OSDUS HIGHLIGHTS

Drug Use Among Ontario Students

1977–2005

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 Survey (OSDUS)* 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 2005. The findings are based on the 15th wave of the *Ontario Student Drug Use Survey (OSDUS)*. We also provide data on trends occurring every two years since 1977. In its entirety, the *OSDUS* now spans twenty-seven years, and 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 *OSDUS* 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.

One major aim of the *OSDUS* is 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;
- attitudes, beliefs and perceptions about alcohol and other drug use.

The 2005 *OSDUS* included new questions addressing:

- the use of OxyContin®;
- intoxication at school; and
- the availability of drugs at school.

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, 1977-2005: Detailed *OSDUS* Findings" (available in PDF format at: www.camh.net/research/osdus.html). The *OSDUS* 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 2006.

History of the OSDUS

The Ontario Student Drug Use Survey 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 OSDUS was again expanded to include students in grades 7 to 13 (OAC). In 2003, the OSDUS 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 65,000 students.

METHOD

Sampling Design

For each of the 15 *OSDUS* surveys, the target population was all students enrolled in the public or 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 7% of Ontario students).

Like the cycles between 1999 and 2003, the 2005 *OSDUS* employed a two-stage (school, class), stratified (region and school type) cluster sample design, and oversampled students in Northern Ontario.

However, the 2003 and 2005 *OSDUS* cycles differ from the previous cycles in several ways:

- Students in grades 7 through 12 were surveyed. Grade 13 (OAC) students were excluded, given that this grade no longer exists in Ontario schools.

- 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. Thirty-seven (27%) of the schools in the 2005 survey also participated in the 2003 and 2001 surveys. Forty-eight (35%) of the schools were new in 2005 – that is, did not participate in either the 2003 or the 2001 survey.

The sample selection occurred as follows:

a) For 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 2005, these same schools were re-contacted.

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 surveys, Ontario was 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 the 7 Public Health Planning Regions.)

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 January and June 2005. Participation was voluntary and anonymous. All students recorded their responses directly on the questionnaires, which were then entered and fully-verified by data entry staff.

The final sample size for the 2005 survey was 7,726 7th- to 12th-graders (72% of selected students) from 42 school boards, 137 schools and 445 classes. This sample represents about 975,200 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 2005

Past Year Drug Use

By far the most commonly used drug is alcohol, with 62% 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 use. Tobacco ranks third, with 14% reporting smoking cigarettes during the past year.

Past year use of hallucinogens other than LSD (e.g., mescaline and psilocybin "magic mushrooms") is reported by 7% 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.

Over one-quarter (29%) report using at least one illicit drug in the past year. When cannabis is excluded, this 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). Just under 70% have ever used alcohol, and about one-third have ever used cannabis, and cigarettes in their lifetime. About one-in-twelve have used hallucinogens, other than LSD and PCP, and solvents. The remaining drugs were used by less than 6% of students in their lifetime.

Frequency of Drug Use in 2005

Frequent drug use, defined as using six or more times during the past 12 months. Of all the drugs, excluding alcohol and tobacco, cannabis is the most frequently used. About one-in-seven (15%) students report using cannabis six or more times during the past year. Stimulants, hallucinogens (other than LSD and PCP), cocaine and ecstasy are the next most frequently used, with about 2% 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 (Grades 7-12), *OSDUS* 2005

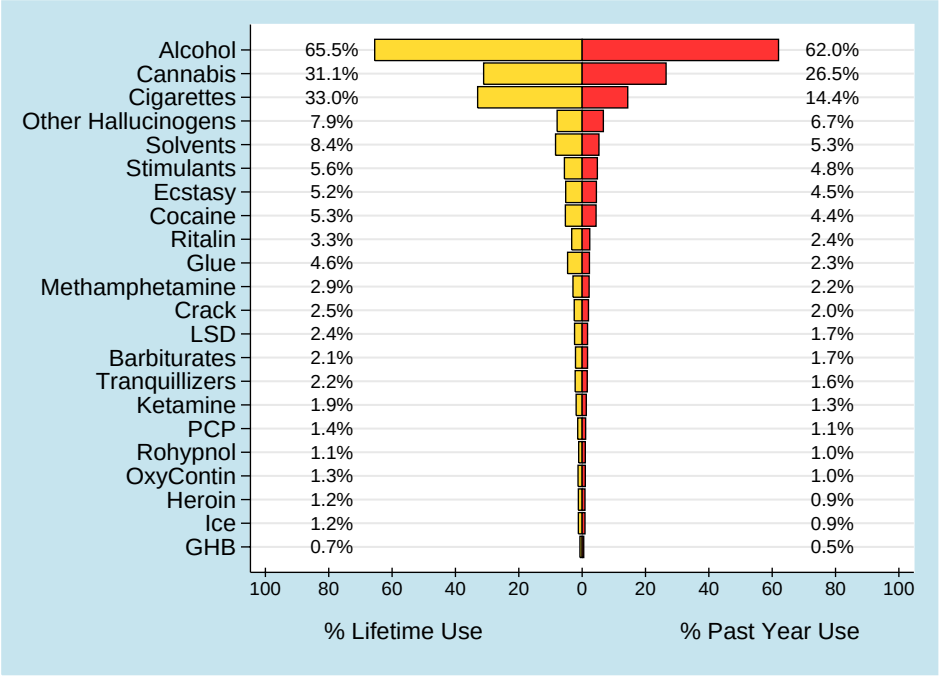


Table 1. Past Year Drug Use (%) by Total, Sex, and Grade, 2005 *OSDUS*

	Total	Males	Females		G7	G8	G9	G10	G11	G12	
Alcohol	**62.0**	62.3	61.8		31.4	44.3	64.8	69.6	76.1	81.8	*
Cannabis	**26.5**	27.9	25.1	*	3.0	9.7	23.0	33.6	40.1	46.2	*
Binge Drinking	**22.7**	25.1	20.2	*	3.4	7.4	18.8	26.2	34.5	42.5	*
Cigarettes	**14.4**	13.9	14.9		2.0	5.8	12.6	17.9	23.5	22.9	*
Hallucinogens	**6.7**	7.6	5.6	*	0.5	2.7	5.7	8.1	11.1	11.1	*
Solvents	**5.3**	4.7	5.9		9.2	8.8	5.7	5.0	2.7	1.3	*
Stimulants (NM)	**4.8**	4.3	5.4		1.1	3.9	5.7	5.3	6.5	6.0	*
Ecstasy (MDMA)	**4.5**	4.6	4.3		s	1.2	3.6	5.3	7.7	8.1	*
Cocaine	**4.4**	4.5	4.3		1.7	1.7	3.8	4.6	7.2	7.1	*
Ritalin (NM)	**2.4**	2.8	2.0		0.7	1.7	3.1	3.2	3.3	2.5	*
Glue	**2.3**	2.8	1.7		4.0	2.8	3.3	2.0	1.4	0.6	*
Methamphetamine	**2.2**	2.6	1.7	*	s	1.6	2.9	2.4	2.8	2.9	*
Crack	**2.0**	2.1	1.9		1.0	1.5	2.6	2.5	2.1	2.1	
LSD	**1.7**	2.1	1.4		s	1.0	2.4	1.6	2.8	2.2	*
Barbiturates (NM)	**1.7**	2.0	1.4		0.6	1.6	1.6	1.8	2.4	2.1	
Tranquillizers (NM)	**1.6**	1.5	1.8		s	0.7	2.5	1.2	2.3	2.5	*
Ketamine	**1.3**	1.6	0.9	*	0.6	0.6	1.5	1.6	1.9	1.4	
PCP	**1.1**	1.4	0.7	*	s	1.0	1.5	1.0	1.4	1.1	
Rohypnol	**1.0**	1.2	0.7		0.6	1.1	2.1	1.4	0.6	s	*
OxyContin	**1.0**	0.9	1.2		0.9	0.7	1.3	0.7	1.2	1.4	
Heroin	**0.9**	1.1	0.7		0.6	1.0	1.4	0.6	0.8	1.0	
Ice	**0.9**	1.2	0.5	*	s	1.0	1.4	0.5	0.7	0.5	
GHB	**0.5**	0.6	0.5		s	0.6	0.7	0.5	0.6	0.5	
Any Illicit, including cannabis	**28.7**	29.9	27.4		5.5	12.4	25.2	35.5	42.0	48.2	*
Any Illicit, excluding cannabis	**12.1**	12.6	11.6		3.8	7.2	11.6	14.2	18.1	17.0	*
Steroids (lifetime)	**2.3**	3.2	1.4	*	s	1.9	2.0	2.9	2.6	3.7	*

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

Drug Use in 2005 versus 2003 (Grades 7 to 12)

Of the 24 drug measures included in the 2005 and 2003 surveys (see Appendix Table A2), 11 showed significant decreases among all students in grades 7 to 12:

- cigarettes (from 19% in 2003 to 14% in 2005)
- alcohol (from 66% to 62%)
- LSD (from 2.9% to 1.7%)
- PCP (from 2.2% to 1.1%)
- hallucinogens (from 10% to 7%)
- methamphetamine (from 3.3% to 2.2%)
- heroin (from 1.4% to 0.9%)
- Ketamine (from 2.2% to 1.3%)
- barbiturates (from 2.5% to 1.7%)
- use of any illicit drug including cannabis (from 32% to 29%)
- use of any illicit drug excluding cannabis (from 15% to 12%).

No drug showed a significant increase between 2003 and 2005. Use of all other drugs remained stable between these two survey years.

