01; <sup>d</sup> significant long-term linear trend, p<.01; <sup>e</sup> significant long-term non-linear 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 Use of Crack Cocaine

(Figures 3.6.17, 3.6.18; 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.

	Crack Cocaine Use in 2011 (Grades 7–12)	Trends in Crack Cocaine Use
Total Sample	<ul style="list-style-type: none"> <li>Overall, 0.7% of students used crack cocaine during the past year. With sampling error, we estimate that between 0.5% and 1.1% of students in grades 7 through 12 use crack. The percentage 0.7% represents about 6,900 students in Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>Crack use in 2011 (0.7%) is statistically similar to the level found in 2009 (1.1%), but significantly lower than the estimates from 1999 (2.5%), 2001 (2.1%) and 2003 (2.7%).</li> <li>Over the long-term (among grades 7, 9, and 11 only), there was a small, but significant, increase in crack use between 1991 and 2003, followed by a decline.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>Use of crack does not significantly differ between males and females.</li> </ul>	<ul style="list-style-type: none"> <li>Crack use has significantly declined since 1999 for both males and females.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Estimates by grade were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>Only 11<sup>th</sup>-graders show a significant decline in crack use in 2011 relative to use in 1999.</li> </ul>
Region	<ul style="list-style-type: none"> <li>There are no significant differences among the regions regarding crack use.</li> </ul>	<ul style="list-style-type: none"> <li>Students in the West and East regions show a significant decline in crack use over the past decade.</li> </ul>

Figure 3.6.17  
 Past Year Crack Cocaine Use, 1999–2011 OSDUHS (Grades 7–12)

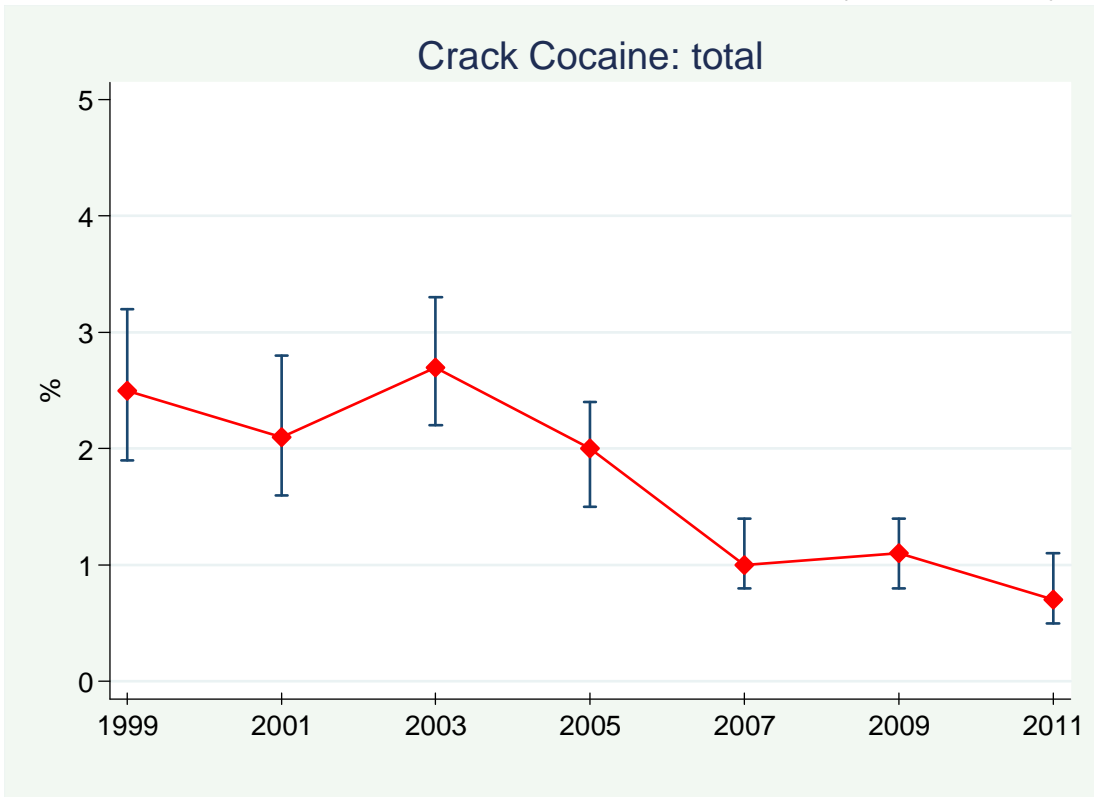


Figure 3.6.18  
 Past Year Crack Cocaine Use, 1987–2011 OSDUHS (Grades 7, 9, 11 only)

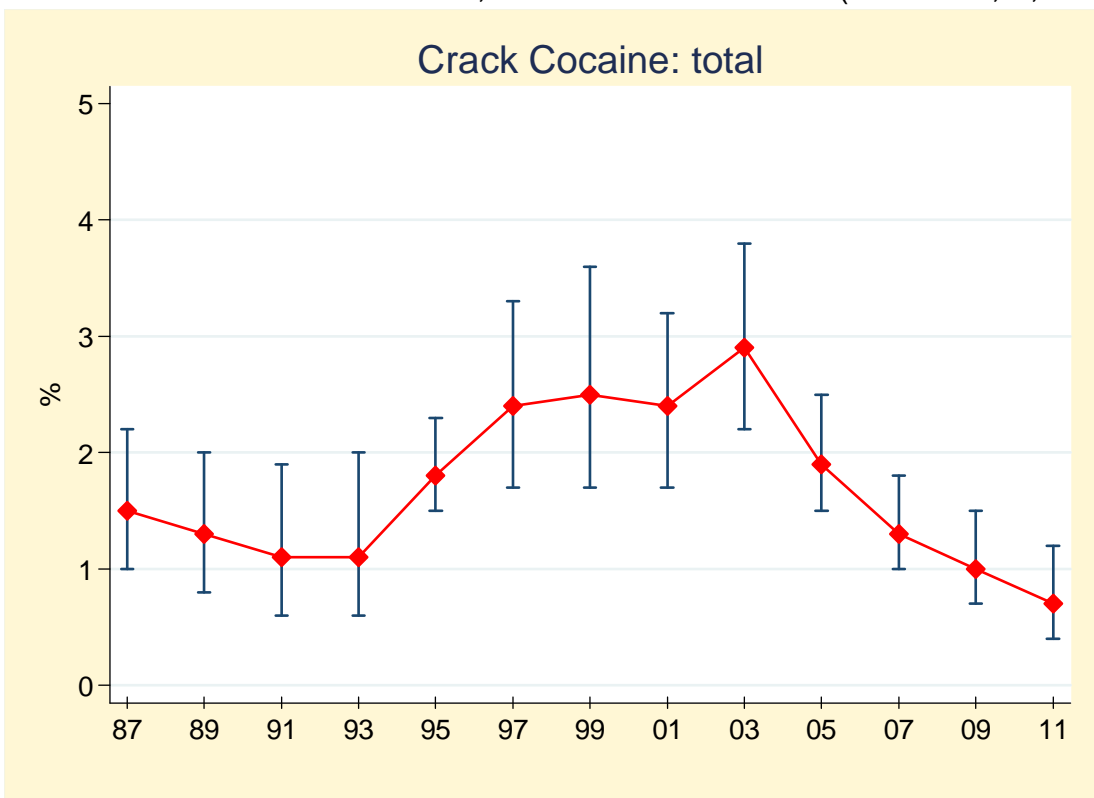


Table 3.6.8: Percentage Reporting Crack Cocaine Use in the Past Year, 1987–2011 OSDUHS

	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )							(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	2.5 (1.9-3.2)	2.1 (1.6-2.8)	2.7 (2.2-3.3)	2.0 (1.5-2.4)	1.0 (0.8-1.4)	1.1 (0.8-1.4)	0.7 <sup>b</sup> (0.5-1.1)
Total <sup>2</sup>	1.5 (1.0-2.2)	1.3 (0.8-2.0)	1.1 (0.6-1.9)	1.1 (0.6-2.0)	1.8 (1.5-2.3)	2.4 (1.7-3.3)	2.5 (1.7-3.6)	2.4 (1.7-3.2)	2.9 (2.2-3.8)	1.9 (1.5-2.5)	1.3 (1.0-1.8)	1.0 (0.7-1.5)	0.7 <sup>d</sup> (0.4-1.2)
Sex													
Males <sup>1</sup>	—	—	—	—	—	—	3.0 (2.2-4.1)	2.5 (1.6-3.8)	2.8 (2.1-3.6)	2.1 (1.6-2.6)	0.9 (0.6-1.4)	1.3 (0.9-1.8)	0.9 <sup>b</sup> (0.6-1.6)
Males <sup>2</sup>	2.3 (1.3-4.1)	1.6 (1.0-2.6)	1.1 (0.6-2.1)	1.6 (0.8-3.3)	2.3 (1.6-3.4)	3.4 (2.0-5.8)	2.9 (1.9-4.4)	2.4 (1.4-3.9)	3.0 (2.1-4.2)	1.7 (1.2-2.4)	1.1 (0.7-1.7)	1.0 (0.6-1.8)	†
Females <sup>1</sup>	—	—	—	—	—	—	2.0 (1.4-2.8)	1.8 (1.2-2.6)	2.6 (1.9-3.5)	1.9 (1.5-2.4)	1.1 (0.8-1.7)	0.9 (0.6-1.3)	† <sup>b</sup>
Females <sup>2</sup>	0.8 (0.4-1.3)	1.0 (0.6-1.8)	1.1 (0.5-2.2)	0.7 (0.3-1.6)	1.4 (1.1-1.8)	1.5 (1.0-2.3)	2.1 (1.3-3.4)	2.3 (1.4-3.7)	2.8 (1.9-4.1)	2.2 (1.5-3.1)	1.5 (0.9-2.5)	1.0 (0.6-1.7)	†
Grade													
7	1.8 (1.3-2.4)	1.2 (0.7-1.9)	0.8 (0.2-3.0)	1.5 (0.6-3.8)	1.1 (0.7-1.8)	1.5 (0.4-5.3)	†	†	1.7 (0.9-3.2)	†	†	†	†
8	—	—	—	—	—	—	1.6 (0.8-3.0)	†	1.7 (1.0-3.0)	1.5 (0.9-2.6)	†	†	†
9	1.7 (1.0-2.9)	1.0 (0.4-2.6)	1.1 (0.4-3.4)	†	1.8 (1.1-3.0)	2.3 (1.4-3.7)	3.0 (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)	†	†
10	—	—	—	—	—	—	3.8 (2.1-6.6)	1.4 (0.7-2.8)	3.0 (2.0-4.5)	2.5 (1.7-3.8)	1.1 (0.6-2.0)	0.9 (0.5-1.6)	†
11	1.1 (0.3-3.4)	1.8 (0.8-3.8)	1.3 (0.7-2.4)	1.6 (0.7-3.6)	2.5 (2.0-3.2)	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)	† <sup>b</sup>
12	—	—	—	—	—	—	†	2.9 (1.3-6.7)	2.5 (1.7-3.7)	2.1 (1.3-3.2)	†	1.5 (0.8-2.8)	†

(Continued...)

	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )							(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region													
Toronto <sup>1</sup>	—	—	—	—	—	—	†	<b>2.7</b> (2.0-3.6)	<b>2.2</b> (1.2-4.0)	<b>1.4</b> (0.8-2.3)	<b>0.9</b> (0.5-1.6)	<b>1.4</b> (0.7-2.5)	†
Toronto <sup>2</sup>	<b>1.0</b> (0.4-2.4)	<b>1.7</b> (0.4-7.4)	<b>1.6</b> (0.7-3.8)	<b>0.6</b> (0.3-1.3)	<b>2.1</b> (1.2-3.7)	<b>1.6</b> (0.5-4.9)	†	<b>3.2</b> (2.1-4.9)	<b>2.4</b> (1.2-5.0)	<b>1.8</b> (0.9-3.4)	<b>1.2</b> (0.5-2.7)	†	†
North <sup>1</sup>	—	—	—	—	—	—	<b>2.8</b> (1.6-4.8)	<b>1.0</b> (0.5-2.0)	<b>4.6</b> (3.3-6.2)	<b>2.1</b> (1.3-3.3)	<b>3.0</b> (1.7-5.0)	†	†
North <sup>2</sup>	<b>1.4</b> (0.9-2.2)	<b>1.9</b> (0.6-5.8)	<b>0.5</b> (0.1-3.6)	<b>1.6</b> (0.2-12.6)	†	<b>2.5</b> (0.8-7.5)	<b>1.9</b> (0.6-6.1)	<b>1.0</b> (0.3-2.8)	<b>5.1</b> (3.5-7.4)	<b>2.3</b> (1.1-4.6)	<b>3.6</b> (2.0-6.7)	†	†
West <sup>1</sup>	—	—	—	—	—	—	<b>2.9</b> (1.8-4.4)	<b>2.7</b> (1.7-4.1)	<b>2.6</b> (1.8-3.8)	<b>2.6</b> (2.0-3.3)	<b>0.8</b> (0.4-1.4)	<b>1.0</b> (0.7-1.5)	† <sup>b</sup>
West <sup>2</sup>	<b>2.0</b> (1.0-3.6)	<b>1.1</b> (0.8-1.6)	<b>1.2</b> (0.5-3.3)	<b>1.4</b> (0.7-2.9)	<b>2.3</b> (1.8-2.9)	<b>2.7</b> (1.6-4.6)	<b>3.0</b> (1.6-5.5)	<b>3.0</b> (1.8-4.9)	<b>2.9</b> (1.8-4.4)	<b>2.4</b> (1.7-3.6)	<b>0.8</b> (0.5-1.4)	<b>1.2</b> (0.6-2.3)	†
East <sup>1</sup>	—	—	—	—	—	—	<b>2.3</b> (1.7-3.2)	<b>1.3</b> (0.7-2.2)	<b>2.6</b> (1.7-3.8)	<b>1.5</b> (1.0-2.2)	<b>1.0</b> (0.6-1.7)	<b>1.0</b> (0.6-1.5)	<b>0.7</b> (0.4-1.2) <sup>b</sup>
East <sup>2</sup>	<b>1.2</b> (0.6-2.2)	<b>1.0</b> (0.4-2.7)	<b>0.6</b> (0.4-1.1)	<b>0.9</b> (0.2-3.0)	<b>1.4</b> (0.8-2.5)	<b>2.4</b> (1.8-3.2)	<b>2.6</b> (1.6-4.2)	<b>1.0</b> (0.5-2.2)	<b>2.6</b> (1.6-4.3)	<b>1.3</b> (0.8-2.0)	<b>1.6</b> (0.9-2.8)	<b>0.8</b> (0.4-1.7)	†

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 difference 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>d</sup> significant long-term non-linear 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 Use of Heroin

(Table 3.6.9)

	Heroin Use in 2011 (Grades 7–12)	Trends in Heroin Use
Total Sample	<ul style="list-style-type: none"> <li>■ The 2011 OSDUHS estimate for past year heroin use among the total sample of students was suppressed (&lt; 1%).</li> </ul>	<ul style="list-style-type: none"> <li>□ Heroin use did not significantly change between 2009 and 2011. However, use is currently lower than the level seen in 1999 (1.9%).</li> <li>□ Over the long-term, the use of heroin has been negligible and stable, hovering around 2% or less (among grades 7, 9, and 11 only).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Estimates by sex were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>□ Males show a significant decline in heroin use since 1999, when the estimate was at 2.5%.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ Estimates by grade were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>□ Only 12<sup>th</sup>-graders show a significant decline in use since 1999. Use among all other grades has remained stable and very low.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ Estimates by region were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>□ Only students in the East region show a significant decline in use since 1999. Use among students in other regions has remained stable and very low.</li> </ul>

## Past Year Use of Doda

For the first time in 2011, we asked students whether they used doda during the past 12 months. Doda is an illegal opiate made from grinding the dried seed pod of an opium plant into a fine powder. It can be mixed into a liquid and swallowed. Similar to heroin, it produces a euphoric state and is addictive.

To assess use, students were asked: “*In the last 12 months, how often did you use doda (also known as ‘dode’)?*”

- The percentage of students in 2011 reporting using doda in the past year had to be suppressed because the sample size was insufficient to estimate an extremely low value (as did the percentage reporting ever using this drug). This finding indicates that doda use is negligible among students in Ontario.

Table 3.6.9: Percentage Reporting Heroin 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 <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>1.9</b> (1.5-2.5)	<b>1.1</b> (0.8-1.5)	<b>1.4</b> (1.1-1.7)	<b>0.9</b> (0.7-1.2)	<b>0.9</b> (0.7-1.3)	<b>0.7</b> (0.5-0.9)	† <sup>b</sup>	
Total <sup>2</sup>	<b>2.0</b> (1.6-2.6)	<b>2.5</b> (1.9-3.2)	<b>1.5</b> (1.0-2.2)	<b>1.8</b> (1.3-2.5)	<b>1.6</b> (1.2-2.3)	<b>1.5</b> (1.0-2.3)	<b>1.2</b> (0.8-1.9)	<b>1.1</b> (0.7-1.7)	<b>1.3</b> (0.9-1.8)	<b>2.1</b> (1.4-2.9)	<b>1.8</b> (1.6-2.2)	<b>1.7</b> (1.2-2.4)	<b>1.3</b> (0.9-2.0)	<b>1.4</b> (1.0-1.9)	<b>0.9</b> (0.7-1.3)	<b>1.1</b> (0.8-1.7)	<b>0.7</b> (0.4-1.1)	†	
Sex																			
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>2.5</b> (1.8-3.4)	<b>1.4</b> (1.0-2.1)	<b>1.9</b> (1.4-2.5)	<b>1.1</b> (0.8-1.5)	<b>1.3</b> (0.9-1.8)	<b>0.9</b> (0.6-1.5)	† <sup>b</sup>	
Males <sup>2</sup>	<b>2.0</b> (1.4-2.7)	<b>3.2</b> (2.4-4.3)	<b>2.2</b> (1.4-3.3)	<b>2.2</b> (1.5-3.2)	<b>2.2</b> (1.6-2.9)	<b>2.0</b> (1.2-3.2)	<b>1.5</b> (0.9-2.6)	<b>1.3</b> (0.7-2.5)	<b>1.5</b> (0.8-2.7)	<b>3.0</b> (2.2-4.2)	<b>2.5</b> (1.9-3.2)	<b>2.1</b> (1.3-3.4)	<b>1.6</b> (0.9-2.9)	<b>1.6</b> (1.1-2.5)	<b>1.1</b> (0.7-1.7)	<b>1.8</b> (1.2-2.8)	<b>0.8</b> (0.4-1.6)	†	
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>1.4</b> (0.8-2.1)	<b>0.7</b> (0.4-1.4)	<b>0.9</b> (0.6-1.3)	<b>0.7</b> (0.5-1.1)	<b>0.6</b> (0.3-1.0)	†	†	
Females <sup>2</sup>	<b>2.0</b> (1.5-2.8)	<b>1.7</b> (1.1-2.5)	<b>0.8</b> (0.4-1.4)	<b>1.4</b> (0.9-2.3)	<b>1.1</b> (0.6-1.9)	<b>1.1</b> (0.6-1.8)	<b>0.9</b> (0.5-1.6)	<b>0.9</b> (0.6-1.4)	<b>1.1</b> (0.5-2.1)	<b>1.1</b> (0.6-2.1)	<b>1.3</b> (1.0-1.7)	<b>1.3</b> (0.6-2.7)	<b>1.0</b> (0.4-2.2)	<b>1.1</b> (0.6-1.9)	<b>0.8</b> (0.4-1.4)	†	†	†	
Grade																			
7	<b>1.7</b> (1.1-2.5)	<b>1.9</b> (1.2-3.1)	<b>0.7</b> (0.2-1.8)	<b>1.5</b> (0.8-2.6)	<b>1.6</b> (0.7-3.5)	<b>1.7</b> (1.1-2.6)	<b>0.9</b> (0.4-1.9)	<b>0.8</b> (0.2-2.9)	<b>1.5</b> (1.1-2.0)	<b>1.4</b> (0.5-3.7)	<b>1.7</b> (1.3-2.2)	†	†	†	†	†	†	†	
8	—	—	—	—	—	—	—	—	—	—	—	<b>2.8</b> (1.6-4.9)	†	†	†	†	†	†	
9	<b>2.7</b> (2.0-3.8)	<b>3.2</b> (2.3-4.6)	<b>2.2</b> (1.3-3.8)	<b>2.4</b> (1.6-3.8)	<b>2.0</b> (1.2-3.2)	<b>1.3</b> (0.5-3.4)	<b>1.1</b> (0.5-2.4)	<b>1.2</b> (0.6-2.4)	<b>1.2</b> (0.6-2.2)	<b>2.3</b> (1.7-3.2)	<b>2.1</b> (1.6-2.7)	<b>2.5</b> (1.7-3.8)	<b>2.2</b> (1.3-3.6)	<b>1.5</b> (0.9-2.4)	<b>1.4</b> (0.8-2.3)	<b>1.0</b> (0.6-1.8)	†	†	
10	—	—	—	—	—	—	—	—	—	—	—	†	<b>1.2</b> (0.6-2.2)	<b>2.0</b> (1.2-3.5)	†	<b>0.7</b> (0.4-1.3)	†	†	
11	<b>1.4</b> (0.8-2.4)	<b>2.0</b> (1.3-3.1)	<b>1.5</b> (1.0-2.2)	<b>1.6</b> (0.8-3.1)	<b>1.3</b> (0.9-2.0)	<b>1.6</b> (0.8-3.2)	<b>1.7</b> (0.9-3.3)	<b>1.4</b> (0.8-2.2)	<b>1.2</b> (0.6-2.4)	<b>2.4</b> (1.3-4.6)	<b>1.8</b> (1.2-2.5)	†	†	<b>1.3</b> (0.7-2.2)	<b>0.8</b> (0.4-1.5)	<b>1.7</b> (1.0-2.9)	†	†	
12	—	—	—	—	—	—	—	—	—	—	—	<b>2.2</b> (1.2-4.0)	†	<b>1.1</b> (0.6-2.0)	<b>1.0</b> (0.6-1.7)	†	<b>1.0</b> (0.5-2.0)	† <sup>b</sup>	

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	
Region																			
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>1.4</b> (0.7-2.7)	†	<b>1.1</b> (0.6-2.1)	<b>1.6</b> (0.9-2.9)	<b>1.1</b> (0.6-2.0)	†	†
Toronto <sup>2</sup>	—	—	<b>1.0</b> (0.2-4.3)	<b>1.3</b> (0.7-2.4)	<b>2.5</b> (1.4-4.5)	<b>2.4</b> (1.0-5.8)	<b>1.0</b> (0.2-4.8)	<b>2.3</b> (1.1-4.8)	<b>1.7</b> (0.9-3.3)	<b>1.9</b> (1.2-3.0)	<b>1.6</b> (1.0-2.5)	<b>1.2</b> (0.5-2.9)	†	<b>1.3</b> (0.7-2.7)	<b>1.9</b> (1.0-3.5)	<b>1.7</b> (0.9-3.3)	†	†	
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>1.3</b> (0.8-2.1)	†	<b>1.1</b> (0.6-2.1)	<b>0.9</b> (0.5-1.7)	†	†	†
North <sup>2</sup>	—	—	<b>0.5</b> (0.1-2.4)	<b>1.9</b> (1.0-3.7)	<b>1.9</b> (1.0-3.6)	<b>1.4</b> (0.6-3.1)	<b>1.6</b> (0.4-5.6)	<b>1.0</b> (0.1-7.1)	<b>1.1</b> (0.5-2.4)	<b>2.0</b> (0.5-7.0)	<b>2.2</b> (1.2-4.3)	<b>1.1</b> (0.4-2.7)	†	<b>1.5</b> (0.7-3.5)	<b>1.2</b> (0.6-2.4)	†	†	†	
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>1.9</b> (1.2-2.9)	<b>1.7</b> (1.1-2.4)	<b>1.4</b> (1.0-2.1)	<b>1.0</b> (0.7-1.4)	<b>1.0</b> (0.6-1.8)	<b>0.7</b> (0.4-1.1)	†
West <sup>2</sup>	—	—	<b>2.1</b> (1.4-3.1)	<b>2.0</b> (1.1-3.5)	<b>1.7</b> (0.9-3.1)	<b>1.2</b> (0.6-2.6)	<b>1.5</b> (0.9-2.5)	<b>1.0</b> (0.6-1.8)	<b>1.4</b> (0.8-2.2)	<b>2.2</b> (1.2-4.3)	<b>2.0</b> (1.6-2.6)	<b>1.6</b> (0.9-3.1)	<b>2.0</b> (1.2-3.3)	<b>1.3</b> (0.8-2.1)	<b>1.0</b> (0.5-1.7)	<b>1.3</b> (0.7-2.3)	<b>0.7</b> (0.4-1.5)	†	
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>2.5</b> (1.8-3.5)	†	<b>1.4</b> (1.0-2.2)	†	<b>0.7</b> (0.4-1.2)	<b>0.5</b> (0.3-1.0)	† <sup>b</sup>
East <sup>2</sup>	—	—	<b>1.2</b> (0.8-2.0)	<b>2.0</b> (1.3-3.2)	<b>0.8</b> (0.4-1.6)	<b>1.2</b> (0.6-2.4)	<b>0.8</b> (0.4-1.7)	<b>0.5</b> (0.2-1.0)	<b>0.8</b> (0.5-1.5)	<b>2.0</b> (1.2-3.0)	<b>1.6</b> (1.3-2.0)	<b>2.2</b> (1.2-3.8)	†	<b>1.5</b> (0.8-3.0)	†	<b>0.7</b> (0.3-1.8)	<b>0.9</b> (0.4-1.9)	†	

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) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (5) † estimate suppressed due to unreliability; (6) no significant difference 2011 vs. 2009; <sup>b</sup> 2009 vs. 1999 significant difference, p<.01; no significant linear or non-linear trend between 1977 and 2011.

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 Use of Ecstasy (MDMA)

(Figures 3.6.19–3.6.21; 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.

	Ecstasy Use in 2011 (Grades 7–12)	Trends in Ecstasy Use
Total Sample	<ul style="list-style-type: none"> <li>■ In 2011, 3.3% of students in grades 7 through 12 report using ecstasy at least once during the 12 months before the survey. With the sampling error, we estimate that between 2.6% and 4.2% of students use ecstasy. The estimated number of students in Ontario who use ecstasy is about 33,400.</li> </ul>	<ul style="list-style-type: none"> <li>□ The 2011 estimate (3.3%) for ecstasy use among students in grades 7–12 is not significantly different from that found in 2009 (3.2%), but is significantly lower than the peak level evident in 2001 (6.0%).</li> <li>□ Since monitoring began in 1991, ecstasy use steadily increased from under 0.5% to a peak of about 6% in 2001 (among grades 7, 9–11 only). Use declined between 2001 and 2009, and has since remained stable.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ There is no significant sex difference regarding ecstasy use (3.5% of males, 3.2% of females).</li> </ul>	<ul style="list-style-type: none"> <li>□ Only males show a significant decline in 2011 (3.5%) compared with their 2001 estimate (6.7%).</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ There is significant grade variation, with 11<sup>th</sup>-graders (7.9%) the most likely to report ecstasy use.</li> </ul>	<ul style="list-style-type: none"> <li>□ Only students in 9<sup>th</sup>-grade show a significant decline in use since the peak seen in 2001.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ There is no significant variation among the regions.</li> </ul>	<ul style="list-style-type: none"> <li>□ Among the four regions, students in the West show a significant decline in use since 2001. There have been no significant changes over the past few years among students in the other three regions.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ Less than 1% of all students report using ecstasy six times or more often in the past year (see Figure 3.1.2).</li> <li>■ About half (47%) of ecstasy users report using once or twice in the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.6.19  
 Past Year Ecstasy Use by Sex, Grade, and Region, 2011 OSDUHS

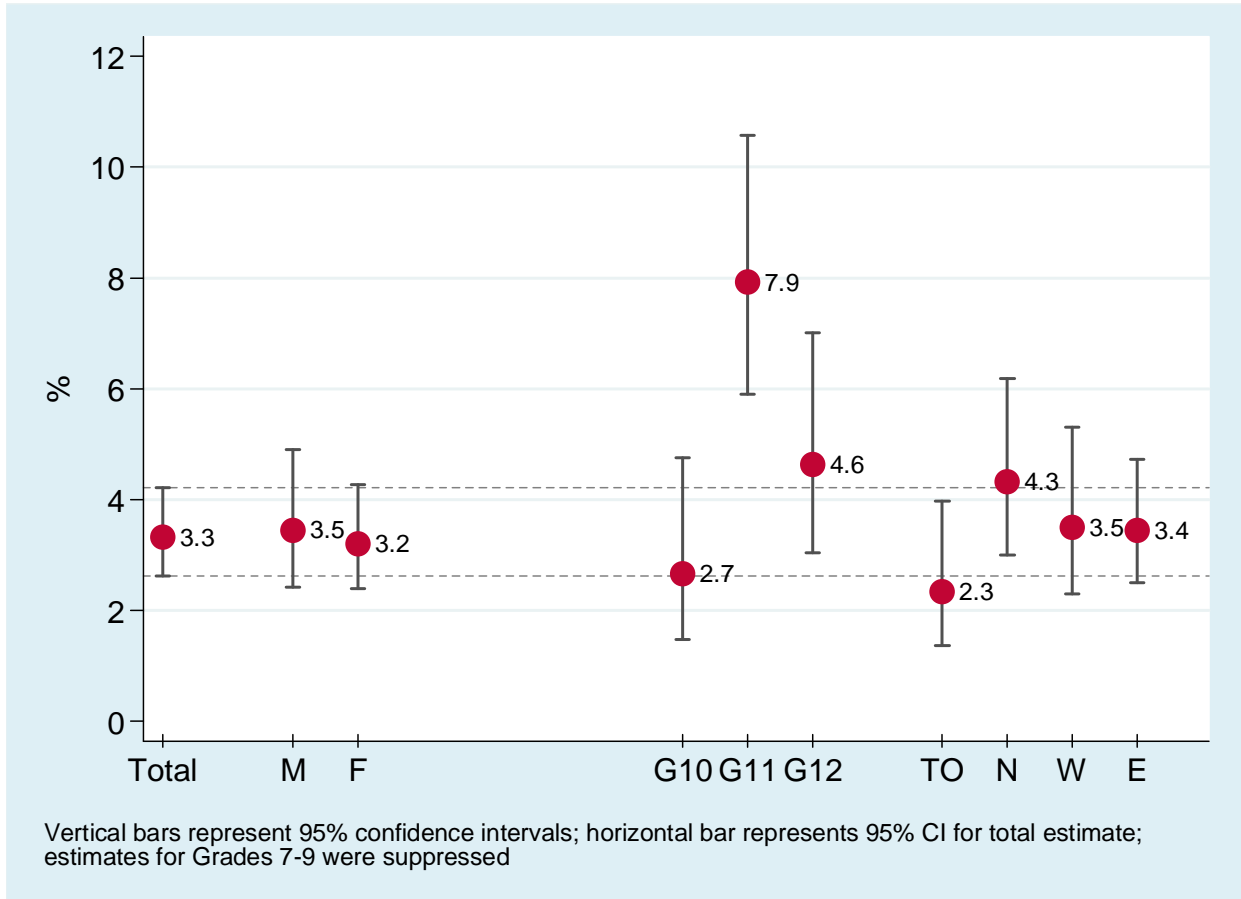


Figure 3.6.20  
 Past Year Ecstasy Use, 1999–2011 (Grades 7–12)

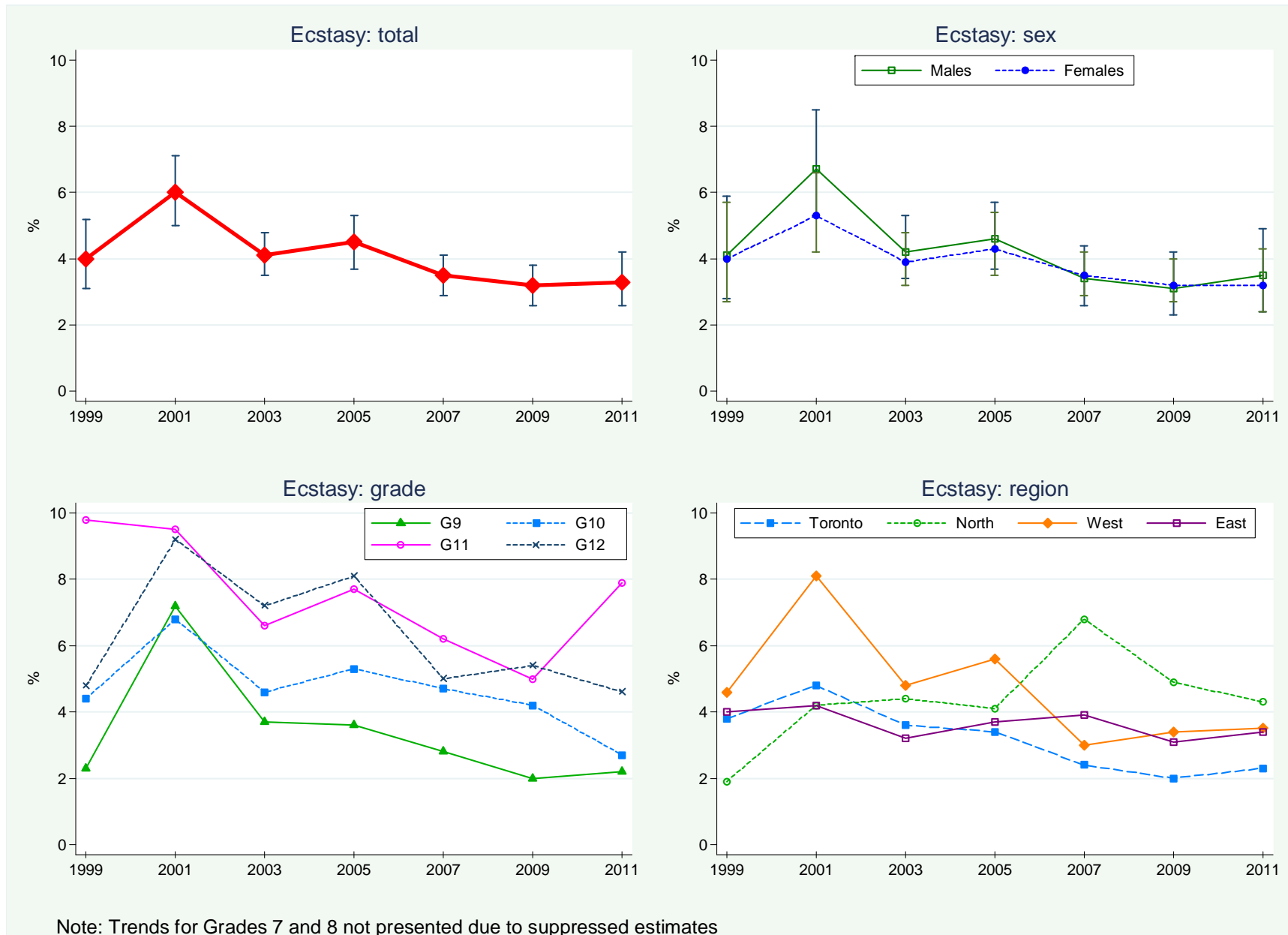
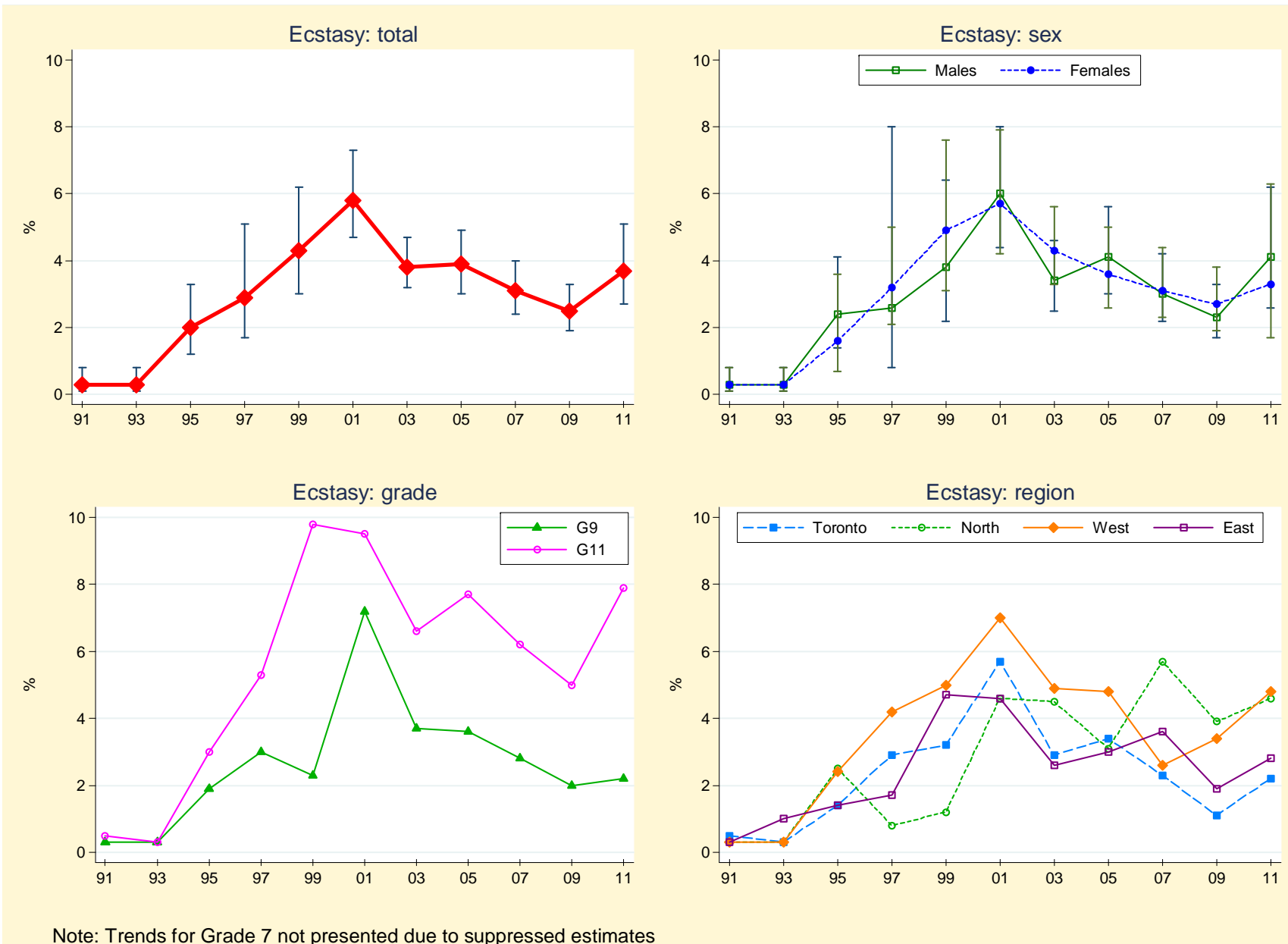


Figure 3.6.21  
 Past Year Ecstasy Use, 1991–2011 (Grades 7, 9, 11 only)



Note: Trends for Grade 7 not presented due to suppressed estimates

Table 3.6.10: Percentage Reporting Ecstasy Use in the Past Year, 1991–2011 OSDUHS

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )					(2299)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(1405)	(1376)	(1454)	(1545)	(1253)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	<b>4.0</b> (3.1-5.2)	<b>6.0</b> (5.0-7.1)	<b>4.1</b> (3.5-4.8)	<b>4.5</b> (3.7-5.3)	<b>3.5</b> (2.9-4.1)	<b>3.2</b> (2.6-3.8)	<b>3.3</b> <sup>b</sup> (2.6-4.2)
Total <sup>2</sup>	†	†	<b>2.0</b> (1.2-3.3)	<b>2.9</b> (1.7-5.1)	<b>4.3</b> (3.0-6.2)	<b>5.8</b> (4.7-7.3)	<b>3.8</b> (3.2-4.7)	<b>3.9</b> (3.0-4.9)	<b>3.1</b> (2.4-4.0)	<b>2.5</b> (1.9-3.3)	<b>3.7</b> <sup>cd</sup> (2.7-5.1)
Sex											
Males <sup>1</sup>	—	—	—	—	<b>4.1</b> (2.8-5.9)	<b>6.7</b> (5.3-8.5)	<b>4.2</b> (3.4-5.3)	<b>4.6</b> (3.7-5.7)	<b>3.4</b> (2.6-4.4)	<b>3.1</b> (2.3-4.2)	<b>3.5</b> <sup>b</sup> (2.4-4.9)
Males <sup>2</sup>	†	†	<b>2.4</b> (1.4-4.1)	<b>2.6</b> (0.8-8.0)	<b>3.8</b> (2.2-6.4)	<b>6.0</b> (4.4-8.0)	<b>3.4</b> (2.5-4.6)	<b>4.1</b> (3.0-5.6)	<b>3.0</b> (2.2-4.2)	<b>2.3</b> (1.6-3.2)	<b>4.1</b> (2.6-6.2)
Females <sup>1</sup>	—	—	—	—	<b>4.0</b> (2.7-5.7)	<b>5.3</b> (4.2-6.6)	<b>3.9</b> (3.2-4.8)	<b>4.3</b> (3.5-5.4)	<b>3.5</b> (2.9-4.2)	<b>3.2</b> (2.7-4.0)	<b>3.2</b> (2.4-4.3)
Females <sup>2</sup>	†	†	<b>1.6</b> (0.7-3.6)	<b>3.2</b> (2.1-5.0)	<b>4.9</b> (3.1-7.6)	<b>5.7</b> (4.2-7.9)	<b>4.3</b> (3.3-5.6)	<b>3.6</b> (2.6-5.0)	<b>3.1</b> (2.3-4.4)	<b>2.7</b> (1.9-3.8)	<b>3.3</b> (1.7-6.3)
Grade											
7	†	†	<b>0.7</b> (0.1-5.7)	†	†	†	†	†	†	†	†
8	—	—	—	—	†	<b>3.0</b> (1.7-5.3)	†	<b>1.2</b> (0.6-2.2)	<b>1.2</b> (0.6-2.4)	†	†
9	†	†	<b>1.9</b> (0.7-5.1)	<b>3.0</b> (2.2-4.2)	†	<b>7.2</b> (5.0-10.1)	<b>3.7</b> (2.7-5.1)	<b>3.6</b> (2.6-4.9)	<b>2.8</b> (1.9-4.1)	<b>2.0</b> (1.1-3.5)	† <sup>b</sup>
10	—	—	—	—	<b>4.4</b> (2.5-7.8)	<b>6.8</b> (4.6-9.9)	<b>4.6</b> (3.2-6.4)	<b>5.3</b> (3.9-7.0)	<b>4.7</b> (3.5-6.4)	<b>4.2</b> (3.1-5.7)	<b>2.7</b> (1.5-4.8)
11	<b>0.5</b> (0.2-1.1)	†	<b>3.0</b> (1.7-5.6)	<b>5.3</b> (2.2-12.1)	<b>9.8</b> (6.4-14.8)	<b>9.5</b> (6.9-12.9)	<b>6.6</b> (4.9-9.0)	<b>7.7</b> (5.7-40.5)	<b>6.2</b> (4.6-8.2)	<b>5.0</b> (3.7-6.9)	<b>7.9</b> (5.9-10.6)
12	—	—	—	—	<b>4.8</b> (2.6-8.8)	<b>9.2</b> (6.0-14.1)	<b>7.2</b> (5.5-9.4)	<b>8.1</b> (6.3-10.5)	<b>5.0</b> (3.8-6.7)	<b>5.4</b> (3.8-7.6)	<b>4.6</b> (3.0-7.0)
Region											
Toronto <sup>1</sup>	—	—	—	—	†	<b>4.8</b> (3.1-7.4)	<b>3.6</b> (2.3-5.5)	<b>3.4</b> (2.2-5.5)	<b>2.4</b> (1.7-3.3)	<b>2.0</b> (1.1-3.6)	<b>2.3</b> (1.4-4.0)
Toronto <sup>2</sup>	<b>0.5</b> (0.4-0.6)	†	<b>1.4</b> (0.3-6.1)	<b>2.9</b> (1.8-4.6)	†	<b>5.7</b> (3.6-8.9)	<b>2.9</b> (1.5-5.8)	<b>3.4</b> (2.0-5.7)	<b>2.3</b> (1.4-3.8)	†	<b>2.2</b> (1.1-4.3)
North <sup>1</sup>	—	—	—	—	<b>1.9</b> (1.0-3.4)	<b>4.2</b> (3.0-5.9)	<b>4.4</b> (3.5-5.5)	<b>4.1</b> (3.2-5.2)	<b>6.8</b> (4.5-10.1)	<b>4.9</b> (3.0-7.6)	<b>4.3</b> (3.0-6.2)
North <sup>2</sup>	†	†	<b>2.5</b> (0.4-13.7)	<b>0.8</b> (0.1-6.2)	<b>1.2</b> (0.3-4.4)	<b>4.6</b> (2.6-7.9)	<b>4.5</b> (3.3-6.2)	<b>3.1</b> (2.0-4.8)	<b>5.7</b> (2.6-11.9)	<b>3.9</b> (1.9-7.8)	<b>4.6</b> (2.8-7.4)
West <sup>1</sup>	—	—	—	—	<b>4.6</b> (3.1-6.6)	<b>8.1</b> (6.5-10.0)	<b>4.8</b> (3.8-6.1)	<b>5.6</b> (4.3-7.2)	<b>3.0</b> (2.2-4.1)	<b>3.4</b> (2.6-4.6)	<b>3.5</b> <sup>b</sup> (2.3-5.3)
West <sup>2</sup>	†	†	<b>2.4</b> (1.4-4.3)	<b>4.2</b> (2.0-8.6)	<b>5.0</b> (3.0-8.3)	<b>7.0</b> (5.2-9.4)	<b>4.9</b> (3.7-6.4)	<b>4.8</b> (3.2-7.2)	<b>2.6</b> (1.7-3.8)	<b>3.4</b> (2.3-5.0)	<b>4.8</b> (3.0-7.7)
East <sup>1</sup>	—	—	—	—	<b>4.0</b> (2.5-6.5)	<b>4.2</b> (2.6-6.8)	<b>3.2</b> (2.4-4.3)	<b>3.7</b> (2.7-5.0)	<b>3.9</b> (2.9-5.4)	<b>3.1</b> (2.2-4.3)	<b>3.4</b> (2.5-4.7)
East <sup>2</sup>	†	<b>1.0</b> (0.3-3.1)	<b>1.4</b> (0.3-6.7)	<b>1.7</b> (0.3-9.6)	<b>4.7</b> (2.4-8.8)	<b>4.6</b> (2.5-8.4)	<b>2.6</b> (1.8-3.9)	<b>3.0</b> (2.1-4.3)	<b>3.6</b> (2.3-5.8)	<b>1.9</b> (1.2-2.9)	<b>2.8</b> (1.8-4.4)

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) based on random half sample between 1991 and 1999; (5) † estimate suppressed due to unreliability; (6) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 2001 (peak) significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.01; <sup>d</sup> significant long-term non-linear trend, p<.01.

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

Source: OSDUHS, Centre for Addiction & Mental Health

## Past Year Use of Ketamine

(Table 3.6.11)

Ketamine (also known as “vitamin K”, “special K”) is a dissociative anaesthetic drug usually used in veterinary medicine and sometimes in human medicine to produce anaesthesia. Ketamine can be injected, snorted, or smoked. It can produce feelings of detachment, distorted perceptions of sight and sound, increased heart rate, and impaired motor function. The OSDUHS began monitoring ketamine use in 2003.

	Ketamine Use in 2011 (Grades 7–12)	Trends in Ketamine Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>■ Ketamine is used by 0.9% of students in grades 7 through 12. With the sampling error, we estimate that between 0.5% and 1.6% of students use ketamine. The estimated number of students in Ontario who use ketamine is about 9,100.</li> </ul>	<ul style="list-style-type: none"> <li>□ Ketamine use in 2011 (0.9%) is similar to the estimate found in 2009 (1.6%), but is significantly lower than that found in the first year of surveillance in 2003 (2.2%).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ There is a significant sex difference, with males more likely to use.</li> </ul>	<ul style="list-style-type: none"> <li>□ Only females’ use of ketamine is significantly lower in 2011 compared with 2003. Males show no significant change over time.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ Estimates by grade were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>□ Despite some downward movement, no grade shows a significant change over the past few years.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ Use does not significantly vary by region.</li> </ul>	<ul style="list-style-type: none"> <li>□ No region shows a significant change over the past few years.</li> </ul>

Table 3.6.11: Percentage Reporting Ketamine Use in the Past Year, 2003–2011 OSDUHS

	<b>2003</b> (N=3152)	<b>2005</b> (N=3648)	<b>2007</b> (N=2935)	<b>2009</b> (N=4261)	<b>2011</b> (N=4472)
Total (95% CI)	<b>2.2</b> (1.8-2.9)	<b>1.3</b> (0.9-1.7)	<b>1.1</b> (0.7-1.7)	<b>1.6</b> (1.1-2.3)	<b>0.9</b> <sup>b</sup> (0.5-1.6)
Sex					
Males	<b>3.0</b> (2.1-4.1)	<b>1.6</b> (1.1-2.4)	<b>1.3</b> (0.8-2.1)	<b>1.8</b> (1.2-2.6)	<b>1.4</b> (0.7-2.7)
Females	<b>1.6</b> (1.0-2.4)	<b>0.9</b> (0.5-1.4)	<b>1.0</b> (0.5-1.9)	<b>1.4</b> (0.7-2.5)	† <sup>b</sup>
Grade					
7	†	†	†	†	†
8	†	†	†	†	†
9	†	†	†	†	†
10	†	†	†	†	†
11	<b>4.7</b> (3.1-6.9)	<b>1.9</b> (1.1-3.3)	<b>2.0</b> (1.1-3.8)	<b>2.3</b> (1.4-4.0)	†
12	<b>3.7</b> (2.1-6.5)	<b>1.4</b> (0.7-2.5)	<b>2.5</b> (1.4-4.4)	<b>2.8</b> (1.6-5.1)	†
Region					
Toronto	†	†	†	†	†
North	†	<b>1.5</b> (0.8-2.9)	†	†	†
West	<b>2.7</b> (2.0-3.8)	<b>1.8</b> (1.2-2.7)	<b>0.9</b> (0.5-1.6)	<b>1.8</b> (0.9-3.4)	†
East	<b>1.8</b> (1.1-2.8)	<b>0.9</b> (0.5-1.8)	†	<b>1.4</b> (0.8-2.6)	<b>0.9</b> (0.5-1.6)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) based on a random half-sample in each year; (4) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 2003 significant difference, 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

## Past Year Use of Mephedrone

For the first time in 2011, we asked students whether they used mephedrone. Mephedrone (4-methylmethcathinone), which is illegal and relatively new to Canada, is a stimulant that produces an experience similar to methamphetamine in that it can cause rapid heart rate and hallucinations. It comes in powder form and is usually snorted, but can be swallowed and may also appear in pill form. 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 ‘drone’, ‘bubbles’, ‘m-cat’)?*”

- Among the total sample of students, the percentage reporting using mephedrone in the past year had to be suppressed due to an extremely low value relative to our sample size. The percentage of students reporting lifetime use was found to be 0.7% (95% CI: 0.4%-1.3%). Thus, there is some evidence to suggest that this drug is available in Ontario, but has not diffused to the student population.

## Past Year Use of BZP Pills

For the first time in 2011, we asked students whether they used BZP pills. BZP (benzylpiperazine) pills are synthetic stimulant drugs that can cause hallucinogens and euphoria, much like ecstasy. Indeed, BZP pills are often purposely designed to look like ecstasy. Taken in high doses, BZP can cause vomiting, convulsion, and seizures. This drug is legal in Canada, and available in “head shops” and over the internet.

To assess use, students were asked: “*In the last 12 months, how often did you use BZP Pills (also known as ‘pure rush’, ‘legal E’, ‘herbal high’)?*”

- Among the total sample of students, the percentage reporting using BZP pills in the past year had to be suppressed due to an extremely low value relative to our sample size. The percentage of students reporting lifetime use of this drug was found to be 0.5% (95% CI: 0.3%-1.0%). Again, there is some evidence to suggest that this drug is available in Ontario, but has not diffused to the student population.

