



**NORTHWESTERN ONTARIO  
STUDENT DRUG USE SURVEY  
2005**

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# **Student Drug Use in Northwestern Ontario**

## **Results of the Northwestern Ontario Student Drug Use Survey 1997 – 2005**

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Ignace C.O.R.E. FOCUS Coalition  
Red Lake/Ear Falls FOCUS Coalition  
Rainy River SAP Coalition

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# 1 EXECUTIVE SUMMARY

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This report summarizes the prevalence of drug use by students in Northwestern Ontario as reported by students on the Northwestern Ontario Student Drug Use Survey (NWOSDUS). This is the third cycle of the NWOSDUS, previous cycles having occurred in 1997 and 2001.

Not only does the NWOSDUS contribute to identifying the current patterns in alcohol, tobacco and other drug use, but it also helps us to understand the precipitating factors and the consequent negative personal and social outcomes. This knowledge helps local agencies concerned about student drug use evaluate the effectiveness of their past activities and to design effective interventions for the future.

The NWOSDUS uses the same instrument as the Ontario Student Drug Use Survey (OSDUS), enabling us to compare student drug use patterns in Northwestern Ontario with a province-wide sample.

The NWOSDUS is based on the methodology of the biennial province-wide OSDUS conducted by the Centre for Addiction and Mental Health (CAMH). The NWOSDUS was first conducted in 1997 in response to the fact that the OSDUS does not have a sufficient sample size to report results at the local level for Northwestern Health Unit or for Thunder Bay District Health Unit. The OSDUS only reports results for the entire “North”, which includes Algoma, Cochrane, Manitoulin, Sudbury (R.M.), Sudbury (T.D.), Muskoka, Parry Sound, Nipissing, Timiskaming, Thunder Bay, Kenora and Rainy River.

In contrast, we conducted the NWOSDUS only in the City of Thunder Bay, District of Thunder Bay and Kenora-Rainy River, allowing us to report reliable results for the three local regional groupings.

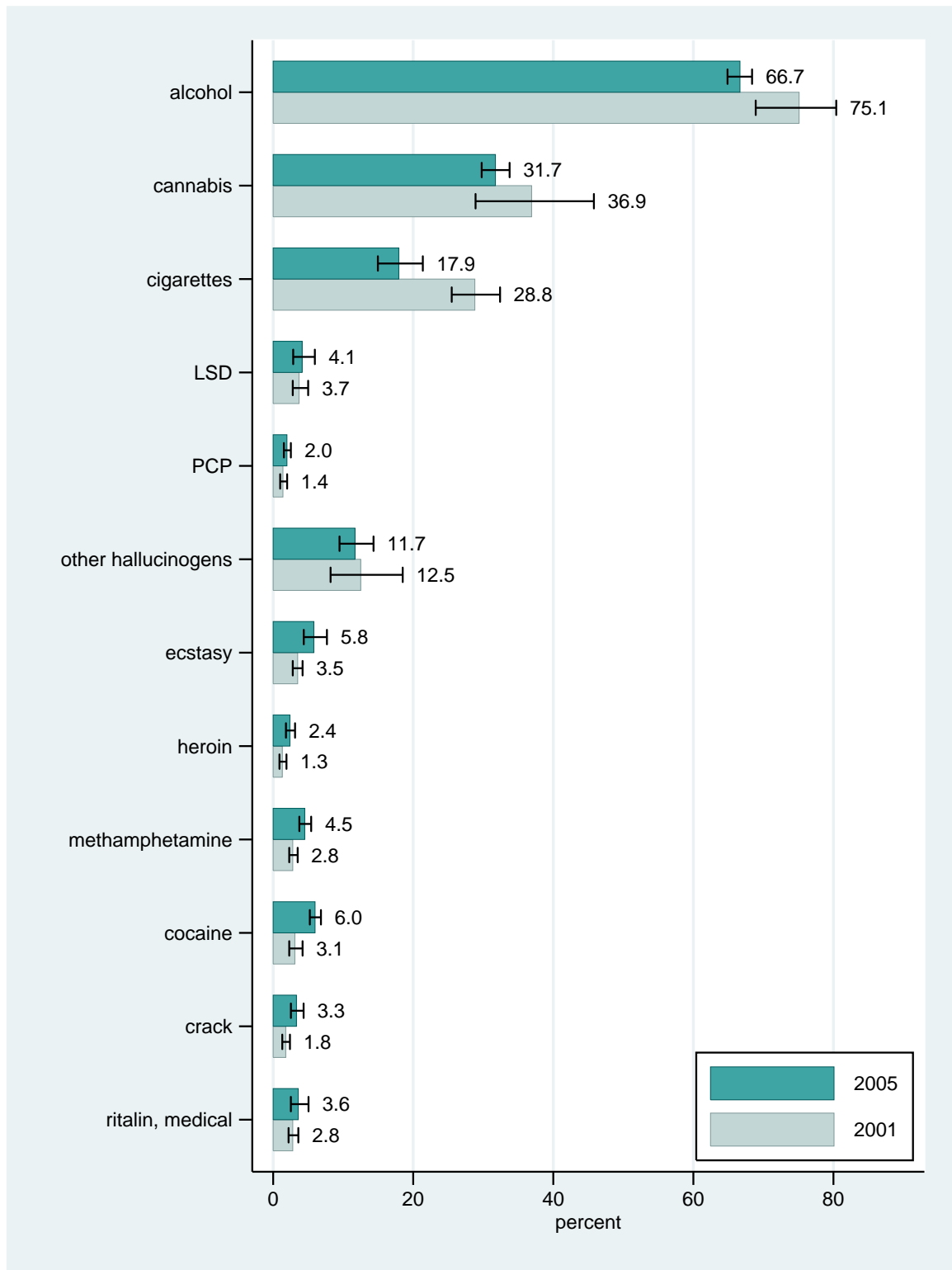
The NWOSDUS has a regionally stratified, single-stage cluster sampling design with schools as the primary sampling unit. Elementary and secondary schools located in Northwestern Ontario that were not already chosen for the OSDUS were eligible for inclusion in the NWOSDUS sample. Excluded were private schools, special education schools (e.g., those within correctional or health institutions), and schools on First Nations reserves and military bases. Students in eligible schools in grades 7 through 12 were eligible to complete the NWOSDUS. Our final sample size was 1374 students across 23 schools.

There are some differences between the various cycles of the NWOSDUS. In 1997, the survey participants were students in grades 7, 9, 11 and 13. In 2001, because the government had announced a plan to phase-out of OAC in Ontario, we surveyed student from all grades from 7 through 13. By the time of the present survey, OAC had been eliminated so all grades from 7 through 12 were surveyed.

## **Trends from 2001 to 2005**

Past-year use of cigarettes has declined by almost 40% since 2001. This is probably in response to major initiatives at the municipal, provincial and federal levels to curb smoking in all age groups,

## Trends in Past-Year Student Drug Use, 2001 and 2005, Northwestern Ontario



and the attendant shift in societal attitudes towards smoking. In response to local concerns, we also measured students' use of smokeless tobacco in this cycle of the NWOSDUS. It currently stands at 10%.

Past-year alcohol use is down from 75.1% in 2001 to 66.7% in 2005. Cannabis use remained approximately the same from 2001 to 2005.

Following a significant drop between 1997 and 2001, LSD use has remained approximately constant at about 4% in 2005. The use of other hallucinogens also remained constant from 2001 to 2005.

Past-year use of ecstasy continued its rise. After doubling between 1997 and 2001, ecstasy use almost doubled again from 2001 to 2005, and now stands at about 6%. That six percent translates into more than 1000 students who tried ecstasy last year.

Cocaine and crack use has historically been low among Northwestern Ontario students. However, cocaine and crack use doubled between 2001 and 2005 from 3% to 6%.

Another drug that is gaining in popularity is methamphetamine. Current past year use stands at about 4.5% for Northwestern Ontario students, having doubled since 2001. Anecdotal evidence from the Superior Points Harm Reduction Program also suggests that both methamphetamine and cocaine are becoming more common among street-involved and at-risk youth. This is a worrying trend.

## **Northwestern Ontario Compared to Ontario-wide Estimates**

In 2005, there were pronounced differences between student drug use rates in Northwestern Ontario compared to the provincial average (Note: Ontario provincial averages are from the 2005 OSDUS by the Centre for Addiction and Mental Health).

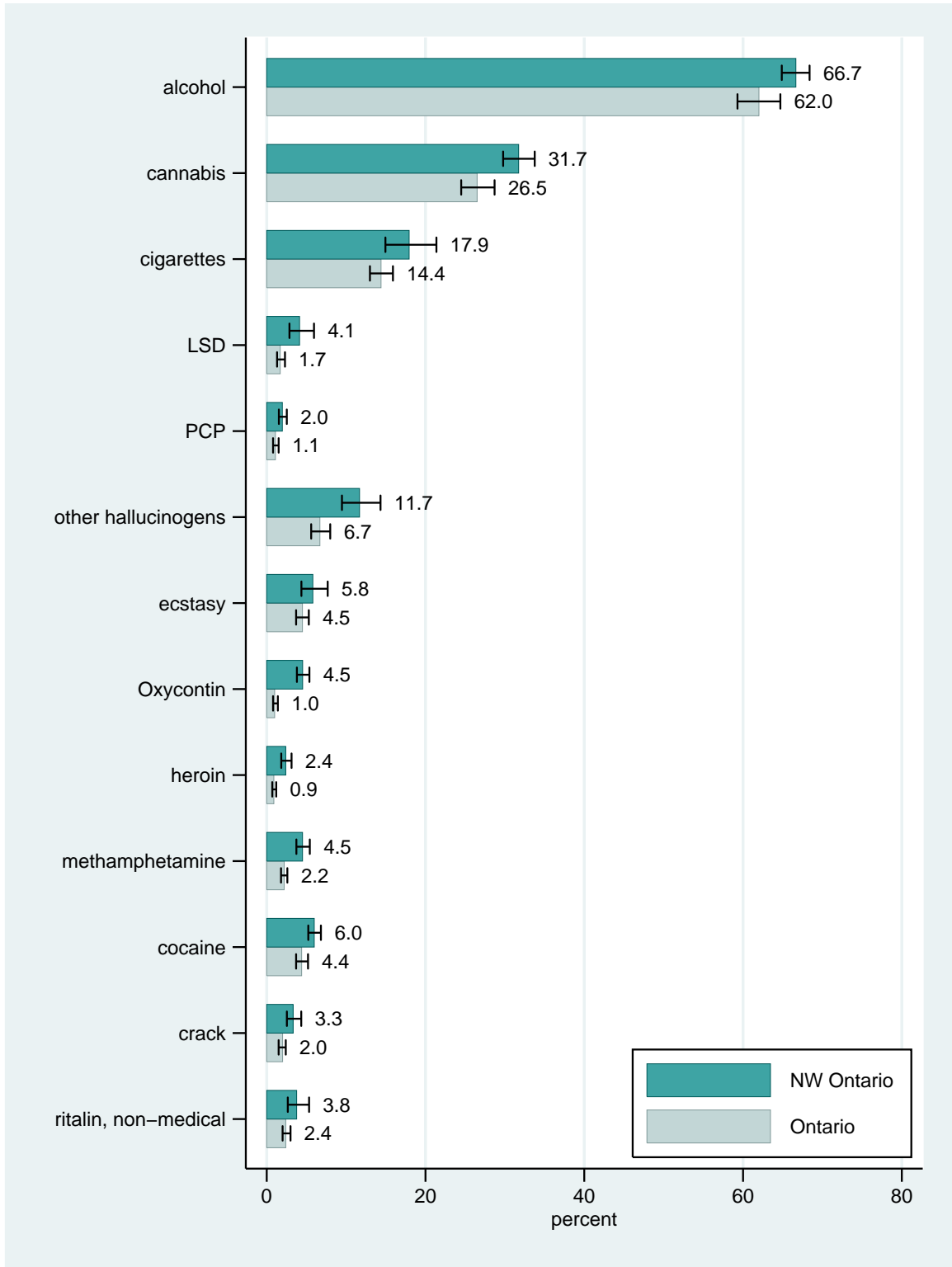
Compared with the provincial average, Northwestern Ontario students reported higher alcohol use (66.7% vs. 62%), cannabis use (31.7% vs. 26.5%), LSD use (4.1% vs. 1.7%) and other hallucinogen use (11.7% vs. 6.7%). This continues a historical trend of higher use rates of these substances in the north compared to the rest of the province.

In the past, Northwestern Ontario students reported substantially higher cigarette use rates compared to the Ontario average. However, in 2005, the gap narrowed and the difference is no longer statistically distinguishable (18% in Northwestern Ontario vs. 14.4% in Ontario).

In previous years, Northwestern Ontario students have tended to report lower use of "hard drugs" compared to province-wide estimates. However, in 2005 they reported significantly higher rates of methamphetamine (4.5% vs. 2.2%), OxyContin (4.5% vs. 1%), cocaine (6% vs. 4.4%), crack (3.3% vs. 2%), and heroin (2.4% vs. 0.9%). It will be important to monitor these trends into the future.

While in the past Northwestern Ontario students reported lower ecstasy use compared with the rest of Ontario, it is now comparable (5.8% vs. 4.5%).

**Differences Between Past Year Student Drug Use in Northwestern Ontario and the rest of Ontario. Northwestern Ontario data from the NWOUSDUS, Ontario data from the OSDUS, 2005.**



## Alcohol Use

Northwestern Ontario students demonstrate a greater proclivity for alcohol use than the rest of the province. Four statistics will serve to illustrate the problem use of alcohol among Northwestern Ontario students: past year alcohol use, binge drinking, hazardous drinking, and drinking & driving.

For each of the four indicators, Northwestern Ontario students report

significantly higher and more dangerous levels of drinking than the rest of Ontario (see Table 1 below). In particular, Northwestern Ontario students are 54% more likely to report binge drinking in the last four weeks, 76% more likely to report hazardous drinking, and 84% more likely to report drinking & driving.

**Table 1. Alcohol indicators demonstrating problematic levels of drinking in Ontario and Northwestern Ontario, 2005.**

<b>Indicator</b>		<b>Northwestern Ontario</b>	<b>Ontario</b>
		<b>%</b>	<b>%</b>
		<b>(95% confidence interval)</b>	<b>(95% confidence interval)</b>
<b>Past year alcohol use</b>	Had at least one drink in past year	66.7 (64.9-68.4)	62.0 (59.3-64.7)
<b>Binge drinking</b>	Had 5+ drinks on one occasion in the last 4 weeks	34.9 (32.0-37.8)	22.7 (20.4-25.2)
<b>Hazardous drinking</b>	Scores 8+ points on the Alcohol Use Disorders Identification Test (AUDIT)*	28.0 (25.7-30.4)	15.9 (13.6-18.5)
<b>Drinking &amp; Driving</b>	Driving within one hour of having 2+ drinks, grades 10-12 with drivers license	25.0 (19.6-31.3)	13.6 (11.8-15.6)

\* The AUDIT is a scale developed by the World Health Organization. Scoring 8 or higher on the scale indicates *hazardous drinking*, which indicates a pattern of drinking that increases the likelihood of future medical and physical problems, including accidents.



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## **1.4 List of Abbreviations, Acronyms, and Symbols**

+/-	Plus or minus
%	Percent
95% CI	95 percent confidence interval
ADHD	Attention Deficit Hyperactivity Disorder
AIDS	Acquired Immunodeficiency Syndrome
AUDIT	Alcohol Use Disorder Identification Test
CAMH	Centre for Addiction and Mental Health
“City” (in figures)	City of Thunder Bay
CNS	Central Nervous System
CRAFFT	A problematic drug use scale; the acronym is derived from the six questionnaire items – see Section 4.17.
“District” (in figures)	That part of the Thunder Bay District outside of the City of Thunder Bay
DSM-IV	Diagnostic and Statistical Manual, Fourth Revision
gr (in figures)	Grade
HIV	Human Immunodeficiency Virus
KRR	Kenora and Rainy River Districts
LSD	Lysergic Acid Diethylamide (“Acid”)
MDMA	3,4-methylenedioxymethamphetamine (“Ecstasy”)
N	Number of survey respondents
Non-med	Non-medical
NWHU	Northwestern Health Unit
NWOSDUS	Northwestern Ontario Student Drug Use Survey
OAC	Ontario Academic Credit
OR	Odds Ratio
OSDUS	Ontario Student Drug Use Survey
p	p-value, probability value
PCP	Phencyclidine (“Angel Dust”)
RCMP	Royal Canadian Mounted Police
TBDHU	Thunder Bay District Health Unit
THC	delta-9-tetrahydrocannabinol



## 2 INTRODUCTION

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### **2.1 History and Rationale for the Northwestern Ontario Student Drug Use Survey**

The Northwestern Ontario Student Drug Use Survey (NWOSDUS) was first conducted in 1997, but it draws on the more mature experience of the Ontario Student Drug Use Survey (OSDUS). The OSDUS is the longest running study of youthful alcohol, cigarette, and other drug use in Canada (Adlaf & Paglia-Boak, 2005). The history of the OSDUS begins in 1967 when several Toronto area school boards asked the Centre for Addiction and Mental Health (CAMH), then the Addiction Research Foundation, to assess the extent of student drug use among their students. In 1977, after four such surveys, the study was expanded to include all of Ontario and the OSDUS was officially born.

Since then, the OSDUS has surveyed approximately 4000 Ontario students biannually, yielding a vast amount of information. The large sample size allows for many sub-group analyses, and the various geographic regions of the province can be fruitfully compared. The OSDUS, however, has the limitation that the number of students surveyed in any particular health unit district (except Toronto) is relatively small. For the purposes of the OSDUS, the “North” is considered a single geographic unit stretching from Parry Sound to the Manitoba border. Even with substantial over-sampling, the OSDUS samples only approximately 1000 students in the vast geographic area of northern Ontario.

Furthermore, breakdowns by public health unit or other regions within the North are not available. While this sampling scheme is adequate to gain a broad provincial perspective, it is insufficient for local use.

The NWOSDUS was conceived as a separate study, conducted exclusively in the Thunder Bay District Health Unit (TBDHU) and Northwestern Health Unit (NWHU) public health regions. The NWOSDUS utilizes the OSDUS survey instrument, but has the flexibility to allow for additional questions of local interest. It collects data from a sufficient number of students to be able to distinguish between the City of Thunder Bay, the District of Thunder Bay, and the Kenora/Rainy River District.

Until 1999, both the OSDUS and the NWOSDUS surveyed students in grades seven, nine, eleven, and thirteen/OAC. However, the 1997 Government of Ontario decision to eliminate grade thirteen/OAC by 2003 introduced a change into the OSDUS and the NWOSDUS sampling frames. The 2001 OSDUS and the 2001 NWOSDUS surveyed students in all grades from seven through thirteen/OAC. Since 2003, owing to the final elimination of grade thirteen/OAC, both the OSDUS and NWOSDUS have surveyed all grades from seven through twelve.

## 2.2 Why Survey Student Drug Use?

Adolescence is a pivotal developmental stage. The values, habits, and worldviews that people develop in this stage carry through into adulthood. Adolescent drug use can have immediate consequences, but also can have a long-term impact on adult life. For example, most adults currently addicted to tobacco began their use of tobacco in their teens before they had a full appreciation of the difficulty of quitting or of the long-term health consequences of smoking. Surveying and monitoring student drug use and associated behaviours gives health and social agencies the information required to design programs to prevent drug use and its negative consequences.

While there are many well-known drugs with well-understood patterns of use, there are always newly emerging drugs and new uses for old drugs. Examples include the emergence of crack cocaine as a cheap and deadly alternative to cocaine, the devastating relationship between injection drug use and HIV/AIDS (as well as hepatitis and other blood-borne infections), and the emergence of new “designer” drugs, such as ecstasy. New drugs and drug patterns can emerge even when the size of the drug-using population is stable. The NWOSDUS provides a mechanism for gathering information on new drugs and new patterns of drug use.

Alcohol, tobacco, and other drug use, as well as methods to deal with it are controversial. Public attention is often

focused by highly visible events, such as drug-related arrests and seizures or a particularly tragic death. Media reports are sometimes more sensational than representative. Because the NWOSDUS is a rigorous scientific survey, it can be used as a gold standard to confirm or refute public perceptions. Thus, the NWOSDUS is a tool for informing the public.

Surveying student drug use is also about public accountability. The NWOSDUS provides an opportunity to evaluate the success of public health interventions intended to improve awareness of the negative consequences of drug use and to reduce the use and associated harm. Recent Northwestern Ontario examples of such interventions include the Safe Party harm reduction program, the “Take a Break with your Kid” social marketing campaign, and the Photo Voice peer education campaign. While these interventions have short-term process indicators that can easily be measured (e.g., number of students who attend presentations, the reach of marketing campaigns), the long-term goal is to effect a change in teen attitudes toward alcohol, tobacco, and other drug use. The NWOSDUS is the best and currently the only, way to obtain population-based, systematic, consistent, direct estimates of student drug use, attitudes, and beliefs. Therefore, it is the best way for those who are responsible for substance use prevention campaigns to ensure that their programming choices are making a difference.

### **2.3 Scope and Benefits of the Report**

This report describes the findings of the NWOSDUS regarding the use of alcohol, cigarettes, and other drugs among Northwestern Ontario students. It discusses the prevalence of drug use and changes in drug use over time. It also compares drug use among the geographic regions of Northwestern Ontario and with the provincial averages as reported in the OSDUS (Adlaf & Paglia-Boak, 2005). It shows how drug use varies according to selected demographic characteristics.

The scope of the NWOSDUS is broader than drug use. It also contains questions on mental and general health, which are not presented here.

The aims of the present report are:

1. To document the extent of student drug use and to compare it across time and place,
2. To assess the extent and nature of problems related to alcohol and other drug use,

3. To identify subgroups at higher risk of problematic drug use.

The NWOSDUS can provide us with data to evaluate all of these aims. Beyond the scope of NWOSDUS is the extent of drug use in the non-student and adult populations. Also beyond the scope are the drug problems of the street drug scene. Student drug use is very broad and typically overlaps only partially with the street drug scene. Standard indicators of drug problems (arrests, convictions, seizures, treatment, and mortality) focus on the non-student and adult scene and only capture the fringes of the student drug problem.

Although no single source of data can fully describe student drug use, the strengths of the survey method far outweigh the limitations. Table 2.3.1 summarizes the main strengths and weaknesses of the NWOSDUS.

**Table 2.3.1. Strengths and weaknesses of the Northwestern Ontario Student Drug Use Survey (adapted from Adlaf and Paglia, 2001).**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>➤ The survey is based on scientific, random sampling methods that result in representative samples in which the sampling error can be calculated.</li> <li>➤ Drug use surveys are often the only feasible means to measure the size of the drug-using population since no other official source exists.</li> <li>➤ The survey is widely dispersed throughout Northwestern Ontario with representation from the City of Thunder Bay, District of Thunder Bay, and Kenora/Rainy-River.</li> <li>➤ The survey is administered on a classroom basis. Not only is this cost-effective, but it tends to increase the rate of student participation.</li> <li>➤ The questionnaire is completed anonymously, which is the most critical factor in reducing the under-reporting of drug use. School administered surveys typically obtain higher reports of drug use than do household surveys.</li> <li>➤ Unlike enforcement data (e.g., arrests, convictions) and treatment data, survey data captures the widest population of drug users, from former to active users.</li> <li>➤ Because surveys are based on individual responses, drug use can be correlated with personal and social characteristics to help identify the characteristics of high-risk groups.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The survey is restricted to adolescent students enrolled in regular schools. Excluded by design are groups in which drug use is typically higher such as institutionalized students, dropouts, and street youth.</li> <li>➤ Because the reporting of drug use is based on self-reports, there is an unmeasured potential for the error in the estimation of drug use caused by intentional (i.e., under- or over-reporting) and unintentional errors (e.g., memory errors).</li> <li>➤ The survey is designed to provide precise estimates of drug use for Northwestern Ontario. As the sample is broken up to compare across geographic regions, grades, sexes, etc, the sample may become too small to provide precise estimates.</li> <li>➤ Highly structured surveys do not allow for the probing of rich qualitative information.</li> </ul>

## 3 METHODS

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### 3.1 *Sampling Design*

The target population was composed of all 18 317 students from grades 7 to 12 enrolled in public and Catholic school boards in the TBDHU and NWHU in 2005 (see Table 3.6.1 for breakdown of the enrolled population in 2005, by grade and region). In previous years, the sampling design was different. In 1997, data were collected from students in grades 7, 9, 11, and 13/OAC. In 2001, in preparation for the cancellation of grade 13/OAC, students from all grades from 7 through 13/OAC were surveyed. This change in the grade structure surveyed is reflected in the drug use prevalence tables throughout the report.

Exclusions were similar to the OSDUS: 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. Also excluded from the NWOSDUS were those schools already selected to participate in the OSDUS.

The NWOSDUS uses a stratified, single-stage cluster probability design, where the primary sampling unit is the school. The stratification is based on two criteria: region and school sector. There were three regions (City of Thunder Bay, District of Thunder Bay, and Kenora/Rainy River) and two school sectors (elementary, representing grades seven and eight; secondary, representing grades nine through twelve) resulting in six strata. Within each of the six strata, schools were randomly selected based on probability-proportional-to-size sampling (i.e., schools with a greater enrollment had a higher probability of being selected).

### 3.2 *Recruitment, Consent and Administration*

We first contacted school boards to obtain their permission to conduct the survey. All of the school boards in Northwestern Ontario that we contacted agreed to allow us to continue. We then contacted individual school principals to enroll their schools.

Parental consent forms were distributed prior to the survey. Returned consent forms were collected by homeroom teachers and kept until the day of the survey. On the day of the survey, survey staff collected the consent forms and

distributed questionnaires to those students that were allowed to participate. Survey staff administered the survey with teachers out of the classroom. We made an additional effort to protect student anonymity by supplying survey respondents with unmarked manila envelopes in which to place their completed questionnaires. Survey staff collected the completed questionnaires; at no time did school officials have access to the information supplied by students. Data entry was contracted to Compustat Consultants (Orangeville,

Ontario) and included 10% random data entry verification.

The various information letters, consent forms, instructions, and the English questionnaire can be found in the Appendices.

### 3.3 Summary of participation, NWOSDUS 2005

Region	School Type	Number of Schools	Valid Questionnaires
City of Thunder Bay	Elementary	5	268
	Secondary	4	449
District of Thunder Bay	Elementary	4	67
	Secondary	3	99
Kenora-Rainy River	Elementary	4	295
	Secondary	3	223
Total		23	1401

### 3.4 The Questionnaire

To ensure comparability with the Ontario-wide results, the 2005 NWOSDUS used Form A of the OSDUS survey questionnaire. It contained 171 questions and took

approximately thirty minutes to complete. A copy of the English questionnaire is included in Appendix G – English Questionnaire. A French translation was also available to schools.

