

Drug Use Among Ontario Students

OSDUS
HIGHLIGHTS



1977-2003



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

EDWARD M. ADLAF
ANGELA PAGLIA

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Drug Use Among Ontario Students 1977–2003

OSDUS HIGHLIGHTS

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TABLE OF CONTENTS

| | |
|---|----|
| Introduction | 1 |
| Method | 2 |
| Results | 3 |
| Overview of Drug Use in 2003 | 3 |
| Drug Use in 2003 versus 2001 | 5 |
| Overview of Short-Term Trends (1999-2003) | 5 |
| Overview of Long-Term Trends (1977-2003) | 6 |
| Tobacco | 7 |
| Alcohol | 8 |
| Cannabis | 9 |
| Multiple Drug Use: Alcohol, Tobacco, Cannabis and Other Drugs | 10 |
| New Users and Early Onset | 11 |
| Consequences and Problems Related to Substance Use | 12 |
| Drinking and Driving | 12 |
| Cannabis Use and Driving | 12 |
| Been a Passenger with an Intoxicated Driver | 12 |
| Drug Use Problem | 12 |
| Treatment | 12 |
| Coexisting Alcohol and Mental Health Problems | 13 |
| Attitudes and Perceptions | 14 |
| Subgroup Profiles: Sex, Grade, Region | 15 |
| Public Health Planning Regions | 17 |
| Summary | 19 |
| Appendix Tables | 21 |
| A1. Terminology | 22 |
| A2. Percentage Using Drug at Least Once During the Past Year, 1999 – 2003, Grades 7 to 12 | 23 |
| A3. Significant Changes in Past Year Drug Use between 1999 and 2003 by Subgroup, OSDUS, Grades 7 to 12 | 24 |
| A4. Percentage Using Drug at Least Once During the Past Year, 1977 – 2003, Grades 7, 9, 11 only | 25 |

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 2003. The findings are based on the 14th 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-five years, and is the longest systematic study of alcohol and drug use among a youthful population in Canada.

Surveys such as the *OSDUS* contribute to an understanding of current and changing patterns of alcohol and other drug use, the problems associated with use, and the social and demographic correlates involved. 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 2003 *OSDUS* report includes new material on the following issues:

- the use of Ritalin without a prescription;
- the use of Ketamine;
- the average age of onset for tobacco, alcohol, and cannabis use and changes over time; and
- riding in a vehicle with a driver who had been using drugs.

Note to Readers of Prior OSDUS Reports

Unlike prior OSDUS surveys, OAC (Grade 13) students were not surveyed in 2003. Thus, to ensure valid comparisons across years, we have made important changes to the 2003 OSDUS report:

- ***All percentages based on samples before 2003 have been recalculated to exclude OAC students.***

This means that percentages found in earlier OSDUS reports (from 1977 to 2001) cannot be compared to percentages in the 2003 report (the exception to this rule is for percentages based on individual grade levels).

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, 1977-2003: Detailed *OSDUS* Findings" (available in PDF format at:

http://www.camh.net/research/population_life_course.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 2004.

History of the OSDUS

The OSDUS is the longest ongoing school survey in Canada. 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 Ontario. In 1999, the OSDUS was again expanded to include students in grades 7 to 13 (OAC). In 2003, the OSDUS excluded grade 13, 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 58,000 students.

METHOD

Sampling Design

For each of the 14 *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 1999 and 2001 cycles, the 2003 *OSDUS* employed a two-stage (school, class), stratified (region and school type) cluster sample design, and oversampled students in Northern Ontario.

However, the 2003 *OSDUS* differs from previous surveys 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. The 2003 sample design employed a longitudinal sample of schools drawn from the 2001 sample. Forty-three percent (n=54) of the schools in the 2003 survey also participated in 2001. This feature of overlapping schools provides more efficient estimates of change over time.

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 2003, 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 parental consent form responded to the anonymous, self-administered questionnaires in class groups within a 30 to 40 minute session, between January and June 2003. 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 2003 survey was 6,616 7th- to 12th-graders (72% of selected students) from 37 school boards, 126 schools and 383 classes. This sample represents about 970,000 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 Form B. On average, the questionnaire took about 30 minutes to complete. Questionnaires are available at: www.camh.net/research/population_life_course.html.

RESULTS

Overview of Drug Use in 2003

By far the most commonly used drug is alcohol, with 66% 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 30% reporting use. Tobacco ranks third, with 19% 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 10% of students. The remaining drugs are used by fewer than 7% on a past year basis. The least common drug is GHB, used by less than 1% of students.

One-third (32%) report using at least one illicit drug in the past year. When cannabis is excluded, this proportion becomes about one-in-six (15%).

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-ten have used hallucinogens, other than LSD and PCP, and solvents. The remaining drugs were used by less than 7% of students in their lifetime.

Frequency of Drug Use in 2003

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-six (16%) students reports using cannabis six or more times during the past year. Stimulants and hallucinogens (excluding LSD) are the next class of drugs 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.

