Drug Use Among Ontario Students

OSDUHS HIGHLIGHTS

1977 2007

30th anniversary

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

Edward M. Adlaf
Angela Paglia-Boak

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INTRODUCTION

The purpose of the *Ontario Student Drug Use and Health Survey (OSDUHS)* is to examine epidemiological trends in student substance use, mental health (e.g., depression), physical health, and risk behaviours (e.g., violence, gambling), as well as identifying risk and protective factors.

In this *Highlights Report*, we summarize the extent and patterns of alcohol and other drug use among Ontario students enrolled in grades 7 through 12 in 2007. The findings are based on the 16th wave of the *OSDUHS*. We also provide data on trends occurring every two years since 1977. The *OSDUHS*, now spanning 30 years, is the longest systematic study of alcohol and drug use among a youthful population in Canada, and the second-longest in North America.

Surveys such as the *OSDUHS* contribute to an understanding of current and changing patterns of alcohol and other drug use, the problems stemming from use, and the associated social and demographic factors.

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

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

The 2007 *OSDUHS* included **new questions** addressing:

- the use of alcoholic coolers;
- the use of jimson weed;
- the non-medical use of prescription opioid pain relievers and prescription ADHD drugs;
- the non-medical use of over-the-counter sleeping medication;
- the source and availability of diverted prescription opioid pain relievers;
- the grade in which students first experienced drunkenness; and
- attitudes about the risk and disapproval of binge drinking each weekend.

A more comprehensive analysis of the survey's drug findings, as well as a complete description of methodology, may be found in the detailed report "Drug Use Among Ontario Students, 1977-2007: Detailed *OSDUHS* Findings" (available in PDF format at: www.camh.net/research/osdus.html). The *OSDUHS* also covers an array of mental and physical health topics, and these results will be published in the companion mental health report in the spring of 2008.

From OSDUS to OSDUHS

To better reflect the nature and scope of this study, we have re-named the Ontario Student Drug Use Survey (OSDUS) as the *Ontario Student Drug Use and Health Survey* (OSDUHS).

The OSDUHS is the longest ongoing school survey in Canada. In 1967, several Toronto school boards approached the Addiction Research Foundation for assistance in determining the extent of drug use among their students. Under the direction of Reginald Smart, four surveys from 1968 to 1974 monitored the extent of alcohol, tobacco and other drug use among Toronto students in grades 7, 9, 11 and 13. In 1977, the study was expanded to include students throughout the province of Ontario. In 1999, the study was again expanded to include students in grades 7 to 13 (OAC). In 2003, the OSDUHS excluded grade 13 (OAC), therefore representing students in grades 7 to 12, and increased the number of classes surveyed in secondary schools.

Since 1977, the study has surveyed about 4,000 students every two years, and to date, has interviewed over 71,000 students.

METHOD

Sampling Design

For all *OSDUHS* surveys, the target population is all students enrolled in the public and Catholic regular school systems. Thus it excludes those enrolled in private schools, special education classes, those institutionalized for correctional or health reasons, those on Indian reserves and Canadian Forces bases, and those in the far northern regions of Ontario (a total of about 8% of Ontario students).

Like the cycles between 1999 and 2005, the 2007 *OSDUHS* employed a two-stage (school, class), stratified (region and school type) cluster sample design, and over-sampled students in Northern Ontario.

However, the cycles since 2003 (inclusive) differ from the previous cycles in several ways:

- Four classes were selected in each secondary school, one for each grade between 9 and 12. Prior surveys selected only three classes in secondary schools, regardless of grade.

- The sample of schools was based on a longitudinal sample commencing in 2001. This feature of overlapping schools provides more efficient estimates of change over time.

The sample selection occurred as follows:

a) To select the 2001 sample, schools were drawn from the Ministry of Education's 1996/1997 enrolment data, and were stratified according to the four regions used in previous surveys.

b) Within each regional strata, a random selection of schools was chosen with probability proportional to size (thus, larger schools have a greater probability of being selected). In 2007, these same schools were re-contacted. If a school could not participate, a replacement school from the same region was selected.

Also included in the 2007 sample was a selection based on brand new schools in the province. The sampling frame for replacement schools and brand new schools was based on the Ministry of Education and Training's 2004/2005 enrolment data.

c) Within each school, classes were randomly selected. In elementary/middle schools, two classes were randomly selected – one 7th-grade and one 8th-grade. In secondary schools, four classes were randomly selected, one in each grade between 9 and 12.

For all *OSDUHS* surveys, Ontario is divided into four regions based on the following boundaries: **Toronto**, schools within the former Metropolitan Toronto; **Northern** Ontario, schools within the North Bay and Sudbury areas and farther north; **Eastern** Ontario, schools within York Region district and farther east; and **Western** Ontario, schools west of, and including, Peel Region. (See Table 2 for a breakdown according to the Local Health Integration Networks.)

Procedures

Students who returned a signed active parental consent form completed the self-administered questionnaires in their classrooms within a 30-40 minute session, between November 2006 and June 2007. Participation was voluntary and anonymous. All students recorded their responses directly on the questionnaires, which were then entered and partially-verified by data entry staff.

The final sample size in 2007 was **6,323** 7th- to 12th-graders (68% of selected students) from 43 school boards, 119 schools and 385 classes. This sample represents about 1,011,200 Ontario students in grades 7 to 12. All survey estimates were weighted, and variance and statistical tests were corrected for the sampling design.

The Questionnaire

To cover as many content areas as possible in a fixed time period, we employed two questionnaires, Form A and Form B. In each classroom, half the students were randomly assigned either Form A or B. On average, the questionnaire took about 30 minutes to complete. Questionnaires are available at: www.camh.net/research/osdus.html.

RESULTS

Overview of Drug Use in 2007

Past Year Drug Use

By far, the most commonly used drug is alcohol, with 61% of students reporting use during the 12 months before the survey (see Figure 1 and Table 1). Cannabis is the next most common drug, with 26% reporting past year use. The non-medical use of opioid pain relievers, such as codeine, Percocet, Percodan or Tylenol #3, ranks third at 21%. Tobacco ranks fourth, with 12% reporting smoking cigarettes during the past year.

Past year use of solvents, stimulants, and hallucinogens other than LSD (e.g., mescaline and psilocybin "magic mushrooms") is reported by about 6% of students. The remaining drugs are used by fewer than 6% on a past year basis. The least common drug is GHB, used by less than 1% of students.

Just over one-quarter (29%) report using at least one illicit drug in the past year. When cannabis is excluded from this general measure, the proportion becomes about one-in-eight (12%).

Lifetime Drug Use

Estimates for lifetime drug use follow a similar pattern as that for past year use: alcohol, cannabis, and tobacco are the three most common drugs (Figure 1). About 23% of students have used opioid pain relievers (e.g., codeine, Percocet, Percodan, Tylenol #3) for non-medical purposes in their lifetime. Twelve percent have used over-the-counter sleeping medication (e.g., Nytol) for non-sleeping purposes in their lifetime. The remaining drugs were used by less than 7% of students in their lifetime.

Frequency of Drug Use

Of all the illicit drugs (excludes alcohol and tobacco) cannabis is, by far, the most frequently used, as defined as six or more times in the past year. About one-in-seven (14%) students report using cannabis frequently. Frequent use of opioid pain relievers is reported by about 8% of students. Stimulants, solvents, hallucinogens, cocaine and ecstasy are the next most frequently used, with about 1% of all students reporting using these six or more times. All other drugs are not likely to be used at this frequency.

Figure 1. Percentage Reporting Lifetime and Past Year Drug Use, 2007 OSDUHS (Grades 7-12)

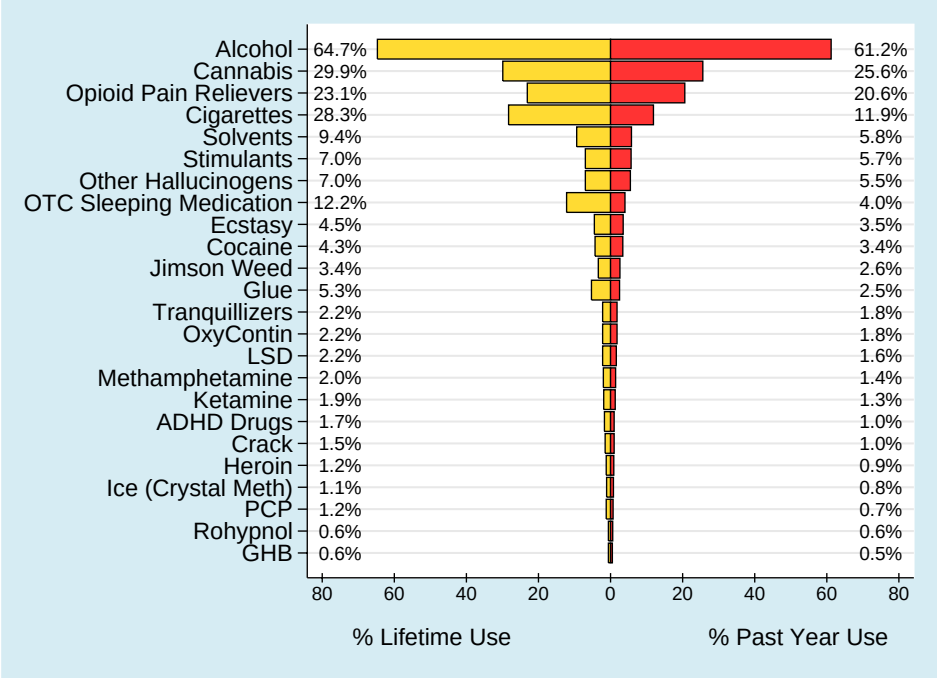


Table 1. Past Year Drug Use (%) by Total, Sex, and Grade, 2007 OSDUHS

	Total	Males	Females		G7	G8	G9	G10	G11	G12	
Alcohol	**61.2**	61.7	60.7		28.1	40.1	58.9	69.6	79.2	83.0	*
Binge Drinking	**26.3**	27.1	25.4		4.4	6.5	18.8	29.8	42.2	48.0	*
Cannabis	**25.6**	26.9	24.3		3.6	6.6	21.0	30.9	40.0	44.7	*
Opioid Pain Relievers (NM)	**20.6**	18.0	23.5	*	12.5	22.1	24.0	21.5	22.0	20.5	*
Cigarettes	**11.9**	11.7	12.1		2.5	3.8	10.2	13.7	19.3	19.2	*
Solvents	**5.8**	4.9	6.8		9.3	10.1	5.8	5.6	3.9	1.5	*
Stimulants (NM)	**5.7**	4.0	7.5	*	1.9	3.3	6.4	5.4	8.2	7.9	*
Other Hallucinogens	**5.5**	6.6	4.3	*	0.6	1.0	4.1	6.3	10.9	8.8	*
OTC Sleeping Medication (NM)	**4.0**	3.2	4.9	*	3.2	3.3	5.5	2.3	5.0	4.4	
Ecstasy (MDMA)	**3.5**	3.4	3.5		s	1.2	2.8	4.7	6.2	5.0	*
Cocaine	**3.4**	3.6	3.1		1.7	2.0	2.3	3.4	5.7	4.5	*
Jimson Weed	**2.6**	2.7	2.4		1.2	1.5	2.6	3.1	3.3	3.4	
Glue	**2.5**	2.1	3.0		3.1	5.2	2.3	2.2	2.0	1.0	*
Tranquillizers/Sedatives (NM)	**1.8**	1.7	1.9		s	1.6	1.2	2.3	3.2	2.1	*
OxyContin (NM)	**1.8**	1.7	1.9		1.0	1.5	0.8	1.9	3.2	2.2	*
LSD	**1.6**	2.1	1.1	*	s	1.0	1.9	1.0	3.0	2.1	*
Methamphetamine	**1.4**	1.5	1.4		s	0.5	1.5	1.2	2.9	1.8	*
Ketamine	**1.1**	1.3	1.0		s	s	0.8	s	2.0	2.5	*
Crack	**1.0**	0.9	1.1		0.7	0.7	1.0	1.1	2.2	0.5	*
ADHD Drugs (NM)	**1.0**	1.1	1.0		s	s	1.7	1.1	2.2	0.9	*
Heroin	**0.9**	1.3	0.6	*	0.6	0.8	1.0	0.7	1.7	0.7	
Ice (Crystal Methamphetamine)	**0.8**	0.8	0.8		s	0.9	0.7	0.7	1.6	0.5	
PCP	**0.7**	0.9	0.5		s	s	0.7	0.7	1.3	0.8	
Rohypnol	**0.6**	s	0.8		0.6	1.4	0.7	s	0.8	s	
GHB	**0.5**	s	0.7		s	s	s	s	1.0	1.0	
Any Illicit Drug, including cannabis	**28.7**	29.3	28.1		6.9	10.0	25.3	33.2	43.3	47.3	*
Any Illicit Drug, excluding cannabis	**11.7**	11.7	11.6		4.4	5.9	11.0	12.1	18.4	16.3	*
Steroids (lifetime use)	**1.3**	2.0	0.5	*	0.7	0.6	s	1.3	2.0	2.4	

Notes: binge drinking (5+ drinks on one occasion) refers to the past 4 weeks time period; NM=non-medical use; OTC= over-the-counter; s=estimate suppressed (less than 0.5%); * indicates a significant sex difference, or grade differences (p<.05), *not* controlling for other factors.

Drug Use in 2007 versus 2005 (Grades 7 to 12)

The number, and magnitude, of declines in past year drug use found in the last survey has attenuated, as the majority of prevalence rates remained stable between 2005 and 2007.

Of the 23 drug measures included in both the 2007 and 2005 surveys, only 4 showed small, yet statistically significant, decreases among the total sample of students:

- cigarette smoking (decreased from 14% in 2005 to 12% 2007);
- methamphetamine ("speed") use (from 2% in 2005 to 1% in 2007);
- crack use (from 2% in 2005 to 1% in 2007);
- lifetime steroid use (from 2% to 1%).

Use of one drug significantly increased between 2005 and 2007. The non-medical use of OxyContin showed a small, but significant, increase from 1% in 2005 to 2% in 2007.

Use of all other drugs remained stable between these two survey years.

Overview of Short-Term Trends, 1999 – 2007 (Grades 7 to 12)

There have been 14 significant decreases in drug use between 1999 and 2007 (also see Table A2):

- cigarettes (from 28% in 1999 to 12% in 2007)
- alcohol (from 66% to 61%)
- stimulants (from 7% to 6%)
- LSD (from 7% to 2%)
- PCP (from 3% to 1%)
- other hallucinogens (from 13% to 6%)
- glue (from 4% to 2.5%)
- methamphetamine (from 5% to 1%)
- crack (from 2.5% to 1%)
- heroin (from 1.9% to 0.9%)
- Rohypnol (from 3% [2001] to 0.6%)
- steroids (lifetime use; from 3% to 1%)
- use of any illicit drug including cannabis (from 32% to 29%)
- use of any illicit drug excluding cannabis (from 21% to 12%).