### 3.5 Data Quality and Response Rate

To improve data quality, several exclusion criteria were implemented. We excluded students who:

1. failed to provide their age or sex
2. reported using a fictitious drug
3. were below grade seven (as might occur in a split grade six-seven class)
4. reported using three or more drugs forty times or more during the past year
5. had missing values for all core drug questions

Of the 1414 returned questionnaires, 40 were excluded leaving 1374 respondents

in the final sample used for data analysis.

The average item non-response rate in the final sample of 1374 was 2.2%, and 94% responded to all sixteen core drug questions. To maximize the amount of data available for analysis, we imputed missing values using Harrell's transcan imputation function (Harrell et al 2005). Missing values for each item were imputed based on grade, sex, and geographical region, as well as three questions related to the item being imputed. Harrell's method applied to categorical variables produces imputed values that are similar to the mode of the

missing variable conditional on the values of the six variables used as

predictors.

### 3.6 Analytical Method

All data analysis, except the imputation step, was conducted using Stata Release 9.2 (StataCorp, 2006). The imputation step was conducted using R 2.2.0 (R Development Core Team 2006). We used Stata's survey-specific routines were used to account for the characteristics of the survey design. Failure to account for the survey design is likely to result in biased estimates and incorrect standard errors.

Three main aspects of the survey design have been accounted for in the data analysis:

1. *Stratification*. One of the strengths of the NWOSDUS is its ability to give us reliable estimates for each of three major geographical regions in Northwestern Ontario. Those regions are the City of Thunder Bay, the District of Thunder Bay, and the combined Districts of Kenora/Rainy River. To ensure that an adequate number of students are obtained for each of the three regions, and that we would have sufficient sample size to produce independent estimates for elementary and secondary school within each region, we independently sampled a pre-determined number of schools from each of six region-grade strata. Accounting for stratification usually results in smaller standard errors and narrower confidence intervals.
2. *Clustering*. The NWOSDUS uses the school as its "primary sampling unit". That is, the sampling scheme is designed to select schools, not

individual students. Once a school is selected, all the students in the school are selected. The reason why we account for the clustering of students within schools is that it is reasonable to believe that students within schools are more similar to each other than they are to students from other schools. Most statistical procedures assume that each observation (a student is an "observation" in this case) is independently selected. In the present sampling design, students are not selected independently, but as a group. Failure to account for this grouped selection would yield unrealistically small standard errors. Accounting for clustering yields wider, but more honest, confidence intervals.

3. *Weighting*. Drug use varies with age and grade, tending to increase through the teen years. It also tends to vary across geographic regions. Therefore, when estimating the overall rate of drug use it is very important that the proportion of students in each grade and region in our sample match that in the actual population of students. Weighting ensures that this is the case. Analyses that account for weights yield approximately unbiased estimates of the full population. In short, weighting ensures that the sample we analyzed is approximately representative of the full population from which we sampled. There are two components to these weights. First, we calculate a probability

weight, which is the inverse of the probability of a school being selected for the survey. Being selected to participate, however, does not necessarily mean that all classrooms and students within the school will participate. To account for this, we “post-stratify” the responses according to grade and region, and weight each response so that the proportion of students in each grade-region post-stratum in the survey sample matches the actual proportions in the population. This

accounts for the difference between being selected and actually participating. Table 3.6.1 and Table 3.6.2 show how the post-stratification and probability weights were calculated.

In addition, we calculated a finite population adjustment at the school level to account for the fact that in some strata there were few schools. The number of schools sampled and the total number of schools in the stratum can be found in Table 3.6.2.

**Table 3.6.1. Final sample and population counts and proportions for eighteen region-grade post-strata, 2005 NWOSDUS.**

Region	Grade	Enrolled population		Final survey sample		Post-stratification
		Number	Proportion	Number	Proportion	Weight
City of Thunder Bay	7	1 718	0.09379	154	0.11208	0.83683
	8	1 674	0.09139	113	0.08224	1.11124
	9	1 698	0.09270	114	0.08297	1.11729
	10	1 807	0.09865	115	0.08370	1.17867
	11	1 849	0.10094	119	0.08661	1.16553
	12	1 801	0.09832	87	0.06332	1.55284
District of Thunder Bay	7	304	0.01660	30	0.02183	0.76012
	8	294	0.01605	37	0.02693	0.59604
	9	338	0.01845	28	0.02038	0.90551
	10	336	0.01834	39	0.02838	0.64626
	11	335	0.01829	24	0.01747	1.04705
	12	333	0.01818	6	0.00437	4.16318
Kenora – Rainy River	7	952	0.05197	179	0.13028	0.39895
	8	929	0.05071	113	0.08224	0.61669
	9	1 135	0.06196	56	0.04076	1.52034
	10	1 078	0.05885	28	0.02038	2.88797
	11	965	0.05268	57	0.04148	1.26994
	12	771	0.04209	75	0.05459	0.77113
<b>Totals</b>		<b>18 317</b>		<b>1 374</b>		

**Table 3.6.2. Calculation of probability weights, 2005 NWOSDUS.**

Region	Grade Level	Sampled Schools	Total Schools	Probability Weight
City of Thunder Bay	Elementary	5	37	7.40
City of Thunder Bay	Secondary	4	9	2.25
District of Thunder Bay	Elementary	4	24	6.00
District of Thunder Bay	Secondary	3	5	1.67
Kenora-Rainy River	Elementary	4	34	8.50
Kenora-Rainy River	Secondary	3	10	3.33

### 3.7 Interpreting the Data

The main goal of a sample survey is to *estimate* from a *sample* the "true" value of a particular *characteristic* in the *population*. In this case, we *sampled* over 1374 grade seven through twelve students in Northwestern Ontario in order to generalize about the larger *population* of 18 317 students. The *characteristics* we measured are mostly whether students used a variety of drugs, and the *estimate* we use most often to summarize that drug use is the percentage (e.g., the percentage of students who used alcohol in the preceding twelve months).

Although our sample size was adequate to estimate the overall rate of past year drug use for every drug on the questionnaire, it was sometimes not adequate once the results were broken down by grade and region. We do not report any results based on less than five positive responses because generalizations to the larger population based on only a few responses are statistically suspect. As well, there is a certain amount of random misclassification, coding error and such in all surveys. To be reasonably accurate, the number of true positive outcomes (e.g., the number of students who accurately report using a particular

drug) needs to be significantly larger than the number of errors.

#### 3.7.1 Precision and confidence intervals

*Precision* refers to the margin of error of an estimate and is expressed in this report as a *confidence interval*. A confidence interval is analogous to the "plus-or-minus" caveat that usually accompanies polling results. For example, an opinion poll may indicate that 70% +/- 3% of adults favour a proposed tobacco bylaw. While often not stated explicitly, there is also always a degree of confidence associated with the confidence interval. By convention, that level of confidence is set at 95%.

To continue the example above, the correct way to report the poll result, including both the margin of error and the confidence level, would be 70% +/- 3%, nineteen times out of twenty (or 95% of the time). This acknowledges that there is a 5% chance that the actual population parameter is outside of the confidence interval (i.e., either greater than 73% or less than 67%). The equivalent way to express the poll result using a confidence interval would be 70% (95% CI: 67%, 73%), indicating the

interval within which the true population percentage lies 95% of the time.

The reason for employing confidence intervals arises from the sampling error inherent in using results obtained from a single sample to draw conclusions about the entire population from which the sample was drawn. If we had surveyed a different group of 1374 students in Northwestern Ontario, using identical procedures, the results would have differed slightly from those we obtained from our present sample. The confidence interval around the percentage indicates the range of variation that would have been obtained from 95% of the other equivalent samples that we might have studied.

Another way to think about the confidence interval is as a range within which we are 95% likely to find the true value we would have obtained if we had studied every member of the target population. In reporting that the percentage of students who had used alcohol in the prior twelve months was 66.7% (95% CI: 64.9, 68.4), we mean that there is a 95% chance that the true percentage of students in the population of Northwestern Ontario students who used alcohol lies between 64.9% and 68.4%.

The confidence intervals convey important information, and are particularly important to consider when comparing drug use percentages. Roughly speaking, when the confidence intervals of two drug use percentages overlap one another, you cannot say with great certainty that one was above or below the other. This may be because there is no true difference in the population between the two percentages, or it may be because we lacked adequate sample size to be able to separate the

two values. Therefore, they are statistically equivalent and it would not be appropriate to rank one above or below the other.

Narrower confidence intervals imply greater precision, or less sampling error. In our case, the size of the interval depends on three factors:

- the number of students interviewed (the larger the sample size the smaller or more precise is the interval)
- the size of the percentage (percentages around 50% have the largest uncertainty while percentages approaching 0% and 100% have less uncertainty)
- design effects (the greater the similarity (or correlation) of responses within schools the wider is the interval)

Unlike in previous years, in this report, we do not show the results of statistical hypothesis tests of difference in the tables. The reason is that we now have three cycles of data as well as many characteristics to compare across. Trying to report the results of so many statistical tests would be both unwieldy and statistically unwise. In the next section, we explain further how we have dealt with the idea of statistical significance.

### 3.7.2 Definition of “statistical significance”

Every percentage provided in this report is an *estimate*, based on our sample, of the true population value. Because it is an estimate, it is appropriate to give an interval, the confidence interval, to indicate our uncertainty about the estimate. What should be done about the use of the term “statistical significance” and the presentation of p-values? These terms are associated with a paradigm in

science based on the theory of formal hypothesis testing, and particularly with the making of binary decisions based on whether a p-value is greater than or less than 0.05. In contrast, confidence intervals are associated with a paradigm of estimating the true values of population parameters.

There is a great debate within the field of epidemiology about the use of p-values and confidence intervals, and on the use of terms like statistical significance. Probably the majority of deep thinkers in epidemiology favour the estimation paradigm and confidence intervals, but the vast majority of epidemiologists and other scientists have been trained to think in terms of statistical significance and p-values.

For our part, we believe that estimation with confidence intervals provides more information and focuses attention on the value of the estimate. With few exceptions, therefore, we have relied almost exclusively on confidence intervals to communicate uncertainty resulting from sampling error. However, we have also found it convenient to use the term “statistical significance” or “statistically significant” to describe the situation in which two different estimates are likely to have arisen for reasons other than pure sampling error. That is, the difference between two estimates is probably not merely a matter of chance, but is the result of some systematic process, whether it be bias or a true difference in the underlying population parameter.

For the purposes of this report, we will define “statistical significance” as non-overlapping 95% confidence intervals. This is not equivalent to a formal hypothesis test of the equivalence of two estimates with a significance level of

0.05. Non-overlapping 95% confidence intervals will always have an equivalent p-value less than 0.05, but some slightly overlapping 95% confidence intervals will also be less than 0.05. So, in fact, non-overlapping 95% confidence intervals is a more stringent criterion for statistical significance than a formal hypothesis test with a significance level of 0.05.

One benefit of assessing statistical significance via the criteria of non-overlapping confidence intervals is that separate data sets can be assessed. Formal hypothesis tests of the differences between the NWOSDUS and the OSDUS, or between cycles of the NWOSDUS, would require combining the data from the various surveys. Comparing confidence intervals of individual estimates is much easier to do. The danger with this approach, however, is that making comparisons informally or implicitly can lead to false conclusions, both because too many comparisons will be made without taking into consideration the multiple-comparison problem, and because less attention may be paid to the different characteristics of the samples being compared.

### 3.7.3 Comparisons between the three cycles of the NWOSDUS

Despite the admonition above to make comparisons with care, one of the purposes of a report such as this is to monitor trends, which means making comparisons from cycle to cycle. There are many comparisons made in this report between the results of the 1997, 2001, and 2005 cycles of the NWOSDUS. The reader should note that the samples from each year are not strictly equivalent. As noted earlier, the

1997 sample included students in grades 7, 9, 11, and 13/OAC. The 2001 sample included those grades as well as the intervening grades 8, 10, and 12. The 2005 sample included all grades from 7 through 12. Therefore, while grade-specific comparisons are valid, comparisons of combined-grade results may be biased. Comparisons between the 1997 and later combined-grade results are unbiased only if the even-numbered grades (8, 10, and 12) are approximately a linear function of the odd-numbered grades. For example, if the values for grades seven, eight, and nine are 10, 15, and 20 respectively, and there were approximately the same number of students in each grade, then combining grades 7 and 9 would be approximately equivalent to combining grades 7, 8, and 9. Based on tests on a sample of questions, we have determined that the magnitude of this potential bias is well within the sampling error reported.

Another issue is that, owing to the fact that school boards did not report separate enrollment figures for grades 12 and 13 in 2001, we had to combine the two grades. Grade 13 students made up only a small proportion (3%) of the total sample, and only 89 of the 402 students in the combined grade 12 and 13 category. Nonetheless, it means that comparison of grade 12 students from 2001 to 2005 may be somewhat biased. A series of comparisons based on a sample of questions revealed that the difference between grade 12 estimates and combined grade 12/13 estimates is less than one percentage point, so we believe that the amount of bias from combining years is minimal.

### 3.7.4 Other issues

Finally, the reader should note these further caveats regarding the interpretation of this data.

- The degree of error that we present in this report is restricted to random sampling error as noted above in the discussion on confidence intervals. There are other forms of error, including non-random selection factors, errors of recall among the respondents, under-reporting of drug use, misinterpretation of questions by respondents, etc. Such error may lead some to quibble about a particular result. Readers should note, however, that most potential errors would exist reasonably consistently from year to year and from place to place. However, because such error exists and is unmeasured in this survey, readers should generally not put too much stock in minor variation, but rather focus their interest on large differences or differences that are consistent in their trend (e.g. across grade levels or over all three survey cycles).
- Our analysis involves, at least implicitly, a large number of statistical comparisons. The reader must remember that, by definition, for every twenty comparisons made, there will be on average one statistically significant difference that is due solely to chance.
- This report is descriptive and does not attempt to prove causal relationships between factors. For example, if we report that the use of cigarettes among girls is higher than among boys, we are describing a fact, not suggesting that the difference can be attributed intrinsically to gender. Assessing

causation is far more difficult than

asserting statistical significance.

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## 4 RESULTS

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### 4.1 Overview of Drug Use

Table 4.1.1 and Figure 4.1.1 compare total-sample use rates for twenty-one drugs for 1997 and 2001. Figure 4.1.2 compares the use rates of twenty-one drugs for males versus females. Figure 4.1.3 compares Northwestern Ontario with the all-Ontario sample from the 2005 OSDUS.

#### 4.1.1 Highest Prevalence

Four drugs stand out as being particularly prevalent among students in Northwestern Ontario. As in past years, they are alcohol (66.7%), cannabis (31.7%), cigarettes (18.0%), and “other

hallucinogens” (11.7%). The “other hallucinogens” category refers mainly to psilocybin (a.k.a. “magic”) mushrooms, but also to mescaline, which would be comparatively less common.

#### 4.1.2 Temporal Changes

*(Figure 4.1.1)*

The most significant difference from 2001 to 2005 is the sharp decline in cigarette use from 28.8% to 18.0%. Because this drop was accompanied in the intervening years by substantial changes in public policy and societal attitudes towards smoking (e.g., the widespread acceptance of public smoking bans first at the municipal level and now at the provincial level), it seems unlikely that this decline is merely a result of random variability.

Alcohol use also dropped significantly from three-quarters of students in 2001 to two-thirds in 2005. However, alcohol use in 2005 is not substantially different from the 1997 level of 59%, nor are we aware of any substantial shifts in social attitudes regarding alcohol use. Therefore, we have no grounds to reject

random variation as an explanation for the drop.

Cannabis and hallucinogen use have remained relatively steady from 1997 through 2001 to 2005.

Northwestern Ontario has seen substantial increases in cocaine, ecstasy, and methamphetamine use since 2001. Cocaine use doubled to 6.0%, ecstasy use increased by more than half to 5.8%, and methamphetamine use doubled to 4.5%. While the proportion of students using these drugs is still relatively low, they appear to be emerging in importance and are beginning to affect a significant number of youth. For example, cocaine use at 6% translates into approximately 1100 students trying cocaine in Northwestern Ontario in the course of a year.

### 4.1.3 Sex-based Differences

*(Figure 4.1.2)*

In the 2001 survey, one notable exception was cigarette use: 32.1% of females reported past year cigarette use compared with 26.1% of males ( $p < 0.01$ ). This discrepancy between male and female smoking rates was also evident in the 1997 NWOSDUS. In 2005, the point estimate for female smoking is still higher than for males, but the difference is no longer statistically significant. This is likely a side effect of the large overall drop in cigarette use among youth.

Smokeless tobacco use, on the other hand, is largely a male phenomenon. According to anecdotal reports, the use of chewing tobacco is popular on male sports teams because of the perception that it boosts performance.

In 2005, for the first time, we saw a significantly higher rate of cannabis use among females compared to males. In past years, there was no significant difference, nor are we aware of any reason why the cannabis use rate for females should be higher than for males.

### 4.1.4 Northwestern Ontario versus the Ontario Average

*(Figure 4.1.3)*

Because the NWOSDUS uses the same methodology as the OSDUS, we are able to make valid comparisons with the OSDUS findings.

Of the thirteen direct comparisons made in Figure 4.1.3, all drugs were either as commonly used or more commonly used in Northwestern Ontario compared to the province as a whole.

The prevalence of alcohol consumption (66.7% versus 62.0%) and cannabis use (31.7% versus 28.5%) was higher among Northwestern Ontario students compared with the provincial average. In previous years, cigarette use in Northwestern Ontario was also higher, but the downward trend in cigarette use has pushed the two rates closer together such that they are no longer statistically distinguishable.

In previous years, ecstasy use in Northwestern Ontario was significantly lower than the provincial average. However, ecstasy, a phenomenon

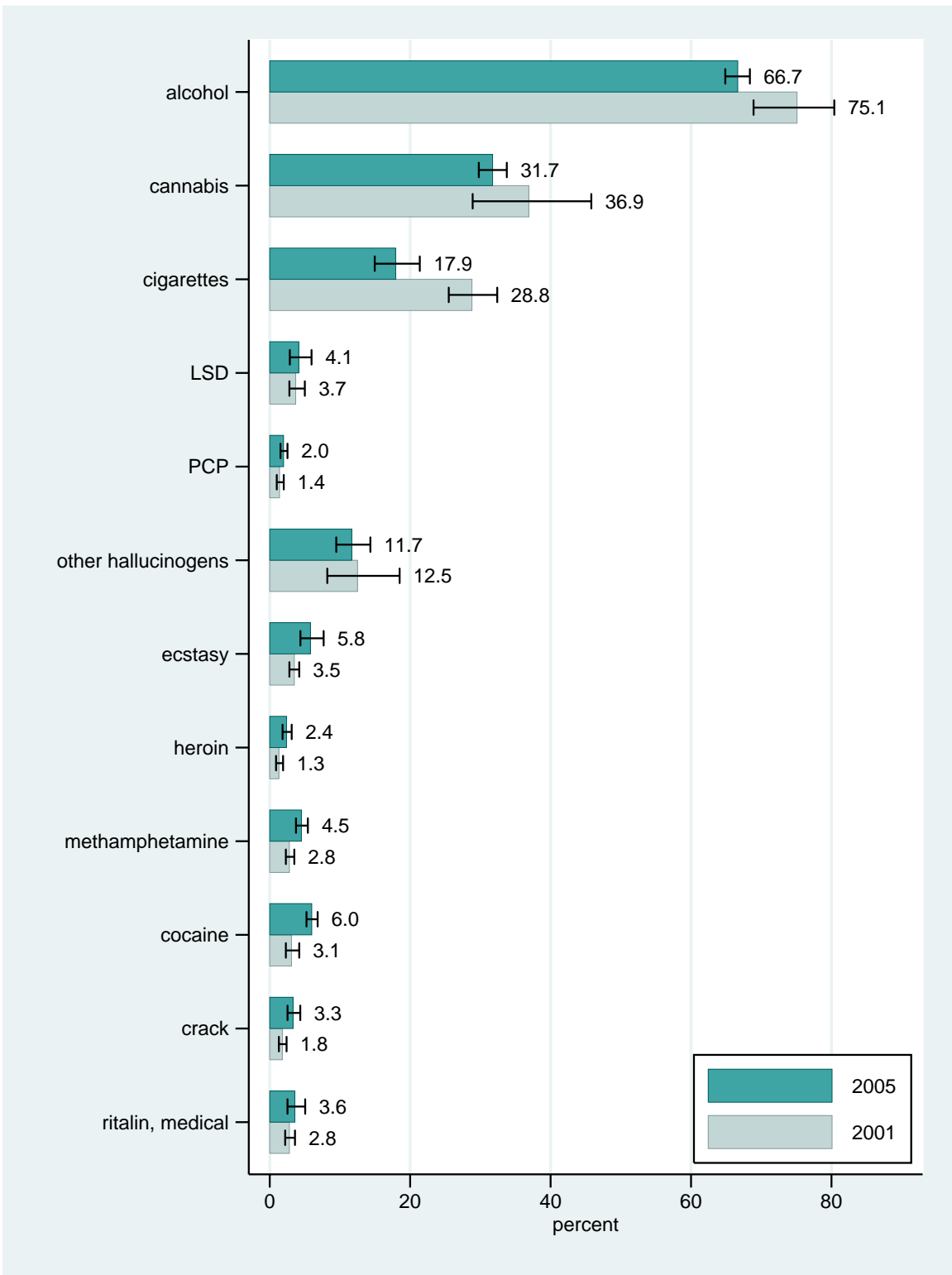
associated with rave parties, has now penetrated into Northwestern Ontario sufficiently to render our rate the same as the provincial average.

The use of LSD and other hallucinogens is significantly higher in Northwestern Ontario in 2005. This was not the case in 2001 when hallucinogen use rates were virtually identical in northern and southern Ontario. Anecdotal reports have suggested that LSD and other hallucinogens exhibit cyclical trends based on demand, so the difference may exist simply because the rest of Ontario is entering a low part of that cycle, while hallucinogens are still trendy in Northwestern Ontario.

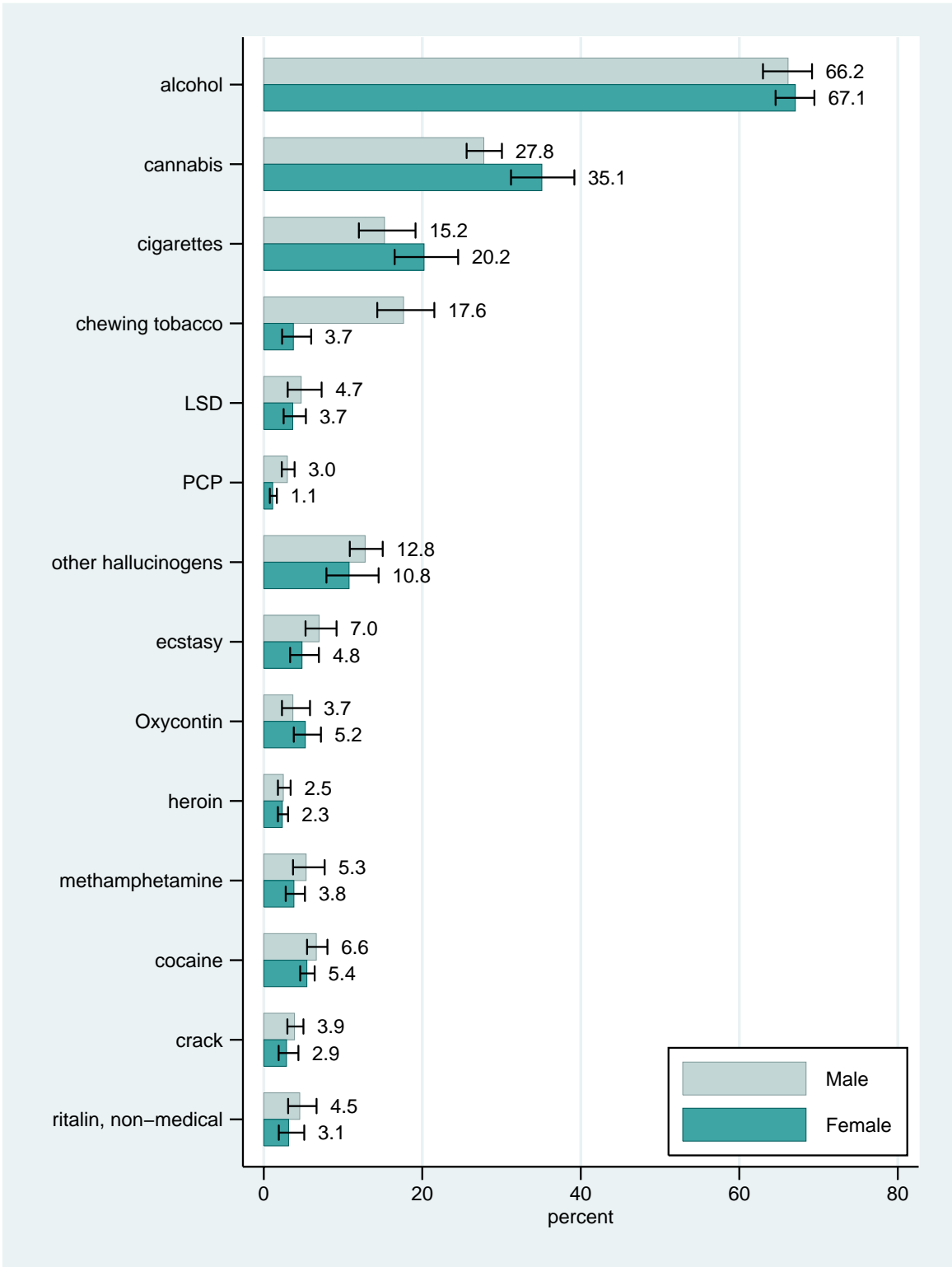
A new category of drug not previously surveyed on either the OSDUS or the NWOSDUS is OxyContin. On this first attempt at characterizing Ontario students' OxyContin use, Northwestern Ontario students reported a rate more than four times higher than the provincial average.