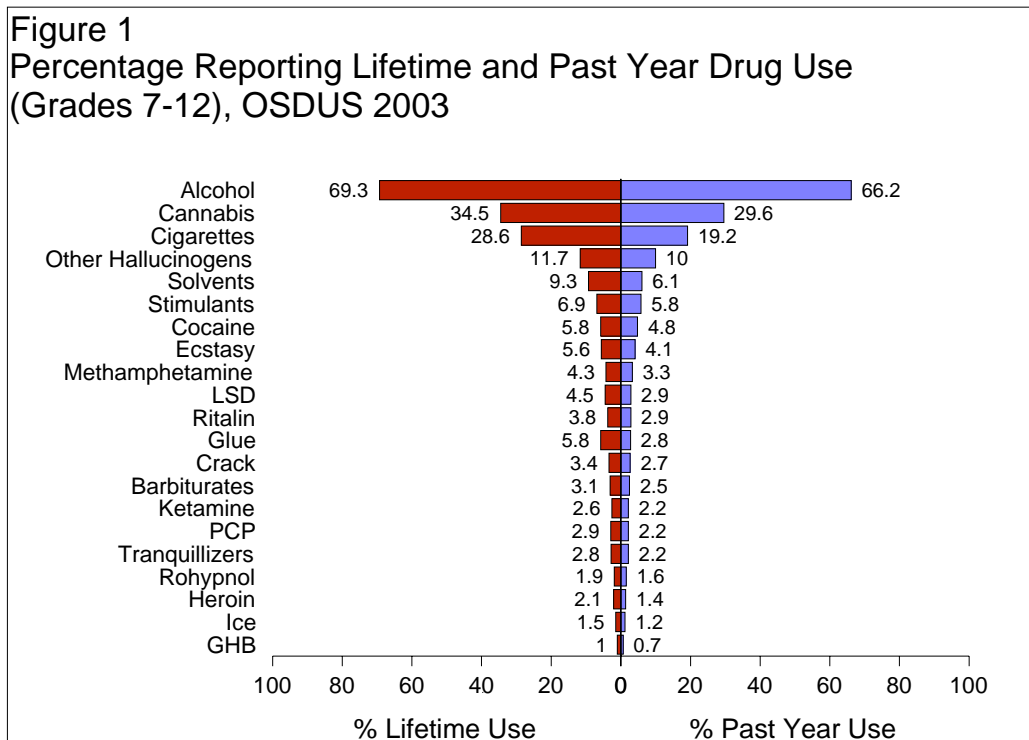


Table 1. Past Year Drug Use (%) by Total, Sex, and Grade, 2003 OSDUS

| | Total | Males | Females | | G7 | G8 | G9 | G10 | G11 | G12 | |
|--|--------------|--------------|----------------|---|-----------|-----------|-----------|------------|------------|------------|---|
| <i>Alcohol</i> | 66.2 | 68.3 | 64.3 | * | 39.1 | 48.9 | 65.1 | 75.1 | 79.9 | 82.5 | * |
| <i>Cannabis</i> | 29.6 | 30.9 | 28.3 | | 6.2 | 10.7 | 27.9 | 35.9 | 45.0 | 44.8 | * |
| <i>Binge Drinking</i> | 26.5 | 29.4 | 23.8 | * | 5.8 | 7.7 | 23.5 | 29.8 | 40.9 | 45.2 | * |
| <i>Cigarettes</i> | 19.2 | 18.0 | 20.3 | | 4.4 | 10.2 | 17.0 | 21.8 | 28.3 | 30.2 | * |
| <i>Hallucinogens</i> | 10.0 | 12.1 | 8.0 | * | 1.8 | 2.6 | 7.8 | 12.5 | 17.4 | 15.3 | * |
| <i>Solvents</i> | 6.1 | 5.9 | 6.3 | | 10.2 | 9.5 | 6.5 | 4.2 | 3.6 | 3.9 | * |
| <i>Stimulants (NM)</i> | 5.8 | 4.7 | 6.7 | * | 1.6 | 3.7 | 5.6 | 6.6 | 8.2 | 7.8 | * |
| <i>Cocaine</i> | 4.8 | 5.4 | 4.3 | | 3.1 | 1.9 | 4.9 | 4.6 | 6.9 | 6.7 | * |
| <i>Ecstasy (MDMA)</i> | 4.1 | 4.2 | 3.9 | | 0.5 | 0.8 | 3.7 | 4.6 | 6.6 | 7.2 | * |
| <i>Methamphetamine</i> | 3.3 | 3.8 | 2.9 | | 1.0 | 0.9 | 3.8 | 4.2 | 5.4 | 3.6 | * |
| <i>LSD</i> | 2.9 | 3.5 | 2.3 | * | 0.7 | 1.1 | 3.7 | 4.2 | 4.0 | 2.7 | * |
| <i>Ritalin (NM)</i> | 2.9 | 3.4 | 2.5 | | 1.2 | 1.2 | 3.0 | 3.3 | 5.0 | 3.1 | * |
| <i>Glue</i> | 2.8 | 3.0 | 2.6 | | 5.2 | 3.2 | 2.4 | 2.4 | 2.3 | 1.8 | * |
| <i>Crack</i> | 2.7 | 2.8 | 2.6 | | 1.7 | 1.7 | 3.1 | 3.0 | 3.6 | 2.5 | |
| <i>Barbiturates (NM)</i> | 2.5 | 2.6 | 2.5 | | 1.8 | 2.2 | 3.0 | 2.8 | 3.1 | 1.8 | |
| <i>PCP</i> | 2.2 | 2.9 | 1.6 | * | 1.3 | 0.8 | 2.1 | 3.6 | 2.6 | 2.7 | * |
| <i>Tranquillizers (NM)</i> | 2.2 | 2.7 | 1.8 | * | 0.6 | 1.2 | 1.8 | 2.4 | 4.1 | 2.7 | * |
| <i>Ketamine</i> | 2.2 | 3.0 | 1.6 | * | 1.0 | s | 1.7 | 1.6 | 4.7 | 3.7 | * |
| <i>Rohypnol</i> | 1.6 | 1.7 | 1.5 | | 1.2 | 1.2 | 1.4 | 2.0 | 2.3 | 1.3 | |
| <i>Heroin</i> | 1.4 | 1.9 | 0.9 | * | 1.4 | 0.8 | 1.5 | 2.0 | 1.3 | 1.1 | |
| <i>Ice</i> | 1.2 | 1.3 | 1.0 | | 1.2 | 0.8 | 1.3 | 1.0 | 1.1 | 1.5 | |
| <i>GHB</i> | 0.7 | 0.8 | 0.6 | | s | s | s | 0.9 | 1.7 | s | |
| <i>Any Illicit, including cannabis</i> | 32.2 | 33.1 | 31.3 | | 10.1 | 13.9 | 29.6 | 38.6 | 47.5 | 47.1 | * |
| <i>Any Illicit, excluding cannabis</i> | 15.3 | 16.6 | 14.2 | * | 6.6 | 8.0 | 13.0 | 18.0 | 21.7 | 22.3 | * |
| <i>Steroids (lifetime)</i> | 3.0 | 4.4 | 1.7 | * | 0.7 | 1.8 | 1.6 | 3.8 | 4.6 | 5.3 | * |

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

Drug Use in 2003 versus 2001 (Grades 7 to 12)

Of the 22 drug measures included in the 2003 and 2001 surveys, 5 showed significant decreases (see Appendix Table A2). Cigarette smoking decreased from 23% in 2001 to 19% in 2003 among all students in grades 7 to 12. Past year use of barbiturates decreased from 4% in 2001 to 2% in 2003, as did LSD use (from 5% to 3%) and ecstasy use (from 6% to 4%). Use of any illicit drug excluding cannabis decreased from 18% in 2001 to 15% in 2003.

Between 2001 and 2003, no drug showed a significant increase in use. All other drugs remained stable between these two survey years.

Subgroup Changes

With the exception of increases in cocaine and crack use among Northern students, most subgroup changes in drug use between 2001 and 2003 were declines (see Table A3).

- **Sex:** Between 2001 and 2003, males showed a significant decrease in use of LSD and ecstasy. Females showed a significant decrease in barbiturate use.
- **Grade:** 8th- and 9th-graders showed a decrease in ecstasy use, and 10th-graders showed a decrease in cigarette smoking, use of barbiturates, and LSD.
- **Region:** Use of LSD and ecstasy decreased among Western students.

Overview of Short-Term Trends, 1999 – 2003 (Grades 7 to 12)

There are 6 measures that decreased in the short-term, among students in grades 7 to 12 (see Appendix Table A2). Cigarette smoking has significantly decreased since 1999 (from 28% to 19%). Other decreases between 1999 and 2003 were also found for barbiturates (from 4% to 2%), LSD (from 7% to 3%), other hallucinogens (from 13% to 10%), and methamphetamine (from 5% to 3%). Use of any illicit drug excluding cannabis significantly decreased, from 20% in 1999 to 15% in 2003.

Use of cocaine, however, significantly increased between 1999 and 2003 (from 3% to 5%). All other drugs showed no significant change.

Subgroup Changes

With the exception of cannabis use (which increased among females) and cocaine use (which increased among 12th-graders, and Northern students), most subgroup changes between 1999 and 2003 show decreases in use (see Table A3).

- **Sex:** Males show decreases in cigarette smoking, use of methamphetamine, LSD, and any illicit drug (excluding cannabis). Females show decreases in cigarette smoking, use of barbiturates, LSD, and any illicit drug (excluding cannabis).
- **Grade:** Among 8th-graders, the use of 4 drugs declined since 1999 (cigarettes, LSD, other hallucinogens, and any illicit drug excluding cannabis); 3 declined among 9th-graders (cigarettes, LSD, and any illicit drug excluding cannabis); 4 declined among 10th-graders (cigarettes, LSD, other hallucinogens, and any illicit drug); 3 declined among 11th-graders (cigarettes, LSD, and any illicit drug excluding cannabis); and 2 declined among 12th-graders (methamphetamine and LSD).
- **Region:** There were 4 decreases among students in Northern Ontario (cigarettes, barbiturates, LSD, and any illicit drug excluding cannabis). In the West, cigarette smoking, use of LSD, and any illicit drug decreased. In the East, cigarette smoking, LSD use and any illicit drug use declined.

Overview of Long-Term Trends, 1977 – 2003 (Grades 7, 9, 11 only)

The drug use estimates showing the long-term trends can be found in Table A4. These data reveal 5 dominant patterns:

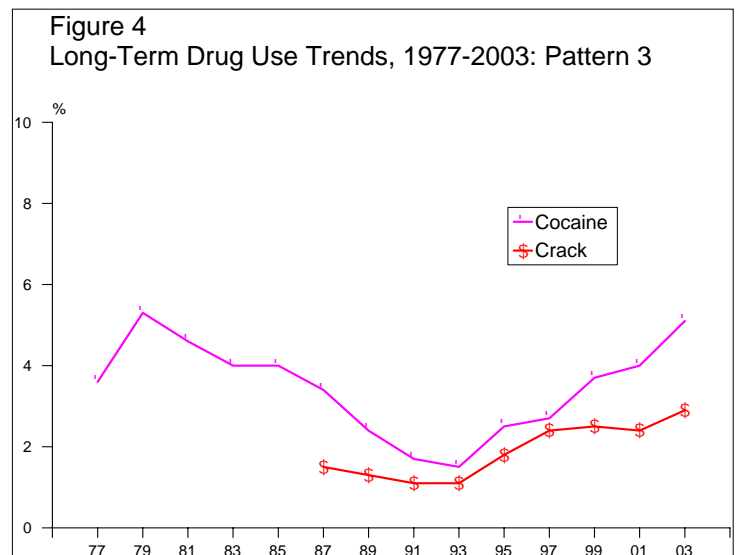
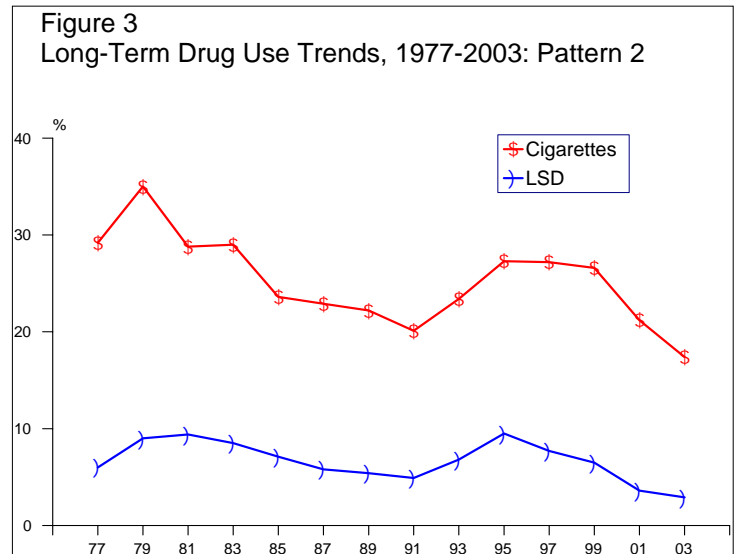
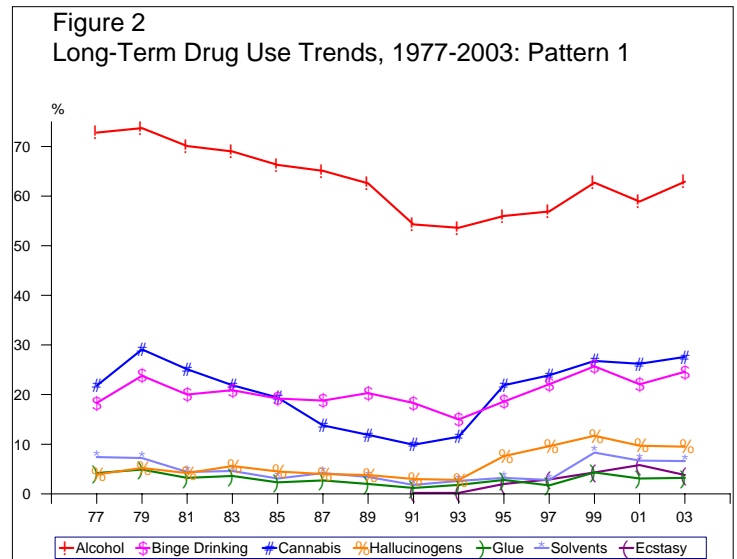
● The first pattern (Figure 2) displays decreases during the 1980s, increases during the 1990s and current stability at elevated rates. This pattern occurs for 6 measures: any alcohol use, binge drinking, inhalants, cannabis, hallucinogens other than LSD or PCP, and ecstasy. For example, cannabis use declined from 29% in 1979 to 10% in 1991, and then increased to 28% in 2003.