Subgroup Changes

With the exceptions of non-medical OxyContin use (which increased among males and Eastern students), stimulant use (which increased among females), ecstasy use (which increased among Northern students), and tranquillizer use (which increased among Eastern students), the subgroup changes within the period from 1999 to 2007 show decreases in use.

- Sex: Except for an increase in OxyContin use among males and an increase in stimulant use among females between 2005 and 2007, both sexes showed many declines in drug use during the period between 1999 and 2007 were (see Table A3).

- Grade: All grades showed decreases in drug use between 1999 and 2007, although 7th-graders showed the fewest number of decreases. No grade showed a significant increase during this period (see Table A3).

- Region: Each of the four regions (Toronto, Northern Ontario, Western Ontario, Eastern Ontario) showed many decreases in drug use during the period between 1999 and 2007 (Table A3). Two regions showed increases in drug use: Northern students showed an increase in ecstasy use, and Eastern students showed increases in non-medical OxyContin use and tranquillizer use.

Overview of Long-Term Trends, 1977 – 2007 (Grades 7, 9, 11 only)

The drug use estimates showing the long-term trends for grades 7, 9, and 11 only can be found in Table A4. These data reveal 5 dominant patterns, displayed in Figures 2 to 6.

- The first pattern (Figure 2) is one that displays drug use found to be at an all-time low in 2005 and stable in 2007. This pattern is evident for cigarettes and LSD.

- The second pattern (Figure 3) displays drug use that is significantly lower in 2007 compared to the peaks in use in 1979 and 1999 (2003 for cocaine). This applies to alcohol, cannabis, glue, and cocaine.

- The third pattern (Figure 4) displays use that is significantly lower in 2007 compared to the peak use in 1979 or the early 1980s. This is evident for heroin, stimulants, and tranquillizers.

- The fourth pattern (Figure 5) shows use that is significantly lower in 2007 compared to the peak use in 1999 (2001 for ecstasy). This applies to PCP, other hallucinogens, methamphetamine, crack, and ecstasy.

- The fifth long-term pattern (Figure 6) displays use that is not significantly lower than the peak years of 1979 or 1999. This pattern applies to solvent use and binge drinking.