More students in 2005 reported being drug- free (including alcohol and tobacco) during the past year compared to 2003 (36% vs 32%, respectively), and fewer students in 2005 reported using 4 or more drugs (8% vs 11%).

Overview of Short-Term Trends, 1999 – 2005 (Grades 7 to 12)

There have been 15 significant declines in drug use between 1999 and 2005 (also see Table A2):

- cigarettes (from 28% in 1999 to 14% in 2005)
- alcohol (from 66% to 62%)
- glue (from 4% to 2%)
- solvents (from 7% to 5%)
- LSD (from 7% to 3%)
- PCP (from 7% to 2%)
- hallucinogens (from 13% to 7%)
- methamphetamine (from 5% to 2%)
- heroin (from 1.9% to 0.9%)
- barbiturates (from 4% to 2%)
- stimulants (from 7% to 5%)
- Rohypnol (from 3% [2001] to 1%)
- steroids (lifetime use; from 3.4% to 2.3%)
- 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 exception of cocaine use (which increased among 12th-graders and Western students); and ecstasy use (which increased among Northern students), the subgroup changes within the period from 1999 to 2005 show declines in use (these are displayed in Table A3).

- Sex: No drug increased among males or females. Use of many drugs decreased among both males and females in the period between 1999 and 2005 (see Table A3).

- Grade: All grades showed many decreases in drug use during the period between 1999 and 2005 (see Table A3). The only increase was found among the 12th-graders, whose cocaine use increased.

- Region: Each of the four regions showed many declines in drug use between 1999 and 2005 (Table A3). There were only 2 increases in drug use: Northern students showed an increase in ecstasy use, and Western students showed an increase in cocaine use.

Overview of Long-Term Trends, 1977 – 2005 (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 4 dominant patterns, displayed in Figures 2 to 5.

- The first pattern (Figure 2) is one that displays decreases during the 1980s, increases during the 1990s, continual decreases after 1999, reaching an all-time low in 2005. The pattern is evident for smoking cigarettes and LSD use.

- The second pattern (Figure 3) displays the rates for cocaine use, which is the only drug that is not lower in 2005 compared to its peak year of use in 1979. Cocaine use decreased during the 1980s and early 1990s. Since then, it has increased and remains elevated.

- The third long-term use pattern (Figure 4) is one that displays use that is significantly lower in 2005 compared to the peak year of use in 1979. This pattern is evident for alcohol, cannabis, glue, heroin, barbiturates, stimulants, and tranquillizers.

- The fourth pattern (Figure 5) shows use that is significantly lower in 2005 compared to the peak year of use in 1999. This is evident for PCP, hallucinogens, solvents, and methamphetamine.

Figure 2. Long-Term Drug Use Trends (*OSDUS* 1977-2005): Pattern 1

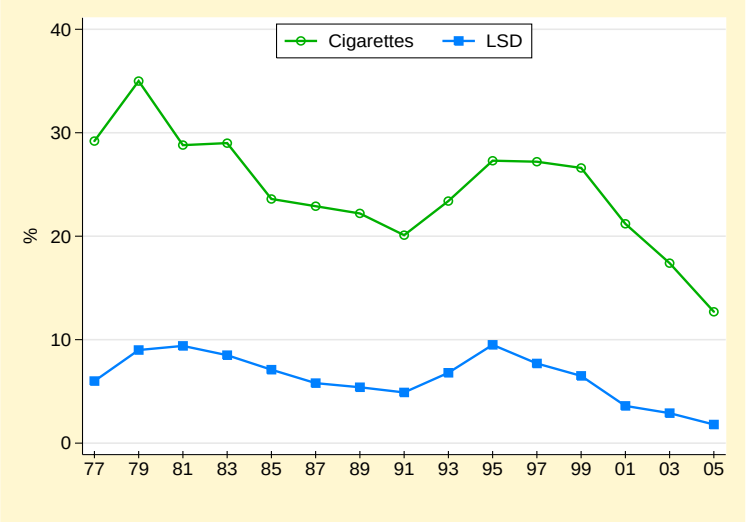


Figure 3. Long-Term Drug Use Trends (*OSDUS* 1977-2005): Pattern 2

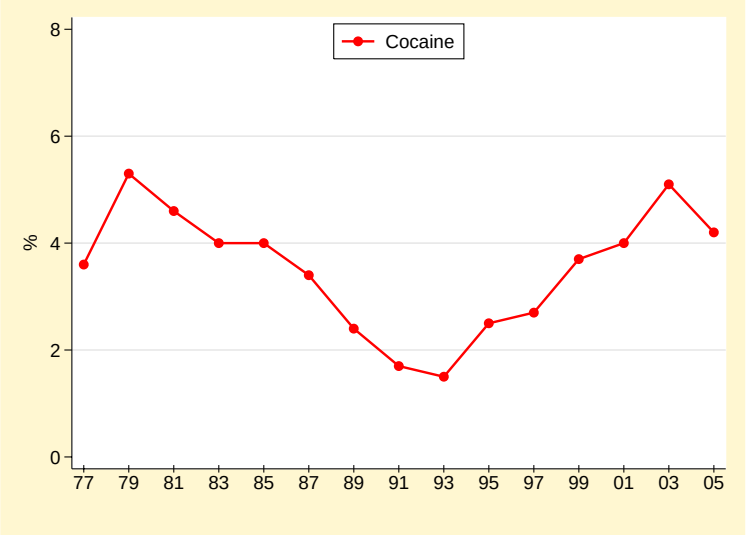


Figure 4. Long-Term Drug Use Trends (*OSDUS* 1977-2005): Pattern 3

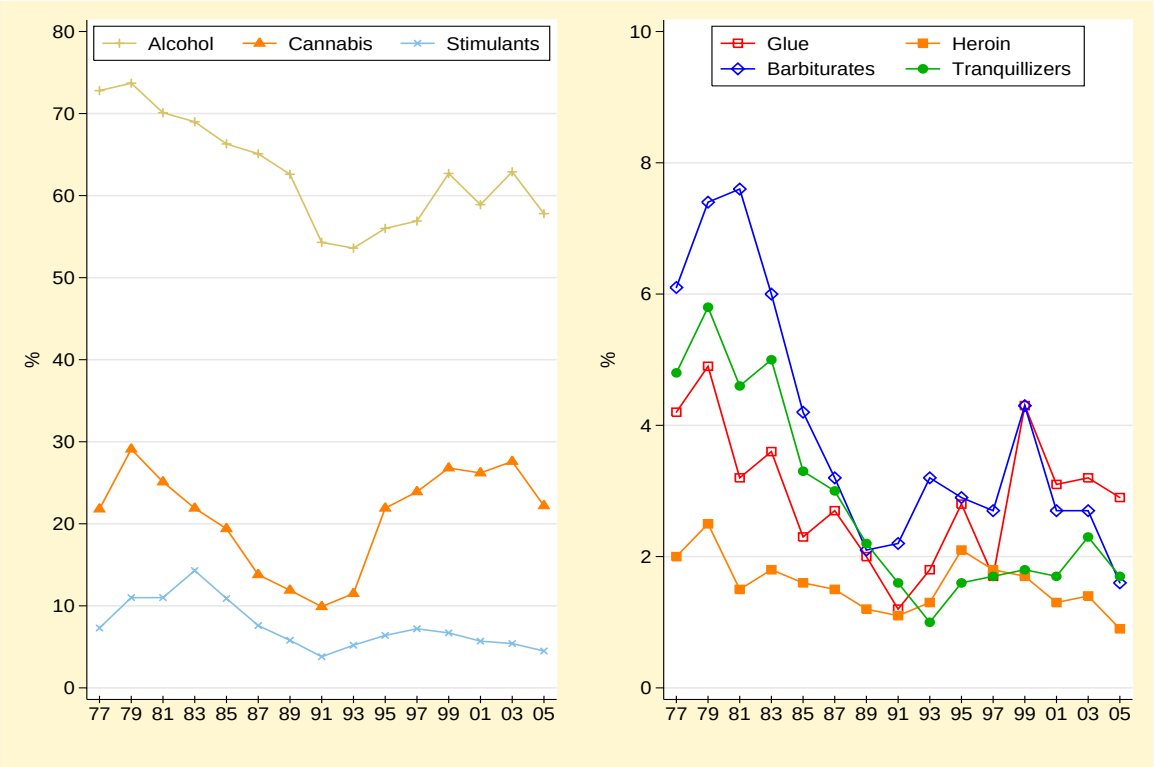
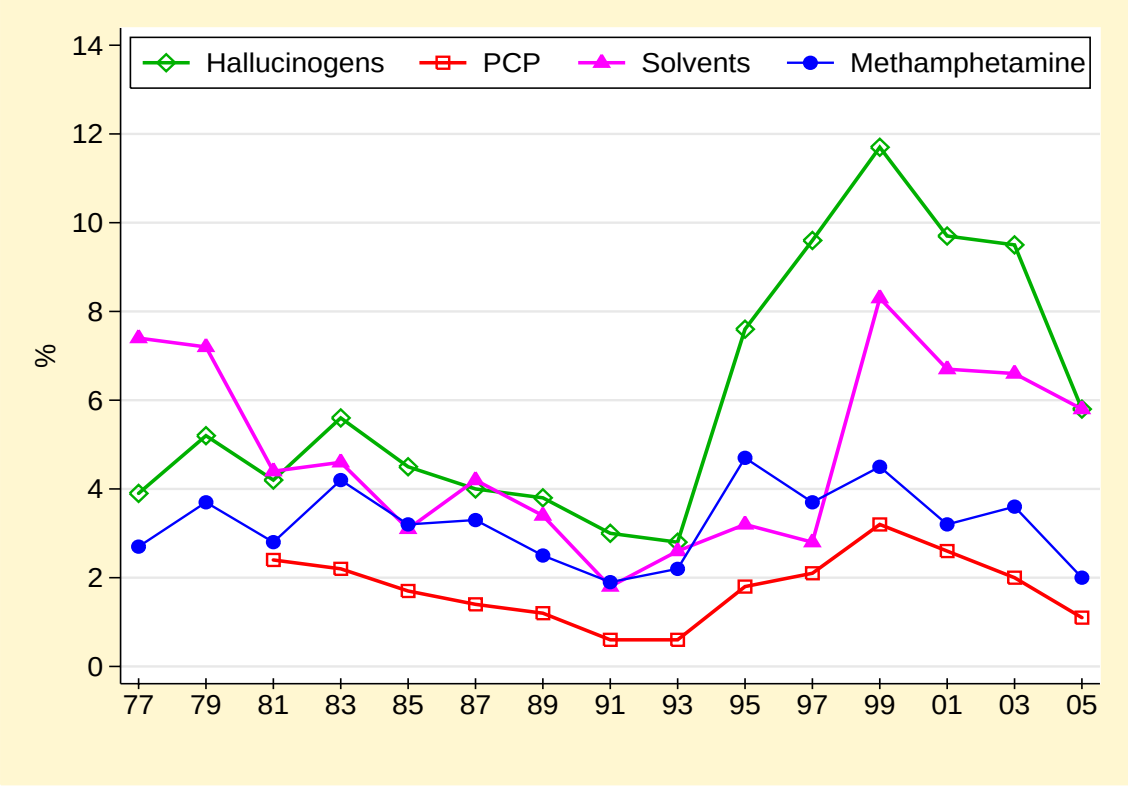