## 3.7 Non-Medical Use of Prescription Drugs and Over-the-Counter Drugs

The non-medical (NM) use (i.e., use without a doctor’s prescription) of controlled psychoactive prescription drugs among adolescents is a growing concern in Canada and the United States. Some of the more popular prescription drugs that are being abused include opioid pain relievers (e.g., OxyContin), stimulant drugs prescribed for Attention Deficit/Hyperactivity Disorder (ADHD) such as Ritalin, and tranquilizer/sedatives (e.g., Valium) that are usually prescribed to reduce stress or anxiety. Over-the-counter medication such as cough and cold medicine containing dextromethorphan (DXM), and Gravol (dimenhydrinate) also have the potential to be abused.

### Past Year Non-Medical Use of OxyContin

(Figure 3.7.1; Table 3.7.1)

OxyContin is a brand name for a highly addictive prescription painkiller containing the opioid oxycodone. It is an analgesic that can cause euphoria, much like heroin. Starting in 2005, the OSDUHS asked students about using OxyContin non-medically during the past 12 months.

	NM OxyContin Use in 2011 (Grades 7–12)	Trends in NM OxyContin Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>■ In 2011, 1.2% of all students report using OxyContin non-medically in the past year. With the sampling error, we estimate that between 0.9% and 1.7% of students use OxyContin. The estimate of 1.2% represents about 12,500 students in Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>□ Among the total sample of students, non-medical OxyContin use in 2011 (1.2%) is similar to the estimate from 2009 (1.6%). There has been no significant change since 2005 (1.0%), when use was first monitored.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ There is no significant difference between males (1.5%) and females (1.0%) in non-medical OxyContin use.</li> </ul>	<ul style="list-style-type: none"> <li>□ There has been no significant change in use among males or females between 2005 and 2011.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ OxyContin use significantly increases with grade, peaking in grade 11 at 2.9%.</li> </ul>	<ul style="list-style-type: none"> <li>□ Use has remained stable between 2005 and 2011 among students in each grade.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ There is no significant regional variation in OxyContin use.</li> </ul>	<ul style="list-style-type: none"> <li>□ Only students in the East show a significant change in use, increasing from 0.6% in 2005 to 1.9% in 2007, followed by stability.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ Most (62%) OxyContin users report using once or twice in the past year. About 15% of users consumed the drug ten times or more often in the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.7.1  
 Past Year Non-Medical OxyContin Use by Sex, Grade, and Region,  
 2011 OSDUHS

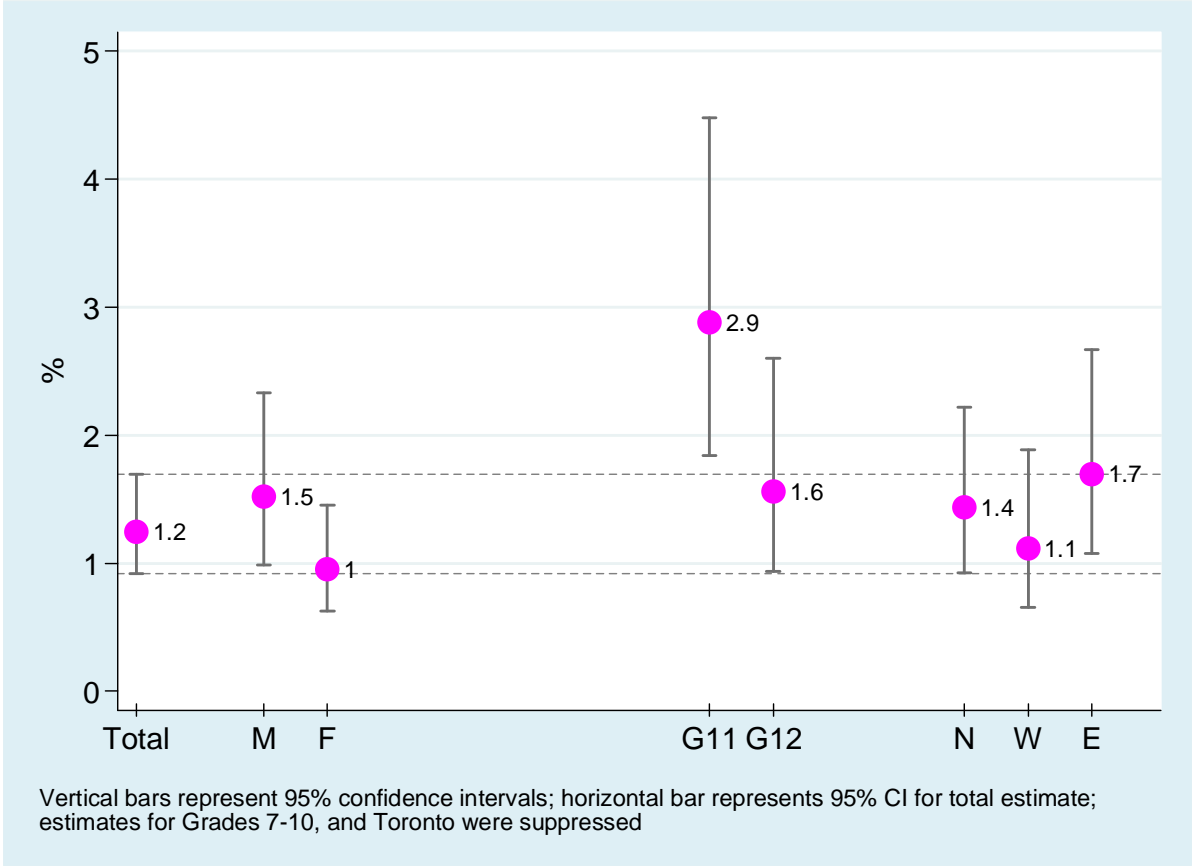


Table 3.7.1: Percentage Reporting Non-Medical Use of OxyContin in the Past Year, 2005–2011 OSDUHS

	<b>2005</b> (N=7726)	<b>2007</b> (N=6323)	<b>2009</b> (N=9112)	<b>2011</b> (N=9288)
<b>Total</b> (95% CI)	<b>1.0</b> (0.7-1.5)	<b>1.8</b> (1.3-2.4)	<b>1.6</b> (1.3-2.0)	<b>1.2</b> (0.9-1.7)
<b>Sex</b>				
Males	<b>0.9</b> (0.6-1.4)	<b>1.7</b> (1.2-2.3)	<b>1.7</b> (1.3-2.3)	<b>1.5</b> (1.0-2.3)
Females	<b>1.2</b> (0.7-1.9)	<b>1.9</b> (1.3-2.8)	<b>1.6</b> (1.2-2.1)	<b>1.0</b> (0.6-1.5)
<b>Grade</b>				
7	†	†	†	†
8	†	†	†	†
9	†	<b>0.8</b> (0.4-1.4)	†	†
10	†	<b>1.9</b> (1.2-3.2)	<b>2.4</b> (1.6-3.5)	†
11	<b>1.2</b> (0.7-2.3)	<b>3.2</b> (1.9-5.3)	<b>2.9</b> (2.0-4.2)	<b>2.9</b> (1.8-4.5)
12	<b>1.4</b> (0.7-2.7)	<b>2.2</b> (1.3-3.6)	<b>1.9</b> (1.2-3.1)	<b>1.6</b> (0.9-2.6)
<b>Region</b>				
Toronto	†	<b>1.3</b> (0.8-2.2)	†	†
North	<b>3.3</b> (1.8-6.1)	<b>3.2</b> (1.8-5.5)	<b>3.2</b> (2.4-4.4)	<b>1.4</b> (0.9-2.2)
West	<b>1.2</b> (0.7-1.9)	<b>1.7</b> (1.1-2.7)	<b>1.7</b> (1.2-2.4)	<b>1.1</b> (0.7-1.9)
East	<b>0.6</b> (0.3-1.0)	<b>1.9</b> (1.3-2.4)	<b>1.6</b> (1.2-2.1)	<b>1.7<sup>b</sup></b> (1.1-2.7)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 2005 significant difference, p<.01.

Q: In the last 12 months, how often did you use “OxyContin” (also known as “oxy”, “OC”) without a prescription or without a doctor telling you to take it?

Source: OSDUHS, Centre for Addiction & Mental Health

## Past Year Non-Medical Use of Prescription Opioid Pain Relievers

(Figure 3.7.2; Table 3.7.2)

Starting in 2007, students were asked about non-medical (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, codeine) without a prescription or without a doctor telling you to take them? (We do not mean regular Tylenol or Aspirin that anyone can buy in a drugstore.)*”

	NM Use of an Opioid Pain Reliever in 2011 (Grades 7–12)	Trends in Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>Among all students, 14.0% (95% CI: 12.8%-15.3%) report using a prescription opioid pain reliever non-medically at least once during the 12 months before the survey. This estimate represents about 140,100 Ontario students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>Among the total sample of students, non-medical opioid use significantly decreased in 2011 (14.0%) compared with the estimate from 2009 (17.8%), and the estimate from 2007 (20.6%).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>There is no significant difference in non-medical opioid use between males (12.9%) and females (15.2%).</li> </ul>	<ul style="list-style-type: none"> <li>Females show a significant decrease in 2011 (15.2%) compared with their 2009 (19.8%) and 2007 (23.5%) estimates. Males do not show a significant decrease in 2011 (12.9%) compared with 2009 (15.8%), but there is a significant decrease compared with 2007 (18.0%).</li> </ul>
Grade	<ul style="list-style-type: none"> <li>There is significant grade variation, with use increasing steadily with grade level, peaking among 11<sup>th</sup>-graders (18.0%).</li> </ul>	<ul style="list-style-type: none"> <li>Only 9<sup>th</sup>-graders show a significant decrease since the last survey (from 19.2% in 2009 to 13.0% in 2011). Students in grades 8, 9, and 10 show significant decreases in 2011 compared with their respective 2007 estimates. Grades 7, 11, and 12 students show no significant change over time.</li> </ul>
Region	<ul style="list-style-type: none"> <li>Use does not significantly differ by region.</li> </ul>	<ul style="list-style-type: none"> <li>Students in Toronto and the East region show a significant decrease in non-medical opioid use in 2011 compared with their respective 2009 and 2007 estimates. Students in the North and the West show a decrease in 2011 compared with 2007.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>About 5% of all students report using an opioid pain reliever non-medically six times or more often in the past year (see Figure 3.1.2).</li> <li>Roughly 39% of past year users used once or twice in the past year. One-quarter (24%) used ten times or more often (see Figure 3.1.3).</li> </ul>	

Figure 3.7.2  
 Past Year Non-Medical Use of a Prescription Opioid Pain Reliever by  
 Sex, Grade, and Region, 2011 OSDUHS

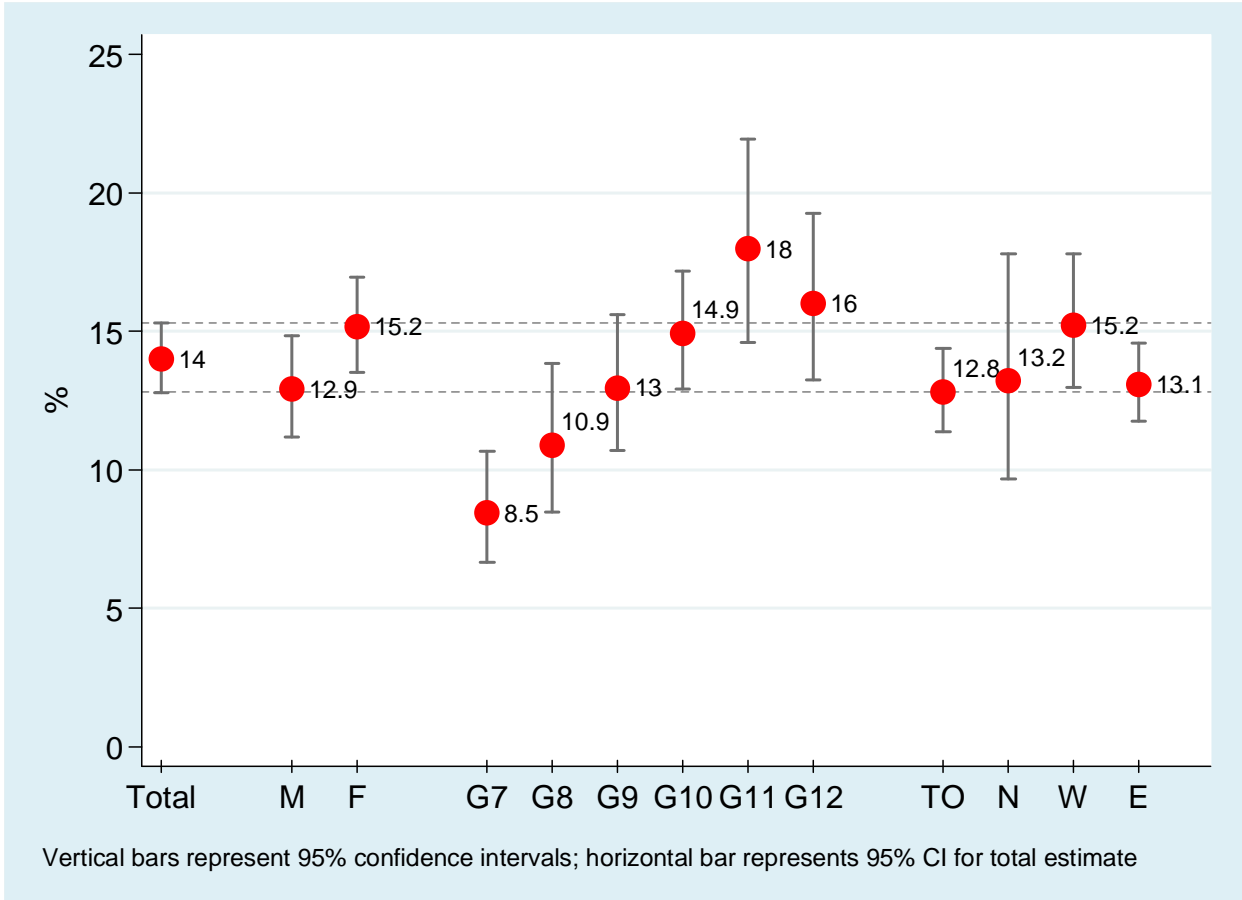


Table 3.7.2: Percentage Reporting Non-Medical Use of a Prescription Opioid Pain Reliever in the Past Year, 2007–2011 OSDUHS

		2007 (N=2935)	2009 (N=9112)	2011 (N=9288)
Total (95% CI)		<b>20.6</b> (18.9-22.3)	<b>17.8</b> (16.6-18.9)	<b>14.0</b> <sup>ab</sup> (12.8-15.3)
Sex				
Males		<b>18.0</b> (15.8-20.3)	<b>15.8</b> (14.3-17.4)	<b>12.9</b> <sup>b</sup> (11.2-14.9)
Females		<b>23.5</b> (20.8-26.3)	<b>19.8</b> (18.4-21.3)	<b>15.2</b> <sup>ab</sup> (13.5-17.0)
Grade				
7		<b>12.5</b> (8.4-18.2)	<b>9.2</b> (6.9-12.2)	<b>8.5</b> (6.7-10.7)
8		<b>22.1</b> (17.7-27.2)	<b>14.4</b> (11.9-17.4)	<b>10.9</b> <sup>b</sup> (8.5-13.8)
9		<b>24.0</b> (19.5-29.1)	<b>19.2</b> (16.4-22.3)	<b>13.0</b> <sup>ab</sup> (10.7-15.6)
10		<b>21.8</b> (18.1-25.9)	<b>20.4</b> (17.1-24.2)	<b>14.9</b> <sup>b</sup> (12.9-17.2)
11		<b>22.0</b> (18.4-26.2)	<b>21.3</b> (18.6-24.3)	<b>18.0</b> (14.6-22.0)
12		<b>20.5</b> (16.6-25.1)	<b>19.5</b> (16.8-22.5)	<b>16.0</b> (13.2-19.2)
Region				
Toronto		<b>17.9</b> (14.5-21.9)	<b>16.8</b> (14.7-19.2)	<b>12.8</b> <sup>ab</sup> (11.4-14.4)
North		<b>27.0</b> (21.6-33.1)	<b>18.1</b> (15.9-20.6)	<b>13.2</b> <sup>b</sup> (9.7-17.8)
West		<b>21.5</b> (18.8-24.4)	<b>17.5</b> (15.6-19.5)	<b>15.2</b> <sup>b</sup> (13.0-17.8)
East		<b>19.3</b> (16.8-22.1)	<b>18.4</b> (16.6-20.4)	<b>13.1</b> <sup>ab</sup> (11.8-14.6)

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in 2007; (3) <sup>a</sup> 2011 vs. 2009 significant difference,  $p < .01$ ; <sup>b</sup> 2011 vs. 2007 significant difference,  $p < .01$ .

Q: In the last 12 months, how often did you use pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, codeine) without a prescription or without a doctor telling you to take them? We do not mean regular Tylenol 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 discernable effect.)

Source: OSDUHS, Centre for Addiction & Mental Health

## Past Year Non-Medical Use of ADHD Drugs

(Table 3.7.3)

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 non-medical (NM) use of this class of drugs. The question used was “*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?*”

	NM ADHD Drug Use in 2011 (Grades 7–12)	Trends in Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>Among all students, 1.0% (95% CI: 0.7%-1.3%) report using an ADHD drug for non-medical purposes at least once in the past 12 months. This represents about 9,700 Ontario students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>Among the total sample of students, the non-medical use of an ADHD drug did not significantly change in 2011 (1.0%) compared with 2009 (1.6%) and 2007 (1.0%).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>There is no significant difference between males (1.2%) and females (0.7%) regarding non-medical use of an ADHD drug.</li> </ul>	<ul style="list-style-type: none"> <li>Use has not changed among males or females.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>Estimates by grade were suppressed.</li> </ul>	<ul style="list-style-type: none"> <li>No grade shows a significant change in use.</li> </ul>
Region	<ul style="list-style-type: none"> <li>There is no significant regional variation.</li> </ul>	<ul style="list-style-type: none"> <li>No region shows a significant change in use.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>Most (63%) past year users report using once or twice in the past year.</li> <li>Less than one-tenth (8%) used ten times or more often in the past year (see Figure 3.1.3).</li> </ul>	

Table 3.7.3: Percentage Reporting Non-Medical Use of an ADHD Drug in the Past Year, 2007–2011 OSDUHS

	2007 (N=2935)	2009 (N=9112)	2011 (N=9288)
Total (95% CI)	<b>1.0</b> (0.7-1.5)	<b>1.6</b> (1.3-2.1)	<b>1.0</b> (0.7-1.3)
Sex			
Males	<b>1.1</b> (0.7-1.8)	<b>1.7</b> (1.2-2.4)	<b>1.2</b> (0.7-2.2)
Females	<b>1.0</b> (0.5-1.9)	<b>1.6</b> (1.2-2.1)	<b>0.7</b> (0.4-1.3)
Grade			
7	†	<b>0.8</b> (0.4-1.5)	†
8	†	<b>1.2</b> (0.7-2.3)	†
9	†	<b>1.8</b> (1.0-3.0)	†
10	†	<b>1.6</b> (1.0-2.6)	†
11	<b>2.2</b> (1.3-3.7)	<b>2.5</b> (1.5-4.1)	†
12	†	<b>1.7</b> (1.1-2.7)	†
Region			
Toronto	†	†	†
North	†	<b>2.5</b> (1.4-4.4)	<b>1.3</b> (0.8-2.3)
West	<b>1.1</b> (0.6-1.7)	<b>1.7</b> (1.1-2.4)	†
East	†	<b>1.8</b> (1.2-2.7)	<b>1.4</b> (1.0-2.0)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) question asked of a random half sample in 2007; (4) no significant changes over time.

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 Non-Medical Use of Other Stimulants

(Figures 3.7.3–3.7.5; Table 3.7.4)

This section presents use of other stimulants, also known as amphetamines, such as Benzedrine. These are drugs that some use to lose weight, feel more energetic, or stay awake. Stimulants speed up the central nervous system, reducing hunger, increasing heart rate, blood pressure, and sleeplessness. Here, we assess non-medical (NM) use – that is, use without a prescription or not under a doctor’s supervision. Trend data on non-medical stimulant use span back to 1977.

	NM Stimulant Use in 2011 (Grades 7–12)	Trends in Use
Total Sample	<ul style="list-style-type: none"> <li>■ The non-medical use of stimulants (e.g., diet pills, stay-awake pills) is reported by 4.1% (95% CI: 3.3%-5.0%) of students. This percentage represents about 41,000 Ontario students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>□ Stimulant use in 2011 (4.1%) is similar to use in 2009 (4.8%), but significantly lower than use in 1999 (7.3%).</li> <li>□ Over the long-term (among grades 7, 9, 11 only), stimulant use was elevated in the late 1970s/early 1980s, steadily decreased during the late 1980s/early 1990s, increased again in the late 1990s, followed by another decrease in the 2000s. The current level is significantly lower than the peaks seen in the late 1970s/early 1980s and late 1990s, and is similar to the low levels evident in the early 1990s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Females (5.3%) are significantly more likely to use stimulants than males (3.0%).</li> </ul>	<ul style="list-style-type: none"> <li>□ Neither males nor females show a change in stimulant use between 2009 and 2011. However, both show a significant decrease in 2011 compared with their respective 1999 estimates.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ Stimulant use significantly increases with grade, peaking in grade 11 at 7.7%.</li> </ul>	<ul style="list-style-type: none"> <li>□ Students in grade 8, 9, 10, and 12 show decreases in use in 2011 compared with their respective 1999 estimates.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ Stimulant use does not significantly vary by region.</li> </ul>	<ul style="list-style-type: none"> <li>□ Only students in Toronto and the West show a significant decrease in use in 2011 compared with 1999.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ About 1% of students use stimulants frequently, that is six times or more in the past year (see Figure 3.1.2).</li> <li>■ About half (49%) of past year users report using stimulants once or twice in the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.7.3  
 Past Year Non-Medical Stimulant Use by Sex, Grade, and Region,  
 2011 OSDUHS

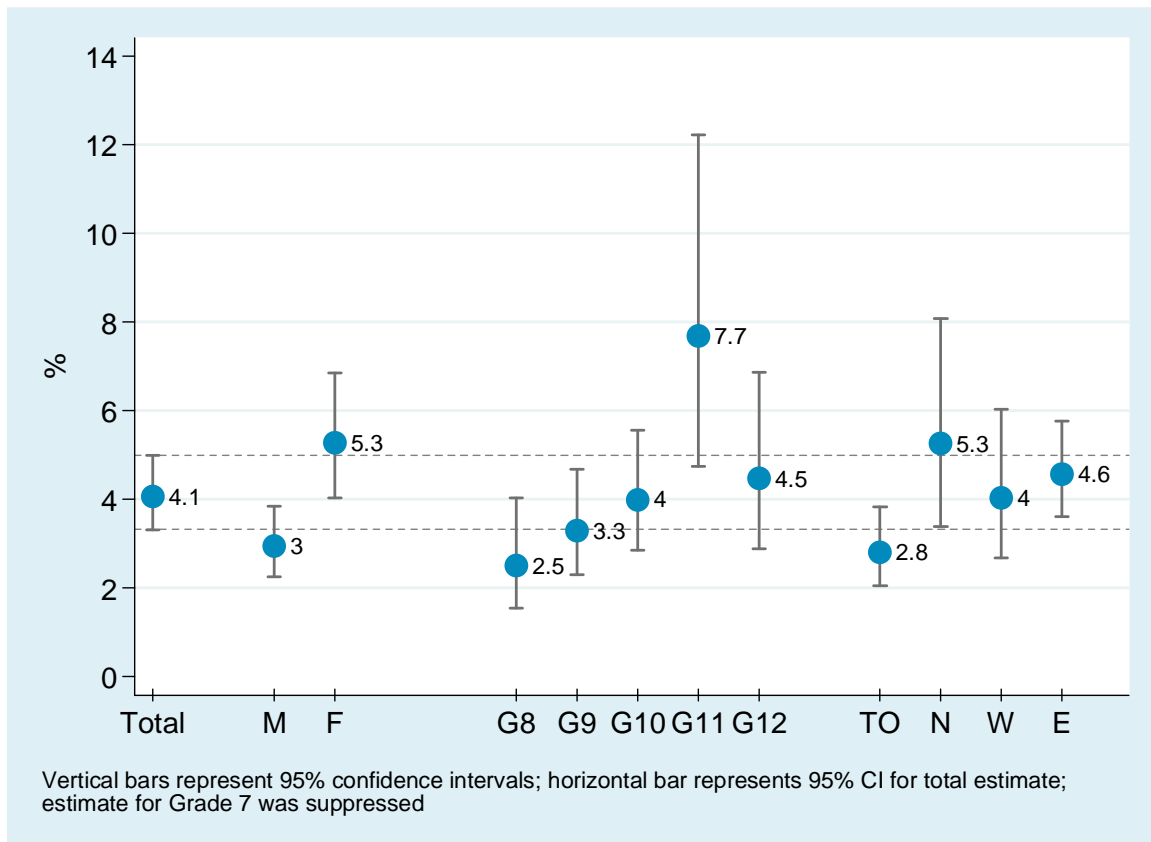


Figure 3.7.4  
 Past Year Non-Medical Stimulant Use, 1999–2011 OSDUHS (Grades 7–12)

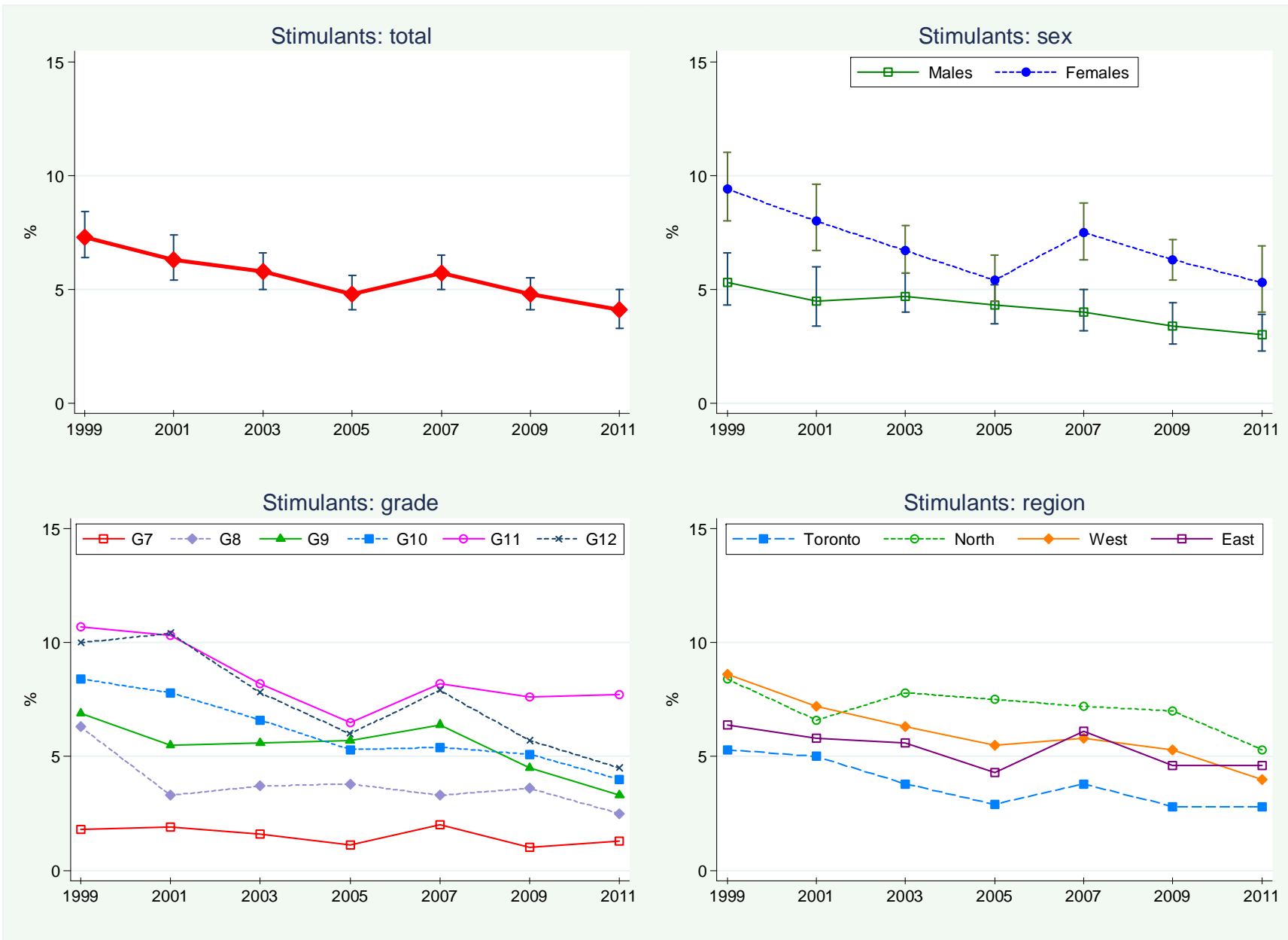


Figure 3.7.5  
 Past Year Non-Medical Stimulant Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

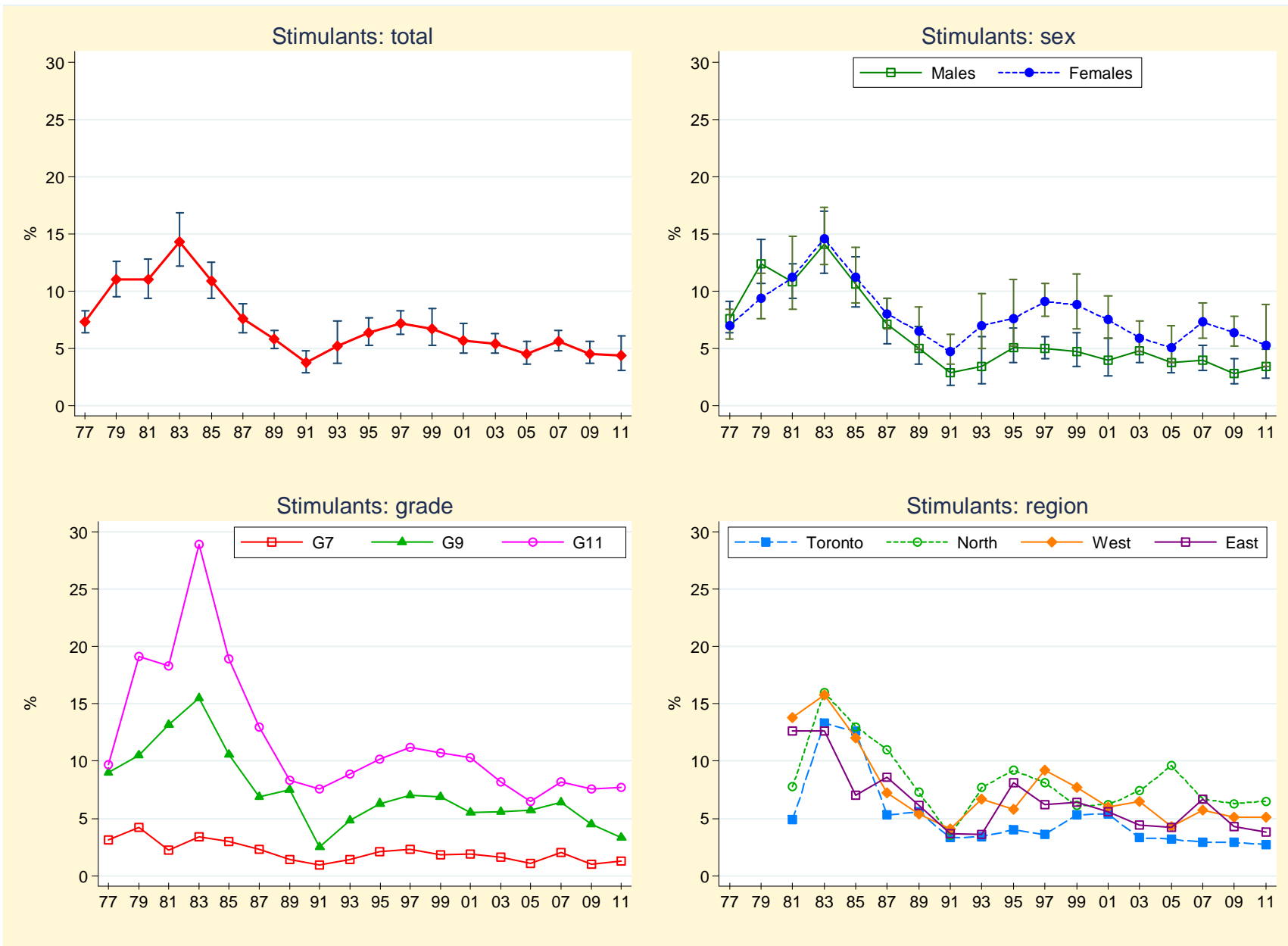


Table 3.7.4: Percentage Reporting Non-Medical Stimulant Use in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	<b>7.3</b> (6.4-8.4)	<b>6.3</b> (5.4-7.4)	<b>5.8</b> (5.0-6.6)	<b>4.8</b> (4.1-5.6)	<b>5.7</b> (5.0-6.5)	<b>4.8</b> (4.1-5.5)	<b>4.1</b> (3.3-5.0)
Total <sup>2</sup>	<b>7.3</b> (6.4-8.3)	<b>11.0</b> (9.5-12.6)	<b>11.0</b> (9.4-12.8)	<b>14.3</b> (12.2-16.8)	<b>10.9</b> (9.4-12.5)	<b>7.6</b> (6.4-8.9)	<b>5.8</b> (5.0-6.6)	<b>3.8</b> (2.9-4.8)	<b>5.2</b> (3.7-7.4)	<b>6.4</b> (5.3-7.7)	<b>7.2</b> (6.2-8.3)	<b>6.7</b> (5.3-8.5)	<b>5.7</b> (4.6-7.2)	<b>5.4</b> (4.6-6.3)	<b>4.5</b> (3.6-5.6)	<b>5.6</b> (4.8-6.6)	<b>4.5</b> (3.7-5.6)	<b>4.4</b> (3.1-6.1)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>5.3</b> (4.3-6.6)	<b>4.5</b> (3.4-6.0)	<b>4.7</b> (4.0-5.7)	<b>4.3</b> (3.5-5.2)	<b>4.0</b> (3.2-5.0)	<b>3.4</b> (2.6-4.4)	<b>3.0</b> (2.3-3.9)
Males <sup>2</sup>	<b>7.6</b> (6.4-9.1)	<b>12.4</b> (10.7-14.5)	<b>10.8</b> (9.4-12.4)	<b>14.1</b> (11.6-17.0)	<b>10.6</b> (8.6-13.0)	<b>7.1</b> (5.4-9.4)	<b>5.0</b> (3.6-6.9)	<b>2.9</b> (1.8-4.6)	<b>3.4</b> (1.9-6.0)	<b>5.1</b> (3.8-6.8)	<b>5.0</b> (4.1-6.0)	<b>4.7</b> (3.4-6.4)	<b>4.0</b> (2.6-5.9)	<b>4.8</b> (3.8-6.1)	<b>3.9</b> (2.9-5.1)	<b>4.0</b> (3.1-5.3)	<b>2.8</b> (1.9-4.1)	<b>3.4</b> (2.4-4.9)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	<b>9.4</b> (8.0-11.0)	<b>8.0</b> (6.7-9.6)	<b>6.7</b> (5.7-7.8)	<b>5.4</b> (4.5-6.5)	<b>7.5</b> (6.3-8.8)	<b>6.3</b> (5.4-7.2)	<b>5.3</b> (4.0-6.9)
Females <sup>2</sup>	<b>7.0</b> (5.8-8.4)	<b>9.4</b> (7.6-11.6)	<b>11.2</b> (8.4-14.8)	<b>14.6</b> (12.3-17.3)	<b>11.2</b> (9.0-13.8)	<b>8.0</b> (6.7-9.4)	<b>6.5</b> (4.9-8.6)	<b>4.7</b> (3.6-6.2)	<b>7.0</b> (5.0-9.8)	<b>7.6</b> (5.2-11.0)	<b>9.1</b> (7.8-10.7)	<b>8.8</b> (6.7-11.5)	<b>7.5</b> (5.9-9.6)	<b>5.9</b> (4.7-7.4)	<b>5.1</b> (3.8-7.0)	<b>7.3</b> (5.9-8.9)	<b>6.4</b> (5.2-7.8)	<b>5.3</b> (3.4-8.3)
Grade																		
7	<b>3.1</b> (2.2-4.4)	<b>4.2</b> (3.2-5.6)	<b>2.2</b> (1.5-3.1)	<b>3.4</b> (2.2-5.3)	<b>3.0</b> (1.3-6.7)	<b>2.3</b> (1.6-3.2)	<b>1.4</b> (0.9-2.1)	<b>0.9</b> (0.3-2.5)	<b>1.4</b> (0.8-2.4)	<b>2.1</b> (1.3-3.5)	<b>2.3</b> (0.6-8.5)	<b>1.8</b> (1.1-3.0)	<b>1.9</b> (1.1-3.3)	<b>1.6</b> (0.9-2.6)	†	<b>1.9</b> (1.0-3.6)	†	†
8	—	—	—	—	—	—	—	—	—	—	—	<b>6.3</b> (4.1-9.4)	<b>3.3</b> (2.2-5.0)	<b>3.7</b> (2.5-5.5)	<b>3.9</b> (2.5-5.8)	<b>3.3</b> (2.1-5.0)	<b>3.6</b> (2.7-4.8)	<b>2.5</b> (1.5-4.0)
9	<b>9.0</b> (7.5-10.8)	<b>10.5</b> (8.6-12.7)	<b>13.2</b> (12.5-14.0)	<b>15.5</b> (12.6-18.9)	<b>10.6</b> (9.1-12.3)	<b>6.9</b> (4.6-10.2)	<b>7.5</b> (6.0-9.4)	<b>2.5</b> (1.9-3.2)	<b>4.8</b> (3.4-6.8)	<b>6.3</b> (4.2-9.2)	<b>7.0</b> (6.0-8.1)	<b>6.9</b> (5.3-9.0)	<b>5.5</b> (3.6-8.3)	<b>5.6</b> (4.2-7.5)	<b>5.7</b> (4.0-8.2)	<b>6.4</b> (5.1-8.2)	<b>4.5</b> (3.2-6.3)	<b>3.3</b> (2.3-4.7)
10	—	—	—	—	—	—	—	—	—	—	—	<b>8.4</b> (6.2-11.3)	<b>7.8</b> (5.7-10.6)	<b>6.6</b> (4.8-9.1)	<b>5.3</b> (3.9-7.2)	<b>5.4</b> (3.9-7.4)	<b>5.1</b> (3.7-6.9)	<b>4.0</b> (2.9-5.6)
11	<b>9.7</b> (7.6-12.3)	<b>19.1</b> (15.5-23.4)	<b>18.3</b> (13.8-23.9)	<b>28.9</b> (22.8-35.9)	<b>18.9</b> (15.8-22.4)	<b>13.0</b> (10.2-16.2)	<b>8.3</b> (7.5-9.1)	<b>7.6</b> (5.6-10.3)	<b>8.9</b> (5.1-15.0)	<b>10.2</b> (8.2-12.6)	<b>11.2</b> (9.9-12.8)	<b>10.7</b> (7.5-14.9)	<b>10.3</b> (7.4-14.1)	<b>8.2</b> (6.4-10.4)	<b>6.5</b> (4.9-8.4)	<b>8.2</b> (6.7-10.0)	<b>7.5</b> (5.8-9.8)	<b>7.7</b> (4.7-12.2)
12	—	—	—	—	—	—	—	—	—	—	—	<b>10.0</b> (7.9-12.7)	<b>10.4</b> (6.9-15.4)	<b>7.8</b> (5.9-10.1)	<b>6.0</b> (4.6-7.9)	<b>7.9</b> (6.0-10.4)	<b>5.7</b> (4.2-7.8)	<b>4.5</b> (2.9-6.9)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	
Region																			
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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 <sup>b</sup> (2.1-3.8)	
Toronto <sup>2</sup>	—	—	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)	2.9 (1.7-4.2)	2.7 (1.7-4.2)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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 <sup>2</sup>	—	—	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)	6.5 (3.8-11.0)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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 <sup>b</sup> (2.7-6.0)	
West <sup>2</sup>	—	—	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)	5.1 (2.8-9.1)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	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 <sup>2</sup>	—	—	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)	5.6 (3.3-5.8)	4.4 (3.2-5.6)	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; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend; <sup>d</sup> significant long-term non-linear 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

## Past Year Non-Medical Use of Tranquillizers/Sedatives

(Figures 3.7.6–3.7.8; 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 non-medical use of tranquilizers/sedatives in 1977.

	Non-Medical Tranquillizer Use in 2011 (Grades 7–12)	Trends in Use
Total Sample	<ul style="list-style-type: none"> <li>■ Non-medical tranquilizer use is reported by 1.9% (95% CI: 1.5%-2.6%) of all students. This percentage represents about 19,400 students in grades 7 through 12.</li> </ul>	<ul style="list-style-type: none"> <li>□ Among the total sample, there has been no change in tranquilizer use between 1999 and 2011, hovering at 2%.</li> <li>□ Over the long-term (among grades 7, 9, 11 only), use peaked in the late 1970s/early 1980s, decreased substantially over the late 1980s/early 1990s, and subsequently increased only minimally. The current level is similar to the lows evident in the early 1990s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Tranquillizer use does not significantly differ between males (1.8%) and females (2.1%).</li> </ul>	<ul style="list-style-type: none"> <li>□ Neither males nor females show significant changes in tranquilizer use since 1999.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ Tranquillizer use significantly varies by grade, with the oldest students more likely to use.</li> </ul>	<ul style="list-style-type: none"> <li>□ No grade shows a significant change in tranquilizer use since 1999.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ Use does not significantly vary by region.</li> </ul>	<ul style="list-style-type: none"> <li>□ No region shows a significant change in tranquilizer use since 1999.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ Frequent use (six times or more often) during the past year is reported by less than 1% of students (see Figure 3.1.2).</li> <li>■ About half (49%) of users report using only once or twice during the past year (see Figure 3.1.3).</li> </ul>	

Figure 3.7.6  
 Past Year Non-Medical Tranquillizer/Sedative Use by Sex, Grade, and Region, 2011 OSDUHS

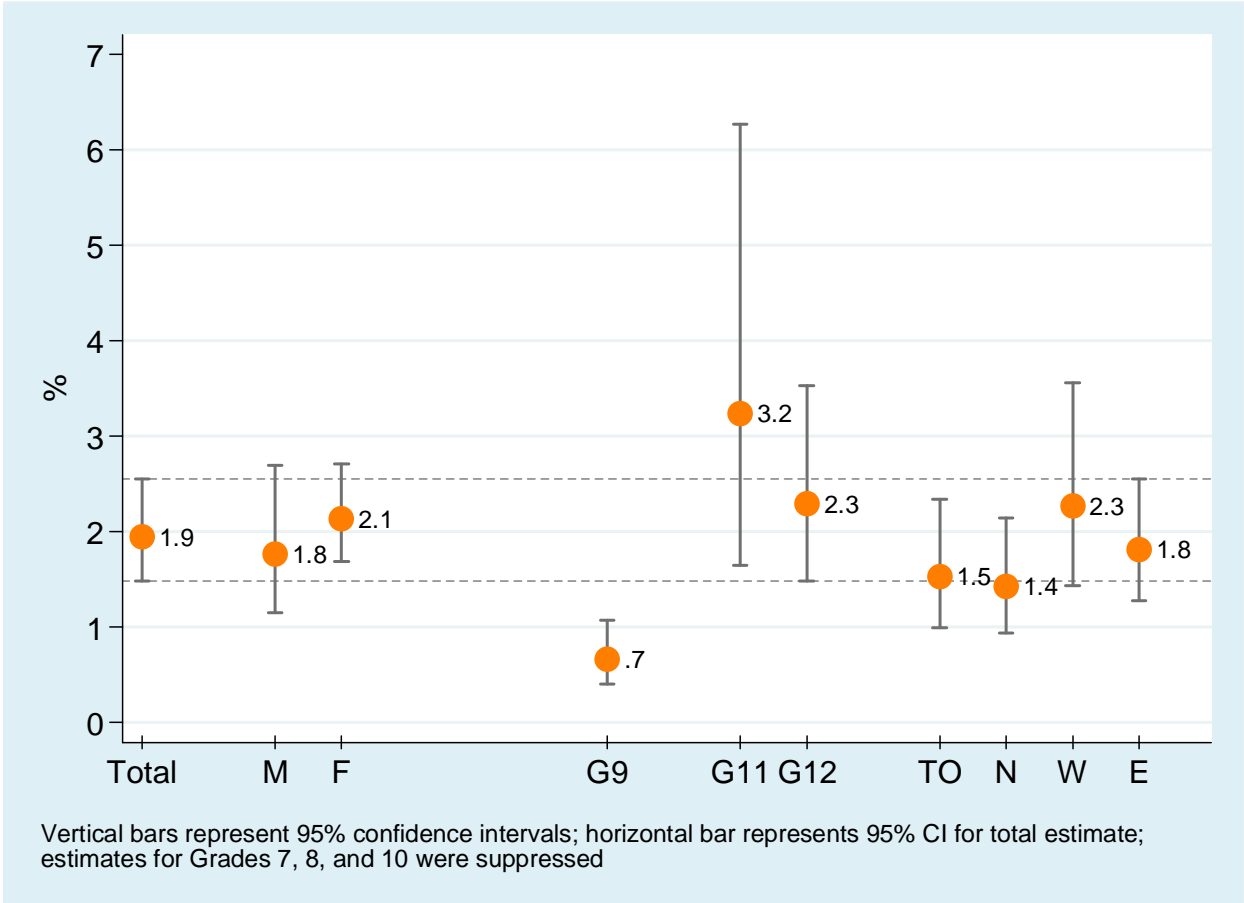
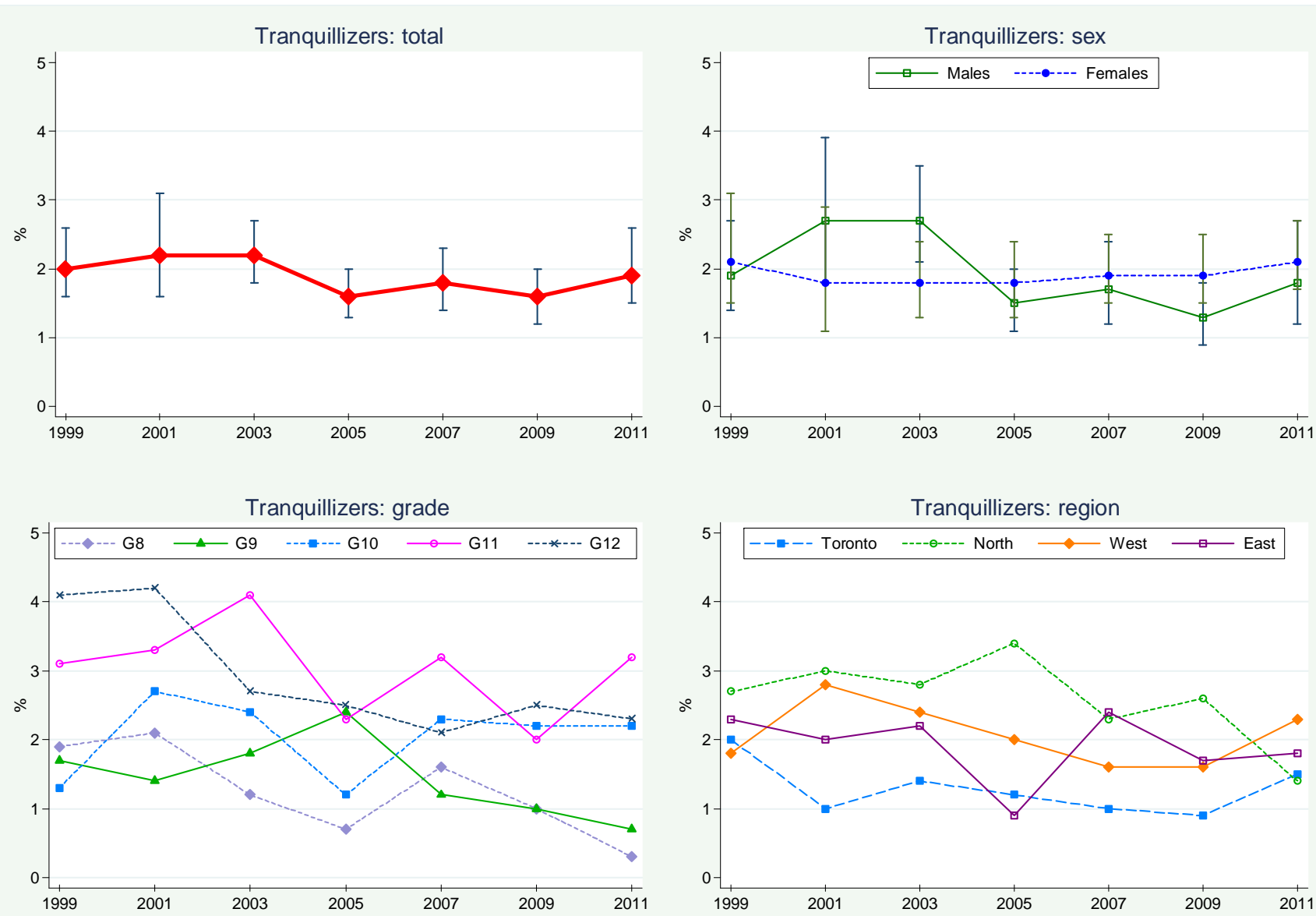
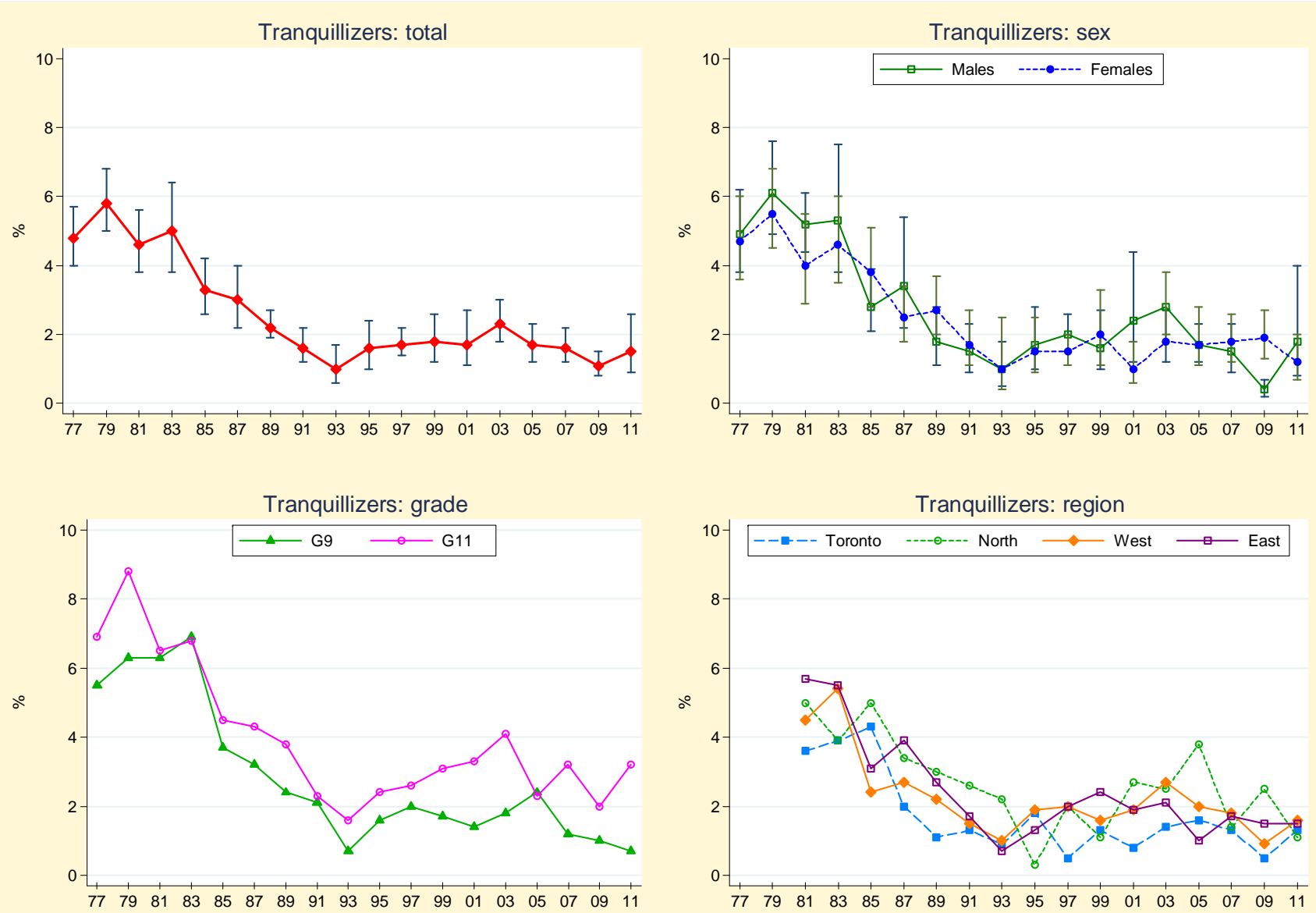