Figure 2. Pattern 1: Long-Term Drug Use Trends, 1977-2007 OSDUHS

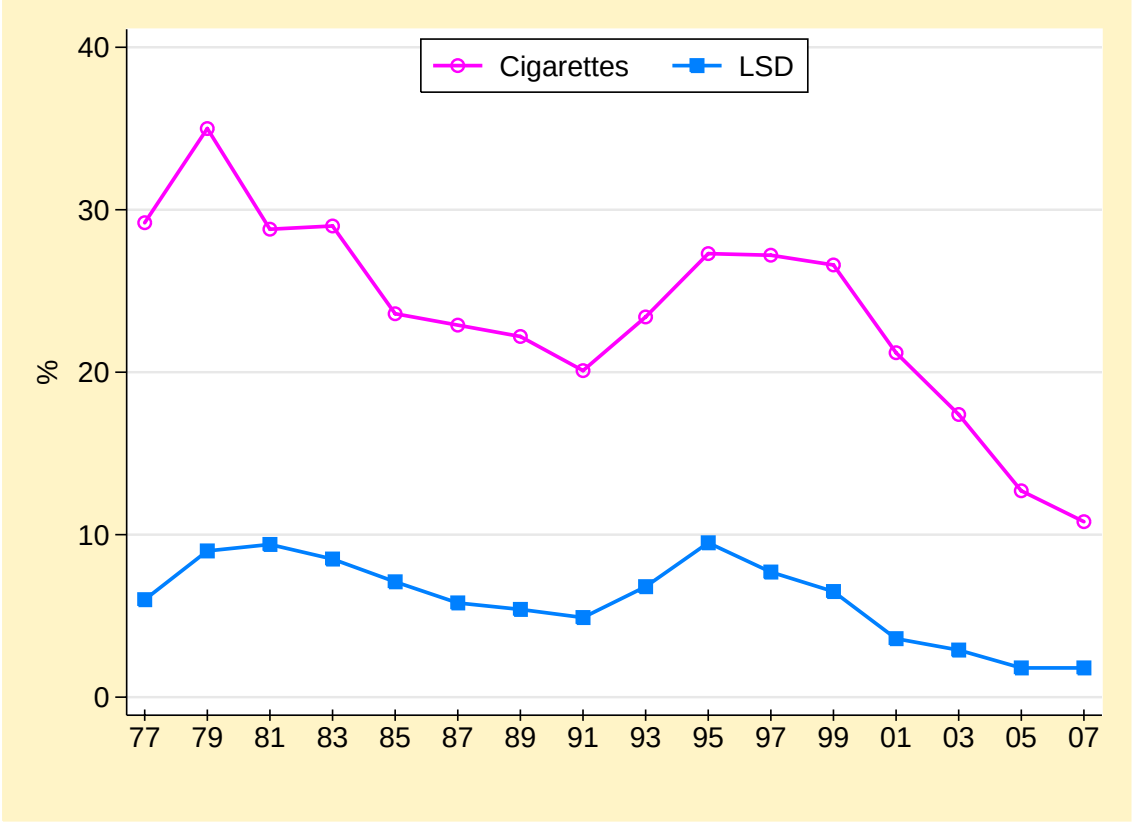


Figure 3. Pattern 2: Long-Term Drug Use Trends, 1977-2007 OSDUHS

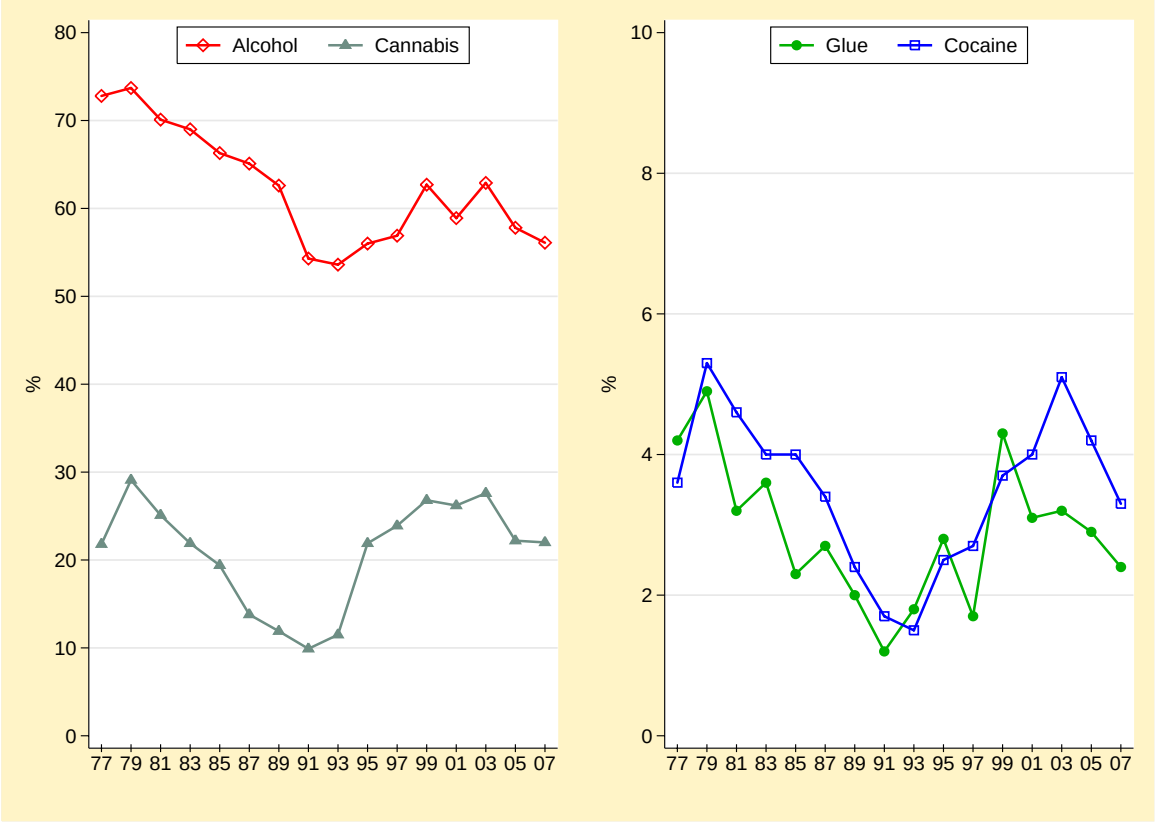


Figure 4. Pattern 3: Long-Term Drug Use Trends, 1977-2007 OSDUHS

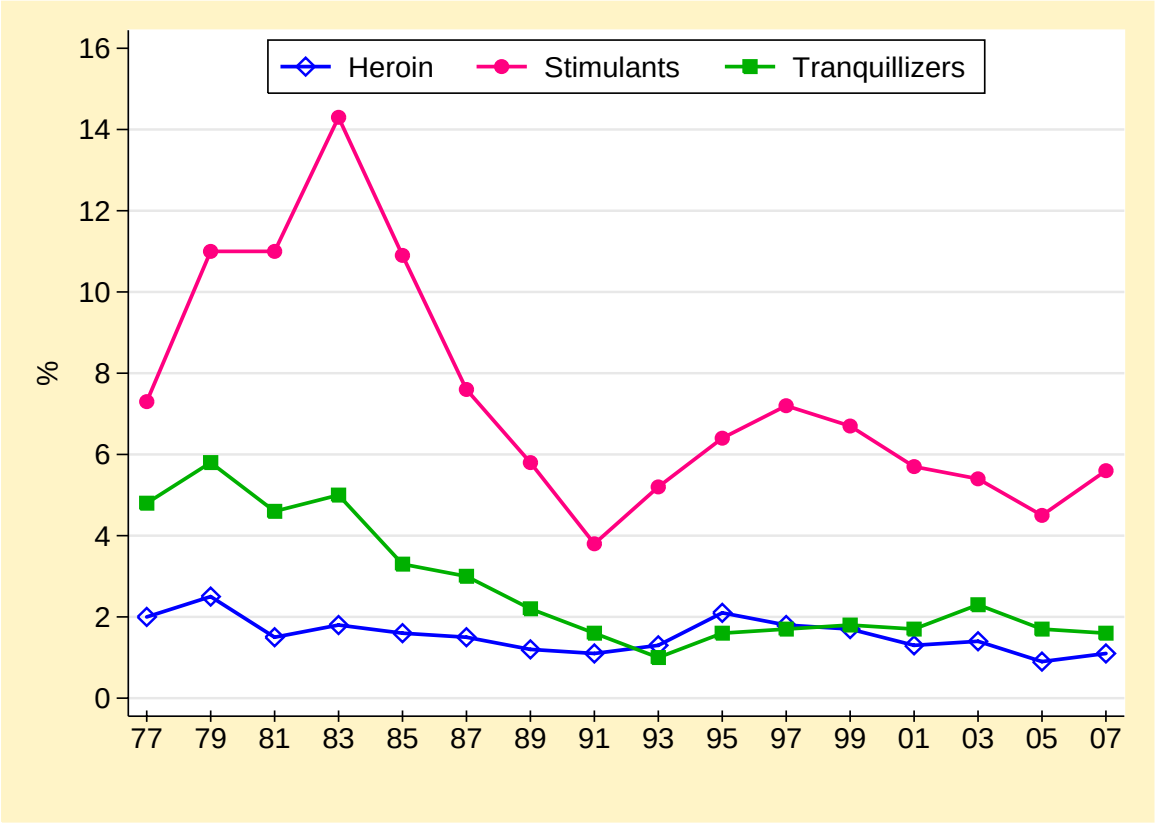


Figure 5. Pattern 4: Long-Term Drug Use Trends, 1977-2007 OSDUHS

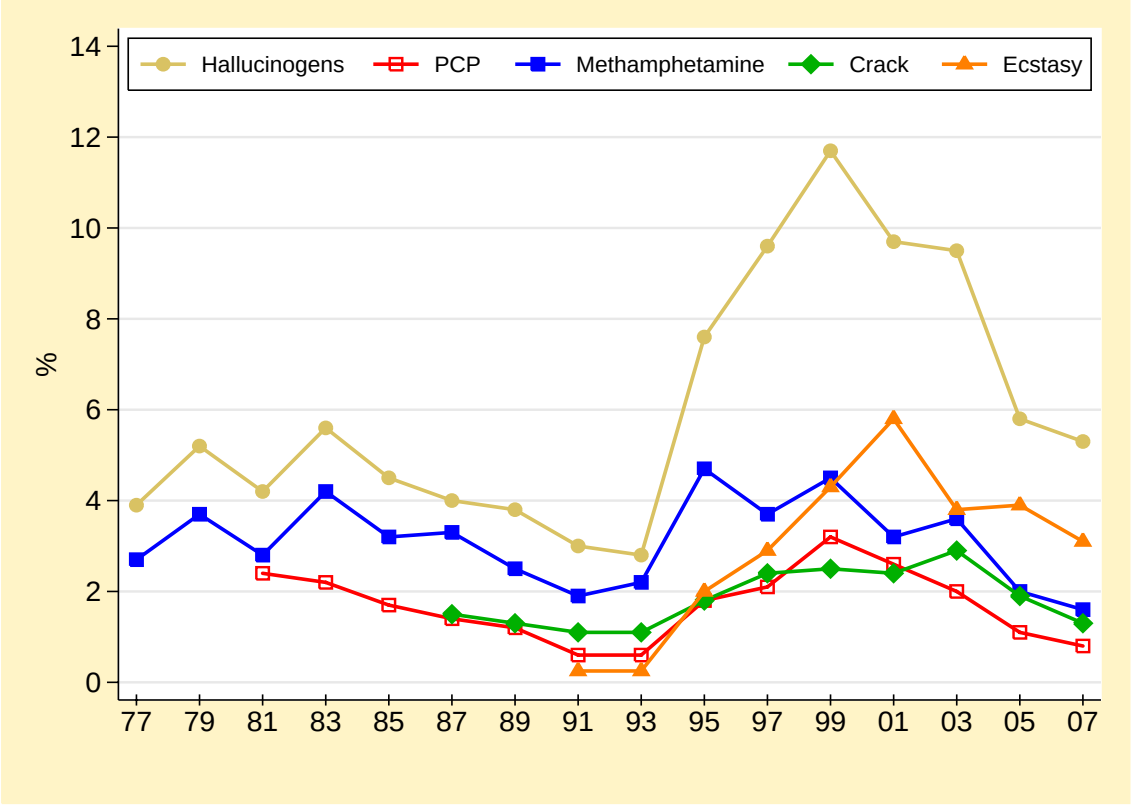
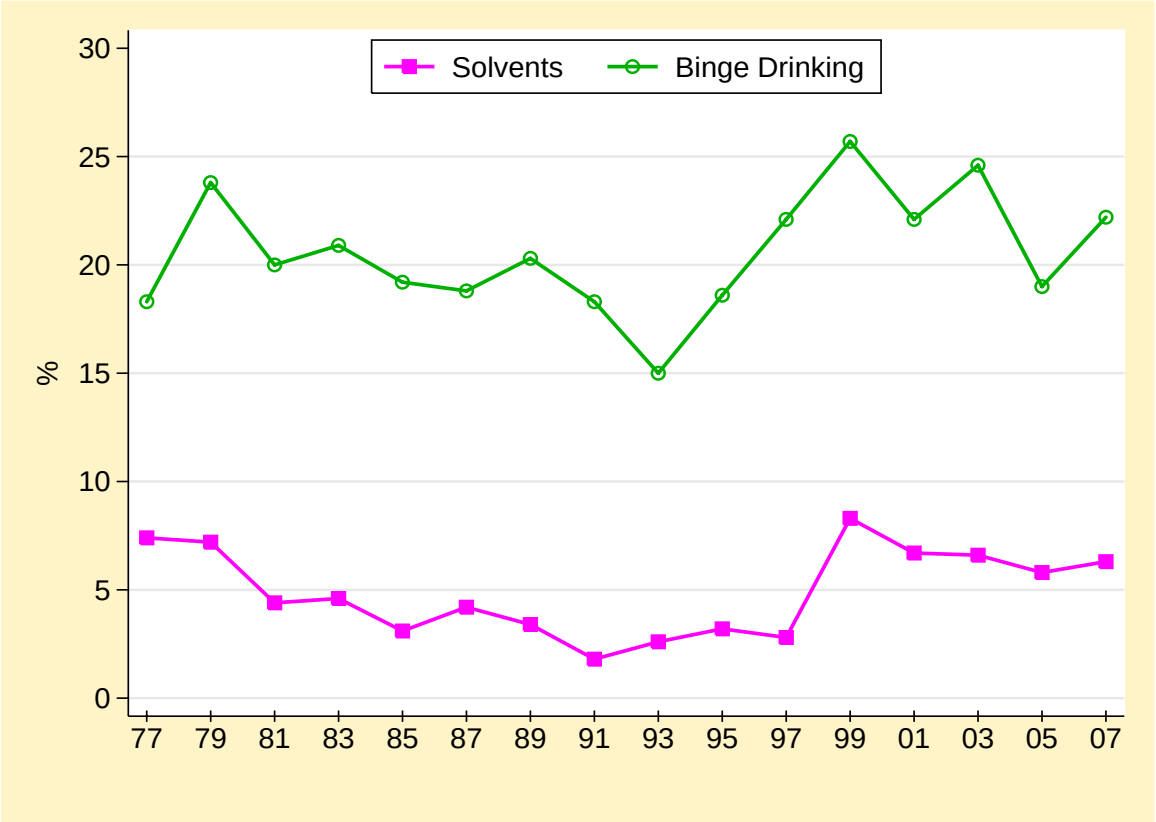


Figure 6. Pattern 5: Long-Term Drug Use Trends, 1977-2007 OSDUHS



Tobacco

Past Year Cigarette Smoking

- About 12% (95% CI: 11%-13%)[1] of all students report smoking in the past year. This represents about 119,900 students in grades 7 to 12 across Ontario.
- Males and females are equally likely to smoke (both 12%).
- Smoking significantly increase with grade: from 2% of 7th-graders; 4% of 8th-graders; 10% of 9th-graders; 14% of 10th -graders; and peaking in 11th- and 12th -grade (both 19%).
- Students in Northern Ontario (20%) are most likely to smoke, and those in Toronto (10%) are least likely. Students in the West and East fall in between (both 12%).

Daily Smoking

- About 5% (95% CI: 4%-6%) of students smoke one or more cigarettes on a daily basis. This percentage represents about 52,700 students in Ontario.
- Daily smoking does not significantly differ between males and females (both 5%).
- Daily smoking is significantly related to grade level, increasing incrementally between 7th-grade (1%) and 11th-grade (10%) and remains steady in 12th-grade (9%).
- Students in the North (12%) are most likely to smoke daily, compared to students in the other three regions (between 4% and 5%).

Usual Amount Smoked

- About 3% of all smokers report smoking more than 20 cigarettes daily, an amount roughly equal to one package. Most student smokers (56%) usually consume less than 1 cigarette per day.

Potential Dependence

Smokers who have their first cigarette within the first 30 minutes upon waking may be considered to be nicotine dependent.

- The 2007 survey found that 18% of smokers have their first cigarette within the first 30 minutes upon waking. Male (19%) and female smokers (17%) are equally likely to smoke within the first half-hour after waking. While there is some variation by grade, these differences are not statistically significant. There are regional differences, with smokers in the North (24%) and West (24%) most likely to report this dependence symptom.

Quitting

- In 2007, 53% of smokers reported at least one quit attempt in the year before the survey. Among the smokers who attempted to quit, most report attempting to do so once (46%) or twice (20%).

Cigarette Purchasing Behaviour

- In 2007, 4% of underage students successfully purchased cigarettes at a retail outlet during the 4 weeks before the survey. Purchasing varied by age: 1% of students aged 15 and under, and 7% of students aged 16 to 18 years, were able to purchase cigarettes.
- Cigarettes are equally likely to be purchased at corner stores (3%), restaurants, gas stations and bars (2%), and supermarkets (2%).
- Reported cigarette purchasing behaviour at any location by underage students is lower in 2007 (4%) compared to the previous survey in 2005 (6%), and is much lower than the estimate from 1999 (15%).

[1] The 95% CI refers to the confidence interval around the estimate, i.e., the probable range in the total population.

Alcohol

Past Year Alcohol Use

- Overall, 61% (95% CI: 59%-64%) of students report drinking alcohol during the 12 months before the survey. This represents about 616,300 students in grades 7 to 12 in Ontario.
- The prevalence of drinking does not significantly differ between males (62%) and females (61%).
- Drinking significantly increases with grade: rates climb by more than ten percentage points with each grade, between grades 7 and 11 (from 28% to 79%). The prevalence climbs slightly again by 12th-grade, to 83%.
- Rates of drinking significantly differ by region, with Toronto students (55%) least likely to drink and Northern students most likely (71%). Students in the West and East fall in-between, at about 62%.

Frequency of Drinking

- About 23% of all students restrict their drinking to special occasions only. One-in-ten (10%) students drink at least once a week. Only a very small proportion of students drink on a daily basis (less than 0.5%).

Binge Drinking (Past Month)

- Overall, 26% (95% CI: 24%-28%) of students report binge drinking at least once during the 4 weeks before the survey. This percentage represents about 262,400 students in grades 7 through 12.
- About 10% of all students report binge drinking 2 to 3 times during the past month. Another 5% report binge drinking 4 or more times.
- Binge drinking does not significantly differ between males (27%) and females (25%).
- Binge drinking increases significantly with grade: it is lowest among 7th-graders (4%) and climbs to a high of 48% among 12th-graders.
- Northern students are the most likely to report binge drinking (35%) compared to students in the other three regions (22%-27%).

Drunkenness (Past Month)

- Overall, 24% (95% CI: 22%-27%) report becoming drunk at least once during the 4 weeks before the survey (about 228,100 students).
- Reported drunkenness is not significantly different between males and females (25% vs 24%).
- Drunkenness is lowest among 7th-graders (3%) and peaks in grade 12 (46%).
- Northern students are the most likely to report drunkenness (35%) compared to students in the other three regions (20%-25%).

Hazardous Drinking

The World Health Organization's "Alcohol Use Disorders Identification Test" (AUDIT) was used to detect hazardous and harmful drinking. Hazardous drinking refers to a pattern of drinking that increases the likelihood of future medical and physical problems (e.g., accidents), and harmful drinking refers to a pattern of drinking that is already causing damage to one's health (e.g., alcohol-related injuries). We restrict the term to "hazardous" for convenience.

- Overall, 19% (95% CI: 17%-21%) of students report drinking at a hazardous level. This represents about 193,000 students in Ontario. About 30% of drinkers drink at a hazardous level.
- Males (19%) and females (18%) are equally likely to drink hazardously.
- As grade increases, so does the likelihood of hazardous drinking, with a large increase in each grade between grade 7 and grade 12 (1% to 34%).
- There is a significant region effect, with Toronto students (13%) least likely to drink hazardously and Northern students (26%) most likely.

Cannabis

Past Year Cannabis Use

- Overall, about one-quarter (26%) of students (95% CI: 24%-28%) report using cannabis at least once during the 12 months before the survey. This represents about 257,600 students in Ontario in grades 7 to 12.
- Males (27%) and females (24%) are equally likely to use cannabis.
- The likelihood of cannabis use shows large increases with each grade, increasing from 4% among 7th-graders to 45% among 12th-graders.
- Despite some variation, there are no significant differences among the four regions.

Frequency of Cannabis Use

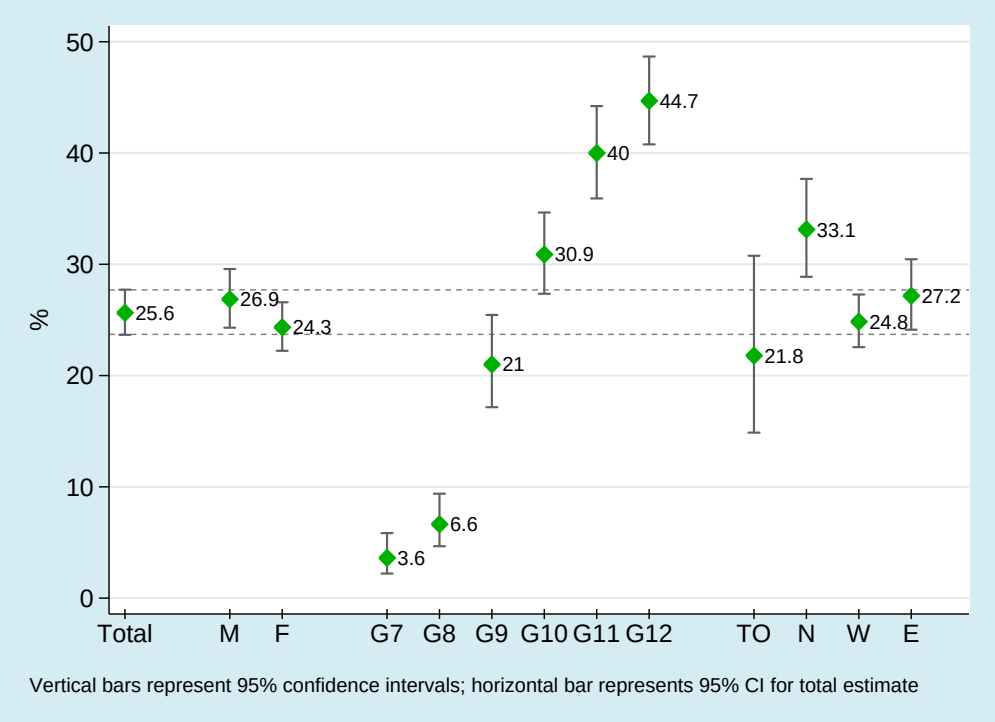
- Among all students, 14% report using cannabis six times or more during the past year. About 12% of students used cannabis between 1 and 5 times.
- During the 4 weeks before the survey, 5% of all students used cannabis weekly, and another 2.5% used on a daily basis – representing about 27,300 students.
- About one-fifth (19%) of past-year cannabis users used the drug on a weekly basis during the 4 weeks before the survey. Another 10% of users used on a daily basis.

Cannabis Dependence

To estimate the percentage of students who may have a dependence problem, the *OSDUHS* included the "Severity of Dependence Scale" (SDS; please see the *Detailed Drug Use Report* for the items).

- About 3% (95% CI: 2%-3%) of all students in grades 7 to 12 may have a cannabis dependence problem. Among cannabis users, about 10% indicate dependence.
- Despite some variation, there are no significant differences by sex, grade, or region.

Figure 7. Past Year Cannabis Use by Sex, Grade and Region, 2007 OSDUHS



Non-Medical Use of Prescription Drugs

Past Year Use of OxyContine

OxyContin is a brand name for a highly addictive prescription painkiller containing the opioid, oxycodone. It is an analgesic drug, and also delivers an initial rush of euphoria, much like heroin.

- About 2% (95% CI: 1.3%-2.4%) of students report using OxyContin at least once during the 12 months before the survey. This represents about 18,100 students in Ontario in grades 7 to 12.
- Males (2%) and females (2%) are equally likely to use OxyContin non-medically.
- Use significantly increases with grade, peaking in grade 11 at 3%.
- There are no significant regional differences.

Past Year Use Opioid Pain Relievers

For the first time in 2007, students were asked about their non-medical use of prescription-type opioid "pain relief pills" such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, and codeine, which were not prescribed to them.

- About 21% (95% CI: 19%-22%) of students report using a prescription opioid pain reliever for non-medical purposes in the year before the survey. This estimate represents about 192,400 Ontario students in grades 7 to 12.
- Females (24%) are more likely than males (18%) to use an opioid pain reliever for non-medical purposes.
- There is significant grade variation, with 7th-graders (12%) least likely to report non-medical use compared to all other grades.
- Non-medical opioid pain reliever use significantly varies by region, with students in the North (27%) most likely to use and Toronto (18%) students least likely.

Past Year Use of ADHD Drugs

Ritalin (methylphenidate), Concerta, and Adderall are stimulant drugs, similar to amphetamines, used to treat Attention Deficit/Hyperactivity Disorder (ADHD) in children. However, some people abuse these drugs for various purposes including appetite suppression, wakefulness, increased focus, and euphoria. For the first time in 2007, students were asked about the use of this class of drugs for non-medical purposes.

- About 1% (95% CI: 0.7%-1.5%) of students report using an ADHD drug for non-medical purposes. This represents about 9,600 Ontario students.
- There is no significant difference between males (1%) and females (1%) in non-medical use of an ADHD drug.
- There is a significant grade effect, with 11th-graders most likely to use (2%).
- There are no significant regional differences.

Past Year Use of Stimulants

- The non-medical use of stimulants (e.g., diet pills, stay awake pills) is reported by 6% of students. This percentage represents about 57,100 7th- to 12th- graders.
- Females (8%) are significantly more likely to use stimulants than are males (4%).
- Stimulant use is significantly associated with grade, increasing from 2% of 7th-graders to about 8% of 11th - and 12th-graders.
- There are no significant regional differences.