Figure 5. Long-Term Drug Use Trends (*OSDUS* 1977-2005): Pattern 4



Tobacco

Past Year Cigarette Smoking

- 14% (95% CI: 13%-16%)[1] of all students report smoking in the past year. This represents about 139,700 students in grades 7 to 12 across Ontario.
- Males (14%) and females (15%) are equally likely to smoke.
- Smoking increases with grade level, from 2% of 7th-graders; 6% of 8th-graders; 13% of 9th-graders; 18% of 10th-graders; and peaking in 11th- (24%) and 12th-grade (23%).
- Students in Northern Ontario (20%) are most likely to smoke, and those in Toronto (13%) and the East (11%) are least likely. Students in the West (17%) fall in between.

Daily Smoking

- 9% (95% CI: 7%-10%) of students report smoking one or more cigarettes on a daily basis during the past year. This percentage represents about 83,300 students in Ontario.
- Daily smoking does not significantly differ between males (8%) and females (9%).
- Daily smoking is significantly related to grade level, increasing incrementally between 7th-grade (1%) and 12th-grade (15%).
- Students in the North (12%) and West (11%) are most likely to smoke daily, while those in the East (6%) and in Toronto (7%) are least likely.

Frequency of Smoking

- About 3% of all smokers report smoking more than 20 cigarettes daily, an amount roughly equal to one package. Among smokers, the most common quantity consumed is less than 1 cigarette per day (40%). There is little variation in the frequency of smoking between males and female smokers.

Potential Smoking Dependence

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

- The 2005 survey found that 21% of smokers have their first cigarette within the first 30 minutes upon waking. Male (21%) and female smokers (21%) 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 (23%) and West (27%) most likely to report this dependence symptom.

Quitting

- In 2005, 58% of smokers reported at least one quit attempt in the 12 months before the survey. Among the smokers who attempted to quit, most report attempting to do so once (45%) or twice (22%).

Cigarette Purchasing Behaviour

- In 2005, 6% of underage students successfully purchased cigarettes at a retail outlet in the 4 weeks before the survey. Purchasing varied by age: 2% of students aged 15 and under, and 12% of students aged 16 to 18 years, were able to purchase cigarettes.

- Cigarettes are equally likely to be purchased at corner stores (6%), restaurants, gas stations and bars (5%), and supermarkets (5%).

[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, 62% (95% CI: 59%-65%) of students report drinking alcohol during the 12 months before the survey. This represents about 603,400 students in grades 7 to 12 in Ontario.
- The prevalence of drinking does not significantly differ between males (62%) and females (62%).
- Drinking significantly increases with grade: rates climb by more than ten percentage points with each grade, between grades 7 and 11 (from 31% to 76%). The prevalence climbs again by 12th-grade, to 82%.
- Rates of drinking significantly differ by region, with Toronto students (51%) least likely to drink compared to students in the other three regions (hovering at about two-thirds).

Frequency of Drinking

- 24% of all students (39% of drinkers) restrict their drinking to special occasions only. One-in-ten (10%) students drink at least once a week (16% of drinkers). Only a very small proportion of students drink on a daily basis (less than 0.5%).

Binge Drinking (Past 4 Weeks)

- Overall, 23% (95% CI: 20%-25%) of students report binge drinking at least once during the 4 weeks before the survey. This percentage represents about 220,100 students in grades 7 through 12.
- About 8% of all students report binge drinking 2 to 3 times during the 4 weeks before the survey. Another 5% report binge drinking 4 or more times.
- Binge drinking is significantly higher among males (25%) than females (20%).
- Binge drinking increases significantly with grade: it is lowest among 7th-graders (3%) and climbs to a high of 42% among 12th-graders.
- Toronto students are the least likely to report binge drinking (15%), whereas Northern students are the most likely (33%).

Drunkenness (Past 4 Weeks)

- Overall, 22% (95% CI: 20%-25%) report becoming drunk at least once during the 4 weeks before the survey (about 205,300 students).
- Reported drunkenness is not significantly different between males and females (23% vs 22%).
- Drunkenness is lowest among 7th-graders (3%) and peaks in grade 12 (39%).
- Toronto students are the least likely to report drunkenness (15%) compared to students in the other three regions.

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, 16% (95% CI: 14%-18%) of students report drinking at a hazardous level. This represents about 158,800 students in Ontario. About one-quarter (25%) of drinkers drink at a hazardous level.
- Males (18%) are significantly more likely than females (14%) to drink hazardously.
- As grade increases, so does the likelihood of hazardous drinking, with a large incremental increase in each grade between grade 7 and grade 12 (2% to 30%).
- There is a significant region effect, with Toronto students (9%) least likely to drink hazardously and Northern students (22%) most likely.

Cannabis

Past Year Cannabis Use

- Overall, about one-quarter (26%) of students (95% CI: 24%-29%) report using cannabis at least once during the 12 months before the survey. This represents about 257,900 students in Ontario in grades 7 to 12.
- Males (28%) are significantly more likely to use cannabis than females (25%).
- Cannabis use shows strong increases with each grade, increasing from 3% among 7th-graders to 46% among 12th-graders.
- Cannabis use is lowest in Toronto (20%), and highest in the North (33%). Use among students in the West (29%) and East (25%) fall in between.

Frequency of Cannabis Use

- Among all students, 15% 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 3% used on a daily basis – representing about 33,200 students.
- About one-fifth (19%) of cannabis users used the drug on a weekly basis during the 4 weeks before the survey. Another 12% used on a daily basis.

Quantity Smoked (Past 4 Weeks):

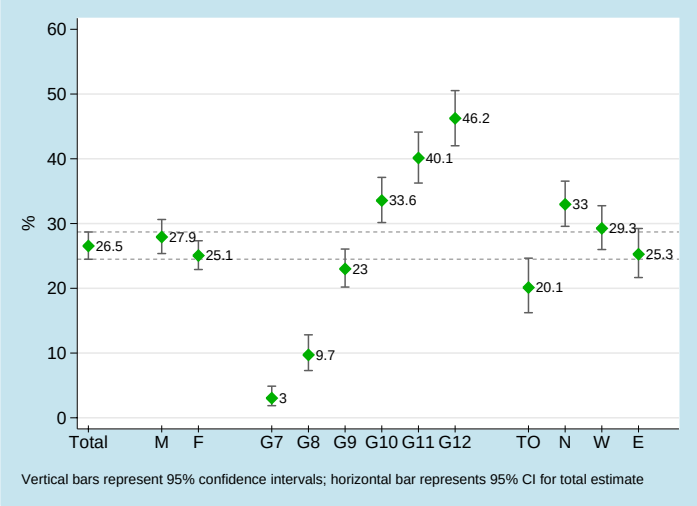
- About 16% of cannabis users in grades 7 to 12 smoked less than one joint per occasion during the 4 weeks before the survey. Twenty-two percent smoked about one joint; 18% smoked two to three joints; and 11% smoked four or more joints. One-third (33%) of users did not consume marijuana during the 4 weeks before the survey.

Cannabis Dependence

To estimate the percentage of cannabis users who may have a dependence problem, we present the percentage reporting uncontrolled use and sustained daily use or attempts to reduce use.

- About one-in-twelve (8%) of cannabis users in grades 7 to 12 report a dependence problem.
- Despite some variation, there are no significant differences by sex, grade, or region.