Figure 3.7.7  
 Past Year Non-Medical Tranquillizer/Sedative Use, 1999–2011 OSDUHS (Grades 7–12)



Note: Trends for Grade 7 not presented due to suppressed estimates

Figure 3.7.8  
 Past Year Non-Medical Tranquillizer/Sedative Use, 1977–2011 OSDUHS (Grades 7, 9, 11 only)



Note: Trends for Grade 7 not presented due to suppressed estimates

Table 3.7.5: Percentage Reporting Non-Medical Tranquillizer/Sedative 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 <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	2.0 (1.6-2.6)	2.2 (1.6-3.1)	2.2 (1.8-2.7)	1.6 (1.3-2.0)	1.8 (1.4-2.3)	1.6 (1.2-2.0)	1.9 (1.5-2.6)
Total <sup>2</sup>	4.8 (4.0-5.7)	5.8 (5.0-6.8)	4.6 (3.8-5.6)	5.0 (3.8-6.4)	3.3 (2.6-4.2)	3.0 (2.2-4.0)	2.2 (1.9-2.7)	1.6 (1.2-2.2)	1.0 (0.6-1.7)	1.6 (1.0-2.4)	1.7 (1.4-2.2)	1.8 (1.2-2.6)	1.7 (1.1-2.7)	2.3 (1.8-3.0)	1.7 (1.1-2.8)	1.6 (1.2-2.2)	1.1 (0.8-1.5)	1.5 <sup>cd</sup> (0.9-2.6)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	1.9 (1.4-2.7)	2.7 (1.8-3.9)	2.7 (2.1-3.5)	1.5 (1.1-2.0)	1.7 (1.2-2.4)	1.3 (0.9-1.8)	1.8 (1.2-2.7)
Males <sup>2</sup>	4.9 (3.8-6.2)	6.1 (4.9-7.6)	5.2 (4.4-6.1)	5.3 (3.8-7.5)	2.8 (2.1-3.9)	3.4 (2.2-5.4)	1.8 (1.1-2.8)	1.5 (0.9-2.3)	1.0 (0.5-1.8)	1.7 (1.0-2.8)	2.0 (1.5-2.6)	1.6 (1.0-2.7)	2.4 (1.2-4.4)	1.8 (1.2-2.7)	1.7 (1.2-2.3)	1.5 (0.9-2.3)	†	†
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	2.1 (1.5-3.1)	1.8 (1.1-2.9)	1.8 (1.3-2.4)	1.8 (1.3-2.4)	1.9 (1.5-2.5)	1.9 (1.5-2.5)	2.1 (1.7-2.7)
Females <sup>2</sup>	4.7 (3.6-6.0)	5.5 (4.5-6.8)	4.0 (2.9-5.5)	4.6 (3.5-6.0)	3.8 (2.8-5.1)	2.5 (1.8-3.4)	2.7 (2.0-3.7)	1.7 (1.1-2.7)	1.0 (0.4-2.5)	1.5 (0.9-2.5)	1.5 (1.1-2.0)	2.0 (1.1-3.3)	1.0 (0.6-1.8)	2.8 (2.0-3.8)	1.7 (1.1-2.8)	1.8 (1.2-2.6)	1.9 (1.3-2.7)	1.2 (0.7-2.0)
Grade																		
7	2.1 (1.5-3.0)	2.6 (1.8-3.9)	0.9 (0.4-1.8)	2.0 (1.2-3.4)	1.7 (1.0-2.8)	1.1 (0.6-2.1)	0.6 (0.3-1.3)	†	0.7 (0.4-1.2)	0.6 (0.2-2.4)	†	†	†	†	†	†	†	†
8	—	—	—	—	—	—	—	—	—	—	—	1.9 (1.1-3.3)	†	1.2 (0.7-2.0)	†	1.6 (0.9-3.0)	†	†
9	5.5 (4.3-7.1)	6.3 (5.0-8.0)	6.3 (5.0-8.1)	6.9 (5.2-9.0)	3.7 (2.8-4.9)	3.2 (1.7-6.0)	2.4 (1.8-3.1)	2.1 (1.4-3.0)	0.7 (0.3-1.6)	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)
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)	†
11	6.9 (5.1-9.3)	8.8 (6.9-11.1)	6.5 (5.0-8.4)	6.8 (4.0-11.4)	4.5 (3.0-6.7)	4.3 (2.7-6.8)	3.8 (3.1-4.6)	2.3 (1.4-3.6)	1.6 (0.6-3.8)	2.4 (1.2-4.8)	2.6 (2.0-3.4)	3.1 (1.8-5.2)	3.3 (1.7-6.4)	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)
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)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	2.0 (1.1-3.5)	†	1.4 (0.8-2.5)	1.2 (0.7-2.2)	†	†	1.5 (1.0-2.3)
Toronto <sup>2</sup>	—	—	3.6 (2.4-5.2)	3.9 (3.2-4.7)	4.3 (3.5-5.2)	2.0 (0.6-6.6)	1.1 (0.3-4.2)	1.3 (0.7-2.2)	0.9 (0.2-4.6)	1.8 (0.4-6.7)	0.5 (0.1-2.2)	1.3 (0.5-3.4)	†	1.4 (0.6-3.5)	1.6 (0.9-2.7)	†	†	1.3 (0.8-2.3)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	2.7 (1.6-4.4)	3.0 (1.8-4.7)	2.8 (1.9-4.1)	3.4 (1.8-6.3)	2.3 (1.4-3.7)	2.6 (1.4-4.7)	1.4 (0.9-2.1)
North <sup>2</sup>	—	—	5.0 (2.7-9.0)	3.9 (2.6-5.9)	5.0 (3.0-8.2)	3.4 (2.5-4.8)	3.0 (1.9-5.0)	2.6 (1.1-6.1)	2.2 (0.4-11.0)	†	2.0 (1.4-2.8)	1.1 (0.4-2.8)	2.7 (1.3-5.3)	2.5 (1.3-4.9)	3.8 (1.6-9.0)	1.4 (0.7-2.8)	2.5 (1.0-6.1)	1.1 (0.5-2.3)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	1.8 (1.1-2.7)	2.8 (1.7-4.5)	2.4 (1.8-3.3)	2.0 (1.5-2.8)	1.6 (1.1-2.4)	1.6 (1.1-2.4)	2.3 (1.4-3.6)
West <sup>2</sup>	—	—	4.5 (3.6-5.6)	5.4 (3.5-8.2)	2.4 (1.3-4.6)	2.7 (1.6-4.6)	2.2 (2.0-2.6)	1.5 (0.8-2.6)	1.0 (0.5-1.9)	1.9 (1.1-3.3)	2.0 (1.5-2.7)	1.6 (1.0-3.0)	1.9 (1.0-3.7)	2.7 (1.9-3.9)	2.0 (1.3-2.9)	1.8 (1.1-2.8)	0.9 (0.5-1.5)	†
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	2.3 (1.4-3.6)	2.0 (1.2-3.6)	2.2 (1.5-3.3)	0.9 (0.6-1.4)	2.4 (1.6-3.6)	1.7 (1.1-2.4)	1.8 (1.3-2.6)
East <sup>2</sup>	—	—	5.7 (3.5-9.0)	5.5 (3.4-8.8)	3.1 (2.2-4.4)	3.9 (2.7-5.6)	2.7 (2.0-3.5)	1.7 (1.1-2.7)	0.7 (0.3-1.5)	1.3 (0.8-2.2)	2.0 (1.4-3.0)	2.4 (1.2-4.5)	1.9 (0.8-4.4)	2.1 (1.3-3.2)	1.0 (0.5-1.9)	1.7 (1.0-2.7)	1.4 (1.0-2.2)	1.5 (1.0-2.2)

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 changes between 1999 and 2011; <sup>c</sup> significant long-term linear trend; <sup>d</sup> significant long-term non-linear 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 Non-Medical Use of Over-the-Counter Cough or Cold Medication

(Figure 3.7.9; Table 3.7.6)

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.

	Use in 2011 (Grades 7–12)	Trends in Use (Grades 7–12)
Total Sample	<ul style="list-style-type: none"> <li>■ In 2011, 6.9% (95% CI: 5.5%-8.7%) of students report using over-the-counter cough/cold medication to get high in the past year. This estimate represents about 68,600 students in Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>□ The percentage of the total sample of students reporting using cough/cold medication to get high in 2011 (6.9%) is similar to the percentage found in 2009 (7.2%).</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Males (8.0%) are significantly more likely than females (5.7%) to use over-the-counter cough/cold medication to get high.</li> </ul>	<ul style="list-style-type: none"> <li>□ Neither males nor females show a significant change in non-medical use of cough/cold medication between 2009 and 2011.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ There is significant grade variation, with use increasing from 3.1% among 7<sup>th</sup>-graders up to about 11.7% among 11<sup>th</sup>-graders, and then drops slightly to 5.5% among 12<sup>th</sup>-graders.</li> </ul>	<ul style="list-style-type: none"> <li>□ No grade showed a significant change in use between 2009 and 2011.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ Despite some variation, there are no significant regional differences.</li> </ul>	<ul style="list-style-type: none"> <li>□ No region showed a significant change in use between 2009 and 2011.</li> </ul>
Frequent Use	<ul style="list-style-type: none"> <li>■ Among the total sample of students, 2.5% report using cough/cold medication to get high six times or more often during the past year (see Figure 3.1.2).</li> </ul>	

Figure 3.7.9  
 Past Year Non-Medical Use of Over-the-Counter (OTC) Cough or Cold Medication by Sex, Grade, and Region, 2011 OSDUHS

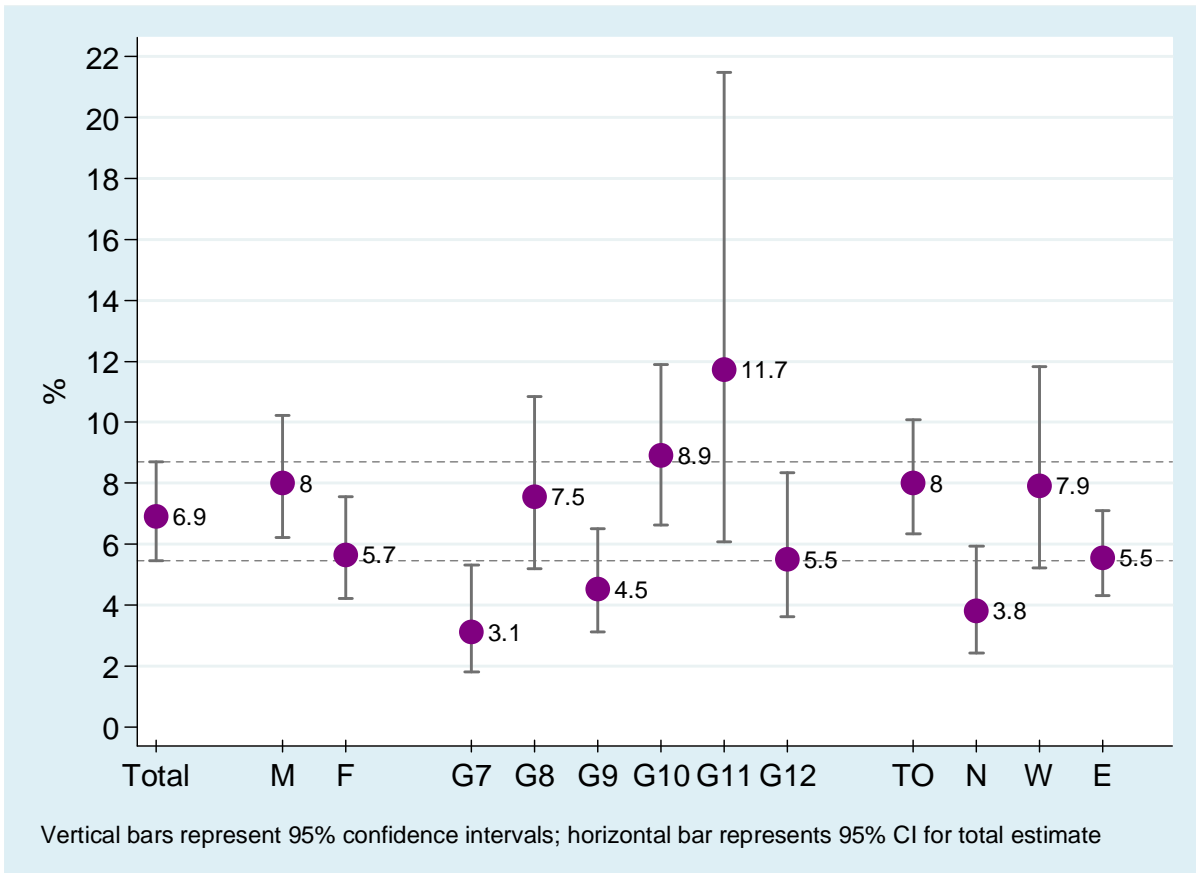


Table 3.7.6: Percentage Reporting Non-Medical Use of Over-the-Counter Cough or Cold Medication in the Past Year, 2009–2011 OSDUHS

	<b>2009</b> (N=4220)	<b>2011</b> (N=4472)
Total (95% CI)	<b>7.2</b> (6.1-8.5)	<b>6.9</b> (5.5-8.7)
<b>Sex</b>		
Males	<b>6.8</b> (5.4-8.6)	<b>8.0</b> (6.2-10.2)
Females	<b>7.6</b> (5.9-9.8)	<b>5.7</b> (4.2-7.5)
<b>Grade</b>		
7	<b>6.0</b> (3.8-9.4)	<b>3.1</b> (1.8-5.3)
8	<b>6.3</b> (4.1-9.6)	<b>7.5</b> (5.2-10.8)
9	<b>6.8</b> (4.0-11.2)	<b>4.5</b> (3.1-6.5)
10	<b>7.9</b> (5.3-11.4)	<b>8.9</b> (6.6-11.9)
11	<b>7.8</b> (5.6-10.9)	<b>11.7</b> (6.1-21.5)
12	<b>7.9</b> (5.3-11.5)	<b>5.5</b> (3.6-8.3)
<b>Region</b>		
Toronto	<b>10.6</b> (7.4-15.1)	<b>8.0</b> (6.3-10.1)
North	<b>5.0</b> (2.9-8.7)	<b>3.8</b> (2.4-5.9)
West	<b>6.7</b> (5.0-8.8)	<b>7.9</b> (5.2-11.8)
East	<b>6.5</b> (5.3-8.1)	<b>5.5</b> (4.3-7.1)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) no significant differences, 2011 vs. 2009.

Q: In the last 12 months, how often did you use a cough or cold medicine from 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 Non-Medical Use of Over-the-Counter Gravol**

The 2011 OSDUHS asked students whether they used Gravol for the purpose of “getting high” during the past year. Gravol is a brand-name for the drug dimenhydrinate, sold over-the-counter to treat nausea and vomiting. However, large doses can produce a euphoric effect and hallucinations. Misuse can also cause drowsiness, paranoia, agitation, memory loss, increased blood pressure and heart rate.

- In 2011, the total sample estimate for past year use of Gravol to “get high” was suppressed due to unreliability.

## Past Year Use of High-Caffeine Energy Drinks

(Figure 3.7.10)

For the first time in 2011, the OSDUHS asked students about their use of highly-caffeinated energy drinks (such as Red Bull, Rockstar, Monster). The consumption of these energy drinks by children and adolescents are a concern because the stimulating effects can cause rapid heart rate, an abnormal heart rhythm, increased blood pressure, and sleeplessness.

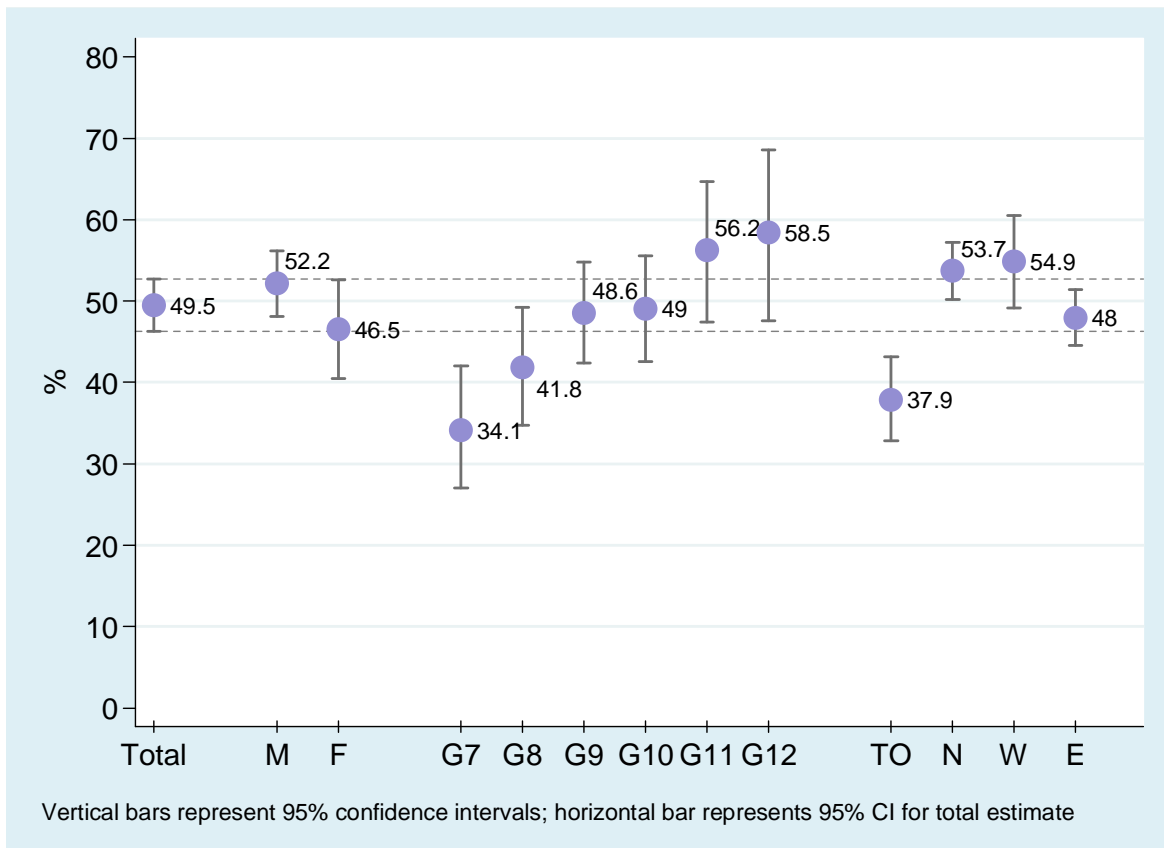
- About half (49.5%; 95% CI: 46.3%-52.7%) of all students in grades 7 through 12 report drinking an energy drink at least once in the past year. This estimate represents about 481,700 Ontario students. One-fifth (19.1%; 95% CI: 17.0%-21.4%) report drinking an energy drink at least once during the 7 days before the survey. This estimate represents about 185,900 Ontario students.

- Males (52.2%) and females (46.5%) are equally likely to report drinking an energy drink in the past year.

- There is significant grade variation showing an increase in past year use as grade level increases (from 34.1% among 7<sup>th</sup>-graders to well over 50% among 11<sup>th</sup>- and 12<sup>th</sup>-graders).

- There is significant regional variation, with Toronto students (37.9%) least likely to use, and students in the North (53.7%) and West (54.9%) regions most likely.

Figure 3.7.10  
Past Year Use of a High-Caffeine Energy Drink by Sex, Grade, and Region, 2011 OSDUHS



## Lifetime Use of Steroids

(Table 3.7.7)

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. Steroids do not produce intoxication, but use can cause hypertension, blood clotting and cholesterol changes, aggression, acne, and adolescents can experience premature stoppage of growth.

	Lifetime Steroid Use (Grades 7–12)	Trends in Use
Total Sample	<ul style="list-style-type: none"> <li>■ In 2011, 1.2% of students (95% CI: 0.8%-1.8%) in grades 7 through 12 report ever using steroids to increase performance or change their physical appearance. This estimate represents about 12,000 students in Ontario.</li> </ul>	<ul style="list-style-type: none"> <li>□ Among the total sample of students, lifetime steroid use reported in 2011 (1.2%) is similar to the estimate from 2009 (1.1%), but significantly lower than that found in 1999 (3.4%).</li> <li>□ Looking at the long-term (among grades 7, 9, and 11 only), steroid use increased at the end of the 1990s/early 2000s, but has since dropped back down to the levels evident in the late 1980s/early 1990s.</li> </ul>
Sex	<ul style="list-style-type: none"> <li>■ Males are significantly more likely than females to report ever using steroids (2.1% vs. less than 0.5%, respectively).</li> </ul>	<ul style="list-style-type: none"> <li>□ The use of steroids among males was stable in 2011 (2.1%) compared with 2009 (1.7%), but is significantly lower compared with the 1999 estimate (5.4%). There was no change among females during the past decade.</li> </ul>
Grade	<ul style="list-style-type: none"> <li>■ Steroid use does not significantly differ by grade.</li> </ul>	<ul style="list-style-type: none"> <li>□ Grade 11 and 12 students show significant declines in 2011 compared with their respective 1999 estimates.</li> </ul>
Region	<ul style="list-style-type: none"> <li>■ Steroid use does not significantly differ by region.</li> </ul>	<ul style="list-style-type: none"> <li>□ No region shows a significant change in 2011 compared with their respective 2009 estimates, or with their respective 1999 estimates.</li> </ul>

Table 3.7.7: Percentage Reporting Steroid Use in Lifetime, 1989–2011 OSDUHS

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(3898)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(1618)	(1862)	(1488)	(2069)	(2254)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	<b>3.4</b> (2.7-4.2)	<b>3.8</b> (3.0-4.8)	<b>3.0</b> (2.4-3.7)	<b>2.3</b> (1.9-2.9)	<b>1.3</b> (0.9-1.9)	<b>1.1</b> (0.7-1.6)	<b>1.2</b> <sup>b</sup> (0.8-1.8)
Total <sup>2</sup>	<b>1.3</b> (0.9-1.8)	<b>1.7</b> (1.4-2.1)	<b>1.6</b> (1.1-2.4)	<b>1.4</b> (1.0-2.0)	<b>1.4</b> (1.0-2.0)	<b>3.1</b> (2.2-4.3)	<b>3.4</b> (2.4-4.6)	<b>2.4</b> (1.8-3.3)	<b>1.8</b> (1.2-2.5)	<b>1.1</b> (0.6-1.8)	<b>1.0</b> (0.5-1.8)	<b>1.3</b> <sup>d</sup> (0.7-2.5)
Sex												
Males <sup>1</sup>	—	—	—	—	—	<b>5.4</b> (4.2-6.9)	<b>5.4</b> (4.0-7.3)	<b>4.4</b> (3.5-5.6)	<b>3.2</b> (2.4-4.2)	<b>2.0</b> (1.3-3.1)	<b>1.7</b> (1.1-2.6)	<b>2.1</b> <sup>b</sup> (1.3-3.2)
Males <sup>2</sup>	<b>2.4</b> (1.7-3.6)	<b>3.0</b> (2.3-3.8)	<b>2.4</b> (1.7-3.3)	<b>1.8</b> (1.1-2.9)	<b>2.3</b> (1.5-3.4)	<b>5.1</b> (3.5-7.3)	<b>4.6</b> (3.1-6.7)	<b>4.1</b> (2.8-5.8)	<b>2.3</b> (1.4-3.7)	<b>1.6</b> (0.9-3.0)	<b>1.9</b> (1.0-3.4)	†
Females <sup>1</sup>	—	—	—	—	—	<b>1.3</b> (0.9-1.8)	<b>2.2</b> (1.6-3.0)	<b>1.7</b> (1.1-2.7)	<b>1.4</b> (0.9-2.2)	†	†	†
Females <sup>2</sup>	†	<b>0.3</b> (0.1-0.9)	<b>0.8</b> (0.4-2.0)	<b>1.0</b> (0.6-1.7)	<b>0.6</b> (0.3-1.1)	<b>1.2</b> (0.7-1.9)	<b>2.1</b> (1.3-3.4)	<b>0.9</b> (0.4-1.6)	<b>1.2</b> (0.6-2.3)	†	†	†
Grade												
7	<b>0.7</b> (0.3-1.4)	<b>1.2</b> (1.0-1.3)	<b>1.0</b> (0.4-2.5)	†	<b>1.0</b> (0.8-1.4)	†	†	†	†	†	†	†
8	—	—	—	—	—	†	†	†	†	†	†	†
9	<b>1.3</b> (0.6-2.9)	<b>1.8</b> (1.2-2.5)	<b>0.9</b> (0.3-2.6)	<b>1.4</b> (1.3-1.6)	<b>1.2</b> (0.5-2.7)	†	†	<b>1.6</b> (0.9-2.9)	<b>2.0</b> (1.1-3.8)	†	†	†
10	—	—	—	—	—	<b>2.9</b> (1.8-4.7)	<b>3.1</b> (2.0-4.8)	<b>3.8</b> (2.4-6.1)	<b>2.9</b> (1.8-4.4)	†	<b>1.8</b> (1.0-3.4)	†
11	<b>1.8</b> (1.2-2.8)	<b>2.1</b> (1.5-3.1)	<b>2.8</b> (1.8-4.2)	<b>1.5</b> (0.7-3.0)	<b>1.8</b> (1.1-3.1)	<b>6.2</b> (4.2-9.1)	<b>5.6</b> (3.4-9.1)	<b>4.6</b> (3.2-6.6)	<b>2.6</b> (1.6-4.3)	<b>2.0</b> (1.1-3.7)	<b>1.2</b> (0.6-2.7)	† <sup>b</sup>
12	—	—	—	—	—	<b>6.9</b> (4.9-9.7)	<b>9.1</b> (5.7-14.3)	<b>5.3</b> (3.4-8.0)	<b>3.7</b> (2.5-5.5)	<b>2.4</b> (1.2-4.7)	†	<b>0.8</b> <sup>b</sup> (0.4-1.6)
Region												
Toronto <sup>1</sup>	—	—	—	—	—	<b>3.6</b> (2.2-5.9)	<b>3.8</b> (2.6-5.5)	<b>2.3</b> (1.2-4.4)	<b>2.1</b> (1.2-3.5)	<b>1.6</b> (0.8-2.9)	†	†
Toronto <sup>2</sup>	<b>0.6</b> (0.1-2.9)	<b>2.2</b> (1.8-2.8)	<b>0.8</b> (0.2-2.8)	<b>0.7</b> (0.2-1.9)	<b>1.6</b> (0.8-3.2)	<b>4.0</b> (2.0-7.9)	<b>2.9</b> (1.8-4.5)	<b>1.6</b> (0.5-5.0)	<b>0.9</b> (0.3-2.5)	<b>0.8</b> (0.3-2.3)	†	†
North <sup>1</sup>	—	—	—	—	—	<b>4.4</b> (2.4-7.8)	<b>4.0</b> (2.8-5.7)	<b>3.8</b> (2.5-5.6)	†	<b>0.7</b> (0.3-1.7)	†	†
North <sup>2</sup>	<b>2.3</b> (0.9-5.7)	<b>2.5</b> (1.1-5.4)	<b>2.1</b> (0.4-10.8)	<b>1.3</b> (0.2-7.0)	<b>0.8</b> (0.7-0.8)	<b>2.3</b> (1.0-5.2)	<b>3.3</b> (2.0-5.4)	<b>2.5</b> (1.3-4.7)	†	<b>1.2</b> (0.4-3.4)	†	†
West <sup>1</sup>	—	—	—	—	—	<b>3.3</b> (2.2-4.8)	<b>4.1</b> (2.9-5.6)	<b>2.7</b> (1.9-3.7)	<b>2.4</b> (1.7-3.3)	<b>1.5</b> (0.8-2.6)	<b>1.2</b> (0.6-2.2)	†
West <sup>2</sup>	<b>1.3</b> (0.9-1.8)	<b>2.1</b> (1.5-2.8)	<b>2.1</b> (1.3-3.4)	<b>1.6</b> (1.0-2.6)	<b>1.4</b> (0.8-2.6)	<b>2.9</b> (1.6-5.2)	<b>3.5</b> (2.0-5.9)	<b>1.9</b> (1.0-3.4)	<b>2.2</b> (1.3-3.6)	<b>1.3</b> (0.6-2.8)	<b>1.1</b> (0.4-2.8)	†
East <sup>1</sup>	—	—	—	—	—	<b>3.0</b> (2.1-4.4)	<b>3.4</b> (1.9-5.9)	<b>3.9</b> (2.7-5.6)	<b>2.6</b> (1.8-3.7)	†	†	<b>1.5</b> (0.9-2.4)
East <sup>2</sup>	<b>1.3</b> (0.4-3.5)	<b>0.6</b> (0.4-1.0)	<b>1.4</b> (0.8-2.3)	<b>1.6</b> (0.9-2.9)	<b>1.3</b> (0.7-2.4)	<b>3.0</b> (1.8-4.9)	<b>3.6</b> (1.7-7.5)	<b>3.8</b> (2.6-5.5)	<b>1.7</b> (0.9-3.2)	†	†	

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) based on random half samples from 2005 to 2011; (6) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>d</sup> significant long-term non-linear trend.

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 among Ontario students by examining (1) the percentage who used any drug, including the non-medical (NM) use of a prescription drug, during the past year; (2) the percentage who used any prescription drug non-medically during the past year; (3) trends in any illicit drug use since 1977 (based on limited number of drugs surveyed in most OSDUHS cycles); (4) the percentage who used any illicit drug by injection; (5) the overlap of alcohol, tobacco, cannabis, and other drug use; and (6) the percentage who used no substance at all during the past year (i.e., past year abstainers).

### Any Drug Use, including Non-Medical Prescription Drug Use, in 2011

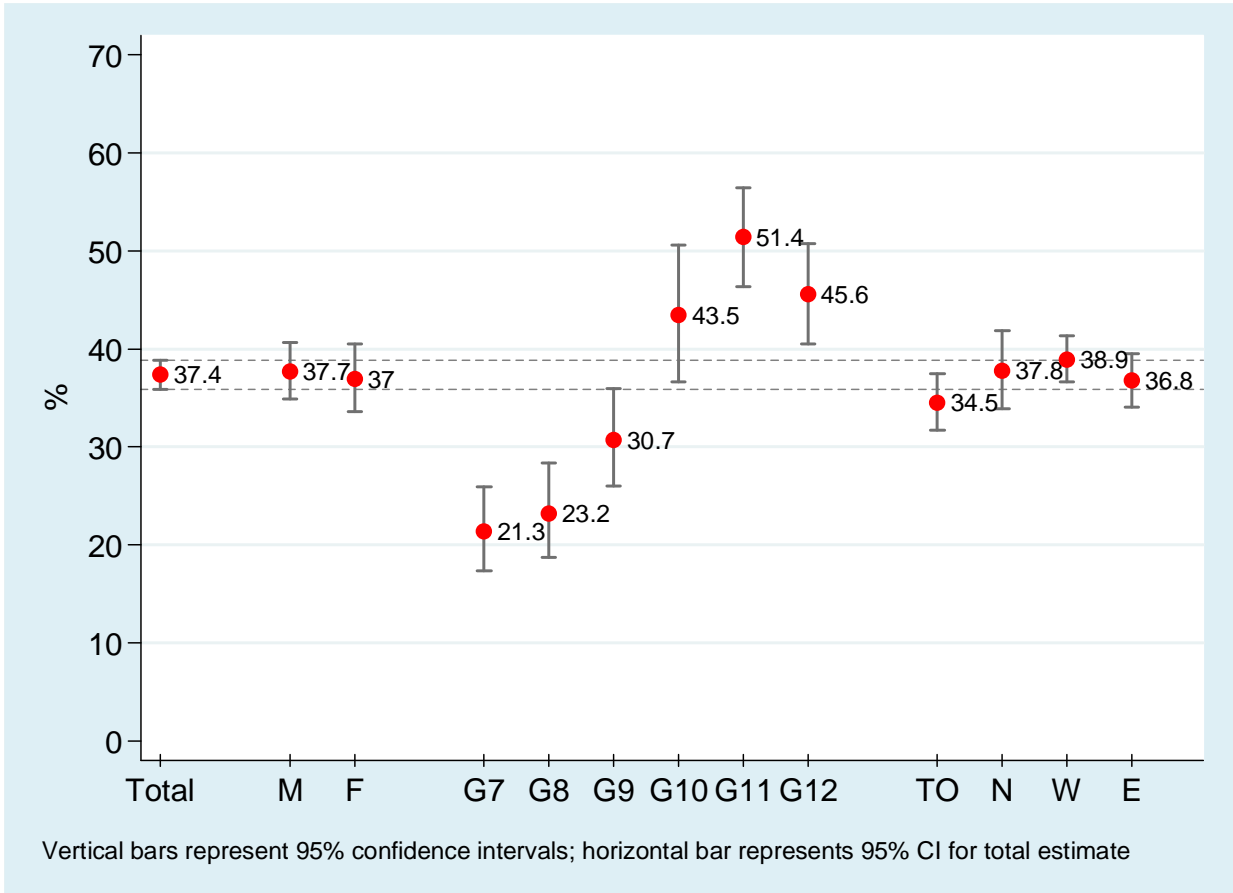
(Figure 3.8.1)

This composite measure captures the use of at least one of the following 22 drugs asked about in the 2011 survey: cannabis, inhalants, LSD, mushrooms/mescaline, cocaine, crack, methamphetamine, heroin, doda, ecstasy, ketamine, jimson weed, salvia divinorum, BZP pills, mephedrone, stimulants (NM), tranquilizers/sedatives (NM), OxyContin (NM), other prescription opioid pain relievers (NM), ADHD drugs (NM), over-the-counter cough/cold medication (to “get high”), and Graval (to “get high”). Excluded from this index are tobacco, alcohol, and high-caffeine energy drinks.

2011: Grades 7–12

- Among the total sample, 37.4% (95% CI: 35.9%-38.9%) report using at least one drug in the past year. This estimate represents about 372,200 Ontario students in grades 7 through 12.
- Males (37.7%) and females (37.0%) are equally likely to report the use of at least one drug in the past year.
- There is significant grade variation, with use increasing between 7<sup>th</sup>-grade (21.3%) and 11<sup>th</sup>-grade (51.4%), and then dropping slightly in grade 12 (45.6%).
- There are no significant differences among the four regions.

Figure 3.8.1  
 Past Year Use of Any Drug (including Non-Medical Prescription Drug Use) by Sex, Grade, and Region, 2011 OSDUHS



## Any Non-Medical Prescription Drug Use in 2011

(Figure 3.8.2)

This section presents the non-medical use of at least one of the following five prescription drugs or drug classes once or more often during the past 12 months: OxyContin, other opioid pain relievers, ADHD drugs, other stimulants, tranquilizers/sedatives. (Non-medical use is defined as use without a doctor's prescription).

2011: Grades 7–12

- Among the total sample, 16.7% (95% CI: 15.1%-18.4%) report using at least one prescription drug non-medically in the past year. This estimate represents about 168,800 Ontario students in grades 7 through 12.

- Females (18.5%) are significantly more likely than males (15.1%) to report using at least one prescription drug non-medically in the past year.

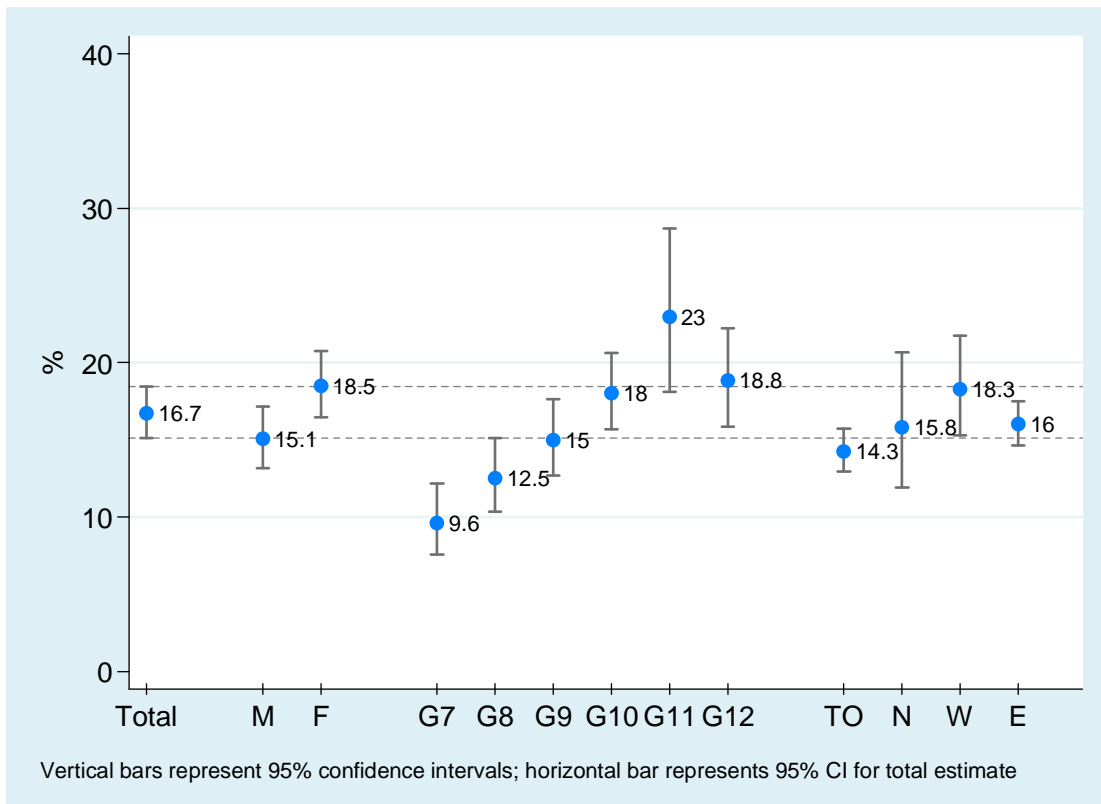
- There is significant grade variation, with use increasing between 7<sup>th</sup>-grade (9.6%) and 11<sup>th</sup>-grade (23.0%), and then dropping only slightly in 12<sup>th</sup>-grade (18.8%).

- There are no significant differences among the regions.

2011 vs. 2009: Grades 7–12

- This measure was defined in the same manner in the 2009 survey, thus allowing for comparisons between the last two survey cycles. The 2011 estimate of 16.7% (95% CI: 15.1%-18.4%) is significantly lower than the 2009 estimate of 20.3% (95% CI: 19.2%-21.5%).

Figure 3.8.2  
Past Year Non-Medical Use of a Prescription Drug by Sex, Grade, and Region, 2011 OSDUHS



## Trends in Any Illicit 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 illicit drug use. The first estimate measures use of any of ten drugs that are common to most OSDUHS cycles since 1977: cannabis, LSD, mushrooms/mescaline, methamphetamine, cocaine, crack, heroin, ecstasy, stimulants (NM), and tranquilizers/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: inhalants, jimson weed, salvia divinorum, ketamine, ADHD drugs, OxyContin, other prescription opioid pain relievers, and any over-the-counter medication.

The second measure of any illicit drug use is similar to the first, but also excludes cannabis.

### *1999–2011: Grades 7–12*

□ The measure for any illicit drug use including cannabis significantly decreased between 2009 (28.0%) and 2011 (24.8%) among the total sample of students. This is likely due to the significant decrease found in cannabis use among the total sample between these two years.

□ Among the subgroups, any illicit drug use including cannabis showed a significant decline in 2011 compared with 2009 for the following: males (from 30.4% in 2009 to 24.9% in 2011); 9<sup>th</sup>-graders (from 21.1% to 14.3%); 12<sup>th</sup>-graders (from 47.6% to 38.5%); and students in the West (from 29.6% to 24.1%).

□ Both measures for any illicit drug use are significantly lower in 2011 compared with the 1999 estimates. Among the total sample, the 2011 estimate (24.8%) for any illicit drug use including cannabis is significantly lower than the 1999 estimate (31.7%). Similarly, any drug

use excluding cannabis is significantly lower in 2011 (9.9%) compared with 1999 (20.0%).

□ The measure for any illicit drug use including cannabis is significantly lower in 2011 compared with 1999 among the following subgroups:

- males (24.9% in 2011 vs 34.4% in 1999)
- 8<sup>th</sup>-graders (8.7% in 2011 vs 19.6% in 1999)
- 9<sup>th</sup>-graders (14.3% in 2011 vs 31.0% in 1999)
- 10<sup>th</sup>-graders (29.3% in 2011 vs 42.6% in 1999)
- West (24.1% in 2011 vs 34.4% in 1999)
- East (26.6% in 2011 vs. 33.3% in 1999).

□ Regarding any illicit drug use excluding cannabis, all subgroups except for students in the 7<sup>th</sup>-grade and in Toronto show significant decreases in 2011 compared with their respective 1999 estimates.

### *1977–2011: Grades 7, 9, 11 only*

□ Any illicit drug use including cannabis began to decline during the 1980s after peaking in 1979. Rates increased again after 1991 (when it was at an all-time low) up until the early 2000s. The estimate declined in 2005 and has levelled off since then. The current estimate is significantly lower than the both peak periods, but still remains significantly higher than the low levels evident in the late 1980s/early 1990s.

□ The trend pattern for the measure excluding cannabis is similar to the one described above, except that the current estimate is similar to the lows evident in the late 1980s/early 1990s.

Figure 3.8.3  
 Past Year Use of Any Illicit Drug *Including* Cannabis, 1999–2011 OSDUHS (Grades 7–12)

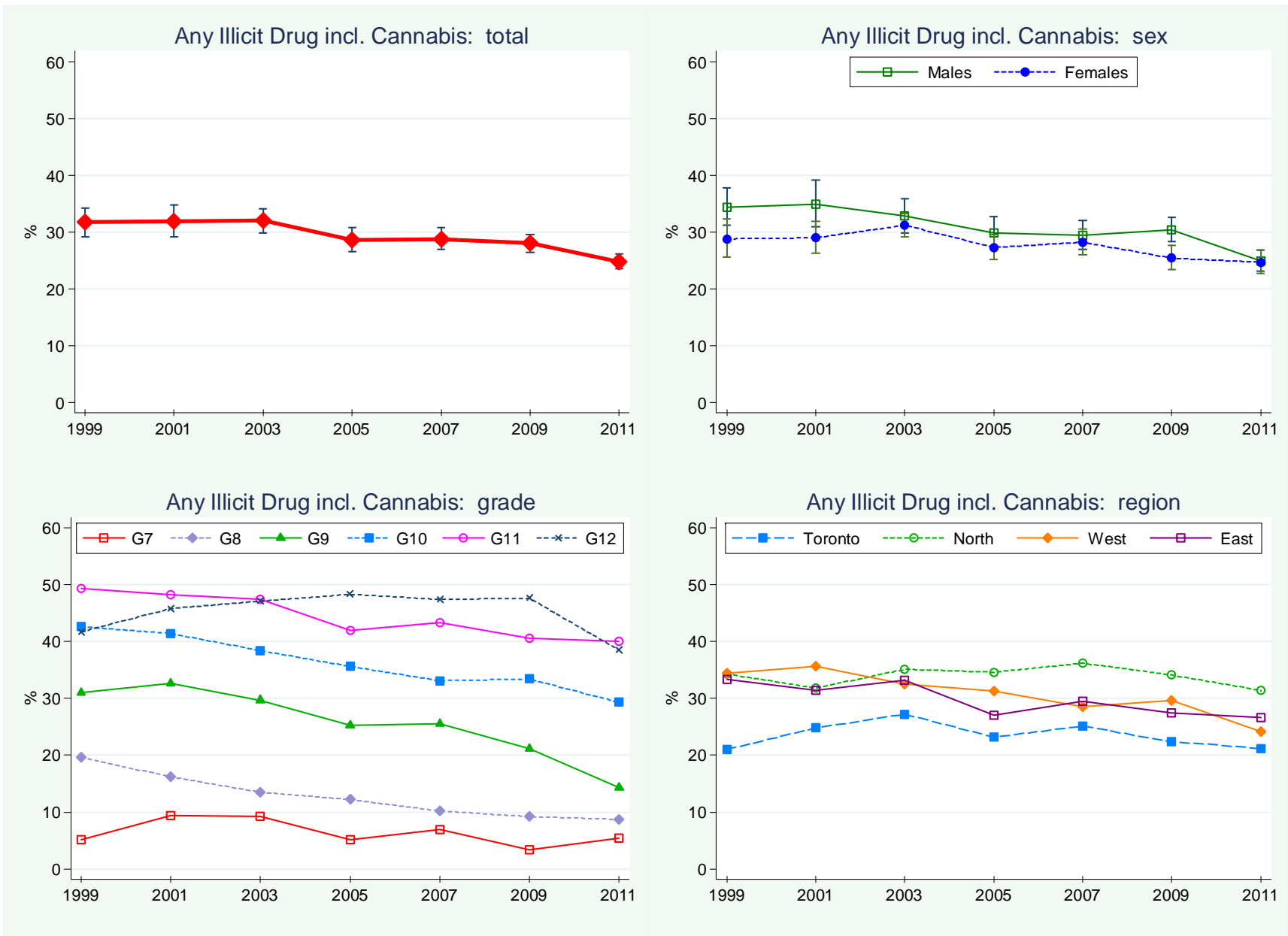


Figure 3.8.4

Past Year Use of Any Illicit Drug *Including* Cannabis, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

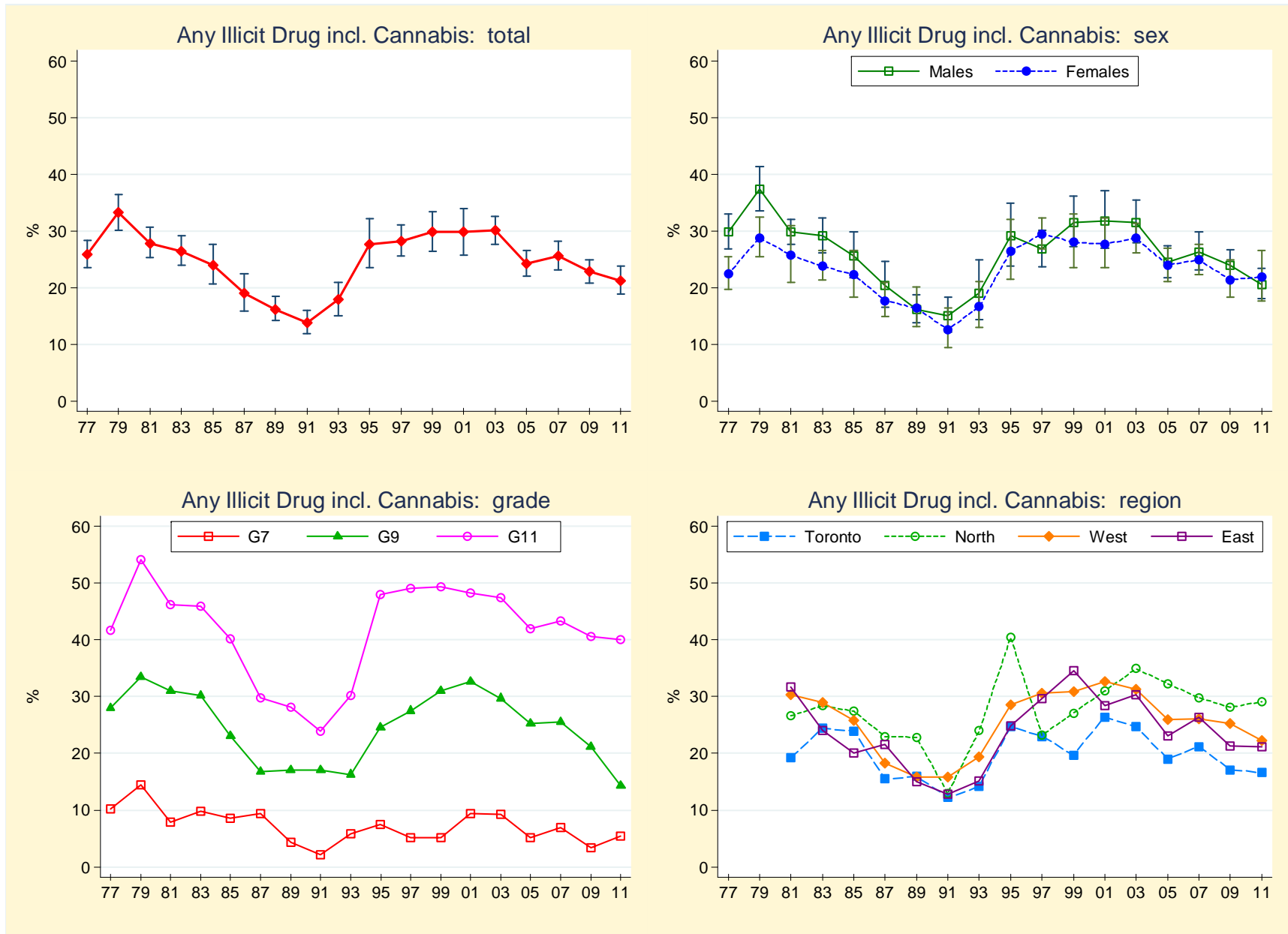


Figure 3.8.5  
 Past Year Use of Any Illicit Drug *Excluding* Cannabis, 1999–2011 OSDUHS (Grades 7–12)

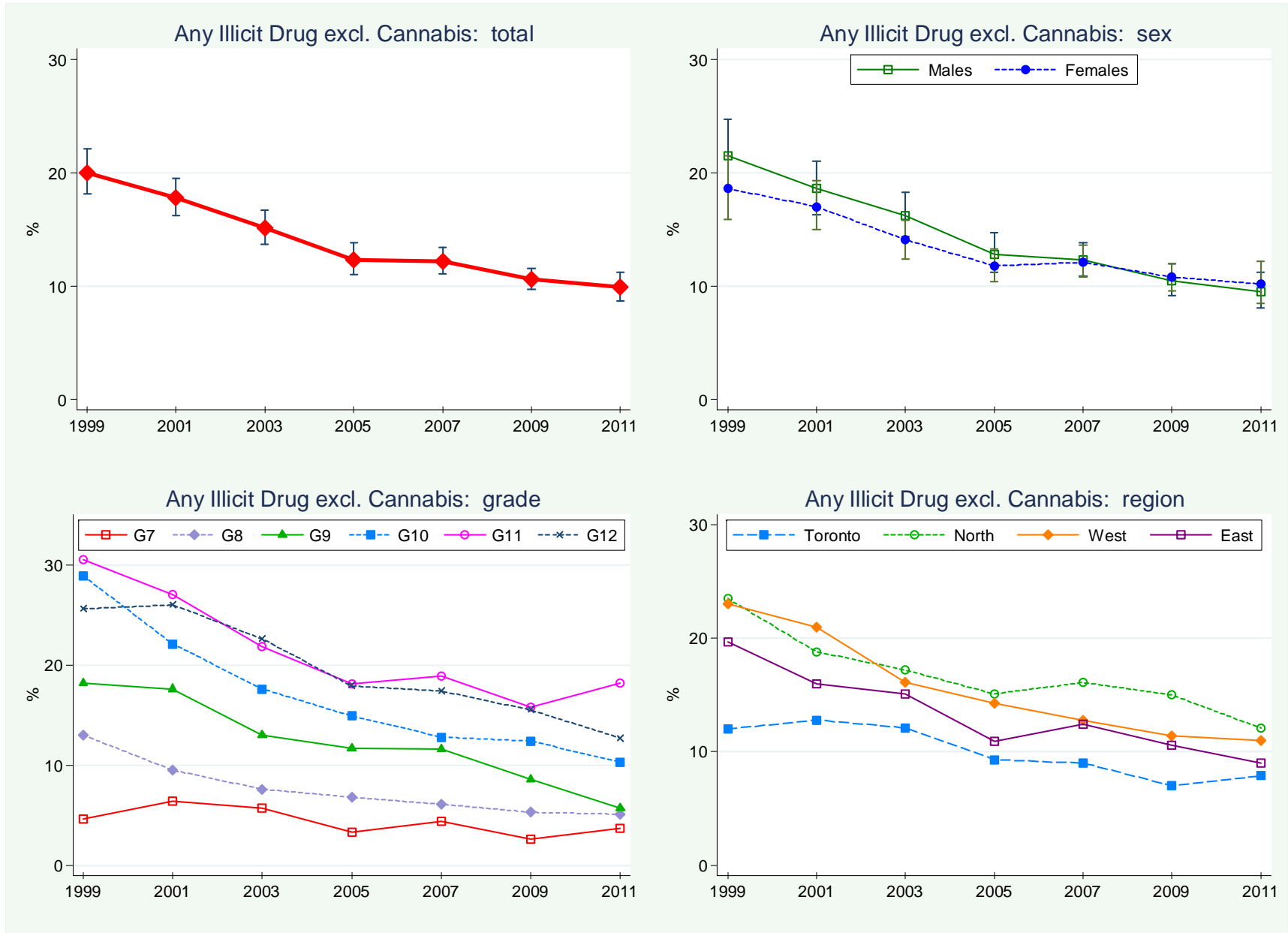


Figure 3.8.6  
 Past Year Use of Any Illicit Drug *Excluding* Cannabis, 1977–2011 OSDUHS (Grades 7, 9, 11 only)