**Table 4.1.1. Percentage of students reporting past year drug use in Northwestern Ontario, grades 7-12, 1997-2005.**

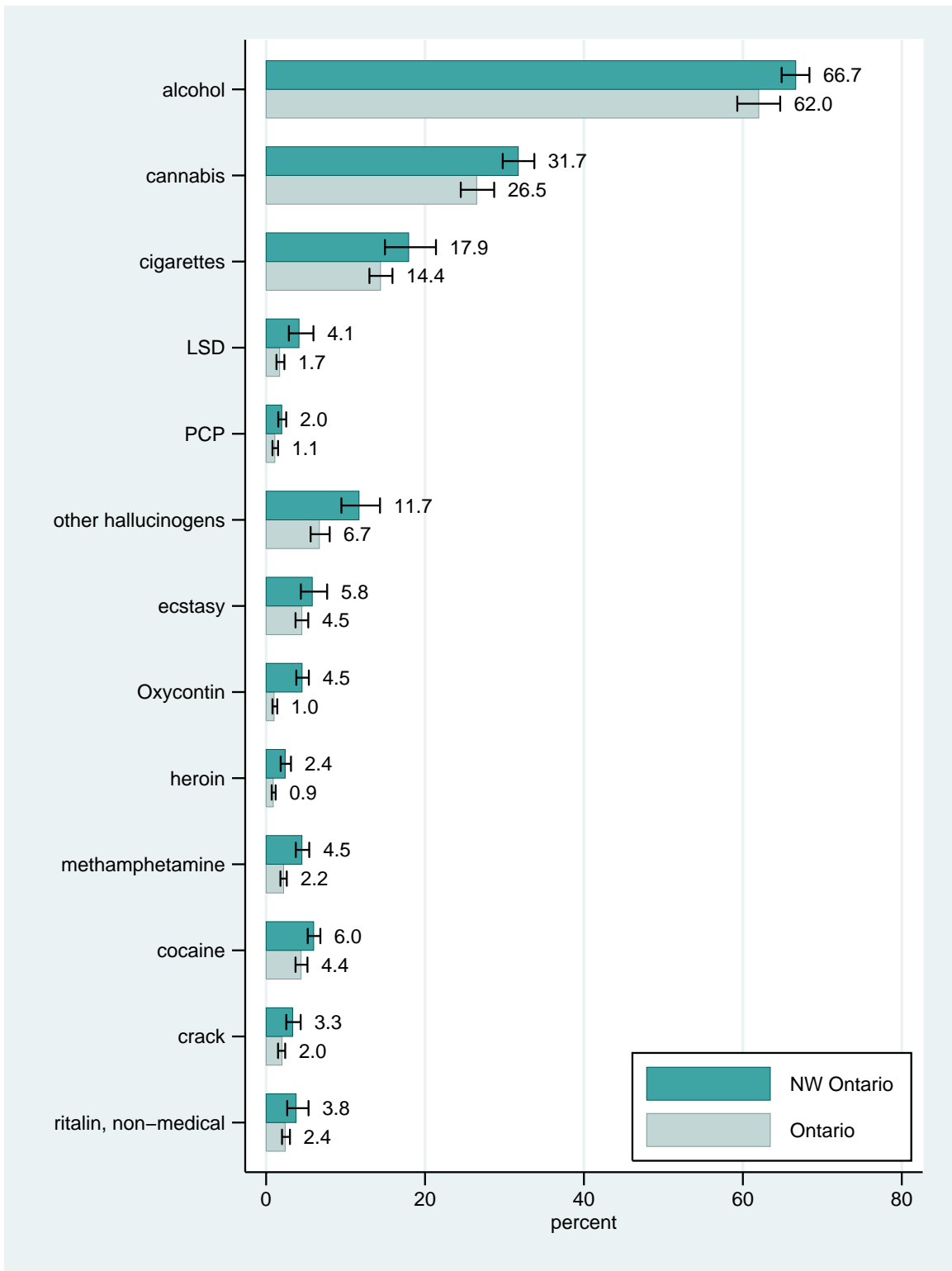
Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Cigarettes	<b>28.3</b>	<b>28.8</b>	<b>17.9</b>
(95% CI)	(25.0, 31.9)	(25.5, 32.4)	(15.0, 21.4)
Chewing Tobacco	--	--	<b>10.1</b>
			(8.6, 11.8)
Alcohol	<b>59.4</b>	<b>75.1</b>	<b>66.7</b>
	(53.0, 65.5)	(68.9, 80.4)	(64.9, 68.4)
Cannabis	<b>25.5</b>	<b>36.9</b>	<b>31.7</b>
	(20.3, 31.5)	(28.9, 45.8)	(29.8, 33.8)
Glue	<b>2.1</b>	<b>1.7</b>	--
	(1.4, 3.1)	(1.3, 2.3)	
Solvents	<b>5.1</b>	<b>3.2</b>	--
	(2.9, 8.6)	(2.5, 3.9)	
Non-Med Barbiturates	<b>3.2</b>	<b>4.2</b>	<b>4.0</b>
	(1.8, 5.5)	(3.0, 5.9)	(3.3, 4.8)
Non-Med Stimulants	<b>6.2</b>	<b>7.9</b>	<b>8.5</b>
	(4.7, 8.3)	(5.8, 10.8)	(7.5, 9.5)
Non-Med Tranquilizers	<b>2.5</b>	<b>1.6</b>	<b>3.0</b>
	(1.4, 4.5)	(1.1, 2.5)	(2.3, 3.8)
LSD	<b>10.4</b>	<b>3.7</b>	<b>4.1</b>
	(7.5, 14.3)	(2.8, 5.0)	(2.9, 6.0)
PCP	<b>2.1</b>	<b>1.4</b>	<b>2.0</b>
	(1.3, 3.6)	(1.0, 2.0)	(1.5, 2.5)
Other Hallucinogens	<b>9.2</b>	<b>12.5</b>	<b>11.7</b>
	(6.9, 12.3)	(8.2, 18.5)	(9.5, 14.3)
Methamphetamine	<b>3.7</b>	<b>2.8</b>	<b>4.5</b>
	(2.4, 5.7)	(2.3, 3.5)	(3.7, 5.4)
Cocaine	<b>3.5</b>	<b>3.1</b>	<b>6.0</b>
	(2.5, 4.8)	(2.3, 4.2)	(5.2, 6.8)
Crack	<b>2.2</b>	<b>1.8</b>	<b>3.3</b>
	(1.6, 3.1)	(1.3, 2.4)	(2.5, 4.3)
Heroin	<b>1.5</b>	<b>1.3</b>	<b>2.4</b>
	(1.0, 2.4)	(0.9, 1.9)	(1.8, 3.1)
Ecstasy	<b>1.5</b>	<b>3.5</b>	<b>5.8</b>
	(1.0, 2.2)	(2.8, 4.2)	(4.4, 7.7)
Oxycontin	--	--	<b>4.5</b>
			(3.8, 5.4)
Non-Med Ritalin	--	--	<b>3.8</b>
			(2.7, 5.3)



**Figure 4.1.1. Percentage of students reporting drug use in past twelve months, with 95% confidence intervals, 2005 and 2001, grades 7-12, Northwestern Ontario.**



**Figure 4.1.2. Percentage of students reporting drug use in past twelve months, with 95% confidence intervals, by sex, grades 7-12, Northwestern Ontario, 2005.**



**Figure 4.1.3. Percentage of students reporting past year drug use, with 95% confidence intervals, Northwestern Ontario versus all of Ontario, grades 7-12, 2005.**

## 4.2 Tobacco

### 4.2.1 Cigarette Use

(Table 4.2.1, Figure 4.2.1, Figure 4.2.2)

Cigarette smoking is one of the most important modifiable risk factors for chronic disease later in life. Because tobacco is so addictive, youth smoking is likely to lead to adult smoking. Efforts to reduce the adult smoking rate should begin with preventing initiation of cigarette smoking among youth.

While there are many ways that cigarette use could be expressed, the most basic and commonly reported indicator is the percentage of students who report having smoked at least one whole cigarette in the past year. Those who have smoked less than one whole cigarette fall into the category of “abstainers” as defined by the 1994 Canadian workshop on tobacco monitoring and surveillance (Mills et al 1994). Past year cigarette use as a baseline rate is a good indicator of future addiction. For example, in the Survey of Albertans Regarding Tobacco Use, 77% of those who smoked one whole cigarette went on to smoke at least 100 cigarettes (Alberta Tobacco Reduction Alliance 2000).

Past year cigarette use did not change in Northwestern Ontario from 1997 to 2001, remaining at approximately 28%, but dropped precipitously between 2001 and 2005. This reflects a similar trend Ontario-wide.

To put these dramatic declines in context, it is important to know that the period from 2002 and 2005 saw a tremendous shift in public opinion in support of smoke-free bylaws. In the Thunder Bay District Health Unit area,

Schreiber, Terrace Bay, Manitouwadge, Greenstone, Nipigon, Red Rock, Marathon, and the City of Thunder Bay passed some form of municipal bylaw limiting or banning smoking in public places. In the Northwestern Health Unit area, Sioux Lookout, Ear Falls, Lavallee, and Dryden passed similar municipal bylaws. As well, the Medical Officer of Health in Northwestern Health Unit issued a warning that exposure to cigarette smoke in enclosed spaces is a health hazard and that he was prepared, under the Health Promotion and Protection Act, to fine businesses that allowed their patrons to be exposed to cigarette smoke. After most of the citizens of Ontario were covered by municipal smoke-free bylaws, the province of Ontario passed a province-wide smoke-free act in 2005. Most of these measures enjoyed great public support, and were accompanied by pervasive educational campaigns and a tremendous shift in public attitudes toward smoking. Thus, although the 2005 NWOSDUS did not specifically ask about the effect of this widespread smoke-free advocacy and debate, it is probably not a coincidence that between 2001 and 2005 there were substantial declines in youth smoking.

Figure 4.2.1 shows that cigarette use varied significantly by grade. In Northwestern Ontario, the largest relative decreases in cigarette use were in the younger grades, but the decreases were substantial across all grades except grade 12, which remained essentially unchanged. In previous years, smoking

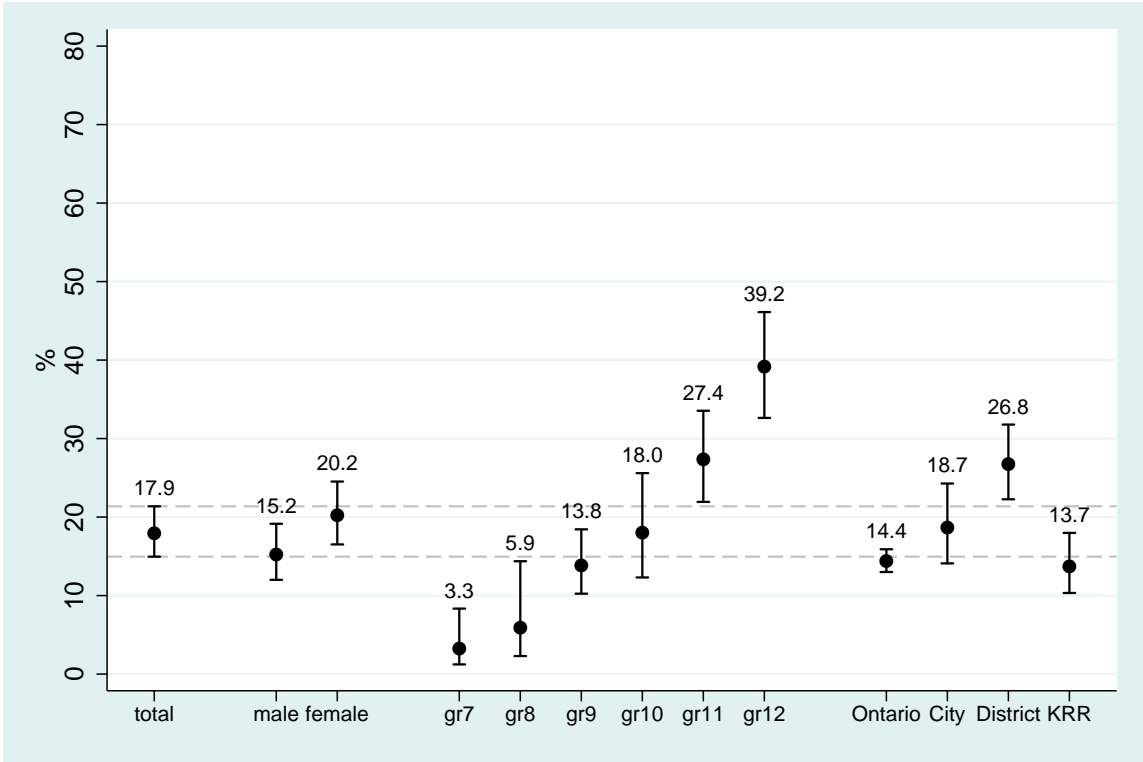
rates peaked in grade 11 and then leveled off or declined in grade 12 and 13. In 2005, we found that grade 12 students had higher cigarette use rates than grade 11 students ( $p=0.009$ ). This may reflect a cohort effect in which the effect of the previous four years of smoke-free advocacy may have had a greater effect on preventing new smokers than in getting older students who had already started smoking to quit.

A unique feature of Northwestern Ontario is that females are more likely to smoke cigarettes than males. This was true in 1997 and in 2001. In 2005, that

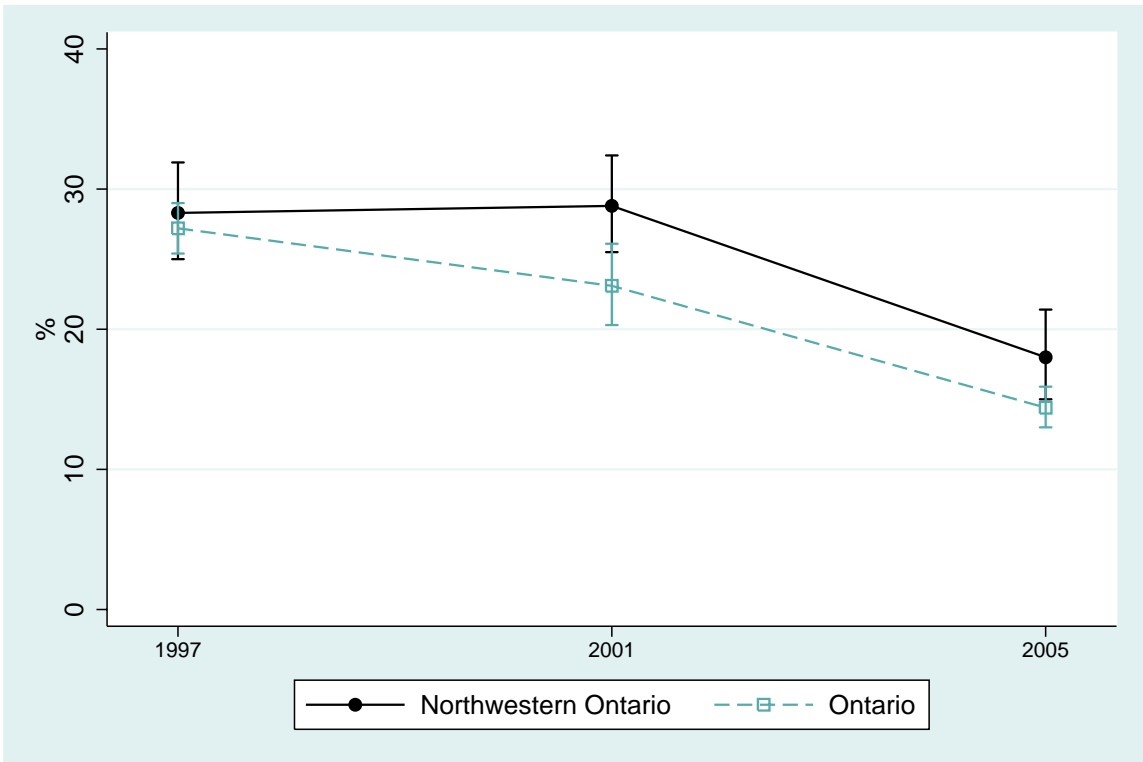
gap narrowed to a difference of five percentage points, but the difference was still statistically significant ( $p=0.026$ ). This sex-based difference is unusual insofar as it is inconsistent with the Ontario-wide results from the OSDUS (Adlaf & Paglia-Boak 2005), the Canada-wide estimates from the Canadian Community Health Survey (Statistics Canada 2005), and with results from the United States (U.S. Centers for Disease Control and Prevention 2006), none of which have found a sex-based difference in adolescent smoking rates.

**Table 4.2.1. Percentage of students reporting past year cigarette use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>28.3</b> (25.0, 31.9)	<b>28.8</b> (25.5, 32.4)	<b>17.9</b> (15.0, 21.4)
Sex			
Male	<b>22.4</b> (17.9, 27.7)	<b>26.1</b> (23.1, 29.4)	<b>15.2</b> (12.0, 19.1)
Female	<b>34.2</b> (30.7, 37.8)	<b>32.1</b> (27.5, 37.1)	<b>20.2</b> (16.5, 24.5)
Grade			
Grade 7	<b>14.0</b> (10.6, 18.4)	<b>9.1</b> (5.8, 14.1)	<b>3.3</b> (1.2, 8.3)
Grade 8	--	<b>19.9</b> (11.8, 31.5)	<b>5.9</b> (2.3, 14.4)
Grade 9	<b>37.5</b> (29.5, 46.2)	<b>23.5</b> (14.7, 35.4)	<b>13.8</b> (10.2, 18.4)
Grade 10	--	<b>30.8</b> (26.9, 34.9)	<b>18.0</b> (12.3, 25.6)
Grade 11	<b>47.4</b> (41.2, 53.7)	<b>42.6</b> (30.3, 55.9)	<b>27.4</b> (21.9, 33.5)
Grade 12	--	<b>39.6</b> (23.8, 57.9)	<b>39.2</b> (32.6, 46.1)
Grade 13	<b>30.3</b> (24.6, 36.6)	--	--
Region			
All Ontario	<b>27.6</b> (26.0, 29.2)	<b>23.6</b> (20.9, 26.5)	<b>14.4</b> (13.0, 15.9)
City of Thunder Bay	<b>21.5</b> (14.1, 31.4)	<b>29.5</b> (24.8, 34.6)	<b>18.7</b> (14.1, 24.3)
District of Thunder Bay	<b>42.4</b> (37.7, 47.2)	<b>30.7</b> (21.3, 42.0)	<b>26.8</b> (22.3, 31.8)
Kenora-Rainy River	<b>29.8</b> (24.1, 36.2)	<b>27.2</b> (20.7, 34.8)	<b>13.7</b> (10.3, 18.0)



**Figure 4.2.1. Past year cigarette use by sex, grade, and region, with 95% confidence intervals, 2005.**



**Figure 4.2.2. Past year cigarette use by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

## 4.2.2 Daily and Current Smoking

(Table 4.2.2, Figure 4.2.3, Figure 4.2.4, Table 4.2.3, Figure 4.2.5)

Past year cigarette use is a sensitive indicator of smoking, but it is also important to consider how much students smoke. The NWOSDUS includes two questions that measure smoking intensity. First, students were asked about the usual number of cigarettes they smoke per day, from which we can derive the number of daily smokers. Second, students were asked how many cigarettes they have smoked in their lifetime. From this, we can derive an indicator called “current smoking.” A current smoker is someone who has smoked at least 100 cigarettes

in their lifetime and who has used cigarettes in the last year.

Like past year smoking, past year daily smoking in Northwestern Ontario dropped precipitously between 2001 and 2005 (Table 4.2.2, Figure 4.2.3). The same patterns can be seen for past year daily smoking as for past year smoking: a Northwestern Ontario rate higher than the provincial average, a significant difference in daily smoking rates between males and females ( $p=0.030$ ), and an increasing prevalence of daily smoking by grade, all the way to grade 12.

**Table 4.2.2. Percentage of students reporting past year daily smoking by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>22.1</b> (19.0, 25.5)	<b>21.5</b> (18.2, 25.2)	<b>12.0</b> (9.5, 15.2)
Sex			
Male	<b>17.0</b> (13.4, 21.3)	<b>20.4</b> (18.0, 23.1)	<b>9.5</b> (7.4, 12.1)
Female	<b>27.1</b> (23.1, 31.6)	<b>22.8</b> (17.6, 28.9)	<b>14.1</b> (10.3, 19.1)
Grade			
Grade 7	<b>10.5</b> (8.0, 13.7)	<b>6.4</b> (3.4, 11.5)	<b>1.7</b> (0.5, 5.8)
Grade 8	--	<b>11.9</b> (7.2, 18.9)	<b>4.4</b> (1.9, 9.6)
Grade 9	<b>31.3</b> (24.6, 40.2)	<b>16.7</b> (7.8, 32.1)	<b>10.4</b> (6.7, 15.6)
Grade 10	--	<b>20.9</b> (17.1, 25.4)	<b>10.4</b> (5.2, 19.7)
Grade 11	<b>36.1</b> (28.6, 44.3)	<b>34.2</b> (25.6, 44.0)	<b>19.9</b> (15.5, 25.1)
Grade 12	--	<b>34.1</b> (16.6, 57.4)	<b>25.4</b> (20.8, 30.7)
Grade 13	<b>21.3</b> (18.3, 24.5)	--	--
Region			
All Ontario	<b>19.4</b> (17.7, 21.3)	<b>17.9</b> (14.7, 21.7)	<b>8.6</b> (7.4, 9.9)
City of Thunder Bay	<b>17.4</b> (10.3, 28.0)	<b>22.9</b> (16.9, 30.2)	<b>12.9</b> (9.4, 17.6)
District of Thunder Bay	<b>34.0</b> (29.4, 39.0)	<b>24.4</b> (15.9, 35.5)	<b>13.7</b> (8.3, 21.6)
Kenora-Rainy River	<b>22.1</b> (16.5, 28.9)	<b>18.3</b> (14.6, 22.8)	<b>9.9</b> (6.2, 15.4)

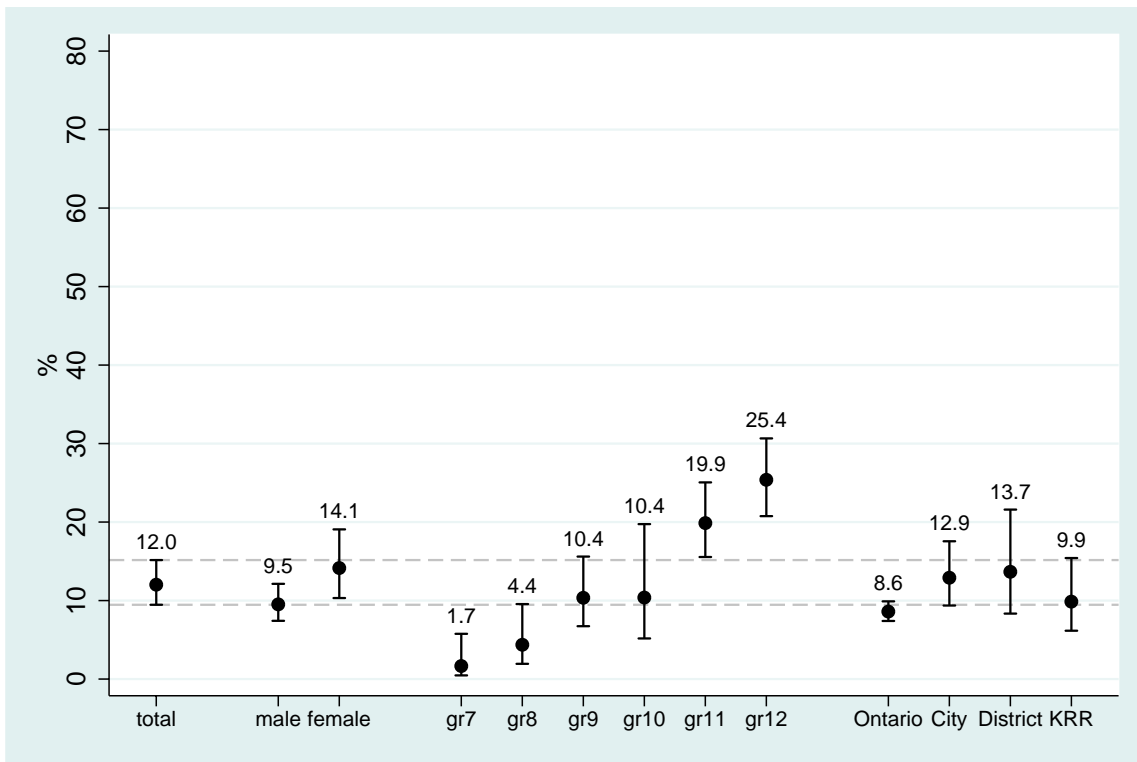


Figure 4.2.3. Past year daily smoking by sex, grade, and region, with 95% confidence intervals, 2005.

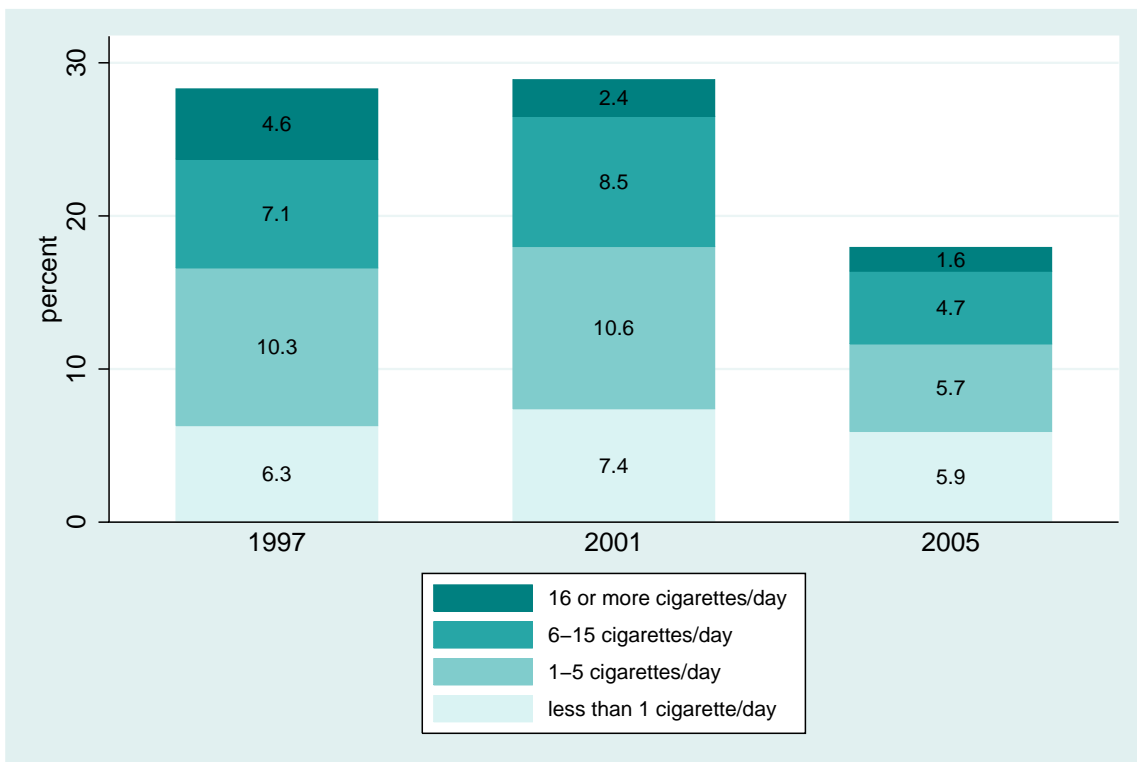


Figure 4.2.4. Percentage of students by usual number of cigarettes smoked per day, Northwestern Ontario, 1997 - 2005.