● The second pattern (Figure 3) is one that displays decreases during the 1980s, increases during the 1990s, but is currently moving downward. The pattern is evident for smoking cigarettes and LSD use. Smoking declined from 35% in 1979 to 20% in 1991, then moved upward to 27% in 1999, and then dropped to 17% in 2003. LSD use moved similarly, from 9% to 5% in 1991, and then increased to 6% to 3%, respectively.

● The third pattern (Figure 4) is one that displays declines during the 1980s, but an upward movement during the 1990s. This is evident for cocaine and, to a lesser extent, crack. For example, cocaine use declined from 5% in 1979 to 2% in 1991, but increased to 3% in 2003.

● The fourth pattern is one that displays decreases during the 1980s, but stability during the 1990s. The pattern is evident for the non-medical use of stimulants, tranquilizers and barbiturates.

● The fifth pattern is one that displays low and stable rates over time. This pattern is evident for the use of heroin, PCP and methamphetamine.



Tobacco

Past Year Cigarette Smoking

- 19% (95% CI: 18%-21%)¹ of all students report smoking in the past year. This represents about 185,100 students in grades 7 to 12 across Ontario.
- Males (18%) and females (20%) are equally likely to smoke.
- Smoking increases with grade level, from 4% of 7th-graders; 10% of 8th-graders; 17% of 9th-graders; 22% of 10th-graders; and peaking in 11th- (28%) and 12th-grade (30%).
- Students in Northern Ontario (24%) are most likely to smoke, and those in Toronto (16%) are least likely. Students in the West (20%) and East (19%) fall in between.

Daily Smoking

- 14% (95% CI: 12%-15%) of students report smoking one or more cigarettes on a daily basis during the past year. This percentage represents about 131,700 students in Ontario.
- Daily smoking does not significantly differ between males (13%) and females (14%).
- Daily smoking is significantly related to grade level, increasing incrementally between 7th-grade (3%) and 12th-grade (22%).
- Students in the North (19%) are most likely to smoke daily, and those in Toronto (11%) are least likely.

Frequency of Smoking

- About 4% 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 (29%). 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 2003 survey found that 23% of smokers have their first cigarette within the first 30 minutes upon waking. Male (21%) and female smokers (24%) are equally likely to smoke within the first half-hour after waking. While there is some variation by grade, and by region, these differences are not statistically significant.

Quitting

- In 2003, 62% of smokers reported at least one quit attempt in the year before the survey. Among the 373 smokers who attempted to quit, most report attempting to do so once (43%) or twice (27%). About one-third of smokers could not abstain for longer than one week, while only about one-quarter (28%) managed to abstain for more than three months.

Cigarette Purchasing Behaviour

- In 2003, 9% of underage students successfully purchased cigarettes at a retail outlet in the month before the survey. Purchasing varied by age: 3% of students aged 15 and under, and 16% of students aged 16 to 18 years, purchased cigarettes.
- Cigarettes are most commonly purchased at corner stores (8%) followed by restaurants, gas stations and bars (7%) and supermarkets (6%).

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, 66% (95% CI: 64%-68%) of students report drinking alcohol during the 12 months before the survey. This represents about 641,700 students in grades 7 to 12 in Ontario.
- The prevalence of drinking is significantly higher among males (68%) than females (64%).
- Drinking increases significantly with grade: rates climb more than ten percentage points by each grade, between grades 7 and 11 (from 39% to 80%). Drinking rates among grades 11th- and 12th-graders are similar (about 80%).
- Rates of drinking do not differ significantly among the regions: about two-thirds of students in each of the four regions drink alcohol.

Frequency of Drinking

- 25% of all students (38% of drinkers) restrict their drinking to special occasions only. One-in-ten (12%) students drink at least once a week (18% of drinkers). Only a very small number of students drink on a daily basis (less than 0.5%).

Binge Drinking (Past Month)

- Overall, 26% (95% CI: 24%-29%) of students report binge drinking at least once during the month before the survey. This percentage represents about 255,900 students in grades 7 through 12.
- About one-in-ten (10%) of all students report binge drinking 2 to 3 times during the 4 weeks before the survey. Another 6% report binge drinking 4 or more times.
- Binge drinking is significantly higher among males (29%) than females (24%).
- Binge drinking increases significantly with grade: it is lowest among 7th-graders (6%) and climbs to a high of 45% among 12th-graders.
- Toronto students are the least likely to report binge drinking (18%), whereas Northern students are the most likely (33%).

Drunkness (Past Month)

- Overall, 24% (95% CI: 21%-27%) reported becoming drunk at least once during the past month (about 225,800 students).
- Reported drunkness is not significantly different between males and females (26% vs 22%).
- Drunkness is lowest among 7th-graders (4%) and peaks in grades 11 and 12 (about 40%).
- Toronto students are the least likely to report drunkness (14%) 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, 19% (95% CI: 17%-21%) of students report drinking at a hazardous level. This represents about 186,700 students in Ontario. About one-quarter (28%) of drinkers drink at a hazardous level.
- Males (21%) are significantly more likely than females (17%) to drink hazardously.
- As grade increases, so does the likelihood of hazardous drinking, with a large incremental increase in each grade between grade 8 and grade 11 (6% to 30%).
- There are no significant differences in hazardous drinking rates among the regions.

Cannabis

Past Year Cannabis Use

- Overall, 30% of students (95% CI: 28%-32%) report using cannabis at least once during the 12 months before the survey. This represents about 286,000 students in Ontario in grades 7 to 12.
- There is no significant difference in the prevalence of cannabis use between males (31%) and females (28%).
- Cannabis use shows strong increases with each grade, increasing from 6% among 7th-graders to 45% among 11th- and 12th-graders.
- Although cannabis use is lowest in Toronto (25%) compared to the other regions (about 30%), these regional differences are not statistically significant.

Frequency of Cannabis Use (Past Year)

- Among all students, 16% report using cannabis six times or more during the past year. About 13% of students used cannabis between 1 to 5 times.
- During the month before the survey, 8% of all students used cannabis weekly, and another 4% used on a daily basis.
- Among cannabis users only, one-quarter (25%) report having used on a weekly basis during the month before the survey. Another 14% used on a daily basis.

Quantity Smoked (Past Month):

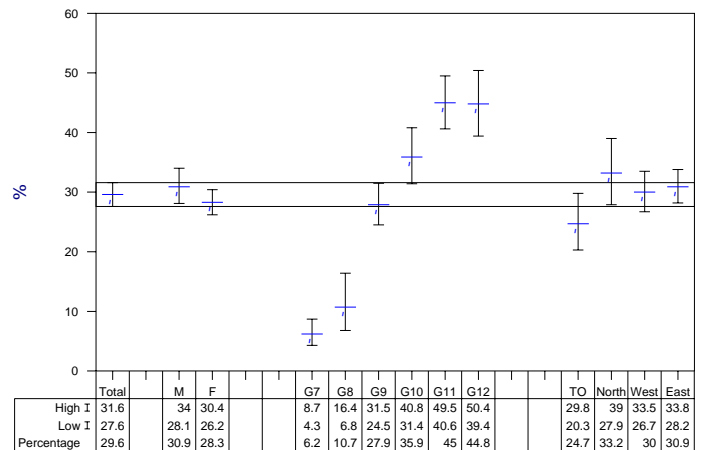
- In 2003, about 15% of cannabis users in grades 7 to 12 smoked less than one joint per occasion during the past month; 22% smoked about one joint; 18% smoked two to three joints; and 15% smoked four or more joints. Just over one-quarter (29%) of past year users did not use marijuana during the month before the survey.

Potential 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-ten (10%) of cannabis users in grades 7 to 12 may have a dependence problem.
- Despite some variation, there are no significant differences by sex, grade, or region.

Figure 5
Past Year Cannabis Use by Sex, Grade and Region, OSDUS 2003

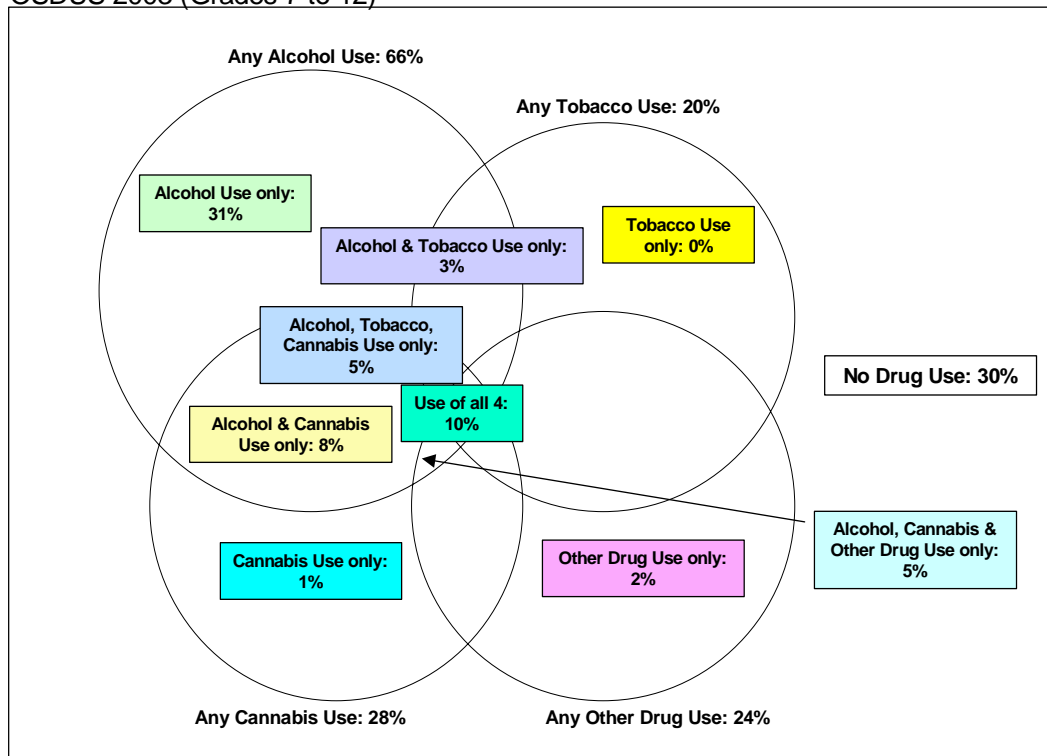


Vertical bars represent 95% confidence intervals; horizontal bar represents 95% CI for total estimate