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

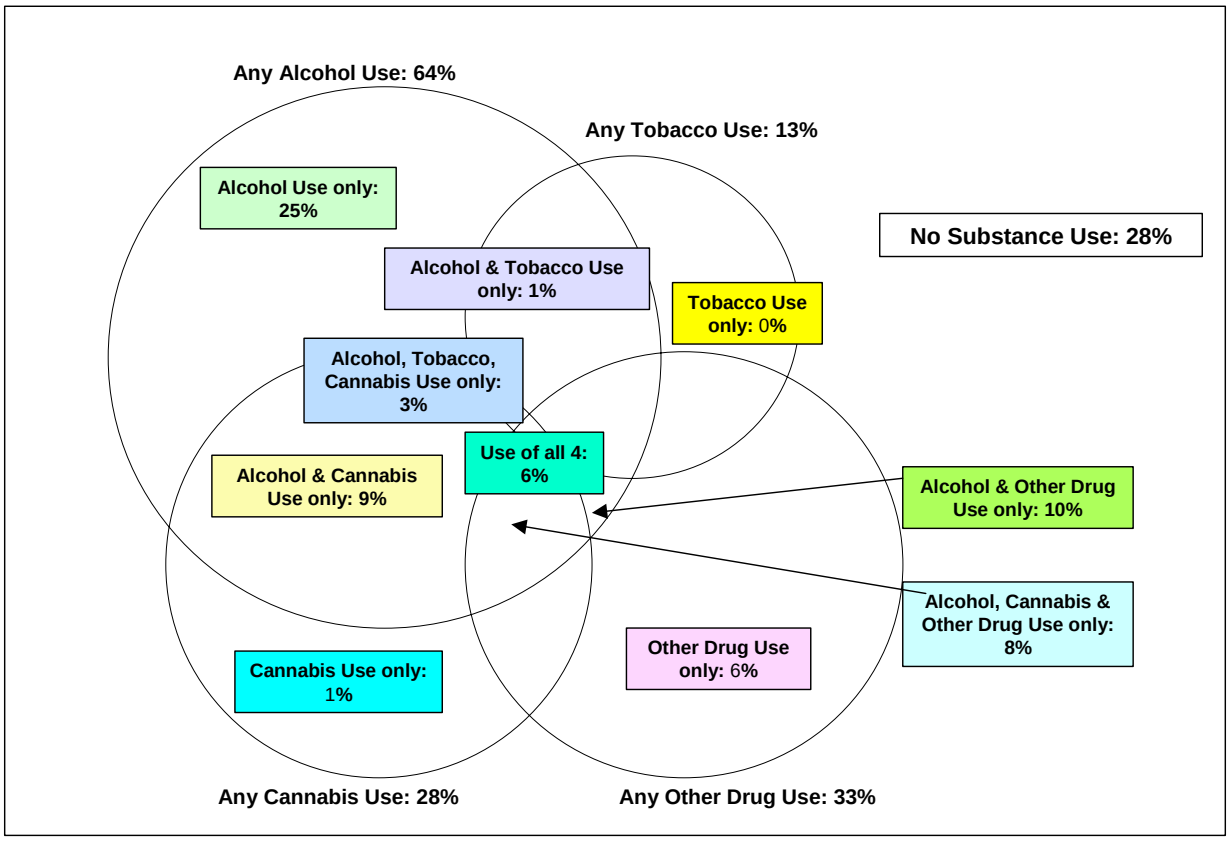
- In 2007, just over one-quarter (28%) of students in grades 7 through 12 report *no substance use* during the past year. A similar proportion (25%) reports using only alcohol. A very small percentage of students uses cannabis exclusively (about 1%), virtually no students smoke cigarettes exclusively, and 6% use any other drug exclusively.

- About 6% of students report using alcohol, tobacco, cannabis, *and* at least one other drug in the past year (representing about 58,600 Ontario students).

- The percentage reporting *no substance use* in 2007 significantly decreases with grade: 54% of 7th-graders, 40% of 8th-graders, 32% of 9th-graders, 24% of 10th-graders, 16% of 11th-graders, and 12% of 12th-graders.

- The percentage of students in 2007 (28%) reporting *no substance use* is similar to the estimates found since 1999 (range 27%-31%). However, over the long-term, abstinence was at its lowest point in 1979 when only 20% of students reported no substance use at all. Abstinence peaked in the early 1990s (when about 40% reported no use), and has significantly declined since then.

Figure 8. The Overlap of Alcohol, Tobacco, Cannabis and Other Drug Use in the Past Year, 2007 OSDUHS (Grades 7 to 12)



Notes: (1) based on a random half sample (N=2935); (2) "Other Drug Use" refers to use of at least 1 out of 21 drugs: glue, solvents, LSD, PCP, hallucinogens, jimson weed, heroin, stimulants, tranquillizers, cocaine, crack, methamphetamine, Ice, ecstasy, GHB, Rohypnol, Ketamine, OxyContin, other opioids, ADHD drugs, and OTC sleeping medication.

New Users and Early Onset

Incidence: New Users in 2007

- Among the total sample of students, 6% smoked cigarettes for the first time during the 12 months before the survey; 16% drank alcohol for the first time; 8% used cannabis; and 3% used another illicit drug for the first time.

- First-time use does not significantly vary by sex or region; however, grade level is significantly associated. Notably, incidence rates for tobacco and alcohol jump between grades 7 and 8, and for cannabis between grades 8 and 9.

Early Onset Among 7th-Graders, 1981-2007

- There is a trend of decreasing early onset of cigarette smoking, with fewer 7th-graders today reporting smoking at an early age. For example, about 3% of 7th-graders in 2007 reported smoking their first whole cigarette by grade 6 (ages 11-12), compared to 9% in 2003, 27% in 1997, and 41% in 1981.

- Early onset of alcohol use is decreasing over time. For example, fewer 7th-graders in 2007 used alcohol by grade 6 compared to past years (31% in 2007 vs. 42% in 2003, and 50% in 1981).

- Early onset of cannabis use – defined here as using for the first time before the end of grade 7 (ages 12-13) – increased between 1993 and 2003, but has since decreased. Specifically, in 1993, 3% of 7th-graders reported first using cannabis in grade 7. This percentage increased to 8% of 7th-graders in 2003, but dropped down to 3% again in 2005 and remains steady in 2007 at 5%. Early onset of cannabis use in 1981 was at 9%.

Drug Use Trends Among 7th-Graders, 1977 – 2007

An overview of the trends in drug use among 7th - graders (ages 12-13), which is the youngest grade surveyed, shows the following:

- The general upswing in drug use during the 1990s and recent declines is evident among the 7th-graders. Short-term declines (2007 vs. 1999) are significant for smoking, alcohol, and methamphetamine ("speed") use.

- Over the long-term, the prevalence of most drugs is generally lower in 2007 compared to the late 1970s (the peak years of use on record).

Average Age of Onset for Smoking, Drinking, and Cannabis Use, 1981 – 2007

In this section, we look at the average age of onset for smoking, drinking, and cannabis use among grade 11 users (ages 16-17). Generally, the trends show older onset ages occurring in recent years.

- In 2007, the average age of first use of cigarettes (smoking one whole cigarette) among grade 11 smokers was 13.3 years. The average age of first use of alcohol among grade 11 drinkers was 13.5 years, and the average age of first drunkenness among 11th-grade drinkers was 14.0. The average age of first cannabis use among grade 11 users was 14.0 years.

- The average onset age for smoking increased between 1981 and 1995, decreased between 1997 and 2001, but has increased again since then.

- The average onset age for drinking has increased since 2001.

- The average age of onset for cannabis use increased between 1981 and 1995, and then decreased up until 1999. Between 1999 and 2005, onset age remained stable. However, the average onset age has increased again in 2007.

Consequences and Problems Related to Substance Use

Drinking and Driving

- In 2007, 12% (95% CI: 10%-14%) of all drivers in grades 10 to 12 drove within an hour after consuming two or more drinks of alcohol at least once during the 12 months before the survey.
- Male drivers are more likely than females to drink and drive (14% vs 9%).
- Despite some variation, there are no significant differences among the grades, or among the regions.

Cannabis Use and Driving

- About 16% (95% CI: 14%-18%) of drivers in grades 10 to 12 report driving a vehicle within one hour of using cannabis at least once during the 12 months before the survey.
- Male drivers are significantly more likely than female drivers to use cannabis and drive (18% vs 13%).
- The likelihood of using cannabis and driving significantly increases with grade, ranging from a low of 4% among drivers in 10th-grade to a high of 19% among drivers in 12th-grade.
- There are no significant regional differences.

Been a Passenger with a Driver Who Was Drinking or Using Drugs

Students were asked how often in the past 12 months they rode in a vehicle driven by someone who had been drinking alcohol, and driven by someone who had been using drugs.

- The 2007 survey found that 26% of students had been a passenger in a vehicle at least once in the past year with a driver who had been drinking, and 18% with a driver who had been using drugs.
- No significant sex differences were found with respect to being a passenger with a driver who was drinking, or who was using drugs.
- Riding in a vehicle with an intoxicated driver (either by alcohol or drugs) increases significantly with grade level. For example, over one-third of 12th-graders report each behaviour.
- There are no significant regional differences in the riding with someone who was drinking alcohol. However, Toronto students (12%) are significantly less likely to report riding with a driver who was using drugs compared to students in the other three regions.

Drug Use Problem

The 2007 survey included the six-item "CRAFFT" screen to gauge drug use problems experienced by students (please see the *Detailed Drug Report* for the six questions). A total of two or more problems is used to identify adolescents who may have a drug use problem that may require treatment.

- About 15% (95% CI: 13%-17%) of students may have a drug use problem. This percentage represents around 160,000 Ontario students in grades 7 to 12.
- There is no sex difference with respect to indicating a drug use problem (both 15%).
- There is significant grade variation: the likelihood of a drug use problem is lowest among 7th-graders (2%) and highest among 12th-graders (25%).
- There are no significant regional differences.

Alcohol and Other Drug Treatment

- In 2007, 1.5% (95% CI: 1.2%-1.8%) of students indicated that they had received either alcohol and/or drug treatment. This estimate represents about 14,700 Ontario students in grades 7 to 12.

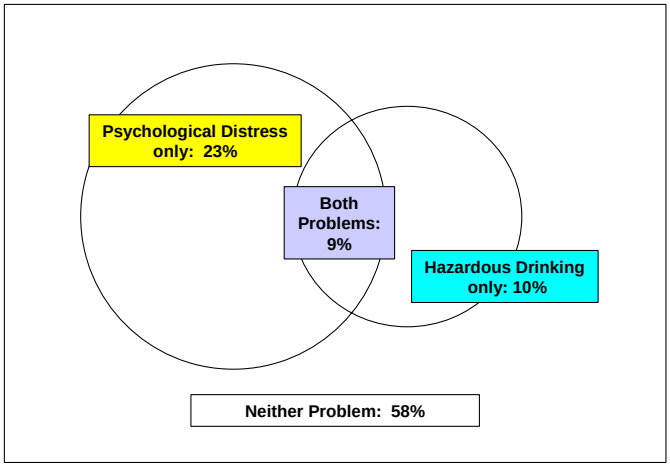
Coexisting Alcohol and Mental Health Problems

In addition to substance use problem indicators, the 2007 *OSDUHS* also contains indicators of poor mental health. Specifically, the survey included the General Health Questionnaire (GHQ12), which is a screening instrument designed to detect current elevated psychological distress (symptoms of anxiety and depression).

In this section, we present the percentage of students who report *both* hazardous drinking (according to the AUDIT) and psychological distress (according to the GHQ12).

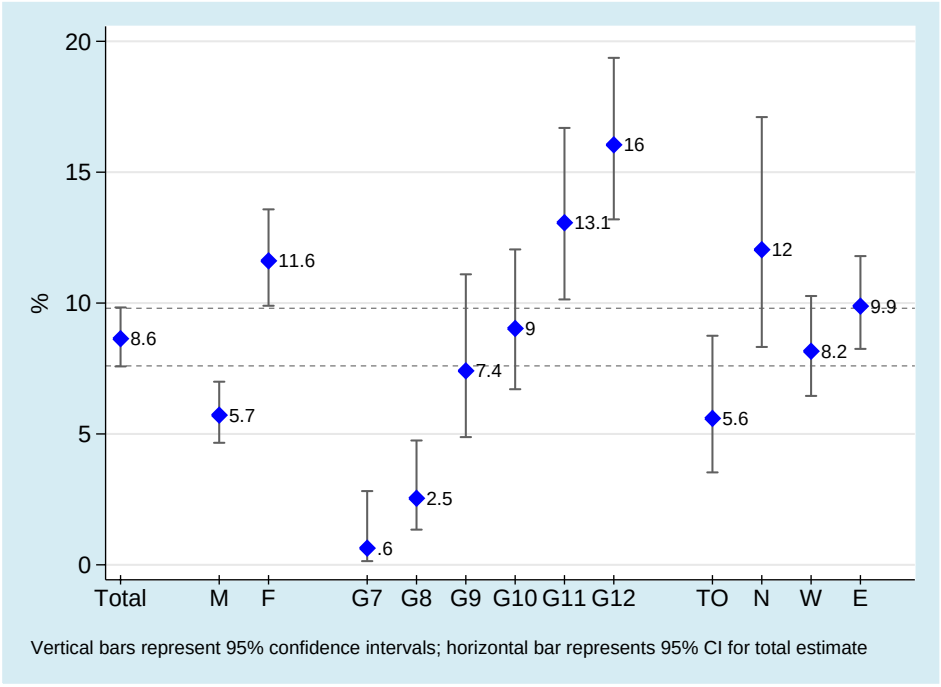
- In 2007, 9% of all students (about 89,900 Ontario students) indicate both hazardous drinking and elevated psychological distress.
- Females are more likely than males to indicate coexisting problems (12% vs 6%).
- Coexisting problems increase with grade, from less than 1% of 7th-graders to 16% of 12th-graders.
- There are significant regional differences, with students in the North (12%) most likely to indicate coexisting problems, while students in Toronto (6%) are least likely.

Figure 9. Coexisting Problems: Hazardous Drinking and Elevated Psychological Distress, 2007 OSDUHS (Grades 7 to 12)



Based on a random half sample (N=3,388)

Figure 10. Coexisting Problems: Hazardous Drinking and Elevated Psychological Distress, 2007 OSDUHS (Grades 7 to 12)



Attitudes and Perceptions

Perceptions of Risk of Harm and Disapproval

- Among the drug behaviours surveyed, students feel that the greatest risk of harm is associated with regular marijuana use (52%), followed by trying ecstasy (41%), trying cocaine (37%), trying LSD (36%), daily smoking (31%), binge drinking on weekends (27%), and trying cannabis (19%).