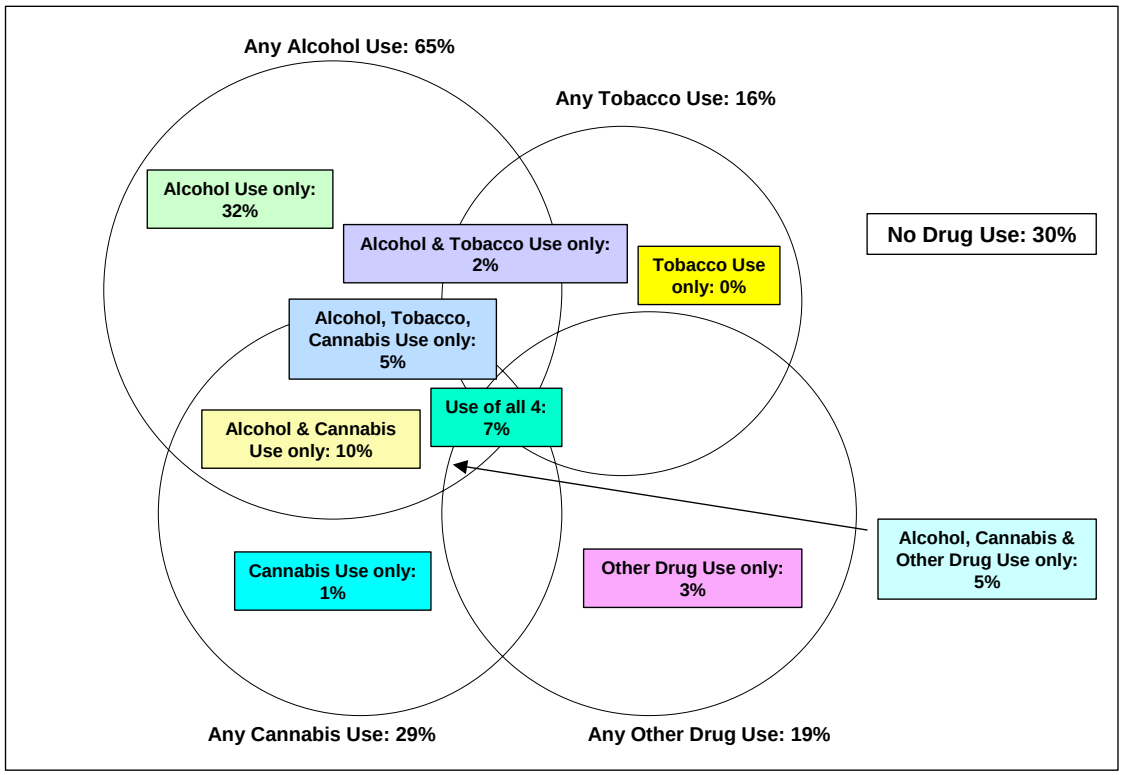
Figure 6. Past Year Cannabis Use by Sex, Grade and Region, 2005 *OSDUS*



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

- In 2005, just under one-third (30%) of students in grades 7 through 12 report *no drug use* during the past year. A similar proportion (32%) reports using only alcohol. A very small proportion uses cannabis exclusively (about 1%), virtually no students smoke cigarettes exclusively, and 3% use any other drug exclusively.
- From Figure 7 below, it appears that alcohol use is a common element of other substance use. This is not surprising, given the ubiquity of alcohol use among students.
- About 7% of students report using alcohol, tobacco, cannabis, and at least one other drug in the past year. This estimate represents about 62,000 Ontario students.

Figure 7. The Overlap of Alcohol, Tobacco, Cannabis and Other Drug Use in the Past Year, 2005 *OSDUS* (Grades 7 to 12)



Notes: (1) based on a random half sample (N=3648); (2) "Other Drug Use" refers to use of at least one of 19 drugs: glue, solvents, LSD, PCP, hallucinogens, heroin, barbiturates, stimulants, tranquillizers, cocaine, crack, methamphetamine, Ice, ecstasy, GHB, Rohypnol, Ketamin, Ritalin, OxyContin.

New Users and Early Onset

Incidence: New Users in 2005

- Among the total sample of students, 7% smoked cigarettes for the first time during the 12 months before the survey; 18% drank alcohol for the first time; 9% used cannabis; and 4% used another illicit drug for the first time.

- First-time use does not vary significantly by sex or region; however, grade level is significantly associated. Notably, between 8th- and 9th-grades, there is a jump in first use of cannabis (from 4% to 12%).

Early Onset among 7th-Graders, 1981-2005

- There is an evident trend of decreasing early onset of cigarette use, with fewer 7th-graders smoking at an early age. Most notably, under 2% of 7th-graders in 2005 (and 2003) reported smoking their first whole cigarette by grade 4, compared to 5% in 2001, 7% in 1997, 8% in 1993, and 16% in 1981.

- Early onset of alcohol use is decreasing over time: fewer 7th-graders in 2005 used alcohol by grade 6 compared to previous years (29% in 2005 vs. 42% in 2003, and 50% in 1981).

- The early onset of cannabis use – defined as using for the first time before the end of grade 7 (ages 12-13) – increased between 1993 and 2003, but has since decreased in 2005. 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.

Drug Use Trends among 7th-Graders, 1977 – 2005

An overview of the trends in drug use among 7th -graders (12-13 year-olds) shows the following:

- The general upswing in drug use during the 1990s and recent declines is evident among the 7th-graders. Declines in 2005 are evident for alcohol, cannabis, and use of any illicit drug (including cannabis).

- Over the long-term, the prevalence of most drugs is generally lower in 2005 compared to the late 1970s (the peak years of use). The exception may be cocaine, which increased in the late 1990s, reaching the level of the late 1970s, and stabilized in recent years.

Average Age of Onset for Smoking, Alcohol and Cannabis Use, 1981 – 2005

In this section, we present the average age of onset for cigarette, alcohol, and cannabis use among grade 11 users (ages 16-17).

- In 2005, the average age of first use of cigarettes (smoking one whole cigarette) among grade 11 smokers was 13.5 years. The average age of first use of alcohol among grade 11 drinkers was 13.2 years, and the average age of first cannabis use among grade 11 users was 13.7 years.

- The average onset age for smoking increased between 1981 and 1995, decreased between 1997 and 2001, and has increased again in recent years.

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

- The average age of onset for cannabis use increased between 1983 and 1995, decreased up until 1999, and subsequently stabilized.

Consequences and Problems Related to Substance Use

Drinking and Driving

- In 2005, 14% (95% CI: 12%-16%) 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 (18% vs 8%).
- There is significant variation by grade, ranging from 8% of 10th-graders to 17% of 12th-graders. There is no significant regional variation in drinking and driving rates.

Cannabis Use and Driving

- About one-in-five (20%, 95% CI: 18%-22%) 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 more likely than females to use cannabis and drive (25% vs 13%).
- Drivers in 12th -grade (24%) are significantly more likely to use cannabis and drive compared to 10th- and 11th-graders (about 15%).
- There is significant regional variation, with drivers in the West (24%) and North (22%) most likely to use cannabis and drive.

Been a Passenger with an Intoxicated Driver

Students were asked how often they had been a passenger in a car driven by someone who had been drinking alcohol, and how often they had been a passenger in a car driven by someone who had been using drugs. Both questions refer to the past 12 months before the survey.

- 29% of students had been a passenger in a car at least once in the past year with a driver who was drinking, and 22% with a driver who was using drugs.
- Females (31%) are significantly more likely than males to be a passenger with a drinking driver (27%). No significant sex difference exists with respect to being a passenger with a driver who was using drugs.
- Being a passenger with an intoxicated driver (either by alcohol or drugs) increases significantly with grade level.
- There are significant regional differences for these two estimates, with students in Toronto least likely to report both events.

Drug Use Problem

The 2005 survey included the six-item "CRAFFT" screen in order to gauge drug use problems experienced by students (see the *Detailed Drug Report* for the 6 items). A total of two or more problems is used to identify adolescents who may have a drug use problem.

- 16% (95% CI: 14%-19%) of students may have a drug use problem.
- There is no sex difference with respect to experiencing a drug use problem: 17% of males and 16% of females.
- There is significant grade variation: reports of drug problems are lowest among 7th-graders (2%) and highest among 12th-graders (28%).
- There are no significant regional differences.

Alcohol and Other Drug Treatment

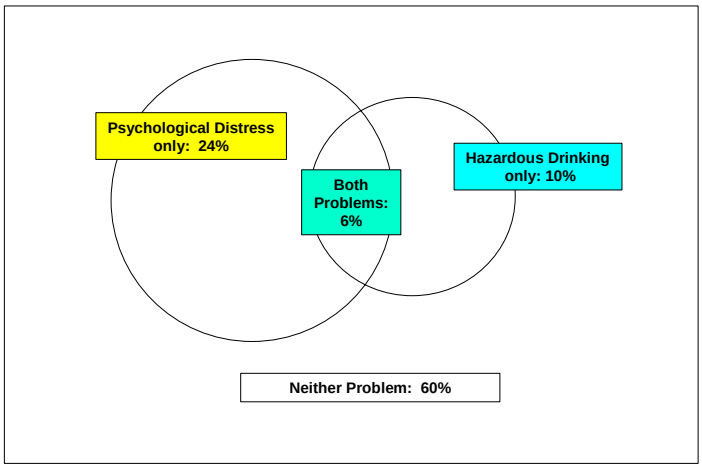
- In 2005, about 0.7% (95% CI: 0.5%-1%) of students indicated that they had received either alcohol and/or drug treatment in the 12 months before the survey. This estimate represents about 6,400 Ontario students in grades 7 to 12.