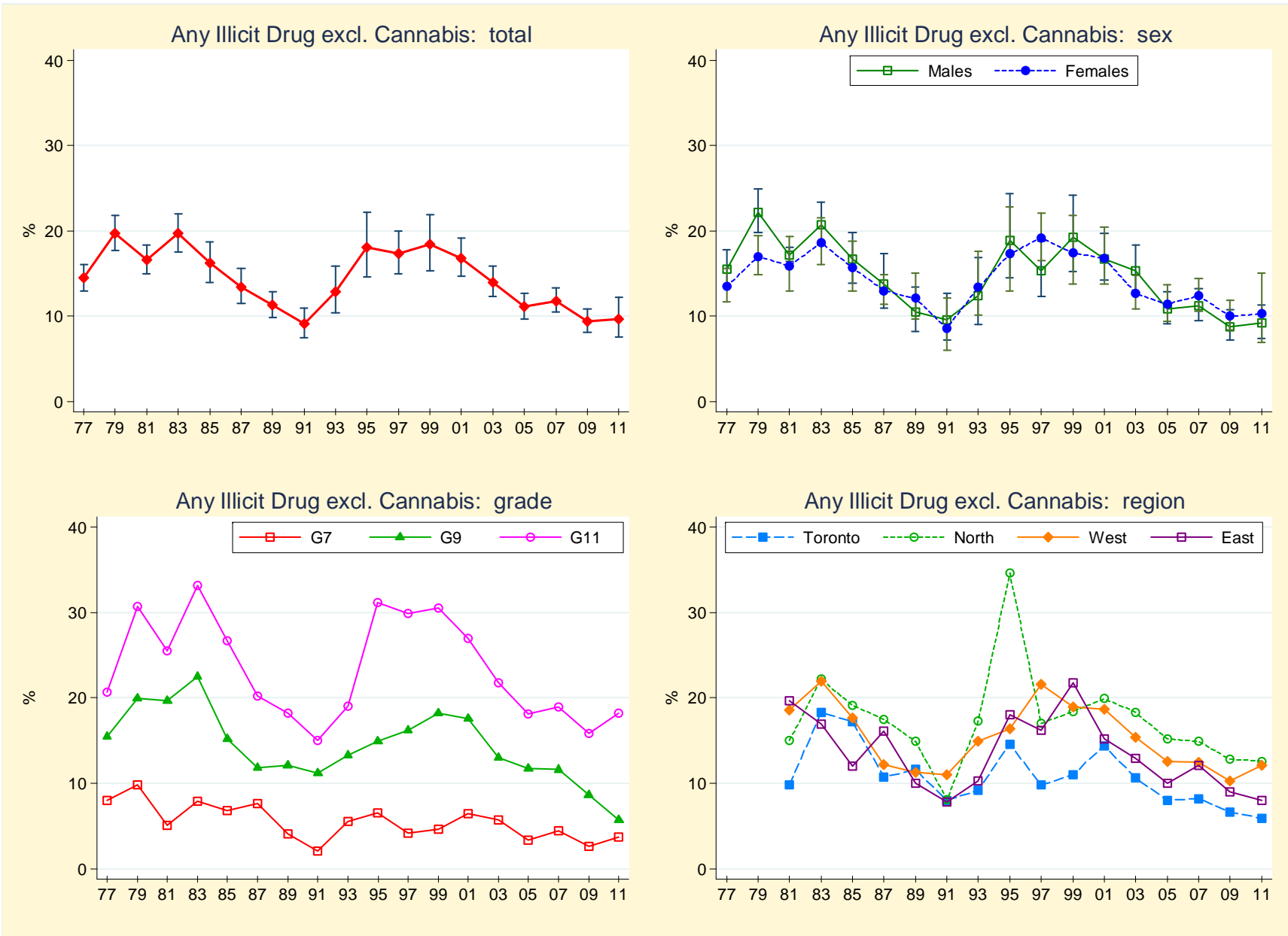


Table 3.8.1: Percentage Reporting Any Illicit Drug Use *Including Cannabis* in the Past Year, 1977–2011 OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(2299)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(1405)	(1376)	(1454)	(1545)	(1253)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	31.7 (29.2-34.2)	31.9 (29.2-34.8)	32.0 (29.9-34.1)	28.6 (26.6-30.8)	28.8 (26.9-30.8)	28.0 (26.4-29.6)	24.8 <sup>ab</sup> (23.5-26.2)
Total <sup>2</sup>	25.9 (23.5-28.4)	33.2 (30.1-36.4)	27.8 (25.3-30.6)	26.4 (23.9-29.2)	24.0 (20.7-27.6)	19.0 (15.9-22.5)	16.2 (14.2-18.5)	13.8 (11.9-16.0)	17.9 (15.1-21.0)	27.7 (23.6-32.2)	28.2 (25.6-31.0)	29.8 (26.4-33.4)	29.8 (25.8-34.0)	30.1 (27.7-32.6)	24.2 (22.0-26.5)	25.6 (23.2-28.2)	22.8 (20.8-24.9)	21.2 <sup>cd</sup> (18.9-23.8)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	34.4 (31.2-37.8)	34.9 (30.9-39.1)	32.8 (29.9-35.8)	29.9 (27.2-32.7)	29.4 (27.0-32.0)	30.4 (28.3-32.6)	24.9 <sup>ab</sup> (23.1-26.8)
Males <sup>2</sup>	29.8 (26.8-33.0)	37.3 (33.5-41.3)	29.8 (27.7-32.0)	29.1 (26.1-32.3)	25.6 (21.7-29.9)	20.4 (16.6-24.7)	16.1 (13.8-18.7)	15.0 (12.2-18.3)	19.1 (14.4-24.9)	29.1 (23.8-34.9)	26.8 (23.7-30.1)	31.5 (27.3-36.1)	31.8 (26.9-37.1)	31.5 (27.9-35.4)	24.5 (21.7-27.4)	26.3 (23.1-29.8)	24.0 (21.6-26.7)	20.6 (18.1-23.4)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	28.8 (25.6-32.3)	29.0 (26.3-31.9)	31.2 (29.1-33.3)	27.3 (25.2-29.5)	28.2 (26.0-30.5)	25.4 (23.4-27.6)	24.7 (22.7-26.8)
Females <sup>2</sup>	22.4 (19.7-25.4)	28.8 (25.5-32.5)	25.7 (21.0-30.9)	23.8 (21.3-26.5)	22.3 (18.4-26.6)	17.7 (14.9-20.9)	16.4 (13.2-20.1)	12.6 (9.5-16.4)	16.7 (13.0-21.1)	26.4 (21.5-32.0)	29.5 (26.8-32.3)	28.0 (23.6-33.0)	27.7 (23.5-32.3)	28.7 (26.2-31.4)	24.0 (21.1-27.0)	24.9 (22.3-27.7)	21.4 (18.3-24.9)	21.9 (17.7-26.6)
Grade																		
7	10.2 (8.3-12.4)	14.5 (12.4-17.0)	7.9 (6.9-9.0)	9.8 (6.6-14.3)	8.6 (5.6-12.8)	9.4 (7.2-12.1)	4.3 (3.5-5.3)	2.1 (1.4-3.1)	5.9 (3.2-10.9)	7.5 (4.7-11.8)	†	5.2 (3.1-8.7)	9.4 (7.2-12.2)	9.2 (6.8-12.4)	5.1 (3.5-7.4)	6.9 (4.9-9.6)	3.4 (2.4-4.9)	5.4 (3.8-7.8)
8	—	—	—	—	—	—	—	—	—	—	—	19.6 (15.4-24.7)	16.2 (13.3-19.7)	13.5 (9.5-18.9)	12.2 (9.4-15.7)	10.2 (7.8-13.1)	9.2 (7.0-11.9)	8.7 <sup>b</sup> (6.4-11.7)
9	28.0 (24.0-32.4)	33.5 (28.2-39.1)	31.0 (28.0-34.0)	30.2 (27.1-33.5)	23.1 (17.8-29.3)	16.8 (9.9-27.1)	17.0 (13.4-21.3)	17.1 (15.8-18.6)	16.3 (13.0-20.3)	24.6 (18.3-32.2)	27.5 (25.4-29.6)	31.0 (25.8-36.7)	32.6 (28.5-37.0)	29.7 (26.2-33.4)	25.3 (22.5-28.3)	25.5 (21.8-29.6)	21.1 (17.3-25.4)	14.3 <sup>ab</sup> (12.2-16.8)
10	—	—	—	—	—	—	—	—	—	—	—	42.6 (36.0-49.4)	41.4 (37.6-45.2)	38.4 (33.6-43.5)	35.6 (32.0-39.3)	33.1 (29.3-37.2)	33.4 (29.3-37.7)	29.3 <sup>b</sup> (25.5-33.3)
11	41.7 (36.9-46.7)	54.1 (48.0-60.0)	46.2 (38.8-53.7)	45.9 (40.2-51.8)	40.2 (33.3-47.5)	29.8 (25.1-35.1)	28.1 (23.9-32.8)	23.9 (18.5-30.4)	30.2 (22.9-38.6)	48.0 (39.5-56.7)	49.0 (45.7-52.3)	49.4 (43.8-55.1)	48.2 (39.8-56.8)	47.4 (43.0-51.8)	41.9 (38.2-45.8)	43.3 (39.3-47.4)	40.6 (36.6-44.8)	40.0 (35.4-44.7)
12	—	—	—	—	—	—	—	—	—	—	—	41.7 (35.8-47.8)	45.8 (34.6-57.5)	47.1 (41.5-52.6)	48.3 (43.9-52.8)	47.4 (43.5-51.4)	47.6 (43.8-51.4)	38.5 <sup>a</sup> (33.5-43.6)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(2299)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(1405)	(1376)	(1454)	(1545)	(1253)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	21.0	24.8	27.2	23.2	25.1	22.4	21.2
												(16.7-26.2)	(17.1-34.5)	(22.4-32.6)	(19.3-27.6)	(18.4-33.3)	(17.5-28.2)	(17.4-25.5)
Toronto <sup>2</sup>	—	—	19.2	24.4	23.9	15.5	15.9	12.2	14.2	24.7	23.0	19.7	26.4	24.7	19.0	21.2	17.1	16.6
			(15.2-23.8)	(18.0-32.1)	(19.2-29.3)	(9.6-24.2)	(9.7-24.8)	(9.8-15.0)	(10.8-18.3)	(14.0-39.8)	(20.8-25.6)	(15.2-25.1)	(16.1-40.2)	(18.8-31.9)	(14.6-24.4)	(12.8-33.1)	(11.0-25.7)	(13.8-19.9)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	34.3	31.8	35.1	34.6	36.2	34.1	31.4
												(29.2-39.7)	(26.6-37.5)	(29.6-41.1)	(30.6-38.8)	(31.8-40.9)	(30.0-38.4)	(28.0-35.0)
North <sup>2</sup>	—	—	26.6	28.4	27.4	23.0	22.8	12.9	24.0	40.4	23.2	27.1	31.0	34.9	32.3	29.8	28.1	29.1
			(20.3-33.8)	(23.6-33.7)	(22.8-32.5)	(15.8-32.3)	(17.4-29.1)	(8.0-19.9)	(15.7-34.9)	(19.7-65.2)	(21.4-25.2)	(16.8-40.7)	(22.9-40.3)	(28.9-41.4)	(26.8-38.4)	(23.3-37.2)	(22.0-35.1)	(23.0-36.2)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	34.4	35.6	32.5	31.3	28.6	29.6	24.1
												(30.5-38.4)	(31.6-39.8)	(29.1-36.1)	(28.1-34.8)	(26.3-31.1)	(27.2-32.2)	(22.1-26.3)
West <sup>2</sup>	—	—	30.3	28.9	25.8	18.3	15.8	15.8	19.4	28.5	30.6	30.9	32.6	31.3	25.9	26.1	25.3	22.2
			(25.8-35.1)	(24.1-34.3)	(20.8-31.4)	(13.1-25.0)	(13.1-18.9)	(11.5-21.4)	(14.4-25.5)	(24.2-33.3)	(25.4-36.5)	(25.4-37.1)	(28.2-37.3)	(27.6-35.2)	(22.5-29.6)	(23.4-29.1)	(22.4-28.5)	(17.8-27.3)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	33.3	31.4	33.2	27.0	29.5	27.5	26.6
												(28.8-38.1)	(27.4-35.8)	(30.4-36.2)	(23.2-31.1)	(26.6-32.6)	(25.5-29.7)	(24.4-28.8)
East <sup>2</sup>	—	—	31.7	24.0	20.1	21.5	15.0	12.8	15.2	24.8	29.6	34.6	28.4	30.3	23.1	26.4	21.3	21.1
			(27.1-36.6)	(22.2-25.9)	(12.9-30.0)	(17.7-25.8)	(11.6-19.2)	(11.4-14.3)	(11.1-20.6)	(19.4-31.0)	(26.1-33.4)	(28.3-41.5)	(21.7-36.2)	(26.5-34.4)	(19.5-27.2)	(23.0-30.0)	(18.6-24.4)	(18.7-23.7)

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) the 10 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), stimulants (NM), tranquilizers (NM); excluded from the index: inhalants, jimson weed, salvia divinorum, ketamine, ADHD drugs (NM), OxyContin or other prescription opioid pain relievers (NM), and over-the-counter medications; (6) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend; <sup>d</sup> significant long-term non-linear trend.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 3.8.2: Percentage Reporting Any Illicit Drug Use *Excluding Cannabis* 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 <sup>1</sup> )												(2299)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(1405)	(1376)	(1454)	(1545)	(1253)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total <sup>1</sup> (95% CI)	—	—	—	—	—	—	—	—	—	—	—	20.0 (18.1-22.1)	17.8 (16.2-19.5)	15.1 (13.7-16.7)	12.3 (11.0-13.8)	12.2 (11.1-13.4)	10.6 (9.7-11.6)	9.9 <sup>b</sup> (8.7-11.2)
Total <sup>2</sup>	14.5 (13.0-16.1)	19.7 (17.7-21.8)	16.6 (15.0-18.3)	19.7 (17.5-22.0)	16.2 (14.0-18.7)	13.4 (11.5-15.6)	11.3 (9.9-12.9)	9.1 (7.5-11.0)	12.9 (10.4-15.9)	18.1 (14.6-22.2)	17.3 (15.0-20.0)	18.4 (15.3-21.9)	16.8 (14.7-19.2)	14.0 (12.3-15.9)	11.1 (9.7-12.7)	11.8 (10.5-13.3)	9.4 (8.1-10.9)	9.7 <sup>cd</sup> (7.6-12.2)
Sex																		
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	21.5 (18.6-24.7)	18.6 (16.3-21.0)	16.2 (14.4-18.3)	12.8 (11.2-14.7)	12.3 (10.9-13.8)	10.5 (9.2-12.0)	9.5 <sup>b</sup> (8.1-11.2)
Males <sup>2</sup>	15.5 (13.5-17.8)	22.2 (19.8-24.9)	17.2 (16.4-18.1)	20.7 (18.3-23.4)	16.7 (13.9-19.8)	13.8 (11.0-17.3)	10.5 (8.2-13.4)	9.6 (7.2-12.7)	12.4 (9.0-16.9)	18.9 (14.5-24.4)	15.3 (12.3-18.8)	19.3 (15.2-24.2)	16.7 (14.2-19.7)	15.3 (12.8-18.3)	10.9 (9.1-12.9)	11.2 (9.5-13.2)	8.8 (7.2-10.8)	9.2 (7.4-11.3)
Females <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	18.6 (15.9-21.5)	17.0 (15.0-19.3)	14.1 (12.4-15.8)	11.8 (10.4-13.3)	12.1 (10.8-13.6)	10.8 (9.6-12.0)	10.2 <sup>b</sup> (8.5-12.2)
Females <sup>2</sup>	13.5 (11.7-15.6)	17.0 (14.9-19.4)	15.9 (13.0-19.3)	18.6 (16.1-21.5)	15.7 (13.0-18.8)	13.0 (11.4-14.9)	12.1 (9.7-15.1)	8.6 (6.0-12.1)	13.4 (10.1-17.6)	17.3 (13.0-22.8)	19.2 (16.5-22.1)	17.4 (13.8-21.8)	16.8 (13.8-20.4)	12.7 (10.9-14.8)	11.4 (9.4-13.7)	12.4 (10.6-14.4)	10.0 (8.4-11.9)	10.3 (6.9-15.1)
Grade																		
7	8.0 (6.4-9.9)	9.8 (8.2-11.6)	5.1 (4.9-5.4)	7.9 (5.5-11.2)	6.8 (4.2-10.8)	7.6 (6.2-9.3)	4.1 (3.4-4.8)	2.1 (1.4-3.1)	5.5 (3.0-10.2)	6.5 (4.2-9.9)	†	4.6 (2.6-7.8)	6.4 (4.8-8.4)	5.7 (3.9-8.2)	3.3 (2.2-5.1)	4.4 (3.0-6.5)	2.6 (1.6-4.0)	3.7 (2.2-6.0)
8	—	—	—	—	—	—	—	—	—	—	—	13.0 (9.7-17.3)	9.5 (7.2-12.3)	7.6 (5.7-10.0)	6.8 (5.1-9.1)	6.1 (4.5-8.3)	5.3 (4.2-6.6)	5.1 <sup>b</sup> (3.6-7.0)
9	15.5 (13.1-18.3)	19.9 (17.0-23.1)	19.7 (17.5-22.0)	22.5 (21.1-24.0)	15.2 (12.2-18.6)	11.8 (7.9-17.4)	12.1 (9.5-15.3)	11.2 (9.2-13.6)	13.3 (10.4-16.9)	14.9 (11.6-19.0)	16.2 (12.5-20.7)	18.2 (13.9-23.4)	17.6 (14.9-20.7)	13.0 (10.7-15.8)	11.7 (9.6-14.2)	11.6 (9.5-14.2)	8.6 (6.6-11.2)	5.7 <sup>b</sup> (4.2-7.8)
10	—	—	—	—	—	—	—	—	—	—	—	28.9 (23.3-35.1)	22.1 (19.0-25.5)	17.6 (14.3-21.4)	14.9 (12.6-17.6)	12.8 (10.5-15.6)	12.4 (10.0-15.4)	10.3 <sup>b</sup> (8.0-13.1)
11	20.7 (17.4-24.5)	30.7 (26.1-35.7)	25.5 (21.5-29.9)	33.2 (27.3-39.7)	26.7 (22.0-32.0)	20.2 (16.3-24.8)	18.2 (15.8-20.9)	15.0 (10.6-20.9)	19.0 (13.0-26.8)	31.2 (22.7-41.3)	29.9 (28.9-31.0)	30.5 (24.5-37.1)	27.0 (22.1-32.6)	21.8 (18.2-25.8)	18.1 (15.4-21.1)	18.9 (16.3-21.7)	15.8 (13.0-19.3)	18.2 <sup>b</sup> (13.7-23.8)
12	—	—	—	—	—	—	—	—	—	—	—	25.6 (21.1-30.5)	26.0 (19.2-34.1)	22.6 (19.2-26.5)	17.9 (14.9-21.4)	17.4 (14.5-20.8)	15.5 (12.8-18.6)	12.7 <sup>b</sup> (9.2-17.2)

(Continued...)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )												(2299)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N <sup>2</sup> )	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(1405)	(1376)	(1454)	(1545)	(1253)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Region																		
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	12.0	12.8	12.1	9.3	9.0	7.0	7.9
												(8.7-16.4)	(9.4-17.3)	(9.2-15.7)	(7.3-11.8)	(6.7-12.0)	(4.9-9.8)	(6.4-9.7)
Toronto <sup>2</sup>	—	—	9.8	18.3	17.2	10.7	11.6	8.0	†	14.6	9.8	11.0	14.4	10.6	8.0	8.2	6.6	5.9
			(6.1-15.3)	(12.7-25.5)	(13.2-22.2)	(6.6-16.8)	(8.8-15.2)	(6.6-9.7)		(7.2-27.3)	(7.6-12.6)	(7.5-15.9)	(10.7-19.3)	(7.3-15.3)	(5.8-11.0)	(5.9-11.4)	(3.5-12.0)	(4.4-7.8)
North <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	23.5	18.8	17.2	15.1	16.1	15.0	12.1
												(19.5-28.0)	(15.0-23.3)	(14.0-21.1)	(11.9-18.9)	(13.0-19.8)	(12.4-18.1)	(9.3-15.6)
North <sup>2</sup>	—	—	15.0	22.2	19.1	17.5	14.9	8.1	17.3	†	17.0	18.4	19.9	18.3	15.2	14.9	12.8	12.6
			(10.3-21.3)	(19.4-25.2)	(13.4-26.5)	(12.1-24.6)	(9.5-22.4)	(6.0-10.8)	(10.1-27.9)		(13.2-21.7)	(11.4-28.1)	(14.3-26.9)	(14.8-22.4)	(10.6-21.5)	(9.3-22.8)	(8.6-18.6)	(8.7-17.9)
West <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	23.0	21.0	16.1	14.3	12.8	11.4	11.0
												(19.7-26.6)	(18.7-23.6)	(13.7-18.7)	(12.0-16.8)	(10.9-15.0)	(9.7-13.4)	(8.8-13.6)
West <sup>2</sup>	—	—	18.6	21.9	17.7	12.2	11.3	11.0	14.9	16.4	21.6	18.9	18.7	15.4	12.6	12.5	10.3	12.1
			(16.2-21.3)	(18.7-25.4)	(13.4-23.0)	(9.7-15.2)	(9.3-13.7)	(7.2-16.5)	(11.5-19.1)	(13.6-19.7)	(17.1-26.9)	(13.3-26.2)	(15.4-22.6)	(12.8-18.3)	(10.2-15.4)	(10.4-15.0)	(8.3-12.7)	(8.4-17.3)
East <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	19.7	16.0	15.1	10.9	12.4	10.6	9.0
												(16.1-23.8)	(13.3-19.2)	(12.5-18.0)	(8.8-13.4)	(10.6-14.4)	(9.7-11.7)	(7.9-10.4)
East <sup>2</sup>	—	—	19.7	16.9	12.0	16.1	10.0	7.8	10.3	18.0	16.2	21.8	15.2	12.9	10.0	12.1	9.0	8.0
			(17.5-22.1)	(13.2-21.4)	(10.2-14.1)	(12.5-20.5)	(7.6-13.2)	(6.8-9.0)	(5.8-17.8)	(14.7-22.0)	(12.8-20.4)	(16.9-27.8)	(11.0-20.7)	(9.8-16.7)	(7.8-12.8)	(9.9-14.6)	(7.2-11.2)	(6.4-10.0)

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) the 9 drugs included in the index are: LSD, mushrooms/mescaline, methamphetamine/crystal methamphetamine, heroin, cocaine, crack (except for years prior to 1987), ecstasy (except for years prior to 1991), stimulants (NM), tranquilizers (NM); excluded from the index: inhalants, jimson weed, salvia divinorum, ketamine, ADHD drugs (NM), OxyContin or other prescription opioid pain relievers (NM), and over-the-counter medications; (6) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend; <sup>d</sup> significant long-term non-linear trend.

Source: OSDUHS, Centre for Addiction & Mental Health

## 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?*”

### 2011: Grades 7–12

■ Among all students, 1.2% (95% CI: 0.8%-2.0%) report using an illegal drug by injection during the past year. This estimate represents about 12,100 Ontario students in grades 7 through 12. Because the sample size is too small to estimate a small percentage, no further breakdown by subgroup is presented.

### 1999–2011: Grades 7–12

□ The 2011 estimate (1.2%) for injection drug is similar to estimates from previous years: 2009 (0.7%), 2007 (1.0%), 2005 (1.0%), 2003 (1.4%), and 2001 (1.1%). However, the 2011 estimate is significantly lower than that found in 1999 (2.7%).

## Multiple Substance Use in the Past Year: Cigarettes, Alcohol, Cannabis, and Other Drugs

(Figure 3.8.7)

### 2011: Grades 7–12

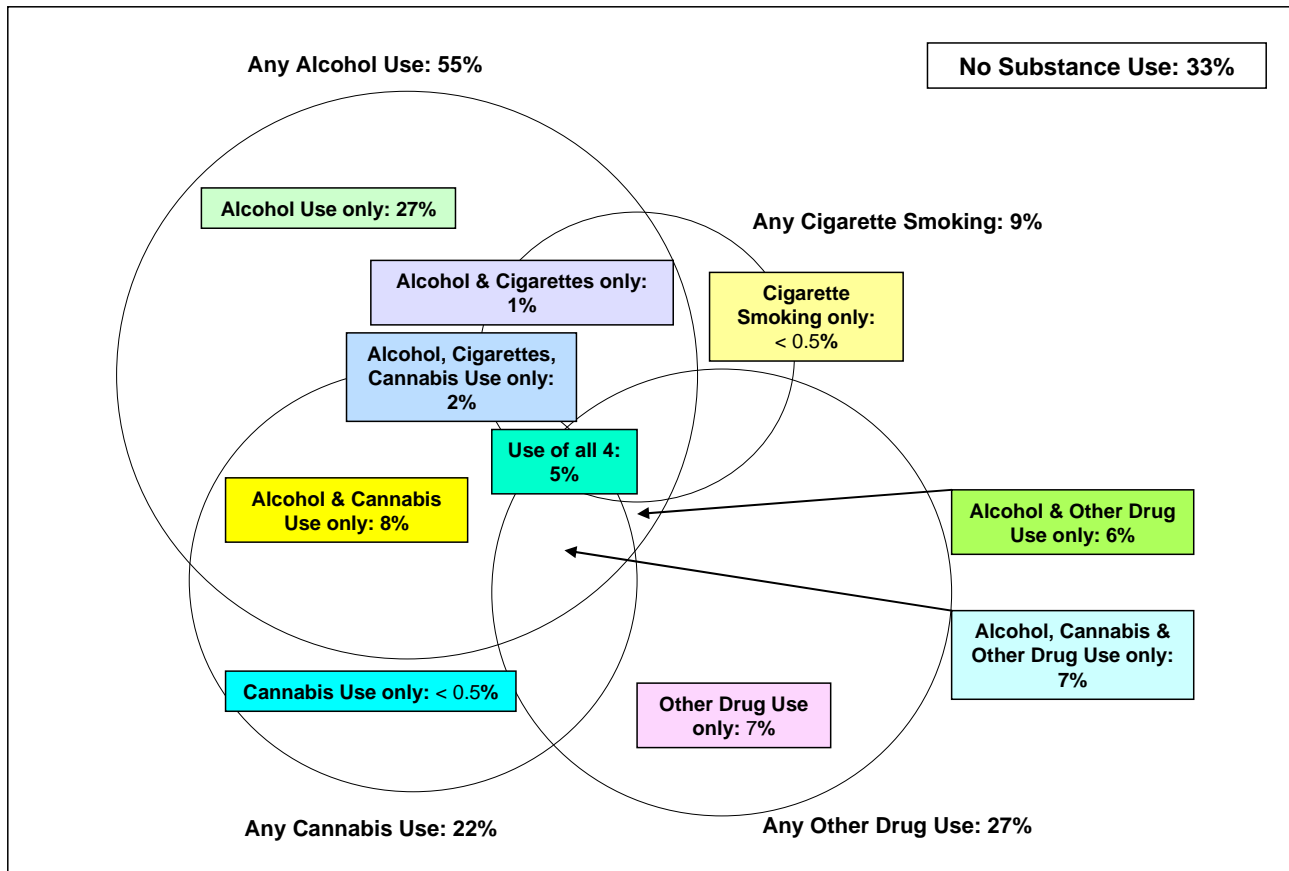
■ Figure 3.8.7 presents the overlap of past year use of all substances (excluding high-caffeine energy drinks) asked about in the 2011 survey. As seen in the figure, most students use alcohol either exclusively, or in addition to other substances.

■ About one-quarter (27%) of students use only alcohol, and no other drug; about 8% use only alcohol and cannabis; and about 7% use alcohol, cannabis, and another drug.

■ Negligible proportions (below 0.5%) of students smoke cigarettes or use cannabis exclusively.

■ Roughly 5% of students – an estimated 51,300 in Ontario – smoke cigarettes, use alcohol, cannabis, *and* at least one other drug.

**Figure 3.8.7**  
**The Overlap of Cigarette Smoking, Alcohol, Cannabis, and Other Drug Use**  
**in the Past Year, 2011 OSDUHS (Grades 7–12)**



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

## No Substance Use in the Past Year

(Figures 3.8.8–3.8.10; Table 3.8.3)

In this section, we report trends in no substance use – including tobacco and alcohol, but excluding caffeinated energy drinks – during the past year. Readers should note that the number of substances asked about varies from survey to survey, as new drugs are introduced. Generally speaking, the number of substances assessed in the survey has *increased* over time, as each cycle attempts to represent the drug availability at the time.

### 2011: Grades 7–12

- One-third (32.6%) of students in grades 7 through 12 report using no substance at all during the past year – this includes alcohol and tobacco.
- Males (31.9%) and females (33.4%) are equally likely to report no substance use.
- Past year abstinence significantly decreases with grade, from 56.6% of 7<sup>th</sup>-graders to 16.0% of 12<sup>th</sup>-graders.

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

### 1999–2011: Grades 7–12

- The 2011 percentage of students reporting no substance use is similar to estimate from 2009, and to the estimates found since 1999. Males, however, show a significant increase in abstinence in 2011 when compared with 1999 (31.9% vs 24.7%, respectively).

### 1977–2011: Grades 7, 9, 11

- As seen in Figure 3.8.10, 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 substance use. This percentage increased over the late 1980s, peaked the early 1990s (at about 40%), and decreased over the 1990s. The current level is similar to estimates evident in the 1990s and 2000s.

**Figure 3.8.8**  
Percentage Reporting No Substance Use in the Past Year, by Sex, Grade, and Region, 2011 OSDUHS

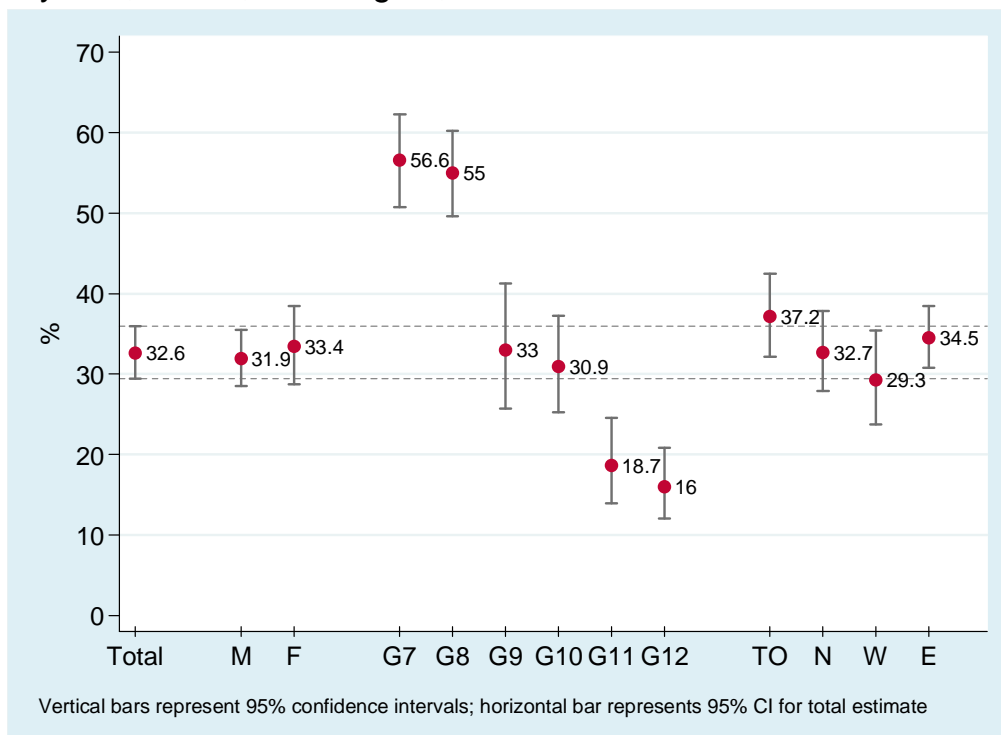


Figure 3.8.9  
 Percentage Reporting No Substance Use in the Past Year,  
 1999–2011 OSDUHS (Grades 7–12)

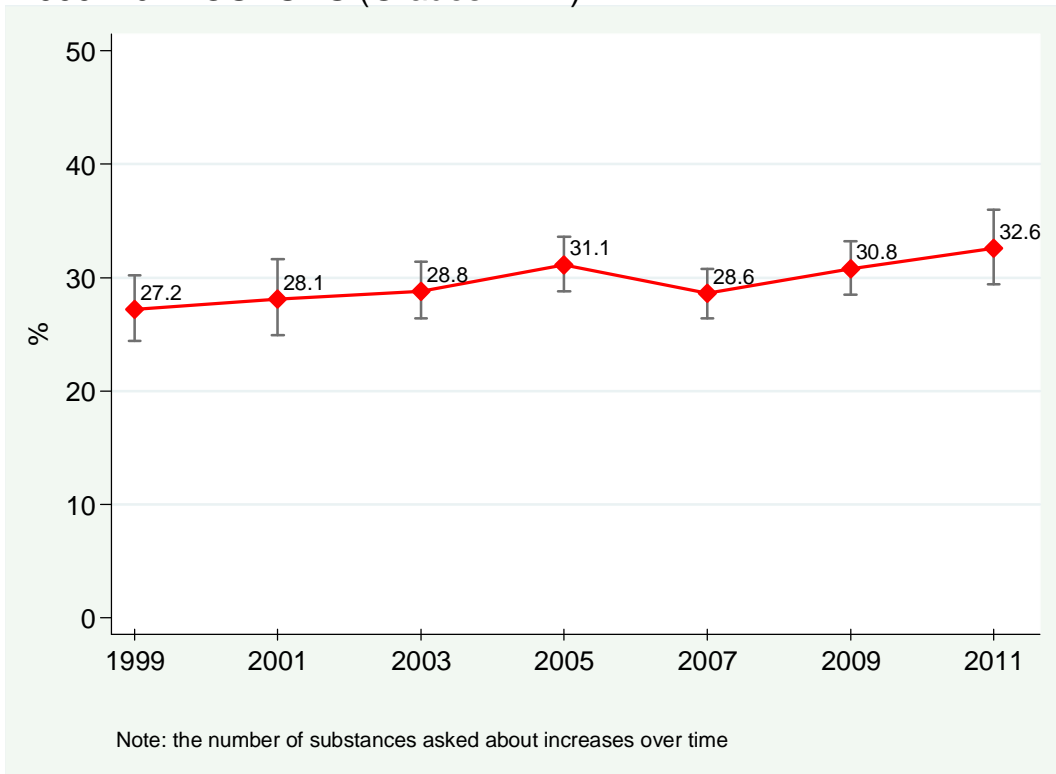


Figure 3.8.10  
 Percentage Reporting No Substance Use in the Past Year,  
 1977–2011 OSDUHS (Grades 7, 9, 11 only)

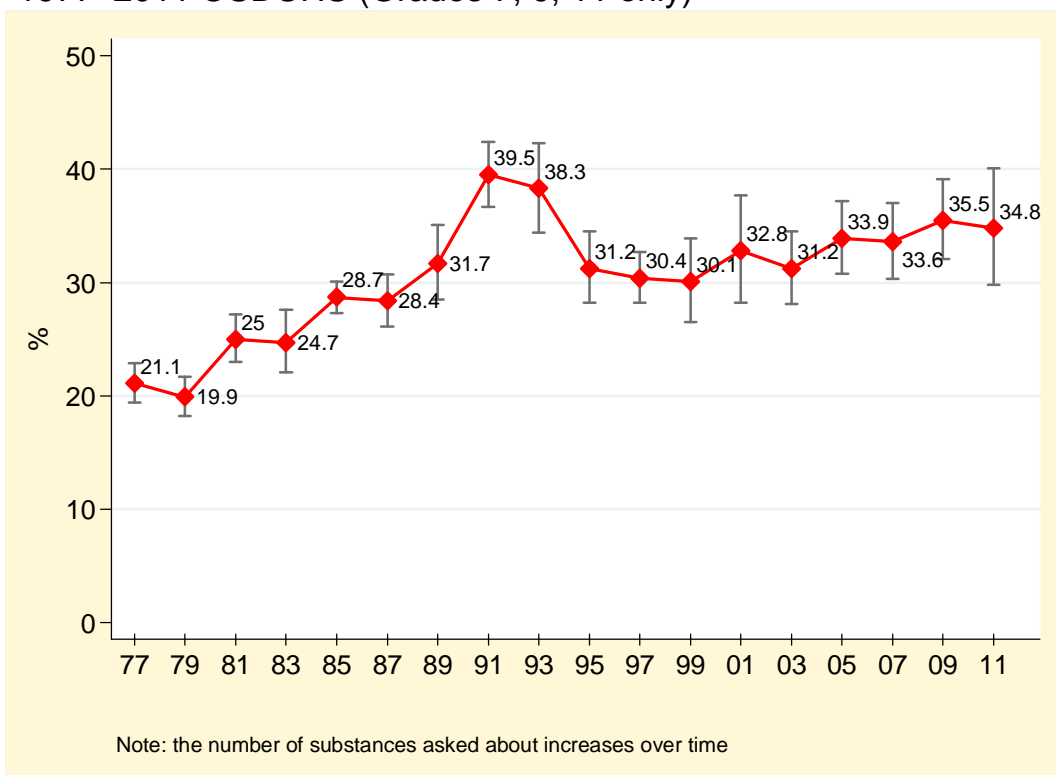


Table 3.8.3: Percentage Reporting No Substance Use in the Past Year, 1999–2011 OSDUHS (Grades 7–12)

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(2229)	(1837)	(3152)	(3648)	(2395)	(4261)	(4472)
<b>Total</b> (95% CI)	<b>27.2</b> (24.4-30.2)	<b>28.1</b> (24.9-31.6)	<b>28.8</b> (26.4-31.4)	<b>31.1</b> (28.8-33.6)	<b>28.6</b> (26.4-30.8)	<b>30.8</b> (28.5-33.2)	<b>32.6</b> (29.4-36.0)
<b>Sex</b>							
Males	<b>24.7</b> (21.5-28.2)	<b>27.2</b> (23.7-30.9)	<b>25.7</b> (22.3-29.4)	<b>29.3</b> (26.5-32.2)	<b>28.9</b> (26.2-31.8)	<b>28.9</b> (25.9-32.0)	<b>31.9</b> <sup>b</sup> (28.5-35.5)
Females	<b>29.8</b> (25.7-34.3)	<b>29.0</b> (24.7-33.7)	<b>31.8</b> (28.7-35.0)	<b>33.2</b> (30.1-36.4)	<b>28.2</b> (25.4-31.2)	<b>33.0</b> (30.2-35.8)	<b>33.4</b> (28.7-38.5)
<b>Grade</b>							
7	<b>47.3</b> (39.0-55.7)	<b>49.4</b> (42.0-56.9)	<b>47.5</b> (42.1-53.0)	<b>54.5</b> (48.0-60.8)	<b>54.1</b> (46.9-61.1)	<b>55.5</b> (49.0-61.8)	<b>56.6</b> (50.8-62.3)
8	<b>36.0</b> (31.5-40.7)	<b>37.5</b> (30.1-45.5)	<b>44.2</b> (39.0-49.4)	<b>48.3</b> (43.8-52.8)	<b>40.2</b> (34.0-46.8)	<b>42.4</b> (36.9-48.0)	<b>55.0</b> <sup>ab</sup> (49.6-60.3)
9	<b>29.7</b> (24.5-35.4)	<b>29.7</b> (22.2-38.5)	<b>30.3</b> (25.4-35.8)	<b>30.5</b> (26.0-35.4)	<b>31.5</b> (25.6-38.0)	<b>35.6</b> (29.7-42.0)	<b>33.0</b> (25.7-41.3)
10	<b>20.8</b> (14.7-28.6)	<b>17.1</b> (12.8-22.4)	<b>21.5</b> (16.9-26.9)	<b>25.0</b> (21.0-29.3)	<b>24.0</b> (19.4-29.3)	<b>27.8</b> (23.1-32.9)	<b>30.9</b> (25.2-37.3)
11	<b>15.9</b> (12.0-20.8)	<b>19.2</b> (12.9-27.6)	<b>18.3</b> (14.5-22.9)	<b>18.0</b> (14.5-22.2)	<b>16.2</b> (13.2-19.8)	<b>19.8</b> (15.8-24.5)	<b>18.7</b> (13.9-24.6)
12	<b>11.9</b> (8.1-17.1)	<b>14.0</b> (8.1-22.9)	<b>15.5</b> (11.2-21.1)	<b>15.0</b> (11.3-19.7)	<b>11.7</b> (9.1-14.9)	<b>15.4</b> (11.4-20.6)	<b>16.0</b> (12.1-20.8)
<b>Region</b>							
Toronto	<b>37.9</b> (30.8-45.6)	<b>32.8</b> (22.6-45.1)	<b>29.2</b> (23.1-36.2)	<b>40.7</b> (33.3-48.1)	<b>31.0</b> (24.4-38.3)	<b>37.9</b> (31.3-45.0)	<b>37.2</b> (32.2-42.5)
North	<b>19.8</b> (13.4-28.2)	<b>22.8</b> (17.1-29.6)	<b>24.7</b> (19.3-31.0)	<b>23.3</b> (18.6-28.7)	<b>18.4</b> (14.7-22.8)	<b>26.4</b> (21.0-32.5)	<b>32.7</b> (27.9-37.8)
West	<b>22.0</b> (17.8-27.0)	<b>26.7</b> (22.3-31.6)	<b>27.9</b> (23.6-32.5)	<b>28.0</b> (25.2-31.1)	<b>28.8</b> (26.0-31.9)	<b>29.0</b> (25.7-32.5)	<b>29.3</b> (23.7-35.4)
East	<b>30.0</b> (25.6-34.7)	<b>28.3</b> (24.2-32.9)	<b>31.2</b> (28.8-33.7)	<b>31.0</b> (26.9-35.4)	<b>28.9</b> (25.3-32.8)	<b>30.4</b> (26.3-34.7)	<b>34.5</b> (30.8-38.5)

Notes: (1) based on a random half sample in each year; (2) entries in brackets are 95% confidence intervals; (3) generally speaking, the number of substances asked about increases over time; (4) <sup>a</sup> 2011 vs. 2009 significant difference,  $p < .01$ ; <sup>b</sup> 2011 vs. 1999 significant difference,  $p < .01$ .

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)

#### 2011: Grades 7–12

Students were asked whether they used certain substances for the very first time during the past 12 months. We evaluated the incidence of four substances – alcohol, cigarettes, cannabis, and illicit drugs other than cannabis. We also compared these results with those from past surveys.

- Among all students, 6.3% smoked a whole **cigarette** for the first time during the 12 months before the survey. This estimate represents about 61,200 students in Ontario. Despite the variation by grade shown in Figure 3.9.1, there are no significant grade differences regarding first-time use of cigarettes in the past year.
- About 17.2% of students tried **alcohol** for the first time (representing about 169,100 students). First use of alcohol increases between grades 7 and 8, remains stable in grades 8, 9, and 10 (at about 21%), and then decreases in grade 11 (15%), and again in grade 12 (12%).
- About 7.8% of students tried **cannabis** (76,600 students); and 3.2% tried **another illicit drug** (such as cocaine, ecstasy) for the first time (31,800 students). Grade level is significantly associated with incidence of cannabis use: it is lowest among students in the younger grades, increases between grade 8 (5%) and grade 9 (8%), and remains steady thereafter.

#### 1999–2011: Grades 7–12

- The percentage of all students who smoked a cigarette for the first time in 2011 (6.3%) is similar to the percentage from 2009 (6.1%), but is significantly lower than the estimates found between 1999 and 2003 (range 9% to 11%).
- The percentage of all students who tried alcohol for the first time in 2011 (17.2%) is similar to the percentage found in 2009 (16.8%). There has been no substantial change since 1999 (hovering between 16% and 20%).
- Among all students, there was no significant change in the percentage of first-time cannabis users over this period (hovering between 8% and 10%). Interestingly, among males only, there has been a significant decline in first-time use of cannabis between 1999 (10.7%) and 2011 (7.2%).
- First-time use of any illicit drug other than cannabis in 2011 (3.2%) is similar to the estimate found in 2009 (3.3%), but significantly lower than the estimates found in 1999 and 2001 (about 5%-6%; data not shown).

Figure 3.9.1  
Percentage Reporting First-Time Use of the Substance in the Past Year,  
by Grade, 2011 OSDUHS

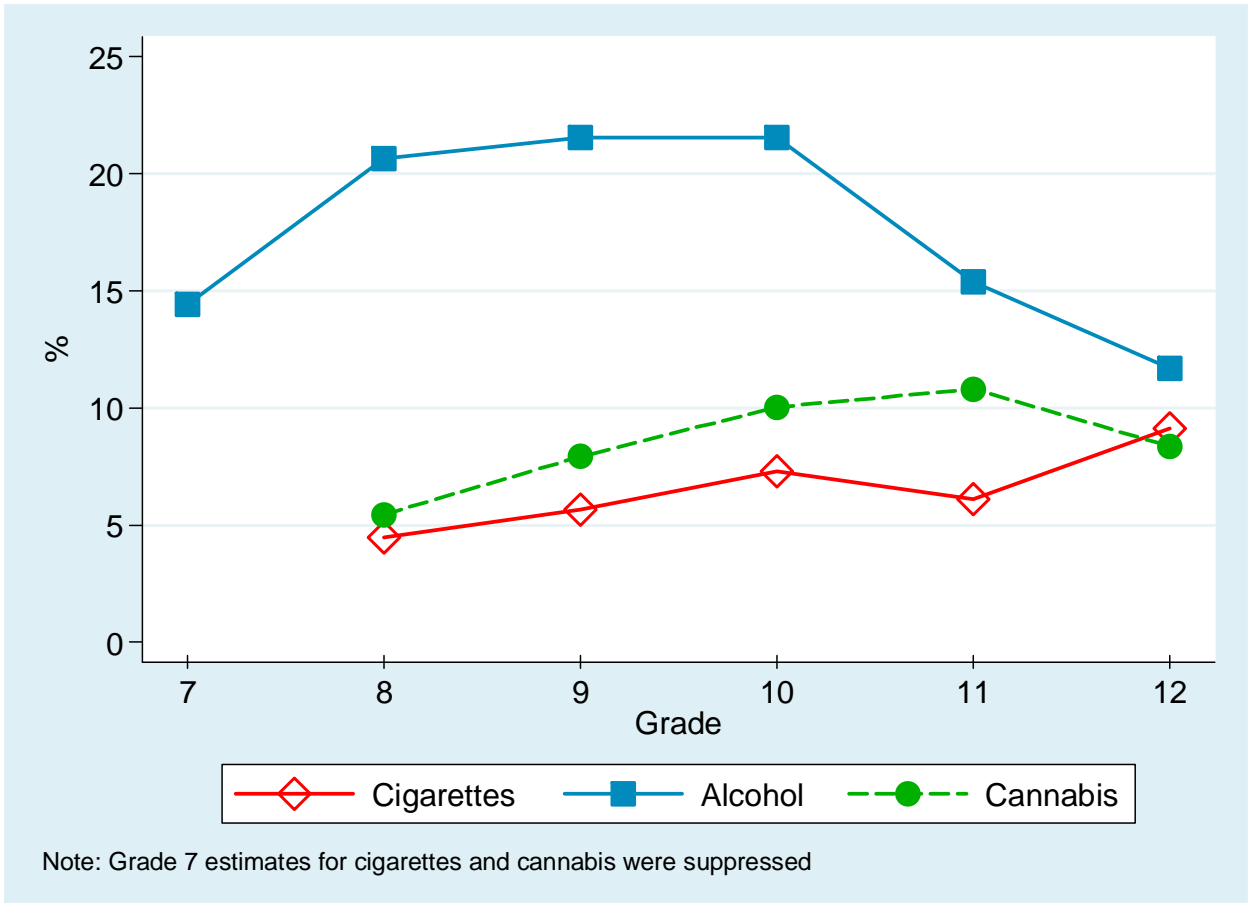


Table 3.9.1: Percentage Reporting Smoking a Whole Cigarette for the First Time in the Past Year, 1999–2011 OSDUHS (Grades 7–12)

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)
Total (95% CI)	<b>10.9</b> (9.3-12.4)	<b>10.1</b> (9.0-11.4)	<b>9.3</b> (8.4-10.3)	<b>7.3</b> (6.4-8.3)	<b>6.3</b> (5.2-7.7)	<b>6.1</b> (5.1-7.4)	<b>6.3</b> <sup>b</sup> (5.1-7.6)
Sex							
Males	<b>11.0</b> (9.3-13.0)	<b>10.0</b> (8.3-12.0)	<b>8.1</b> (7.1-9.2)	<b>6.9</b> (5.8-8.1)	<b>6.6</b> (5.1-8.4)	<b>6.9</b> (5.4-8.7)	<b>6.2</b> <sup>b</sup> (4.6-8.3)
Females	<b>10.8</b> (9.3-12.6)	<b>10.3</b> (8.5-12.3)	<b>10.5</b> (9.0-12.1)	<b>7.8</b> (6.4-9.4)	<b>6.1</b> (4.7-7.9)	<b>5.2</b> (4.0-6.9)	<b>6.4</b> <sup>b</sup> (4.5-9.0)
Grade							
7	<b>7.9</b> (5.7-10.8)	<b>7.8</b> (5.6-10.9)	<b>5.8</b> (4.3-7.8)	<b>2.9</b> (1.7-5.0)	†	†	† <sup>b</sup>
8	<b>11.2</b> (9.0-13.9)	<b>8.6</b> (6.7-11.0)	<b>8.1</b> (5.2-12.3)	<b>5.3</b> (3.2-8.6)	<b>5.2</b> (2.7-9.8)	<b>3.6</b> (2.0-6.5)	<b>4.5</b> <sup>b</sup> (2.6-7.7)
9	<b>14.6</b> (11.9-17.8)	<b>14.2</b> (11.8-17.0)	<b>12.3</b> (10.1-14.8)	<b>7.7</b> (5.7-10.2)	<b>6.6</b> (4.6-9.3)	<b>4.3</b> (2.6-6.9)	<b>5.7</b> <sup>b</sup> (3.7-8.6)
10	<b>12.2</b> (9.7-15.4)	<b>11.0</b> (8.4-14.2)	<b>9.8</b> (7.9-12.1)	<b>10.3</b> (8.0-13.2)	<b>8.2</b> (5.8-11.6)	<b>7.6</b> (5.5-10.5)	<b>7.3</b> (4.5-11.5)
11	<b>9.2</b> (7.1-11.8)	<b>9.2</b> (6.5-12.9)	<b>10.6</b> (9.0-12.5)	<b>8.8</b> (6.5-11.8)	<b>7.6</b> (5.4-10.6)	<b>8.8</b> (6.3-12.2)	<b>6.1</b> (3.9-9.5)
12	<b>9.6</b> (6.3-14.4)	<b>7.5</b> (5.4-10.4)	<b>8.2</b> (6.6-10.1)	<b>8.1</b> (5.9-11.1)	<b>8.0</b> (5.5-11.3)	<b>8.6</b> (5.6-13.0)	<b>9.1</b> (5.6-14.6)
Region							
Toronto	<b>10.3</b> (7.6-13.9)	<b>9.2</b> (6.9-12.3)	<b>7.3</b> (5.6-9.5)	<b>6.4</b> (4.3-9.2)	<b>6.6</b> (4.2-10.3)	<b>5.6</b> (3.3-9.2)	<b>4.5</b> <sup>b</sup> (2.8-7.2)
North	<b>12.1</b> (9.0-16.1)	<b>12.5</b> (10.2-15.2)	<b>9.8</b> (7.9-12.0)	<b>9.6</b> (7.2-12.6)	<b>5.2</b> (2.8-9.4)	<b>10.7</b> (7.4-15.2)	<b>7.0</b> (5.2-9.3)
West	<b>11.5</b> (9.3-14.2)	<b>10.3</b> (8.6-12.4)	<b>9.2</b> (7.7-10.9)	<b>7.2</b> (6.1-8.6)	<b>6.0</b> (4.5-7.9)	<b>6.1</b> (4.4-8.3)	<b>7.2</b> (4.9-10.4)
East	<b>10.1</b> (8.4-12.2)	<b>9.7</b> (7.5-12.5)	<b>10.6</b> (9.3-12.1)	<b>7.6</b> (5.8-9.8)	<b>7.0</b> (4.8-10.0)	<b>5.6</b> (4.1-7.5)	<b>5.9</b> <sup>b</sup> (4.9-7.1)

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 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01.