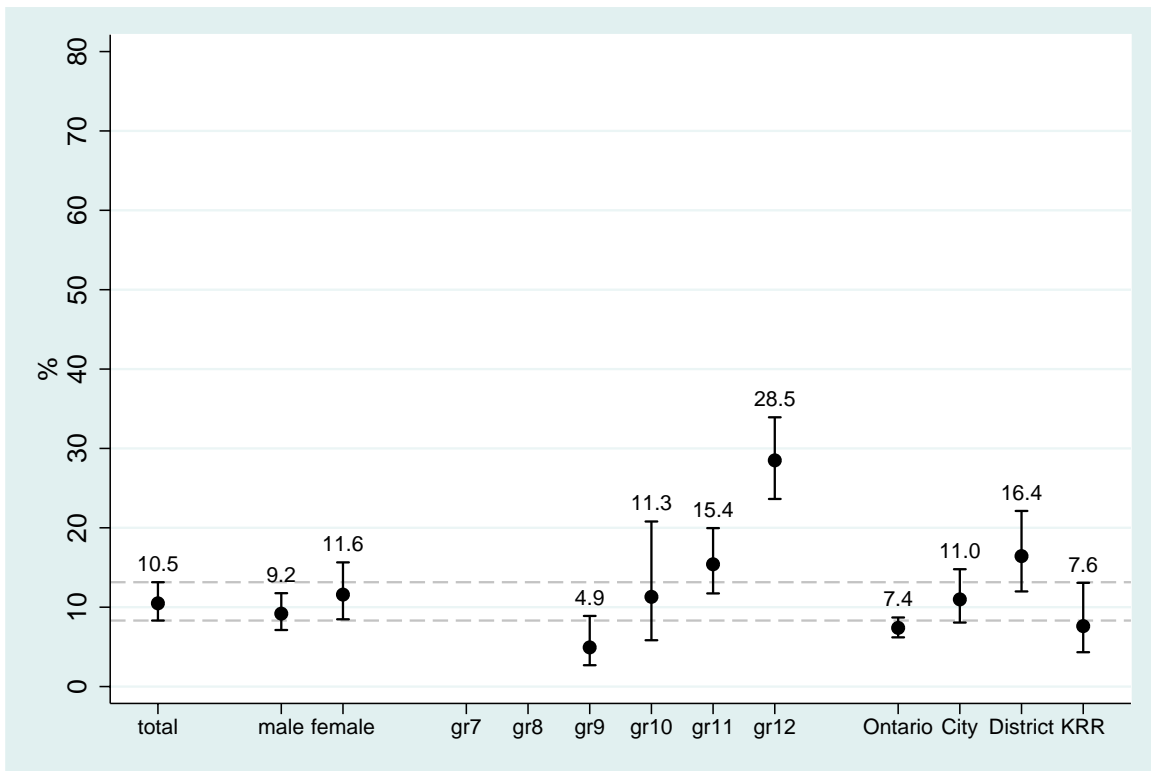
Figure 4.2.4 shows that in 2005 the number of students smoking had declined at all levels of smoking intensity.

Current smoking is a measure that mixes commitment to smoking (having smoked at least 100 cigarettes) with past year cigarette use. This indicator could not be derived for the 1997 and 2001 surveys because students were not asked about the total number of cigarettes smoked in

their lifetime. Table 4.2.3 and Figure 4.2.5 show that 10.5% of students are current smokers, that there is little difference in current smoking between males and females, and that the prevalence of current smoking increases with grade, with the prevalence in grade 12 being nearly double that in grade 11. Current smoking and daily smoking are highly correlated, with 89% of current smokers being daily smokers.

**Table 4.2.3. Percentage of students reporting past year current smoking (smoked at least 100 cigarettes in lifetime and smoked in past year) by sex, grade, and region, 2005.**

Year (N)	2005 (1374)
Total (95% CI)	<b>10.5</b> (8.3, 13.1)
Sex	
Male	<b>9.2</b> (7.1, 11.8)
Female	<b>11.6</b> (8.5, 15.6)
Grade	
Grade 7	--
Grade 8	--
Grade 9	<b>4.9</b> (2.7, 8.9)
Grade 10	<b>11.3</b> (5.8, 20.8)
Grade 11	<b>15.4</b> (11.7, 20.0)
Grade 12	<b>28.5</b> (23.6, 33.9)
Region	
All Ontario	<b>7.4</b> (6.2, 8.7)
City of Thunder Bay	<b>11.0</b> (8.1, 14.8)
District of Thunder Bay	<b>16.4</b> (12.0, 22.1)
Kenora-Rainy River	<b>7.6</b> (4.3, 13.1)



**Figure 4.2.5. Past year current smoking (has smoked at least 100 cigarettes in lifetime and smoked in last year), by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 7 and 8 are too small to be reported.)**

### 4.2.3 Parental Smoking

(Table 4.2.4)

Parental smoking is an important risk factor for smoking among youth. Overall, 29% of students reported that one of their parents smoked, 16% reported that both of their parents smoke, and 56% reported that neither of their parents smoked.

Table 4.2.4 shows that if one parent smokes, the probability that their child will also smoke almost doubles. If both parents smoke, the probability that their child will also smoke almost triples.

**Table 4.2.4. Percentage of students reporting past year cigarette use, daily smoking, and current smoking, by parental smoking status, Northwestern Ontario, 2005.**

	Neither parent smokes	One parent smokes	Both parents smoke
% of students reporting any past year cigarette use	12.1	21.6	32.0
% of students reporting past year daily smoking	7.3	16.0	22.3
% of students reporting past year current smoking	6.2	13.8	20.9

#### 4.2.4 Smokeless Tobacco Use

(Table 4.2.5, Figure 4.2.6)

In 2005, in response to anecdotal reports, we asked students about their smokeless tobacco use over the preceding *twelve months*. We do not, however, have good comparative data.

We did not query smokeless tobacco use at all on the 2001 NWOSDUS. In 1997, the use of smokeless tobacco was queried but the question was “During the last *four weeks*, how often did you take smokeless tobacco (also known as snuff, plus, dipping tobacco, chewing tobacco)?” So, although smokeless tobacco was included in 1997, the *four week* time frame is not comparable to the *twelve month* time frame asked in the 2005 NWOSDUS. For what it is worth, the proportion of students who had used smokeless tobacco in the four weeks prior to the survey in 1997 was 8.4%.

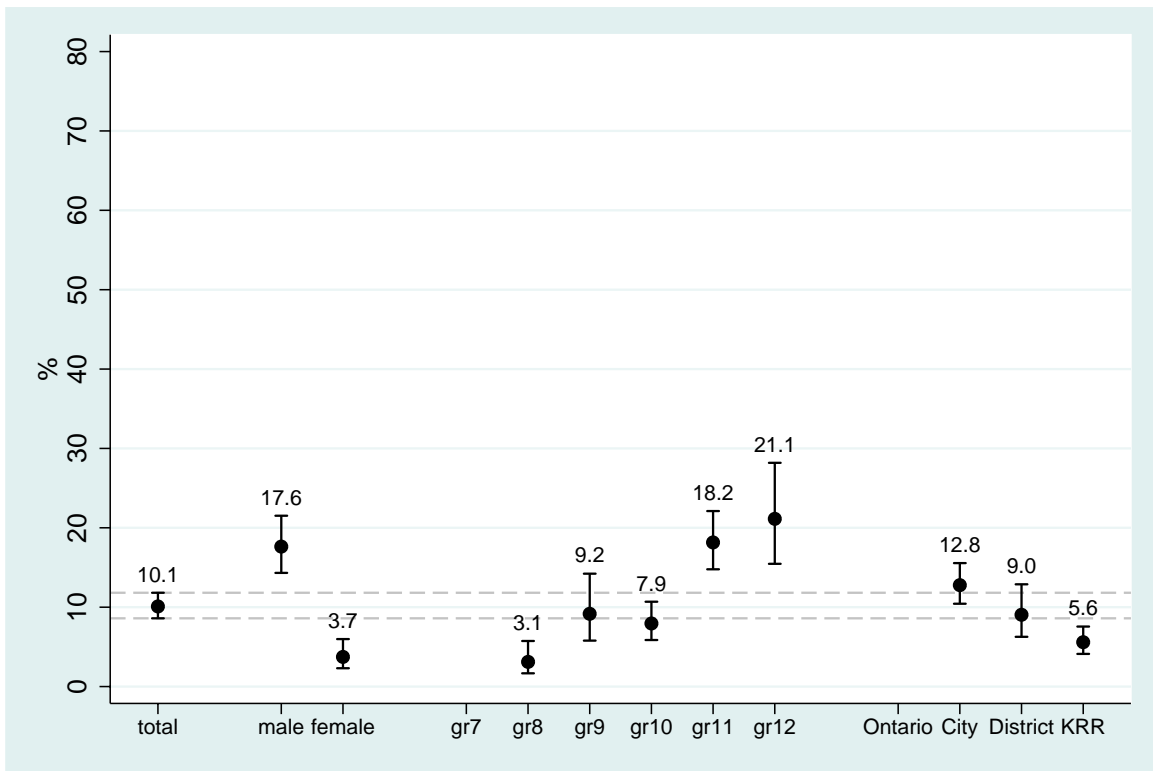
Smokeless tobacco use was not queried on the OSDUS in 2005, so we do not

have a province-wide comparator. The last time the OSDUS asked about smokeless tobacco use was in the late 1980s (Adlaf and Smart 1988) and it found low prevalence rates, varying from one to three percent depending on age and sex.

In 2005, 10.1% of Northwestern Ontario students had used smokeless tobacco at least once in the preceding year (Table 4.2.5, Figure 4.2.6). The prevalence among boys was about five times higher among males than among females (17.6% vs. 3.7%). There was a distinct jump in prevalence rates between grade 10 and 11, with only 5% prevalence among students in grade 10 or lower, and 20% prevalence among those in grade 11 or 12 ( $p < 0.0001$ ). Regionally, the prevalence in the City of Thunder Bay was about twice as high as it was in Kenora- Rainy River (12.8% vs. 5.6%).

**Table 4.2.5. Percentage of students reporting past year smokeless tobacco use by sex, grade, and region, 2005.**

Year		2005
(N)		(1374)
Total		<b>10.1</b>
(95% CI)		(8.6, 11.8)
Sex	Male	<b>17.6</b>
		(14.3, 21.5)
	Female	<b>3.7</b>
		(2.3, 6.0)
Grade	Grade 7	--
	Grade 8	<b>3.1</b>
		(1.7, 5.7)
	Grade 9	<b>9.2</b>
		(5.8, 14.2)
	Grade 10	<b>7.9</b>
		(5.9, 10.7)
	Grade 11	<b>18.2</b>
		(14.8, 22.1)
	Grade 12	<b>21.1</b>
		(15.5, 28.2)
Region	All Ontario	--
	City of Thunder Bay	<b>12.8</b>
		(10.4, 15.6)
	District of Thunder Bay	<b>9.0</b>
		(6.3, 12.9)
	Kenora-Rainy River	<b>5.6</b>
		(4.1, 7.6)



**Figure 4.2.6. Past year smokeless tobacco use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grade 7 too small to be reported.)**

### 4.3 First Time Alcohol and Cannabis Use

(Table 4.3.1, Table 4.3.2)

Early first time drug use is a strong predictor of continued drug use. Those who try a drug at an early age are likely to continue using the drug. The age at which adolescents first use drugs is also an important predictor of substance problems later in life. Those who try alcohol, tobacco, and other drugs at an early age are more likely to develop dependence as well as social problems related to substance use. Delaying first use among youth is a practical public health goal. Also, first time drug use data can be used to identify grades at which students are most at risk to start using drugs.

Table 4.3.1 and Table 4.3.2 show the grade in which grade 11 students

reported first trying alcohol and cannabis.

First time use of both alcohol and cannabis peaked in grades 8 and 9, corresponding with the onset of adolescence. The NWOSDUS asked about first time cannabis use for the first time in 2005 so we cannot report any trend in those figures. However, for first time alcohol use there has been a distinctly positive trend over the years. The percentage of students reporting first time alcohol use before grade 8 declined steadily from 37.6% in 1997 to 31.2% in 2001 to 22.6% in 2005.

Care must be taken in the interpretation of these findings. Although research suggests that delaying first time use

should decrease negative behaviours associated with alcohol use, we have not seen a decrease over the years in

indicators of problematic alcohol use such as binge drinking (see section 4.7 below).

**Table 4.3.1. Grade in which Grade 11 students reported first trying alcohol, Northwestern Ontario, 1997-2005.**

	1997 (N=541)	2001 (N=454)	2005 (N=200)
Grade 4	<b>6.7</b> (5.3, 8.6)	<b>5.8</b> (3.6, 9.0)	<b>3.5</b> (1.9, 6.4)
Grade 5	<b>2.6</b> (1.5, 4.6)	<b>3.3</b> (1.2, 8.8)	<b>2.6</b> (1.3, 5.0)
Grade 6	<b>6.7</b> (4.7, 9.4)	<b>5.9</b> (5.1, 6.8)	<b>5.0</b> (3.5, 7.1)
Grade 7	<b>21.6</b> (19.4, 24.0)	<b>16.2</b> (10.4, 24.2)	<b>11.5</b> (7.2, 17.9)
Grade 8	<b>21.2</b> (16.6, 26.6)	<b>17.7</b> (11.2, 26.8)	<b>21.9</b> (17.3, 27.4)
Grade 9	<b>21.1</b> (17.2, 25.6)	<b>30.4</b> (26.0, 35.2)	<b>22.5</b> (19.2, 26.2)
Grade 10	<b>11.8</b> (10.1, 13.7)	<b>12.5</b> (7.0, 21.6)	<b>17.4</b> (13.1, 22.6)
Grade 11	<b>2.1</b> (1.3, 3.4)	<b>3.2</b> (1.7, 6.0)	<b>10.8</b> (7.9, 14.5)
Never	<b>5.9</b> (4.3, 8.0)	<b>5.0</b> (1.7, 13.7)	<b>4.9</b> (2.8, 8.5)

**Table 4.3.2. Grade in which Grade 11 students reported first trying cannabis, 2005.**

	2005 (N=200)
Grade 4	--
Grade 5	--
Grade 6	<b>3.0</b> (1.7, 5.1)
Grade 7	<b>7.0</b> (4.2, 11.5)
Grade 8	<b>12.2</b> (10.8, 13.6)
Grade 9	<b>18.3</b> (15.1, 22.1)
Grade 10	<b>11.6</b> (9.9, 13.4)
Grade 11	<b>8.1</b> (5.5, 11.6)
Never	<b>37.0</b> (29.2, 45.6)

## 4.4 Alcohol

### 4.4.1 Past Year Alcohol Use

(Table 4.4.1, Figure 4.4.1, Figure 4.4.2, Figure 4.4.3)

Alcohol is an addictive drug and it is illegal for anyone under the age of nineteen in Ontario to purchase or to possess it in public. Nevertheless, most adolescents have had experience with alcohol. Adolescent alcohol use can have important health consequences, the most notable of which is alcohol-related injury, especially traffic accidents. In the long-term, a person who begins drinking at an early age is more likely to become a chronic adult user, which has another set of health consequences including increased risk of liver cirrhosis and heart disease. In addition to health consequences, there is a myriad of personal, social, economic, legal, and family problems associated with alcohol.

Alcohol is the most frequently used drug among students, in both Northwestern Ontario and elsewhere. Table 4.4.1 shows that in 2005 fully two-thirds of

Northwestern Ontario students reported using alcohol in the previous year. This is significantly higher than the provincial rate of 62%. However, it is a significant decline from the 2001 rate of 75.1%.

Males and females were about equally likely to report drinking and there were no significant differences among the regions of Northwestern Ontario.

Most of the decline in drinking since 2001 is in the younger grades, reversing the trend from 1997 to 2001. Drinking rates among older students remains about the same.

With regard to drinking frequency, most of the decline in drinking is among those drinking two to four times per month (Figure 4.4.3).

**Table 4.4.1. Percentage of students reporting past year alcohol use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>59.4</b> (53.0, 65.5)	<b>75.1</b> (68.9, 80.4)	<b>66.7</b> (64.9, 68.4)
Sex			
Male	<b>57.7</b> (51.0, 64.1)	<b>77.1</b> (70.2, 82.7)	<b>66.2</b> (63.0, 69.2)
Female	<b>61.0</b> (54.2, 67.5)	<b>72.7</b> (66.4, 78.2)	<b>67.1</b> (64.6, 69.5)
Grade			
Grade 7	<b>35.3</b> (31.8, 39.0)	<b>44.2</b> (38.1, 50.5)	<b>31.9</b> (27.1, 37.2)
Grade 8	--	<b>61.7</b> (56.6, 66.5)	<b>48.2</b> (43.5, 53.0)
Grade 9	<b>69.0</b> (63.1, 74.3)	<b>75.6</b> (73.7, 77.4)	<b>64.6</b> (59.4, 69.6)
Grade 10	--	<b>80.4</b> (70.4, 87.6)	<b>75.2</b> (71.1, 78.9)
Grade 11	<b>88.4</b> (84.9, 91.1)	<b>86.6</b> (81.1, 90.7)	<b>87.6</b> (86.1, 88.9)
Grade 12	--	<b>91.5</b> (90.9, 92.1)	<b>90.6</b> (88.2, 92.6)
Grade 13	<b>87.8</b> (85.5, 89.9)	--	--
Region			
All Ontario	<b>59.6</b> (56.8, 62.4)	<b>65.6</b> (62.8, 68.4)	<b>62.0</b> (59.3, 64.7)
City of Thunder Bay	<b>49.1</b> (34.4, 64.0)	<b>75.1</b> (64.7, 83.3)	<b>65.1</b> (62.4, 67.7)
District of Thunder Bay	<b>74.5</b> (68.7, 79.6)	<b>73.7</b> (65.7, 80.5)	<b>72.9</b> (67.4, 77.8)
Kenora-Rainy River	<b>64.2</b> (55.0, 72.5)	<b>75.4</b> (68.4, 81.3)	<b>67.4</b> (65.1, 69.6)

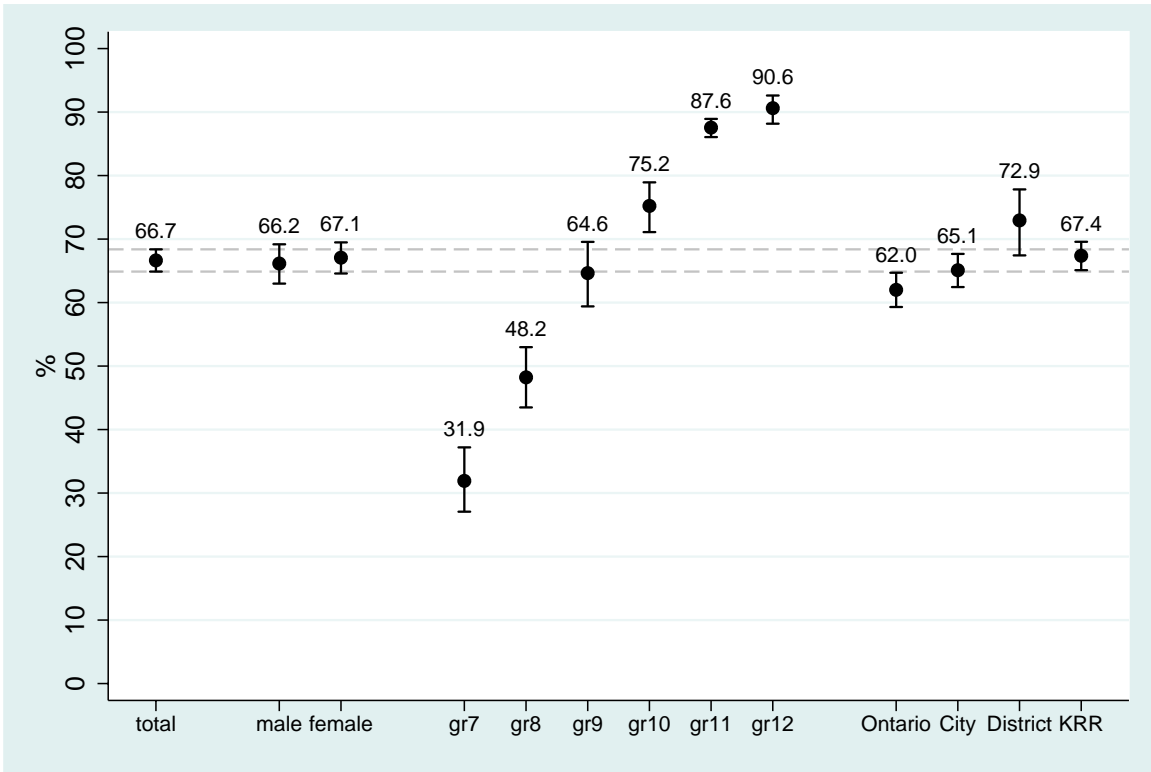


Figure 4.4.1. Past year alcohol use by sex, grade, and region, with 95% confidence intervals, 2005

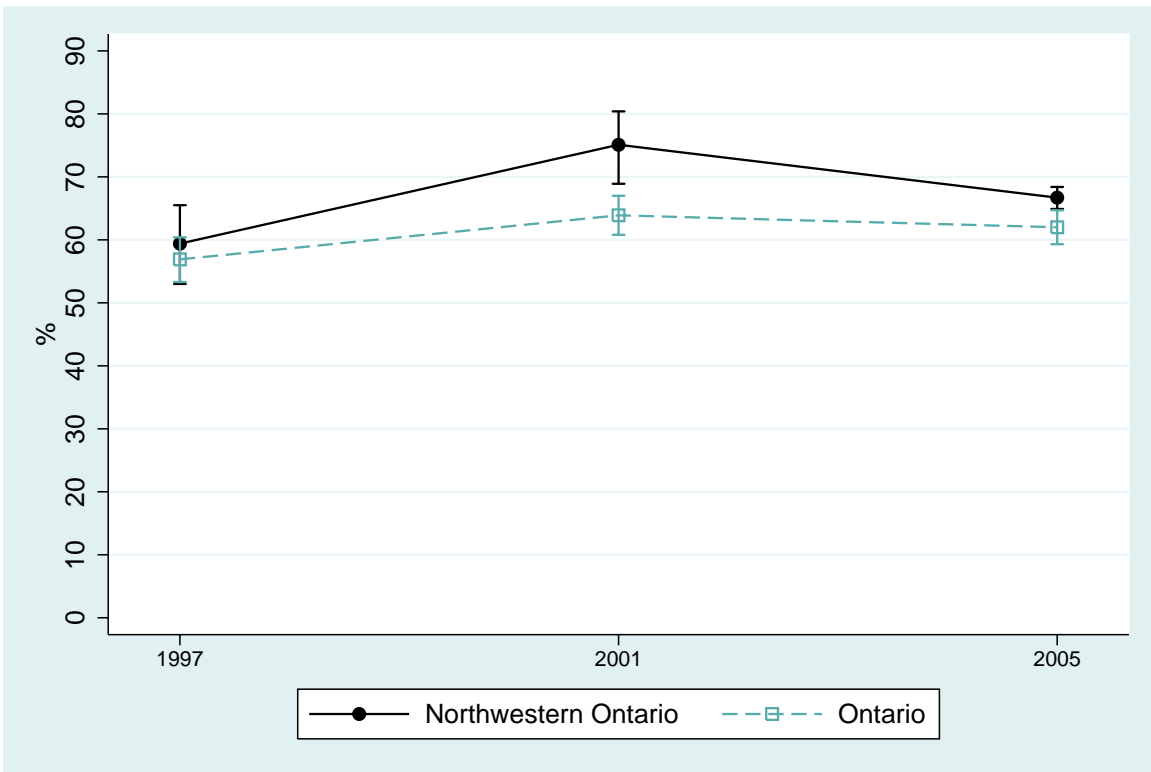
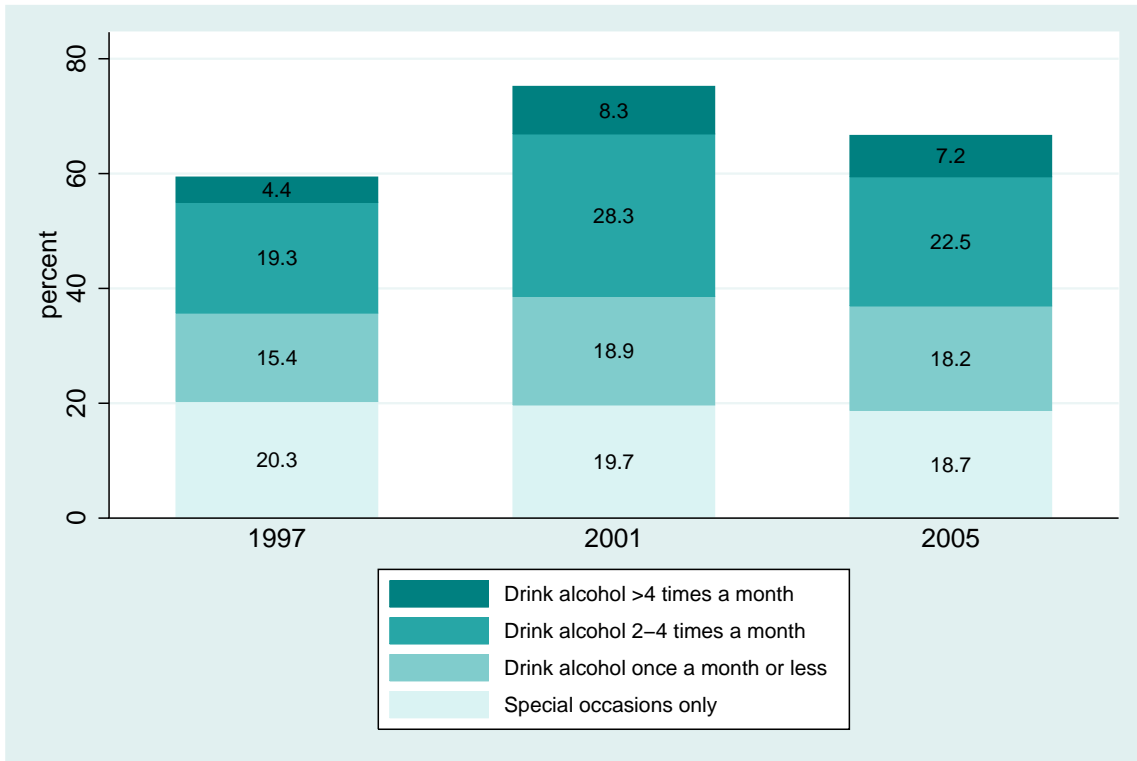


Figure 4.4.2. Past year alcohol use by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.