- Perceptions of risk significantly increase with grade for daily smoking, trying cocaine, LSD, and ecstasy, but *decrease with grade* for cannabis use (trying and regular use).

- Over the long-term, risk perceptions surrounding the use of most of the substances asked about decreased in the late 1990s, but have steadily increased in recent years.

- A majority of students strongly disapprove of trying ecstasy (56%), trying LSD (53%), and trying cocaine (52%). Almost half (48%) strongly disapprove of smoking marijuana regularly. A smaller magnitude (about one-third) strongly disapproves of trying cannabis, and of binge drinking on weekends.

- Over the long-term, disapproval of any cannabis use declined in the late 1980s and early 1990s, but it has been on a gradual upswing increased since the late 1990s. Disapproval of trying cocaine declined up until 2001, and has since increased. Disapproval of trying LSD has been increasing since 1997.

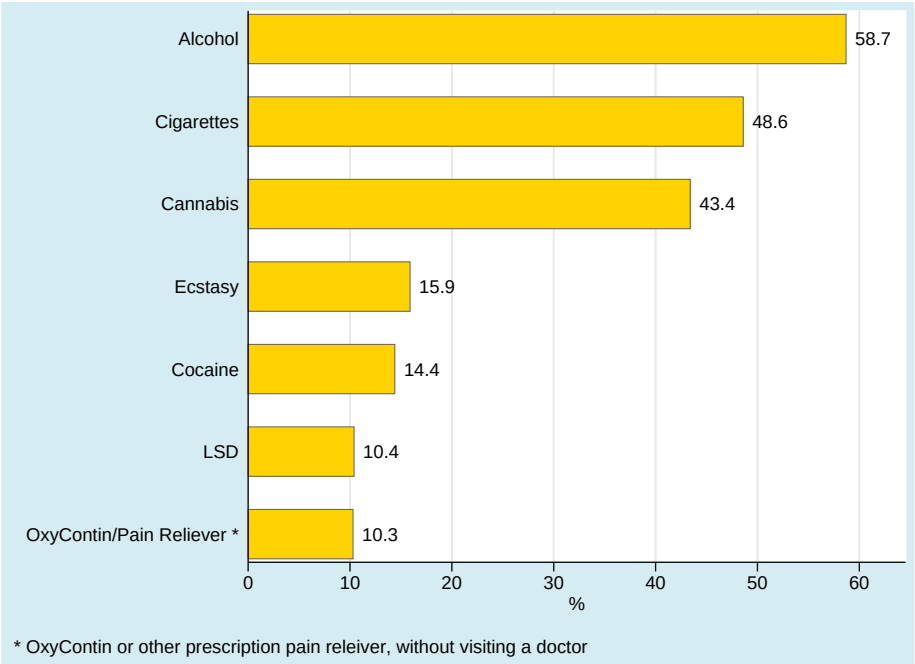
Drug Availability

- As seen in Figure 11, the perception of easy availability ("easy" or "very easy" to get the drug) is highest for alcohol (59%), followed by cigarettes (49%), cannabis (43%), ecstasy (16%), cocaine (14%), LSD (10%), and OxyContin or another prescription opioid pain reliever (10%).

- Not surprisingly, as grade increases, students are more likely to report that these drugs are easy or very easy to obtain.

- Over the short-term (since 1999), the perceived availability of alcohol, cannabis, cocaine, LSD, ecstasy, and cigarettes has significantly decreased.

Figure 11. Percentage of Students Reporting it is "Easy" or "Very Easy" to Obtain the Drug, 2007 OSDUHS (Grades 7-12)



* OxyContin or other prescription pain releiver, without visiting a doctor

School and Neighbourhood

Intoxication at School

Beginning in 2005, the *OSDUHS* asked 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 who report doing so at least once.

- Among all students, 15% (95% CI: 14%-17%) report that they were intoxicated at school at least once during the 12 months before the survey (see Figure 12). This percentage represents about 141,800 Ontario students.
- Males (17%) are more likely than females (13%) to get drunk or high at school.
- Among the grades, 7th- and 8th-graders are significantly less likely to get intoxicated at school, while the 11th- and 12th-graders are most likely (e.g., 24% of 12th-graders).
- There is no significant variation by region.

Getting Drugs at School

Beginning 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?"*

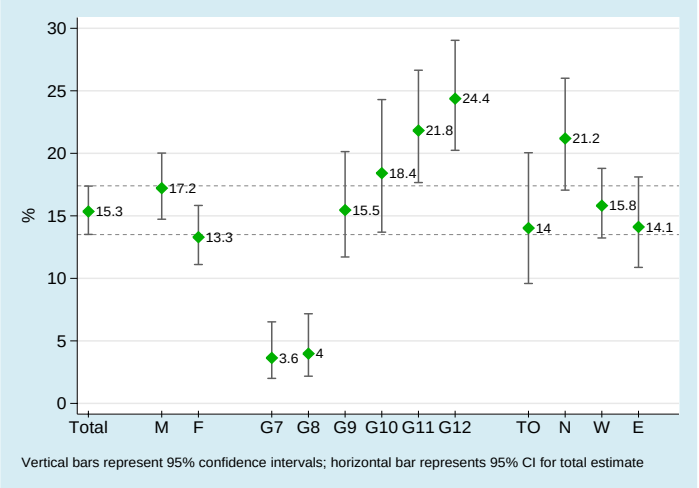
- Among all students, 21% (95% CI: 19%-24%) report that they had been offered, sold, or given a drug at school in the 12 months before the survey. This percentage represents about 194,400 Ontario students.
- Males are more likely than females to have been offered, sold, or given a drug at school (25% vs 18%, respectively).
- Among the grades, 7th- and 8th-graders (about 5%) are significantly less likely to be offered, sold, or given a drug, compared to 11th- and 12th-graders (about 30%).
- There is no significant variation by region.

Exposure to Drug Selling

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.

- In 2007, about one-third (31%) of students report that someone had tried to sell them drugs. Males and older students were more likely to report that someone tried to sell them drugs. There are no significant regional differences.
- The percentage of students reporting that someone had tried to sell them drugs has been on a downward trend since 2001 (from 39% in 2001 significantly dropped to 31% in 2007).
- Just over one-quarter (28%) of students had seen someone selling drugs in their neighbourhood in the past year. Males and females are equally likely to indicate this. Older students are more likely to see drug selling in their neighbourhood, and no significant regional differences are evident.
- The percentage of students in 2007 (28%) that report observing drug selling in their neighbourhood is similar to the 2005 estimate (27%). However, the 2007 estimate is significantly lower than those between 1999 and 2003 (31%-32%).

Figure 12. Percentage Reporting Getting Drunk or High at School During the Past Year by Sex, Grade and Region, 2007 OSDUHS



Subgroup Profiles

Sex

As seen in Figure 13 below, males are more likely than females to use LSD, other hallucinogens, and heroin. Females are more likely to use opioid pain relievers, stimulants, and over-the-counter sleeping medication for purposes other than sleeping.

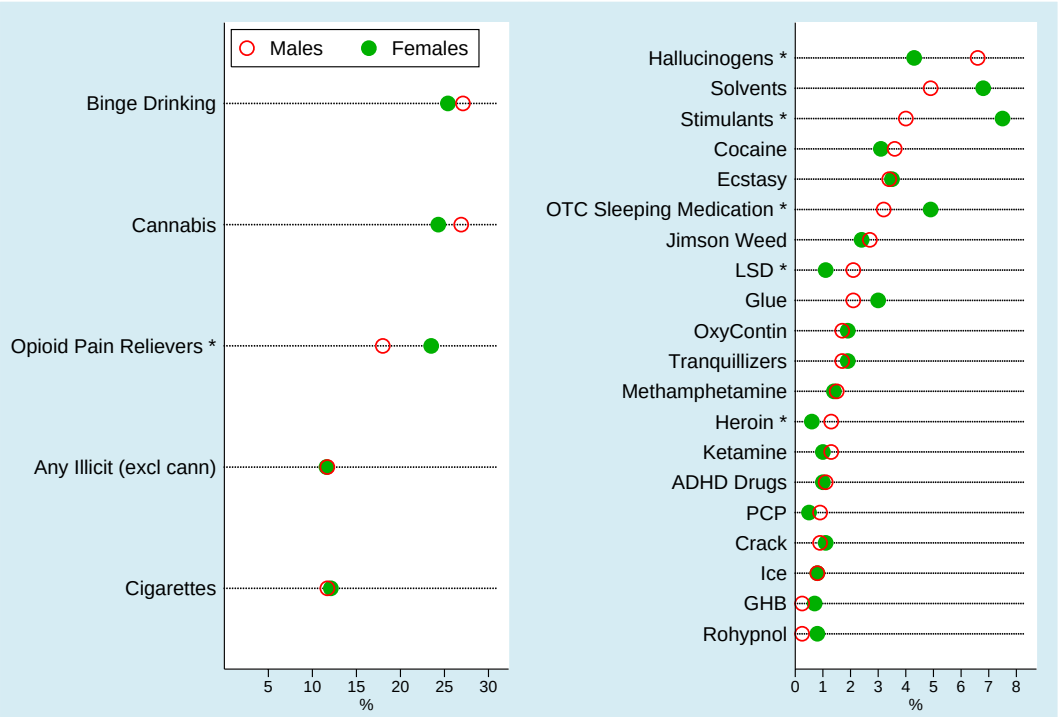
Grade

The use of the following drugs steadily increases with grade: alcohol, binge drinking, and cannabis (Figure 14). Other drugs typically peak in grade 11 and then somewhat subside by grade 12. These drugs are: OxyContin and other prescription opioid pain relievers, cigarettes, ecstasy, hallucinogens, cocaine, stimulants, methamphetamine, tranquillizers, ADHD drugs, LSD, and crack (Figure 15). Only glue and solvent use decrease with grade (Figure 16). The use of over-the-counter sleeping medication, jimson weed, heroin, Ice, PCP, Rohypnol and GHB is not significantly associated with grade (Figure 17).

Region

As seen in Figure 18, many drug use measures significantly vary by region: binge drinking, cigarettes, prescription opioid pain relievers, cigarettes, ecstasy, cocaine, methamphetamine, and crack. The overall measure of any illicit drug use excluding cannabis also significantly varies by region. A general pattern that emerges shows that Toronto students are less likely to use these drugs, whereas Northern students are more likely.

Figure 13. Past Year Drug Use by Sex, 2007 OSDUHS



Notes: * indicates significant sex difference, p<.05; binge drinking refers to past 4 weeks