In addition to substance use problem indicators, the 2005 *OSDUS* 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).

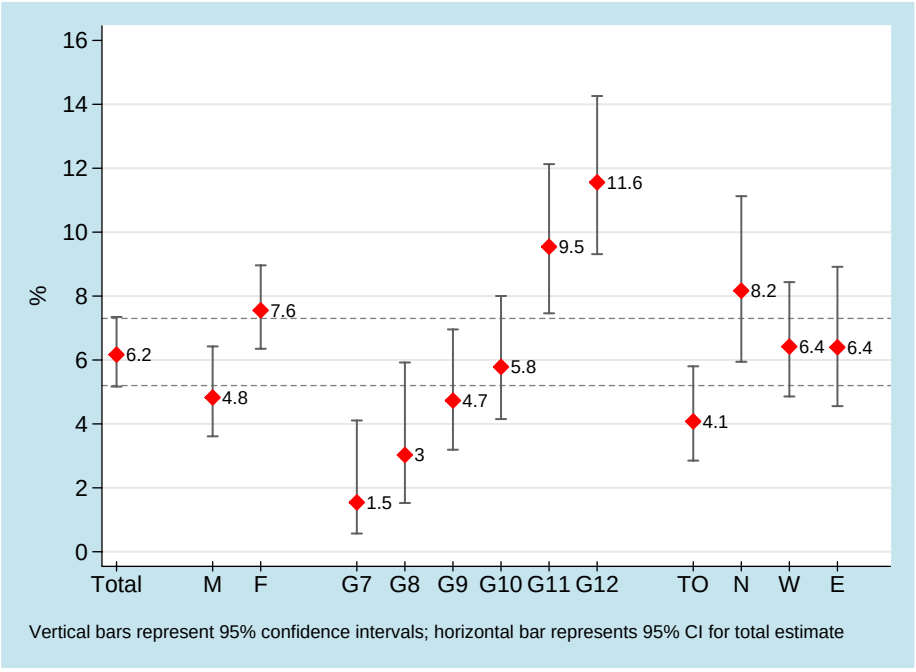
- In 2005, 6% of all students (about 62,000 Ontario students) report both hazardous drinking and elevated psychological distress.
- Females are more likely than males to report coexisting problems (8% vs 5%).
- Coexisting problems increase with grade, from 2% of 7th-graders to 12% of 12th-graders.
- There are no significant regional differences in experiencing coexisting problems.

Figure 8. Coexisting Problems: Hazardous Drinking and Elevated Psychological Distress, 2005 *OSDUS* (Grades 7 to 12)



Based on a random half sample, N=4078

Figure 9. Coexisting Problems: Hazardous Drinking and Elevated Psychological Distress, 2005 *OSDUS* (Grades 7 to 12)



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

Attitudes and Perceptions

Perceptions of Risk of Harm and Disapproval

- Among the drug behaviours surveyed, students felt that the greatest risk of harm is associated with regular marijuana use (53%), followed by trying ecstasy (40%), trying cocaine (36%), trying LSD (34%), daily drinking (32%), daily smoking (28%), and trying cannabis (21%).

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

- Over the long-term, perceptions of risk surrounding the use of most of the substances asked about declined somewhat in the late 1990s, but are now slowly increasing once again, with the exception of daily alcohol use – which has shown little movement over time.

- Almost half of students strongly disapprove of trying ecstasy (50%), trying LSD (48%), smoking marijuana regularly (47%), and trying cocaine (45%). A smaller magnitude (less than one-third) of students strongly disapproves of daily drinking and trying cannabis.

- Over the long-term, disapproval of using cannabis declined in the late 1980s and early 1990s, but seems to be on a gradual increasing trend beginning after 1997. Disapproval of trying cocaine has declined only slightly since 1989. In contrast, since 1997, there has been a gradual increase the disapproval of trying LSD. Disapproval of daily drinking has not changed significantly since 1989.

Drug Availability

- In 2005, the perception of easy availability ("easy" or "very easy" to get the drug) was highest for cigarettes and alcohol (both 57%), followed by cannabis (46%), ecstasy (19%), cocaine (17%), and LSD (12%).

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

- Since 1999, the perceived availability of alcohol, cannabis, cocaine, LSD, and ecstasy has significantly declined.

- Over the long-term, the perceived availability of cannabis, as well as cocaine, increased between 1989 and 2001, but has since decreased. The availability of LSD has been on a downward trend since 1995.

School and Neighbourhood

Intoxication at School

For the first time in 2005, the *OSDUS* 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, 17% (95% CI: 15%-18%) indicated that they were intoxicated at school at least once during the 12 months before the survey (see Figure 10).
- Males (18%) are more likely than females (14%) to get drunk or high at school.
- Among the grades, 7th- and 8th-grades are significantly less likely to get intoxicated at school, while the 11th- and 12th-graders are most likely.
- There is no significant variation by region.

Getting Drugs at School

For the first time in 2005, the *OSDUS* 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?*"

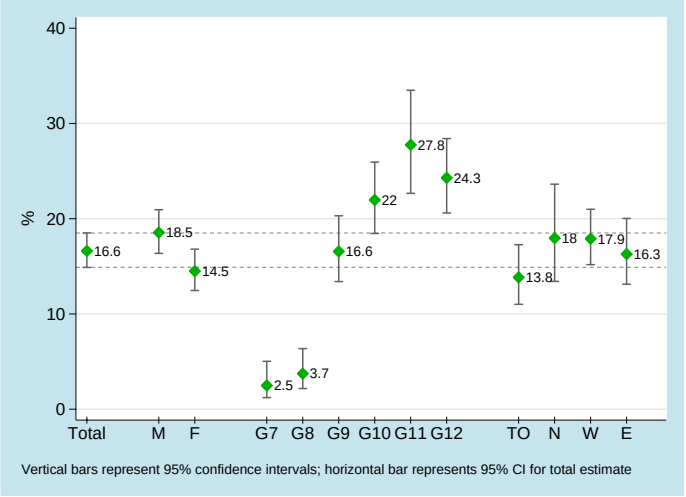
- Among all students, 23% (95% CI: 21%-25%) indicated that they had been offered, sold, or given a drug at school in the 12 months before the survey.
- Males are more likely than females to have been offered, sold, or given a drug at school (26% vs 20%, respectively).
- Among the grades, 7th- and 8th-grades are significantly less likely to be offered, sold, or given a drug, compared to the older grades.
- 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 2005, one-third (33%) 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. Toronto students are least likely to report this compared to the other three regions.
- The proportion of students reporting that someone had tried to sell them drugs has significantly declined since 2001 (from 39% down to 33%).
- Just over one-quarter (27%) of students had seen someone selling drugs in their neighbourhood in the past year. Males and older students were more likely to indicate this. No significant regional differences were found.
- The proportion of students in 2005 (27%) reporting observing drug selling in their neighbourhood is significantly lower than that found in 2003 (32%) and 1999 (31%). The 2005 estimate is similar to that found in 1995.

Figure 10. Percentage Reporting Getting Drunk or High at School During the Past Year by Sex, Grade and Region, 2005 *OSDUS*



Subgroup Profiles

Sex

As seen in Figure 11 below, males are more likely than females to: binge drink, use cannabis, hallucinogens, methamphetamine, Ketamine, PCP, and Ice (crystal methamphetamine). Females are not more likely to use any drug.

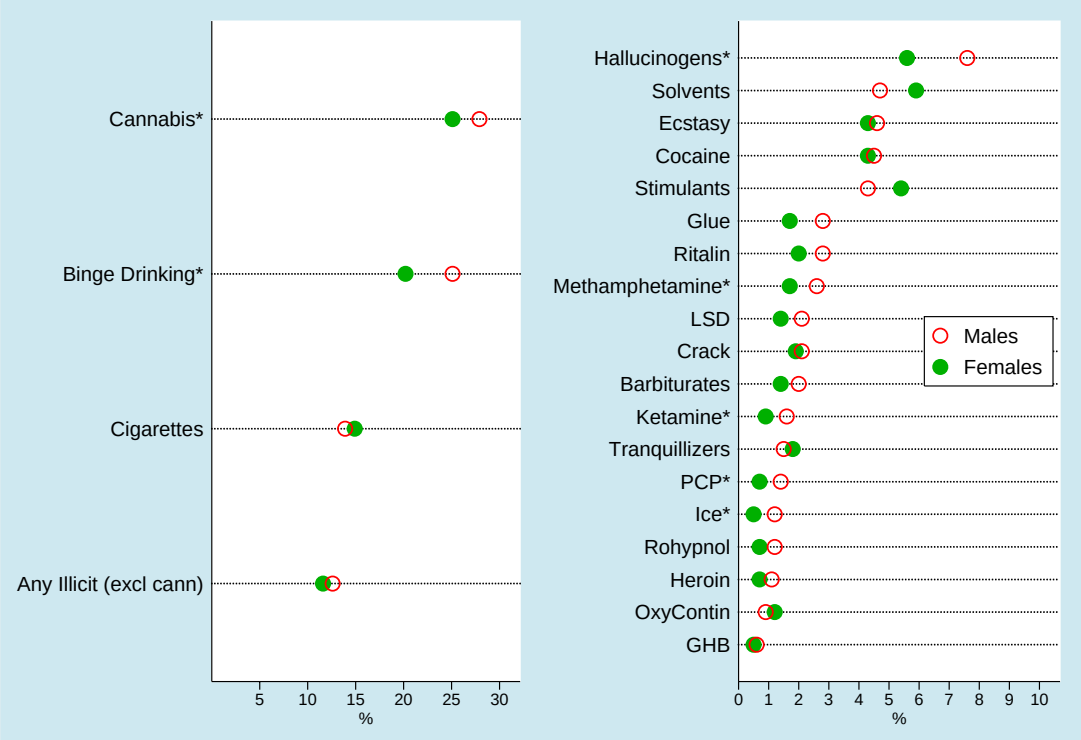
Grade

The use of the following drugs steadily increases with grade: alcohol, binge drinking, and cannabis (Figure 12). Other drugs typically peak in grade 11 and then somewhat subside by grade 12. These drugs are: cigarettes, ecstasy, hallucinogens, cocaine, stimulants, methamphetamine, Rohypnol, and tranquillizers (Figure 13). Only glue and solvent use decrease with grade (Figure 14). The use of LSD, PCP, heroin, OxyContin, barbiturates, crack, Ketamine, Ice and GHB is not significantly associated with grade (Figure 15).