**Figure 4.4.3. Percentage of Northwestern Ontario students in grades 7-12 who drank in the past year, by usual frequency of drinking per month, 1997 - 2005.**

#### 4.4.2 Binge Drinking (consuming five or more drinks of alcohol on one occasion) (Table 4.4.2, Figure 4.4.4, Table 4.4.3)

While the consumption of small amounts of alcohol may be considered relatively benign, major problems with alcohol occur when drinking is taken to excess. A common measure of excessive drinking is binge drinking, which is the consumption of five or more alcoholic drinks on a single occasion.

Similar to the increase in the overall student drinking rate and the increase in drinking frequency, Table 4.4.2 and Figure 4.4.4 show that the binge drinking rate increased significantly since 1997 to 2001, from 24.5% to 41.8%, and then dropped partially back in 2005 to 34.8%. In each year, the Northwestern Ontario rate was

considerably higher than the provincial average.

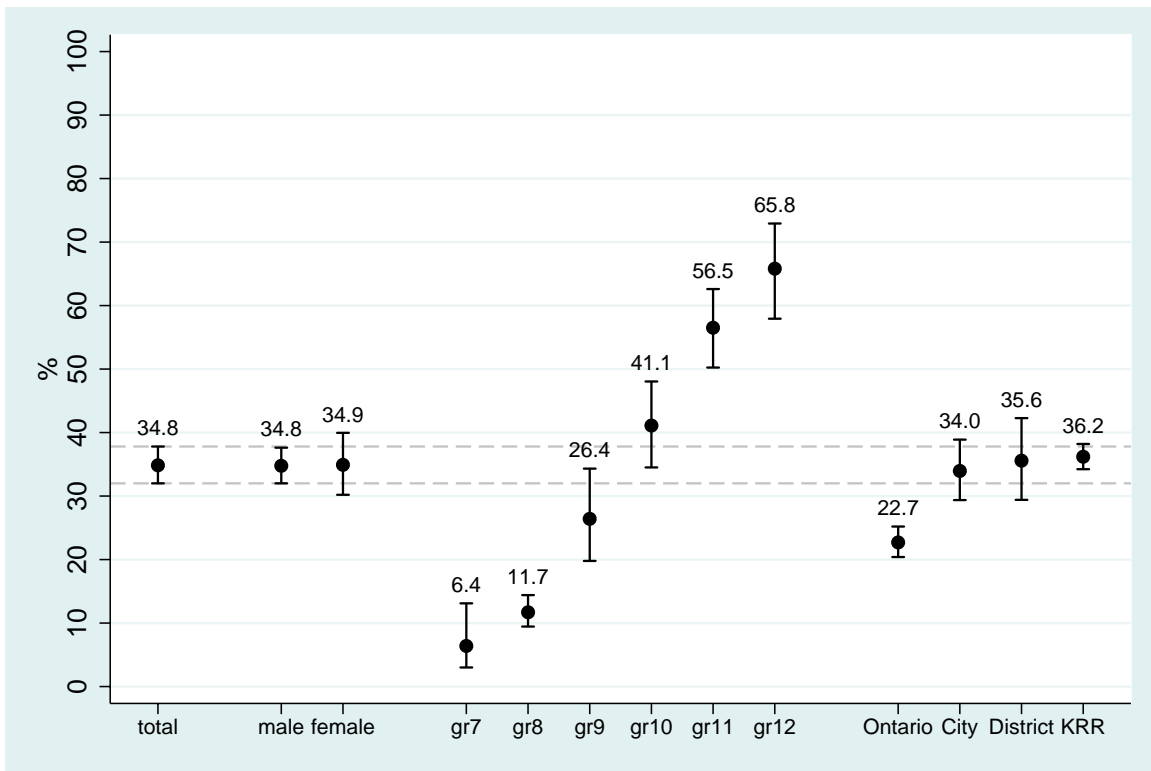
In 2005, as with the basic student alcohol use rate, most of the variation in the rates was among younger students, and there was a strongly increasing frequency with grade. There was no difference in the binge drinking rate between boys and girls, nor were there any differences among the three regions of Northwestern Ontario.

Table 4.4.3 shows the frequency of binge drinking in the month prior to the survey. The percentage of students who reported binge drinking two or more times per month doubled from 18.9% in

1997 to 34.3% in 2001, but then dropped | back to 22.3% in 2005.

**Table 4.4.2. Percentage of students who reported drinking five or more drinks on a single occasion in the last four weeks, 1997-2001.**

Year		1997	2001	2005
(N)		(2238)	(2704)	(1374)
<b>Total</b>		<b>24.5</b>	<b>41.8</b>	<b>34.8</b>
<i>(95% CI)</i>		<i>(19.4, 30.6)</i>	<i>(37.9, 45.7)</i>	<i>(32.0, 37.8)</i>
Sex	Male	<b>23.6</b>	<b>44.8</b>	<b>34.8</b>
		<i>(17.1, 31.8)</i>	<i>(36.9, 53.0)</i>	<i>(32.0, 37.6)</i>
	Female	<b>25.4</b>	<b>38.1</b>	<b>34.9</b>
		<i>(21.1, 30.2)</i>	<i>(34.9, 41.4)</i>	<i>(30.2, 40.0)</i>
Grade	Grade 7	<b>5.2</b>	<b>11.2</b>	<b>6.4</b>
		<i>(2.8, 9.5)</i>	<i>(7.8, 15.8)</i>	<i>(3.0, 13.1)</i>
	Grade 8	--	<b>21.1</b>	<b>11.7</b>
			<i>(14.1, 30.4)</i>	<i>(9.4, 14.4)</i>
	Grade 9	<b>27.4</b>	<b>35.9</b>	<b>26.4</b>
		<i>(19.9, 36.4)</i>	<i>(31.0, 41.0)</i>	<i>(19.8, 34.3)</i>
	Grade 10	--	<b>44.9</b>	<b>41.1</b>
			<i>(37.1, 53.0)</i>	<i>(34.5, 48.0)</i>
Grade 11	<b>51.6</b>	<b>52.6</b>	<b>56.5</b>	
	<i>(45.0, 58.1)</i>	<i>(47.1, 58.1)</i>	<i>(50.2, 62.6)</i>	
Grade 12	--	<b>69.1</b>	<b>65.8</b>	
		<i>(60.4, 76.6)</i>	<i>(57.9, 72.9)</i>	
Grade 13	<b>54.2</b>	--	--	
	<i>(49.9, 58.3)</i>			
Region	All Ontario	<b>24.4</b>	<b>27.5</b>	<b>22.7</b>
		<i>(22.3, 26.6)</i>	<i>(25.0, 30.2)</i>	<i>(20.4, 25.2)</i>
	City of Thunder Bay	<b>16.6</b>	<b>43.9</b>	<b>34.0</b>
		<i>(6.6, 36.1)</i>	<i>(38.2, 49.8)</i>	<i>(29.4, 38.9)</i>
District of Thunder Bay	<b>39.0</b>	<b>42.7</b>	<b>35.6</b>	
	<i>(31.0, 47.7)</i>	<i>(35.2, 50.6)</i>	<i>(29.4, 42.3)</i>	
Kenora-Rainy River	<b>27.0</b>	<b>38.0</b>	<b>36.2</b>	
	<i>(17.5, 39.3)</i>	<i>(33.4, 42.9)</i>	<i>(34.2, 38.2)</i>	



**Figure 4.4.4. Percentage of students who reported drinking five or more alcoholic drinks (“binge drinking”) in the last four weeks, with 95% confidence intervals, by sex, grade, and region, 2005.**

**Table 4.4.3. Frequency of consuming five or more alcoholic drinks on a single occasion (“binge drinking”) in the past four weeks, with 95% confidence intervals, Northwestern Ontario, 1997-2005.**

	1997 (N=2156)	2001 (N=2663)	2005 (N=1374)
Never in past 4 weeks	<b>75.5</b> (69.4, 80.6)	<b>58.2</b> (54.3, 62.1)	<b>65.2</b> (62.2, 68.0)
Once	<b>9.6</b> (7.8, 11.9)	<b>12.9</b> (11.8, 14.1)	<b>12.6</b> (10.8, 14.6)
2 times	<b>6.2</b> (4.9, 7.9)	<b>13.0</b> (10.8, 15.5)	<b>9.3</b> (8.0, 10.9)
3 times	<b>3.9</b> (2.5, 6.1)	<b>5.3</b> (4.2, 6.8)	<b>3.6</b> (2.8, 4.5)
4+ times	<b>4.8</b> (3.3, 6.9)	<b>10.6</b> (8.8, 12.5)	<b>9.4</b> (8.4, 10.4)

### 4.4.3 Hazardous Drinking – The AUDIT screening tool

(Figure 4.4.5, Table 4.4.4, Table 4.4.5)

The Alcohol Use Disorders Identification Test (AUDIT) is a widely used screening instrument, developed by the World Health Organization, and intended for early identification of harmful drinking (Babor et al 1992). The AUDIT can also detect hazardous alcohol use with a high degree of accuracy. The question items were selected to best distinguish light drinkers from harmful drinkers (the list of questions can be found in Table 4.4.5).

We used a slightly modified version of the AUDIT to make it better reflect standard drink sizes in North America. The AUDIT's high volume drinking question ("How often do you have six or more drinks on one occasion?") was changed from a cut-off of six drinks on one occasion to a cut-off of five. This is consistent with the Adolescent Drinking Questionnaire (Jessor & Jessor 1977), Monitoring the Future (Johnston et al 2002), and other adolescent drinking questionnaires (Chung et al 2000).

The highest (worst) score possible on the AUDIT is forty. We define "hazardous drinking" as a score of eight or higher out of forty. In past years, we used a cut-off score of eleven (out of forty) on the AUDIT scale to indicate hazardous drinking. This was a conservative cut-off point. One study (Chung et al 2000) found that when a high cut-off point was used, the AUDIT had very low ability to detect alcohol disorders in youth. At a cut-off of nine, for example, that study found that the AUDIT only detected 49% of those identified by Diagnostic and Statistical Manual, Fourth Revision (DSM-IV) criteria for hazardous

drinking. Based on that study, Chung et al recommended an AUDIT score cut-off of four to detect alcohol disorders in teens. Another typical cut-off point used in alcohol studies (of adults) is eight out of forty (e.g., Bergman & Kallmen 2002) and that cut-off was adopted for the present survey. This cut-off score should be more sensitive to youth alcohol problems than the previous cut-off of eleven, but still specific enough to accurately identify youth with probable alcohol disorders, and conservative enough to avoid alarmism. We have gone back to the previous cycles of the NWOSDUS and re-calculated the AUDIT scores to reflect the cut-off of eight.

The AUDIT questions were not part of the 1997 survey (and OSDUS only implemented them in 1999), so only the 2001 and 2005 cycles of the NWOSDUS can be compared.

Figure 4.4.5 and Table 4.4.4 express the number of students scoring eight or higher on the AUDIT both as a percentage of all respondents and as a percentage of current drinkers.

Northwestern Ontario students are considerably more likely to engage in hazardous drinking than the average Ontario student, whether expressed as a percentage of all students (28.0% vs. 15.9%) or as percentage of current student drinkers (35.6% vs. 25.4%).

The male and female hazardous drinking rates were not significantly different. There were no significant differences in

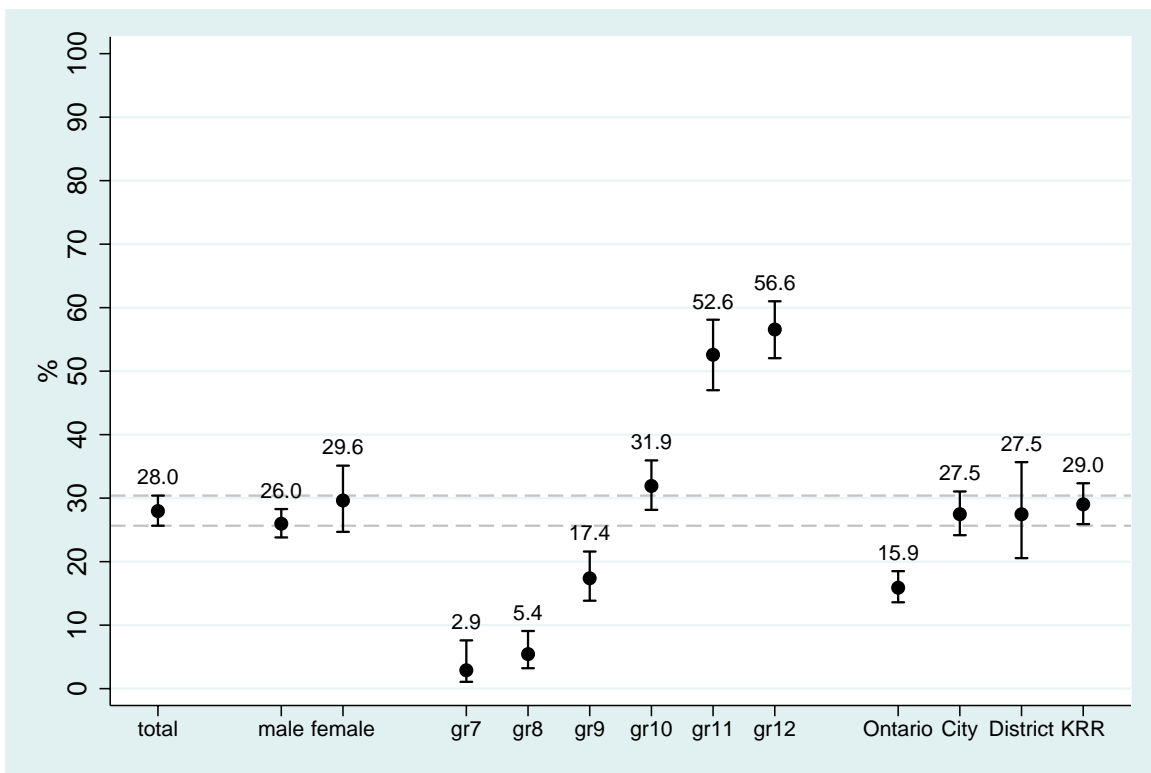
hazardous drinking rates among the three Northwestern Ontario regions.

Examined more closely, Table 4.4.5 indicates that Northwestern Ontario students scored substantially higher than the provincial average on every AUDIT question. This indicates that Northwestern Ontario students were much more likely to have crossed the line from social drinking to hazardous

and harmful drinking and alcohol dependence.

Some particularly striking findings were:

- almost 30% of Northwestern Ontario student drinkers had experienced an alcohol-related blackout in the last twelve months,
- over 20% reported an injury as a result of their drinking,
- over 13% reported being unable to stop drinking once they had started.



**Figure 4.4.5. Percentage of students who scored 8 or higher on the Alcohol Use Disorders Identification Test (AUDIT), with 95% confidence intervals, by sex, grade, and region, 2005.**

Table 4.4.4. Percentage of students scoring 8 or higher on the Alcohol Use Disorder Identification Test (AUDIT), 2001-2005

(N)	2001		2005	
	All respondents (2702)	Current drinkers (1998)	All respondents (1374)	Current drinkers (843)
Total	38.9 (27.1, 34.9)	41.1 (38.6, 43.6)	28.0 (25.7, 30.4)	35.8 (32.8, 38.6)
Sex				
Male	34.6 (28.7, 40.8)	44.7 (39.9, 49.6)	28.0 (23.8, 28.3)	38.9 (28.2, 33.7)
Female	25.5 (24.5, 28.7)	35.4 (34.4, 38.3)	29.6 (24.7, 35.1)	40.9 (34.1, 46.1)
Grade				
Grade 7	3.8 (2.3, 5.5)	7.5 (4.9, 11.3)	2.9 (1.1, 7.6)	9.9 (3.1, 23.5)
Grade 8	18.2 (6.4, 16.0)	15.6 (10.4, 25.4)	5.4 (3.2, 9.1)	11.5 (6.4, 19.7)
Grade 9	24.2 (21.1, 27.5)	31.7 (27.8, 35.9)	17.4 (13.8, 21.6)	28.4 (21.5, 32.0)
Grade 10	35.6 (34.2, 37.0)	44.2 (38.8, 49.8)	31.9 (28.2, 35.9)	42.9 (38.5, 47.5)
Grade 11	41.4 (38.1, 44.8)	48.1 (43.3, 52.9)	52.6 (47.0, 58.1)	60.1 (54.0, 65.9)
Grade 12	58.2 (50.7, 61.5)	61.4 (55.3, 67.2)	56.6 (52.0, 61.0)	62.4 (57.8, 66.8)
Region				
All Ontario	14.6 (12.2, 17.3)	23.0 (19.6, 26.8)	15.9 (13.6, 18.5)	25.4 (22.5, 28.7)
City of Thunder Bay	32.8 (27.7, 38.4)	43.7 (40.5, 47.0)	27.5 (24.2, 31.1)	35.2 (31.1, 39.7)
District of Thunder Bay	29.1 (23.0, 36.1)	39.4 (33.3, 45.8)	27.5 (20.6, 35.7)	34.5 (26.8, 43.1)
Kenora-Rainy River	28.3 (21.7, 35.9)	37.3 (31.1, 44.0)	28.0 (25.9, 32.3)	35.7 (33.0, 40.5)

**Table 4.4.5. Responses to the Alcohol Use Disorders Identification Test (AUDIT) questions, expressed as a percentage of all respondents and as a percentage of current drinkers, for Northwestern Ontario (NWODUS 2005) and for All Ontario (OSDUS 2005).**

Percent Responding "Yes" to AUDIT questions (N)	Northwestern Ontario (NWODUS 2005)		All Ontario (OSDUS 2005)	
	All respondents (1374)	Past year drinkers (843)	All respondents (4078)	Past year drinkers (2687)
1. Consumed alcohol during the past 12 months	66.7	100.0	62.0	100.0
2. Number of drinks usually have on typical day when drink (% reporting 3+ drinks)	40.0	50.0	27.4	43.0
3. Consumed 5 or more drinks on one occasion during the past 12 months	45.0	58.0	32.5	50.9
4. Were not able to stop drinking once you had started	13.3	17.1	7.8	12.1
5. Failed to do what was normally expected from you because of drinking	18.6	24.7	11.7	18.4
6. Needed a first alcoholic drink in the morning to get yourself going after a heavy drinking session	5.6	7.4	2.8	4.3
7. Had a feeling of guilt or remorse after drinking during past 12 months	18.2	22.9	10.0	15.4
8. Been unable to remember what happened the night before because you had been drinking during past 12 months	29.3	38.3	19.5	30.9
9. You or someone else ever been injured as a result of your drinking	21.3	25.5	12.0	17.7
10. Relative/friend or a doctor/health worker ever been concerned about your drinking or suggested that you cut down.	4.8	6.5	2.6	4.0

#### 4.4.4 Alcohol Acquisition

(Table 4.4.6)

**NOTE: We used a slightly different questionnaire in 2005 than in 2001 and alcohol acquisition was not queried. Thus, what follows is carried forward from the 2001 NWOSDUS.**

Over seventy-five percent of Northwestern Ontario students reported that it was easy or very easy to get alcohol when they wanted it, a statistically significant increase over 1997.

Ease of acquisition is an important determinant of whether or not students engage in drinking. Students who reported that alcohol was easy or very easy to acquire were:

- three times more likely to also report drinking in the past twelve months (OR [95% CI]: 3.3 [2.7, 4.1]),
- almost six times more likely to engage in binge drinking (OR [95% CI]: 5.7 [4.2, 7.7]),

- almost six times more likely to have an AUDIT score greater than eleven (OR [95% CI]: 5.7 [3.8, 8.7]),
- almost twice as likely to report an injury as a result of drinking (OR [95% CI]: 1.9 [1.2, 2.7]).

Students can acquire alcohol from a number of sources. Parents can legally offer it to them, friends can buy it for them, they can buy it for themselves, or they can acquire it in some other way (e.g., steal it from their parents). Younger students are most likely to be given alcohol by their parents or to acquire it in some “other” way. The number of students who are able to buy their own alcohol, or who have friends who can acquire alcohol for them, increases with age. Interestingly, 10%-15% of 17 and 18-year-old students are able to purchase alcohol for themselves.

**Table 4.4.6. Percentage of students who reported that alcohol is easy or very easy to acquire when they want it, 2001.**

		1997	2001
(N)		(2106)	(2702)
Total		<b>64.8</b>	<b>75.6 *</b>
(95% CI)		(59.4, 69.9)	(70.2, 80.3)
Sex	Male	<b>64.0</b>	<b>76.8 *</b>
		(57.0, 70.4)	(70.6, 82.0)
	Female	<b>65.7</b>	<b>74.1 *</b>
		(59.9, 71.0)	(69.2, 78.4)
Grade	Grade 7	<b>42.8</b>	<b>37.9</b>
		(37.4, 48.3)	(32.6, 43.6)
	Grade 8	--	<b>58.8</b>
			(49.9, 67.2)
	Grade 9	<b>72.5</b>	<b>77.0</b>
		(63.7, 79.9)	(71.8, 81.5)
	Grade 10	--	<b>81.2</b>
			(79.7, 82.7)
	Grade 11	<b>88.0</b>	<b>88.9</b>
		(85.7, 90.1)	(83.8, 92.6)
	Grade 12	--	<b>96.0</b>
			(92.5, 97.8)
	Grade 13	<b>95.8</b>	--
		(93.4, 97.4)	
Region	City of Thunder Bay	<b>56.5</b>	<b>76.8 *</b>
		(41.5, 70.3)	(68.6, 83.3)
	District of Thunder Bay	<b>77.5</b>	<b>72.2</b>
		(71.2, 82.8)	(65.7, 77.9)
	Kenora-Rainy River	<b>68.4</b>	<b>74.7</b>
		(56.9, 77.9)	(66.1, 81.6)

\* Difference between 1997 and 2001 significant at  $p < 0.05$

## 4.5 Cannabis Use

(Table 4.5.1, Figure 4.5.1, Figure 4.5.2)

The main active chemical in marijuana, responsible for its psychoactive effects, is THC (delta-9-tetrahydrocannabinol). Marijuana's effects on the user depend on the amount of THC it contains. The THC potency of marijuana is said to have increased since the 1960s but has been about the same since the mid-1980s.

After tobacco, alcohol, and caffeine, cannabis is the most commonly used psychoactive (mood-altering) drug in Canada. There is much debate over whether cannabis is addictive. It does not appear to be addictive to the degree that nicotine, alcohol, cocaine, and heroin are addictive. However, regular, heavy users seem to exhibit some tolerance and at least psychological if not physical dependence. This is difficult

to determine, however, because withdrawal symptoms are very mild and ill defined.

Many think that marijuana should be legalized for medicinal use. In Canada, the Marijuana Medical Access Regulations, which allows some people to gain legal authority to possess and/or grow marijuana for medical purposes, came into force on July 30, 2001, and Health Canada set up the Office of Cannabis Medical Access to administer the new regulations.

The main threat to youth from cannabis use is related to the effect of impaired motor skills, coordination, and judgment on driving. THC, the active ingredient, has been detected in many bodies of fatally injured drivers and pedestrians in Canada and the United States.

In addition, chronic, heavy use may lead to decreased motivation and interest, as well as difficulties with memory and concentration, which could potentially harm youths' performance at school. With long term heavy use, respiratory damage from smoking marijuana can occur.

Cannabis use is on the rise. According to the Canadian Addiction Survey, between 1994 and 2004, the rate of past-year cannabis use among people aged 15 and over doubled from 7% to 14% (Adlaf et al 2005). It also found that 45% of

Canadians have used cannabis in their lifetime.

According to the Ontario Student Drug Use Survey, which has been tracking cannabis use among Ontario students since 1977, cannabis use peaked in 1979 at 29.1%, then dropped through the 1980s and early 1990s, but then rose and peaked again in 2003 at 27.8% (Adlaf & Paglia 2005, p. 75).

According to Table 4.5.1, there was a significant increase in cannabis use in Northwestern Ontario between 1997 and 2001 from 25.5% to 36.9%, and then decreased slightly in 2005 to 31.7%. There were more substantial declines among specific groups: males, grade 8 and 9 students, and District of Thunder Bay students.

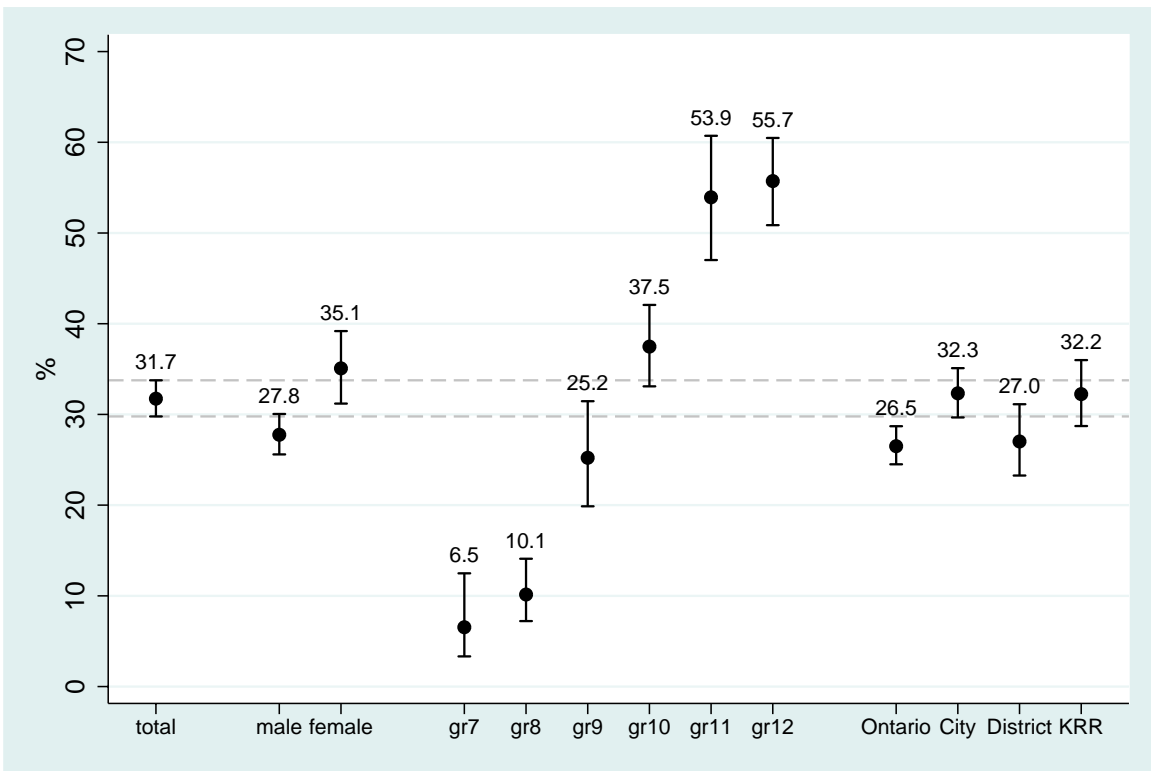
Like alcohol use, females were more likely to report past year cannabis use than males. There were no significant differences among the three regions of Northwestern Ontario. The highest rates were among grade 11 and 12 students at 53.9% and 55.7%, respectively.