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

- In 2003, just under one-third (30%) of students in grades 7 through 12 report no drug use during the past year. A similar proportion (31%) reports using only alcohol. A very small proportion uses cannabis exclusively (about 1%), virtually no students smoke cigarettes exclusively, and 2% use any other illicit drug exclusively.
- From Figure 6 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.
- One-in-ten (10%) students report using alcohol, tobacco, cannabis, and at least one other illicit drug in the past year.

Figure 6
The Overlap of Alcohol, Tobacco, Cannabis, and Other Drug Use in the Past Year, OSDUS 2003 (Grades 7 to 12)



Notes: (1) not necessarily use on the same occasion; (2) based on a random half sample (N=3152)

New Users and Early Onset

Incidence: New Users in 2003

- Among the total sample of students, 9% smoked cigarettes for the first time during the 12 months before the survey; 19% drank alcohol for the first time; 10% used cannabis; and 5% 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 tobacco (from 8% to 12%), and for cannabis (from 5% to 13%).

Early Onset among 7th-Graders, 1981-2003

- 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 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 appears to be decreasing over time: fewer 7th-graders in 2003 used alcohol by grade 6 compared to two decades ago (42% vs 50% in 1981).
- The early onset of cannabis use – defined as using for the first time before the end of grade 6 (age 11) – appears to have increased over time. About 5% of 7th-graders in 2003 reported using cannabis before the end of grade 6. This is significantly higher than the proportion found in 1993 (1%), but not from the proportion in 2001 (2%). It is not significantly lower than the proportion found in 1981 (7%).

Drug Use Trends among 7th-Graders, 1977 – 2003

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 is evident among the 7th-graders, with

the exception of smoking. Increases are evident for alcohol, cannabis, glue, solvents and use of any illicit drug (excluding cannabis).

- Over the long-term, the prevalence of most drugs is generally lower in 2003 compared to the late 1970s (the peak years of use). The exception may be cocaine, which has been increasing in recent years among 7th-graders, reaching the level of the late 1970s.

Average Age of Onset for Smoking, Alcohol and Cannabis Use, 1981 – 2003

In this section, we present the average age of onset for cigarette, alcohol, and cannabis use among grade 11 users.

- In 2003, the average age of first use of cigarettes (smoking one whole cigarette) among grade 11 smokers was 13.1 years. The average age of first use of alcohol among grade 11 drinkers was 13.1 years, and the average age of first cannabis use among grade 11 users was 13.7 years.
- The average onset age for smoking appears to have increased between 1981 and 1995, and has decreased slightly since then.
- The average onset age for drinking has not changed very much over the past two decades, hovering around age 13.
- However, the average age of onset for cannabis use appears to have increased during the 1980s and early 1990s, and then decreased again in recent years.
- Also notable is that the pattern of use of these three substances has been constant since the beginning of the survey. That is, during adolescence, smoking a cigarette typically occurs first, followed by drinking alcohol, and then cannabis use. The exception is in 2003 when cigarette and alcohol use appear to coincide, at about age 13.

Consequences and Problems Related to Substance Use

Drinking and Driving

- In 2003, 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 (20% vs 8%).
- Although there is variation by grade (from 9% of 10th-graders to 16% of 12th-graders), these differences are not statistically significant.
- There is no significant regional variation in drinking and driving rates.

Cannabis Use and Driving

- About one-in-five (20%, 95% CI: 17%-23%) 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 (26% vs 14%). There is no significant difference by grade, or by region.

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 – for the first time in 2003 – 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 23% with a driver who was using drugs.

- There is no significant sex difference for either passenger involvement.
- Being a passenger with an intoxicated driver (either by alcohol or drugs) increases significantly with grade level.
- There are no significant regional differences on these two estimates.

Drug Use Problem

The 2003 survey included the six-item “CRAFTT” 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 – that is, those who may be in need of treatment.

- 18% (95% CI: 16%-20%) of students may have a drug use problem.
- There is no sex difference with respect to experiencing a drug use problem: 18% of males and 17% of females.
- There is significant grade variation: reports of drug problems are lowest among 7th- and 8th-graders (about 7%) and highest among 11th- and 12th-graders (about 27%).
- No significant regional differences were found.

Treatment

- In 2003, about 1% (95% CI: 1.0%-2%) of students indicated that they had received either alcohol and/or drug treatment in the 12 months before the survey. This estimate represents about 13,100 Ontario students in grades 7 to 12.

Coexisting Alcohol and Mental Health Problems

In addition to substance use problem indicators, the 2003 *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 and psychological distress (according to the AUDIT) and psychological distress (according to the GHQ12).

- In 2003, 8% of all students (81,100 Ontario students) report hazardous drinking and elevated psychological distress.
- Females are more likely than males to report coexisting problems (10% vs 6%).
- Coexisting problems are likely to increase with grade, from about 2% of 7th-graders to about 13% of 11th- and 12th-graders.
- There are no significant regional differences in experiencing coexisting problems.

Figure 7
Coexisting Problems: Hazardous Drinking and Elevated Psychological Distress, OSDUS 2003 (Grades 7 to 12)

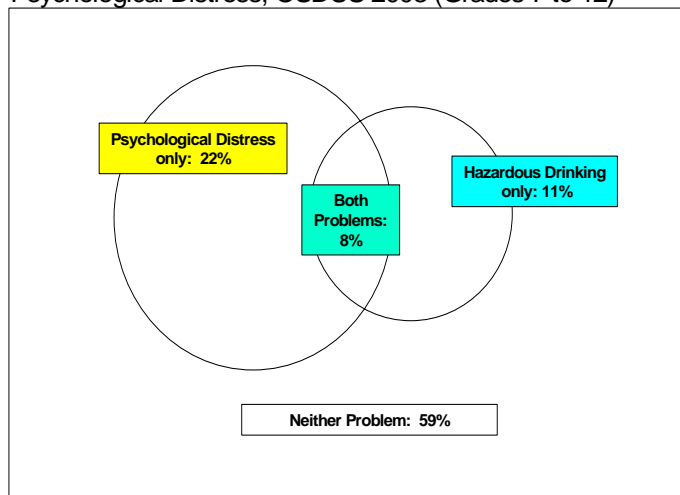
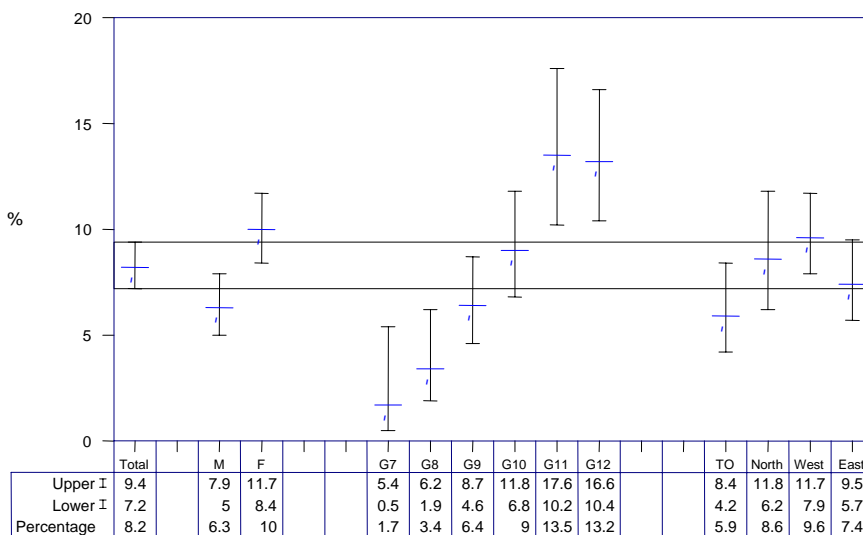


Figure 8
Percentage Reporting Coexisting Hazardous Drinking and Elevated Psychological Distress, OSDUS 2003



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

Attitudes and Perceptions

Perceptions of Risk and Disapproval

- Among the drug behaviours surveyed, students felt that the greatest risk is associated with regular marijuana use (55%), followed by trying ecstasy (40%), trying cocaine (34%), trying LSD (32%), daily drinking (31%), daily smoking (24%), and trying cannabis (19%).
- Perceptions of risk increase significantly with grade for daily drinking, trying cocaine, LSD, and ecstasy, but decrease with grade for cannabis.
- Over the long-term, risk perceptions surrounding the use of most of the substances asked about have gradually declined, especially any use of cannabis.
- Almost half of students strongly disapprove of trying ecstasy (49%), smoking marijuana regularly (47%), trying LSD (46%), and trying cocaine (45%). Just over one-quarter of students strongly disapprove of daily drinking and trying cannabis.
- Over the long-term, disapproval of using cannabis and cocaine has declined. In contrast, since 1997, there has been a gradual increase in the percentage disapproving of trying LSD. Disapproval of daily drinking has not changed significantly since 1989.