Region

As seen in Figure 16, many drug use measures significantly vary by region: cannabis, binge drinking, cigarettes, hallucinogens (other than LSD and PCP), stimulants, cocaine, Ritalin, crack, tranquillizers, Ketamine, OxyContin, heroin, and any illicit drug (excluding cannabis). In general, students in Toronto (with the exception of heroin) and the Eastern region of the province are less likely to use these drugs compared to the province as a whole, whereas Northern and Western students are more likely to use.

Figure 11. Past Year Drug Use by Sex, 2005 *OSDUS*



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

Figure 12. Drugs that Steadily Increase with Grade, 2005 *OSDUS*

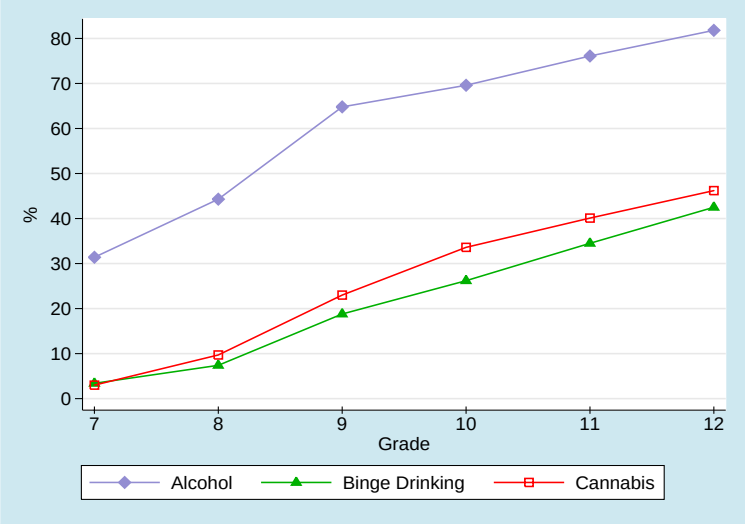


Figure 13. Drugs that Peak Before Grade 12, 2005 *OSDUS*

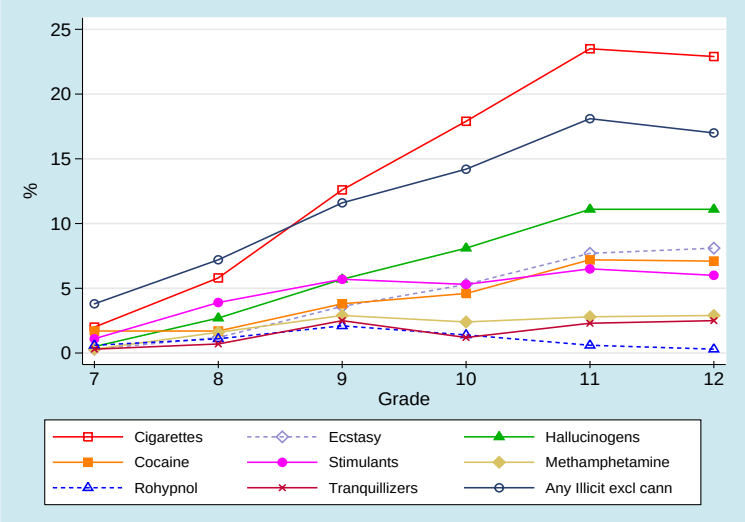


Figure 14. Drugs that Decrease with Grade, 2005 *OSDUS*

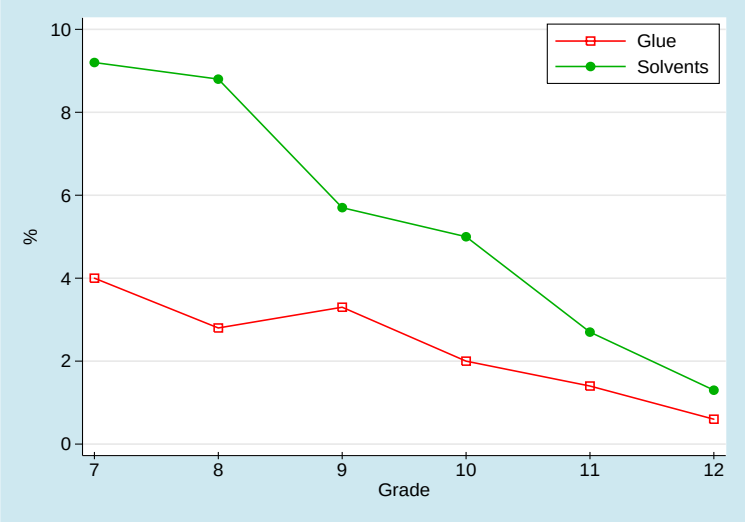


Figure 15. Drugs that Do Not Significantly Vary by Grade, 2005 *OSDUS*

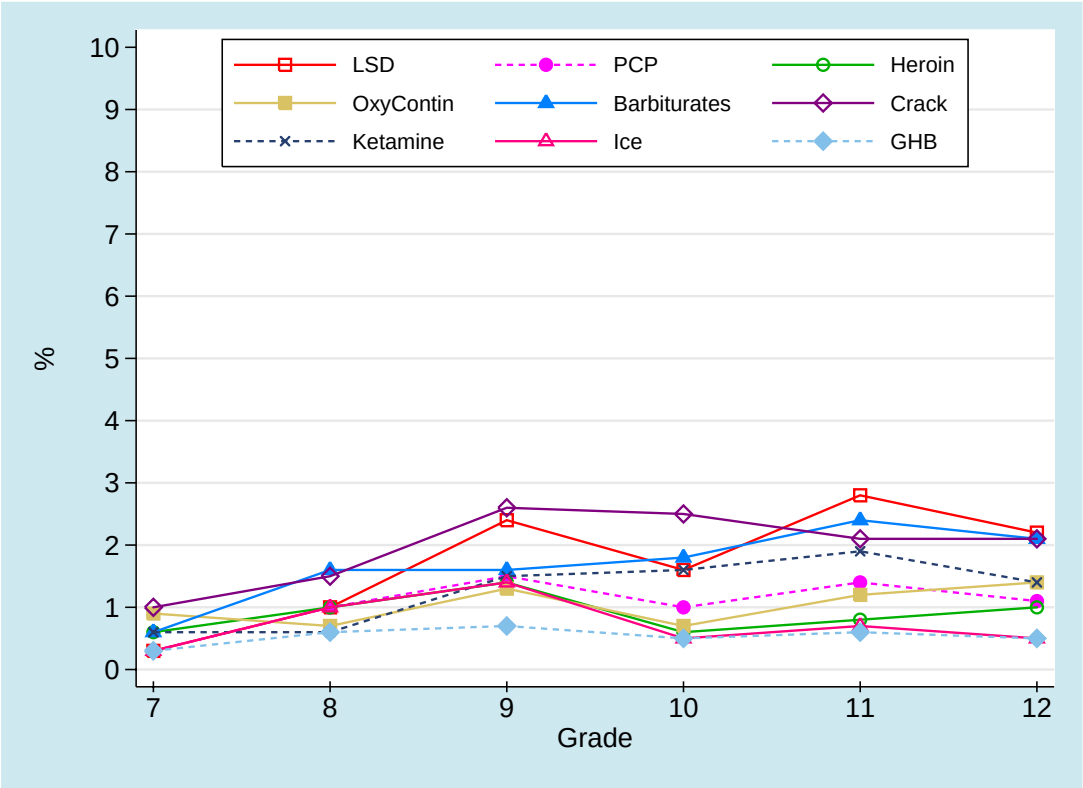
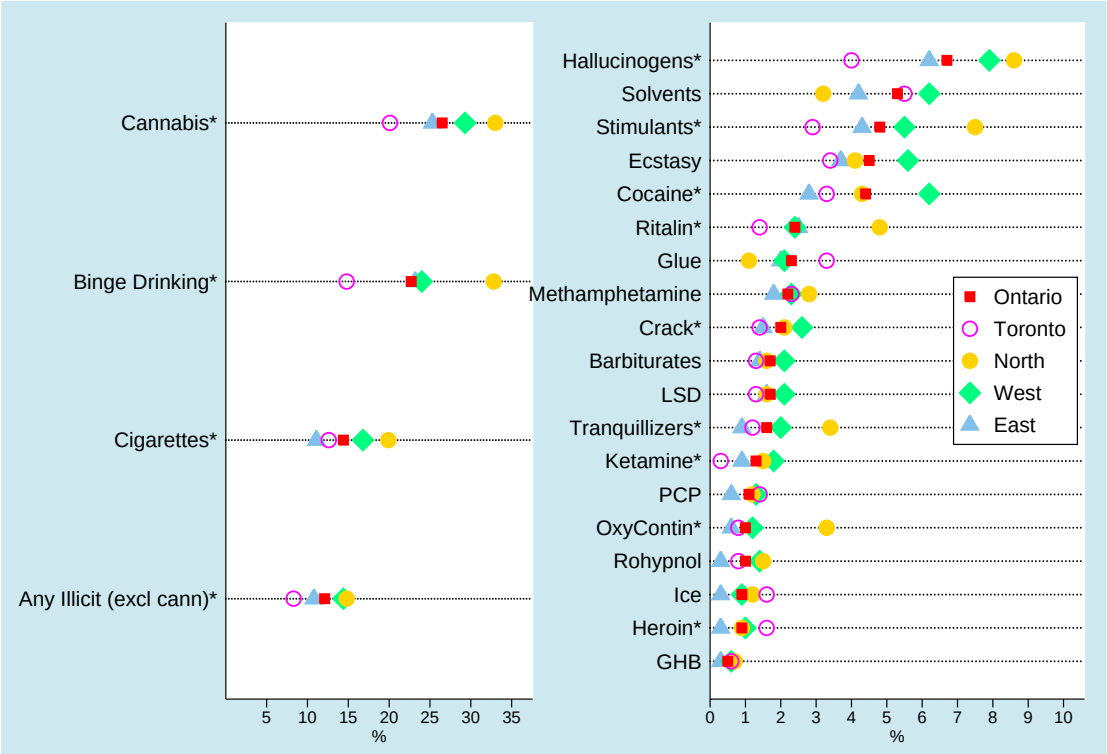