Cannabis use in Northwestern Ontario was significantly higher than the provincial average (31.7% vs. 26.5%).

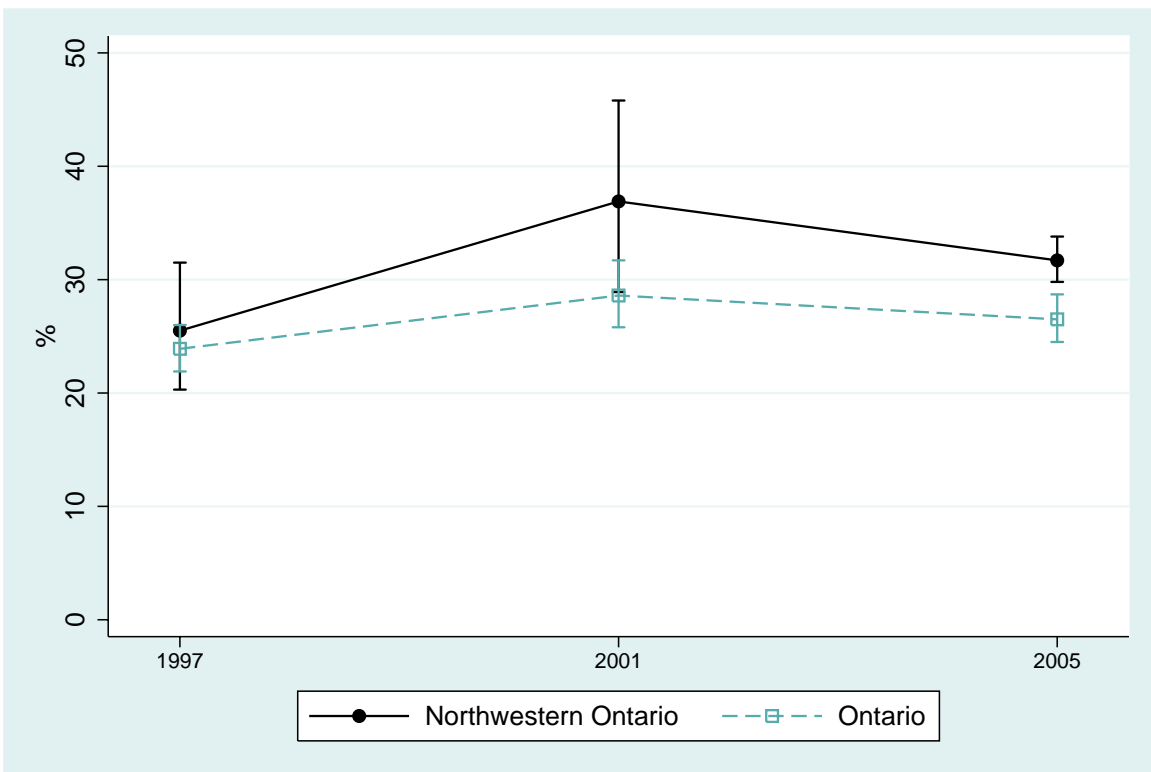
Table 4.5.2 shows that the decrease in cannabis use was concentrated in the lowest frequency category. The prevalence of more frequent (10+ times/year) cannabis use did not change.

**Table 4.5.1. Percentage of students reporting past year cannabis use by sex, grade, and region, 1997-2005.**

Year		1997	2001	2005
(N)		(2238)	(2704)	(1374)
Total		<b>25.5</b>	<b>36.9</b>	<b>31.7</b>
(95% CI)		(20.3, 31.5)	(28.9, 45.8)	(29.8, 33.8)
Sex	Male	<b>24.2</b>	<b>38.4</b>	<b>27.8</b>
		(18.1, 31.5)	(28.0, 49.9)	(25.6, 30.0)
	Female	<b>26.9</b>	<b>35.2</b>	<b>35.1</b>
		(21.9, 32.5)	(29.6, 41.3)	(31.2, 39.2)
Grade	Grade 7	<b>7.4</b>	<b>7.1</b>	<b>6.5</b>
		(4.7, 11.5)	(4.3, 11.3)	(3.3, 12.5)
	Grade 8	--	<b>18.8</b>	<b>10.1</b>
			(13.3, 26.0)	(7.2, 14.1)
	Grade 9	<b>34.5</b>	<b>40.8</b>	<b>25.2</b>
		(24.1, 46.6)	(34.3, 47.7)	(19.9, 31.5)
	Grade 10	--	<b>39.8</b>	<b>37.5</b>
			(35.4, 44.4)	(33.1, 42.1)
Grade 11	<b>45.3</b>	<b>50.5</b>	<b>53.9</b>	
	(38.5, 52.3)	(40.6, 60.3)	(47.0, 60.7)	
Grade 12	--	<b>53.2</b>	<b>55.7</b>	
		(41.2, 64.7)	(50.9, 60.5)	
Grade 13	<b>45.9</b>	--	--	
	(35.4, 56.7)			
Region	All Ontario	<b>24.9</b>	<b>29.8</b>	<b>26.5</b>
		(23.3, 26.5)	(27.2, 32.6)	(24.5, 28.7)
	City of Thunder Bay	<b>17.7</b>	<b>39.2</b>	<b>32.3</b>
		(10.4, 28.5)	(26.6, 53.5)	(29.7, 35.1)
	District of Thunder Bay	<b>39.9</b>	<b>37.1</b>	<b>27.0</b>
	(34.3, 45.7)	(32.6, 41.8)	(23.3, 31.1)	
Kenora-Rainy River	<b>27.9</b>	<b>33.1</b>	<b>32.2</b>	
	(17.4, 41.6)	(26.3, 40.8)	(28.7, 36.0)	



**Figure 4.5.1. Past year cannabis use by sex, grade, and region, with 95% confidence intervals, 2005.**



**Figure 4.5.2. Past year cannabis use by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

**Table 4.5.2. Frequency of using cannabis in the twelve months prior to the survey, Northwestern Ontario, 1997-2005.**

	1997 (2238)	2001 (2689)	2005 (1374)
Never in past year	<b>74.5</b> (68.5, 79.7)	<b>63.1</b> (54.2, 71.1)	<b>68.3</b> (66.2, 70.2)
1 to 9 times	<b>14.9</b> (11.8, 18.6)	<b>19.8</b> (17.6, 22.3)	<b>13.7</b> (13.2, 14.2)
10 to 39 times	<b>6.0</b> (4.3, 8.2)	<b>8.4</b> (5.4, 12.9)	<b>8.3</b> (6.9, 9.8)
40 or more times	<b>4.6</b> (3.3, 6.4)	<b>8.7</b> (6.2, 12.0)	<b>9.8</b> (7.7, 12.3)

#### **4.6 Use of Glue and other Solvents**

*(Table 4.6.1, Table 4.6.2)*

**NOTE: We used a slightly different questionnaire in 2005 and the use of glue and other solvents was not queried. Thus, what follows is carried forward from the 2001 NWOSDUS.**

Glue and other solvents, such as gasoline, hair spray, poppers, paint thinner, etc., are toxic chemicals that are sometimes used as a cheap, accessible substitute for alcohol. When inhaled (“huffed” or “sniffed”), glue and solvents can have major health consequences. Permanent brain damage from sniffing can cause irreversible problems with cognition, movement, vision, and hearing. Inhaling these toxic chemicals can also damage the heart, lungs, liver, and kidneys. Use of inhalants often starts early. Research suggests that chronic or long-term inhalant users are among the most difficult to treat and they may experience multiple psychological and social problems.

The sniffing of glue and other solvents remained constant among Northwestern

Ontario students between 1997 and 2001, while it increased in the province as a whole during the same time period, especially in Toronto (Adlaf & Paglia 2001). However, of all of the drugs in this survey, this category may be the most susceptible to bias because of exclusion criteria. Solvent inhalation is often considered a northern problem because many remote areas are “dry” and/or inaccessible to those who sell street drugs. Thus, often the only way for students to get high in very remote communities is to sniff household solvents, glue, or gasoline. Unfortunately, for cost reasons, very remote communities were excluded from both the NWOSDUS and the OSDUS. The results for this category of drug should be considered in that light.

With that caveat, Table 4.6.1 and Table 4.6.2 show that the rate of glue and other solvent use observed by this study was statistically significantly lower than the provincial rate. The Northwestern Ontario glue use rate of 1.7% was about one-half of the provincial rate of 3.0%;

and the Northwestern Ontario “other solvent” use rate was 3.2% compared to 5.7% for the province.

Notably, the age trend for glue and other solvent use is the opposite of that for other drugs. Usually, drug use increases

with grade, but for glue and other solvents, younger students are far more likely to use. This is likely an access issue, with glue and solvent use decreasing as other drugs – especially alcohol – become more accessible with increasing age.

#### 4.6.1 Glue

**Table 4.6.1. Percentage of students reporting past year glue use by sex, grade, and region, 1997-2001. NOTE: The use of glue was not queried on the 2005 NWOSDUS. These results are carried forward from 2001.**

Year		1997	2001
(N)		(2238)	(2704)
Total		<b>2.1</b>	<b>1.7</b>
(95% CI)		(1.4, 3.1)	(1.3, 2.3)
Sex	Male	<b>1.7</b>	<b>2.0</b>
		(1.1, 2.7)	(1.2, 3.2)
	Female	<b>2.4</b>	<b>1.4</b>
		(1.3, 4.4)	(0.9, 2.3)
Grade	Grade 7	<b>3.2</b>	<b>5.2</b>
		(1.9, 5.2)	(3.4, 7.9)
	Grade 8	--	<b>1.6</b>
		--	(0.9, 2.8)
	Grade 9	<b>1.6</b>	<b>1.9</b>
		(0.8, 3.1)	(1.0, 3.5)
	Grade 10	--	<b>1.1</b>
		--	(0.5, 2.6)
	Grade 11	<b>0.8</b>	<b>1.3</b>
		(0.3, 2.1)	(0.5, 3.2)
	Grade 12	--	<b>0.1</b>
		--	(0.0, 1.0)
	Grade 13	<b>0.5</b>	--
		(0.1, 2.6)	--
Region	All Ontario	<b>1.5</b>	<b>3.0 *</b>
		(1.2, 1.8)	(2.4, 3.8)
	City of Thunder Bay	<b>2.7</b>	<b>1.2 *</b>
		(1.5, 5.0)	(0.8, 1.8)
	District of Thunder Bay	<b>2.1</b>	<b>3.5</b>
	(0.9, 4.7)	(1.9, 6.6)	
	Kenora-Rainy River	<b>1.3</b>	<b>2.1</b>
		(0.7, 2.6)	(1.4, 3.1)

\* Difference between 1997 and 2001 significant at  $p < 0.05$

## 4.6.2 Solvents Other Than Glue

**Table 4.6.2. Percentage of students reporting past year solvent (other than glue) use by sex, grade, and region, 1997-2001. NOTE: The use of solvents was not queried on the 2005 NWOSDUS. These results are carried forward from 2001.**

Year		1997	2001
(N)		(2238)	(2704)
Total		<b>5.1</b>	<b>3.2</b>
(95% CI)		(2.9, 8.6)	(2.5, 3.9)
Sex	Male	<b>4.1</b>	<b>3.5</b>
		(2.0, 8.3)	(2.3, 5.3)
	Female	<b>6.0</b>	<b>2.7 *</b>
		(3.7, 9.7)	(2.1, 3.6)
Grade	Grade 7	<b>7.9</b>	<b>7.5</b>
		(3.8, 15.9)	(5.3, 10.6)
	Grade 8	--	<b>3.3</b>
		--	(2.3, 4.8)
	Grade 9	<b>4.6</b>	<b>3.9</b>
		(3.1, 6.7)	(2.5, 6.0)
	Grade 10	--	<b>4.1</b>
		--	(2.2, 7.4)
	Grade 11	<b>1.4</b>	<b>1.3</b>
		(0.9, 2.3)	(0.5, 3.1)
	Grade 12	--	<b>0.3</b>
		--	(0.1, 1.0)
	Grade 13	<b>0.2</b>	--
		(0.0, 2.4)	--
Region	All Ontario	<b>2.6</b>	<b>5.7 *</b>
		(2.0, 3.2)	(4.8, 6.8)
	City of Thunder Bay	<b>7.4</b>	<b>3.1</b>
		(3.1, 17.0)	(2.3, 4.3)
	District of Thunder Bay	<b>4.2</b>	<b>4.9</b>
		(2.5, 7.1)	(3.2, 7.4)
	Kenora-Rainy River	<b>2.9</b>	<b>2.6</b>
		(1.6, 5.1)	(1.9, 3.5)

\* Difference between 1997 and 2001 significant at  $p < 0.05$

## 4.7 The Illicit Use of Prescription Drugs

Prescription drugs can be obtained illegally and used recreationally by students for their effects on the central nervous system. The NWOSDUS has asked questions about students' illicit use of three major classes of prescription

drugs: barbiturates, stimulants other than cocaine, and tranquilizers. In 2005, we also added a question about the specific use of OxyContin. We have also stopped reporting on the use of barbiturates because the legitimate use and

availability of barbiturates has declined in recent years, being largely replaced by tranquilizers such as benzodiazepines, and it is not clear whether students know what barbiturates are.

It is important to note a few limitations with these questionnaire items. These limitations apply equally to the questionnaire items on licit and illicit prescription drug use. Unlike questions on alcohol, cannabis, or cocaine, which are well known to students, it is likely that some students were unable to match their experiences with the descriptors on the questionnaire. For example, a doctor may give someone “something to help them sleep” without explaining that the pill is a tranquilizer. A student may take medication for attention deficit hyperactivity disorder (ADHD), but not realize that the amphetamine or Ritalin he or she is taking is actually a stimulant. In the questionnaire, we provided synonyms (e.g., “uppers” and “diet pills” for stimulants; “Valium”, “tranqs”, “5’s”, and “10’s” for tranquilizers) to help students understand

the drug classes. However, unlike the better-known recreational drugs, there is a greater chance of misunderstanding.

It is interesting to consider in what direction any misunderstanding is likely to push the results. Students who do not recognize a drug item on the questionnaire are more likely to indicate not having used the drug. We know this because we include a fictitious drug on the survey, which very few students indicate having used. As a precaution against inflated rates due to false reporting, we exclude those few students. This precaution makes it unlikely that the students included in the analysis would claim to have taken a drug that they had not. Rather, it is more likely that some students had used a drug but, failing to recognize the questionnaire’s terminology, did not report it on the questionnaire. Based on that logic, it is likely that the rates of illicit prescription drug use captured by this study are underestimated and, in reality, are somewhat higher than reported here.

#### 4.7.1 Non-Medical Use of OxyContin (Table 4.7.1, Figure 4.7.1)

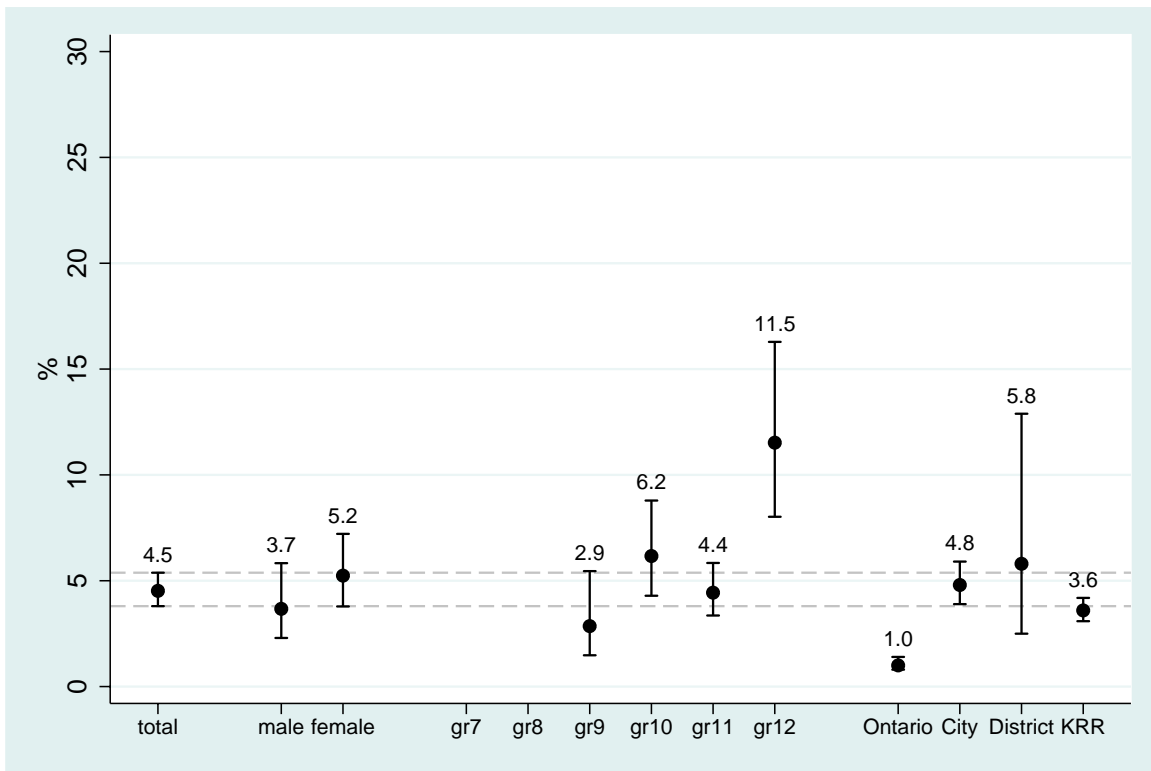
OxyContin is one of the trade names for the drug oxycodone, and arguably the best known among youth. Percocet and Percodan are other well-known trade names that include oxycodone. Oxycodone is a legitimate and indispensable drug for use in pain management and completely legal with a prescription. Unfortunately, like all opiates, oxycodone has addiction potential, and illicit use can become problematic for some people. Although

this question addressed only the use of OxyContin specifically, a future question will ask about the non-prescription use of the whole class of prescription opioids.

In 2005, 4.5% of students reported past year non-medical use of OxyContin (Table 4.7.1, Figure 4.7.1). This was much higher than the provincial rate of 1%. The highest rate was 11.5% among grade 12 students.

**Table 4.7.1. Percentage of students reporting past year non-medical use of OxyContin by sex, grade, and region, 2005.**

Year		2005
(N)		(1374)
Total		<b>4.5</b>
(95% CI)		(3.8, 5.4)
Sex	Male	<b>3.7</b>
		(2.3, 5.8)
	Female	<b>5.2</b>
		(3.8, 7.2)
Grade	Grade 7	--
	Grade 8	--
	Grade 9	<b>2.9</b>
		(1.5, 5.5)
	Grade 10	<b>6.2</b>
		(4.3, 8.8)
	Grade 11	<b>4.4</b>
		(3.4, 5.8)
	Grade 12	<b>11.5</b>
		(8.0, 16.3)
Region	All Ontario	<b>1.0</b>
		(0.8, 1.4)
	City of Thunder Bay	<b>4.8</b>
		(3.9, 5.9)
	District of Thunder Bay	<b>5.8</b>
		(2.5, 12.9)
	Kenora-Rainy River	<b>3.6</b>
		(3.1, 4.2)



**Figure 4.7.1. Past year non-medical use of OxyContin by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 7 and 8 are too small to be reported.)**

#### 4.7.2 Non-Medical Use of Stimulants

(Table 4.7.2, Figure 4.7.2, Figure 4.7.3)

Central nervous system stimulants (“uppers”) are used for the artificial sense of well-being they induce. Prescription stimulants include Ritalin, cocaine, amphetamines, and appetite suppressants. Illicit cocaine use is described separately in section 4.12. Medical and non-medical use of Ritalin use is described in section 4.16. This section describes the use of stimulants by youth who were not told to do so by a physician.

Amphetamines belong to the group of medicines called central nervous system (CNS) stimulants. They are used to treat attention-deficit hyperactivity disorder (ADHD). Amphetamines increase attention and decrease restlessness in

patients who are overactive, unable to concentrate for very long or are easily distracted, and have unstable emotions. Amphetamine and dextroamphetamine are also used in the treatment of narcolepsy (uncontrollable desire for or sudden attacks of deep sleep) (U.S. National Library of Medicine 2002a).

Another use of CNS stimulants is as appetite suppressants (diet pills). In Canada, three prescription appetite suppressants are available: Ionamin (phentermine), Sanorex (mazindol), Tenuate (diethylpropion). However, illicit appetite suppressant use may also include benzphetamine, which is not commercially available in Canada. These drugs may cause some people to

feel a false sense of well-being or to become dizzy, lightheaded, drowsy, or less alert than they are normally. Taking stimulants for a long time can result in psychological and physical dependence (U.S. National Library of Medicine 2002b).

Sometimes dealers sell caffeine, ephedrine, and phenylpropanolamine as amphetamine look-alikes, so it is possible that not all students who report non-medical stimulant use are actually using amphetamines.

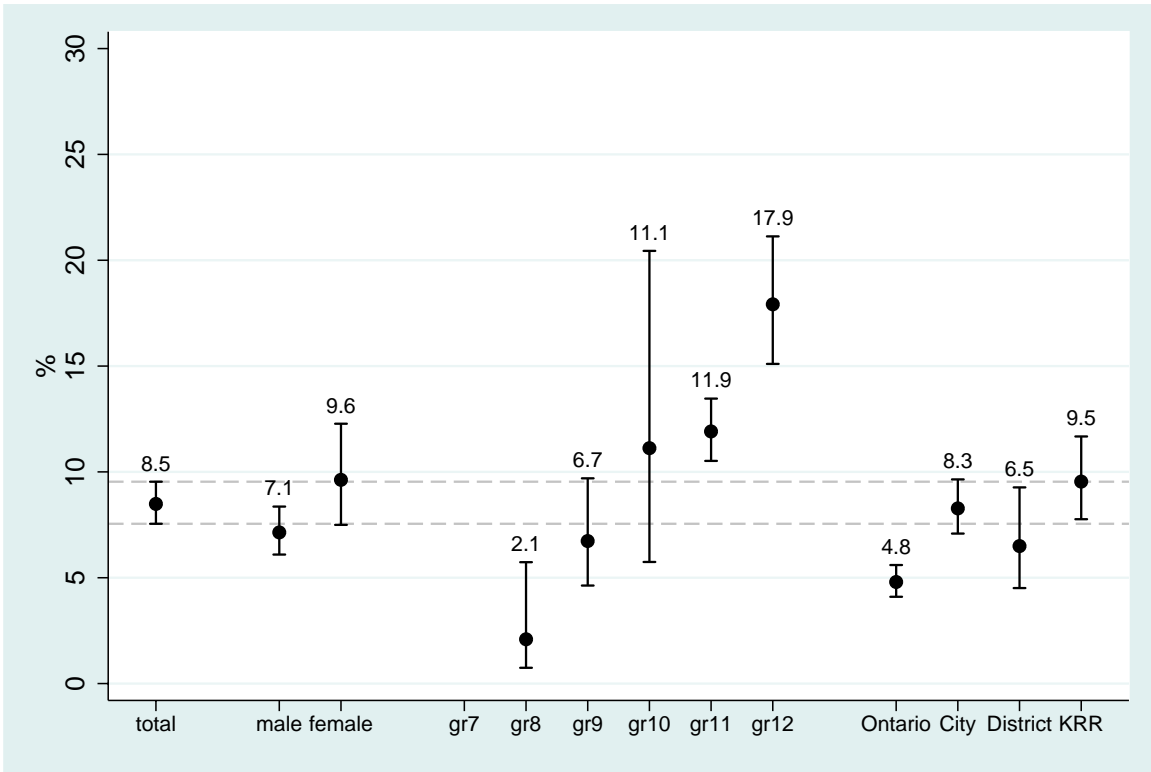
The illicit use of stimulants (other than cocaine) by students in Northwestern

Ontario has been on the increase since 1997, while it has been decreasing provincially. In 2005, Northwestern Ontario students were considerably more likely to use stimulants than the provincial average (8.5% vs. 4.8%).

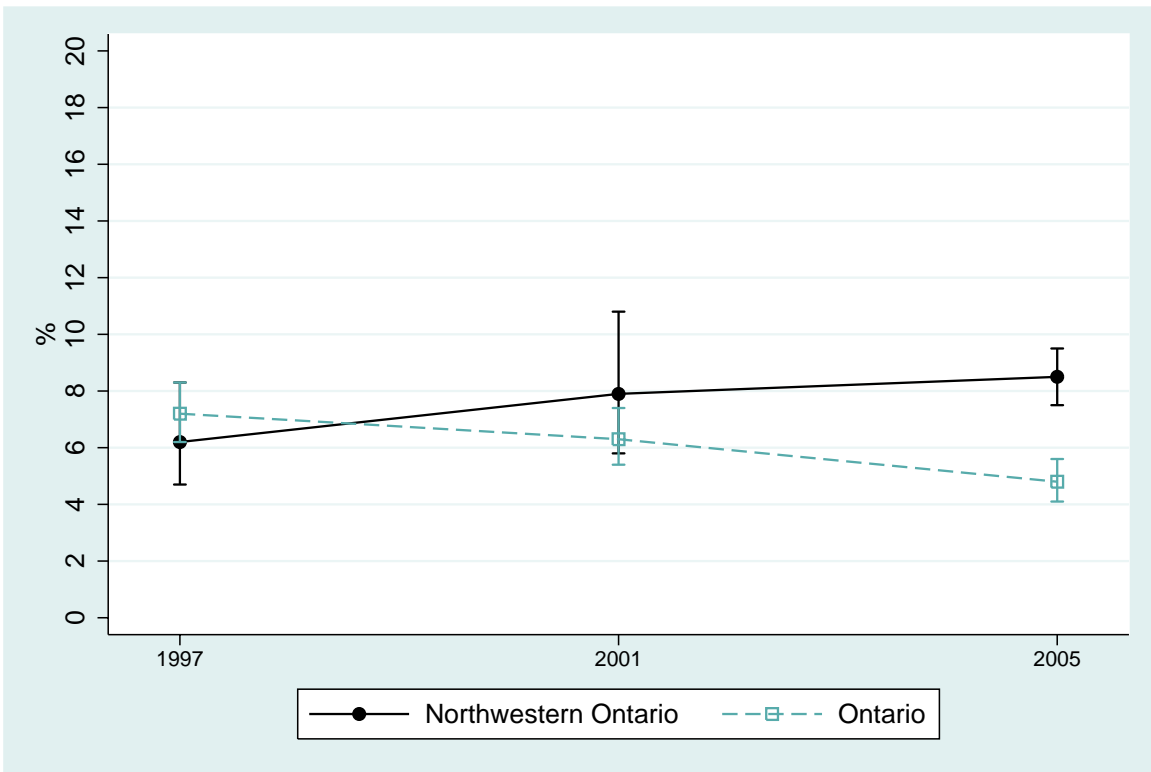
Whereas in 1997 it appeared that girls were more likely to use stimulants than boys, that difference largely disappeared in 2001 and 2005. The highest rate was among grade 12 students at 17.9%. In 2005, there were no significant differences among the three regions of Northwestern Ontario.