Q: During the last 12 months, have you smoked one whole 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, 1999–2011 OSDUHS (Grades 7–12)

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	(4472)
Total (95% CI)	<b>20.0</b> (18.3-21.8)	<b>21.1</b> (19.1-23.3)	<b>19.4</b> (18.1-20.8)	<b>17.7</b> (16.2-19.3)	<b>16.1</b> (14.3-18.0)	<b>16.8</b> (15.2-18.6)	<b>17.2</b> (15.1-19.5)
Sex							
Males	<b>20.1</b> (17.9-22.6)	<b>21.9</b> (19.4-24.7)	<b>20.4</b> (18.4-22.5)	<b>17.5</b> (15.4-19.8)	<b>16.1</b> (13.6-18.8)	<b>16.3</b> (13.7-19.1)	<b>15.9</b> (13.5-18.6)
Females	<b>19.8</b> (17.5-22.4)	<b>20.3</b> (17.7-23.2)	<b>18.4</b> (17.0-20.0)	<b>17.8</b> (15.8-20.0)	<b>16.0</b> (13.9-18.4)	<b>17.5</b> (15.4-19.7)	<b>18.6</b> (15.9-21.6)
Grade							
7	<b>20.3</b> (16.2-25.0)	<b>21.5</b> (17.2-26.5)	<b>21.4</b> (18.1-25.0)	<b>17.9</b> (14.2-22.4)	<b>15.0</b> (10.8-20.6)	<b>14.8</b> (11.9-18.1)	<b>14.4</b> (10.9-18.8)
8	<b>23.4</b> (20.5-26.6)	<b>24.7</b> (21.7-28.0)	<b>21.7</b> (18.6-25.1)	<b>20.2</b> (16.2-24.8)	<b>19.0</b> (13.7-25.7)	<b>19.4</b> (16.1-23.2)	<b>20.6</b> (17.3-24.4)
9	<b>25.6</b> (22.4-29.1)	<b>25.6</b> (21.3-30.3)	<b>23.4</b> (20.9-26.0)	<b>20.1</b> (17.0-23.7)	<b>19.0</b> (15.8-22.8)	<b>23.0</b> (18.8-27.8)	<b>21.6</b> (17.8-25.8)
10	<b>20.7</b> (16.9-25.1)	<b>22.5</b> (18.6-26.8)	<b>20.4</b> (17.3-23.9)	<b>19.9</b> (16.6-23.6)	<b>17.9</b> (14.2-22.3)	<b>18.9</b> (15.1-23.5)	<b>21.6</b> (16.5-27.6)
11	<b>13.5</b> (10.6-16.9)	<b>15.1</b> (10.6-21.2)	<b>16.1</b> (13.7-18.9)	<b>16.5</b> (13.3-20.3)	<b>14.0</b> (10.9-17.7)	<b>15.4</b> (12.4-18.9)	<b>15.4</b> (11.7-19.9)
12	<b>15.0</b> (10.6-20.8)	<b>12.4</b> (8.2-18.5)	<b>13.5</b> (10.9-16.6)	<b>12.2</b> (9.3-15.9)	<b>12.4</b> (8.9-17.0)	<b>11.5</b> (8.7-15.2)	<b>11.7</b> (8.1-16.5)
Region							
Toronto	<b>23.4</b> (20.0-27.2)	<b>20.8</b> (14.1-29.8)	<b>19.7</b> (16.1-23.8)	<b>16.6</b> (13.4-20.5)	<b>14.2</b> (10.0-19.8)	<b>20.4</b> (16.0-25.7)	<b>17.3</b> (14.0-21.2)
North	<b>18.5</b> (14.6-23.2)	<b>19.4</b> (17.2-21.8)	<b>22.2</b> (18.8-26.1)	<b>19.2</b> (15.8-23.3)	<b>14.8</b> (10.3-20.9)	<b>19.2</b> (14.4-25.2)	<b>16.5</b> (14.3-19.1)
West	<b>19.4</b> (16.4-22.8)	<b>19.6</b> (17.1-22.3)	<b>18.4</b> (16.4-20.6)	<b>18.8</b> (16.5-21.3)	<b>16.3</b> (13.8-19.2)	<b>14.4</b> (12.3-16.9)	<b>16.7</b> (12.7-21.6)
East	<b>19.2</b> (16.7-22.0)	<b>24.2</b> (21.1-27.5)	<b>19.9</b> (17.9-22.0)	<b>16.4</b> (13.8-19.4)	<b>17.1</b> (14.0-20.7)	<b>17.8</b> (14.8-21.4)	<b>17.8</b> (15.1-20.9)

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in each year since 2005; no significant differences 2011 vs. 2009, or 2011 vs. 1999.

Q: During 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, 1999–2011 OSDUHS (Grades 7–12)

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(4447)	(3898)	(6616)	(3648)	(2935)	(4261)	4472)
Total (95% CI)	<b>10.0</b> (9.1-11.1)	<b>10.3</b> (9.2-11.4)	<b>10.4</b> (9.6-11.2)	<b>8.8</b> (7.6-10.2)	<b>8.5</b> (7.3-9.9)	<b>8.5</b> (7.3-9.9)	<b>7.8</b> (6.4-9.4)
Sex							
Males	<b>10.7</b> (9.3-12.2)	<b>11.2</b> (9.4-13.3)	<b>10.8</b> (9.5-12.2)	<b>8.8</b> (7.3-10.6)	<b>8.8</b> (7.2-10.8)	<b>9.7</b> (8.1-11.6)	<b>7.2</b> <sup>b</sup> (5.6-9.2)
Females	<b>9.4</b> (8.0-11.0)	<b>9.3</b> (7.9-11.0)	<b>10.0</b> (8.9-11.1)	<b>8.8</b> (7.2-10.6)	<b>8.2</b> (6.7-10.0)	<b>7.2</b> (5.7-9.1)	<b>8.5</b> (6.7-10.7)
Grade							
7	†	<b>4.2</b> (2.6-6.5)	<b>3.2</b> (2.1-4.9)	<b>2.9</b> (1.8-4.8)	<b>2.9</b> (1.5-5.3)	†	†
8	<b>7.6</b> (5.8-10.1)	<b>6.0</b> (4.2-8.4)	<b>5.4</b> (3.4-8.5)	<b>4.2</b> (2.5-7.1)	<b>4.5</b> (2.7-7.4)	<b>3.7</b> (1.9-6.8)	<b>5.5</b> (2.9-9.9)
9	<b>15.3</b> (13.3-17.5)	<b>14.9</b> (12.7-17.3)	<b>13.1</b> (11.2-15.4)	<b>11.8</b> (8.8-15.6)	<b>9.5</b> (6.9-13.0)	<b>11.8</b> (8.6-15.9)	<b>7.9</b> <sup>b</sup> (5.5-11.3)
10	<b>11.2</b> (8.4-14.9)	<b>12.6</b> (10.5-15.1)	<b>14.8</b> (12.7-17.3)	<b>12.8</b> (10.2-16.0)	<b>10.2</b> (7.7-13.2)	<b>12.7</b> (9.8-16.4)	<b>10.0</b> (7.6-13.2)
11	<b>13.5</b> (11.1-16.4)	<b>11.4</b> (8.4-15.3)	<b>12.8</b> (11.0-14.8)	<b>9.1</b> (6.7-12.2)	<b>13.2</b> (10.3-16.8)	<b>9.8</b> (7.0-13.4)	<b>10.8</b> (7.7-15.0)
12	<b>8.2</b> (5.9-11.1)	<b>10.7</b> (6.6-16.9)	<b>10.4</b> (8.6-12.4)	<b>11.1</b> (8.1-15.0)	<b>10.0</b> (7.6-13.0)	<b>10.1</b> (7.6-13.5)	<b>8.4</b> (5.0-13.6)
Region							
Toronto	<b>7.8</b> (6.0-10.1)	<b>9.5</b> (7.7-11.7)	<b>8.5</b> (6.7-10.9)	<b>9.1</b> (5.5-14.7)	<b>7.3</b> (4.6-11.5)	<b>7.9</b> (5.0-12.3)	<b>7.9</b> (5.2-11.6)
North	<b>11.5</b> (9.8-13.5)	<b>9.2</b> (7.8-10.9)	<b>13.2</b> (10.9-15.8)	<b>10.4</b> (8.3-13.0)	<b>12.2</b> (8.6-17.1)	<b>10.8</b> (6.9-16.3)	<b>8.1</b> (5.7-11.3)
West	<b>10.1</b> (8.5-11.9)	<b>10.9</b> (9.1-13.0)	<b>9.8</b> (8.8-10.9)	<b>7.7</b> (6.2-9.6)	<b>7.5</b> (6.1-9.2)	<b>9.3</b> (7.4-11.5)	<b>7.7</b> (5.3-11.0)
East	<b>10.9</b> (9.1-12.9)	<b>10.2</b> (8.5-12.1)	<b>11.6</b> (10.0-13.4)	<b>9.9</b> (8.2-12.0)	<b>10.1</b> (7.6-13.3)	<b>7.3</b> (5.8-9.2)	<b>7.9</b> (6.2-10.0)

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 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01.

Qs: During the last 12 months, have you tried cannabis (marijuana or hashish) for the very first time?

Source: OSDUHS, Centre for Addiction & Mental Health

## Early Initiation Among 7<sup>th</sup>-Graders, 1981–2011

(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 drugs at an early age (i.e., typically defined as before age 13 or 14) are more likely to develop dependence and other problems later on in life (Agrawal et al., 2006; Behrendt, Wittchen, Höfler, Lieb, & Beesdo, 2009; Chen, O'Brien, & Anthony, 2005; Dawson, Goldstein, Chou, Ruan, & Grant, 2008; DeWit, Adlaf, Offord, & Ogborne, 2000; Hingson, Heeren, & Winter, 2006).

One way of monitoring changes in early initiation is to examine initiation of drug use among the youngest cohort of students, namely the 7<sup>th</sup>-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 7<sup>th</sup>-graders is profiled in Figures 3.9.2 to 3.9.4 for the years 2011, 2009, 2007, 2005, 2003, 2001, 1997, 1993 and 1981.

### Tobacco

■ As seen in Figure 3.9.2, early initiation of cigarette smoking shows a downward trend over time, with fewer 7<sup>th</sup>-graders today reporting smoking at an early age. Most notably, less than 2% of 7<sup>th</sup>-graders in 2011 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, 13% of 7<sup>th</sup>-graders in 2011 used 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 3% of 7<sup>th</sup>-graders in 2011 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 using for the first time before the end of grade 7 (ages 12/13) – was at 9% in 1981. Early use decreased by 1993 (3.5%), increased again in 1997 and remained elevated until 2003 (8%). In 2011, the estimate is lower at 2%.

## Drug Use Trends Among 7<sup>th</sup>-Graders, 1977–2009

(Figure 3.9.5)

Another approach to assessing potential future trends in adolescent drug use is to closely monitor prevalence among the 7<sup>th</sup>-graders (ages 12/13), the youngest students in our sample. We present the past year prevalence rates for tobacco, alcohol, and cannabis among 7<sup>th</sup>-graders in Figure 3.9.5. An overview of these data shows that use of these substances 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 of First Whole Cigarette Smoked Among All 7<sup>th</sup>-Graders,  
by Year of Survey, 1981–2011 OSDUHS

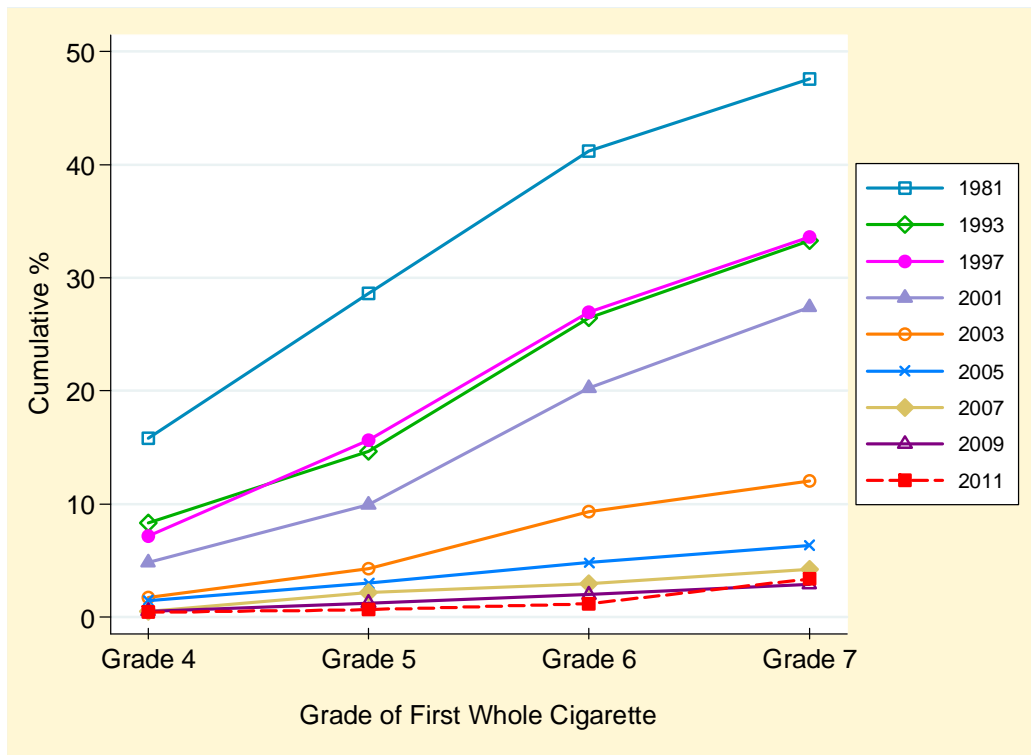


Figure 3.9.3  
Grade of First Alcohol Use Among All 7<sup>th</sup>-Graders, by Year of Survey, 1981–2011 OSDUHS

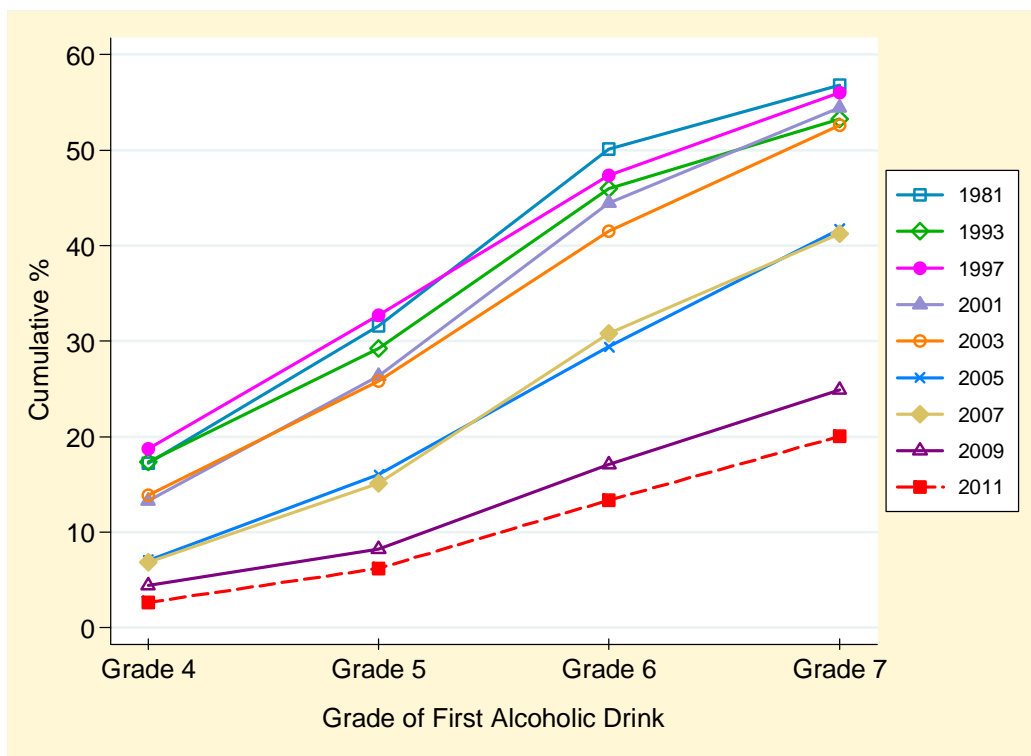


Figure 3.9.4  
Grade of First Cannabis Use Among All 7<sup>th</sup>-Graders, by Year of Survey, 1981–2011 OSDUHS

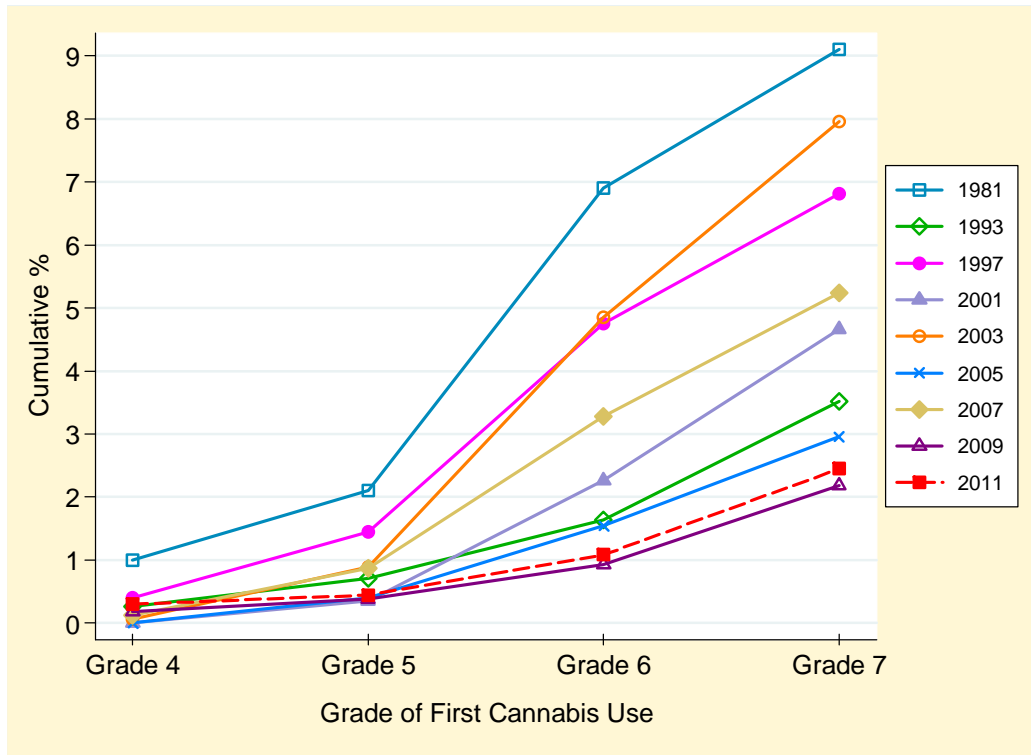
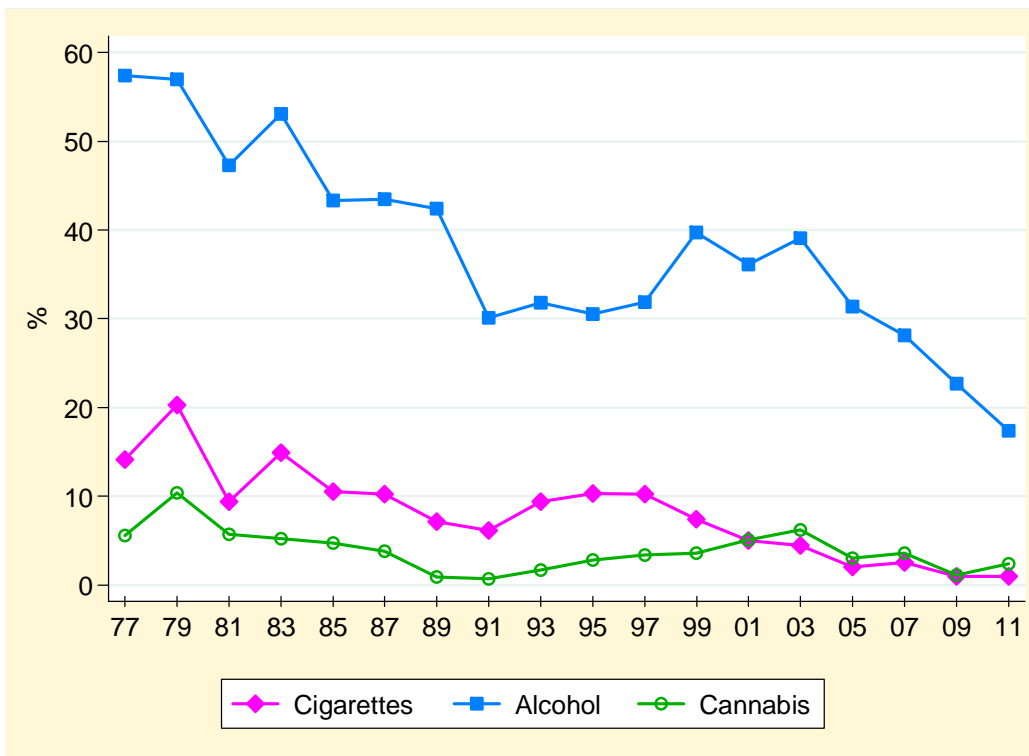


Figure 3.9.5  
Percentage of 7<sup>th</sup>-Graders Reporting Cigarette Smoking, Alcohol Use, and Cannabis Use in the Past Year, 1977–2011 OSDUHS



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

(Figures 3.9.6–3.9.9)

As previously mentioned, early initiation of substance use is a risk factor for dependence and other problems later in life. In this section we present the average age of initiation for cigarette, alcohol, and cannabis use *among grade 11 users* (ages 16/17). We provide this analysis for the years between 1981 and 2011. We selected grade 11 for two reasons: (1) it is the oldest grade for which we have data spanning back the furthest, and (2) grade 11 is typically the peak grade of most substance use.

### Mean Ages

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

### Cigarette Smoking

- As seen in Figures 3.9.6 and 3.9.7, the average initiation age for smoking increased between 1981 and 1995, decreased slightly in the late 1990s, and has increased considerably over the past decade.

### Drinking Alcohol

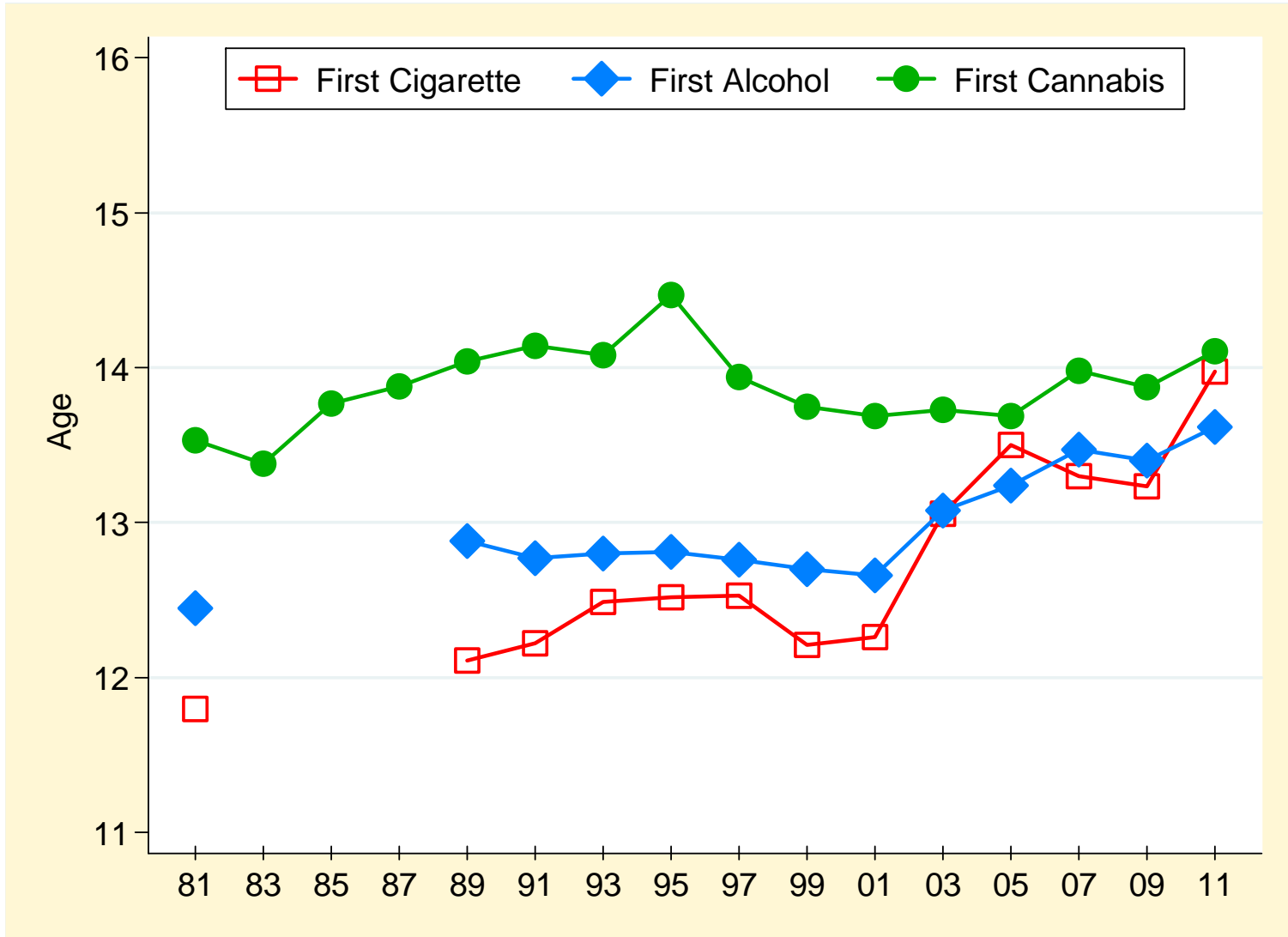
- As seen in Figures 3.9.6 and 3.9.8, the average initiation age for drinking was stable over the 1990s, and has increased over the past decade.

### Cannabis Use

- The average age of initiation for cannabis use has not dramatically changed during the study period, hovering around 14 years of age. However, the current average age is somewhat higher than the estimates found decades ago in 1981 and 1983 (see Figures 3.9.6 and 3.9.9).

Figure 3.9.6

Mean Age of First Cigarette Among 11<sup>th</sup>-Grade Smokers, First Alcoholic Drink Among 11<sup>th</sup>-Grade Drinkers, and First Cannabis Use Among 11<sup>th</sup>-Grade Users, 1981–2011 OSDUHS



	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Cigarettes	11.85	--	--	--	12.11	12.22	12.49	12.52	12.53	12.21	12.26	13.06	13.50	13.30	13.23	13.98
Alcohol	12.45	--	--	--	12.88	12.77	12.80	12.81	12.76	12.70	12.66	13.08	13.24	13.47	13.40	13.62
Cannabis	13.53	13.38	13.77	13.88	14.04	14.14	14.08	14.47	13.94	13.75	13.69	13.73	13.69	13.98	13.87	14.11

Note: age (grade) of first cigarette and of first alcoholic drink were not asked between 1983 and 1987

Figure 3.9.7  
Grade of First Whole Cigarette Among 11<sup>th</sup>-Grade Smokers, by Year of Survey, 1981–2011 OSDUHS

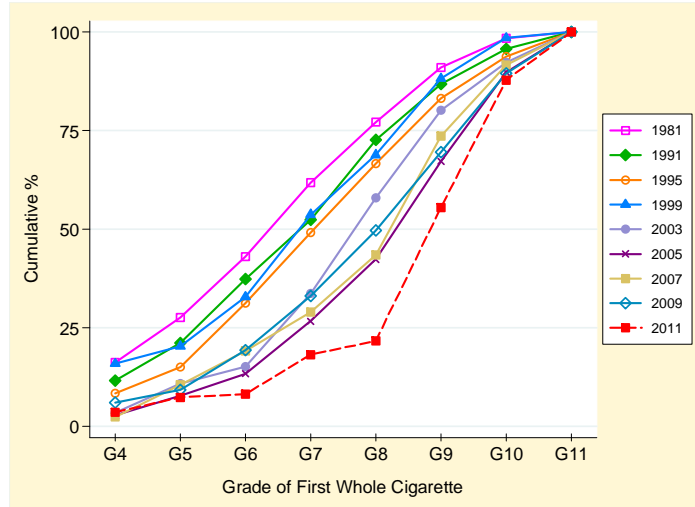


Figure 3.9.8  
Grade of First Alcoholic Drink Among 11<sup>th</sup>-Grade Drinkers, by Year of Survey, 1981–2011 OSDUHS

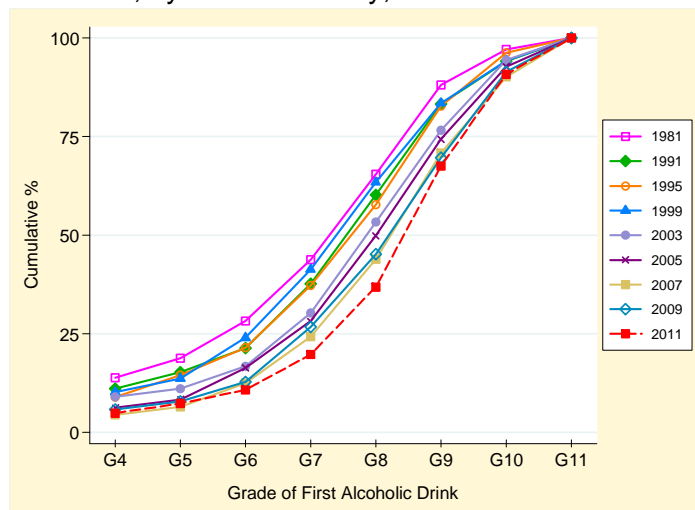
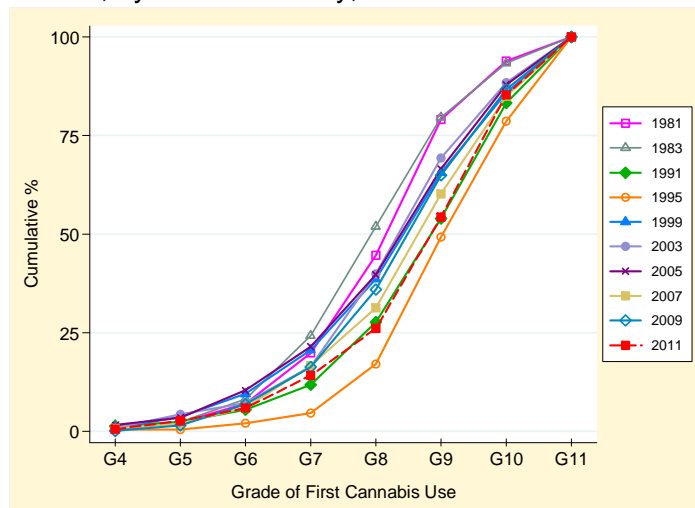


Figure 3.9.9  
Grade of First Cannabis Use Among 11<sup>th</sup>-Grade Users, by Year of Survey, 1981–2011 OSDUHS



## 3.10 Consequences and Harms

### Driving a Motor Vehicle after Drinking Alcohol (Figures 3.10.1, 3.10.2; Table 3.10.1)

2011: Drivers in Grades 10–12

■ In 2011, 7.0% of drivers (with a G-Class licence) in grades 10 through 12 drove within an hour after consuming two or more alcoholic drinks at least one time during the past 12 months. With the sampling error, we estimate that between 4.9% and 9.8% of adolescent drivers in Ontario drove after drinking alcohol. The estimate of 7.0% represents about 21,500 drivers in grades 10, 11, and 12.

- Male and female drivers are equally likely to drink and drive.
- There are no significant grade differences.
- There are no significant regional differences.

1999–2011: Grades 10–12

□ There has been a significant decrease in drinking and driving among adolescent drivers between 2009 (11.9%) and 2011 (7.0%). The 2011 estimate is also significantly lower than the estimate from 1999 (14.0%).

□ Among the subgroups, males, grade 12 students, those in the North and East show a significantly lower rate in 2011 than in 2009 and/or 1999.

1977–2011: Drivers in Grade 11 only

□ Figure 3.10.2 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 11<sup>th</sup>-graders, especially since the late 1970s when monitoring first began.

Figure 3.10.1  
Percentage of 10<sup>th</sup>- to 12<sup>th</sup>-Grade Drivers Reporting Drinking and Driving at Least Once in the Past Year, 1999–2011 OSDUHS

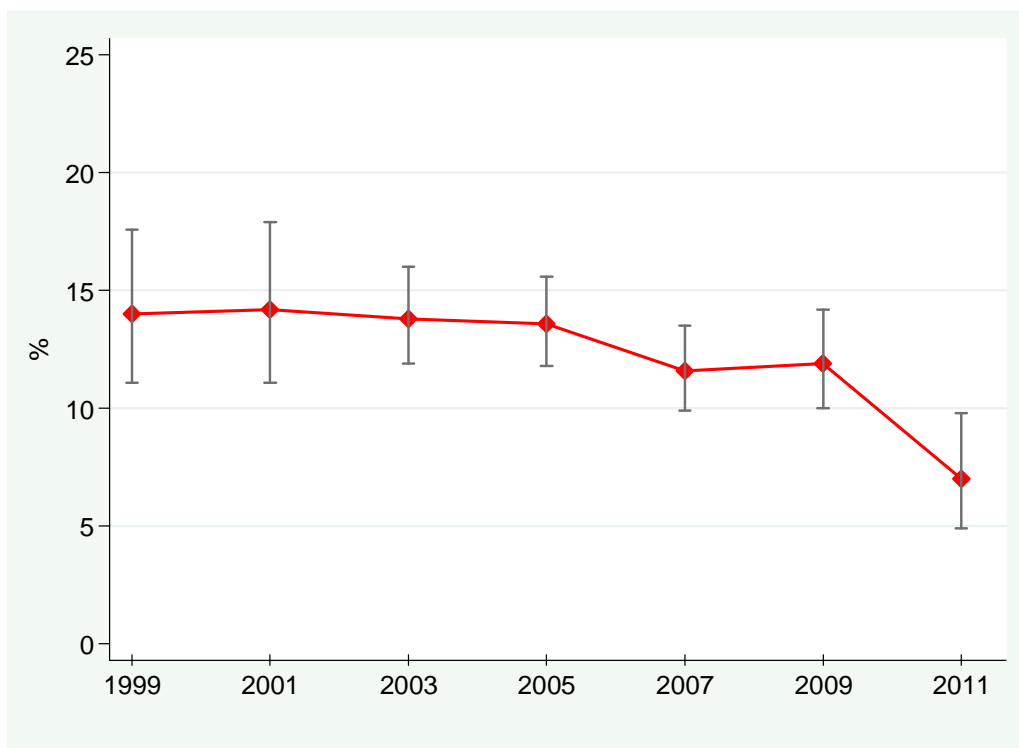
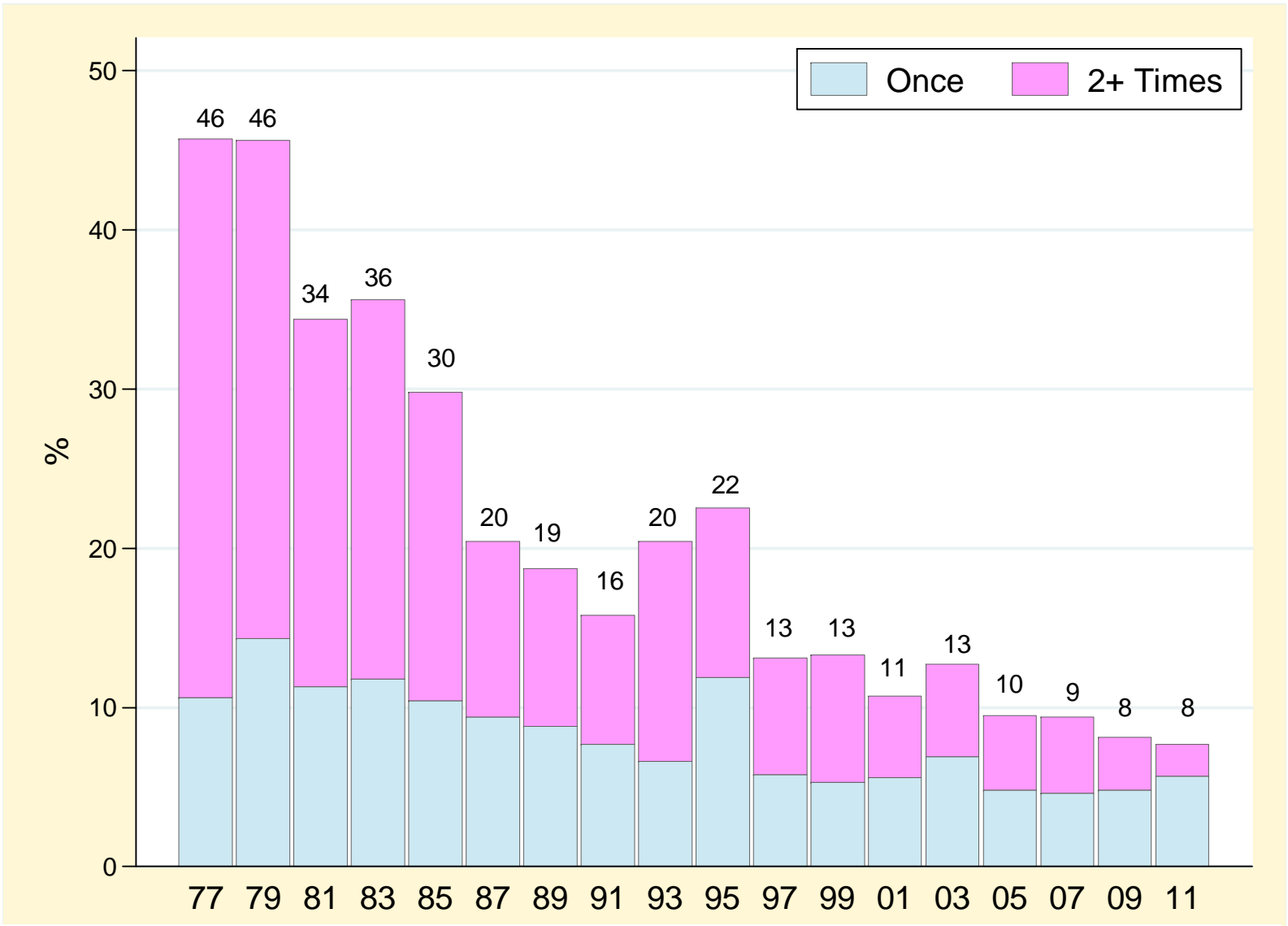


Figure 3.10.2  
 Percentage of 11<sup>th</sup>-Grade Drivers Reporting Drinking and Driving in the Past Year,  
 1977–2011 OSDUHS



	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Sample N	314	558	436	556	563	638	578	646	401	560	614	451	374	824	965	794	856	987
Never (%)	54	54	66	64	70	79	81	84	80	77	87	87	89	87	90	91	92	92
Once	11	14	11	12	10	9	9	8	7	12	6	5	6	7	5	5	5	6
2+ Times	36	32	24	24	19	11	10	9	14	10	8	7	5	4	5	4	3	2

Table 3.10.1: Percentage of 10<sup>th</sup>- to 12<sup>th</sup>-Grade Drivers Reporting Drinking and Driving at Least Once in the Past Year, 1999–2011 OSDUHS

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
(N)	(1009)	(847)	(1973)	(2280)	(1897)	(2219)	(2486)
Total (95% CI)	<b>14.0</b> (11.1-17.6)	<b>14.2</b> (11.1-17.9)	<b>13.8</b> (11.9-16.0)	<b>13.6</b> (11.8-15.6)	<b>11.6</b> (9.9-13.5)	<b>11.9</b> (10.0-14.2)	<b>7.0</b> <sup>ab</sup> (4.9-9.8)
Sex							
Males	<b>17.6</b> (14.0-21.8)	<b>19.0</b> (14.2-25.1)	<b>19.5</b> (16.5-22.9)	<b>17.7</b> (15.0-20.7)	<b>14.1</b> (11.5-17.2)	<b>14.9</b> (12.3-18.0)	<b>7.8</b> <sup>ab</sup> (5.8-10.6)
Females	<b>9.8</b> (6.4-14.7)	<b>7.4</b> (4.6-11.8)	<b>7.8</b> (6.0-10.0)	<b>8.5</b> (6.7-10.7)	<b>8.4</b> (6.5-10.9)	<b>8.3</b> (6.3-10.7)	†
Grade							
10	<b>8.1</b> (4.0-15.5)	<b>9.8</b> (4.4-20.6)	<b>9.8</b> (6.1-15.4)	<b>7.6</b> (4.2-13.3)	<b>9.0</b> (5.0-15.8)	<b>3.8</b> (1.7-8.2)	†
11	<b>13.4</b> (9.1-19.4)	<b>10.7</b> (8.0-14.2)	<b>12.7</b> (10.3-15.6)	<b>9.5</b> (7.3-12.4)	<b>9.3</b> (6.9-12.6)	<b>8.1</b> (5.4-12.0)	<b>7.8</b> (2.9-19.4)
12	<b>16.3</b> (11.4-22.8)	<b>20.9</b> (15.4-27.7)	<b>16.2</b> (13.1-19.8)	<b>17.4</b> (14.7-20.6)	<b>13.4</b> (11.2-15.9)	<b>15.1</b> (12.3-18.5)	<b>7.0</b> <sup>ab</sup> (5.0-9.8)
Region							
Toronto	<b>7.3</b> (3.0-16.9)	<b>13.2</b> (10.7-16.2)	<b>12.4</b> (8.5-17.9)	<b>9.8</b> (5.7-16.1)	<b>11.0</b> (6.1-19.1)	<b>6.5</b> (2.7-15.1)	†
North	<b>26.0</b> (17.3-37.2)	<b>12.5</b> (9.0-17.0)	<b>16.8</b> (12.0-23.0)	<b>16.8</b> (12.9-21.5)	<b>12.7</b> (8.4-18.8)	<b>12.5</b> (8.9-17.2)	<b>9.8</b> <sup>b</sup> (5.8-16.1)
West	<b>13.6</b> (9.8-18.6)	<b>18.5</b> (13.1-25.6)	<b>13.9</b> (10.6-18.0)	<b>15.6</b> (12.9-18.7)	<b>11.7</b> (9.1-14.8)	<b>10.8</b> (7.8-14.9)	†
East	<b>12.9</b> (7.7-21.0)	<b>8.2</b> (4.8-13.5)	<b>13.6</b> (11.0-16.7)	<b>12.1</b> (9.1-15.9)	<b>11.5</b> (9.1-14.3)	<b>14.6</b> (11.8-18.0)	<b>7.9</b> <sup>a</sup> (5.5-11.2)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed due to unreliability; (3) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, 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

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

(Figure 3.10.3)

For the first time in 2011, students were asked if they drove a snowmobile, motor boat, Sea-Doo, or all terrain vehicle (ATV) after drinking alcohol. The question used was “*In the last 12 months, have you driven a snowmobile, motor boat, sea-doo, or all- terrain vehicle (ATV) with an hour of drinking 2 or more drinks of alcohol?*” The three response options were did not drive any of these in the last 12 months, yes, or no. We present the results among students in grades 10 through 12 only.

2011: Grades 10–12

- Among students in grades 10–12, 6.6% (95% CI: 4.6%-9.4%) report operating a snowmobile, motor boat, Sea-Doo, or an ATV

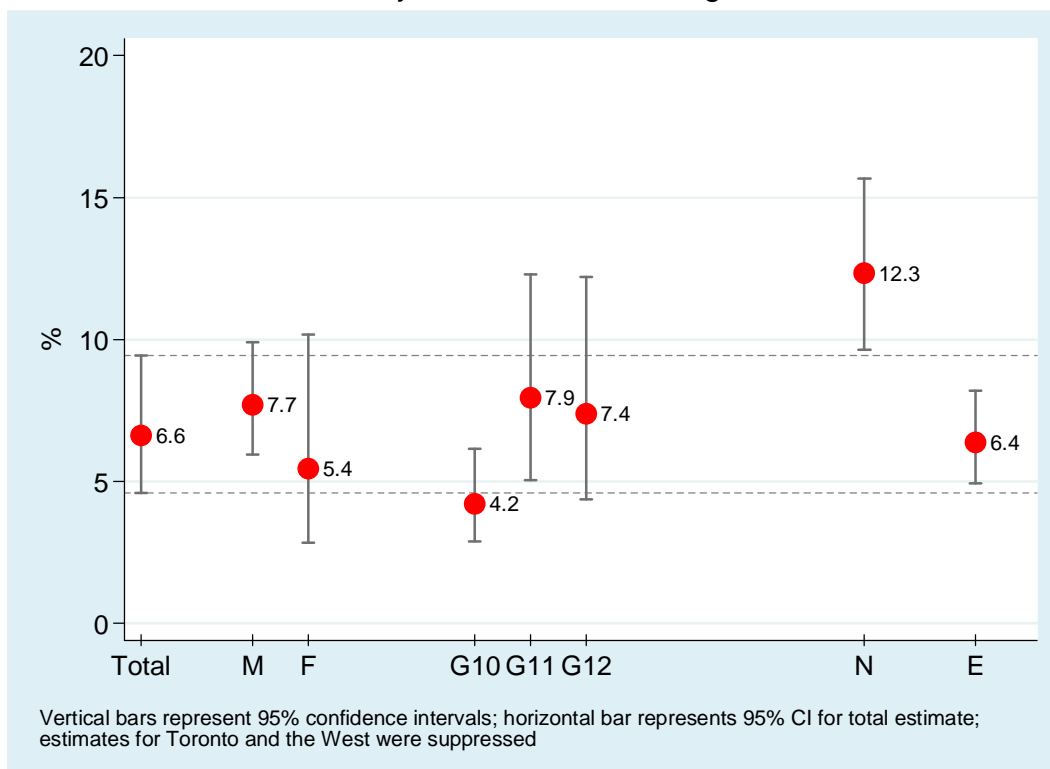
within an hour of drinking two or more alcoholic drinks at least one time during the past 12 months. This estimate represents about 37,700 Ontario students in grades 10–12.

- Males (7.7%) and females (5.4%) are equally likely to report this behaviour.

- There are no statistically significant differences among the grades.

- Despite some variation, there is no statistically significant regional effect.

Figure 3.10.3  
Percentage of Students in Grades 10–12 Reporting Operating a Snowmobile, Motor Boat, Sea-Doo, or ATV within an Hour of Drinking Alcohol in the Past Year, by Sex, Grade, and Region, 2011 OSDUHS



## Driving a Motor Vehicle after Using Cannabis

(Figure 3.10.4; Table 3.10.2)

Beginning in 2001, the OSDUHS asks students how often, if at all, they had driven a vehicle within one 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.

### 2011: Drivers in Grades 10–12

- In 2011, 12.4% of students in grades 10–12 with a driver’s licence report driving after using cannabis. This estimate represents about 38,300 adolescent drivers in Ontario.

- Male drivers are significantly more likely than female drivers to use cannabis and drive (15.3% vs 9.0%, 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.

### 2001–2011: Drivers in Grades 10–12

- The 2011 estimate (12.4%) for cannabis use and driving does not significantly differ from the 2009 estimate (16.6%), but is significantly lower than the estimates from 2001 and 2003 (about 20%).