Figure 16. Past Year Drug Use by Region, 2005 *OSDUS*



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

Public Health Planning Regions

This section provides the 2005 drug use estimates for Ontario's seven public health planning regions. The seven regions are delineated as such:

Toronto

South West
- Essex
- Kent, Lambton
- Elgin, Oxford, Middlesex
- Bruce, Grey, Perth, Huron

Central South
- Niagara
- Hamilton-Wentworth
- Brant, Haldimand-Norfolk

Central West
- Halton
- Peel
- Wellington, Dufferin
- Waterloo

Central East
- Northumberland, Victoria, Haliburton, Peterborough
- Durham
- York
- Simcoe

East
- Ottawa-Carleton
- Renfrew, Prescott & Russell, Stormont, Dundas & Glengarry
- Lanark/Leeds/Grenville, Hastings, Prince Edward, Frontenac, Lennox, Addington

North
- Algoma, Cochrane
- Manitoulin, Sudbury (R.M.), Sudbury (T.D.)
- Muskoka, Parry Sound, Nipissing, Timiskaming
- Thunder Bay, Kenora, Rainy River

Table 2. Percentage of Students (Grades 7 to 12) Reporting Drug Use During the Past Year, by Ontario Public Health Planning Region, 2005

(N)	Toronto (1,172)	South-West (821)	Central-South (373)	Central-West (1,671)	Central-East (1,215)	East (1,229)	North (1,245)	Ontario (7,726)
Alcohol	**51.3** ** (43.8-58.8)	**65.8** (55.9-74.5)	**74.6** (62.2-83.9)	**63.7** (57.8-69.3)	**68.8** (61.0-75.7)	**56.6** (46.6-66.1)	**69.0** * (64.8-73.0)	**62.0** (59.3-64.7)
Binge Drinking	**14.8** ** (11.4-19.1)	**29.0** (20.8-38.8)	**32.6** (22.7-44.2)	**19.8** (15.7-24.7)	**25.9** (20.2-32.5)	**21.3** (13.6-31.6)	**32.8** * (28.5-37.4)	**22.7** (20.4-25.2)
Cigarette Smoking	**12.6** (10.1-15.7)	**19.5** (13.6-27.2)	**22.0** * (16.2-29.1)	**14.4** (11.5-18.0)	**15.1** (11.5-19.6)	**8.1** ** (5.7-11.2)	**19.9** ** (16.4-24.0)	**14.4** (13.0-15.9)
Daily Smoking	**7.4** (5.6-9.7)	**14.0** * (8.8-21.7)	**12.8** (7.7-20.6)	**9.0** (6.7-11.9)	**8.1** (5.8-11.1)	**3.6** ** (2.2-6.0)	**12.1** * (9.0-16.1)	**8.6** (7.4-9.9)
Cannabis	**20.1** ** (16.2-24.6)	**31.8** (24.0-40.8)	**35.9** (26.7-46.3)	**26.7** (21.4-32.7)	**29.8** (23.6-36.9)	**21.8** (16.1-28.9)	**33.0** ** (29.6-36.6)	**26.5** (24.5-28.7)
Glue	**3.3** (2.1-5.2)	**1.1** (0.4-2.8)	**4.0** (1.4-10.8)	**2.2** (1.5-3.4)	**2.4** (1.0-5.6)	**1.7** (0.9-3.2)	**1.0** (0.4-3.1)	**2.3** (1.8-2.9)
Solvents	**5.5** (3.8-8.0)	**3.0** * (1.8-4.9)	**7.9** (4.2-14.3)	**7.5** * (5.3-10.5)	**4.9** (2.9-8.1)	**3.6** (2.2-5.7)	**3.2** (1.6-6.4)	**5.3** (4.4-6.4)
LSD	**1.3** (0.8-2.3)	**3.4** (1.6-7.4)	**2.2** (1.3-3.6)	**1.4** (0.8-2.4)	**2.1** (1.1-3.9)	**1.2** (0.6-2.2)	**1.6** (1.0-2.5)	**1.7** (1.3-2.3)
PCP	**1.1** (0.6-3.4)	**1.2** (0.5-2.8)	**3.3** ** (1.7-6.2)	**0.8** (0.4-1.6)	**0.6** (0.3-1.4)	**0.6** (0.2-1.5)	**1.2** (0.6-2.3)	**1.1** (0.8-1.5)
Hallucinogens	**4.0** ** (2.5-6.4)	**10.4** (6.0-17.4)	**11.2** ** (8.3-15.0)	**6.0** (4.1-8.7)	**6.9** (4.5-10.4)	**5.6** (3.3-9.5)	**8.6** * (6.7-10.9)	**6.7** (5.6-8.0)
Heroin	**1.6** ** (0.9-2.9)	**1.2** (0.7-2.0)	**2.2** ** (1.2-4.2)	**0.6** (0.3-1.0)	**0.5** (0.2-1.0)	†	**0.9** (0.5-1.7)	**0.9** (0.7-1.2)
Methamphetamine ("Speed")	**2.3** (1.5-3.5)	**2.9** (1.8-4.6)	**3.5** * (2.5-4.9)	**1.8** (1.2-2.8)	**1.8** (1.0-3.2)	**1.8** (1.1-3.0)	**2.8** (1.9-4.0)	**2.2** (1.8-2.6)
Ice	**1.6** (0.8-3.2)	†	**0.8** (0.2-2.6)	**1.1** (0.6-2.3)	†	†	**1.2** (0.5-2.8)	**0.9** (0.6-1.3)
Cocaine	**3.3** (2.2-4.8)	**6.2** (3.4-11.1)	**9.1** ** (6.2-13.0)	**5.6** (4.3-7.3)	**3.6** (2.3-5.8)	**2.2** * (1.2-4.1)	**4.3** (3.0-6.1)	**4.4** (3.7-5.2)
Crack	**1.4** (0.8-2.3)	**2.2** (1.1-4.3)	**4.7** ** (3.6-6.2)	**2.3** (1.7-3.2)	**1.6** (1.0-2.6)	**1.4** (0.8-2.5)	**2.1** (1.3-3.3)	**2.0** (1.6-2.4)
Ecstasy (MDMA)	**3.4** (2.2-5.5)	**7.2** (4.4-11.6)	**9.5** ** (6.2-14.3)	**4.0** (2.8-5.7)	**4.8** (3.2-7.1)	**2.8** * (1.6-5.0)	**4.1** (3.2-5.2)	**4.5** (3.7-5.3)
GHB	**0.6** (0.1-2.9)	†	**1.5** ** (0.7-3.4)	**0.5** (0.2-1.2)	†	**0.5** (0.1-1.7)	**0.7** (0.3-1.5)	**0.5** (0.3-0.9)
Rohypnol	**0.8** (0.2-2.8)	**1.4** (0.6-3.2)	**1.3** (0.4-4.2)	**1.4** (0.8-2.5)	†	†	**1.5** (0.7-3.3)	**1.0** (0.7-1.4)
Ketamine	†	**1.1** (0.4-2.9)	**1.1** (0.2-6.8)	**2.3** ** (1.5-3.6)	**1.2** (0.5-3.0)	**0.7** (0.3-1.8)	**1.5** (0.8-2.9)	**1.3** (0.9-1.7)
Ritalin (non-medical)	**1.4** (0.7-2.8)	**3.2** (2.1-5.0)	**2.7** (1.7-4.4)	**1.9** (1.2-3.1)	**2.0** (1.3-3.0)	**3.0** (1.6-5.3)	**4.8** ** (3.5-6.5)	**2.4** (2.0-3.0)
OxyContin	**0.8** (0.2-2.6)	**1.8** (1.0-3.3)	**1.3** (.04-3.5)	**0.8** (0.3-2.0)	†	**0.7** (0.3-1.4)	**3.3** ** (1.8-6.1)	**1.0** (0.7-1.5)
Barbiturates	**1.3** (0.6-2.7)	**3.1** * (1.7-5.4)	**2.8** (1.5-5.0)	**1.5** (1.0-2.3)	**1.1** (0.5-2.7)	**1.7** (0.9-3.1)	**1.6** (0.9-2.8)	**1.7** (1.3-2.2)
Stimulants	**2.9** * (2.0-4.2)	**6.5** (4.0-10.6)	**7.7** ** (5.9-9.9)	**4.6** (3.4-6.2)	**3.7** * (2.6-5.1)	**4.8** (3.2-7.2)	**7.5** * (4.5-12.2)	**4.8** (4.1-5.6)
Tranquillizers	**1.2** (0.7-2.2)	**2.5** (1.4-4.5)	**3.2** ** (2.0-5.0)	**1.6** (1.0-2.4)	**0.9** * (0.5-1.7)	**1.0** * (0.5-1.8)	**3.4** * (1.8-6.3)	**1.6** (1.3-2.0)