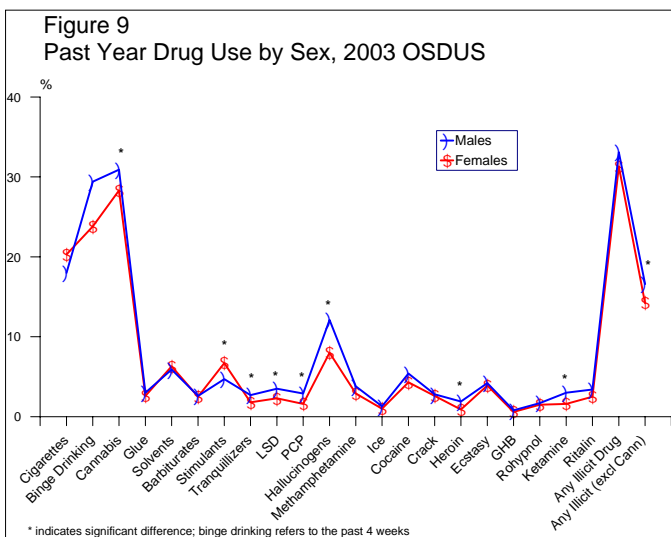
Drug Availability

- In 2003, the perception of easy availability was highest for alcohol (66%), followed by cannabis (51%), cocaine (21%), ecstasy (20%) and LSD (16%).
- Not surprisingly, as grade increases, students are more likely to report that these drugs are easy or very easy to obtain.
- The perceived availability of LSD has significantly decreased since 1999 (from 25% to 16% in 2003).
- The availability of ecstasy also significantly declined between 2001 (27%) and 2003 (20%).
- The perceived availability of cannabis, as well as cocaine, has significantly increased since 1989. However, it seems that LSD is not as readily available in 2003 as it was in 1995 (15% vs 33% reporting it is easy to obtain).

Subgroup Profiles

Sex

As seen in Figure 9, males are more likely than females to: binge drink (and to use alcohol in general), use stimulants, tranquilizers, LSD, PCP, other hallucinogens, heroin, Ketamine, and any illicit drug (excluding cannabis). Females, however, are more likely to use stimulants (e.g., diet pills).



Grade

The following drugs significantly increase with grade: alcohol, binge drinking, cigarettes, cannabis, ecstasy, and any illicit drug use including and excluding cannabis (Figure 10). The use of certain drugs typically peaks in grades 10 or 11 and then somewhat subsides by grade 12. These drugs are: stimulants, tranquilizers, LSD, PCP, other hallucinogens, methamphetamine, cocaine, Ritalin, and Ketamine (Figure 11). Only glue and solvent use decrease with grade (Figure 12). The use of heroin, Rohypnol, crack, barbiturates, and ice is not significantly associated with grade (Figure 13).

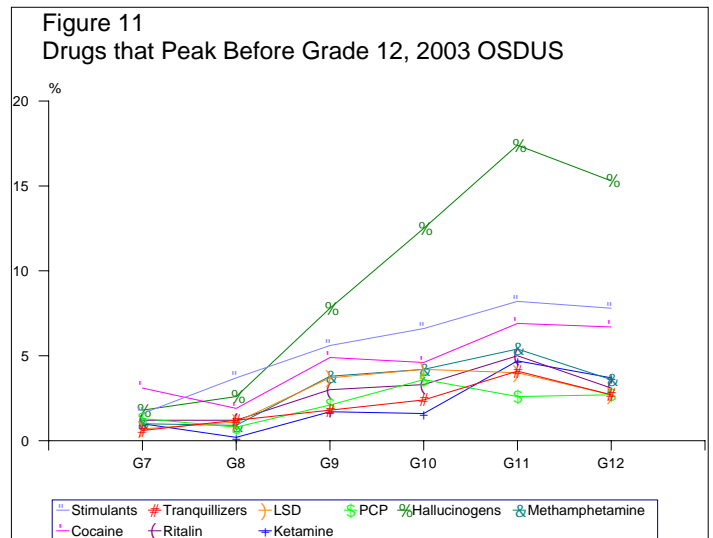
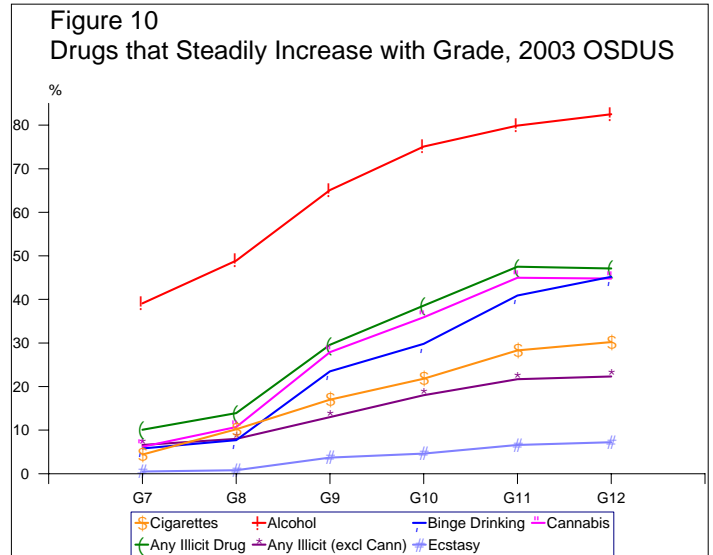


Figure 12
Drugs that Decrease with Grade, 2003 OSDUS

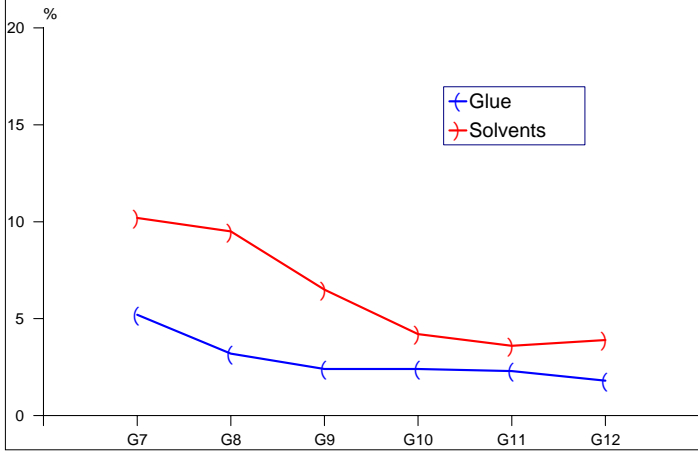
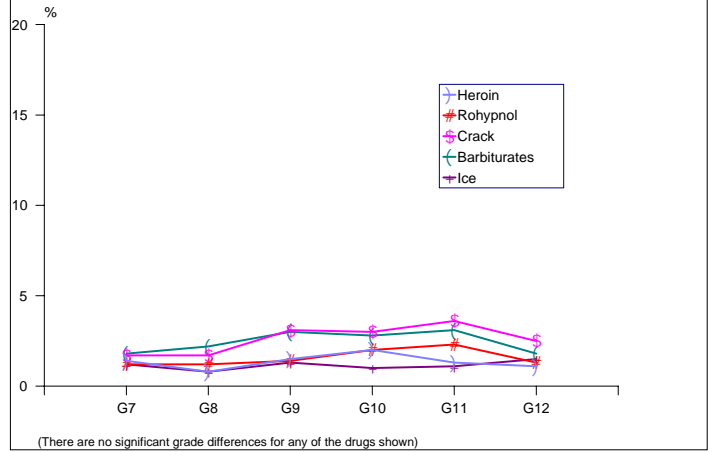


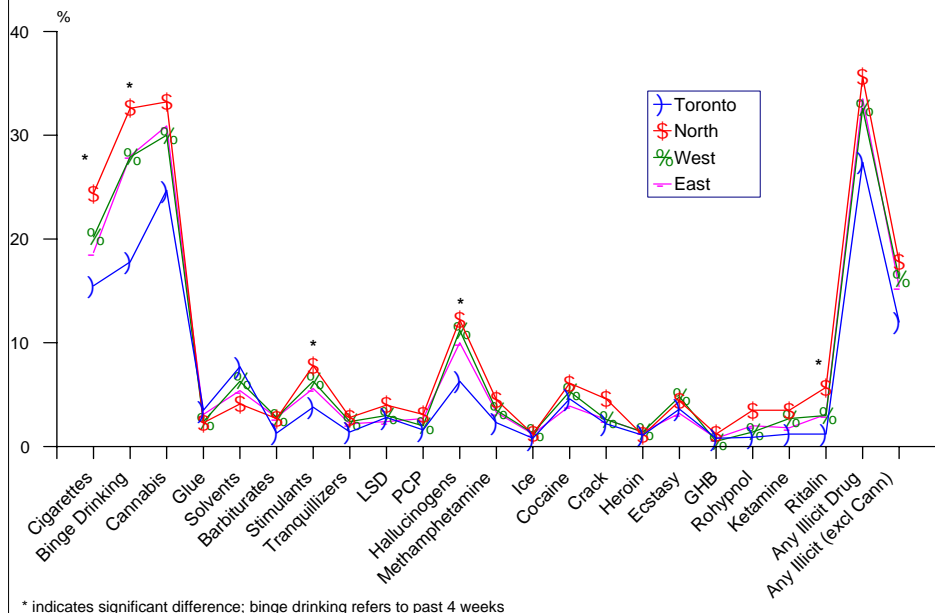
Figure 13
Drugs that Remain Low and Stable with Grade, 2003 OSDUS



Region

As seen in Figure 14, significant regional differences exist for 5 drugs: cigarette smoking, binge drinking, use of stimulants, hallucinogens (other than LSD and PCP), and Ritalin. Students from Toronto are least likely to use these drugs, whereas Northern students are the most likely. Students from the East and West fall in between.