Figure 3.10.4  
Percentage of 10<sup>th</sup>- to 12<sup>th</sup>-Grade Drivers Reporting Driving after Using Cannabis at Least Once in the Past Year, by Sex, Grade, and Region, 2011 OSDUHS

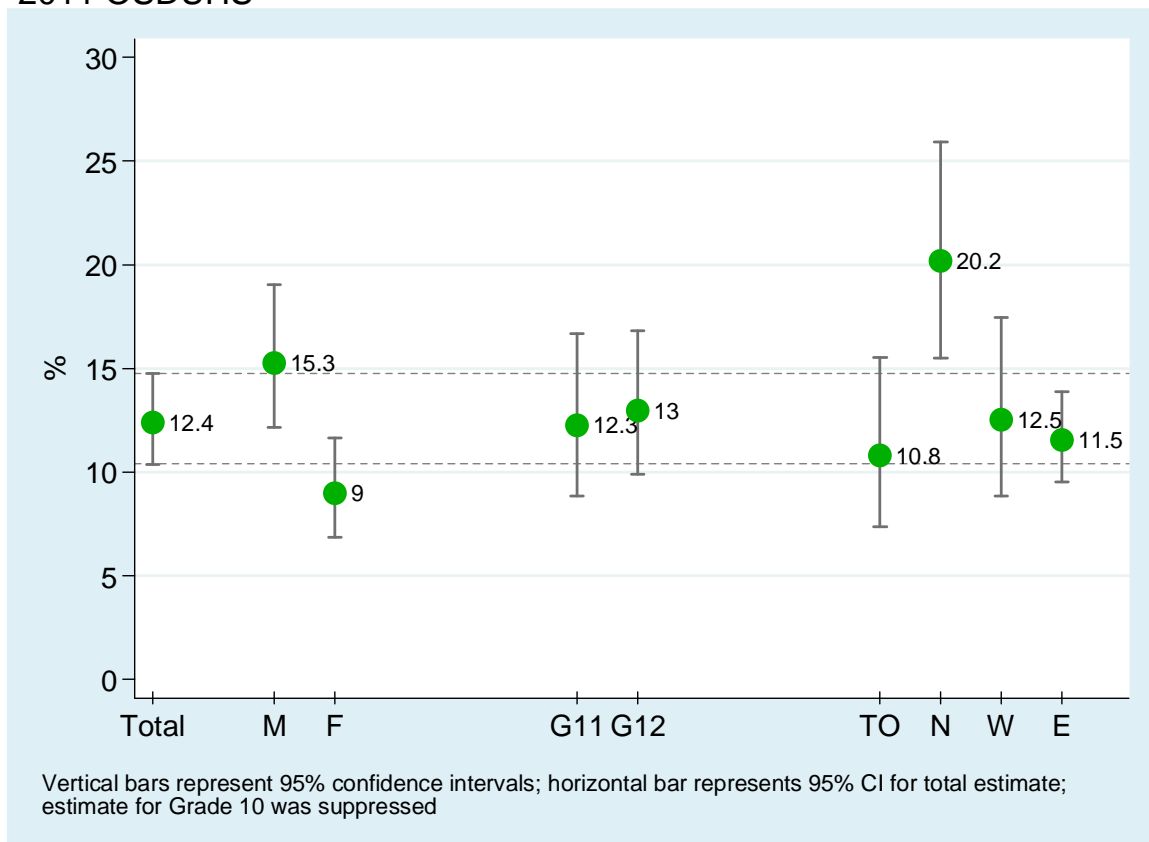


Table 3.10.2: Percentage of 10<sup>th</sup>- to 12<sup>th</sup>-Grade Drivers Reporting Cannabis Use and Driving at Least Once in the Past Year, 2001–2011 OSDUHS

	2001 (400)	2003 (1973)	2005 (2280)	2007 (1897)	2009 (2219)	2011 (2468)
Total (95% CI)	<b>19.9</b> (14.9-26.0)	<b>20.1</b> (17.3-23.1)	<b>20.0</b> (17.6-22.5)	<b>15.5</b> (13.4-17.9)	<b>16.6</b> (13.8-19.9)	<b>12.4</b> <sup>bc</sup> (10.4-14.8)
Sex						
Males	<b>25.3</b> (17.3-35.5)	<b>25.6</b> (21.4-30.2)	<b>25.2</b> (22.1-28.7)	<b>17.9</b> (15.0-21.2)	<b>20.8</b> (16.9-25.4)	<b>15.3</b> <sup>c</sup> (12.2-19.0)
Females	<b>12.6</b> (8.5-18.4)	<b>14.1</b> (11.3-17.6)	<b>13.4</b> (10.8-16.4)	<b>12.7</b> (9.8-16.4)	<b>11.4</b> (8.9-14.6)	<b>9.0</b> (6.9-11.7)
Grade						
10	<b>18.9</b> (9.6-33.9)	<b>15.9</b> (11.3-21.9)	<b>15.1</b> (9.7-22.6)	†	<b>7.8</b> (4.1-14.4)	†
11	<b>18.9</b> (12.7-27.3)	<b>18.0</b> (14.4-22.3)	<b>15.4</b> (12.3-19.1)	<b>12.8</b> (10.0-16.3)	<b>10.8</b> (8.1-14.3)	<b>12.3</b> (8.9-16.7)
12	<b>21.6</b> (14.1-31.7)	<b>23.3</b> (18.9-28.3)	<b>23.9</b> (20.5-27.6)	<b>18.9</b> (16.2-21.8)	<b>21.1</b> (17.0-25.7)	<b>13.0</b> <sup>ac</sup> (9.9-16.8)
Region						
Toronto	<b>13.7</b> (6.1-28.0)	<b>13.8</b> (10.0-19.4)	<b>16.0</b> (10.8-23.1)	<b>15.1</b> (11.0-20.3)	<b>11.4</b> (6.1-20.4)	<b>10.8</b> (7.4-15.6)
North	<b>17.5</b> (10.9-27.1)	<b>24.7</b> (16.3-35.6)	<b>21.6</b> (17.0-27.0)	<b>19.0</b> (12.5-27.7)	<b>21.1</b> (13.9-30.6)	<b>20.2</b> (15.5-25.9)
West	<b>23.9</b> (17.2-32.2)	<b>21.0</b> (17.0-25.7)	<b>24.1</b> (20.1-28.6)	<b>14.3</b> (10.9-18.5)	<b>17.8</b> (13.3-23.3)	<b>12.5</b> (8.9-17.4)
East	<b>16.7</b> (7.8-32.1)	<b>20.3</b> (15.2-26.6)	<b>16.3</b> (12.9-20.3)	<b>16.7</b> (13.6-20.3)	<b>16.0</b> (11.6-21.7)	<b>11.5</b> <sup>c</sup> (9.5-13.9)

Notes: (1) entries in brackets are 95% confidence intervals; (2) question asked of a random half sample in 2001; (3) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 2001 significant difference, p<.01; <sup>c</sup> 2011 vs. 2003 significant difference, 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

## Driving a Motor Vehicle after Using a Prescription Opioid

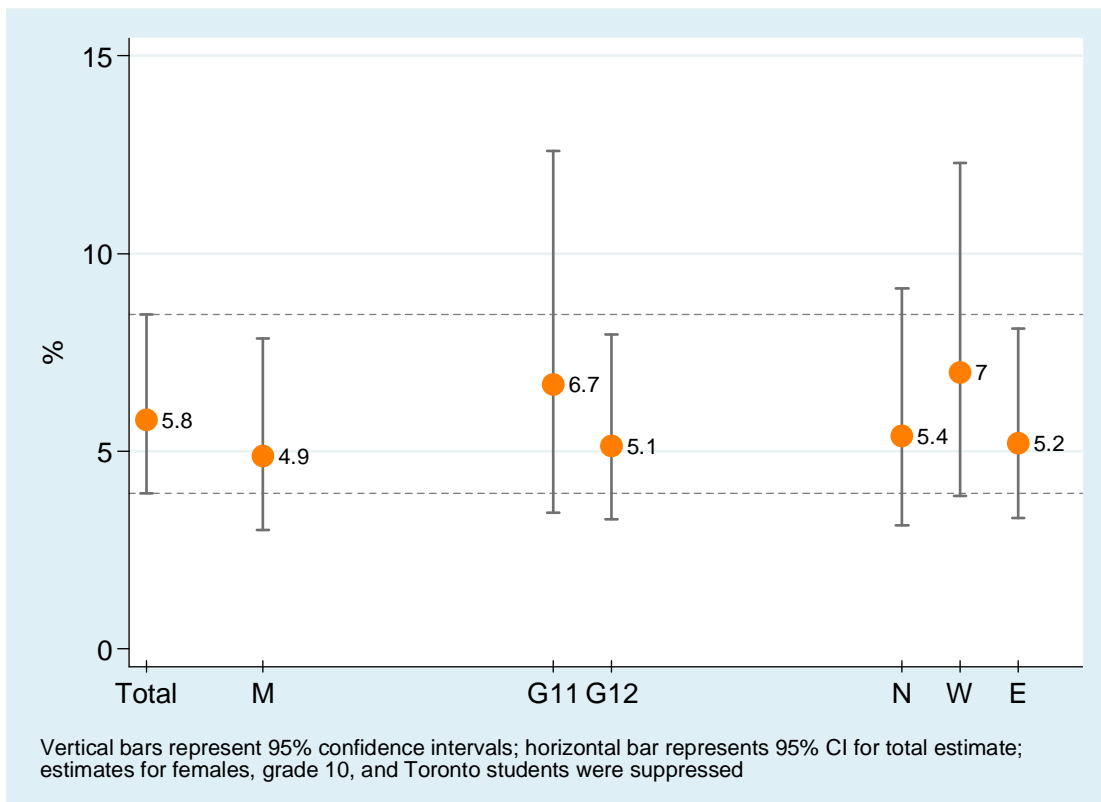
(Figure 3.10.5)

For the first time in 2011, students were asked how often, if at all, they had driven a vehicle after using a prescription opioid drug. The question was “*In the last 12 months, how often have you driven a vehicle within an hour of using a prescription pain relief pill such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, or codeine? (We do not mean regular Tylenol or Aspirin that anyone can buy in a drugstore.)*” We present the percentage of students in grades 10, 11, and 12 with a driver’s licence who report doing so at least once in the past 12 months.

2011: Grades 10–12

- About 5.8% (95% CI: 3.9%-8.5%) of students with a licence report driving after using a prescription opioid at least one time in the past 12 months. This estimate represents about 17,900 adolescent drivers in Ontario.
- There is no significant difference between male and female drivers.
- There are no significant grade differences.
- There are no significant regional differences.

Figure 3.10.5  
Percentage of 10<sup>th</sup>- to 12<sup>th</sup>-Grade Drivers Reporting Driving after Using a Prescription Opioid Drug at Least Once in the Past Year, by Sex, Grade, and Region, 2011 OSDUHS



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

(Figures 3.10.6, 3.10.7; Tables 3.10.3, 3.10.4)

Students 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 month period before the survey.

### 2011: Grades 7–12

- The 2011 survey found that about one-quarter (24.1%) of students rode in a vehicle at least once in the past year with a driver who had been drinking. This represents roughly 241,500 students in Ontario. About 15.5% of students rode with a driver who had been using drugs at least once in the past year. This estimate represents 155,600 students in Ontario.

- Females (27.7%) are more likely than males (20.8%) to ride with a driver who had been drinking alcohol. No significant sex difference was found for riding with a driver who had been using drugs.

- Being a passenger 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. However there were significant differences regarding riding with a driver who had been using drugs, with Toronto students (11.2%) least likely, and Northern students (20.6%) most likely, to report this behaviour.

### 2001–2011: Grades 7–12

- The percentage of students who report riding with a driver who had been drinking did not significantly change between 2009 (23.4%) and 2011 (24.1%). However, the current estimate is significantly lower than that found in 2001 (30.9%), when monitoring first began.

- The percentage of students who report riding in a vehicle with a driver who been using drugs did not significantly change between 2009 (17.9%) and 2011 (15.5%). However, the current estimate is significantly lower than the estimate found in 2003 (22.9%), when monitoring first began.

Figure 3.10.6  
 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, 2011 OSDUHS

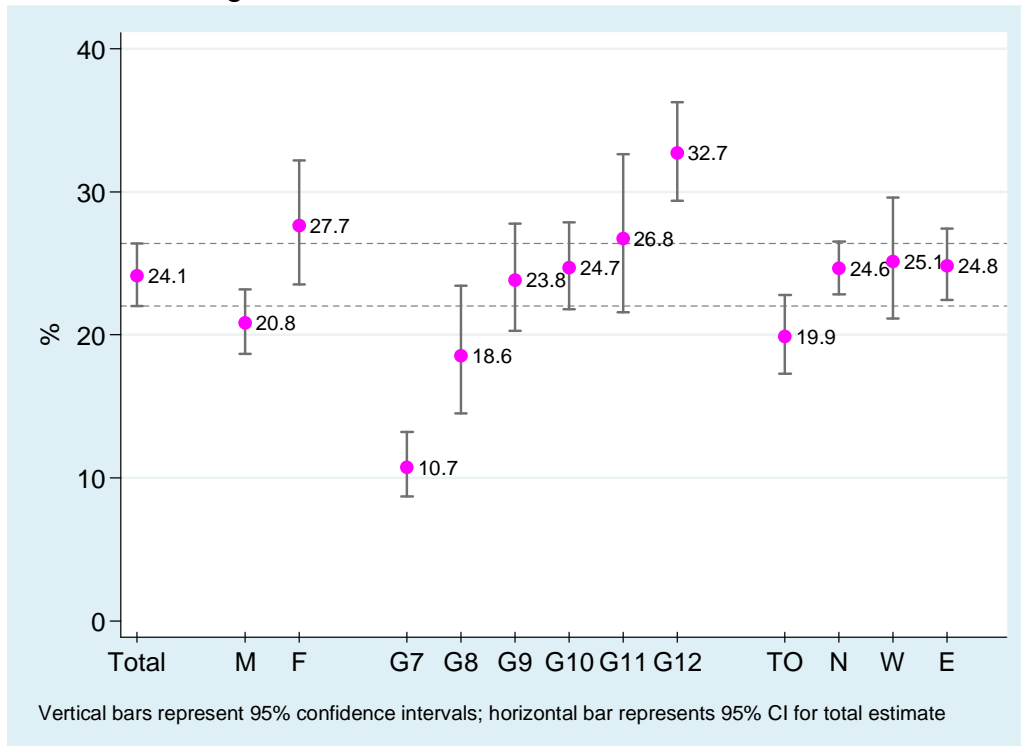


Figure 3.10.7  
 Percentage Reporting Riding in a Vehicle with a Driver Who Had  
 Been Using Drugs (at Least Once in the Past Year) by Sex,  
 and Region, 2011 OSDUHS

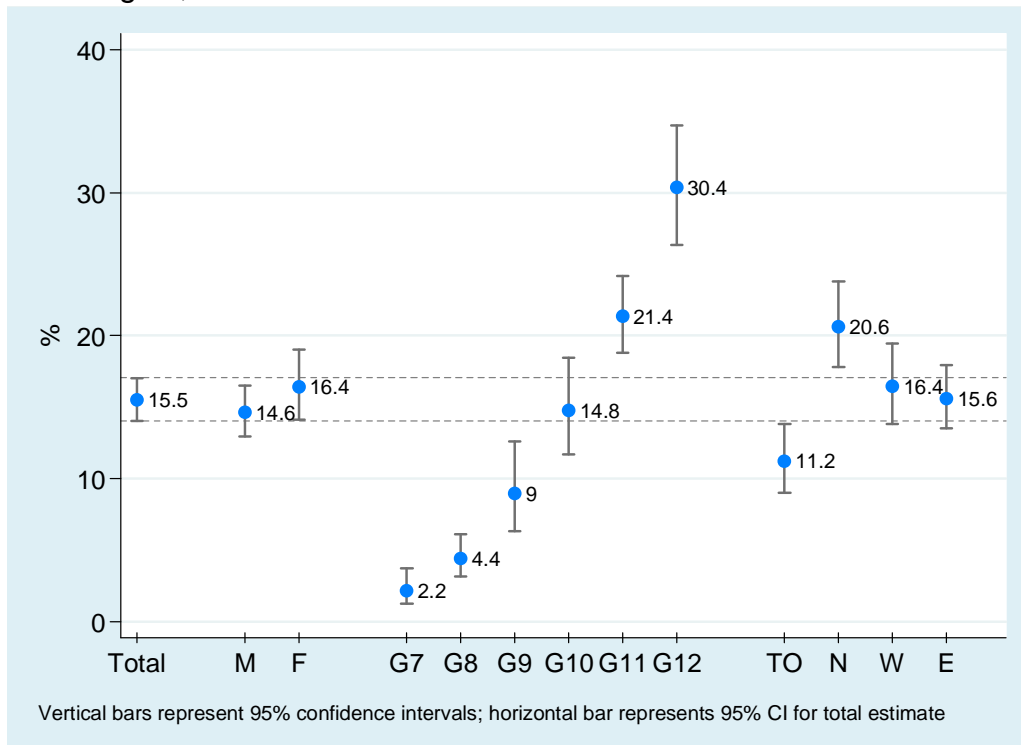


Table 3.10.3: Percentage of the Total Sample Reporting Riding in a Vehicle with a Driver Who Had Been Drinking Alcohol (at Least Once in the Past Year), 2001–2011 OSDUHS

(N)	2001 (1837)	2003 (3152)	2005 (3648)	2007 (2935)	2009 (4261)	2011 (9288)
Total (95% CI)	<b>30.9</b> (28.5-33.5)	<b>29.2</b> (27.1-31.3)	<b>28.8</b> (26.9-30.8)	<b>25.7</b> (23.6-27.9)	<b>23.4</b> (21.6-25.4)	<b>24.1</b> <sup>b</sup> (22.0-26.4)
Sex						
Males	<b>31.5</b> (28.2-34.9)	<b>27.6</b> (25.0-30.5)	<b>26.7</b> (24.3-29.2)	<b>24.7</b> (22.2-27.5)	<b>23.2</b> (20.5-26.2)	<b>20.8</b> <sup>b</sup> (18.7-23.2)
Females	<b>30.4</b> (26.7-34.3)	<b>30.6</b> (27.7-33.6)	<b>31.2</b> (28.5-33.9)	<b>26.8</b> (23.9-29.9)	<b>23.6</b> (21.1-26.3)	<b>27.7</b> (23.6-32.2)
Grade						
7	<b>17.5</b> (12.9-23.4)	<b>21.2</b> (16.6-26.8)	<b>17.7</b> (14.1-22.0)	<b>14.0</b> (10.8-18.0)	<b>10.0</b> (6.6-14.8)	<b>10.7</b> (8.7-13.2)
8	<b>23.2</b> (16.5-31.5)	<b>25.2</b> (21.1-29.8)	<b>19.9</b> (16.7-23.5)	<b>17.3</b> (13.9-21.4)	<b>14.8</b> (11.4-19.2)	<b>18.6</b> (14.5-23.4)
9	<b>31.5</b> (25.1-38.6)	<b>24.0</b> (20.1-28.4)	<b>27.3</b> (23.2-31.9)	<b>22.0</b> (18.4-26.0)	<b>23.3</b> (18.9-28.3)	<b>23.8</b> (20.3-27.8)
10	<b>36.0</b> (30.8-41.7)	<b>30.2</b> (25.5-35.4)	<b>28.9</b> (24.5-33.7)	<b>24.9</b> (21.2-29.0)	<b>23.0</b> (19.4-27.0)	<b>24.7</b> <sup>b</sup> (21.8-27.9)
11	<b>40.0</b> (33.4-46.9)	<b>38.3</b> (33.9-42.8)	<b>36.5</b> (31.9-41.2)	<b>33.1</b> (29.0-37.4)	<b>26.5</b> (22.0-31.6)	<b>26.8</b> <sup>b</sup> (21.6-32.6)
12	<b>36.2</b> (28.9-44.1)	<b>34.1</b> (30.1-38.2)	<b>39.4</b> (34.8-44.3)	<b>37.4</b> (31.8-43.4)	<b>34.1</b> (28.0-40.8)	<b>32.7</b> (29.4-36.3)
Region						
Toronto	<b>26.1</b> (19.0-34.6)	<b>27.1</b> (21.6-33.4)	<b>21.3</b> (18.6-24.3)	<b>19.9</b> (14.3-26.9)	<b>19.1</b> (14.4-24.9)	<b>19.9</b> (17.3-22.8)
North	<b>34.7</b> (30.9-38.8)	<b>29.8</b> (26.0-33.8)	<b>31.7</b> (26.7-37.2)	<b>27.2</b> (22.8-32.1)	<b>27.3</b> (21.7-33.6)	<b>24.6</b> <sup>b</sup> (22.8-26.5)
West	<b>32.8</b> (29.2-36.5)	<b>32.5</b> (29.4-35.6)	<b>30.0</b> (26.9-33.3)	<b>27.9</b> (25.3-30.6)	<b>23.9</b> (20.8-27.2)	<b>25.1</b> (21.2-29.6)
East	<b>30.2</b> (26.5-34.2)	<b>25.1</b> (21.6-28.9)	<b>31.2</b> (27.6-35.1)	<b>25.6</b> (21.4-30.4)	<b>24.5</b> (22.0-27.2)	<b>24.8</b> (22.4-27.4)

Notes: (1) entries in brackets are 95% confidence intervals; (2) based on a random half sample in each year except in 2011; (3) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 2001 significant difference,  $p < .01$ .

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 3.10.4: Percentage of the Total Sample Reporting Riding in a Vehicle with a Driver Who Had Been Using Drugs (at Least Once in the Past Year), 2003–2011 OSDUHS

	<b>2003</b> (N) (3464)	<b>2005</b> (4078)	<b>2007</b> (3388)	<b>2009</b> (4851)	<b>2011</b> (9288)
Total (95% CI)	<b>22.9</b> (20.8-25.0)	<b>21.5</b> (19.3-24.0)	<b>17.6</b> (16.1-19.2)	<b>17.9</b> (16.4-19.5)	<b>15.5</b> <sup>b</sup> (14.0-17.0)
Sex					
Males	<b>21.1</b> (18.3-24.1)	<b>21.2</b> (18.3-24.5)	<b>16.2</b> (14.2-18.2)	<b>18.9</b> (16.4-21.6)	<b>14.6</b> <sup>b</sup> (12.9-16.5)
Females	<b>24.5</b> (21.8-27.3)	<b>21.9</b> (19.3-24.7)	<b>19.0</b> (16.8-21.4)	<b>16.9</b> (14.9-19.1)	<b>16.4</b> <sup>b</sup> (14.1-19.0)
Grade					
7	<b>9.4</b> (6.1-14.1)	<b>6.1</b> (3.6-10.0)	<b>2.8</b> (1.6-4.9)	<b>1.5</b> (0.9-2.5)	<b>2.2</b> <sup>b</sup> (1.2-3.7)
8	<b>11.1</b> (8.0-15.3)	<b>9.2</b> (6.3-13.2)	<b>5.6</b> (3.5-9.1)	<b>5.1</b> (3.5-7.5)	<b>4.4</b> <sup>b</sup> (3.2-6.1)
9	<b>17.4</b> (14.0-21.3)	<b>15.2</b> (11.8-19.2)	<b>13.9</b> (10.6-18.1)	<b>10.0</b> (7.9-12.7)	<b>9.0</b> <sup>b</sup> (6.3-12.6)
10	<b>23.3</b> (19.0-28.3)	<b>23.6</b> (20.0-27.7)	<b>17.9</b> (14.8-21.6)	<b>16.7</b> (13.6-20.4)	<b>14.8</b> <sup>b</sup> (11.7-18.5)
11	<b>33.8</b> (28.7-39.3)	<b>34.7</b> (31.2-38.3)	<b>25.0</b> (21.6-28.7)	<b>25.9</b> (20.2-32.6)	<b>21.4</b> <sup>b</sup> (18.8-24.2)
12	<b>37.0</b> (31.4-43.0)	<b>38.0</b> (33.7-42.5)	<b>34.0</b> (29.3-39.1)	<b>37.1</b> (23.8-41.6)	<b>30.4</b> (26.4-34.7)
Region					
Toronto	<b>20.7</b> (17.0-25.0)	<b>15.3</b> (11.6-20.0)	<b>12.0</b> (9.4-15.1)	<b>12.7</b> (9.9-16.3)	<b>11.2</b> <sup>b</sup> (9.0-13.8)
North	<b>27.0</b> (21.7-33.2)	<b>27.2</b> (23.6-31.3)	<b>22.3</b> (18.1-27.2)	<b>22.2</b> (16.8-28.8)	<b>20.6</b> (17.8-23.8)
West	<b>22.7</b> (19.9-25.8)	<b>23.6</b> (20.5-27.0)	<b>19.0</b> (16.5-21.7)	<b>18.4</b> (16.1-21.0)	<b>16.5</b> <sup>b</sup> (13.8-19.4)
East	<b>23.2</b> (18.9-28.0)	<b>20.9</b> (16.6-26.1)	<b>17.7</b> (15.3-20.4)	<b>18.9</b> (16.3-21.8)	<b>15.6</b> <sup>b</sup> (13.5-17.9)

Notes: (1) entries in brackets are 95% confidence intervals; (2) based on a random half sample in each year except in 2011; (3) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 2003 significant difference, 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

## Drug Use Problem (CRAFFT Screener)

(Figure 3.10.8; 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 (presented 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 ( $\alpha=0.79$ ).

### 2011: Grades 7–12

- Among the six CRAFFT problems, riding in a vehicle with a driver who was using drugs is experienced the most (about 14%), followed by used drugs to relax or feel better (about 12%).
- Overall, 12.7% of students report at least two of the six CRAFFT symptoms, and, therefore, meet the criterion for a drug use problem. This percentage represents about 130,200 Ontario students in grades 7–12.

- Males (13.7%) and females (11.8%) are equally likely to meet the criterion for a drug use problem.
- There is significant grade variation. The likelihood of a drug use problem is lowest among 8<sup>th</sup>-graders (2.6%) and highest among 12<sup>th</sup>-graders (21.7%).
- Despite some variation, there are no significant differences among the regions.

### 2003 –2011: Grades 7–12

- The percentage of students in 2011 (12.7%) who meet the CRAFFT criterion for a drug use problem does not significantly differ from the percentage found in 2009 (15.5%). However, the current estimate is significantly lower than that found in 2003 (17.5%), the year monitoring began.

Table 3.10.5: Percentage of the Total Sample of Students Reporting Drug Use Problems Experienced in the Past Year, 2011 OSDUHS (Grades 7–12)

CRAFFT Item	% “yes” among the total sample
“In the last 12 months....”	
1. did you ride in a car or other vehicle driven by someone who had been using drugs (other than alcohol)?	13.7
2. did you use drugs to relax, feel better about yourself, or fit in?	12.4
3. did you use drugs while you were by yourself (alone)?	8.7
4. did you forget things you did while using drugs?	6.4
5. did your family or friends tell you that you should cut down on your use of drugs?	3.7
6. did you get into trouble while using drugs?	3.7
<hr/>	
% CRAFFT 2+ Score (95% CI)	12.7 (10.6-15.3)

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=4,816).

Source: OSDUHS, Centre for Addiction & Mental Health

Figure 3.10.8  
 Percentage Indicating a Drug Use Problem (CRAFFT 2+) by Sex,  
 Grade, and Region, 2011 OSDUHS

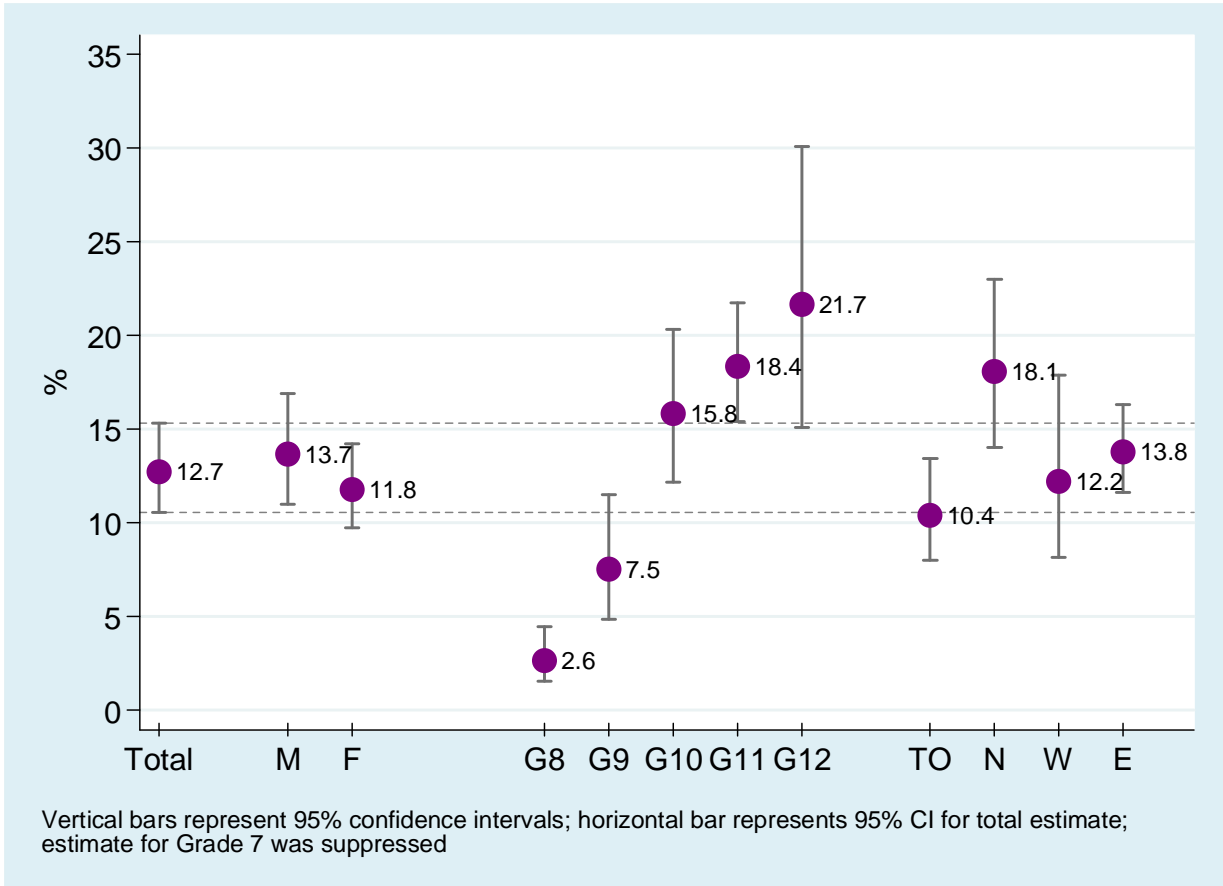


Table 3.10.6: Percentage of the Total Sample Indicating a Drug Use Problem (CRAFTT 2+), 2003–2011 OSDUHS (Grades 7–12)

	(N)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)
Total (95% CI)		<b>17.5</b> (15.7-19.5)	<b>16.4</b> (14.5-18.6)	<b>14.9</b> (13.3-16.6)	<b>15.5</b> (14.2-16.9)	<b>12.7</b> <sup>b</sup> (10.6-15.3)
Sex						
Males		<b>17.7</b> (15.0-20.7)	<b>17.4</b> (14.8-20.2)	<b>14.9</b> (12.9-17.2)	<b>17.3</b> (15.2-19.7)	<b>13.7</b> (11.0-16.9)
Females		<b>17.4</b> (15.2-19.8)	<b>15.5</b> (13.4-17.8)	<b>14.8</b> (13.0-16.9)	<b>13.6</b> (12.1-15.4)	<b>11.8</b> <sup>b</sup> (9.7-14.2)
Grade						
7		<b>6.1</b> (3.4-10.6)	<b>2.4</b> (1.3-4.5)	†	<b>2.3</b> (1.3-4.1)	†
8		<b>6.9</b> (4.2-11.0)	<b>7.0</b> (4.7-10.4)	<b>4.1</b> (2.3-7.2)	<b>6.2</b> (4.1-9.2)	<b>2.6</b> (1.5-4.5)
9		<b>14.1</b> (11.4-17.2)	<b>13.4</b> (10.4-17.1)	<b>14.0</b> (10.3-18.8)	<b>11.7</b> (8.8-15.5)	<b>7.5</b> (4.8-11.5)
10		<b>20.5</b> (16.1-25.8)	<b>21.0</b> (17.6-24.8)	<b>18.0</b> (14.8-21.7)	<b>18.4</b> (14.8-22.8)	<b>15.8</b> (12.2-20.3)
11		<b>27.0</b> (22.2-32.4)	<b>25.4</b> (21.5-29.6)	<b>23.0</b> (19.2-27.2)	<b>19.4</b> (15.1-24.7)	<b>18.4</b> <sup>b</sup> (15.4-21.8)
12		<b>26.7</b> (21.8-32.2)	<b>28.3</b> (24.3-32.6)	<b>24.7</b> (20.8-29.0)	<b>28.2</b> (24.5-32.1)	<b>21.7</b> (15.1-30.1)
Region						
Toronto		<b>16.8</b> (13.3-20.9)	<b>13.3</b> (10.0-17.4)	<b>10.9</b> (6.9-16.9)	<b>13.4</b> (10.8-16.7)	<b>10.4</b> (8.0-13.4)
North		<b>19.5</b> (14.9-25.2)	<b>20.3</b> (15.8-25.6)	<b>20.7</b> (16.2-26.0)	<b>20.4</b> (16.3-25.2)	<b>18.1</b> (14.0-23.0)
West		<b>16.6</b> (14.1-19.6)	<b>17.4</b> (14.3-21.0)	<b>14.7</b> (12.6-17.0)	<b>15.6</b> (13.3-18.3)	<b>12.2</b> (8.1-17.9)
East		<b>18.7</b> (15.0-22.9)	<b>16.0</b> (12.7-19.8)	<b>15.8</b> (13.2-18.8)	<b>15.4</b> (13.4-17.5)	<b>13.8</b> (11.6-16.3)

Notes: (1) entries in brackets are 95% confidence intervals; (2) based on a random half sample in each year; (3) † estimate suppressed due to unreliability; (4) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 2003 significant difference, p<.01.

Source: OSDUHS, Centre for Addiction & Mental Health

## Alcohol and Other Drug Treatment

In addition to asking students about alcohol and drug use problems, we surveyed students about their treatment experience. Specifically, we asked “*Have you been in a treatment program during the last 12 months because of your alcohol or drug use?*”

- In 2011, 0.9% (95% CI: 0.6%-1.3%) of students report that they had received treatment for their alcohol and/or drug use (data not tabled). This estimate represents about 8,900 Ontario students in grades 7 through 12.
- The 2011 estimate (0.9%) for students who received treatment is similar to the estimate from 2009 (1.4%), as well as estimates from previous years (1.5% in 2007; 0.7% in 2005; 1.4% in 2003).

## Coexisting Alcohol and Mental Health Problems

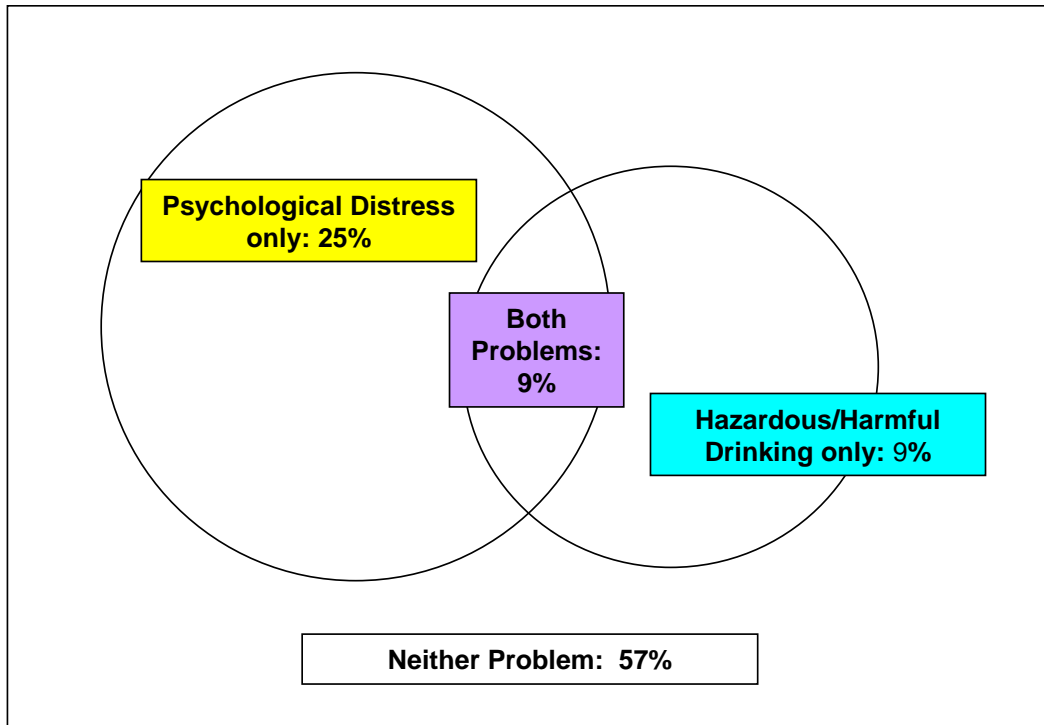
(Figures 3.10.9, 3.10.10)

In addition to substance problem indicators, the OSDUHS also contains mental health indicators. One of these is the General Health Questionnaire (GHQ12), which is a 12-item screening instrument designed to detect current elevated psychological distress (symptoms of anxiety and depression) (Goldberg, Oldehinkel, & Ormel, 1998; McDowell & Newell, 1996). For our present purpose, we examine the percentage reporting at least 3 of the 12 GHQ problems.

Figure 3.10.9 displays the percentage of all students in grades 7 through 12 who report hazardous/harmful drinking according to the AUDIT (those scoring 8+); the percentage reporting psychological distress according to the GHQ (those scoring 3+); and the percentage reporting both problems.

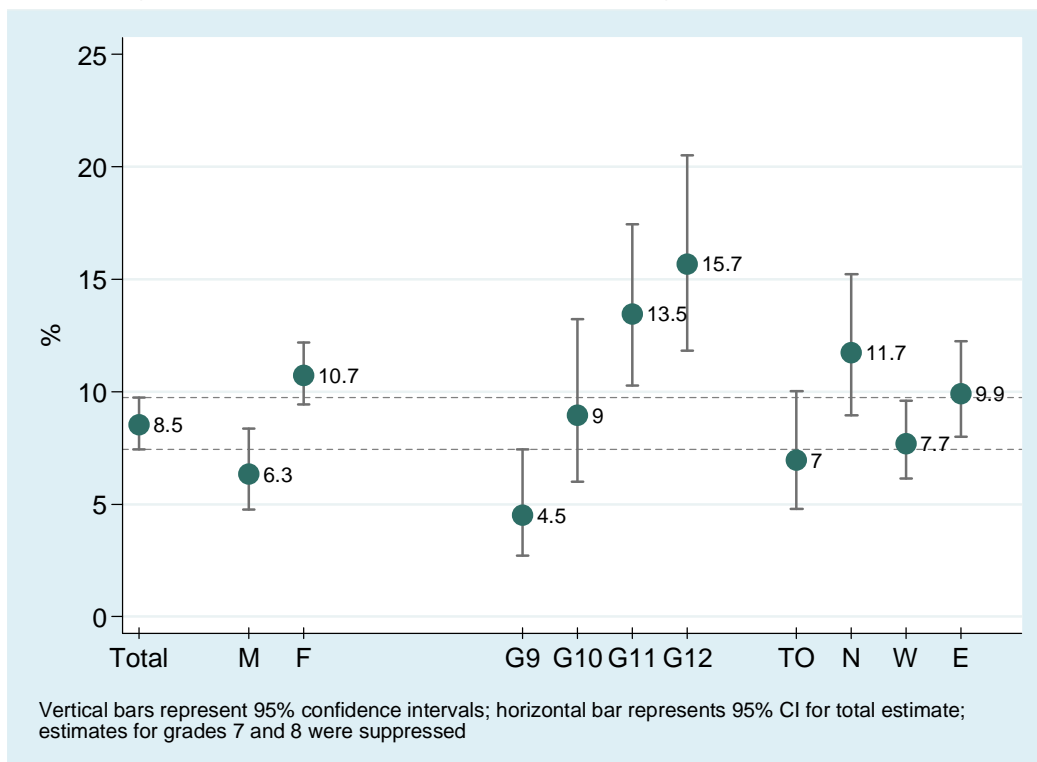
- As seen in Figure 3.10.10, 8.5% (95% CI: 7.4%-9.7%) of all students indicate both hazardous/harmful drinking and elevated psychological distress. This estimate represents about 83,300 students in Ontario.
- Females are more likely than males to report these two coexisting problems (10.7% vs 6.3%, respectively).
- Coexisting problems significantly increase with grade, up to a high of 15.7% among 12<sup>th</sup>-graders.
- Despite some variation, there are no significant regional differences.

Figure 3.10.9  
 Coexisting Problems: Hazardous/Harmful Drinking (AUDIT 8+) and Elevated Psychological Distress (GHQ 3+), 2011 OSDUHS (Grades 7–12)



Based on a random half sample (N=4,816)

Figure 3.10.10  
 Percentage Reporting Coexisting Hazardous/Harmful Drinking and Elevated Psychological Distress by Sex, Grade, and Region, 2011 OSDUHS



## 3.11 Attitudes and Perceptions

### Perceptions of Risk and Disapproval

(Figures 3.11.1–3.11.3; Tables 3.11.1, 3.11.2)

Research has shown that drug-related attitudes and beliefs correlate strongly with drug using behaviour (Bachman, Wadsworth, O'Malley, Johnston, & Schulenberg, 1997; Johnston et al. 2011). 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 Table 3.11.1 and Figure 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 Table 3.11.2 and Figure 3.11.2, we present the percentage who “**strongly disapprove**” of people aged 18 and older using particular drugs.

#### 2011: Grades 7–12

- Among the drug behaviours surveyed, students feel that the greatest risk of harm is associated with regular marijuana use (55.5%), followed by trying cocaine (40.7%), trying ecstasy (38.7%), daily smoking (31.7%), binge drinking each weekend (26.2%), and trying marijuana (18.4%).
- Perceptions of risk significantly increase with grade regarding trying cocaine, trying ecstasy, and daily smoking, but *decrease with grade* regarding marijuana use (trying and regular use) and binge drinking each weekend.
- The majority of students strongly disapprove of someone using marijuana regularly (55.8%), trying cocaine (54.4%), and trying ecstasy (53.9%). About one-third (33.6%) strongly disapprove of trying marijuana.

#### 1999–2011: Grades 7–12

- For the first time in a long while, there has been an increase in disapproval of **marijuana** use. The percentage strongly disapproving of trying marijuana is significantly higher in 2011 (33.6%) compared with 2009 (28.3%) and with 1999 (26.3%). Similarly, the percentage disapproving of regular use is higher in 2011 (55.8%) compared with 2009 (45.2%) and 1999 (43.4%).
- The perception of great risk of harm associated with trying **cocaine** is significantly higher in 2011 (40.7%) compared with 1999 (33.3%). There was also an increase in 2011 (54.4%) in the percentage that strongly disapproves of trying cocaine compared with 2009 (49.0%) and with 1999 (40.1%).
- The perception of great risk associated with trying **ecstasy** is significantly higher in 2011 (38.7%) compared with 2001 (32.2%). There was also a parallel increase in the percentage that strongly disapproves of trying ecstasy (from 38.8% in 2001 up to 53.9% in 2011).
- The percentage of students who perceive there is great risk associated with **daily smoking** is significantly higher in 2011 (31.7%) compared with 2003 (24.0%).

#### 1989–2011: Grades 7, 9, and 11 only

- Over the long-term, perceptions of great risk associated with the use of most of the substances monitored in the survey decreased somewhat in the late 1990s, and have slightly increased in recent years. However, risk perceptions about trying marijuana have not recently increased.
- Similarly, disapproval of using these substances decreased in the late 1990s, and steadily increased in recent years.

Figure 3.11.1  
Percentage Who Perceive “Great Risk” of Harm Associated  
with Drug Use, 2011 OSDUHS (Grades 7–12)

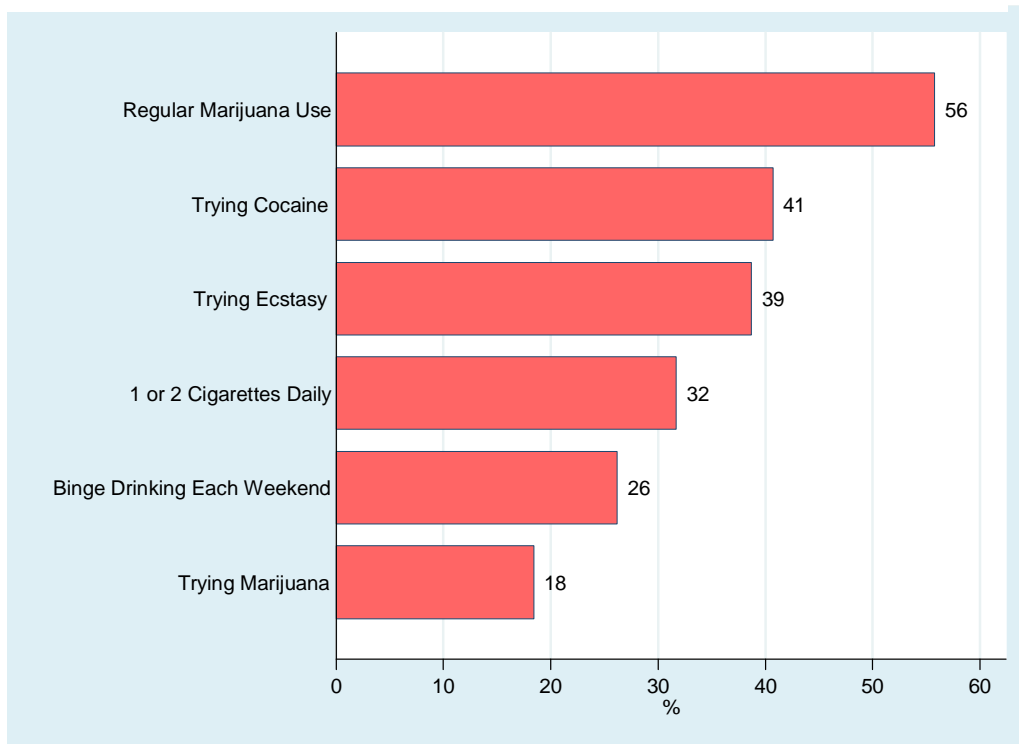


Figure 3.11.2  
Percentage Who “Strongly Disapprove” of Drug Use,  
2011 OSDUHS (Grades 7–12)

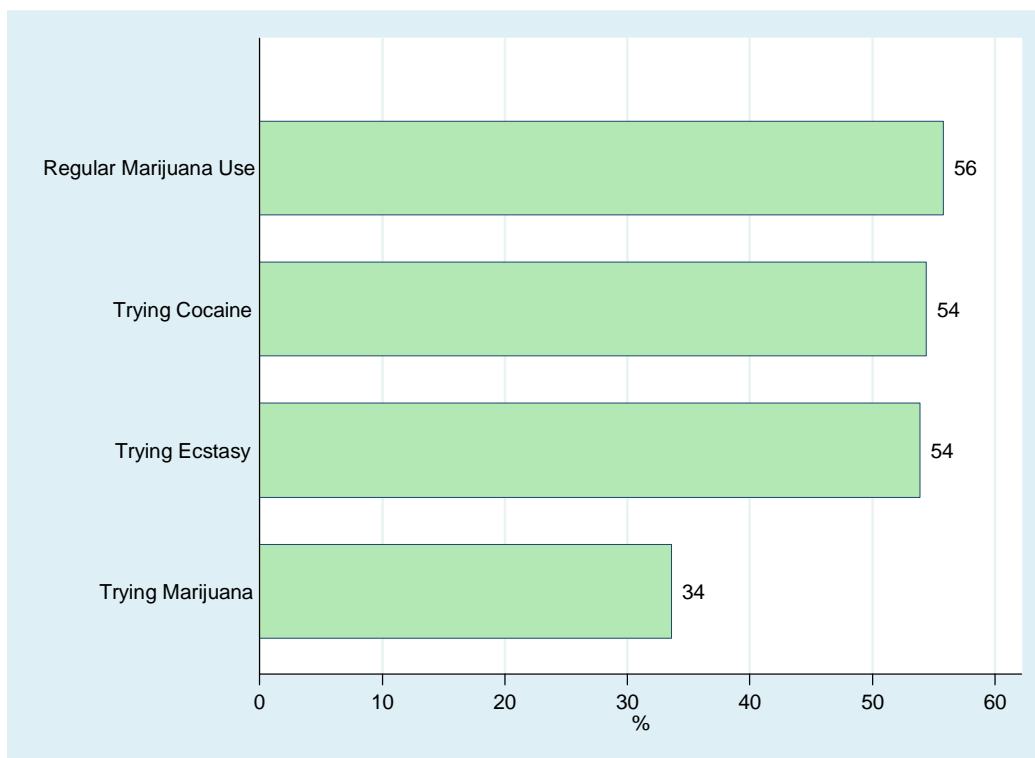


Figure 3.11.3  
 Percentage Who Perceive “Great Risk” of Harm Associated with  
 Drug Use, 1989–2011 OSDUHS (Grades 7, 9, 11 only)

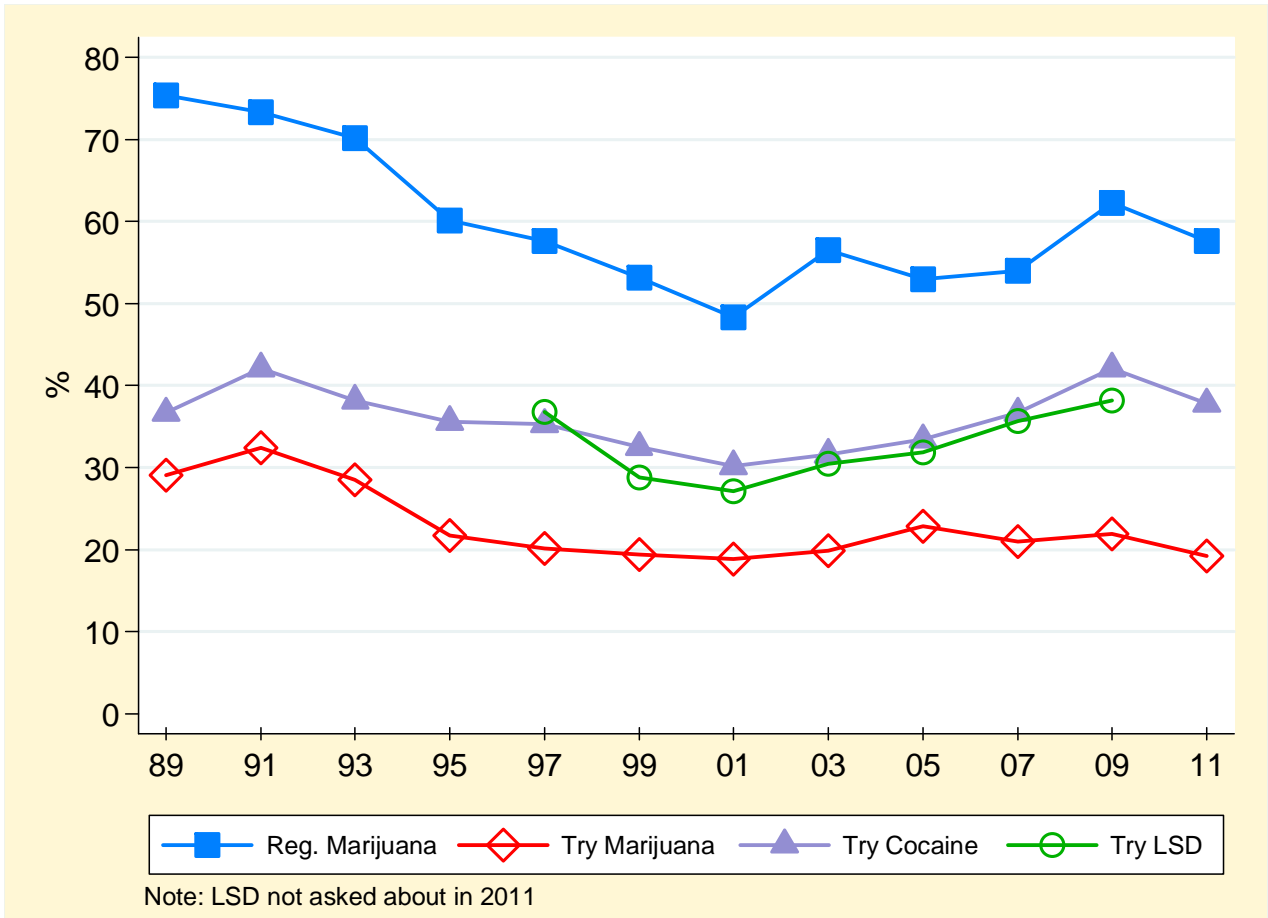


Table 3.11.1: Percentage Who Perceive “Great Risk” of Harm Associated with Drug Use, by Grade, 1989–2011 OSDUHS

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(1837)	(3152)	(3648)	(2935)	(4262)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)
<b>Great Risk in Trying Marijuana Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	19.2	19.7	19.2	20.6	19.4	19.1	18.4
Total <sup>2</sup>	29.1	32.4	28.5	21.7	20.1	19.4	18.8	19.9	22.8	21.0	21.9	19.2
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
Grade 8	—	—	—	—	—	27.7	30.5	29.4	24.7	27.0	27.1	24.8
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
Grade 10	—	—	—	—	—	13.9	16.6	13.3	18.9	14.6	17.4	19.1
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
Grade 12	—	—	—	—	—	13.8	16.0	14.6	12.9	14.2	9.6	12.4
<b>Great Risk in Smoking Marijuana Regularly</b>												
Total <sup>1</sup>	—	—	—	—	—	52.2	49.4	54.9	53.4	52.5	56.9	55.8
Total <sup>2</sup>	75.4	73.3	70.2	60.1	57.6	53.2	48.3	56.5	53.0	54.0	62.3	57.6
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
Grade 8	—	—	—	—	—	60.2	58.7	66.8	59.5	59.8	67.0	63.8
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
Grade 10	—	—	—	—	—	45.5	48.2	48.4	54.9	50.6	52.4	52.3
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
Grade 12	—	—	—	—	—	45.2	44.4	46.8	47.8	45.2	42.3	50.1
<b>Great Risk in Trying Cocaine Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	33.3	31.8	33.7	35.9	37.2	44.4	40.7 <sup>b</sup>
Total <sup>2</sup>	36.7	42.1	38.2	35.6	35.3	32.5	30.2	31.6	33.4	36.7	42.1	37.8
Grade 7	35.1	37.8	30.5	27.1	27.7	23.8	21.4	19.0	25.8	26.9	34.8	28.3
Grade 8	—	—	—	—	—	28.0	28.1	29.4	28.7	24.4	33.5	27.3
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 <sup>b</sup>
Grade 10	—	—	—	—	—	35.4	34.3	33.7	37.6	38.2	48.8	41.8
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
Grade 12	—	—	—	—	—	40.8	40.2	44.0	46.6	46.9	52.9	53.4 <sup>b</sup>
<b>Great Risk in Trying Ecstasy Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	—	32.2	39.5	39.5	40.7	42.8	38.7 <sup>b</sup>
Grade 7	—	—	—	—	—	—	25.5	23.3	27.6	27.0	31.1	28.4
Grade 8	—	—	—	—	—	—	27.3	38.7	32.4	28.8	32.7	25.7
Grade 9	—	—	—	—	—	—	31.7	38.7	39.7	40.4	40.7	35.1
Grade 10	—	—	—	—	—	—	31.3	43.5	42.9	42.0	45.5	40.6 <sup>b</sup>
Grade 11	—	—	—	—	—	—	39.4	43.4	42.8	51.2	45.8	42.1
Grade 12	—	—	—	—	—	—	39.8	46.9	48.8	50.2	53.2	51.0
<b>Great Risk in Smoking 1 or 2 Cigarettes Daily</b>												
Total <sup>1</sup>	—	—	—	—	—	—	—	24.0	27.9	31.2	33.4	31.7 <sup>b</sup>
Grade 7	—	—	—	—	—	—	—	20.4	23.2	24.0	30.3	24.7
Grade 8	—	—	—	—	—	—	—	21.4	19.6	28.3	26.2	25.6
Grade 9	—	—	—	—	—	—	—	22.5	28.0	28.9	35.4	25.5
Grade 10	—	—	—	—	—	—	—	23.8	31.4	31.6	33.8	35.2 <sup>b</sup>
Grade 11	—	—	—	—	—	—	—	26.0	28.8	34.5	35.7	32.8
Grade 12	—	—	—	—	—	—	—	29.2	34.6	37.4	36.2	40.5 <sup>b</sup>

(Continued...)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(1837)	(3152)	(3648)	(2935)	(4262)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)

### Great Risk in Having 5 Drinks of Alcohol Once or Twice Each Weekend

<b>Total</b> <sup>1</sup>	—	—	—	—	—	—	—	—	—	27.4	28.2	26.2
Grade 7										32.2	31.6	30.3
Grade 8										26.4	28.0	30.9
Grade 9										27.3	33.1	24.3
Grade 10										27.1	28.3	29.5
Grade 11										29.8	27.6	25.1
Grade 12										23.2	23.1	21.0

### Great Risk in Trying LSD Once or Twice

<b>Total</b> <sup>1</sup>	—	—	—	—	—	28.9	28.6	32.0	34.2	36.3	41.0	—
<b>Total</b> <sup>2</sup>						36.8	28.8	27.1	30.5	31.9	35.7	38.2
Grade 7						39.6	21.9	19.7	17.8	22.9	22.8	30.5
Grade 8						—	25.7	25.4	26.0	26.4	21.6	32.1
Grade 9						33.4	30.0	25.8	34.0	32.2	35.0	37.5
Grade 10						—	28.3	28.8	33.7	35.6	37.8	43.2
Grade 11						38.0	33.0	35.8	37.0	39.8	48.2	44.8
Grade 12						—	34.1	40.2	40.0	45.3	47.4	50.6

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) based on a random half sample since 2001; (4) LSD not asked about in 2011; (5) <sup>a</sup> significant difference, 2011 vs. 2009, p<.01; <sup>b</sup> significant difference, 2011 vs. 1999, p<.01 (vs. 2001 for ecstasy, vs. 2003 for daily smoking).