Notes: (1) entries in brackets are 95% confidence intervals; (2) † estimate suppressed or <0.5%; (3) binge drinking is defined as consuming 5 or more drinks on one occasion at least once during the 4 weeks before the survey; (4) daily smoking is defined as having at least one whole cigarette a day during the past 12 months; (5) solvents include nail polish remover, paint thinner, gasoline; (6) hallucinogens excludes LSD and PCP, includes mescaline and psilocybin; (7) Ice is a crystallized, smokeable form of methamphetamine; (8) *p<.05, **p<.01 significant difference, public health region versus Ontario.

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

SUMMARY

The Public Health Approach Towards Drug Use

The *OSDUS* 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 *OSDUS* 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. In fact, the prevalence of smoking in 2005 (14%) is at its lowest point on record since monitoring began in 1977. The prevalence has significantly declined since 2003 (19%) and dramatically declined since 1999 when the prevalence was 28%. Moreover, students today **begin smoking cigarettes at a later age** (about age 13), compared to students two decades ago (about age 11). Further, the **perceived risk of harm from smoking** 1 or 2 cigarettes daily has increased in 2005 relative to 2003.

Alcohol: While the majority of students (62%) are considered to be current drinkers, the drinking prevalence among all students has significantly declined compared to 2003 (66%) and 1999 (66%). This is the first decline in alcohol use since 1989. In addition, the average **age of onset for alcohol use** has moved upward since 2001.

Binge drinking is also lower in 2005 (23%) compared to 1999 (28%), and currently resembles the lower rates found in the mid-1980s.

Despite recent media attention regarding the use of **methamphetamine** and crystal methamphetamine in various populations, there is no evidence that either drug has diffused into the student population.

More students in 2005 report being **drug-free** (including alcohol and tobacco) during the past year compared to 2003 (36% vs 32%), and fewer students in 2005 reported using 4 or more drugs (8% vs 11%).

Among all students, the **use of any illicit drug excluding cannabis** is currently lower in 2005 (12%) compared to surveys since 1999 (about 20%).

Measures of initiation are considered leading indicators of emerging patterns of substance use. **Alcohol and cannabis use declined among 7th-graders** (the youngest group) in 2005 compared to 2003, suggesting that future prevalence rates may fall.

After cannabis, **hallucinogens** other than LSD and PCP (e.g., magic mushrooms) are the second most commonly used illicit drug among Ontario students. Hallucinogen use has declined in 2005, continuing on a downward trend that began in 2001.

Use of **LSD** also continued on the downward trend that began in 1995. The 2005 estimate is significantly lower than that found in 2003, 2001 and 1999. The decline in LSD use corresponds to increase in the perceived risk of trying LSD, as well as disapproval.

The use of other illicit drugs also declined in 2005 compared to recent years: **PCP, heroin, methamphetamine, Rohypnol,** and **Ketamine.** Non-medical use of **barbiturates** and **stimulants** also declined in 2005.

Drinking and driving among licensed students remained stable at about 14%. This level is markedly lower than rates found in the late 1970s and early 1980s.

The perceived **availability** of alcohol, cannabis, cocaine, LSD, and ecstasy has significantly declined in recent years.

The **perceptions of risk of harm and the disapproval** of trying ecstasy are higher in 2005 compared to 2001. Thus, students today seem to be more aware of the potential physical harm caused by ecstasy.

Although over one-quarter (27%) of students report **exposure to drug selling** in their neighbourhood, this proportion has declined since 2003 (32%).

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 2005, there is still a significant proportion (one-in-seven) that does smoke (about 139,700 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.

Drugs and Vehicles: Despite long-term declines in drinking and driving, there are still about one-in-seven (14%) licensed students who drink and drive. A somewhat higher percentage (20%) of licensed students report driving after using cannabis. Moreover, over one-quarter (29%) of all students report being a passenger with a driver who had been drinking, and 22% 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 40% of 12th-graders report each). These behaviours increase the risk of unintentional injuries – a leading cause of death among youth.

Daily cannabis use among cannabis users has increased significantly over the long-term. About 12% of users (3% of all students, a percentage representing about 33,200 of Ontario students in grades 7-12), report daily cannabis use. Moreover, two-thirds of these students also smoke cigarettes daily, thereby increasing the likelihood of respiratory illnesses.

Cocaine: Since 1993, cocaine use has been steadily increasing among all students, and among all demographic subgroups, except Toronto students. There was a significant increase in cocaine use among all students between 1999 and 2003, and the 2005 level remains steady at about 4%. Students in grade 12, and Western students, also show marked increases in cocaine use in 2005 compared to 2003. Cocaine use remains elevated among senior students, and use among 11th-graders is the highest recorded since 1977.

About one-in-five (17%) students are likely to get **drunk or high at school**, and one-quarter (23%) are likely to be **offered, sold, or given a drug at school.**

One-third (33%) of students report that **someone tried to sell drugs to them** during the past 12 months before the survey.

Substance Use and Mental Health

There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2005 *OSDUS* shows that about 6% of all students (62,000 Ontario students) report both hazardous drinking and elevated psychological distress (symptoms of anxiety and depression).

Future OSDUS 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 on school property), education programs, and whether health objectives are achieved. Finally, scientific surveys such as the *OSDUS,* 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 *OSDUS* 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 2006.

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.
Illicit Drug Use	Use of any illegal drug at least once during the past 12 months. For the trend analysis, *excluded* from this analysis are: alcohol, tobacco, inhalants, prescription drugs, Ice, Ecstasy, GHB, Rohypnol, Ketamine, non-medical Ritalin, and OxyContin. 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 at least once during the past 4 weeks; (2) Becoming *drunk* at least once 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).

Note: See the *OSDUS Detailed Drug Report* for specific details and references associated with the screens used.

Table A2. Percentage Using Drug *at Least Once* During the Past Year, 1999 – 2005, Grades 7 to 12

(N)	1999 (4447)	2001 (3898)	2003 (6616)	2005 (7726)	
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)	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)	ab
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)	
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)	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)	b
LSD	**6.8** (6.7-8.1)	**4.8** (3.9-5.9)	**2.9** (2.4-3.5)	**1.7** (1.3-2.3)	ab
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)	ab
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)	ab
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)	ab
Ice	**1.4** (0.8-2.7)	**0.6** (0.3-1.1)	**1.2** (0.8-1.7)	**0.9** (0.6-1.3)	
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)	
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)	
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)	ab
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)	
GHB	—	**1.3** (0.8-2.1)	**0.7** (0.4-1.1)	**0.5** (0.3-0.9)	
Rohypnol	—	**3.1** (2.0-4.8)	**1.6** (1.2-2.2)	**1.0** (0.7-1.4)	b
Ketamine	—	—	**2.2** (1.8-2.9)	**1.3** (0.9-1.7)	a
Ritalin (NM)	—	—	**2.9** (2.5-3.5)	**2.4** (2.0-3.0)	
Barbiturates (NM)	**4.4** (3.5-5.5)	**4.0** (3.2-5.0)	**2.5** (2.1-3.0)	**1.7** (1.3-2.2)	ab
Stimulants (NM)	**7.3** (6.4-8.4)	**6.3** (5.4-7.4)	**5.8** (5.0-6.6)	**4.8** (4.1-5.6)	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)	
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)	ab
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)	ab
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)	b

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

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

Table A3. Significant Changes in Past Year Drug Use by Subgroup, 2005 vs. 2003 and 2005 vs. 1999, *OSDUS* (Grades 7 to 12)

	Cigarettes	*Alcohol*	*Binge Drinking*	*Cannabis*	*Glue*	*Other Solvents*	*LSD*	*PCP*	*Other Hallucinogens*	*Heroin*	*Meth ("Speed")*	*Ice*	*Cocaine*	*Crack*	*Ecstasy*	*GHB*	*Rohypnol*	*Ketamine*	*Barbiturates (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 decrease in 2005 vs. 2003, p<.01; (2)△▽ significant decrease or increase in 2005 vs. 1999, p<.01 (2005 GHB and Rohypnol rates are compared to 2001); (3) NM = non-medical use; (4) table excludes Ritalin and OxyContin.

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

Table A4. Percentage Using Drug *at Least Once* During the Past Year, 1977 – 2003, Grades 7, 9, 11 only

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005
(N)	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3040)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)
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)

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, barbiturates, stimulants, and tranquillizers (excluded are glue, solvents, Ice, ecstasy, GHB, Rohypnol, Ketamine, Ritalin and OxyContin).

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