Figure 14. Drugs that Steadily Increase with Grade, 2007 OSDUHS

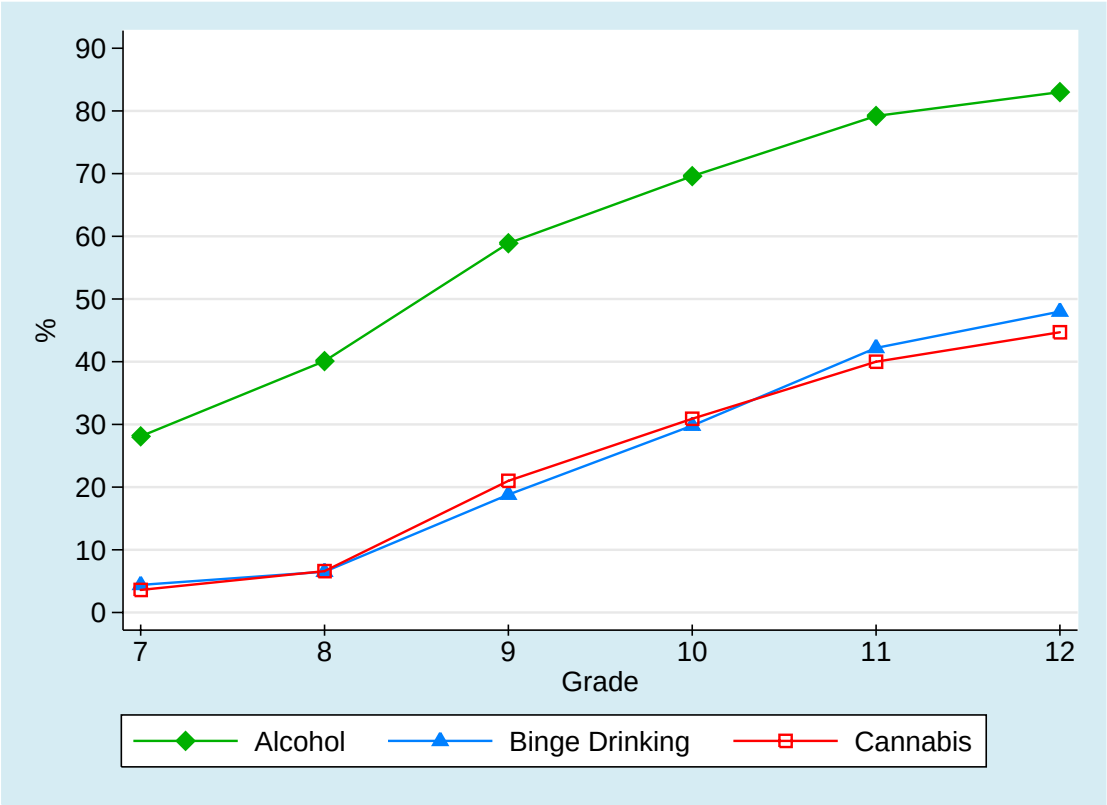


Figure 15. Drugs that Peak Before Grade 12, 2007 OSDUHS

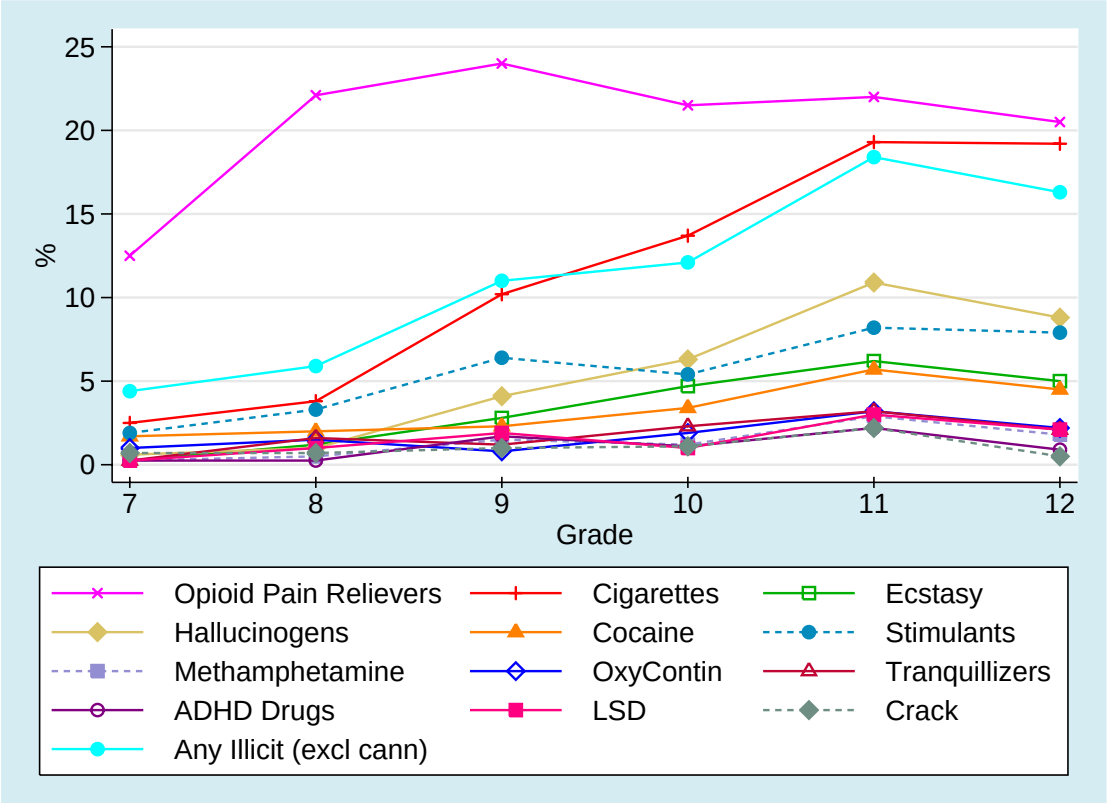


Figure 16. Drugs that Decrease with Grade, 2007 OSDUHS

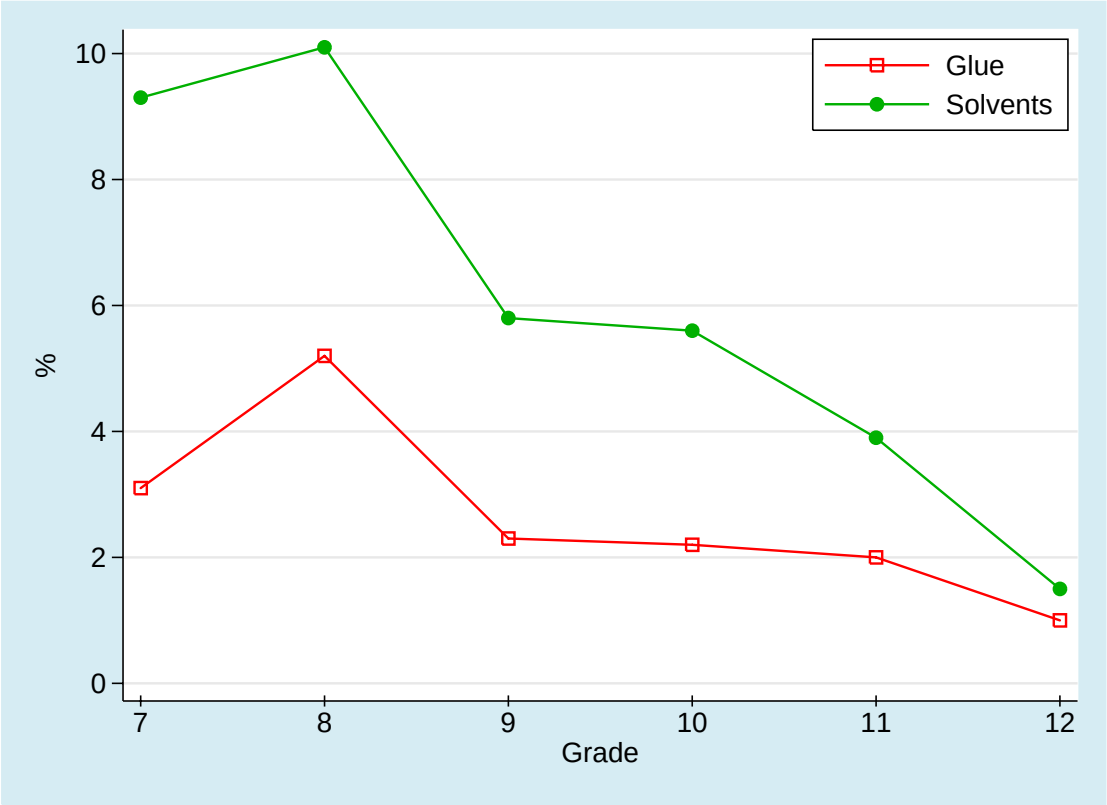


Figure 17. Drugs that Do Not Significantly Vary by Grade, 2007 OSDUHS

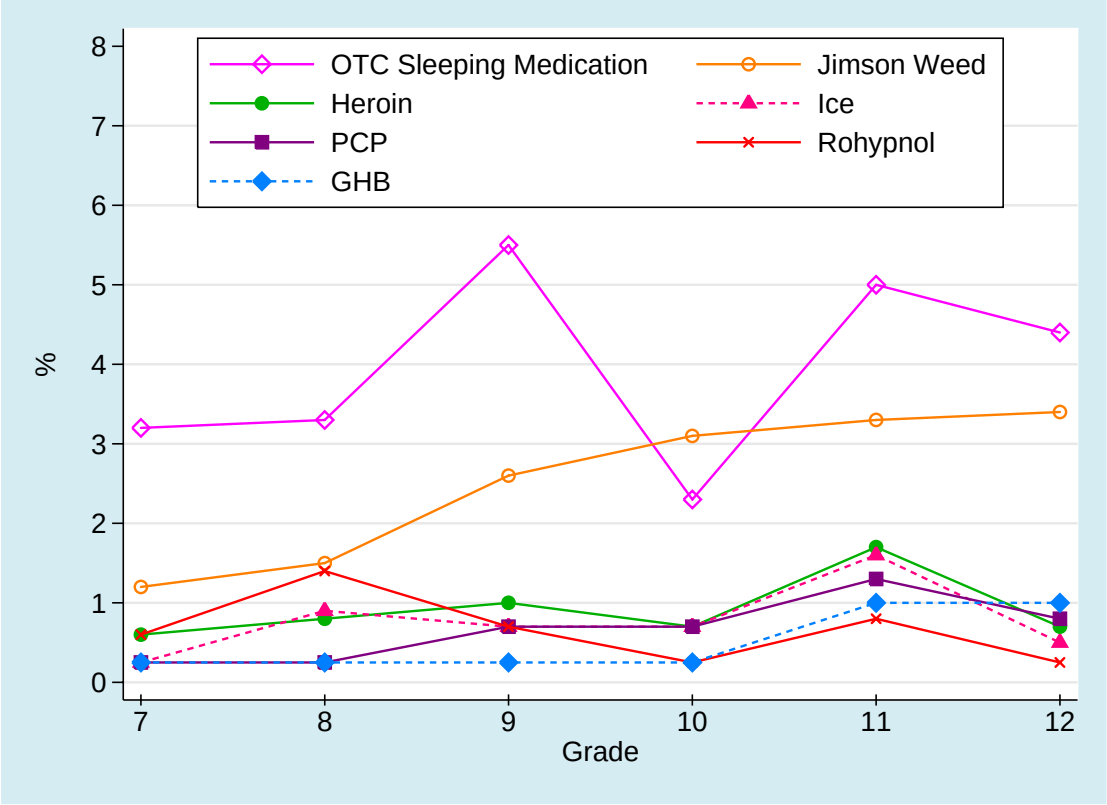
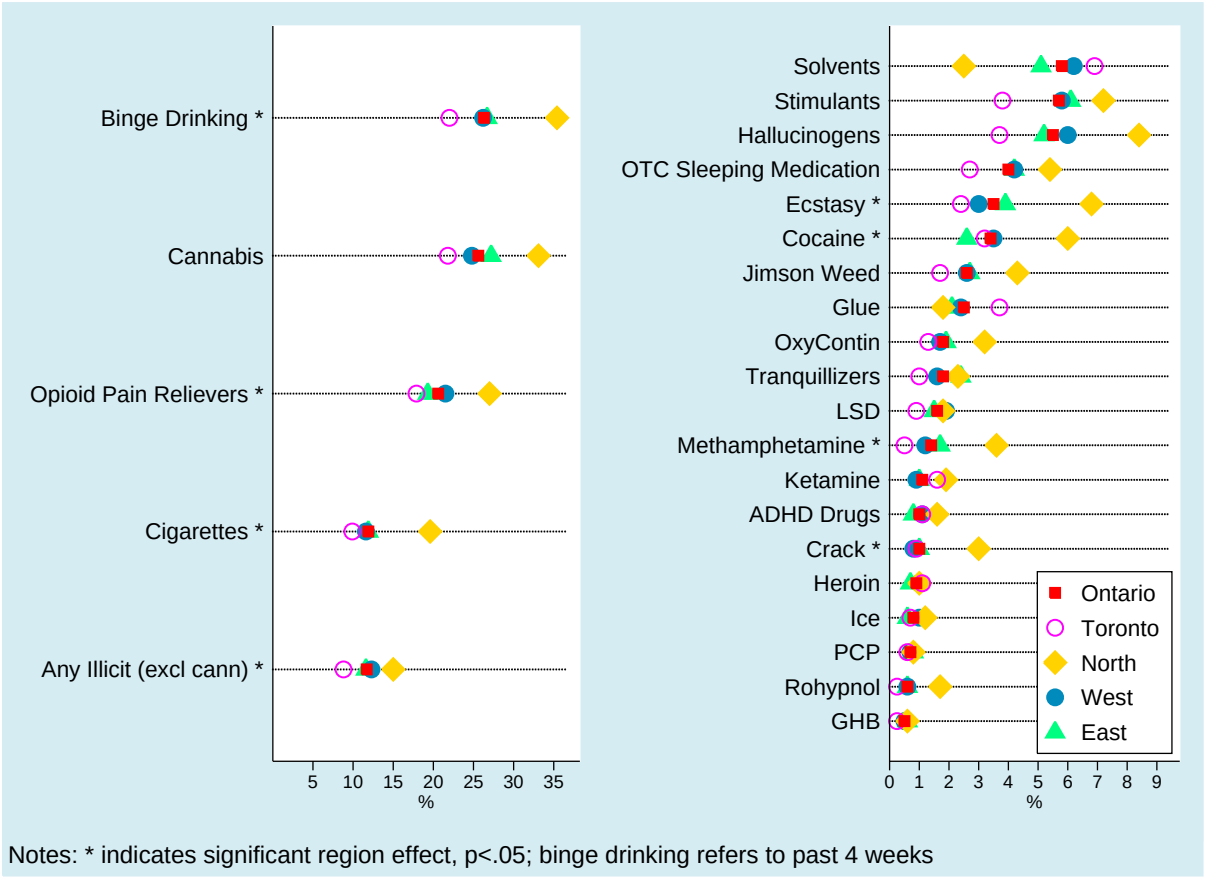


Figure 18. Past Year Drug Use by Region, 2007 OSDUHS



Notes: * indicates significant region effect, p<.05; binge drinking refers to past 4 weeks

Ontario's Local Health Integration Networks

This section provides the 2007 drug use estimates among high school students only (grades 9-12) according to Ontario's Local Health Integration Networks (LHINs). In 2006, the province designated 14 geographic areas each to function as health systems that plan, integrate and fund local health services (see http://www.lhins.on.ca).

In the *OSDUHS*, the LHINs were assigned to students using the six-digit postal code of the school. Due to small sample sizes, some adjacent LHINs were merged. The 12 LHIN areas presented are:

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

Table 2. Percentage of Secondary School Students (Grades 9 to 12) Reporting Drug Use, and Other Selected Indicators, During the Past Year, by Ontario Local Health Integration Network, 2007 OSDUHS