Figure 14
Past Year Drug Use by Region, 2003 OSDUS



Public Health Planning Regions

This section provides the 2003 drug estimates for the Ontario Ministry of Health'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 Reporting Drug Use During the Past Year, by Ontario Public Health Planning Region, 2003

| | Toronto (N=) (1097) | South- West (934) | Central -South (218) | Central -West (1361) | Central -East (724) | East (1049) | North (1233) | Ontario (6616) |
|------------------------------|------------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|----------------------------|
| Alcohol | 61.5 (55.8-66.9) | 74.0* (66.6-80.2) | 58.0 (45.2-69.8) | 64.3 (57.8-70.3) | 70.2 (62.3-77.0) | 64.1 (58.7-69.2) | 72.0* (67.0-76.6) | 66.2 (64.1-68.4) |
| Binge Drinking | 17.8** (14.5-21.7) | 34.3* (26.8-42.8) | 15.4 (5.1-38.3) | 25.8 (20.6-31.6) | 26.8 (20.3-34.4) | 28.0 (22.3-34.4) | 34.7** (29.9-39.9) | 26.5 (24.4-28.7) |
| Cigarettes | 15.5 (12.2-19.4) | 24.5* (19.9-29.7) | 14.0 (7.8-23.9) | 18.3 (15.1-22.1) | 19.1 (14.6-24.6) | 18.2 (14.7-22.4) | 25.6** (20.5-31.4) | 19.2 (17.7-20.8) |
| Daily Smoking | 10.6 (8.2-13.7) | 17.6* (13.4-22.7) | 6.1** (3.4-10.9) | 13.6 (11.2-16.5) | 14.2 (10.3-19.3) | 12.2 (9.3-15.9) | 19.8** (14.2-26.8) | 13.6 (12.3-15.1) |
| Cannabis | 24.7 (20.3-29.8) | 37.3* (30.5-44.6) | 11.6 (3.6-31.6) | 28.4 (23.7-33.7) | 31.1 (24.8-38.2) | 30.2 (25.8-35.1) | 35.0* (29.2-41.4) | 29.6 (27.6-31.6) |
| Glue | 3.5 (2.5-5.0) | 1.2* (0.6-2.5) | 2.3 (0.9-5.8) | 3.4 (2.2-5.2) | 3.7 (1.8-7.7) | 2.8 (2.1-3.9) | 2.0 (1.3-3.0) | 2.8 (2.3-3.4) |
| Solvents | 7.7 (5.2-11.2) | 4.2 (2.7-6.4) | 6.2 (2.2-15.8) | 7.9* (5.8-10.7) | 6.4 (4.3-9.5) | 4.9 (3.3-7.2) | 3.8** (3.0-4.9) | 6.1 (5.2-7.2) |
| Barbiturates | 1.3* (0.7-2.4) | 3.3 (2.1-5.2) | 2.0 (0.6-6.6) | 2.6 (1.8-3.6) | 4.2** (2.9-6.2) | 2.1 (1.3-3.4) | 2.6 (1.6-4.4) | 2.5 (2.1-3.0) |
| Stimulants | 3.8* (2.8-5.2) | 6.6 (4.9-9.0) | 3.7 (1.1-12.1) | 6.5 (4.9-8.6) | 5.8 (3.8-8.6) | 5.6 (3.9-7.9) | 7.8* (6.0-10.0) | 5.8 (5.0-6.6) |
| Tranquillizers | 1.4 (0.8-2.5) | 2.9 (2.0-4.2) | 1.4 (0.4-5.4) | 2.3 (1.4-3.8) | 2.5 (1.6-4.0) | 2.1 (1.2-3.7) | 2.7 (1.8-4.0) | 2.2 (1.8-2.7) |
| Heroin | 1.1 (0.6-2.1) | 0.9 (0.5-1.6) | 0.9 (0.2-5.2) | 2.0 (1.3-3.0) | 1.8 (0.9-3.7) | 1.2 (0.7-1.9) | 1.2 (0.7-2.2) | 1.4 (1.1-1.7) |
| Methamphetamine ("Speed") | 2.3 (1.4-3.8) | 4.4 (2.8-6.9) | 1.0 (0.3-3.6) | 3.4 (2.2-5.0) | 3.2 (1.8-5.4) | 3.3 (2.0-5.3) | 4.8* (3.3-6.9) | 3.3 (2.8-4.0) |
| LSD | 2.8 (1.7-4.7) | 3.2 (2.0-5.1) | 1.0 (0.3-3.0) | 3.2 (2.2-4.8) | 3.0 (1.8-5.0) | 2.0 (1.1-3.5) | 4.3** (3.0-6.0) | 2.9 (2.4-3.5) |
| PCP | 1.6 (0.9-2.8) | 2.3 (1.5-3.5) | 0.5 (0.1-2.8) | 2.1 (1.6-2.8) | 3.4 (1.9-6.2) | 2.4 (1.6-3.5) | 3.1* (2.2-4.3) | 2.2 (1.9-2.7) |
| Hallucinogens | 6.3* (4.6-8.5) | 14.0* (10.3-18.9) | 4.0 (0.9-16.7) | 10.5 (7.8-13.8) | 9.6 (6.3-14.3) | 10.0 (6.8-14.3) | 12.9* (9.8-16.8) | 10.0 (8.8-11.4) |
| Cocaine | 4.6 (3.2-6.7) | 5.9 (4.1-8.4) | 1.4* (0.5-4.0) | 5.6* (4.4-7.1) | 4.3 (2.4-7.6) | 3.6 (2.8-4.7) | 6.2** (4.6-8.2) | 4.8 (4.2-5.5) |
| Crack | 2.2 (1.2-4.0) | 3.2 (2.0-5.2) | 0.5* (0.1-2.8) | 2.6 (1.5-4.5) | 3.8 (2.1-7.0) | 1.9 (1.2-3.0) | 4.8** (3.5-6.6) | 2.7 (2.2-3.3) |
| Ecstasy (MDMA) | 3.6 (2.3-5.5) | 6.0* (4.2-8.7) | 1.9 (0.3-10.2) | 4.5 (3.2-6.2) | 3.3 (2.0-5.4) | 3.1 (2.1-4.6) | 4.6 (3.7-5.9) | 4.1 (3.5-4.8) |
| Ice | 0.8 (0.2-2.7) | 1.4 (0.6-3.2) | 1.3 (0.3-5.2) | 1.1 (0.4-2.8) | 0.9 (0.2-3.6) | 1.4 (0.7-2.8) | 1.3 (0.7-2.4) | 1.2 (0.8-1.7) |
| GHB | 0.8 (0.3-2.1) | 0.8 (0.3-2.3) | † | † | 1.1 (0.4-3.4) | 0.6 (0.2-2.2) | 1.3 (0.6-2.7) | 0.7 (0.4-1.1) |
| Rohypnol | 0.9 (0.4-2.0) | 2.2 (1.2-4.1) | 1.7 (0.5-5.9) | 0.7 (0.3-1.8) | 2.2 (0.9-5.3) | 1.9 (1.0-3.7) | 3.5* (1.8-6.7) | 1.6 (1.2-2.2) |
| Ketamine | 1.2 (0.5-3.1) | 3.2 (1.9-5.4) | 1.0 (0.2-5.6) | 2.7 (1.7-4.4) | 1.8 (0.8-4.2) | 1.7 (1.1-2.7) | 3.8 (1.9-7.4) | 2.2 (1.8-2.9) |
| Ritalin (non-medical) | 1.2** (0.7-2.1) | 3.8* (2.5-5.6) | 0.8* (0.2-2.8) | 3.0 (2.0-4.5) | 3.0 (2.2-4.1) | 3.0 (2.0-4.6) | 6.1** (4.6-8.2) | 2.9 (2.5-3.5) |

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 certain 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 declined in 2003 and is at its lowest point (19%) since monitoring began in 1977. Among the demographic subgroups, only 10th-graders show a significant decline in 2003 compared to 2001. However, most subgroups do show significant decreases in smoking compared to their 1999 estimates.

Among all students, use of any **illicit drug excluding cannabis** is currently lower in 2003 compared to 2001 and 1999. This short-term decline is evident among males, females, grades 8 to 11, and all regions except Toronto – which remained stable and low.

The majority of students (about 68%) have not used an illicit drug, including cannabis, in the past year. Further, the majority of drug users report infrequent use – once or twice in the past year.

Student use of **ecstasy** showed the first decrease since monitoring began in 1991. The 2003 level is significantly lower than that found in 2001, but does resemble that in 1999. The decrease is also

evident among males, 8th- and 9th-graders, and students in the West.

Use of **LSD** continued on the downward trend that started in 1995. The 2003 estimate is significantly lower than that found in 2001 and 1999. This short-term decline is also found among males, females, all grades except the 7th, and all regions except Toronto. This decline in LSD use corresponds to a decrease in reported of availability of the drug, and increased disapproval of use.

Other hallucinogen use decreased between 1999 and 2003. Those in 8th- and 10th-grade also show this short-term decrease.

There is some evidence to suggest that students today **begin smoking cigarettes at a later age** (about age 13), compared to students two decades ago (about age 11). The age of onset for alcohol use has not changed over the long-term (about age 13).

Drinking and driving among licensed students remained stable at about 14%. This level is markedly lower than that of 1977 (58%).

In 2003, **perceptions of risk regarding ecstasy** use increased compared to 2001. Thus, students today seem to be more aware of the potential physical harm caused by ecstasy.

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, psychological, and social well-being of youth, as well as to the population as a whole.