**Table 4.7.2. Percentage of students reporting past year non-medical use of stimulants by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>6.2</b> (4.7, 8.3)	<b>7.9</b> (5.8, 10.8)	<b>8.5</b> (7.5, 9.5)
Sex			
Male	<b>4.4</b> (3.2, 5.9)	<b>7.0</b> (5.7, 8.6)	<b>7.1</b> (6.1, 8.4)
Female	<b>8.1</b> (5.3, 12.2)	<b>9.1</b> (5.8, 13.9)	<b>9.6</b> (7.5, 12.3)
Grade			
Grade 7	<b>1.8</b> (1.0, 3.3)	<b>2.4</b> (0.8, 7.2)	--
Grade 8	--	<b>4.9</b> (2.8, 8.6)	<b>2.1</b> (0.7, 5.7)
Grade 9	<b>9.3</b> (6.1, 13.8)	<b>6.3</b> (3.7, 10.8)	<b>6.7</b> (4.6, 9.7)
Grade 10	--	<b>7.3</b> (6.4, 8.2)	<b>11.1</b> (5.7, 20.4)
Grade 11	<b>10.4</b> (6.9, 15.5)	<b>8.3</b> (4.9, 13.7)	<b>11.9</b> (10.5, 13.5)
Grade 12	--	<b>15.2</b> (8.3, 26.0)	<b>17.9</b> (15.1, 21.1)
Grade 13	<b>10.1</b> (4.9, 19.8)	--	--
Region			
All Ontario	<b>6.6</b> (5.8, 7.4)	<b>6.4</b> (5.4, 7.5)	<b>4.8</b> (4.1, 5.6)
City of Thunder Bay	<b>4.2</b> (2.0, 8.8)	<b>7.5</b> (4.0, 13.6)	<b>8.3</b> (7.1, 9.6)
District of Thunder Bay	<b>10.9</b> (7.5, 15.5)	<b>13.6</b> (10.9, 16.9)	<b>6.5</b> (4.5, 9.3)
Kenora-Rainy River	<b>6.5</b> (3.8, 10.8)	<b>6.9</b> (4.8, 9.9)	<b>9.5</b> (7.8, 11.7)



**Figure 4.7.2. Past year non-medical use of stimulants by sex, grade, and region, with 95% confidence intervals, 2005. (Estimate for grade 7 too small to be reported.)**



**Figure 4.7.3. Past year non-medical use of stimulants by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

### 4.7.3 Non-Medical Use of Tranquilizers

*(Table 4.7.3, Figure 4.7.4, Figure 4.7.5)*

This section describes the use of tranquilizers by teens that were not told to do so by a physician.

Tranquilizers belong to the class of central nervous system depressants. Tranquilizers decrease anxiety as well as induce sleep. These drugs belong to a larger group of substances known as the sedative-hypnotics, which slow or sedate the central nervous. Diazepam (Valium), lorazepam (Ativan), triazolam (Halcion), and oxazepam (Serax) are examples of tranquilizers.

The short-term effects of tranquilizers in normal doses include relaxation, drowsiness, reduced tension, and

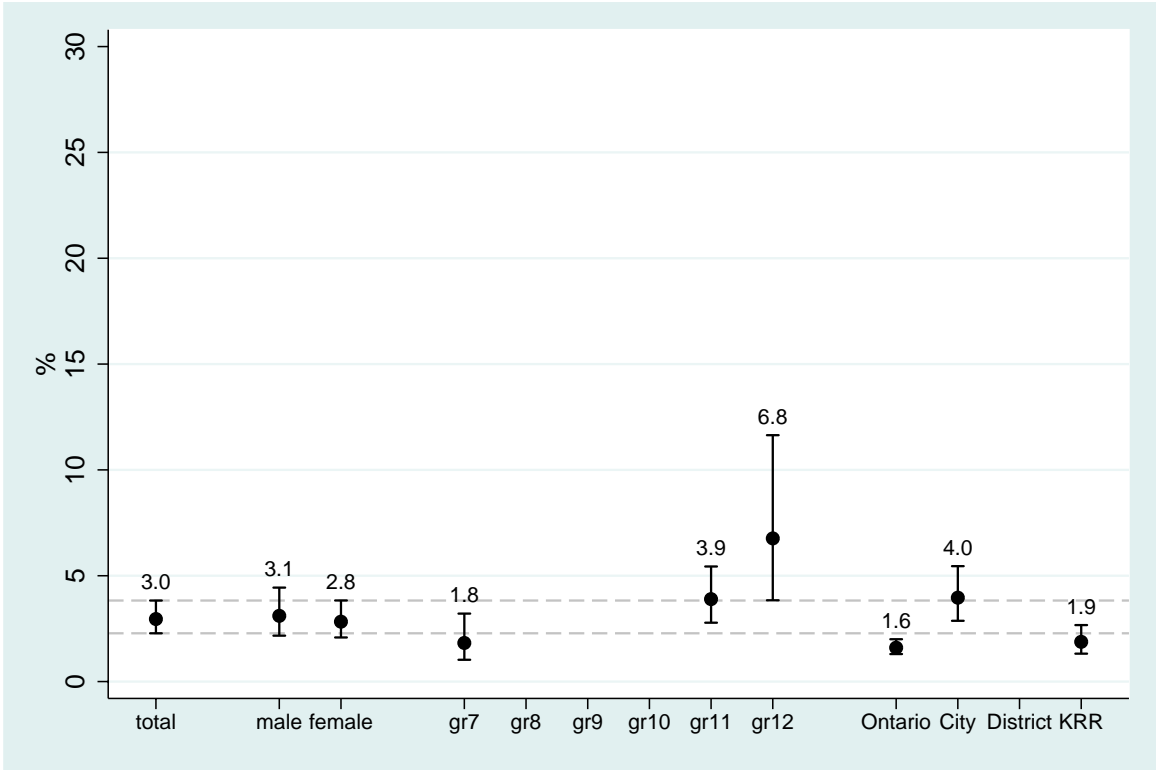
feelings of well-being. In large doses, tranquilizers can make you become unconscious. Tranquilizer use causes dependence and tolerance.

Table 4.7.3 shows that in 2005 illicit tranquilizer use reported by students in Northwestern Ontario was at 3.0%. There was no significant difference between male and female use, but there was significantly increasing usage with grade. District of Thunder Bay students reported lower tranquilizer use in 2005, while use among City of Thunder Bay students was up.

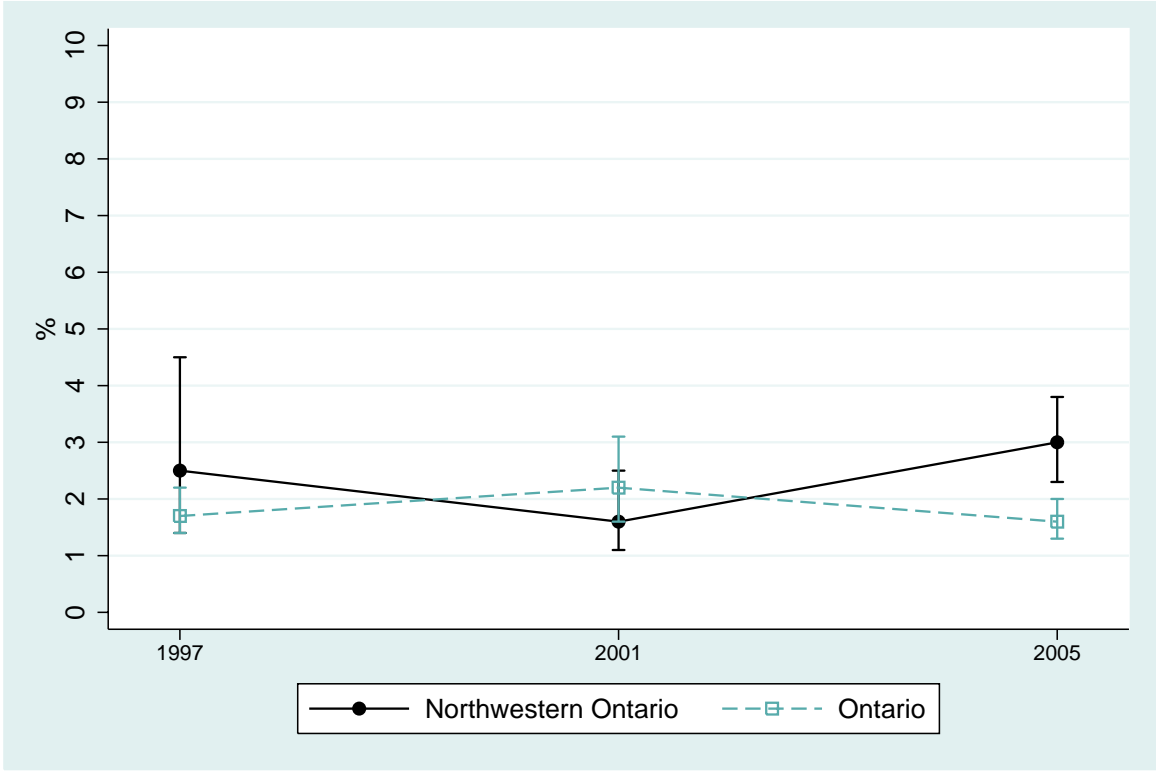
Figure 4.7.5 indicates no particular trend over time in tranquilizer use.

**Table 4.7.3. Percentage of students reporting past year non-medical use of tranquilizers by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>2.5</b> (1.4, 4.5)	<b>1.6</b> (1.1, 2.5)	<b>3.0</b> (2.3, 3.8)
Sex			
Male	<b>1.1</b> (0.7, 1.7)	<b>1.8</b> (1.1, 2.9)	<b>3.1</b> (2.2, 4.4)
Female	<b>4.0</b> (2.0, 7.9)	<b>1.4</b> (0.7, 2.6)	<b>2.8</b> (2.1, 3.8)
Grade			
Grade 7	<b>2.0</b> (0.5, 8.2)	<b>0.7</b> (0.2, 3.0)	<b>1.8</b> (1.0, 3.2)
Grade 8	--	<b>2.0</b> (1.5, 2.6)	--
Grade 9	<b>4.0</b> (2.6, 6.0)	<b>1.5</b> (0.7, 3.0)	--
Grade 10	--	<b>2.1</b> (0.9, 4.6)	--
Grade 11	<b>2.2</b> (1.5, 3.2)	<b>3.2</b> (1.9, 5.5)	<b>3.9</b> (2.8, 5.4)
Grade 12	--	<b>0.5</b> (0.1, 1.8)	<b>6.8</b> (3.8, 11.6)
Grade 13	<b>1.4</b> (0.6, 3.5)	--	--
Region			
All Ontario	<b>1.7</b> (1.4, 2.0)	<b>2.2</b> (1.6, 3.0)	<b>1.6</b> (1.3, 2.0)
City of Thunder Bay	<b>3.0</b> (1.0, 8.5)	<b>1.3</b> (0.5, 3.0)	<b>4.0</b> (2.9, 5.5)
District of Thunder Bay	<b>2.9</b> (1.9, 4.5)	<b>3.2</b> (1.3, 7.6)	--
Kenora-Rainy River	<b>1.9</b> (0.7, 4.9)	<b>1.7</b> (0.9, 3.1)	<b>1.9</b> (1.3, 2.7)



**Figure 4.7.4. Past year non-medical use of tranquilizers by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 8-10 and for the District of Thunder Bay are too small to be reported.)**



**Figure 4.7.5. Past year non-medical use of tranquilizers by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

## 4.8 LSD Use

*(Table 4.8.1, Figure 4.8.1, Figure 4.8.2)*

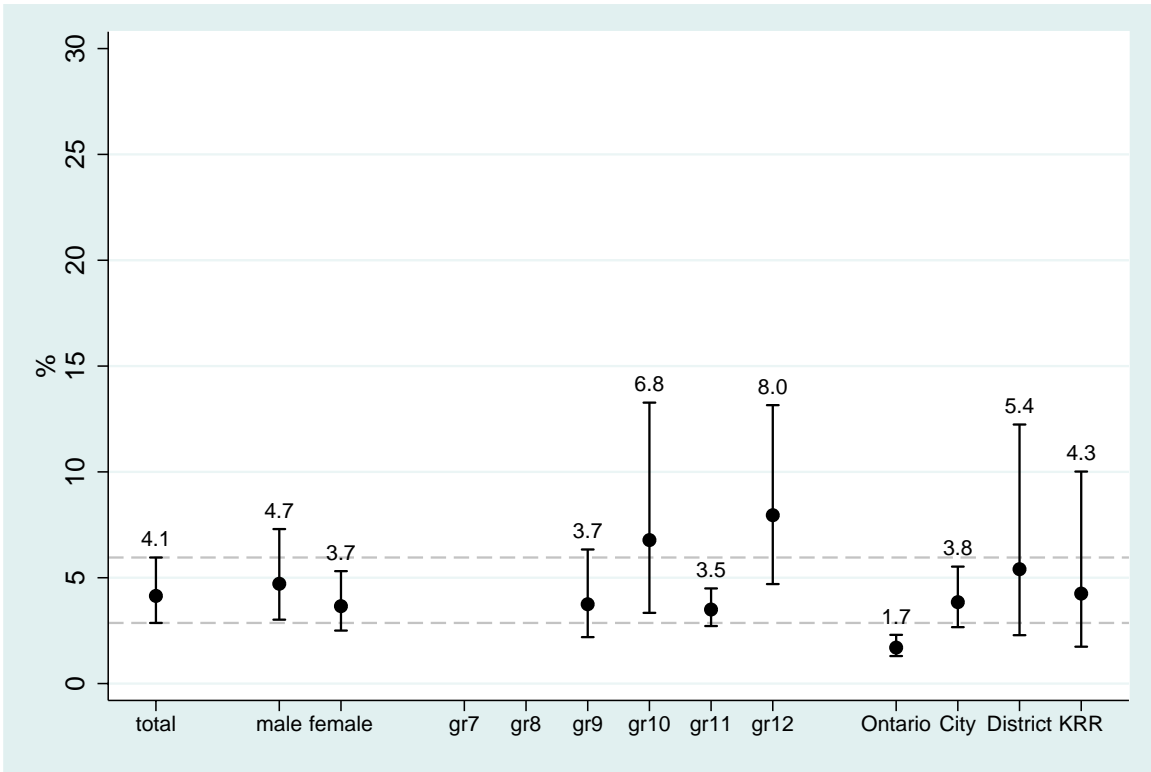
Lysergic acid diethylamide (LSD) was discovered in 1938 and has been illegal in Canada since 1969. It causes hallucinations and is one of the most potent mood-altering chemicals known. The user experience varies from profoundly positive to terrifying. The effects can be unpredictable and depend greatly on the amount taken as well as the user's personality, mood, and setting. The user's sense of time, place, and self are altered, and emotions are felt more intensely. Users often experience visual hallucinations. Flashbacks and other adverse effects, including psychoses, can occur in healthy people, but are more likely in those with underlying personality disorders.

LSD is not considered an addictive drug since it does not produce physical dependence or compulsive drug-seeking behavior as do cocaine, amphetamine, heroin, alcohol, and nicotine (U.S. National Institute on Drug Abuse 2002d).

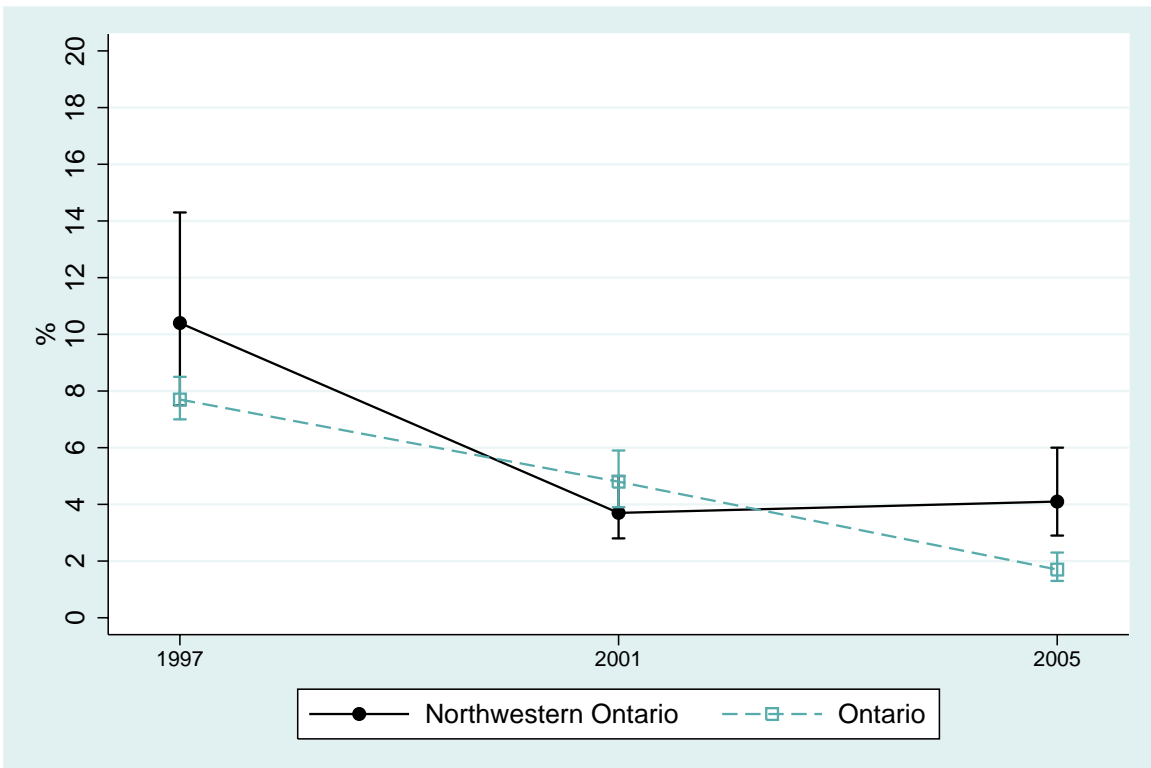
The use of LSD in Northwestern Ontario dropped significantly from 10.4% in 1997 to 3.7% in 2001 and 4.1% in 2005, echoing a similar drop in LSD use Ontario-wide (Table 4.8.1). The drop from 1997 to 2001 and then the plateau into 2005 are similar across all grades, regions, and both sexes.

**Table 4.8.1. Percentage of students reporting past year LSD use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>10.4</b> (7.5, 14.3)	<b>3.7</b> (2.8, 5.0)	<b>4.1</b> (2.9, 6.0)
Sex			
Male	<b>9.2</b> (6.7, 12.5)	<b>4.5</b> (2.6, 7.7)	<b>4.7</b> (3.0, 2.3)
Female	<b>11.6</b> (7.7, 17.1)	<b>2.8</b> (2.1, 3.8)	<b>3.7</b> (2.5, 5.3)
Grade			
Grade 7	<b>4.4</b> (2.0, 9.5)	<b>1.0</b> (0.3, 3.1)	--
Grade 8	--	<b>2.9</b> (1.7, 4.9)	--
Grade 9	<b>14.4</b> (7.8, 25.0)	<b>4.1</b> (3.3, 5.0)	<b>3.7</b> (2.2, 6.3)
Grade 10	--	<b>4.3</b> (2.9, 6.4)	<b>6.8</b> (3.3, 13.3)
Grade 11	<b>18.5</b> (14.7, 23.1)	<b>3.1</b> (1.8, 5.4)	<b>3.5</b> (2.7, 4.5)
Grade 12	--	<b>6.0</b> (2.0, 16.1)	<b>8.0</b> (4.7, 13.2)
Grade 13	<b>10.1</b> (6.9, 14.6)	--	--
Region			
All Ontario	<b>7.6</b> (6.8, 8.4)	<b>4.5</b> (3.6, 5.6)	<b>1.7</b> (1.3, 2.3)
City of Thunder Bay	<b>8.6</b> (4.4, 16.0)	<b>4.2</b> (2.5, 7.0)	<b>3.8</b> (2.7, 5.5)
District of Thunder Bay	<b>13.4</b> (10.7, 16.6)	<b>4.6</b> (2.7, 7.8)	<b>5.4</b> (2.3, 12.2)
Kenora-Rainy River	<b>11.1</b> (5.6, 20.7)	<b>2.6</b> (1.9, 3.6)	<b>4.3</b> (1.7, 10.0)



**Figure 4.8.1. Past year LSD use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 7 and 8 are too small to be reported.)**



**Figure 4.8.2. Past year use of LSD by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

## 4.9 PCP Use

(Table 4.9.1, Figure 4.9.1, Figure 4.9.2)

PCP (phencyclidine) was developed in the 1950s as an anaesthetic, but its use in humans was never approved because of its negative psychological effects on patients in clinical trials. PCP is illegally manufactured in laboratories and is sold on the street as powder, tablets, capsules, or mixed with marijuana or leafy herbs like parsley or mint (U.S. National Institute on Drug Abuse 2002g).

PCP is an unpleasant, risky drug. Even at low doses, it has a reputation for causing bad reactions. It can lead to psychological dependence, craving, and compulsive PCP-seeking behavior. PCP can cause effects that mimic the full range of symptoms of schizophrenia, such as delusions, paranoia, disordered thinking, a sensation of distance from one's environment, and catatonia (U.S. National Institute on Drug Abuse 2002g).

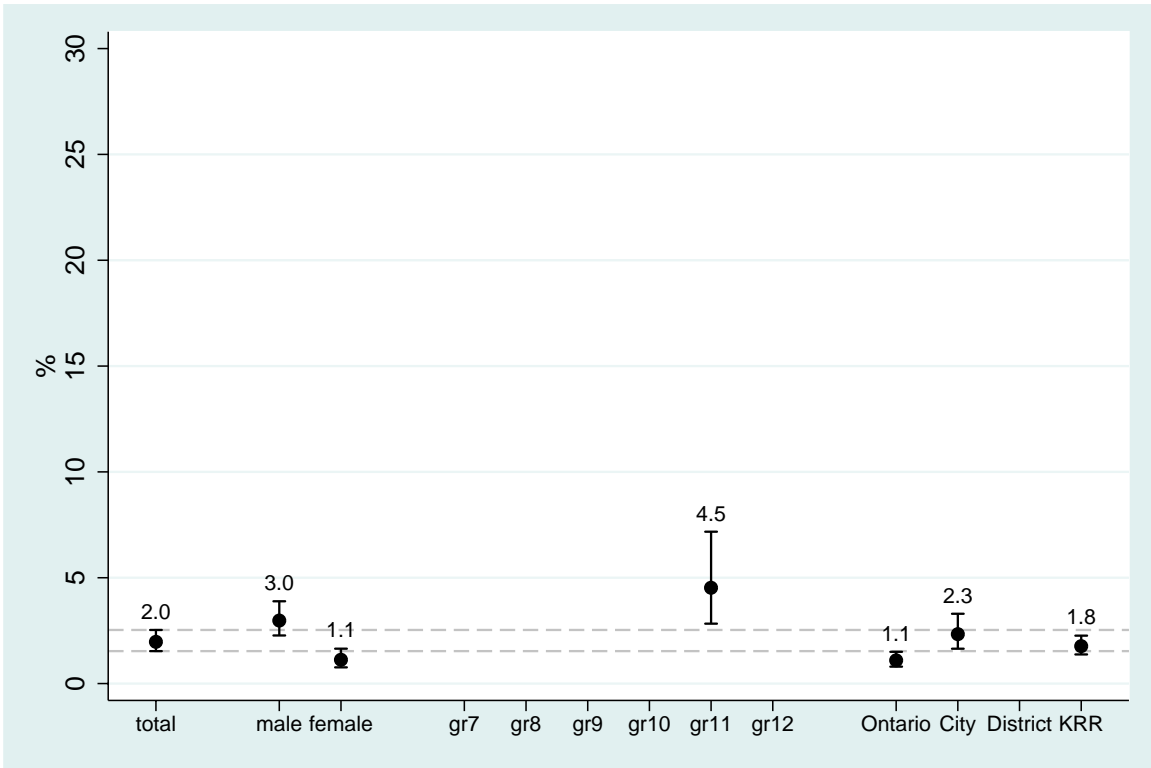
Since 1977, the OSDUS indicates that PCP has never been popular among Ontario students, with past year use rates never exceeding about 3% (Adlaf & Paglia-Boak 2005).

In this cycle of the NWOSDUS, 2.0% of students reported use of PCP (Table 4.9.1). The rate has remained low and virtually the same since 1997. The relative unavailability of PCP may lead some readers to doubt the validity of these reports of PCP use. However, the RCMP continues to find PCP in drug seizures in Canada, especially from raves (Health Canada and RCMP 2004). Readers should note that rave drugs are usually sold in pill or capsule form and the user has no way of knowing exactly what drug (or combination of drugs) he or she is taking.

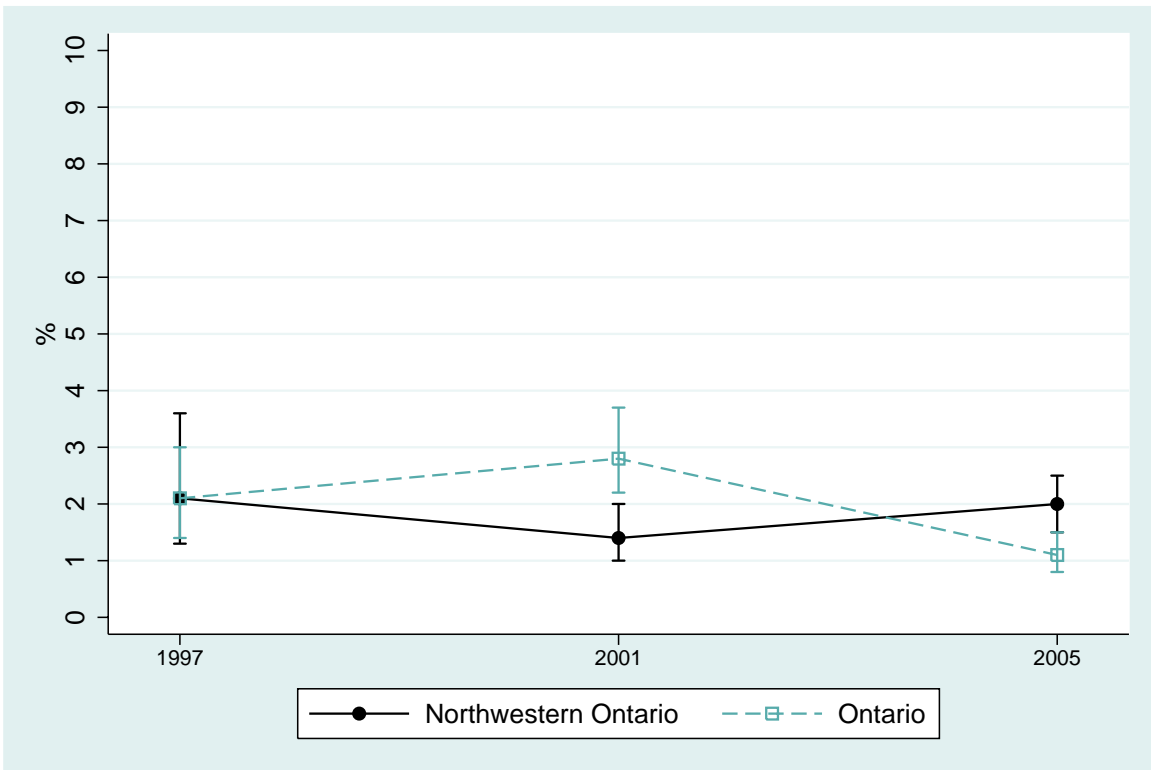
The 2005 NWOSDUS found no significant age-, regional-, or gender-based differences.