	Erie St. Clair	South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	C. East + S. East	Champlain	North Simcoe Muskoka	N. East + N. West	Ont.
(Student N) *(School N)*	*(210)* *(3)*	*(187)* *(3)*	*(429)* *(6)*	*(561)* *(11)*	*(382)* *(6)*	*(430)* *(7)*	*(174)* *(3)*	*(461)* *(7)*	*(563)* *(8)*	*(675)* *(8)*	*(134)* *(2)*	*(628)* *(13)*	*(4834)* *(77)*
Cigarettes (95% CI)	**21.6**** (20.3-22.9)	**15.0** (11.5-19.4)	**21.9** (15.1-30.6)	**12.2** (8.7-16.8)	**13.5** (9.2-19.2)	**13.9** (10.5-18.1)	**20.1** (9.8-36.6)	**12.3*** (9.2-16.2)	**14.8** (10.8-20.0)	**16.1** (12.9-19.9)	**13.6** (10.3-17.7)	**24.1**** (19.6-29.4)	**15.8** (14.1-17.6)
Daily Smoking	**11.9**** (8.7-16.0)	**4.1** (1.9-8.5)	**13.3*** (7.3-22.8)	**6.6** (4.1-10.5)	**4.1** (2.1-8.0)	**6.9** (4.6-10.2)	**6.8** (4.2-10.7)	**4.5** (2.6-7.6)	**7.4** (5.3-10.2)	**4.4*** (3.0-6.6)	**6.4** (4.0-10.2)	**14.5**** (10.7-19.3)	**7.0** (5.9-8.3)
Alcohol	**81.5** (72.9-87.8)	**78.8** (74.6-82.4)	**75.7** (69.3-81.1)	**75.2** (68.4-81.0)	**71.1** (63.5-77.6)	**66.8** (51.6-79.2)	**75.6** (51.9-89.8)	**63.6**** (54.8-71.6)	**71.3** (62.2-79.0)	**75.3** (67.6-81.6)	**83.0**** (78.9-86.5)	**80.8*** (75.3-85.4)	**73.1** (70.1-76.0)
Binge Drinking	**48.5*** (36.5-60.6)	**46.4*** (38.3-54.7)	**37.1** (30.7-44.0)	**35.2** (29.7-41.1)	**30.8**** (26.7-35.2)	**28.1** (18.5-40.2)	**37.2** (21.3-56.3)	**25.8**** (18.5-34.7)	**33.8** (29.6-38.2)	**38.6** (32.7-45.0)	**41.4** (35.1-48.0)	**46.1**** (41.6-50.7)	**35.3** (32.7-38.1)
Cannabis	**38.6** (29.2-49.0)	**34.6** (23.3-47.9)	**40.3** (36.5-44.1)	**31.0** (25.6-36.9)	**30.0*** (25.3-35.3)	**29.8** (21.2-40.2)	**45.3** (28.6-63.1)	**27.4*** (21.0-34.8)	**35.0** (28.8-41.7)	**36.4** (29.9-43.3)	**48.3**** (47.4-49.1)	**41.2** (35.7-46.9)	**34.7** (32.0-37.4)
Glue or Solvents	**9.3**** (5.2-15.9)	†	†	†	**8.5** (4.0-17.0)	**6.8** (2.9-14.8)	†	**3.8** (2.5-5.6)	**5.7** (3.4-9.5)	**3.1** (1.3-7.3)	†	**3.0** (1.5-5.7)	**4.7** (3.5-6.2)
LSD or PCP	**6.0**** (3.7-9.8)	†	**5.3**** (2.7-9.9)	**2.6** (0.9-7.2)	†	†	†	**2.4** (1.3-4.3)	**1.9** (0.9-4.0)	**2.7** (1.3-5.7)	†	**3.0** (1.6-5.3)	**2.4** (1.8-3.2)
Hallucinogens	**17.7**** (9.4-31.0)	**9.4** (4.3-19.4)	**14.0*** (9.1-21.0)	**6.5** (3.8-10.9)	**3.6*** (1.6-8.1)	**5.2** (2.8-9.4)	**8.4** (4.6-15.1)	**4.5**** (3.0-6.6)	**6.8** (4.6-9.9)	**6.3** (4.5-8.8)	**13.2**** (10.9-15.8)	**11.6*** (8.8-15.3)	**7.6** (6.3-9.0)
Jimson Weed	**8.0**** (6.8-9.5)	--	**6.9** (2.3-18.9)	†	†	†	†	†	**3.6** (1.6-7.9)	**3.7** (2.1-6.5)	†	**3.2** (1.9-5.4)	**3.1** (2.2-4.2)
Methamphetamine or Ice	†	†	**3.6** (1.6-8.0)	†	†	**1.8** (0.8-3.8)	†	†	**2.6** (1.5-4.4)	**3.4** (1.9-6.0)	†	**4.7*** (2.0-10.6)	**2.2** (1.7-2.9)
Cocaine or Crack	**9.0**** (6.3-12.9)	†	**6.0** (2.9-12.1)	**3.7** (2.1-6.4)	**3.6** (1.9-6.7)	**3.2** (2.0-5.2)	**4.6** (1.7-11.4)	**2.8** (1.7-4.3)	**4.4** (3.1-6.2)	**3.5** (2.8-4.3)	†	**8.1**** (5.2-12.4)	**4.2** (3.6-5.0)
Ecstasy	**8.0**** (5.0-12.6)	†	**7.7**** (4.9-11.9)	**3.0** (1.9-4.7)	†	**3.6** (1.6-7.6)	†	**2.6*** (1.6-4.2)	**5.5** (3.1-9.4)	**6.7**** (5.1-8.7)	†	**9.0**** (5.7-13.8)	**4.7** (3.9-5.7)
OxyContin (NM)	**5.1*** (1.9-13.0)	†	**3.5*** (1.9-6.5)	†	†	†	†	**1.6** (0.7-3.9)	**3.2** (1.2-8.4)	**1.9** (1.2-2.8)	†	**4.2**** (2.3-7.5)	**2.0** (1.4-2.8)
Opioid Pain Relievers (NM)	**29.1*** (22.2-37.1)	**24.4** (19.1-30.6)	**20.9** (14.1-29.7)	**21.2** (16.1-27.4)	**20.3** (15.4-26.3)	**29.2*** (21.8-37.9)	**15.6*** (11.4-21.0)	**17.6*** (13.9-22.0)	**22.2** (17.2-28.0)	**19.7** (14.2-26.6)	**21.4** (20.3-22.5)	**28.6** (21.6-36.8)	**22.0** (20.0-24.2)
Stimulants (NM)	**10.1** (5.7-17.2)	**4.8** (2.5-8.9)	**9.6*** (7.0-13.0)	**7.5** (4.2-12.9)	**6.9** (4.6-10.2)	**4.1**** (3.3-4.9)	**9.4*** (7.1-12.4)	**3.9*** (2.5-6.1)	**8.6** (5.6-12.9)	**6.9** (5.5-8.6)	**6.8** (4.9-9.3)	**7.8** (5.9-10.3)	**7.0** (6.1-8.1)
Tranquillizers (NM)	†	†	**3.5*** (1.9-6.4)	**2.0** (0.9-4.4)	†	†	†	†	**3.6*** (2.0-6.4)	**3.3*** (1.9-5.7)	†	**2.8** (1.7-4.6)	**2.2** (1.7-2.8)
OTC Sleeping Medication (NM)	†	†	**4.8** (2.8-8.1)	**3.6** (2.0-6.5)	**4.3** (2.9-6.4)	†	†	†	**7.1*** (3.7-13.2)	**6.2** (3.7-10.2)	†	**6.2*** (4.0-9.5)	**4.3** (3.4-5.5)
Any Illicit Drug (excl. Cannabis)	**25.4*** (14.5-40.6)	**12.8** (6.8-23.0)	**21.2*** (16.3-27.1)	**14.0** (9.7-19.9)	**11.2** (7.9-15.6)	**11.1*** (8.0-15.3)	**16.0** (10.2-24.1)	**9.3*** (7.2-11.9)	**15.0** (12.0-187)	**14.8** (11.6-18.6)	**17.7**** (17.2-18.3)	**18.4** (14.6-22.9)	**14.6** (13.0-16.2)

Continued....

	Erie St. Clair	South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	C. East + S. East	Champlain	North Simcoe Muskoka	N. East + N. West	Ont.
(Student N)	*(210)*	*(187)*	*(429)*	*(561)*	*(382)*	*(430)*	*(174)*	*(461)*	*(563)*	*(675)*	*(134)*	*(628)*	*(4834)*
(School N)	*(3)*	*(3)*	*(6)*	*(11)*	*(6)*	*(7)*	*(3)*	*(7)*	*(8)*	*(8)*	*(2)*	*(13)*	*(77)*
Hazardous Drinking	**30.6** (15.7-51.1)	**33.6** (23.7-45.2)	**31.8** (25.4-38.9)	**27.2** (22.4-32.5)	**20.1** (12.6-30.5)	**16.9** (8.2-31.6)	**27.1** (18.3-38.2)	**16.2**** (10.9-23.4)	**26.0** (21.4-31.1)	**27.6** (23.4-32.2)	**27.8** (16.7-42.6)	**35.4*** (28.1-43.5)	**25.5** (23.0-28.2)
Cannabis Dependence	†	†	**6.5**** (4.0-10.2)	†	†	†	†	†	**4.1** (2.3-7.1)	**2.8** (2.0-3.8)	†	**7.0**** (4.0-12.0)	**3.5** (2.8-4.4)
Drug Use Problem	**23.5** (16.3-32.6)	**18.2** (9.5-32.1)	**24.5** (18.3-31.9)	**16.8** (11.6-23.6)	**18.4** (14.0-23.6)	**16.1*** (12.7-20.3)	**20.6** (7.9-43.8)	**12.5**** (8.7-17.6)	**24.6** (19.7-30.4)	**20.1** (16.6-24.0)	**31.7**** (26.4-37.4)	**26.0** (20.0-33.0)	**20.1** (18.1-22.4)
Passenger/Alcohol	**38.7** (27.9-50.7)	**42.6*** (31.6-54.3)	**32.3** (27.0-38.1)	**33.7** (27.4-40.7)	**23.7**** (20.9-26.8)	**27.6** (21.2-35.0)	**29.7** (13.6-53.0)	**23.6**** (21.0-26.5)	**32.6** (21.1-46.5)	**27.3** (23.5-31.4)	**22.9** (11.1-41.6)	**32.7** (27.4-38.4)	**29.8** (27.0-32.7)
Passenger/Drugs	**31.8** (22.7-42.6)	**23.1** (18.0-29.0)	**27.3** (23.4-31.6)	**26.4** (21.3-32.2)	**18.9** (12.5-27.7)	**19.2** (11.2-30.9)	**17.6** (12.4-24.5)	**21.1** (15.8-27.6)	**22.1** (17.2-27.9)	**23.6** (20.2-27.4)	**31.1**** (29.5-32.7)	**27.9** (22.4-34.3)	**23.3** (21.4-25.3)
Drinking-Driving (Drivers Gr. 10-12)	**17.4*** (15.2-19.9)	**14.2** (7.7-24.8)	**15.3** (9.4-23.9)	**10.1** (6.7-14.8)	**6.2** (2.8-13.4)	**11.0** (5.3-21.4)	**14.4** (6.9-27.5)	**11.2** (5.6-20.9)	**11.9** (8.6-16.3)	**10.8** (7.4-15.4)	**12.3** (9.5-15.9)	**12.7** (8.4-18.8)	**11.6** (9.9-13.5)
Cannabis-Driving (Drivers Gr. 10-12)	**17.5** (7.0-37.5)	**14.9** (10.8-20.3)	**16.0** (11.5-21.8)	**15.5** (10.1-23.1)	**10.8** (4.1-25.3)	**12.8** (6.7-23.1)	**19.0** (10.0-33.3)	**15.7** (11.5-21.2)	**15.6** (11.1-21.6)	**16.0** (11.2-22.4)	**18.6** (16.4-21.0)	**19.0** (12.5-27.7)	**15.6** (13.4-17.9)

Notes: (1) due to small sample sizes, the Central East (n=515) and South East (n=48) LHINs were merged, and the North East (n=587) and North West (n=41) LHINs were merged; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) binge drinking is defined as consuming 5 or more drinks on one occasion at least once during the 4 weeks before the survey; (5) "Hallucinogens" refers to mescaline and psilocybin; (6) "Ice" is crystallized methamphetamine; (7) NM=non-medical use or without a doctor's prescription; (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) *p<.05, **p<.01 significant difference, LHIN vs. Ontario.

Source: *OSDUHS*, Centre for Addiction & Mental Health

SUMMARY

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, namely: identifying the extent of drug use among the general population; identifying its timing and pattern during the life course; tracking trends in the prevalence and incidence over time; and, identifying risk and protective factors. As well, the *OSDUHS* provides a knowledge-base for designing preventive programs and health promotion programs; informing public health policy; and disseminating information to the general public.

Some Encouraging Findings

There are many findings in this report that should be viewed as encouraging. We have ordered these findings according to their public health importance.

Cigarettes: The majority of students do not smoke cigarettes. The prevalence of past year smoking has been declining since the late 1990s and has shown another significant drop between 2005 (14%) and 2007 (12%), as has daily smoking (from 9% to 5%). In fact, daily smoking in 2007 is the lowest on record since monitoring began in 1977. Moreover, students today begin smoking cigarettes at a later age (about age 13), compared to students surveyed two decades ago (about age 11). Further, the perceived risk of harm from smoking 1 or 2 cigarettes daily has increased in 2007 compared to 2005, and the perceived availability of cigarettes has decreased.

Alcohol: While the majority of students (61%) are considered to be current drinkers, the past year drinking prevalence among all students has significantly declined compared to 1999 (66%). In addition, students are trying alcohol at a later age, as the average age of onset for alcohol use has shown upward movement since 2001.

Cannabis use and driving among licensed students significantly decreased between 2005 and 2007 (from 20% down to 16%).

Drinking and driving among licensed students remained stable, compared to the last survey, at about 12% in 2007. However, the current rate is markedly lower than rates found in the late 1970s and early 1980s.

The percentage of all students reporting **riding in a vehicle with a driver who was drinking alcohol** significantly decreased between 2001 and 2007 (from 31% down to 26%).

The percentage of all students reporting **riding in a vehicle with a driver who was using drugs** significantly decreased between 2005 and 2007 (from 22% down to 18%).

Despite recent media attention given to **methamphetamine** and **crystal methamphetamine** use in various populations, there is no evidence that either drug has diffused into the student population. In fact, past year use of methamphetamine ("speed") significantly decreased between 2005 (2%) and 2007 (1%).

Crack use significantly decreased between 2005 (2%) and 2007 (1%).

Use of **hallucinogenic drugs** has been declining over the short-term and long-term. Use of LSD also continued on the downward trend that began in 1995, and the 2007 estimate is significantly lower than those found in recent years. This decline in LSD use corresponds to increase in the perceived risk of trying LSD, as well as disapproval. The use of PCP and other hallucinogens (e.g., magic mushrooms) has also decreased over the short-term (since 1999).

Use of other drugs is also lower in 2007 compared to recent years: **heroin, stimulants, Rohypnol,** and **Ketamine**. The use of **any illicit drug excluding cannabis** (measured as a general index) decreased over the short-term (since 1999).

The **perceived availability** of alcohol, cannabis, cocaine, LSD, and ecstasy, and cigarettes has significantly declined in recent years. 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 2007 compared to recent years. Thus, students today seem to be more aware of the potential physical harm caused by these drugs.

Some Public Health Flags

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

Cigarettes: Although student smoking declined in 2007, there is still a significant proportion (one-in-eight) that does smoke (about 119,900 students). Cigarette smoking is by far the greatest public health issue impinging on a population's health, as is it the leading preventable cause of disease.

Alcohol: Binge drinking still remains at an elevated level, as just over one-quarter of students (26%) are likely to consume at least 5 drinks on the same occasion. Females show a significant increase in hazardous drinking in 2007 compared to 2005.

Drugs and Vehicles: Despite long-term declines in drinking and driving, there are still about one-in-eight (12%) licensed students who drink and drive. A higher percentage (16%) of licensed students report driving after using cannabis. Moreover, one-quarter (26%) of all students report being a passenger with a driver who had been drinking, and 18% 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., over one-third of 12th-graders report each behaviour). These behaviours increase the risk of unintentional injuries – the leading cause of death among youth.

Only about one-in-four (28%) students reports **using no substance** in the past year, including no drinking and no smoking. The proportion of students abstaining today is significantly lower compared with estimates from the early 1990s. (However, it is higher than the estimates from thirty years ago.)

About 2.5% of all students **use cannabis daily** (representing about 27,300 students). Daily cannabis use has increased over the past two decades (0.6% in 1987). Moreover, one half of these students also smoke cigarettes daily, thereby increasing the likelihood of respiratory illnesses. About 3% of all students may have a cannabis dependence problem (representing around 28,700 students in grades 7 to 12).

One-in-five (21%) students report using **prescription opioid pain relievers for non-medical purposes**. These drugs include Tylenol #3, codeine, Percocet, and Percodan. Almost three-quarters (72%) of those who used an opioid pain reliever non-medically report obtaining it from home.

OxyContin is a highly-addictive prescribed opiate drug usually used to relieve pain. The **non-medical use of OxyContin** showed a small, but significant increase between 2005 (1%) and 2007 (2%; representing about 18,100 students). However, only future monitoring can elucidate whether or not this is a definite upward trend or a random occurrence.