Cigarettes: Although student smoking declined between 2001 and 2003, there is still a significant proportion (one-in-five) that does smoke (about 185,800 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.

Heavy Drinking: while rates of alcohol use have not increased in 2003, trend data show that heavy drinking (i.e., binge drinking, getting drunk) still remains at an elevated level among all students compared to a decade ago.

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 23% rode with a driver who had been using drugs. These behaviours increase the risk of unintentional injuries – a leading cause of death among youth.

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. Students in grade 12, and Northern students, also show marked increases in cocaine use over the short-term.

Crack: Since 1991, crack use has increased modestly among the total sample. Northern students show an increased rate of crack use in 2003 compared to 2001.

Hallucinogens: Compared to 1979, a substantially larger percentage of students today use hallucinogens, such as mescaline and psilocybin. Among Ontario students, hallucinogens are the most prevalent illicit drugs, next to cannabis.

Cannabis use among females increased between 1999 and 2003.

Daily cannabis use among cannabis users has increased significantly over the long- and short-term.

The **age of onset for cannabis use** has decreased in recent years. Thus, youth today are trying

cannabis for the first time at a younger age compared to youth a decade ago.

Attitudes and Perceptions: Although the perceived risk surrounding ecstasy use has increased, perceptions about the risks of using cannabis, cocaine, LSD, and daily drinking seem to be weakening over time. The reported availability of cannabis and cocaine has increased over time.

Substance Use and Mental Health

There is an overlap between alcohol and drug use problems and mental health problems among youth. The 2003 *OSDUS* shows that about 8% (81,100 Ontario students) report both hazardous drinking and elevated psychological distress (symptoms of anxiety and depression).

Future OSDUS Monitoring

Monitoring health risk behaviours, such as substance use, over time provides valuable information about determinants, changes, and co-occurrences of the behaviours. With these data, we can 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 will be available in the spring of 2004.

APPENDIX TABLES

Table A1. Terminology

| <i>Term</i> | <i>Definition</i> |
|---|---|
| <i>Past Year Cigarette Use (“Smoker”)</i> | Smoking less than one cigarette or more daily during the past 12 months. Excluded are those who “tried a cigarette.” |
| <i>Past Year Alcohol Use (“Drinker”)</i> | Any alcohol consumed during the past 12 months. Use includes consumption on special occasions, but excludes sips. |
| <i>Past Year Drug Use (“User”)</i> | Used the drug at least once during the past 12 months. |
| <i>Frequent Drug Use</i> | Used the drug 6 or more times during the past 12 months. |
| <i>Illicit Drug Use</i> | 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, ecstasy, ice, GHB, Rohypnol, Ketamine, and non-medical Ritalin. The analysis is also preformed with cannabis excluded. |
| <i>Daily Smoking</i> | Smoking at least one whole cigarette daily over the past 12 months. |
| <i>Heavy Drinking</i> | Two indicators are used: (1) <i>Binge Drinking</i> : drinking 5 or more drinks on the same occasion during the past 4 weeks; (2) Becoming <i>drunk</i> during the past 4 weeks. |
| <i>Hazardous Drinking</i> | 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. |
| <i>Drug Use Problem</i> | Reporting at least 2 of the 6 items on the “CRAFFT” screen, 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 – 2003, Grades 7 to 12

| | 1999 | 2001 | 2003 |
|---------------------------------|----------------------------|----------------------------|---|
| (N) | (4447) | (3898) | (6616) |
| Cigarettes | 28.4 (26.1-30.7) | 23.1 (20.3-26.1) | 19.2^{ab} (17.7-20.8) |
| Alcohol | 66.0 (63.6-68.3) | 63.9 (60.8-67.0) | 66.2 (64.1-68.4) |
| Cannabis | 28.0 (26.0-30.1) | 28.6 (25.8-31.7) | 29.6 (27.6-31.6) |
| Glue | 3.8 (3.1-4.7) | 3.2 (2.6-4.1) | 2.8 (2.3-3.4) |
| Other Solvents | 7.6 (6.6-8.8) | 6.4 (5.3-7.9) | 6.1 (5.2-7.2) |
| Barbiturates (NM) | 4.4 (3.5-5.5) | 4.0 (3.2-5.0) | 2.5^{ab} (2.1-3.0) |
| Stimulants (NM) | 7.3 (6.4-8.4) | 6.3 (5.4-7.4) | 5.8 (5.0-6.6) |
| Tranquillizers (NM) | 2.0 (1.6-2.6) | 2.2 (1.6-3.1) | 2.2 (1.8-2.7) |
| LSD | 6.8 (6.7-8.1) | 4.8 (3.9-5.9) | 2.9^{ab} (2.4-3.5) |
| PCP | 3.0 (2.4-3.9) | 2.8 (2.2-3.7) | 2.2 (1.8-2.7) |
| Other Hallucinogens | 12.8 (11.4-14.4) | 11.1 (9.6-12.9) | 10.0^b (8.8-11.4) |
| Methamphetamine (“Speed”) | 5.0 (4.1-6.2) | 3.9 (3.1-4.9) | 3.3^b (2.8-4.0) |
| Ice | 1.4 (0.8-2.7) | 0.6 (0.3-1.1) | 1.2 (0.8-1.7) |
| Cocaine | 3.4 (2.8-4.2) | 4.4 (3.6-5.4) | 4.8^b (4.2-5.5) |
| Crack | 2.5 (1.9-3.2) | 2.1 (1.6-2.8) | 2.7 (2.2-3.3) |
| Heroin | 1.9 (1.5-2.5) | 1.1 (0.8-1.5) | 1.4 (1.1-1.7) |
| Ecstasy (MDMA) | 4.0 (3.1-5.2) | 6.0 (5.0-7.1) | 4.1^a (3.5-4.8) |
| GHB | — | 1.3 (0.8-2.1) | 0.7 (0.4-1.1) |
| Rohypnol | — | 3.1 (2.0-4.8) | 2.2 (1.8-2.9) |
| Any illicit, including cannabis | 32.3 (30.2-34.4) | 32.5 (29.8-35.3) | 32.2 (30.1-34.3) |
| Any illicit, excluding cannabis | 20.5 (18.8-22.4) | 18.1 (16.6-19.7) | 15.3^{ab} (13.9-16.9) |
| Steroids (lifetime use) | 3.4 (2.7-4.2) | 3.8 (3.0-4.8) | 3.0 (2.4-3.7) |

Notes: (1) entries in brackets are 95% confidence intervals; (2) ^a 2003 vs. 2001 significant difference, p<.01; (3) ^b 2003 vs. 1999 significant difference, p<.01; (4) † estimate suppressed or less than 0.5%; (5) NM = non-medical use; (6) estimates for “any illicit” drug include: cannabis, barbiturates, heroin, speed, stimulants, tranquilizers, LSD, PCP, hallucinogens, cocaine, and crack (excluded are glue, solvents, ecstasy, ice, GHB, Rohypnol, Ketamine, non-medical Ritalin).

Source: OSDUS, Centre for Addiction & Mental Health

Table A3. Significant Changes in Past Year Drug Use between 1999 and 2003 by Subgroup, Grades 7 to 12

| | Cigarettes | Alcohol | Binge Drinking | Cannabis | Glue | Other Solvents | Barbiturates (NM) | Stimulants (NM) | Tranquilizers (NM) | Heroin | Meth ("Speed") | LSD | PCP | Other Hallucinogens | Cocaine | Crack | Ecstasy | GHB | Rohypnol | 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 or increase between 2001 and 2003, p<.01; (2) △▽ significant decrease or increase between 1999 and 2003, p<.01; (3) NM = non-medical use; (4) table excludes ice, Ketamine, and non-medical Ritalin use.