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, 1989–2011 OSDUHS

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)
<b>Strongly Disapprove of Trying Marijuana Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	26.3	28.0	28.8	31.4	32.4	28.3	33.6 <sup>ab</sup>
Total <sup>2</sup>	43.1	45.9	38.6	30.9	26.4	28.2	29.8	29.6	33.0	36.6	34.4	38.8 <sup>b</sup>
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 <sup>b</sup>
Grade 8	—	—	—	—	—	35.0	38.6	38.6	43.2	46.2	38.6	46.2 <sup>b</sup>
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 <sup>b</sup>
Grade 10	—	—	—	—	—	18.4	19.0	27.5	31.0	28.3	22.2	29.9 <sup>b</sup>
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
Grade 12	—	—	—	—	—	16.1	22.5	19.0	18.0	16.0	13.6	18.7
<b>Strongly Disapprove of Smoking Marijuana Regularly</b>												
Total <sup>1</sup>	—	—	—	—	—	43.4	39.9	47.1	46.9	47.6	45.2	55.8 <sup>ab</sup>
Total <sup>2</sup>	62.5	62.0	56.8	49.6	44.1	44.9	41.8	47.8	48.0	52.1	50.7	59.7 <sup>b</sup>
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 <sup>b</sup>
Grade 8	—	—	—	—	—	53.5	53.5	62.3	57.8	61.4	60.4	68.2 <sup>b</sup>
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 <sup>ab</sup>
Grade 10	—	—	—	—	—	35.7	30.6	42.4	44.4	43.8	37.0	54.5 <sup>ab</sup>
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 <sup>b</sup>
Grade 12	—	—	—	—	—	33.2	30.1	36.8	37.1	30.5	30.2	41.6
<b>Strongly Disapprove of Trying Cocaine Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	40.1	38.7	44.9	45.3	51.3	49.0	54.4 <sup>ab</sup>
Total <sup>2</sup>	50.6	55.6	48.3	46.1	41.2	41.1	39.1	43.7	43.2	52.2	50.5	56.3 <sup>b</sup>
Grade 7	58.6	59.6	47.7	45.7	44.9	44.6	45.3	48.9	49.4	63.1	59.4	60.4 <sup>b</sup>
Grade 8	—	—	—	—	—	39.9	37.4	43.7	45.5	54.4	47.1	53.2 <sup>b</sup>
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 <sup>b</sup>
Grade 10	—	—	—	—	—	35.0	37.6	46.3	46.3	47.9	44.5	51.1 <sup>b</sup>
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 <sup>b</sup>
Grade 12	—	—	—	—	—	41.5	40.2	48.4	49.6	49.8	50.5	53.9 <sup>b</sup>
<b>Strongly Disapprove of Trying Ecstasy Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	—	38.8	48.9	49.7	55.8	51.5	53.9 <sup>b</sup>
Grade 7	—	—	—	—	—	—	49.6	54.0	54.8	66.3	61.6	61.5 <sup>b</sup>
Grade 8	—	—	—	—	—	—	40.3	50.6	51.2	59.2	50.7	52.5 <sup>b</sup>
Grade 9	—	—	—	—	—	—	35.1	48.5	45.2	52.3	46.9	58.9 <sup>b</sup>
Grade 10	—	—	—	—	—	—	35.6	51.1	47.7	51.8	48.0	49.1 <sup>b</sup>
Grade 11	—	—	—	—	—	—	35.7	43.0	47.6	53.1	54.0	51.3 <sup>b</sup>
Grade 12	—	—	—	—	—	—	38.8	47.4	51.9	53.9	50.2	52.4 <sup>b</sup>
<b>Strongly Disapprove of Trying LSD Once or Twice</b>												
Total <sup>1</sup>	—	—	—	—	—	38.1	40.1	45.5	47.6	52.6	50.5	—
Total <sup>2</sup>	—	—	—	—	—	37.9	39.8	40.5	44.1	47.1	53.5	53.3
Grade 7	—	—	—	—	—	44.1	45.2	47.4	48.9	53.7	62.2	60.3
Grade 8	—	—	—	—	—	—	41.1	39.6	45.5	46.4	55.3	47.4
Grade 9	—	—	—	—	—	34.6	38.0	35.8	42.3	43.0	47.0	47.6
Grade 10	—	—	—	—	—	—	28.1	39.0	47.0	46.1	48.5	46.9
Grade 11	—	—	—	—	—	35.5	37.8	39.5	42.2	45.4	52.2	53.2
Grade 12	—	—	—	—	—	—	37.1	40.9	48.3	51.2	52.2	49.1

(Continued...)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)

**Strongly Disapprove of Having 5 Drinks of Alcohol Once/ Twice Each Weekend**

<b>Total</b> <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	<b>28.1</b>	<b>21.9</b>	—
Grade 7											49.7	36.9	
Grade 8											37.1	29.2	
Grade 9											26.3	23.8	
Grade 10											23.6	18.3	
Grade 11											21.6	19.5	
Grade 12											16.7	11.7	

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) based on a random half sample since 2001; (4) LSD and “having 5 drinks each weekend” were not asked about in 2011; (5) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01 (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 3.11.4, 3.11.5; Table 3.11.3)

In this section, we present the percentage reporting that it is “**fairly easy**” or “**very easy**” to get alcohol, cigarettes, cannabis, cocaine, ecstasy, LSD, and prescription opioid pain relievers without visiting a doctor.

### 2011: Grades 7–12

- In 2011, the perception of easy availability is highest for alcohol (56.1%), followed by cigarettes (51.7%), cannabis (41.6%), a prescription opioid pain reliever (19.2%), ecstasy (13.1%), cocaine (9.6%), and LSD (7.7%).
- Not surprisingly, as grade level increases, students are more likely to report that these drugs are easy to obtain.

### 1999–2011: Grades 7–12

□ The only significant change from 2009 to 2011 in perceived availability was for LSD, which decreased from 11.2% in 2009 to 7.7% in 2011. Compared with 1999 estimates, the perceived availability of alcohol, cannabis, cocaine, and LSD is significantly lower in 2011. The perceived availability of ecstasy is currently lower compared with the 2001 estimate, the first year of monitoring. The perceived availability of cigarettes is currently lower compared with the 2005 estimate, the first year of monitoring.

### 1989–2011: Grades 7, 9, and 11

□ The perceived availability of cannabis and cocaine increased between 1989 and 2001, and subsequently decreased. The perceived availability of alcohol was stable between 1989 and 2003, and has decreased slightly since then. The availability of LSD has been on a downward trend since 1995.

Figure 3.11.4  
Percentage Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug, 2011 OSDUHS (Grades 7–12)

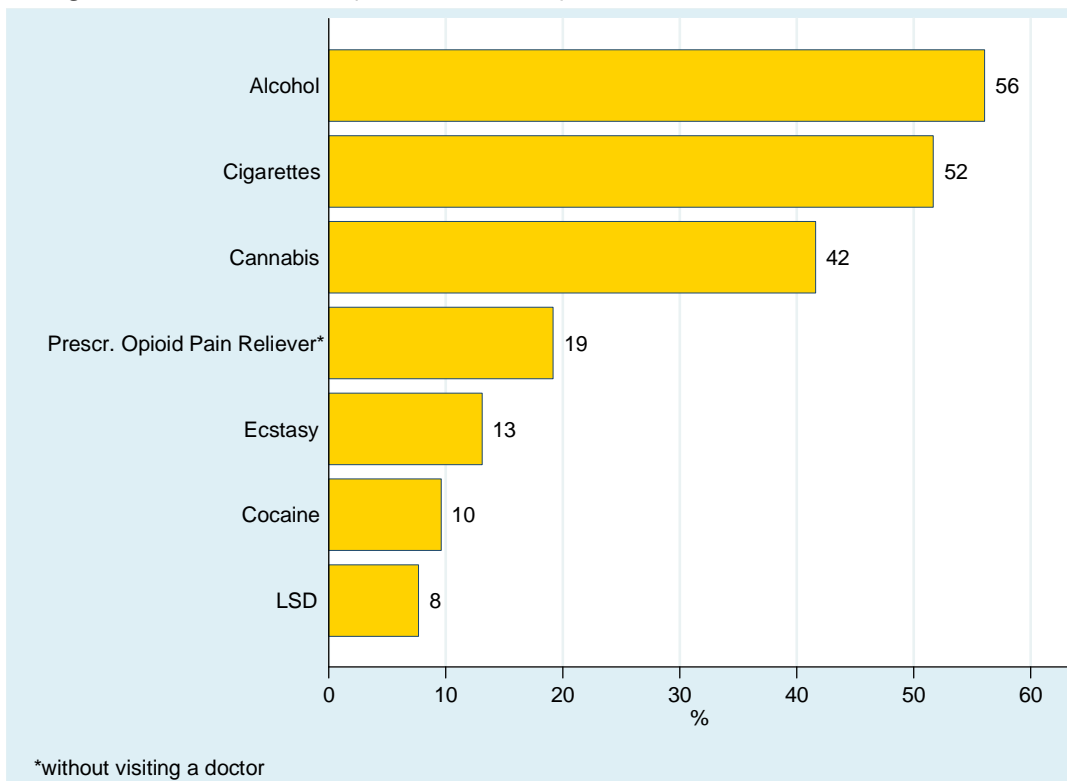


Figure 3.11.5  
 Percentage Reporting it is “Fairly Easy” or “Very Easy” to Obtain the Drug,  
 1989–2011 OSDUHS (Grades 7, 9, 11 only)

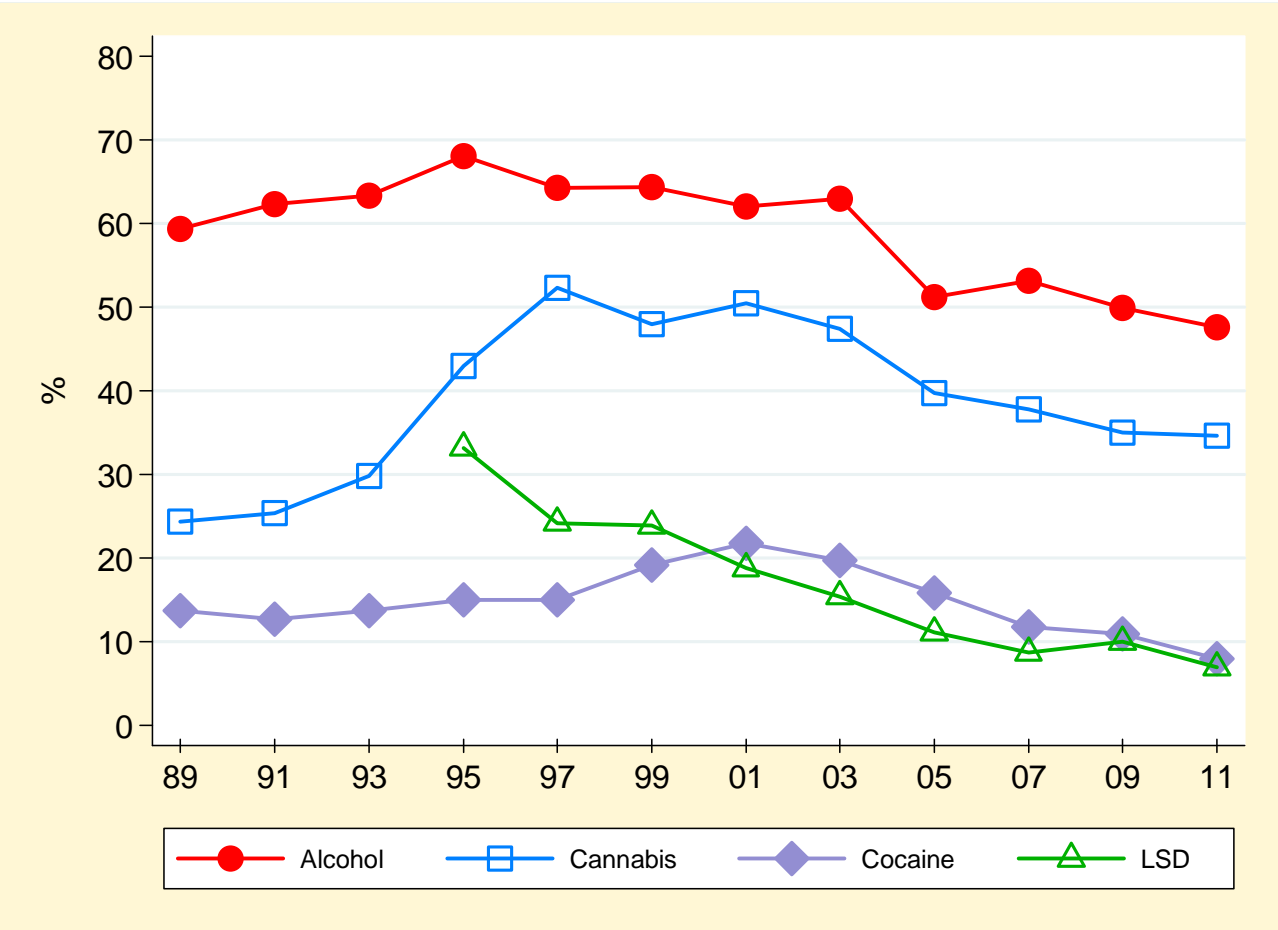


Table 3.11.3: Percentage Reporting it is “Fairly Easy” or “Very Easy” to Obtain Alcohol, Cannabis, Cocaine, LSD, Ecstasy, Cigarettes, and Prescription Opioid Pain Relievers, 1989–2011 OSDUHS

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)
<b>Alcohol</b>												
Total <sup>1</sup>	—	—	—	—	—	66.9	67.3	66.4	56.9	58.7	56.6	56.1 <sup>b</sup>
Total <sup>2</sup>	59.4	62.3	63.4	68.1	64.3	64.4	62.1	63.0	51.2	53.2	49.9	47.6
Grade 7	38.1	40.1	42.8	43.7	40.8	33.8	31.9	33.8	24.6	29.4	19.7	21.0 <sup>b</sup>
Grade 8	—	—	—	—	—	47.9	52.3	43.9	32.8	35.5	32.8	34.8 <sup>b</sup>
Grade 9	60.1	62.6	64.8	69.1	63.8	66.6	68.8	66.2	53.0	54.2	50.0	48.1 <sup>b</sup>
Grade 10	—	—	—	—	—	79.2	80.0	75.1	66.0	63.8	62.1	56.3 <sup>b</sup>
Grade 11	80.8	81.7	78.4	87.2	84.5	87.2	85.1	82.6	74.5	74.6	73.0	68.6 <sup>b</sup>
Grade 12	—	—	—	—	—	87.6	89.6	86.7	83.8	84.5	82.0	85.8
<b>Cannabis</b>												
Total <sup>1</sup>	—	—	—	—	—	51.6	53.4	51.4	45.8	43.4	41.5	41.6 <sup>b</sup>
Total <sup>2</sup>	24.4	25.4	29.8	43.0	52.3	48.0	50.5	47.4	39.7	37.8	35.0	34.6
Grade 7	5.1	4.8	7.1	12.7	17.3	12.2	14.9	14.5	8.9	10.6	4.2	5.7 <sup>b</sup>
Grade 8	—	—	—	—	—	30.9	27.6	28.4	21.4	15.7	13.5	15.6 <sup>b</sup>
Grade 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 <sup>b</sup>
Grade 10	—	—	—	—	—	66.7	68.6	63.5	58.1	54.0	54.0	43.7 <sup>b</sup>
Grade 11	42.0	47.7	50.2	66.4	77.3	75.2	76.6	70.6	64.2	62.3	58.5	60.2 <sup>b</sup>
Grade 12	—	—	—	—	—	76.2	73.6	70.9	71.3	68.1	63.8	69.6
<b>Cocaine</b>												
Total <sup>1</sup>	—	—	—	—	—	19.6	21.6	21.1	17.3	14.4	12.6	9.6 <sup>b</sup>
Total <sup>2</sup>	13.7	12.7	13.7	15.0	15.0	19.2	21.8	19.7	15.8	11.8	10.9	8.0
Grade 7	5.2	4.5	5.0	6.3	6.5	6.5	6.9	7.1	4.6	4.8	1.7	† <sup>b</sup>
Grade 8	—	—	—	—	—	12.7	9.2	10.5	4.7	5.6	5.4	5.3 <sup>b</sup>
Grade 9	14.4	12.5	12.9	15.7	15.1	19.6	26.3	21.2	15.8	10.6	9.9	5.4 <sup>b</sup>
Grade 10	—	—	—	—	—	23.6	24.4	24.4	20.6	18.5	13.6	10.7 <sup>b</sup>
Grade 11	21.9	20.6	21.6	21.5	22.1	29.5	31.4	28.8	26.3	19.8	18.9	16.4 <sup>b</sup>
Grade 12	—	—	—	—	—	25.1	32.5	31.5	28.5	23.7	20.1	14.4 <sup>b</sup>
<b>LSD</b>												
Total <sup>1</sup>	—	—	—	—	—	25.2	20.0	15.6	12.1	10.4	11.2	7.7 <sup>ab</sup>
Total <sup>2</sup>	—	—	—	33.2	24.2	23.9	18.8	15.4	11.1	8.7	10.0	6.9
Grade 7	—	—	—	8.7	5.0	3.8	5.2	3.6	3.3	2.6	†	† <sup>b</sup>
Grade 8	—	—	—	—	—	13.6	7.1	6.2	3.2	4.8	4.4	2.4 <sup>b</sup>
Grade 9	—	—	—	29.7	23.1	23.6	21.3	13.9	10.6	8.7	8.4	4.9 <sup>b</sup>
Grade 10	—	—	—	—	—	33.3	24.9	19.3	17.4	13.6	12.4	8.9 <sup>b</sup>
Grade 11	—	—	—	56.9	41.6	40.9	30.6	25.7	18.9	14.4	18.2	14.1 <sup>b</sup>
Grade 12	—	—	—	—	—	35.2	34.3	20.1	17.6	15.6	17.2	11.3 <sup>b</sup>
<b>Ecstasy</b>												
Total <sup>1</sup>	—	—	—	—	—	—	27.1	19.9	19.3	15.9	13.3	13.1 <sup>b</sup>
Grade 7	—	—	—	—	—	—	3.9	4.7	3.7	3.8	†	† <sup>b</sup>
Grade 8	—	—	—	—	—	—	12.2	6.2	5.3	4.6	3.8	3.3 <sup>b</sup>
Grade 9	—	—	—	—	—	—	28.7	14.4	16.8	12.8	9.7	8.2 <sup>b</sup>
Grade 10	—	—	—	—	—	—	37.4	22.3	23.8	18.7	15.9	12.0 <sup>b</sup>
Grade 11	—	—	—	—	—	—	36.8	33.3	32.2	22.7	20.8	25.0 <sup>b</sup>
Grade 12	—	—	—	—	—	—	46.0	34.7	30.9	28.3	21.9	21.6 <sup>b</sup>

(Continued...)

	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )						(4447)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)

### Cigarettes

Total <sup>1</sup>	—	—	—	—	—	—	—	—	—	<b>56.9</b>	<b>48.6</b>	<b>52.5</b>	<b>51.7</b> <sup>b</sup>
Grade 7										18.5	17.7	12.2	14.0
Grade 8										29.4	24.3	26.2	28.9
Grade 9										58.1	46.1	48.2	45.3 <sup>b</sup>
Grade 10										67.8	52.8	61.6	52.5 <sup>b</sup>
Grade 11										76.1	67.0	72.0	69.7
Grade 12										83.6	73.3	74.8	78.0

### Prescription Opioid Pain Reliever\*

Total <sup>1</sup>	—	—	—	—	—	—	—	—	—	—	—	—	<b>19.2</b>
Grade 7													6.6
Grade 8													13.7
Grade 9													22.1
Grade 10													19.5
Grade 11													24.4
Grade 12													23.7

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) based on a random half sample in each year (except for alcohol); (4) † indicates estimate suppressed due to unreliability; (5) \* such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, codeine, without visiting a doctor; (6) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, p<.01 (vs. 2001 for ecstasy, vs. 2005 for cigarettes).

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

The 2011 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 cigarette in the past 12 months, where did you get it from? (Please choose only one answer).” The response options were from 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.

2011: Grades 7–12

■ Among those who reported smoking at least one whole cigarette in the past 12 months, (n=605), the most common source was a friend or relative, followed by a store/gas station/bar. The least common source was the internet.

All sources are listed below:

• corner store/grocery store/ supermarket/gas station/bar	20%
• the internet	<0.5%
• a friend or family member	58%
• someone else	8%
• a native reserve	2%
• other source not listed	4%
• don’t remember	8%

## Source of Alcohol

In 2011, students were asked how they usually obtain alcohol: “In the last 12 months, how did you usually get the alcohol you drank? (Please choose one answer only).” The response options were someone gave it to me; I took it from home; I took it from somewhere else; I bought it in a liquor store; I bought it in a beer store; I bought it in 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.

2011: Grades 7–12

■ Among those who reported drinking in the past 12 months, (n=2,494), the most common response option was being given alcohol by someone, followed by giving someone money to purchase alcohol. The least common method of obtaining alcohol was purchasing it at a public event.

All sources are listed below:

• someone gave it to me	38%
• I took it from home	12%
• I took it from somewhere else	1%
• I bought it in a liquor store	4%
• I bought it in a beer store	2%
• I bought it in a restaurant/bar/ club	<1%
• I bought it at a public event	<0.5%
• I gave someone else money to buy it for me	28%
• I got it some other way	8%
• don’t remember	5%

## Source of Diverted Prescription Opioid Pain Relievers

The 2011 OSDUHS included a question about where students obtained (if at all) prescription opioids, without having a doctor’s prescription. A random half sample was asked “*If you used pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, 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; and 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.

2011: Grades 7–12

- Among those who used opioid pain relievers non-medically in the past year (n=506), the most common source was someone at home. The least common sources were at a party and “the street.”

All sources are listed below:

- a parent or sibling 63%
- someone else I live with 4%
- a friend 6%
- someone else I know 4%
- someone at a party < 0.5%
- someone on the “street” or at a bar/club < 0.5%
- other source not listed 11%
- don’t remember 12%

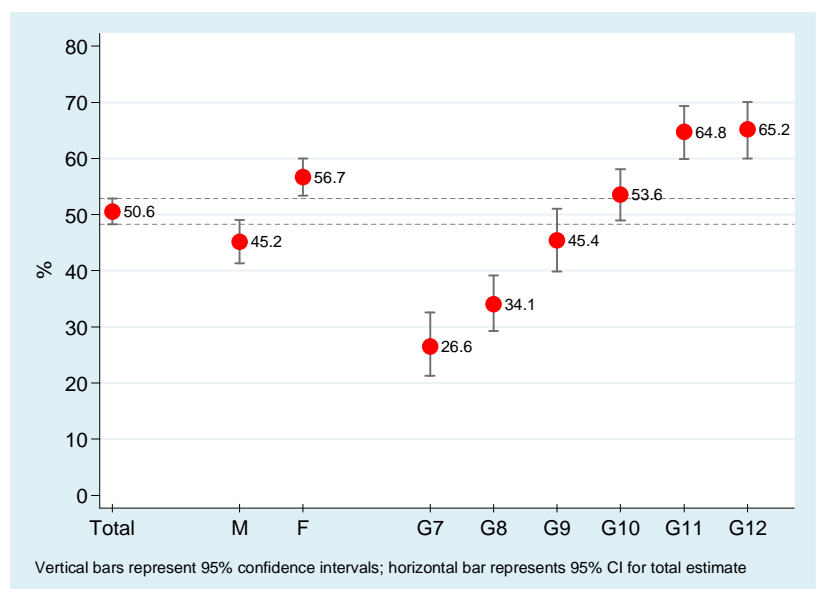
## Opinions about Alcohol Advertising Targeting Youth (Figure 3.11.6)

Students were asked whether they strongly agreed, somewhat agreed, somewhat disagreed, or strongly disagreed with the following statement: “*Alcohol companies advertise to people my age.*” We present the percentage of students who either strongly agree or somewhat agree with this statement.

2011: Grades 7–12

- Among the total sample, 50.6% (95% CI: 48.3%-52.8%) believe that alcohol companies advertise to people in their age group.
- Females (56.7%) are more likely than males (45.2%) to believe that alcohol companies advertise to people in their age group.
- There are significant grade differences as agreement increases incrementally with grade level, from 26.6% of 7<sup>th</sup>-graders to about 65% of 11<sup>th</sup>- and 12<sup>th</sup>-graders.

Figure 3.11.6  
Percentage Who Agree that Alcohol Companies Advertise to People their Age, by Sex and Grade, 2011 OSDUHS



## 3.12 School and Neighbourhood Factors

### Recall of Substance Education at School

(Figure 3.12.1)

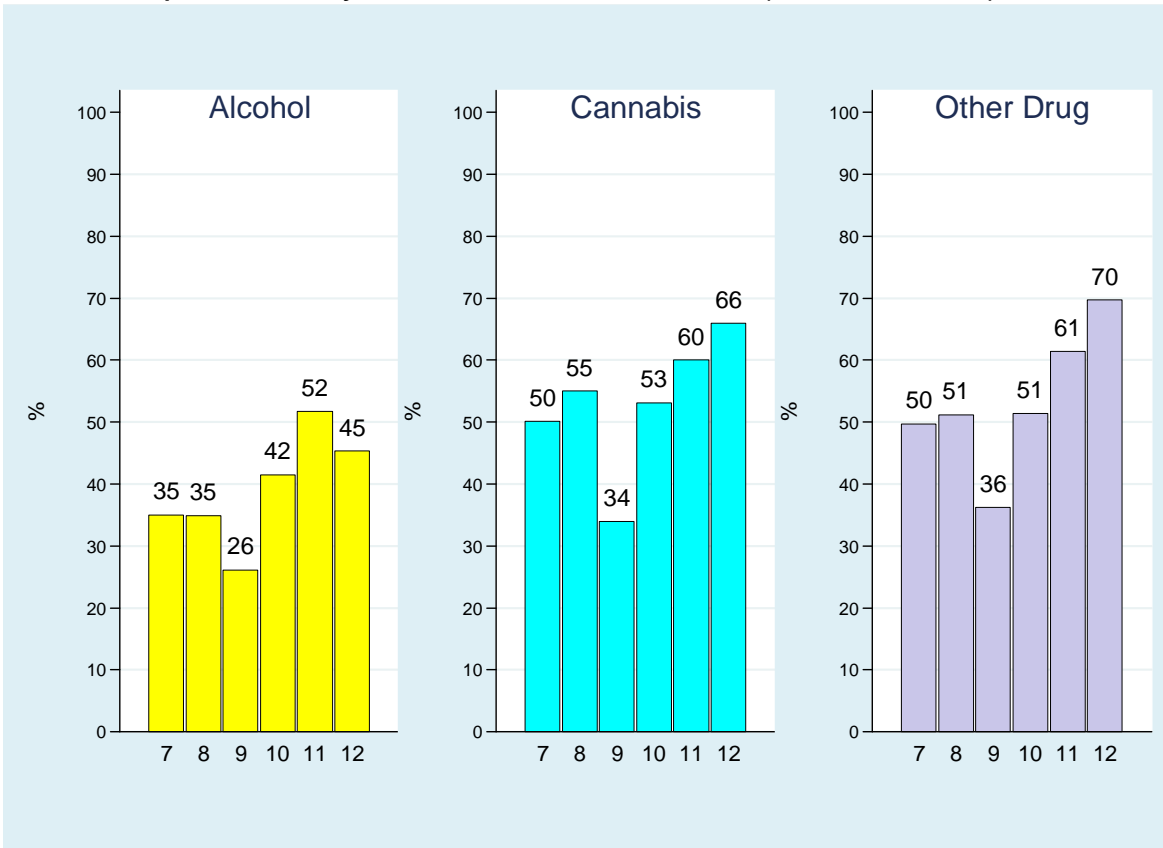
In 1998, substance use education was mandated for Ontario students in grades 1 through 8 as part of the Health and Physical Education curriculum (Ontario Ministry of Education and Training). In 1999, Ontario introduced a curriculum for high school students stipulating that at least one Health and Physical Education credit is needed in order to graduate. Most students fulfill this requirement in 9<sup>th</sup>- or 10<sup>th</sup>-grade. Substance use education is a course component in both grades 9 and 10.

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?*”; (2) “*Since September, how many classes or presentations did you have that talked about cannabis (marijuana or hashish)?*”; (3) “*Since September, how many classes or presentations did you have that talked about drugs other than alcohol, tobacco, or cannabis?*” We focus on the percentage of students who recall receiving no class or presentation about substances. (Note that students who completed the survey during the months of October, November, and December were excluded from this analysis.)

2011: Grades 7–12

- In 2011, 39.9% (95% CI: 35.6%-44.4%) of students could not recall receiving at least one class about alcohol since the start of the school year. This significantly varies by grade, and is lowest in grade 9 (26.1%).
- About 54.1% (95% CI: 51.0%-57.2%) of students could not recall at least one class about cannabis since the start of the school year. This varies by grade, and is lowest in grade 9 (34.0%).
- About 54.7% (95% CI: 51.6%-57.8%) of students could not recall at least one class about other drugs. This varies by grade, and is lowest in grade 9 (36.2%).

Figure 3.12.1  
Percentage Recalling No Class/Presentation about the Substance  
Since September, by Grade, 2011 OSDUHS (Grades 7–12)



## Recall of Other Prevention Activities at School

In the 2011 OSDUHS students were asked whether their school had any substance use prevention activities or events since September. The question asked was: “*Since September, were there any activities or events at your school (outside of regular class time) to stop students from using alcohol or drugs?*” The response options were: no; yes, there were activities, but I was not involved; yes, there were activities, and I was involved; or not sure. (Note that students who completed the survey during the months of October, November, and December were excluded from this analysis.)

### 2011: Grades 7–12

- About 20.2% (95% CI: 18.0%-22.6%) of students could recall a prevention activity or event at their school since the start of the school year. Roughly half (48.1%; 95% CI: 45.6%-50.7%) of students could not recall a prevention activity/event, and 31.7% (95% CI: 29.6%-33.8%) were unsure.
- There is significant grade variation, with students in grades 9 through 12 (about 22%-25%) most likely to recall a prevention activity/event at school compared with students in grades 7 and 8 (about 11%-13%).
- There are no significant regional differences.

## Drug Problem in School

(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?*”

### 2011: Grades 7–12

- In 2011, 24.8% (95% CI: 22.2%-27.6%) of students believe that drug use in their school is a big problem, 49.6% (95% CI: 46.8%-52.5%) believe it is a small problem, and 25.5% (95% CI: 22.3%-29.0%) believe that drug use is not a problem in their school.
- Females (28.5%) are more likely than males (21.5%) to believe that drug use is a big problem in their school.
- Not surprisingly, 7<sup>th</sup>- and 8<sup>th</sup>-graders are least likely to indicate 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 it was when this was first measured in 1993 (14.8%).

Table 3.12.1: Percentage Reporting the Perception that Drug Use in their School is a “Big Problem,” 1993–2011

	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )				(2148)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(1241)	(1453)	(1527)	(1168)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)
Total <sup>1</sup> (95% CI)	—	—	—	<b>23.5</b> (20.5-26.7)	<b>26.6</b> (23.1-30.5)	<b>27.8</b> (25.2-30.5)	<b>24.9</b> (22.4-27.6)	<b>25.0</b> (22.2-28.0)	<b>23.7</b> (21.4-26.2)	<b>24.8</b> (22.2-27.6)
Total <sup>2</sup>	<b>14.8</b> (11.4-19.0)	<b>26.2</b> (21.5-31.5)	<b>25.4</b> (22.1-29.1)	<b>25.9</b> (22.2-30.0)	<b>25.5</b> (20.7-31.0)	<b>28.2</b> (25.0-31.6)	<b>24.1</b> (21.4-27.1)	<b>23.5</b> (20.5-26.7)	<b>22.6</b> (19.7-25.8)	<b>23.5</b> (20.8-26.5)
Sex										
Males <sup>1</sup>	—	—	—	22.3	26.7	25.7	23.2	22.2	20.2	21.5
Males <sup>2</sup>	12.7	23.3	23.9	25.8	26.9	26.3	25.6	20.8	19.7	21.2
Females <sup>1</sup>	—	—	—	24.6	26.5	29.7	26.9	28.1	27.7	28.5
Females <sup>2</sup>	16.9	28.9	26.8	26.1	24.1	30.0	22.7	26.4	25.8	26.0
Grade										
7	9.0	13.7	14.5	17.9	8.1	14.2	12.4	10.9	9.8	8.9
8	—	—	—	14.6	8.0	14.8	11.3	13.3	9.6	11.4
9	18.0	31.8	29.1	29.9	35.0	32.6	28.9	27.8	26.6	30.4
10	—	—	—	21.4	37.0	35.7	34.4	30.3	35.5	34.2
11	16.5	31.0	31.2	27.8	31.2	34.7	30.3	30.3	26.4	28.2
12	—	—	—	26.1	37.4	28.8	29.8	32.8	25.8	28.7
Region										
Toronto <sup>1</sup>	—	—	—	21.8	21.1	25.6	23.6	23.4	22.1	20.5
Toronto <sup>2</sup>	16.5	21.5	24.9	23.7	21.0	22.8	23.0	22.9	19.8	20.6
North <sup>1</sup>	—	—	—	26.6	30.7	31.4	30.8	32.0	28.4	33.2
North <sup>2</sup>	35.5	10.4	35.4	24.2	32.3	32.0	31.7	32.6	29.3	35.1
West <sup>1</sup>	—	—	—	25.5	29.4	29.0	28.1	27.1	23.3	26.1
West <sup>2</sup>	11.9	32.7	26.2	30.1	27.8	32.2	27.2	24.7	24.2	20.0
East <sup>1</sup>	—	—	—	20.6	25.0	26.3	20.3	21.1	24.3	24.2
East <sup>2</sup>	15.4	23.7	19.3	21.9	24.6	24.2	19.3	19.6	20.7	27.5

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) based on a random half sample in each year; (5) no significant changes between 1999 and 2011 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 3.12.2; 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?*” We present the percentage reporting being drunk or high at least once in the past year.

### 2011: Grades 7–12

- Among all students, 16.0% (95% CI: 13.9%-18.4%) report that they were intoxicated at school at least once during the 12 months before the survey. This percentage represents about 157,300 Ontario students in grades 7 through 12.
- Males (17.0%) and females (14.9%) are equally likely to report being drunk or high at school.
- Students in grades 10, 11, and 12 (20%-25%) are significantly more likely to report being intoxicated at school, compared with the younger grades.
- There are significant differences among the regions, with students in the North (18.7%) and the West (19.2%) most likely to report being intoxicated at school.

### 2005–2011: Grades 7–12

- Among the total sample, the 2011 estimate (16.0%) is not significantly different from the 2009 estimate (15.8%), or the estimate found in 2005 (16.6%), the first year of monitoring.

## Getting Drugs at School

(Figure 3.12.3; 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?*”

### 2011: Grades 7–12

- Among all students, 20.3% (95% CI: 18.5%-22.3%) report that they had been offered, sold, or given a drug at school during the 12 months before the survey. This percentage represents about 200,100 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 (23.6% vs 16.7%, respectively).
- With increasing grade, students are more likely to be offered, sold, or given a drug, peaking in grade 11 at 30.9%.
- There are no significant differences among the regions.

### 2005–2011: Grades 7–12

- Among the total sample, the 2011 estimate (20.3%) is not significantly different from the 2009 estimate (22.7%), or the estimate found in 2005 (23.1%), the first year of monitoring.

Figure 3.12.2  
 Percentage Reporting Being Drunk or High at School at Least Once in the Past Year by Sex, Grade, and Region, 2011 OSDUHS

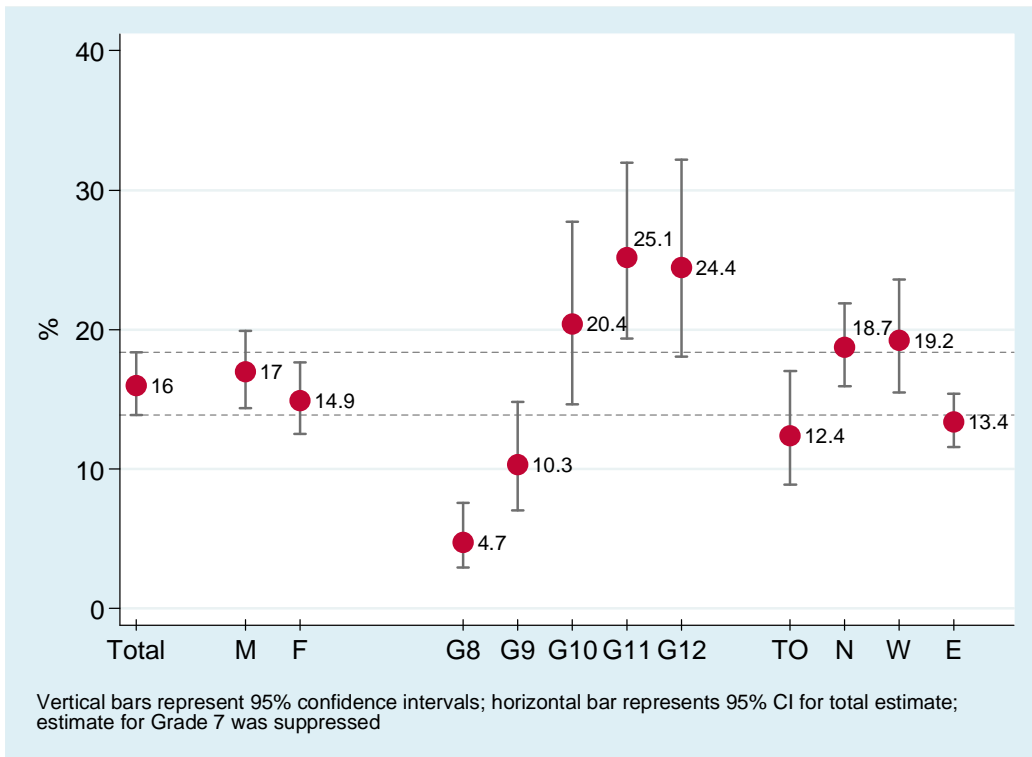


Figure 3.12.3  
 Percentage Reporting Having Been Offered, Given or Sold an Illegal Drug at School at Least Once in the Past Year by Sex, Grade, and Region, 2011 OSDUHS

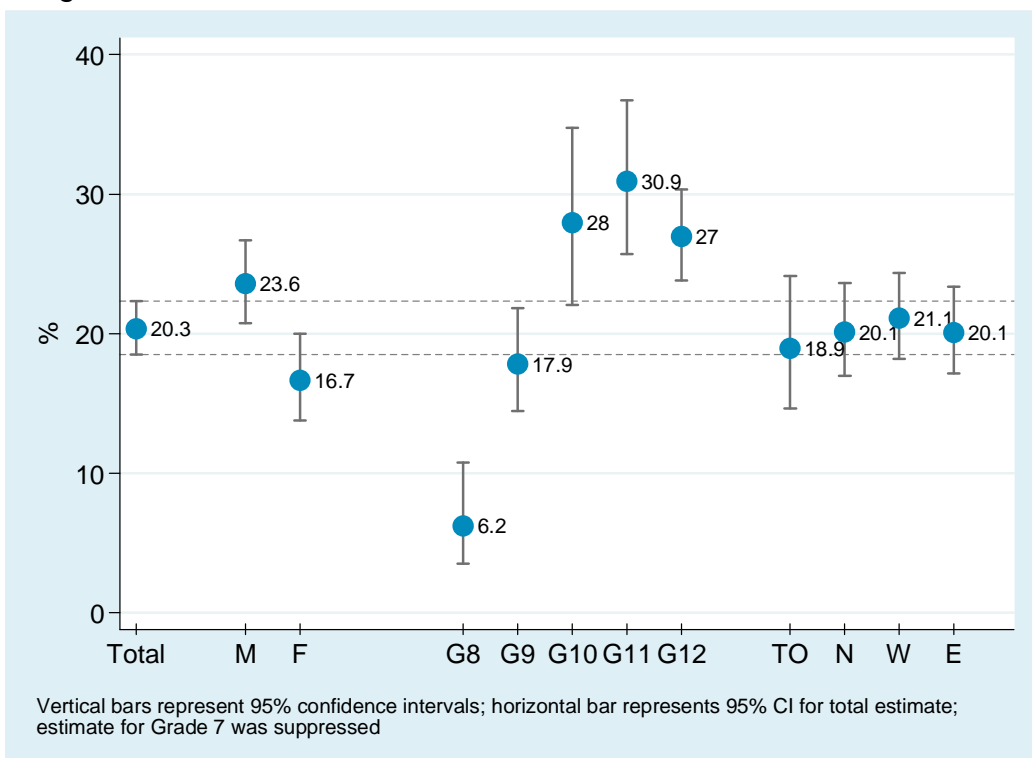


Table 3.12.2: Percentage Reporting Being Drunk or High at School at Least Once in the Past Year, 2005–2011 OSDUHS (Grades 7–12)

	(N)	2005 (3648)	2007 (2935)	2009 (4261)	2011 (4472)
Total (95% CI)		<b>16.6</b> (14.9-18.5)	<b>15.4</b> (13.5-17.4)	<b>15.8</b> (14.0-17.8)	<b>16.0</b> (13.9-18.4)
Sex					
Males		<b>18.5</b> (16.4-21.0)	<b>17.2</b> (14.7-20.0)	<b>17.3</b> (15.0-19.8)	<b>17.0</b> (14.4-19.9)
Females		<b>14.5</b> (12.5-16.8)	<b>13.3</b> (11.1-15.8)	<b>14.1</b> (12.0-16.4)	<b>14.9</b> (12.5-17.6)
Grade					
7		†	<b>3.6</b> (2.0-6.5)	†	†
8		<b>3.7</b> (2.2-6.4)	<b>4.0</b> (2.2-7.2)	<b>3.8</b> (2.5-5.8)	<b>4.7</b> (2.9-7.6)
9		<b>16.6</b> (13.4-20.3)	<b>15.5</b> (11.7-20.1)	<b>10.6</b> (7.8-14.2)	<b>10.3</b> (7.0-14.8)
10		<b>22.0</b> (18.4-25.9)	<b>18.4</b> (13.7-24.3)	<b>21.4</b> (16.8-26.9)	<b>20.4</b> (14.6-27.7)
11		<b>27.8</b> (22.7-33.5)	<b>21.8</b> (17.7-26.6)	<b>22.9</b> (18.4-28.1)	<b>25.1</b> (19.4-32.0)
12		<b>24.3</b> (20.6-28.4)	<b>24.4</b> (20.2-29.0)	<b>26.2</b> (21.5-31.6)	<b>24.4</b> (18.1-32.2)
Region					
Toronto		<b>13.8</b> (11.0-17.3)	<b>14.0</b> (9.6-20.0)	<b>13.3</b> (9.6-18.0)	<b>12.4</b> (8.9-17.0)
North		<b>18.0</b> (13.4-23.6)	<b>21.2</b> (17.1-26.0)	<b>17.7</b> (11.8-25.8)	<b>18.7</b> (15.9-21.9)
West		<b>17.9</b> (15.2-21.0)	<b>15.8</b> (13.2-18.8)	<b>16.9</b> (13.8-20.7)	<b>19.2</b> (15.5-23.6)
East		<b>16.3</b> (13.1-20.0)	<b>14.1</b> (10.9-18.1)	<b>15.1</b> (12.9-17.6)	<b>13.4</b> (11.6-15.4)

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 changes between 2005 and 2011.

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 at Least Once in the Past Year, 2005–2011 OSDUHS (Grades 7–12)

	(N)	2005 (3648)	2007 (2935)	2009 (4261)	2011 (4472)
Total (95% CI)		<b>23.1</b> (21.0-25.4)	<b>21.1</b> (18.8-23.6)	<b>22.7</b> (20.8-24.7)	<b>20.3</b> (18.5-22.3)
Sex					
Males		<b>26.1</b> (23.4-29.0)	<b>24.2</b> (20.8-27.9)	<b>26.1</b> (23.5-29.0)	<b>23.6</b> (20.7-26.7)
Females		<b>19.9</b> (17.5-22.6)	<b>17.7</b> (15.5-20.1)	<b>18.8</b> (16.8-21.1)	<b>16.7</b> (13.8-20.0)
Grade					
7		<b>3.3</b> (2.0-5.6)	<b>4.6</b> (2.6-8.0)	†	†
8		<b>5.5</b> (3.5-8.4)	<b>5.2</b> (3.2-8.3)	<b>4.9</b> (3.1-7.5)	<b>6.2</b> (3.5-10.8)
9		<b>26.2</b> (21.8-31.2)	<b>22.5</b> (17.9-27.8)	<b>23.2</b> (18.4-28.9)	<b>17.9</b> <sup>b</sup> (14.5-21.8)
10		<b>30.1</b> (25.3-35.3)	<b>26.1</b> (20.4-32.7)	<b>31.5</b> (27.1-36.4)	<b>28.0</b> (22.1-34.8)
11		<b>34.4</b> (29.5-39.8)	<b>32.4</b> (27.8-37.4)	<b>35.9</b> (30.5-41.7)	<b>30.9</b> (25.7-36.7)
12		<b>35.1</b> (30.3-40.2)	<b>30.3</b> (26.0-35.0)	<b>28.9</b> (23.5-35.0)	<b>27.0</b> (23.8-30.4)
Region					
Toronto		<b>21.2</b> (16.0-27.7)	<b>20.0</b> (14.3-27.4)	<b>18.0</b> (13.6-23.3)	<b>18.9</b> (14.6-24.1)
North		<b>22.4</b> (17.9-27.8)	<b>22.7</b> (16.8-30.0)	<b>27.3</b> (21.8-33.5)	<b>20.1</b> (17.0-23.6)
West		<b>25.3</b> (22.1-28.8)	<b>20.5</b> (17.0-24.5)	<b>24.4</b> (21.2-27.8)	<b>21.1</b> (18.2-24.4)
East		<b>21.3</b> (17.8-25.3)	<b>22.2</b> (18.6-26.4)	<b>22.0</b> (19.3-25.0)	<b>20.1</b> (17.2-23.4)

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 difference 2011 vs. 2009; <sup>b</sup> 2011 vs. 2005 significant difference, 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

## Exposure to Drug Selling

(Figures 3.12.4, 3.12.5; Tables 3.12.4, 3.12.5)

Starting in 1995, students were asked whether anyone had tried to sell them drugs anywhere during the past 12 months, and whether or not they had seen drug selling in their neighbourhood.

### 2011: Grades 7–12

- In 2011, just over one-quarter (26.8%) of students report that someone had tried to sell them drugs during the past year. This estimate represents about 262,300 students in grades 7 through 12 in Ontario.
- Males and older students are more likely to report that someone tried to sell drugs to them. Among the four regions, Toronto students are significantly less likely to report that someone tried to sell drugs to them compared with students in the other regions.
- Just over one-quarter (26.0%) of students – an estimated 254,900 in Ontario – had seen someone selling drugs in their neighbourhood in the past year.
- There is no significant difference between males and females regarding witnessing drug selling in the neighbourhood. Older students are more likely to witness drug selling. Among the four regions, Toronto students are significantly less likely to report witnessing drug selling in their neighbourhood compared with students in the other regions.

### 1999–2011: Grades 7–12

- Among the total sample, the percentage reporting that someone had tried to sell them drugs in 2011 (26.8%) is significantly lower than in 2009 (32.2%). The current estimate is also significantly lower than estimates from a decade ago.
- The percentage of students in 2011 (26.0%) that report witnessing drug selling in their neighbourhood is similar to the 2009 estimate (28.3%). However, the current estimate is significantly lower than estimates from a decade ago.