About one-in-seven (15%) students is likely to be **drunk or high at school**, and about one-in-five (21%) is likely to be **offered, sold, or given a drug at school**.

One-third (31%) of students report that someone **tried to sell drugs to them** at least once during the year before the survey. About one-quarter (28%) had **witnessed drug selling in their neighbourhood**.

Substance Use and Mental Health

There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2007 *OSDUHS* shows that about 9% of all students report both hazardous drinking and elevated psychological distress (symptoms of anxiety and depression). Females (12%) are more likely than males (6%) to report coexisting problems.

Possibilities for Prevention

The *OSDUHS* shows that problem use of alcohol and drugs are not rare among youth. We also found that potentially harmful consequences, such as binge drinking and becoming drunk, driving while intoxicated, and being a passenger with driver who had been using alcohol or drugs, are not uncommon occurrences. Thus, there is a need for programs to focus on reducing these harmful consequences. Indeed, special efforts should be made to address the high rate of driving after cannabis use among youth – a problem that, to date, has received relatively little attention.

Our data indicate that the prime period for prevention programs is between grade 7 and 9 (ages 12-14), as this is the time most likely for initiation. As well, the jump between 10th- to 11th-grade is another period of increased risk for onset.

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 of using a substance are associated with concurrent and subsequent decreases in the rate of use, and vice versa.

Indeed, our findings show that attitudes and beliefs about cannabis correlate with use of that drug over time, but other drugs, such as cocaine, do not show as robust a relationship over time. This supports the notion that not only are attitudes drug-specific, but also that the attitude-behaviour relationship is drug-specific. Thus, any prevention effort should provide drug-specific information.

Finally, the *OSDUHS* also found a correlation between use and availability, for alcohol, cannabis, ecstasy, and LSD. While prevention efforts cannot control access to drugs through peer groups, the availability and accessibility of cigarettes and alcohol can be controlled through stricter government policies. There is strong research evidence showing that reducing access through regulations such as increased taxes, enforcing minimum age laws, and reducing the number of sales outlets can reduce use among youth.

Future OSDUHS Monitoring

Substance use by young people is an ever-changing phenomenon, requiring ongoing monitoring and evaluation. As new drugs come on to the scene, it is important to assess their use and perceptions about them. Monitoring health risk behaviours, such as substance use, over time 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; anti-bullying programs), education programs, and whether health objectives are achieved. Finally, scientific surveys such as the *OSDUHS* provide a useful tool to compare across different youth populations.

In summary, great strides were made during the 1980s in reducing drug use among Ontario students. But history has shown that the values and lifestyles of adolescents can change quickly, and so too can the character of drug use. Although it is premature to know confidently 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, mental health, gambling, and violence. The next release will be in the spring of 2008.

APPENDIX TABLES

Table A1. Terminology

Term	Definition
Past Year Cigarette Use ("Smoker")	Smoking less than one cigarette or more daily during the past 12 months. Excluded are those who "tried a cigarette."
Past Year Alcohol Use ("Drinker")	Any alcohol consumed during the past 12 months. Use includes consumption on special occasions, but excludes sips.
Past Year Drug Use ("User")	Used the drug at least once during the past 12 months.
Frequent Drug Use	Used the drug 6 or more times during the past 12 months.
Any Illicit Drug Use	Use of at least one of the following drugs once or more often during the past 12 months: cannabis, LSD, PCP, other hallucinogens, methamphetamine, cocaine, crack, heroin, stimulants and tranquillizers. Excluded from this analysis are: alcohol, tobacco, inhalants, Ice, Ecstasy, GHB, Rohypnol, Ketamine, non-medical use of OxyContin, other opioid pain relievers, and ADHD drugs. The analysis is also conducted with cannabis excluded.
Daily Smoking	Smoking at least one whole cigarette daily over the past 12 months.
Heavy Drinking	Two indicators are used: (1) Binge drinking: drinking 5 or more drinks on the same occasion during the past 4 weeks; (2) Becoming drunk during the past 4 weeks.
Hazardous Drinking	Scoring at least 8 out of 40 on the World Health Organization's "Alcohol Use Disorders Identification Test" (AUDIT) screen, which measures heavy drinking and alcohol-related problems during the past 12 months.
Drug Use Problem	Reporting experiencing at least 2 of the 6 items on the "CRAFFT" screener, which measures a drug use problem that may require treatment (past 12 months time interval).
Cannabis Dependence	Scoring at least 4 out of 15 on the cannabis "Severity of Dependence Scale" (SDS). The SDS is a valid and reliable 5-item scale used to screen for dependence in adolescent populations.

Note: Please see the 2007 *OSDUHS Detailed Drug Report* for specific details and references associated with the screens used. It is available in PDF format at: www.camh.net/research/osdus.html.

Table A2. Percentage Using Drug at Least Once During the Past Year, 1999 – 2007 (Grades 7 to 12)

	1999	2001	2003	2005	2007	
(N)	(4447)	(3898)	(6616)	(7726)	(6323)	
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)	ab
Alcohol	**66.0** (63.6-68.3)	**63.9** (60.8-67.0)	**66.2** (64.1-68.4)	**62.0** (59.3-64.7)	**61.2** (58.9-63.5)	b
Cannabis	**28.0** (26.0-30.1)	**28.6** (25.8-31.7)	**29.6** (27.6-31.6)	**26.5** (24.5-28.7)	**25.6** (23.7-27.7)	
Glue	**3.8** (3.1-4.7)	**3.2** (2.6-4.1)	**2.8** (2.3-3.4)	**2.3** (1.8-2.9)	**2.5** (1.8-3.4)	b
Other Solvents	**7.6** (6.6-8.8)	**6.4** (5.3-7.9)	**6.1** (5.2-7.2)	**5.3** (4.4-6.4)	**5.8** (4.7-7.0)	
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)	b
PCP	**3.0** (2.4-3.9)	**2.8** (2.2-3.7)	**2.2** (1.8-2.7)	**1.1** (0.8-1.5)	**0.7** (0.5-1.0)	b
Other Hallucinogens	**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)	b
Methamphetamine (“Speed”)	**5.0** (4.1-6.2)	**3.9** (3.1-4.9)	**3.3** (2.8-4.0)	**2.2** (1.8-2.6)	**1.4** (1.1-1.9)	ab
Ice (Crystal Methamphetamine)	**1.4** (0.8-2.7)	**0.6** (0.3-1.1)	**1.2** (0.8-1.7)	**0.9** (0.6-1.3)	**0.8** (0.6-1.1)	
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)	
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)	ab
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)	b
Ecstasy (MDMA)	**4.0** (3.1-5.2)	**6.0** (5.0-7.1)	**4.1** (3.5-4.8)	**4.5** (3.7-5.3)	**3.5** (2.9-4.1)	
GHB	—	**1.3** (0.8-2.1)	**0.7** (0.4-1.1)	**0.5** (0.3-0.9)	**0.5** (0.3-1.0)	
Rohypnol	—	**3.1** (2.0-4.8)	**1.6** (1.2-2.2)	**1.0** (0.7-1.4)	**0.6** (0.3-0.9)	b
Ketamine	—	—	**2.2** (1.8-2.9)	**1.3** (0.9-1.7)	**1.1** (0.7-1.7)	b
OxyContin (NM)	—	—	—	**1.0** (0.7-1.5)	**1.8** (0.3-2.4)	a
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)	b
Tranquillizers (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)	
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)	ab
Any illicit, including cannabis	**32.3** (30.2-34.4)	**32.5** (29.8-35.3)	**32.2** (30.1-34.3)	**28.7** (26.6-30.9)	**28.7** (26.8-30./)	b
Any illicit, excluding cannabis	**20.5** (18.8-22.4)	**18.1** (16.6-19.7)	**15.3** (13.9-16.9)	**12.1** (10.8-13.6)	**11.7** (10.6-12.9)	b

Notes: (1) entries in brackets are 95% confidence intervals; (2) [a] 2007 vs. 2005 significant difference, p<.01; (3) [b] 2007 vs. 1999 significant difference, p<.01 (vs. 2001 for Rohypnol, vs. 2003 for Ketamine); (4) NM = non-medical use; (5) estimates for “any illicit” drug include: cannabis, LSD, PCP, other hallucinogens, speed, cocaine, crack, heroin, stimulants and tranquillizers (excluded are glue, solvents, Ice, ecstasy, GHB, Rohypnol, Ketamine, OxyContin, other opioid pain relievers, ADHD drugs, and barbiturates [dropped in 2007]).

Source: *OSDUHS*, Centre for Addiction & Mental Health

Table A3. Significant Changes in Past Year Drug Use by Subgroup, 2007 vs. 2005 and 2007 vs. 1999 (Grades 7 to 12)

	Cigarettes	Alcohol	Binge Drinking	Cannabis	Glue	Other Solvents	LSD	PCP	Other Hallucinogens	Methamphetamine	Ice (Crystal Meth)	Cocaine	Crack	Heroin	Ecstasy	GHB	Rohypnol	Ketamine	OxyContin (NM)	Stimulants (NM)	Tranquillizers (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 increase or decrease in 2007 vs. 2005, p<.01; (2) △▽ significant increase or decrease in 2007 vs. 1999, p<.01 (vs. 2001 for GHB and Rohypnol, and vs. 2003 for Ketamine); (3) NM = non-medical use; (4) table excludes jimson weed, ADHD drugs, and opioid pain relievers.

Table A4. Percentage Using Drug at Least Once During the Past Year, 1977 – 2007 (Grades 7, 9, 11 only)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007
(N)	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)
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)
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)
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)
Glue	**4.2** (3.6-5.1)	**4.9** (4.1-5.8)	**3.2** (2.4-4.2)	**3.6** (3.2-4.2)	**2.3** (1.8-2.8)	**2.7** (1.8-4.1)	**2.0** (1.7-2.5)	**1.2** (0.8-1.9)	**1.8** (1.3-2.4)	**2.8** (2.3-3.3)	**1.7** (1.3-2.2)	**4.3** (3.3-5.5)	**3.1** (2.2-4.2)	**3.2** (2.5-4.0)	**2.9** (2.1-4.0)	**2.4** (1.6-3.8)
Other Solvents	**7.4** (6.5-8.5)	**7.2** (6.3-8.2)	**4.4** (3.3-5.8)	**4.6** (3.8-5.5)	**3.1** (2.5-3.7)	**4.2** (3.1-5.6)	**3.4** (2.8-4.3)	**1.8** (1.2-2.7)	**2.6** (2.0-3.2)	**3.2** (2.7-3.9)	**2.8** (2.1-3.7)	**8.3** (6.8-10.1)	**6.7** (5.4-8.4)	**6.6** (5.5-7.8)	**5.8** (4.5-7.5)	**6.3** (4.8-8.2)
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)
PCP	**—**	**—**	**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)
Other Hallucinogens	**3.9** (3.2-4.7)	**5.2** (4.3-6.4)	**4.2** (2.9-6.1)	**5.6** (4.4-7.1)	**4.5** (3.5-5.8)	**4.0** (2.6-6.1)	**3.8** (2.7-5.4)	**3.0** (2.4-3.7)	**2.8** (2.2-3.6)	**7.6** (5.5-10.4)	**9.6** (8.3-11.2)	**11.7** (9.4-14.4)	**9.7** (7.7-12.1)	**9.5** (8.0-11.2)	**5.8** (4.7-7.2)	**5.3** (4.4-6.4)
Methamphetamine (“Speed”)	**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)	**1.9** (1.4-2.5)	**2.2** (1.6-3.0)	**4.7** (3.4-6.6)	**3.7** (3.1-4.5)	**4.5** (3.2-6.4)	**3.2** (2.4-4.3)	**3.6** (2.9-4.4)	**2.0** (1.6-2.6)	**1.6** (1.2-2.3)
Ice	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**0.9** (0.5-1.6)	**1.2** (0.5-2.8)	**1.7** (1.2-2.5)	†	**1.6** (0.6-4.1)	**0.5** (0.2-1.5)	**1.2** (0.7-2.0)	**1.1** (0.7-1.7)	**0.9** (0.6-1.4)
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)
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)
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)
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)
Barbiturates (NM)	**6.1** (5.2-7.2)	**7.4** (6.3-8.5)	**7.6** (5.7-10.1)	**6.0** (4.8-7.3)	**4.2** (3.8-4.8)	**3.2** (2.5-4.3)	**2.1** (1.6-2.7)	**2.2** (1.8-2.8)	**3.2** (2.5-4.1)	**2.9** (2.2-3.6)	**2.7** (2.1-3.4)	**4.3** (3.1-5.9)	**2.7** (1.9-3.7)	**2.7** (2.2-3.4)	**1.6** (1.1-2.1)	—
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)
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)
Any illicit, including Cannabis	**26.0** (23.7-28.5)	**33.4** (30.4-36.7)	**28.0** (25.4-30.8)	**26.6** (24.0-29.3)	**24.2** (21.0-27.7)	**19.3** (16.2-22.8)	**16.6** (14.7-18.8)	**14.0** (12.6-15.5)	**16.4** (14.6-18.3)	**25.8** (22.7-29.2)	**28.1** (26.2-30.0)	**30.8** (27.6-34.2)	**30.0** (26.1-34.2)	**30.3** (27.9-32.9)	**24.4** (22.2-26.7)	**25.6** (23.2-28.1)
Any illicit, excluding Cannabis	**15.1** (13.6-16.7)	**20.4** (18.4-22.5)	**17.0** (15.2-19.0)	**20.0** (17.8-22.3)	**16.6** (14.4-19.0)	**13.7** (11.9-15.8)	**11.8** (10.4-13.3)	**9.8** (8.7-11.0)	**11.8** (9.9-13.9)	**17.0** (14.7-19.6)	**17.5** (16.0-19.0)	**19.2** (16.5-22.3)	**16.4** (14.4-18.7)	**14.3** (12.6-16.2)	**11.2** (9.7-12.9)	**11.4** (10.1-12.9)
Steroids (lifetime use)	**—**	**—**	**—**	**—**	**—**	**—**	**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)

Notes: (1) entries in brackets are 95% confidence intervals; (2) NM = non-medical use; (3) † estimate suppressed or less than 0.5%; (4) estimates for “any illicit” drug include cannabis, LSD, PCP, other hallucinogens, speed, cocaine, crack, heroin, stimulants, and tranquillizers (excluded are glue, solvents, Ice, ecstasy, GHB, Rohypnol, Ketamine, OxyContin, other opioid pain relievers, ADHD drugs, and barbiturates [dropped in 2007]).

Source: *OSDUHS*, Centre for Addiction & Mental Health

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