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 (N) | 1979 (3927) | 1981 (3920) | 1983 (3010) | 1985 (3614) | 1987 (3146) | 1989 (3376) | 1991 (3040) | 1993 (2961) | 1995 (2617) | 1997 (2907) | 1999 (3072) | 2001 (2421) | 2003 (2013) | 2003 (3389) |
|------------------------------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Cigarettes | 29.2 | 35.0 | 28.8 | 29.0 | 23.6 | 22.9 | 22.2 | 20.1 | 23.4 | 27.3 | 27.2 | 26.6 | 21.2 | 17.4 | 17.4 |
| | (26.7-31.8) | (32.3-37.7) | (25.4-32.5) | (25.6-32.6) | (21.1-26.2) | (21.1-24.8) | (20.3-24.2) | (18.4-22.0) | (21.8-25.2) | (25.2-29.5) | (25.4-29.0) | (23.5-30.0) | (17.7-25.2) | (15.3-19.7) | |
| Alcohol | 72.8 | 73.7 | 70.1 | 69.0 | 66.3 | 65.1 | 62.6 | 54.3 | 53.6 | 56.0 | 56.9 | 62.7 | 58.9 | 62.9 | 62.9 |
| | (70.4-75.1) | (71.6-75.8) | (67.7-72.3) | (66.1-71.9) | (64.7-67.9) | (63.0-67.3) | (58.8-66.3) | (51.6-57.0) | (50.4-56.6) | (53.4-58.4) | (53.3-60.4) | (59.4-66.0) | (54.1-63.5) | (60.2-64.4) | |
| Cannabis | 21.8 | 29.1 | 25.1 | 21.9 | 19.4 | 13.8 | 11.9 | 9.9 | 11.5 | 21.9 | 23.9 | 26.8 | 26.2 | 27.8 | 27.8 |
| | (19.5-24.3) | (26.1-32.4) | (22.2-28.2) | (19.7-24.3) | (16.4-22.9) | (10.9-17.3) | (9.7-14.4) | (8.7-11.3) | (10.7-12.4) | (18.8-25.4) | (21.9-26.0) | (23.7-30.1) | (22.1-30.8) | (25.4-30.3) | |
| Glue | 4.2 | 4.9 | 3.2 | 3.6 | 2.3 | 2.7 | 2.0 | 1.2 | 1.8 | 2.8 | 1.7 | 4.3 | 3.1 | 3.2 | 3.2 |
| | (3.6-5.1) | (4.1-5.8) | (2.4-4.2) | (3.2-4.2) | (1.8-2.8) | (1.8-4.1) | (1.7-2.5) | (0.8-1.9) | (1.3-2.4) | (2.3-3.3) | (1.3-2.2) | (3.3-5.5) | (2.2-4.2) | (2.5-4.0) | |
| Other Solvents | 7.4 | 7.2 | 4.4 | 4.6 | 3.1 | 4.2 | 3.4 | 1.8 | 2.6 | 3.2 | 2.8 | 8.3 | 6.7 | 6.6 | 6.6 |
| | (6.5-8.5) | (6.3-8.2) | (3.3-5.8) | (3.8-5.5) | (2.5-3.7) | (3.1-5.6) | (2.8-4.3) | (1.2-2.7) | (2.0-3.2) | (2.7-3.9) | (2.1-3.7) | (6.8-10.1) | (5.4-8.4) | (5.5-7.8) | |
| Barbiturates (NM) | 6.1 | 7.4 | 7.6 | 6.0 | 4.2 | 3.2 | 2.1 | 2.2 | 3.2 | 2.9 | 2.7 | 4.3 | 2.7 | 2.7 | 2.7 |
| | (5.2-7.2) | (6.3-8.5) | (5.7-10.1) | (4.8-7.3) | (3.8-4.8) | (2.5-4.3) | (1.6-2.7) | (1.8-2.8) | (2.5-4.1) | (2.2-3.6) | (2.1-3.4) | (3.1-5.9) | (1.9-3.7) | (2.2-3.4) | |
| Stimulants (NM) | 7.3 | 11.0 | 11.0 | 14.3 | 10.9 | 7.6 | 5.8 | 3.8 | 5.2 | 6.4 | 7.2 | 6.7 | 5.7 | 5.4 | 5.4 |
| | (6.4-8.3) | (9.5-12.6) | (9.4-12.8) | (12.2-16.8) | (9.4-12.5) | (6.4-8.9) | (5.0-6.6) | (2.9-4.8) | (3.7-7.4) | (5.3-7.7) | (6.2-8.3) | (5.3-8.5) | (4.6-7.2) | (4.6-6.3) | |
| Tranquillizers (NM) | 4.8 | 5.8 | 4.6 | 5.0 | 3.3 | 3.0 | 2.2 | 1.6 | 1.0 | 1.6 | 1.7 | 1.8 | 1.7 | 2.3 | 2.3 |
| | (4.0-5.7) | (5.0-6.8) | (3.8-5.6) | (3.8-6.4) | (2.6-4.2) | (2.2-4.0) | (1.9-2.7) | (1.2-2.2) | (0.6-1.7) | (1.0-2.4) | (1.4-2.2) | (1.2-2.6) | (1.1-2.7) | (1.8-3.0) | |
| LSD | 6.0 | 9.0 | 9.4 | 8.5 | 7.1 | 5.8 | 5.4 | 4.9 | 6.8 | 9.5 | 7.7 | 6.5 | 3.6 | 2.9 | 2.9 |
| | (5.1-7.1) | (7.7-10.5) | (7.6-11.6) | (7.2-9.9) | (5.6-8.9) | (4.2-7.9) | (3.8-7.4) | (4.2-5.9) | (5.8-7.9) | (7.2-12.5) | (7.0-8.5) | (4.8-8.6) | (2.7-4.7) | (2.3-3.6) | |
| PCP | — | — | 2.4 | 2.2 | 1.7 | 1.4 | 1.2 | 0.6 | 0.6 | 1.8 | 2.1 | 3.2 | 2.6 | 2.0 | 2.0 |
| | | | (1.7-3.4) | (1.6-2.8) | (1.3-2.2) | (0.8-2.3) | (0.8-1.8) | (0.3-1.1) | (0.3-1.2) | (1.0-3.1) | (1.4-3.0) | (2.2-4.5) | (1.9-3.5) | (1.6-2.6) | |
| Other Hallucinogens | 3.9 | 5.2 | 4.2 | 5.6 | 4.5 | 4.0 | 3.8 | 3.0 | 2.8 | 7.6 | 9.6 | 11.7 | 9.7 | 9.5 | 9.5 |
| | (3.2-4.7) | (4.3-6.4) | (2.9-6.1) | (4.4-7.1) | (3.5-5.8) | (2.6-6.1) | (2.7-5.4) | (2.4-3.7) | (2.2-3.6) | (5.5-10.4) | (8.3-11.2) | (9.4-14.4) | (7.7-12.1) | (8.0-11.2) | |
| Methamphetamine ("Speed") | 2.7 | 3.7 | 2.8 | 4.2 | 3.2 | 3.3 | 2.5 | 1.9 | 2.2 | 4.7 | 3.7 | 4.5 | 3.2 | 3.6 | 3.6 |
| | (2.2-3.2) | (3.0-4.4) | (2.0-3.9) | (2.4-7.0) | (2.7-3.9) | (2.5-4.2) | (2.0-3.2) | (1.4-2.5) | (1.6-3.0) | (3.4-6.6) | (3.1-4.5) | (3.2-6.4) | (2.4-4.3) | (2.9-4.4) | |
| Ice | — | — | — | — | — | — | — | 0.9 | 1.2 | 1.7 | † | 1.6 | 0.5 | 1.2 | 1.2 |
| | | | | | | | | (0.5-1.6) | (0.5-2.8) | (1.2-2.5) | | (0.6-4.1) | (0.2-1.5) | (0.7-2.0) | |
| Cocaine | 3.6 | 5.3 | 4.6 | 4.0 | 4.0 | 3.4 | 2.4 | 1.7 | 1.5 | 2.5 | 2.7 | 3.7 | 4.0 | 5.1 | 5.1 |
| | (3.0-4.3) | (4.4-6.2) | (3.8-5.6) | (3.1-5.3) | (3.1-5.3) | (2.5-4.7) | (1.7-3.4) | (1.2-2.4) | (0.9-2.4) | (2.1-3.0) | (2.4-3.1) | (2.8-4.9) | (3.1-5.3) | (4.2-6.1) | |
| Crack | — | — | — | — | — | 1.5 | 1.3 | 1.1 | 1.1 | 1.8 | 2.4 | 2.5 | 2.4 | 3.0 | 3.0 |
| | | | | | | (1.0-2.2) | (0.8-2.0) | (0.6-1.9) | (0.6-2.0) | (1.5-2.3) | (1.7-3.3) | (1.7-3.6) | (1.7-3.2) | (2.2-3.8) | |
| Heroin | 2.0 | 2.5 | 1.5 | 1.8 | 1.6 | 1.5 | 1.2 | 1.1 | 1.3 | 2.1 | 1.8 | 1.7 | 1.3 | 1.4 | 1.4 |
| | (1.6-2.6) | (1.9-3.2) | (1.0-2.2) | (1.3-2.5) | (1.2-2.3) | (1.0-2.3) | (0.8-1.9) | (0.7-1.7) | (0.9-1.8) | (1.4-2.9) | (1.6-2.2) | (1.2-2.4) | (0.9-2.0) | (1.0-1.9) | |
| Ecstasy (MDMA) | — | — | — | — | — | — | — | † | † | 2.0 | 2.9 | 4.3 | 5.8 | 3.8 | 3.8 |
| | | | | | | | | | | (1.2-3.3) | (1.7-5.1) | (3.0-6.2) | (4.7-7.3) | (3.2-4.7) | |
| Any illicit, including Cannabis | 26.0 | 33.4 | 28.0 | 26.6 | 24.2 | 19.3 | 16.6 | 14.0 | 16.4 | 25.8 | 28.1 | 30.8 | 30.0 | 30.3 | 30.3 |
| | (23.7-28.5) | (30.4-36.7) | (25.4-30.8) | (24.0-29.3) | (21.0-27.7) | (16.2-22.8) | (14.7-18.8) | (12.6-15.5) | (14.6-18.3) | (22.7-29.2) | (26.2-30.0) | (27.6-34.2) | (26.1-34.2) | (27.9-32.9) | |
| Any illicit, excluding Cannabis | 15.1 | 20.4 | 17.0 | 20.0 | 16.6 | 13.7 | 11.8 | 9.8 | 11.8 | 17.0 | 17.5 | 19.2 | 16.4 | 14.3 | 14.3 |
| | (13.6-16.7) | (18.4-22.5) | (15.2-19.0) | (17.8-22.3) | (14.4-19.0) | (11.9-15.8) | (10.4-13.3) | (8.7-11.0) | (9.9-13.9) | (14.7-19.6) | (16.0-19.0) | (16.5-22.3) | (14.4-18.7) | (12.6-16.2) | |
| Steroids (lifetime use) | — | — | — | — | — | — | — | 1.3 | 1.7 | 1.6 | 1.4 | 1.4 | 3.1 | 3.4 | 2.4 |
| | | | | | | | | (0.9-1.8) | (1.4-2.1) | (1.1-2.4) | (1.0-2.0) | (1.0-2.0) | (2.2-4.3) | (2.4-4.6) | (1.8-3.3) |

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, barbiturates, heroin, speed, stimulants, tranquillizers, LSD, PCP, hallucinogens, cocaine, and crack (excluded are glue, solvents, ecstasy, ice, GHB, Rohypnol, Ketamine, non-medical Ritalin).

Source: OSDUS, Centre for Addiction & Mental Health

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