Figure 3.12.4  
 Percentage Reporting that Someone Had Tried to Sell Them Drugs  
 in the Past Year by Sex, Grade, and Region, 2011 OSDUHS

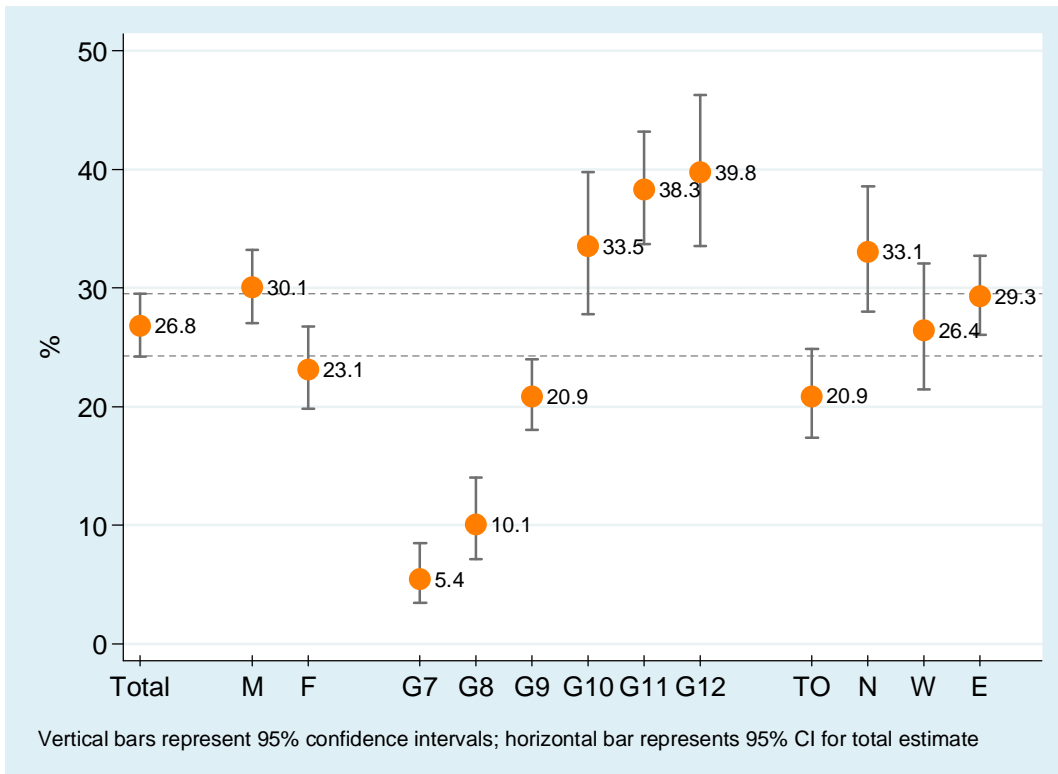


Figure 3.12.5  
 Percentage Reporting Witnessing Drug Selling in their Neighbourhood  
 in the Past Year by Sex, Grade, and Region, 2011 OSDUHS

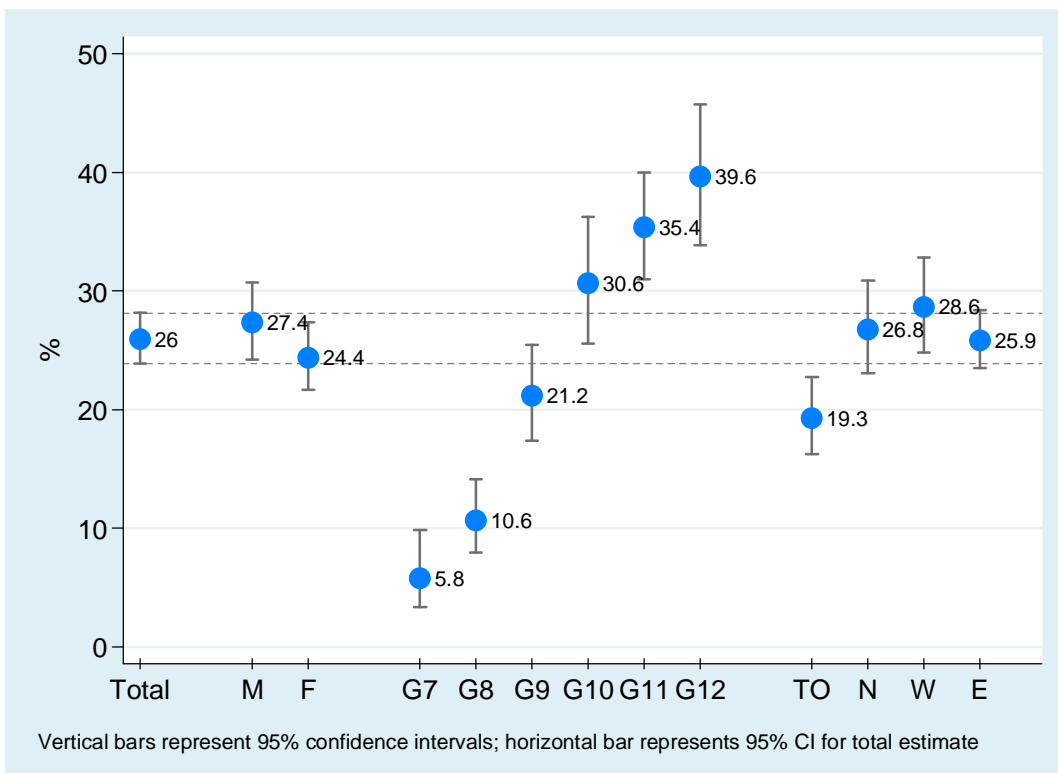


Table 3.12.4: Percentage Reporting that Someone Tried to Sell Drugs to Them in the Past Year, 1995–2011 OSDUHS

	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )			(2148)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(2907)	(1527)	(1168)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)
Total <sup>1</sup> (95% CI)	—	—	<b>35.4</b> (32.7-38.3)	<b>38.8</b> (35.3-42.5)	<b>36.7</b> (34.4-39.1)	<b>33.0</b> (30.8-35.2)	<b>31.0</b> (28.1-34.0)	<b>32.2</b> (30.2-34.2)	<b>26.8</b> (24.2-29.5)
Total <sup>2</sup>	<b>30.6</b> (28.0-33.3)	<b>31.0</b> (28.8-33.2)	<b>34.5</b> (31.2-38.0)	<b>37.3</b> (32.4-42.6)	<b>34.8</b> (31.9-37.8)	<b>30.5</b> (27.5-33.7)	<b>27.1</b> (23.9-30.6)	<b>28.3</b> (25.6-31.1)	<b>22.8</b> (20.4-25.3)
Sex									
Males <sup>1</sup>	—	—	42.8	45.6	45.3	37.8	35.6	38.7	30.0
Males <sup>2</sup>	35.1	38.9	42.5	43.9	44.6	34.2	30.6	34.6	24.9
Females <sup>1</sup>	—	—	27.9	32.4	28.7	27.6	25.8	24.9	23.1
Females <sup>2</sup>	26.4	24.1	26.4	31.0	25.8	26.8	23.2	21.2	20.5
Grade									
7	11.3	11.7	11.5	13.1	11.9	8.5	10.8	5.7	5.4
8	—	—	23.1	20.2	21.0	16.2	14.2	14.0	10.1
9	30.4	33.5	36.8	46.6	36.8	35.1	29.0	28.1	20.9
10	—	—	45.2	53.7	47.2	43.7	41.5	41.2	33.5
11	46.9	45.3	51.2	50.8	51.2	46.4	39.9	45.4	38.3
12	—	—	44.9	42.0	44.8	43.6	43.4	45.4	39.8
Region									
Toronto <sup>1</sup>	—	—	27.8	29.3	32.6	24.4	29.1	27.0	20.9
Toronto <sup>2</sup>	27.8	26.7	29.7	32.0	30.5	23.6	21.2	19.4	17.9
North <sup>1</sup>	—	—	36.0	34.9	35.8	36.2	35.2	44.2	33.1
North <sup>2</sup>	31.4	35.6	32.4	31.1	39.2	33.0	28.9	38.5	28.6
West <sup>1</sup>	—	—	38.9	43.3	39.0	35.1	29.5	32.2	26.4
West <sup>2</sup>	32.4	32.5	37.6	43.5	37.2	30.7	27.0	29.9	21.3
East <sup>1</sup>	—	—	34.7	39.7	36.1	34.8	33.6	32.8	29.3
East <sup>2</sup>	29.5	30.2	33.6	34.5	32.7	34.0	30.6	29.2	26.1

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) based on a random half sample in each year except 1995; (4) <sup>a</sup> 2011 vs. 2009 significant difference, p<.01; <sup>b</sup> 2011 vs. 1999 significant difference, 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, 1995–2011 OSDUHS

	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N <sup>1</sup> )			(2148)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)
(N <sup>2</sup> )	(2907)	(1527)	(1168)	(953)	(1618)	(1862)	(1488)	(2069)	(2254)
Total <sup>1</sup> (95% CI)	—	—	<b>31.4</b> (28.5-34.4)	<b>32.1</b> (29.0-35.3)	<b>32.0</b> (29.9-34.3)	<b>27.0</b> (25.0-29.2)	<b>28.0</b> (25.6-30.5)	<b>28.3</b> (26.1-30.7)	<b>26.0</b> <sup>b</sup> (23.9-28.1)
Total <sup>2</sup>	<b>24.5</b> (21.8-27.5)	<b>25.5</b> (22.8-28.4)	<b>29.3</b> (25.2-33.7)	<b>31.9</b> (27.3-36.8)	<b>31.5</b> (28.8-34.2)	<b>24.7</b> (22.1-27.4)	<b>26.7</b> (24.0-29.6)	<b>23.6</b> (21.0-26.5)	<b>21.9</b> (19.5-24.5)
Sex									
Males <sup>1</sup>	—	—	36.2	37.6	37.7	29.9	29.4	30.8	27.4 <sup>b</sup>
Males <sup>2</sup>	26.7	30.6	35.2	36.9	38.5	27.0	28.2	26.9	22.5
Females <sup>1</sup>	—	—	26.5	26.8	26.7	23.9	26.4	25.6	24.4
Females <sup>2</sup>	22.6	21.0	23.2	27.0	25.0	22.3	25.0	20.0	21.3
Grade									
7	8.7	12.8	12.2	14.2	14.3	7.8	12.5	10.2	5.8 <sup>b</sup>
8	—	—	22.8	17.8	22.3	13.4	13.1	14.0	10.6 <sup>b</sup>
9	24.4	26.4	27.5	36.6	30.8	28.1	30.0	26.3	21.2
10	—	—	43.8	39.9	36.7	34.0	35.3	34.8	30.6 <sup>b</sup>
11	38.0	35.6	45.8	44.2	46.2	36.9	36.2	31.4	35.4
12	—	—	38.7	36.7	37.2	38.2	35.7	42.6	39.6
Region									
Toronto <sup>1</sup>	—	—	26.3	31.1	30.7	23.6	28.9	28.0	19.3
Toronto <sup>2</sup>	26.2	26.8	26.7	34.4	30.3	22.6	23.8	24.4	18.5
North <sup>1</sup>	—	—	33.0	26.0	27.6	27.8	29.9	24.1	26.8
North <sup>2</sup>	27.7	24.4	29.0	21.2	28.4	23.8	29.4	21.5	22.1
West <sup>1</sup>	—	—	32.5	33.0	33.7	27.5	27.4	28.4	28.6
West <sup>2</sup>	25.2	26.3	29.4	33.8	34.3	24.2	27.6	24.2	21.8
East <sup>1</sup>	—	—	32.3	33.0	31.5	28.4	27.9	29.2	25.9
East <sup>2</sup>	21.5	23.8	30.7	29.3	28.4	26.8	26.5	22.8	23.7

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) based on a random half sample in each year except 1995; (4) no significant differences 2011 vs. 2009; <sup>b</sup> 2011 vs. 1999 significant difference, 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 <http://www.lhins.on.ca>). This section provides the 2011 estimates for most drug use measures **among high school students only (grades 9 through 12)** according to the LHINs. Students in grade 7 and 8 were excluded from the analysis because of a considerable imbalance of the number of elementary/middle schools across the LHINs. For the present analysis, students were assigned to LHINs using the six-digit postal code of the school. Due to small sample sizes, some adjacent LHINs were merged. The nine LHIN areas presented here are:

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

Figure 3.13.1  
Local Health Integration Networks of Ontario

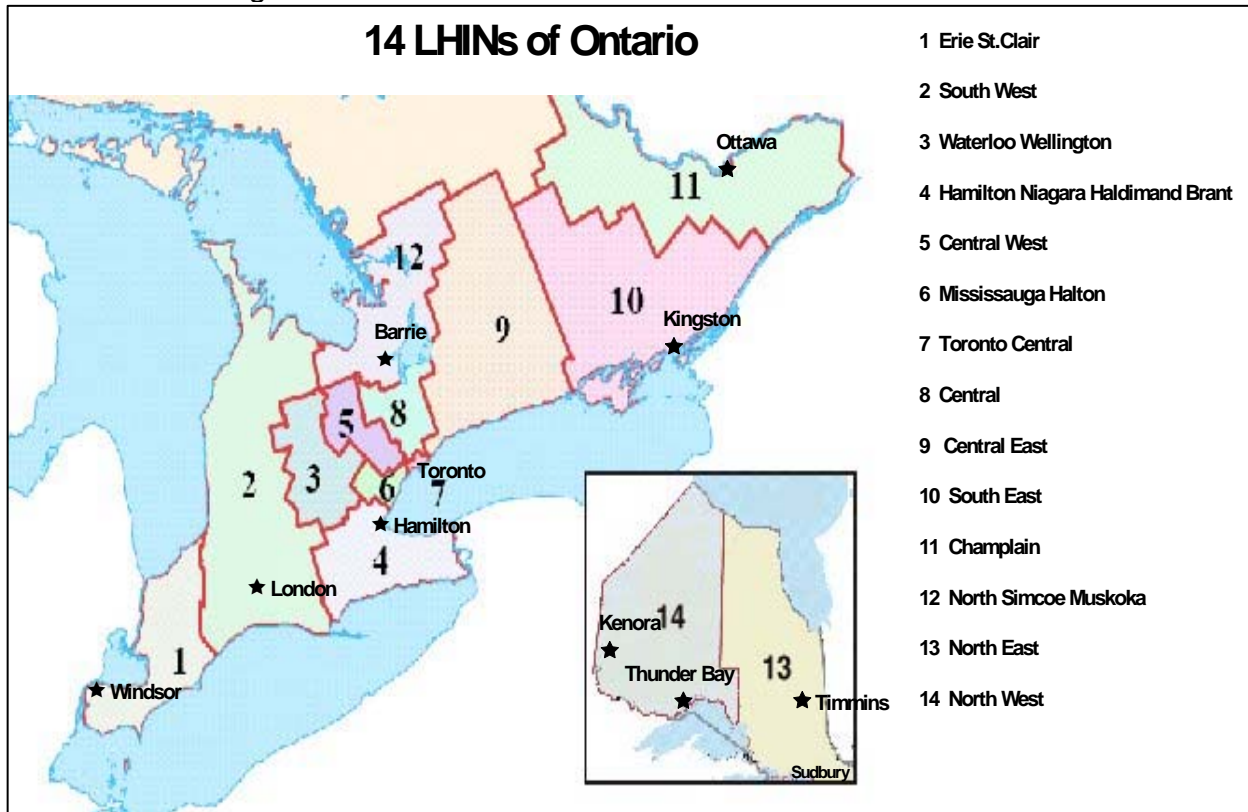


Table 3.13.1: Percentage of Secondary School Students (**Grades 9–12**) Reporting Drug Use in the Past Year and Other Selected Indicators, by Local Health Integration Network (LHIN) Areas, 2011 OSDUHS

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

(Continued...)

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

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

Source: OSDUHS, Centre for Addiction & Mental Health

## 4. SUMMARY AND DISCUSSION

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### The Public Health Approach Toward Drug Use

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

### 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 substance use in the student population, those interpreting the OSDUHS results should consider the following limitations. First, we must recognize that these data are based on self-reports, which cannot be readily verified. 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; Hibell et al., 2003; O'Malley et al., 2000). Still, we must acknowledge that self-reported drug use likely underestimates 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), but underreporting is not likely to vary over time. Thus, estimates of change should remain valid and unaffected by bias.

Second, another factor that can deflate drug use estimates is the bias caused by non-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.

Third, our findings cannot be generalized to adolescents who are not attending school (e.g., drop-outs, street youth, those in the military, or in an institutionalized health 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 non-coverage 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). The non-school group excluded from our target constitutes about 7% of the total adolescent population between the ages of 12 and 18 in Ontario, based on the 2006 Census figures.

Finally, the data reflect a snapshot in time; consequently, because we do not follow the same students across time, we cannot identify causes of individual change or the direction in which one factor affects another (i.e., whether X causes Y, or Y causes X). Also, we cannot determine from these data to what extent our findings are adolescent-limited – that is, whether drug use declines or ceases with the transition into emerging adulthood.

Despite these limitations, such monitoring studies excel at identifying the extent and

change of various health behaviours that have important current and future implications for adolescent well-being. Indeed, such studies help to identify which population groups are at the greatest risk for 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.

Still, the array of findings in such a large study can be 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 more emphasis on steady trends over time.

Although a majority of drugs examined had past year prevalence rates below 5%, it would be inappropriate to dismiss these rates as unimportant. Whether a given drug poses significant problems depends not only on the percentage using, but also on the likelihood of becoming dependent and other hazards as well. Thus, it would be irresponsible to ignore the harm caused by drugs that are used by a small group. Even low rates of use represent large numbers of students. If we extrapolate our estimates to the total population of students in grades 7 through 12 in Ontario (approximately 1,009,900 students), we estimate that about 23,300 (2.3%) use cannabis daily, about 12,500 (1.2%) use OxyContin, and a similar number of students (1.2%) have injected an illegal drug in the past year.

## Encouraging Findings

This report examined the past year use of alcohol, tobacco, illicit drugs, and the non-medical (NM) use of prescription drugs, and changes since 1977. There are many findings that should be viewed as encouraging. We have ordered these findings according to their public health importance. (See Table 4.1 for a trend overview.)

- **Cigarettes:** The vast majority of students in Ontario do not smoke cigarettes. The prevalence of past year smoking significantly decreased in 2011 compared with the last survey in 2009. Over the long-term, smoking began to decline in the 2000s and has reached its lowest point in 2011. Not surprisingly, negative perceptions about smoking have also hardened over time. The perceived risk of harm associated with smoking one or two cigarettes daily is currently higher than it was a decade ago.

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

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

- **Alcohol:** While the majority of students are considered to be current drinkers, the past year prevalence of alcohol use is now much lower than a decade ago in 1999. The magnitude of the decline in drinking has been even greater over the long-term, since the late 1970s when roughly three-quarters of students drank. More importantly, **binge drinking** (five or more drinks on one occasion) is significantly lower today compared with levels evident during the two peak periods seen in the late 1970s and the late 1990s.

- **Driving after drinking alcohol** among licensed students significantly declined between 2009 and 2011. This is the first decline in drinking-driving in a long while. Further, the current rate is markedly lower than rates evident in the late 1970s and early 1980s. It is worth

noting here that the decline in 2011 followed the introduction in Ontario of several new initiatives designed to prevent impaired driving, including requiring a 0 Blood Alcohol Content (BAC) among all drivers up to age 21, and increasing the sanctions for drivers who are apprehended with BACs in the “warn” range (.05% to .10%).

- **Driving after cannabis use** among licensed students is also lower in 2011 compared with estimates from a decade ago.

- The percentage of all students reporting **riding in a vehicle with a driver who was drinking alcohol**, and the percentage **riding in a vehicle with a driver who was using drugs** significantly decreased during the past decade.

- One-third of students **used no substance** in the past year, including alcohol and cigarettes, and this proportion is significantly higher than the estimates from the late 1970s and early 1980s, when only about 20% to 25% of students were abstinent during the past year.

- The **age of initiation** for drinking alcohol, smoking cigarettes, and using cannabis has not declined. In other words, students are not trying these substances at younger ages like their counterparts from years ago. Indeed, our data show that, at least over the past decade, smoking initiation and drinking initiation is occurring later in adolescence.

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

- One function of the OSDUHS is to track the emergence of new drugs in the Ontario student population. For example, in recent years we have seen the emergence of non-medical use of prescription opioids and salvia divinorum. For the first time in 2011, the OSDUHS asked students about the use of **doda** (an opioid), **BZP**

**(benzylpiperazine) pills** and **mephedrone** (4-methylmethcathinone) – the latter two being synthetic stimulants. These drugs have appeared in other countries, but only anecdotal evidence exists for use in Canada. The past year prevalence estimates for each of these drugs were suppressed due negligible estimates. This suggests that these drugs have not measurably diffused into the mainstream student population at this time. However, we must remain cautious. When the OSDUHS first began monitoring ecstasy use in 1991, the past year prevalence estimate was suppressed due to very low numbers. A decade later, ecstasy use among Ontario students hit an all-time high. Therefore, ongoing monitoring these drugs is warranted to observe if they emerge at a later date.

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

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

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

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

## Some Public Health Concerns

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

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

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

- **Alcohol:** Alcohol is the most common drug used by Ontario students, as over half have drunk in the past year (excluding sips). Binge drinking still remains at an elevated level, as about one-in-five (22%) students report drinking five or more drinks on the same occasion once in the past month. Among the 12<sup>th</sup>-graders, this proportion becomes 40%. About one-in-five students (18%) drink hazardously/harmfully in that their drinking puts them at risk for current or future physical and social problems. Most concerning is that one-in-ten (9%) students report being injured or injuring someone in the past year as a result of their drinking.

- **Vehicles:** Despite long-term declines in drinking and driving, there are still about 7% of licensed students in grades 10 through 12 (an estimated 21,500 in Ontario) who report drinking and driving at least once in the past year. A higher percentage (12%) of licensed students report driving after using cannabis (an estimated 38,300 in Ontario). One-quarter (24%) of all students report being a passenger with a

driver who had been drinking, and 16% rode with a driver who had been using drugs. Especially worrisome is that the likelihood of being a passenger with an intoxicated driver (from either alcohol or cannabis) increases significantly with grade (e.g., about one-third of 12<sup>th</sup>-graders report these behaviours). All these behaviours increase the risk of unintentional injuries – the leading cause of death among young people. An important message from these data is that that crash risk is not restricted to drivers.

- **Cannabis:** Roughly 2% of all students (10% of past year cannabis users) report symptoms of cannabis dependence, characterized by loss of control and withdrawal. About 2% of students (an estimated 23,000 in Ontario) use cannabis daily. This frequent pattern of cannabis use is worrisome for many reasons including increased risk for respiratory illnesses and cancers in adulthood (Calabria, Degenhardt, Hall, & Lynskey, 2010; Zhang et al., 1999). Short-term problems from regular cannabis use include memory impairment, reduced attention and motivation, which negatively impact school and family life (Hall & Degenhardt, 2009). Furthermore, research is accumulating to suggest an association between heavy or early cannabis use and the onset of psychotic symptoms in individuals who possess an underlying vulnerability to psychosis (Kuepper et al., 2011; McClaren, Silins, Hutchinson, Mattick, & Hall, 2010; van Os et al., 2002).

- About 14% of students report using a **prescription opioid pain reliever** without their own prescription at least once in the past year (representing some 140,100 students in Ontario). The non-medical use of this class of drugs, which includes Tylenol #3, codeine, Percocet, Percodan, and Demerol, ranks just after cannabis use. Opioids can be dangerous when used without medical supervision because if taken with other depressant drugs (e.g., alcohol) they can slow one's breathing. Even one single large dose can cause severe slowing of one's breathing and possibly death. Chronic abuse of opioids can lead to addiction.

- Past year use of over-the-counter (OTC) **cough/cold medication with dextromethorphan** to “get high” was reported by 7% of students (an estimated 68,600 in Ontario) – a prevalence higher than most of the illicit drugs in the survey.
- Over one-third (37%) of students report past year use of **at least one illicit drug**, including a prescription drug or an OTC drug used for non-medical purposes. The proportion increases with grade, reaching 51% by grade 11. If we remove cannabis, prescription drugs, and OTC drugs from this summated measure, the proportion reporting any other drug use is much lower. Thus, students today are more likely to use cannabis, prescription drugs, and OTC drugs non-medically rather than other “street” drugs such as hallucinogens, cocaine, or ecstasy.
- About one-in-six (16%) students report having been **drunk or high at school**, and about one-in-five (20%) report being **offered, sold, or given a drug at school**.
- One-quarter (27%) of students report that **someone tried to sell drugs to them** at least once during the year before the survey. This proportion increases to 40% among students in grades 11 and 12, suggesting that drugs are readily available to older adolescents.
- **High-Caffeine Energy Drinks:** Recently, the medical community has expressed concern about children and adolescents consuming highly-caffeinated energy drinks, and calls for restrictions on labelling, sales and marketing have been made (MacDonald, Stanbrook, & Hébert, 2010; O’Brien, McCoy, Rhodes, Wagoner, & Wolfson, 2008; Reissig, Strain, & Griffiths, 2009). Our data show that energy drink consumption is common among adolescents, with half (50%) of all students reporting past year use (ranging from 34% of 7<sup>th</sup>-graders to almost 60% of 12<sup>th</sup>-graders). One-in-five (19%) students report drinking an energy drink in the past week.

## Overlapping Alcohol and Mental Health Problems

There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2011 OSDUHS shows that about 9% of all students in grades 7 through 12 (an estimated 83,300 Ontario students) report both hazardous/harmful drinking *and* elevated psychological distress (symptoms of anxiety and depression). This increases to 16% by 12<sup>th</sup>-grade.

## Important 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). The exception to this is inhalant use, which is most prevalent among 7<sup>th</sup>- and 8<sup>th</sup>-graders, and then declines by grade 9.

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

**Sex** is also associated with certain types of drug use. As summarized in Table 4.2, males are significantly more likely to use smokeless tobacco, LSD, mushrooms, jimson weed, salvia divinorum, ketamine, and OTC cough/cold medication. Females are more likely to use stimulants non-medically, and any prescription drug non-medically. It is interesting to note that the 2011 cycle found fewer differences between males and females compared with past cycles, suggesting that the sex gap may be narrowing. This appears to be due to decreases found among males in 2011 (e.g., smoking, drinking,

cannabis use), rather than increases among females.

There are important differences in student drug use according to **region** of the province. These are summarized in Table 4.2.

Compared with the provincial average:

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

## 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 (Paglia-Boak & Adlaf, 2007; Toumbourou et al., 2007).

Our survey shows that problem use of alcohol and drugs are not rare among youth. We also found that risk behaviours, such as binge drinking and becoming drunk, driving while intoxicated, and being a passenger with a driver who was using alcohol or drugs, are not uncommon occurrences. Thus, there is a need for programs to focus on reducing these behaviours. Special efforts should be made to address the relatively high rate of driving after cannabis use among youth. In addition, messages against impaired driving need to be expanded beyond roadways to include the operation of boats, snowmobiles, and all-terrain vehicles after drinking – as the 2011 OSDUHS

found the proportion of students reporting these behaviours was sufficiently large to pose public health harms.

Our findings show that, except for cannabis, a relatively smaller percentage of youth use so-called “street” or “club” drugs such as ecstasy, cocaine, or hallucinogenic drugs (e.g., mushrooms or LSD) when compared with the percentage that use prescription drugs (e.g., opioid pain relievers) or over-the-counter cough/cold medications non-medically. Similar changes in the “drug landscape” over the past decade have been found in the United States (Johnston et al., 2011). One likely explanation for this shift is that young people perceive these medications to be less harmful than “street” drugs given that they are legal and also have therapeutic purposes (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 non-medical use of these drugs. Initiatives in Ontario intended to reduce prescription opioid abuse (e.g., Ontario’s Narcotics Strategy) could be one reason for the recent drop in non-medical opioid pain reliever use among students in 2011.

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

Prevention efforts should include a component that targets youths’ beliefs and attitudes about drugs, specifically the risks of physical harms that can occur from use. Increases over time in the perceived risk of harm from using a substance are associated with concurrent and subsequent decreases in the rate of use, and vice versa (Johnston et al., 2011). Our data show that attitudes and beliefs about risk of harm and disapproval are drug-specific. Thus, any prevention effort should provide drug-specific information.

Finally, the OSDUHS data also suggest a relationship between use and availability, for certain drugs such as alcohol, cannabis, ecstasy, and LSD. That is, past year use and perceived availability have been 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 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**

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

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

programmatic responses are based not on sensationalized fears, but rather on sound scientific information.

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

Table 4.1: Significant Changes in Past Year Drug Use by Subgroup, 2011 vs. 2009 and 2011 vs. 1999, OSDUHS (Grades 7–12)

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

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

Source: OSDUHS, Centre for Addiction & Mental Health

Table 4.2: Significant Subgroup Differences in Past Year Drug Use, 2011 OSDUHS

	Cigarettes	Smokeless Tobacco	Alcohol	Binge Drinking	Cannabis	Inhalants	LSD	Mushrooms/Mesc.	Jimson Weed	Salvia Divinorum	Cocaine	Ecstasy	Ketamine	OxyContin (NM)	Opioid Pain Relievers (NM)	Stimulants (NM)	Tranquillizers (NM)	OTC Cough/Cold Medication	High-Caffeine Energy Drinks	Any NM Prescription Drug Use	Any Illicit Drug, incl. NM Prescription Drug	
<b>Sex Effect</b>	ns	***	ns	ns	ns	ns	**	***	*	*	ns	ns	**	ns	ns	**	ns	**	ns	**	ns	
		M ↑					M ↑	M ↑	M ↑	M ↑			M ↑			F ↑		M ↑		F ↑		
<b>Grade Effect</b>	***	***	***	***	***	***	**	***	ns	**	***	***	ns	***	***	***	***	*	**	***	***	
(compared with previous grade)			8 ↑ 7	8 ↑ 7	8 ↑ 7							8 ↑ 7							8 ↑ 7			
			9 ↑ 8	9 ↑ 8	9 ↑ 8	9 ↓ 8						9 ↑ 8		9 ↑ 8								9 ↑ 8
	10 ↑ 9	10 ↑ 9	10 ↑ 9	10 ↑ 9	10 ↑ 9			10 ↑ 9											10 ↑ 9			10 ↑ 9
	11 ↑ 10		11 ↑ 10	11 ↑ 10	11 ↑ 10			11 ↑ 10	11 ↑ 10			11 ↑ 10	11 ↑ 10				11 ↑ 10					11 ↑ 10
								12 ↓ 11					12 ↓ 11									
<b>Region Effect</b>	*	*	*	***	**	ns	ns	ns	ns	ns	**	ns	ns	ns	ns	ns	ns	ns	ns	***	ns	ns
(region compared with Ontario)			T ↓	T ↓	T ↓						T ↓									T ↓		
	N ↑		N ↑	N ↑	N ↑						N ↑									N ↑		
		W ↓																		W ↑		

Notes: (1) overall tests of effect are based on a univariate chi-square statistic, \*p<.05, \*\*p<.01, \*\*\*p<.001; (2) subgroup comparisons are based on *adjusted logistic regressions*; (3) grade contrasts for inhalant use compares with the next grade level; (4) ns=non-significant; (5) binge drinking refers to the past month; (6) NM=non-medical use, without a doctor's prescription; (7) use of methamphetamine, crack, heroin, ADHD drugs (NM) showed no significant differences according to sex, grade, or region and therefore are not presented.

Source: OSDUHS, Centre for Addiction & Mental Health

## 5. APPENDIX

Table A1  
District School Boards in Ontario by Region

<b>TORONTO</b>	<b>WESTERN ONTARIO</b>
TORONTO CATHOLIC DISTRICT	AVON MAITLAND DISTRICT
TORONTO DISTRICT	BLUEWATER DISTRICT
<b>EASTERN ONTARIO</b>	BRANT HALDIMAND NORFOLK CATHOLIC DISTRICT
ALGONQUIN AND LAKESHORE CATHOLIC DISTRICT	BRUCE-GREY CATHOLIC DISTRICT
CATHOLIC DISTRICT OF EASTERN ONTARIO	CONSEIL DES ECOLES CATHOLIQUES DE SUD-OUEST*
CONSEIL CATHOLIQUE CENTRE-SUD	CONSEIL DE DISTRICT DU CENTRE SUD-OUEST*
CONSEIL CATHOLIQUE DE L'EST ONTARIEN	DISTRICT OF NIAGARA
CONSEIL DES ÉCOLES PUBLIQUES DE L'EST DE L'ONTARIO	DUFFERIN-PEEL CATHOLIC DISTRICT
CONSEIL DES ÉCOLES CATHOLIQUES DU CENTRE-EST	GRAND ERIE DISTRICT
DURHAM CATHOLIC DISTRICT	GREATER ESSEX COUNTY DISTRICT
DURHAM DISTRICT	HALTON CATHOLIC DISTRICT
HASTINGS AND PRINCE EDWARD DISTRICT	HALTON DISTRICT
KAWARTHA PINE RIDGE DISTRICT	HAMILTON-WENTWORTH CATHOLIC DISTRICT
LIMESTONE DISTRICT	HAMILTON-WENTWORTH DISTRICT
OTTAWA CATHOLIC	HURON PERTH CATHOLIC DISTRICT
OTTAWA-CARLETON DISTRICT	LAMBTON KENT DISTRICT
PETERBOROUGH VICTORIA NORTHUMBERLAND & CLARINGTON CATHOLIC DISTRICT	LONDON DISTRICT CATHOLIC
RENFREW COUNTY CATHOLIC DISTRICT	NIAGARA CATHOLIC DISTRICT
RENFREW COUNTY DISTRICT	PEEL DISTRICT
SIMCOE COUNTY DISTRICT	ST. CLAIR CATHOLIC DISTRICT
SIMCOE MUSKOKA CATHOLIC DISTRICT	THAMES VALLEY DISTRICT
TRILLIUM LAKELANDS DISTRICT	UPPER GRAND DISTRICT
UPPER CANADA DISTRICT	WATERLOO CATHOLIC DISTRICT
YORK CATHOLIC DISTRICT	WATERLOO REGION DISTRICT
YORK REGION DISTRICT	WELLINGTON CATHOLIC DISTRICT
	WINDSOR-ESSEX CATHOLIC DISTRICT
<b>NORTHERN ONTARIO</b>	
ALGOMA DISTRICT	LAKEHEAD DISTRICT
CONSEIL CATHOLIQUE FRANCO-NORD	NEAR NORTH DISTRICT
CONSEIL CATHOLIQUE DES GRANDES RIVIÈRES	NIPISSING-PARRY SOUND CATHOLIC DISTRICT
CONSEIL CATHOLIQUE DU NOUVEL ONTARIO	NORTH EASTERN CATHOLIC DISTRICT
CONSEIL DU GRAND NORD DE L'ONTARIO	NORTHWEST CATHOLIC DISTRICT
CONSEIL DU NORD-EST DE L'ONTARIO	RAINBOW DISTRICT
CONSEIL CATHOLIQUE DES AURORES BORÉALES	RAINY RIVER DISTRICT
DISTRICT ONTARIO NORTH EAST	SUDBURY CATHOLIC DISTRICT
HURON-SUPERIOR CATHOLIC DISTRICT	SUPERIOR-GREENSTONE DISTRICT
KEEWATIN-PATRICIA DISTRICT	SUPERIOR NORTH CATHOLIC DISTRICT
KENORA CATHOLIC DISTRICT	THUNDER BAY CATHOLIC DISTRICT

\* board with schools in another region

**Table A2**  
**Student Participation Rate by Year of Survey**

		1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Total	Selected (N)	(5,077)	(5,092)	(4,832)	(4,781)	(4,640)	(5,167)	(5,231)	(6,564)	(6,094)	(9,411)	(10,922)	(9,497)	(14,196)	(15,005)
	Participated %	82	84	81	83	77	76	77	76	71	72	72	68	65	62
	Absent (%)	14	12	15	14	13	15	15	12	13	12	12	13	13	12
	No consent (%)	4	4	4	3	9	9	8	12	16	16	16	19	22	26
Grade 7	Selected (N)	(1257)	(1440)	(1340)	(1106)	(1083)	(1165)	(1054)	(1030)	(1016)	(1446)	(1273)	(1104)	(2632)	(2434)
	Participated (%)	84	86	84	86	83	80	81	76	75	68	76	66	63	60
	Absent (%)	7	6	7	5	8	6	5	10	7	7	9	9	9	8
	No consent (%)	9	7	9	9	9	13	14	14	18	25	14	25	27	32
Grade 8	Selected (N)								(1061)	(1038)	(1449)	(1301)	(1085)	(2711)	(2467)
	Participated (%)								76	68	68	75	72	63	60
	Absent (%)								10	8	9	7	9	10	9
	No consent (%)								14	24	23	18	19	26	31
Grade 9	Selected (N)	(1315)	(1206)	(1265)	(1029)	(1248)	(1366)	(1442)	(1201)	(1017)	(1671)	(2110)	(1820)	(2111)	(2664)
	Participated (%)	82	84	83	88	81	78	80	77	70	75	71	68	68	64
	Absent (%)	13	11	13	10	8	11	12	9	12	12	9	11	11	10
	No consent (%)	5	5	4	2	10	11	7	14	18	13	20	20	21	26
Grade 10	Selected (N)								(855)	(1177)	(1654)	(2120)	(1727)	(2332)	(2597)
	Participated (%)								76	70	73	68	65	67	60
	Absent (%)								10	16	14	13	15	13	14
	No consent (%)								14	14	13	19	20	19	25
Grade 11	Selected (N)	(1280)	(1341)	(1115)	(1392)	(1068)	(1270)	(1075)	(1046)	(874)	(1672)	(2128)	(1876)	(2140)	(2384)
	Participated (%)	80	84	79	81	68	74	75	73	68	72	73	69	65	65
	Absent (%)	17	14	20	16	17	18	15	17	18	14	14	15	15	14
	No consent (%)	3	2	1	2	15	7	10	10	14	14	13	16	20	20
Grade 12	Selected (N)								(789)	(584)	(1519)	(1990)	(1885)	(2270)	(2459)
	Participated (%)								76	68	72	69	66	65	66
	Absent (%)								19	23	19	18	19	19	15
	No consent (%)								5	9	9	13	14	15	19
Toronto	Selected (N)	(1140)	(1187)	(856)	(1060)	(1117)	(1113)	(1273)	(1139)	(734)	(1617)	(1609)	(1316)	(1415)	(1886)
	Participated (%)	75	78	77	81	80	70	77	74	76	69	74	73	60	66
	Absent (%)	18	14	19	16	13	23	16	15	12	15	12	14	15	13
	No consent (%)	7	7	4	3	7	7	7	11	12	16	14	13	25	20
West	Selected (N)	(1914)	(1917)	(2211)	(2054)	(2061)	(2261)	(1992)	(2321)	(2360)	(3628)	(4052)	(4030)	(4447)	(3841)
	Participated (%)	84	85	81	82	74	77	78	73	66	71	72	67	65	63
	Absent (%)	12	12	14	10	14	13	15	13	14	11	12	13	14	12
	No consent (%)	4	3	5	4	12	10	7	13	20	18	16	20	21	25
East	Selected (N)	(1397)	(1404)	(1339)	(1340)	(1209)	(1407)	(1476)	(1881)	(1552)	(2298)	(3296)	(2787)	(7255)	(6010)
	Participated (%)	83	85	82	85	77	78	74	79	70	76	75	70	67	65
	Absent (%)	14	11	14	12	13	13	13	10	12	12	12	12	11	11
	No consent (%)	3	4	4	2	9	8	12	11	17	12	13	17	22	24
North	Selected (N)	(626)	(584)	(426)	(327)	(253)	(386)	(490)	(1223)	(1448)	(1868)	(1965)	(1364)	(1079)	(3268)
	Participated (%)	84	86	87	86	81	76	79	77	76	70	64	60	61	55
	Absent (%)	13	14	12	12	14	16	13	13	14	13	12	16	16	11
	No consent (%)	3	0	0	2	5	8	9	10	10	17	24	24	23	33

Notes: Surveys from 1985–1997 included grades 7, 9, 11, and 13 only; surveys in 1999 and 2001 included grades 7–13; surveys from 2003–2011 included grades 7–12; “No consent” refers to either lack of parental consent or no returned consent form.

Source: OSDUHS, Centre for Addiction & Mental Health; tabulated by the Institute for Social Research, York University

**Table A3**  
**Sample Demographics by Year of Survey**

	1977		1979		1981		1983		1985		1987		1989		1991		1993		1995		1997		1999		2001		2003		2005		2007		2009		2011																							
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%																						
Males	(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	(2252)	50.8	(1917)	49.8	(3163)	48.3	(3720)	51.8	(3068)	51.8	(4341)	51.8	(4334)	51.8																						
Females	(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	(2195)	49.2	(1981)	50.2	(3453)	51.7	(4006)	48.2	(3255)	48.2	(4771)	48.2	(4954)	48.2																						
<b>Grade:</b>																																																										
7	(1287)	32.8	(1267)	32.3	(1112)	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	(766)	16.0	(750)	17.1	(947)	14.9	(961)	15.8	(721)	15.1	(1632)	14.1	(1446)	13.0																						
8																							(798)	16.0	(691)	14.6	(976)	14.3	(971)	16.1	(768)	15.6	(1697)	14.3	(1459)	13.5																						
9	(1578)	40.2	(1545)	39.4	(1004)	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	(905)	21.7	(702)	20.8	(1254)	18.4	(1471)	17.0	(1221)	16.5	(1414)	16.3	(1684)	16.7																						
10																							(638)	13.7	(806)	21.6	(1181)	18.0	(1427)	16.4	(1105)	16.6	(1534)	16.7	(1547)	16.8																						
11	(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	(750)	18.7	(561)	15.7	(1188)	18.3	(1537)	16.1	(1273)	16.2	(1378)	16.9	(1539)	17.1																						
12																							(590)	13.8	(388)	10.2	(1070)	16.1	(1359)	18.6	(1235)	20.0	(1457)	21.7	(1613)	22.9																						
Mean 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)	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)																																								
<b>Region:</b>																																																										
Toronto	(1486)	37.8	(1115)	28.4	(494)	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	(740)	18.0	(533)	19.8	(1097)	18.3	(1172)	17.9	(943)	17.0	(836)	16.7	(1243)	16.9																						
North	(509)	13.0	(624)	15.9	(356)	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	(808)	8.5	(1014)	9.0	(1285)	7.9	(1245)	7.0	(797)	6.4	(649)	6.4	(1793)	5.2																						
East	(843)	21.5	(778)	19.5	(1022)	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	(1367)	30.7	(926)	28.2	(1721)	29.4	(2444)	33.4	(1944)	33.8	(4766)	34.0	(3860)	33.7																						
West	(1089)	27.7	(1403)	35.8	(1138)	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	(1532)	42.7	(1425)	43.0	(2513)	44.4	(2865)	41.8	(2639)	42.8	(2861)	43.0	(2392)	44.2																						
Total N	3927	3920	3010	3614	3146	3376	3040	2961	2617	2707	3072	4447	3898	6616	7726	6323	9112	9288																																								

Notes: The sample size (N) is the number surveyed (unweighted); percentages are based on weighted data; 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 A4  
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*
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
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
Grade 8	--	--	--	--	--	--	--	--	--	14.6	1.55	3.11	4.96	3.12	2.12	6.70
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
Grade 10	--	--	--	--	--	--	--	--	--	12.5	20.4	2.17	1.55	2.80	3.14	2.52
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
Grade 12	--	--	--	--	--	--	--	--	--	12.6	23.0	3.18	2.90	1.59	3.69	5.50
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	16.87
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	5.22
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	44.22
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	33.69
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
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
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
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
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
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
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
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
Stimulants (NM)	1.78	3.20	1.40	1.63	1.02	2.15	3.79	1.60	1.15	2.47	1.79	1.80	2.41	1.72	2.26	4.23
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
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
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
Mushrooms/Mesc.	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
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
<b>Total (average)</b>	<b>3.99</b>	<b>2.41</b>	<b>1.79</b>	<b>3.93</b>	<b>2.32</b>	<b>3.51</b>	<b>1.67</b>	<b>1.81</b>	<b>0.91</b>	<b>5.28</b>	<b>6.74</b>	<b>2.99</b>	<b>4.07</b>	<b>2.69</b>	<b>3.53</b>	<b>8.42</b>

Notes: 1981–1997 DEFFs are based on grades 7, 9, 11, and 13; 1999 and 2001 DEFFs are based on grades 7–13; 2003–2011 DEFFs are based on grades 7–12; NM=non-medical use; M=medical/prescription use; Mesc.=mescaline; \*elevated DEFFs in 2011 are attributed to the oversampling of students in the public health regions.

Source: OSDUHS, Centre for Addiction & Mental Health

# **PARENTAL CONSENT/STUDENT ASSENT FORM**



## The 2011 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 second-longest in North America. Since 1977, students have been asked about their beliefs and use (if any) of tobacco, alcohol and other drugs (for example, cannabis, cocaine, and medical drugs).

About 9,000 Ontario students in grades 7 to 12 will be asked to complete a pen-and-paper questionnaire. Your child's class has been asked to participate. Both the school and the class were randomly selected. **Students do not write their names on the questionnaires and neither students nor classes can ever be identified.** Students' answers can never be 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.** The survey also covers topics about physical health, mental well-being, and illegal behaviours such as theft. The survey will be completed in the classroom taking on average 35 to 40 minutes. Participation 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, York University, their school or teacher, or any research group associated with the project. There are no expected risks in completing the survey. **Participating students will receive an HMV free 5-song digital download card for their time.** For those under age 18, parental/guardian consent is required for use. 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, the 2009 survey reports and the 2011 questionnaire are available at: [www.camh.net/research/osdus.html](http://www.camh.net/research/osdus.html).

A PAHOW/WHO

Un Centre collaborateur  
OPS/OMS

Affiliated with the  
University of Toronto  
Affilié à l'Université  
de Toronto

The results of this survey will be used to help school and health professionals across Ontario to identify key issues and to develop health and education programs. We believe this study is very important and we hope you will allow your child to participate by signing the form below.

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. 4496 or email me at [robert\\_mann@camh.net](mailto:robert_mann@camh.net). 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. 6876. This study has also been approved by York University's Human Participants Review Committee.

Robert E. Mann, Ph.D.  
Study Director

.....✂  
We (parent and student) have read the request for participation in the **2011 Ontario Student Drug Use and Health Survey**. We have discussed it and...

- |   |  |
|---|--|
| <input type="checkbox"/> I (parent) give permission for my son/daughter to participate.               | <input type="checkbox"/> I (student) agree to participate.               |
| <input type="checkbox"/> I (parent) do <b>not</b> give permission for my son/daughter to participate. | <input type="checkbox"/> I (student) do <b>not</b> agree to participate. |

Signature of Parent/Guardian:

Signature of Student:

\_\_\_\_\_

\_\_\_\_\_

Name of Student (please print): \_\_\_\_\_

## Drugs Not Monitored in the 2011 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. PCP (also called “angel dust”) is a dissociative drug. GHB (gamma-hydroxybutyrate, also called “liquid ecstasy,” “G”) is an odourless central nervous system depressant, taken for its euphoric and relaxing effects. Rohypnol (brand name for flunitrazepam, also called “roofies,” “roach”) is a benzodiazepine, which is odourless and tasteless and can produce severe drowsiness, visual disturbances, and amnesia. Rohypnol is usually taken with other drugs, such as alcohol, to increase the effect, and is sometimes taken to decrease the after-effects of stimulant drugs such as cocaine. The following tables present the historic data on the past year prevalence for each drug.

Table A5  
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 <sup>1</sup> )										(4447)	(3898)	(6616)	(7726)	(6323)	(9112)
(N <sup>2</sup> )	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)
Total <sup>1</sup> (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)
Total <sup>2</sup>	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 (0.5-1.2)	0.7 (0.4-1.1)
Sex															
Males <sup>1</sup>	—	—	—	—	—	—	—	—	—	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)
Males <sup>2</sup>	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 <sup>1</sup>	—	—	—	—	—	—	—	—	—	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)
Females <sup>2</sup>	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)	†	† <sup>b</sup>
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)	† <sup>b</sup>
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)	† <sup>b</sup>
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)
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)

(Continued....)

	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009
(N <sup>1</sup> )										(4447)	(3898)	(6616)	(7726)	(6323)	(9112)
(N <sup>2</sup> )	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)
Region															
Toronto <sup>1</sup>	—	—	—	—	—	—	—	—	—	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)	† <sup>b</sup>
Toronto <sup>2</sup>	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 <sup>1</sup>	—	—	—	—	—	—	—	—	—	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)	† <sup>b</sup>
North <sup>2</sup>	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 <sup>1</sup>	—	—	—	—	—	—	—	—	—	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 <sup>b</sup> (0.5-2.0)
West <sup>2</sup>	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 <sup>1</sup>	—	—	—	—	—	—	—	—	—	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 <sup>b</sup> (0.3-1.7)
East <sup>2</sup>	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; <sup>b</sup> 2007 vs. 1999 significant difference, p<.01; <sup>c</sup> significant long-term linear trend, p<.01; <sup>d</sup> significant long-term non-linear 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 A6  
Percentage Reporting GHB Use, Rohypnol Use, and OTC Sleeping Medication Non-Medical Use in the Past Year,  
2001–2009 OSDUHS (Grades 7–12)

		GHB					Rohypnol					OTC Sleep Med.	
(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)		<b>1.3</b> (0.8-2.1)	<b>0.7</b> (0.4-1.1)	<b>0.5</b> (0.3-0.9)	<b>0.5</b> (0.3-1.0)	<b>0.5</b> (0.3-0.9)	<b>3.1</b> (2.0-4.8)	<b>1.6</b> (1.2-2.2)	<b>1.0</b> (0.7-1.4)	<b>0.6</b> (0.3-0.9)	<b>0.7</b> (0.4-1.2)	<b>4.0</b> (3.2-5.0)	<b>2.6</b> (2.0-3.4)
Sex	Males	<b>1.8</b> (1.0-3.4)	<b>0.8</b> (0.4-1.5)	<b>0.6</b> (0.3-1.3)	†	<b>0.7</b> (0.3-1.6)	<b>3.5</b> (1.6-7.3)	<b>1.7</b> (1.1-2.8)	<b>1.2</b> (0.8-1.9)	†	<b>0.7</b> (0.4-1.4)	<b>3.2</b> (2.3-4.4)	<b>2.2</b> (1.4-3.3)
	Females	<b>0.7</b> (0.3-1.5)	<b>0.6</b> (0.3-1.2)	<b>0.5</b> (0.3-0.9)	<b>0.7</b> (0.3-1.6)	†	<b>2.7</b> (1.6-4.7)	<b>1.5</b> (1.0-2.3)	<b>0.7</b> (0.4-1.2)	<b>0.8</b> (0.4-1.4)	<b>0.7</b> (0.3-1.5)	<b>4.9</b> (3.7-6.5)	<b>3.1</b> (2.2-4.2)
Grade	7	†	†	†	†	†	<b>1.6</b> (0.6-4.4)	<b>1.2</b> (0.5-2.9)	<b>0.6</b> (0.2-1.9)	†	†	†	†
	8	†	†	†	†	†	<b>2.6</b> (1.0-6.5)	<b>1.2</b> (0.5-2.7)	<b>1.1</b> (0.3-3.6)	†	†	†	<b>1.9</b> (1.1-3.5)
	9	<b>1.2</b> (0.4-3.3)	†	<b>0.7</b> (0.3-1.6)	†	†	<b>5.2</b> (3.4-7.9)	<b>1.4</b> (0.8-2.8)	<b>2.1</b> (1.2-3.6)	†	†	<b>5.6</b> (3.5-8.9)	<b>2.6</b> (1.3-4.8)
	10	<b>3.6</b> (1.7-7.1)	<b>0.9</b> (0.3-2.3)	<b>0.5</b> (0.2-1.2)	†	†	<b>3.0</b> (1.3-6.9)	<b>2.0</b> (1.0-4.0)	<b>1.4</b> (0.7-2.5)	†	†	<b>2.3</b> (1.4-3.9)	<b>2.8</b> (1.6-4.7)
	11	†	<b>1.7</b> (0.8-3.4)	<b>0.6</b> (0.3-1.5)	<b>1.0</b> (0.4-2.3)	†	<b>1.2</b> (0.4-3.5)	<b>2.3</b> (1.3-4.0)	<b>0.6</b> (0.2-1.6)	<b>0.8</b> (0.3-1.8)	<b>2.0</b> (0.8-5.0)	<b>5.0</b> (3.5-7.0)	<b>3.9</b> (2.4-6.4)
	12	<b>1.2</b> (0.3-3.8)	†	<b>0.5</b> (0.2-1.6)	<b>1.0</b> (0.3-2.9)	†	<b>5.4</b> (1.3-19.9)	<b>1.3</b> (0.5-3.2)	†	†	†	<b>4.4</b> (2.8-7.0)	<b>2.3</b> (1.1-4.6)
Region	Toronto	<b>1.6</b> (0.6-4.2)	<b>0.8</b> (0.3-2.1)	†	†	†	<b>2.9</b> (1.6-5.1)	<b>0.9</b> (0.4-2.0)	<b>0.8</b> (0.2-2.8)	†	†	†	†
	North	<b>0.7</b> (0.2-2.0)	<b>1.2</b> (0.6-2.6)	<b>0.7</b> (0.3-1.5)	<b>0.6</b> (0.1-4.2)	†	<b>1.6</b> (0.6-4.1)	<b>3.5</b> (1.9-6.5)	<b>1.5</b> (0.7-3.3)	<b>1.7</b> (0.6-4.4)	†	<b>5.4</b> (3.5-8.1)	<b>3.6</b> (2.0-6.3)
	West	<b>1.5</b> (0.7-3.1)	<b>0.5</b> (0.2-1.0)	<b>0.6</b> (0.3-1.1)	<b>0.5</b> (0.2-1.6)	†	<b>4.2</b> (2.1-8.1)	<b>1.4</b> (0.8-2.3)	<b>1.4</b> (0.9-2.1)	<b>0.6</b> (0.3-1.1)	<b>0.9</b> (0.4-2.0)	<b>4.2</b> (3.2-5.5)	<b>2.0</b> (1.2-3.4)
	East	<b>0.9</b> (0.3-2.3)	<b>0.8</b> (0.3-1.9)	†	<b>0.6</b> (0.3-1.5)	<b>0.9</b> (0.3-2.3)	<b>2.0</b> (0.9-4.5)	<b>2.0</b> (1.1-3.4)	†	<b>0.6</b> (0.2-1.6)	<b>0.7</b> (0.3-1.9)	<b>4.2</b> (2.7-6.6)	<b>2.8</b> (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 Somnex, for purposes other than sleeping?”

Source: OSDUHS, Centre for Addiction & Mental Health

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## Selected OSDUHS Peer-Reviewed Publications

- Hamilton, H., Paglia-Boak, A., Wekerle, C., Danielson, A., & Mann, R. E. (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, 398-409.
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