**Table 4.9.1. Percentage of students reporting past year PCP use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>2.1</b> (1.3, 3.6)	<b>1.4</b> (1.0, 2.0)	<b>2.0</b> (1.5, 2.5)
Sex			
Male	<b>2.3</b> (1.2, 4.2)	<b>1.5</b> (1.1, 2.1)	<b>3.0</b> (2.3, 3.9)
Female	<b>2.0</b> (1.1, 3.5)	<b>1.4</b> (0.9, 2.0)	<b>1.1</b> (0.8, 1.6)
Grade			
Grade 7	<b>0.6</b> (0.2, 1.8)	<b>1.2</b> (0.4, 3.2)	--
Grade 8	--	<b>1.2</b> (0.7, 2.2)	--
Grade 9	<b>3.9</b> (1.9, 7.8)	<b>2.3</b> (1.1, 4.6)	--
Grade 10	--	<b>2.1</b> (1.0, 4.3)	--
Grade 11	<b>3.5</b> (1.5, 7.7)	<b>1.7</b> (1.0, 2.7)	<b>4.5</b> (2.8, 7.2)
Grade 12	--	<b>0.5</b> (0.1, 1.9)	--
Grade 13	<b>1.4</b> (0.9, 2.2)	--	--
Region			
All Ontario	<b>2.0</b> (1.4, 2.6)	<b>2.7</b> (2.1, 3.5)	<b>1.1</b> (0.8, 1.5)
City of Thunder Bay	<b>1.6</b> (0.6, 4.1)	<b>1.0</b> (0.5, 2.3)	<b>2.3</b> (1.6, 3.3)
District of Thunder Bay	<b>3.1</b> (1.7, 5.7)	<b>2.8</b> (1.5, 5.3)	--
Kenora-Rainy River	<b>2.3</b> (0.8, 6.7)	<b>1.6</b> (1.1, 2.5)	<b>1.8</b> (1.4, 2.3)



**Figure 4.9.1. Past year PCP use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grade 7, 8, 9, 10, and 12, as well as for the District of Thunder Bay, are too small to be reported.)**



**Figure 4.9.2. Past year use of PCP by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

#### **4.10 Hallucinogen (Other than LSD and PCP) Use**

*(Table 4.10.1, Figure 4.10.1, Figure 4.10.2)*

There is a variety of other hallucinogens besides PCP and LSD, including psilocybin (“magic”) mushrooms and mescaline. Technically, PCP is not a hallucinogen but rather a “dissociative anaesthetics”. However, it is often grouped with hallucinogens for convenience (U.S. National Institute on Drug Abuse 2002i).

While LSD and PCP were first synthesized in the 20<sup>th</sup> century, cultures from the tropics to the arctic have used plants to induce states of detachment from reality and to precipitate visions thought to provide mystical insight. These plants contain chemical compounds, such as mescaline, psilocybin, that are structurally similar to serotonin, and they produce their effects by disrupting normal functioning of the serotonin system (U.S. National Institute on Drug Abuse 2002i).

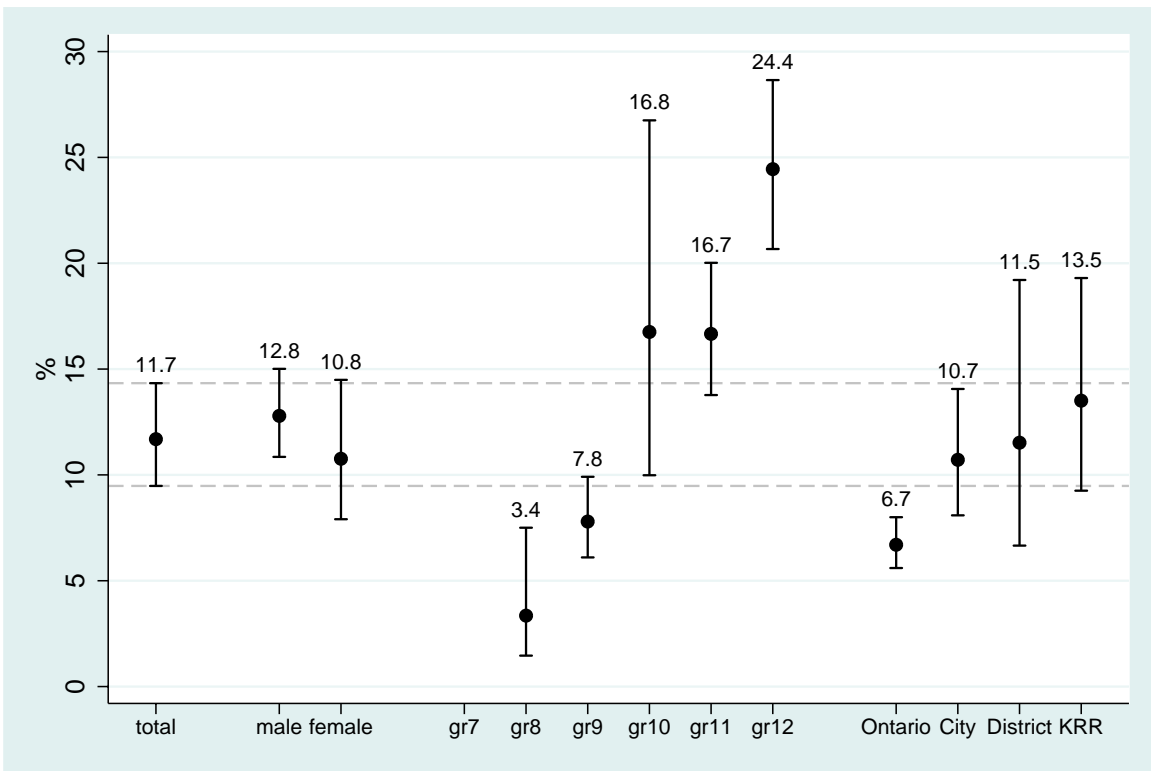
Mescaline and psilocybin mushroom use was popular in North America in the 1960s, but their use declined somewhat until a resurgence in the late 1990s and into the 21<sup>st</sup> century.

Table 4.10.1 shows that the use of hallucinogens other than LSD and PCP is common in Northwestern Ontario, with 11.7% of students reporting use in the past year. There was no appreciable change between 2001 and 2005.

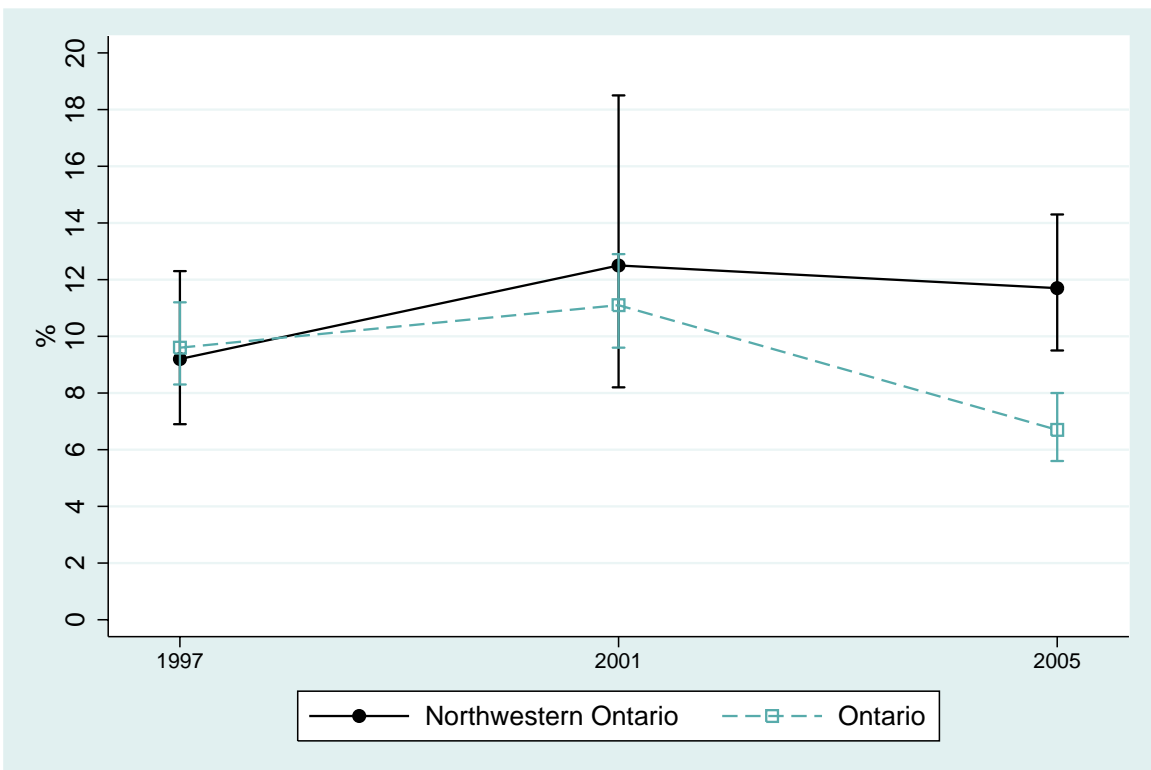
Hallucinogen use rates rise significantly with increasing grade (Figure 4.10.1). Gender and regional differences within Northwestern Ontario were not pronounced. Unlike in past years, the Northwestern Ontario rate was considerably higher than the provincial rate (11.7% vs. 6.7%).

**Table 4.10.1. Percentage of students reporting past year hallucinogen (other than LSD and PCP) use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>9.2</b> (6.9, 12.3)	<b>12.5</b> (8.2, 18.5)	<b>11.7</b> (9.5, 14.3)
Sex			
Male	<b>9.4</b> (6.6, 13.1)	<b>14.7</b> (10.3, 20.5)	<b>12.8</b> (10.9, 15.0)
Female	<b>9.1</b> (6.8, 11.9)	<b>9.7</b> (5.5, 16.5)	<b>10.8</b> (7.9, 14.5)
Grade			
Grade 7	<b>1.6</b> (0.6, 4.0)	<b>2.1</b> (1.0, 4.2)	--
Grade 8	--	<b>4.9</b> (2.8, 8.4)	<b>3.4</b> (1.5, 7.5)
Grade 9	<b>12.3</b> (7.8, 19.1)	<b>13.7</b> (10.9, 16.9)	<b>7.8</b> (6.1, 9.9)
Grade 10	--	<b>13.4</b> (9.9, 17.9)	<b>16.8</b> (10.0, 26.8)
Grade 11	<b>16.3</b> (13.4, 19.5)	<b>16.3</b> (7.4, 32.3)	<b>16.7</b> (13.8, 20.0)
Grade 12	--	<b>19.7</b> (15.3, 24.9)	<b>24.4</b> (20.7, 28.7)
Grade 13	<b>22.9</b> (13.5, 36.2)	--	--
Region			
All Ontario	<b>10.1</b> (8.9, 11.3)	<b>11.4</b> (9.9, 13.0)	<b>6.7</b> (5.6, 8.0)
City of Thunder Bay	<b>4.6</b> (2.2, 9.7)	<b>12.0</b> (5.4, 24.7)	<b>10.7</b> (8.1, 14.1)
District of Thunder Bay	<b>12.8</b> (8.2, 19.5)	<b>15.4</b> (11.5, 20.4)	<b>11.5</b> (6.7, 19.2)
Kenora-Rainy River	<b>12.6</b> (8.1, 19.3)	<b>12.2</b> (9.3, 15.9)	<b>13.5</b> (9.3, 19.3)



**Figure 4.10.1. Past year hallucinogen (other than LSD and PCP) use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimate for grade 7 too small to be reported.)**



**Figure 4.10.2. Past year use of hallucinogens (other than LSD and PCP) by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

## **4.11 Methamphetamine Use**

*(Table 4.11.1, Figure 4.11.1, Figure 4.11.2)*

Methamphetamine in powder form is called “speed” and is snorted or injected. If it is processed into methamphetamine hydrochloride as a hard crystalline rock, it is called “ice” or “crystal meth” and it is smoked. Regardless of the route of administration, the effect is the same: a powerful central nervous stimulant that causes a sudden, pleasurable, but short-lived “rush”. Effects include increased wakefulness, increased physical activity, decreased appetite, increased respiration, hyperthermia, and euphoria (U.S. National Institute on Drug Abuse 2002f). For these effects, it is one of the popular drugs associated with rave parties.

Although a closely related compound, dextroamphetamine is licensed in Canada for treatment of attention deficit hyperactivity disorder, methamphetamine has no licensed use.

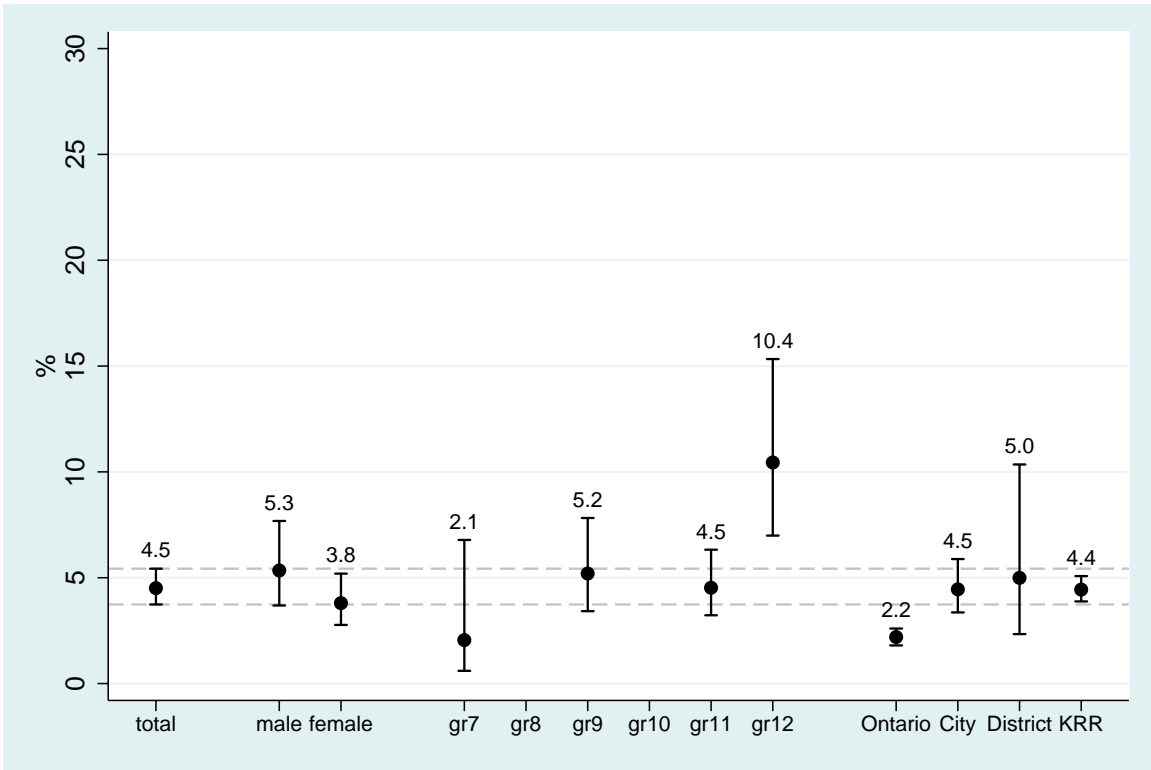
Thus, all use of methamphetamine in Canada is illegal.

Like all amphetamines, methamphetamine is highly addictive, producing tolerance and both physical and psychological dependence. The most common symptoms of withdrawal among heavy amphetamine users are fatigue, long but troubled sleep, irritability, intense hunger, and moderate to severe depression, which may lead to suicidal behavior.

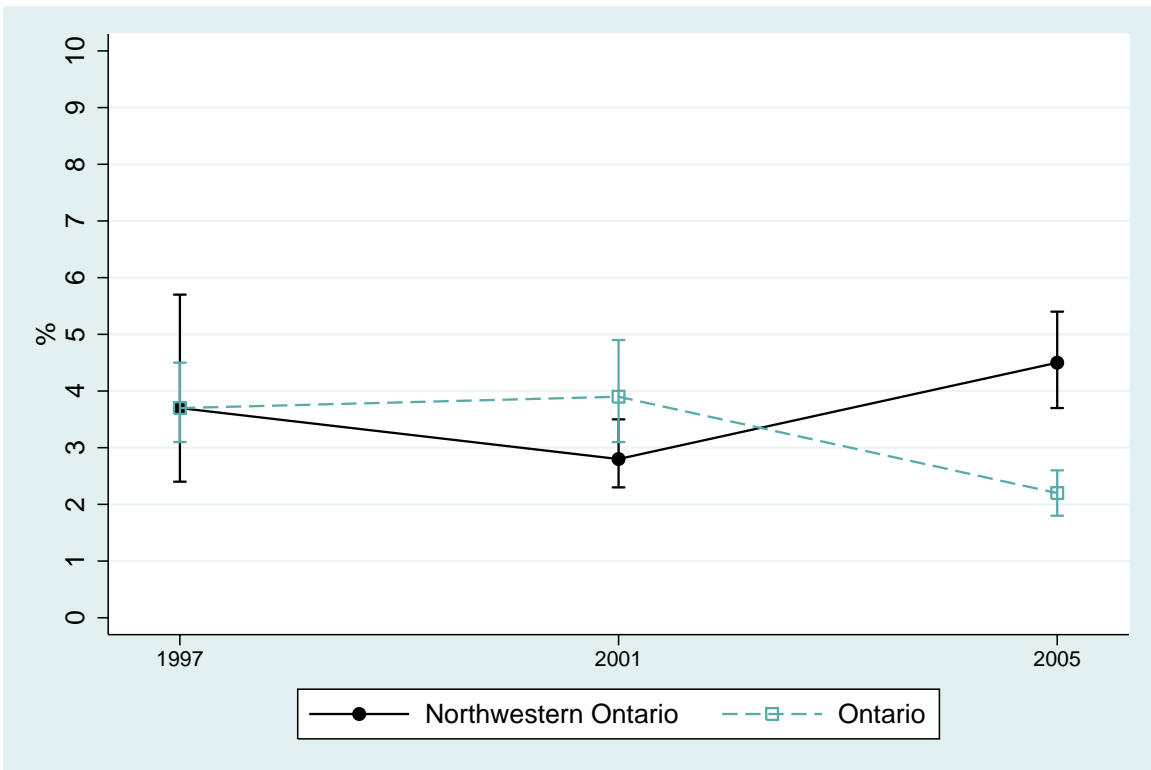
In Northwestern Ontario, student use of methamphetamine (Table 4.11.1) is reported at 4.5% - an increase over the 2001 rate of 2.8%, and also higher than the provincial average of 2.2%. The probability of use increased with age. There was no substantial variation by sex or among the three regions of Northwestern Ontario.

**Table 4.11.1. Percentage of students reporting past year methamphetamine use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>3.7</b> (2.4, 5.7)	<b>2.8</b> (2.3, 3.5)	<b>4.5</b> (3.7, 5.4)
Sex			
Male	<b>3.1</b> (2.1, 4.5)	<b>2.7</b> (2.1, 3.4)	<b>5.3</b> (3.7, 7.7)
Female	<b>4.3</b> (2.2, 8.4)	<b>3.0</b> (2.2, 4.1)	<b>3.8</b> (2.8, 5.2)
Grade			
Grade 7	<b>2.3</b> (0.6, 8.1)	<b>1.4</b> (0.7, 2.8)	<b>2.1</b> (0.6, 6.8)
Grade 8	--	<b>3.1</b> (1.3, 7.1)	--
Grade 9	<b>5.6</b> (3.2, 9.5)	<b>4.7</b> (3.0, 7.4)	<b>5.2</b> (3.4, 7.8)
Grade 10	--	<b>3.2</b> (1.9, 5.3)	--
Grade 11	<b>4.1</b> (2.5, 6.8)	<b>2.9</b> (1.9, 4.5)	<b>4.5</b> (3.2, 6.3)
Grade 12	--	<b>1.8</b> (1.1, 3.0)	<b>10.4</b> (7.0, 15.3)
Grade 13	<b>4.1</b> (3.0, 5.6)	--	--
Region			
All Ontario	<b>3.6</b> (3.0, 4.2)	<b>3.8</b> (3.1, 4.8)	<b>2.2</b> (1.8, 2.6)
City of Thunder Bay	<b>3.7</b> (1.5, 8.9)	<b>1.9</b> (1.0, 3.8)	<b>4.5</b> (3.4, 5.9)
District of Thunder Bay	<b>5.4</b> (4.4, 6.6)	<b>6.9</b> (4.9, 9.5)	<b>5.0</b> (2.3, 10.4)
Kenora-Rainy River	<b>3.0</b> (1.3, 7.0)	<b>3.0</b> (2.3, 4.0)	<b>4.4</b> (3.9, 5.1)



**Figure 4.11.1. Past year methamphetamine use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 8 and 10 too small to be reported.)**



**Figure 4.11.2. Past year use of methamphetamine by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

## 4.12 Cocaine and Crack Use

(Table 4.12.1, Figure 4.12.1, Figure 4.12.2, Table 4.12.2, Figure 4.12.3, Figure 4.12.4)

Cocaine is a white powder derived from the leaves of the coca bush. It is usually snorted or injected, but may also be rubbed onto the mucous membranes of the mouth, rectum, or vagina.

Alternatively, cocaine can be purified by processing with ether into “freebase”, which is a crystal that can be smoked. Crack is the name given to cocaine that has been more crudely processed using ammonia or baking soda into a chunky crystal to be smoked.

Cocaine (including crack) is a strong central nervous system stimulant. Its euphoric effects include hyper-stimulation, reduced fatigue, decreased appetite, and enhanced mental clarity. Some people may not experience the euphoric effects every time the drug is used. Cocaine can also cause people to become paranoid, erratic, and even panic-stricken. The high (or low) from snorting may last 15 to 30 minutes, while that from smoking may last 5 to 10 minutes (U.S. National Institute on Drug Abuse 2002b; Centre for Addiction and Mental Health 2002).

Controversy exists as to whether cocaine use causes tolerance. However, there is no disagreement that it causes both strong physical and psychological

dependence. Indeed, experience with human addicts, as well as scientific experiments on animals, suggest that cocaine may be the most powerfully psychologically addictive drug available.

Taking large amounts of cocaine can result in cardiac arrest and death. However, some people die very suddenly from using cocaine in small doses, sometimes after their first use. The mechanism is unknown, but one theory postulates that the simultaneous use of cocaine and alcohol results in the formation of a third compound, cocaethylene, which may be related to the risk of sudden death (U.S. National Institute on Drug Abuse 2002b).

The use of cocaine (Table 4.12.1) and crack (Table 4.12.2) among Northwestern Ontario students was 6.0% and 3.8% respectively. These rates represent a near doubling in use rates over 2001, and are higher than the 2005 provincial averages.

Most of that increase was among grade 11 and 12 students. There were no significant differences between the sexes, or among the three regions of Northwestern Ontario.

#### 4.12.1 Cocaine Use

**Table 4.12.1. Percentage of students reporting past year cocaine use by sex, grade, and region, 1997-2005.**

Year		1997	2001	2005
(N)		(2238)	(2704)	(1374)
<b>Total</b>		<b>3.5</b>	<b>3.1</b>	<b>6.0</b>
<i>(95% CI)</i>		<i>(2.5, 4.8)</i>	<i>(2.3, 4.2)</i>	<i>(5.2, 6.8)</i>
Sex	Male	<b>3.0</b> <i>(2.1, 4.2)</i>	<b>3.8</b> <i>(2.4, 5.8)</i>	<b>6.6</b> <i>(5.5, 8.0)</i>
	Female	<b>3.9</b> <i>(2.7, 5.6)</i>	<b>2.3</b> <i>(1.5, 3.5)</i>	<b>5.4</b> <i>(4.6, 6.4)</i>
Grade	Grade 7	<b>1.9</b> <i>(0.9, 3.7)</i>	<b>2.5</b> <i>(1.0, 5.9)</i>	--
	Grade 8	--	<b>3.5</b> <i>(2.0, 6.1)</i>	<b>2.3</b> <i>(0.9, 5.6)</i>
	Grade 9	<b>6.1</b> <i>(4.1, 9.1)</i>	<b>1.6</b> <i>(0.5, 5.0)</i>	<b>2.9</b> <i>(2.0, 4.0)</i>
	Grade 10	--	<b>2.5</b> <i>(1.4, 4.6)</i>	<b>5.4</b> <i>(3.9, 7.4)</i>
	Grade 11	<b>4.4</b> <i>(3.0, 6.3)</i>	<b>3.0</b> <i>(2.1, 4.3)</i>	<b>8.6</b> <i>(6.6, 11.0)</i>
	Grade 12	--	<b>5.0</b> <i>(2.8, 8.5)</i>	<b>16.3</b> <i>(13.3, 19.7)</i>
	Grade 13	<b>1.6</b> <i>(0.9, 2.8)</i>	--	--
	Region	All Ontario	<b>2.7</b> <i>(2.4, 3.0)</i>	<b>4.3</b> <i>(3.5, 5.2)</i>
City of Thunder Bay		<b>2.5</b> <i>(1.4, 4.5)</i>	<b>2.6</b> <i>(2.0, 3.4)</i>	<b>5.5</b> <i>(4.9, 6.2)</i>
District of Thunder Bay		<b>5.7</b> <i>(4.6, 7.0)</i>	<b>6.5</b> <i>(3.9, 10.6)</i>	<b>8.6</b> <i>(4.7, 15.2)</i>
Kenora-Rainy River		<b>3.7</b> <i>(2.0, 6.8)</i>	<b>2.9</b> <i>(1.5, 5.4)</i>	<b>5.9</b> <i>(4.7, 7.5)</i>

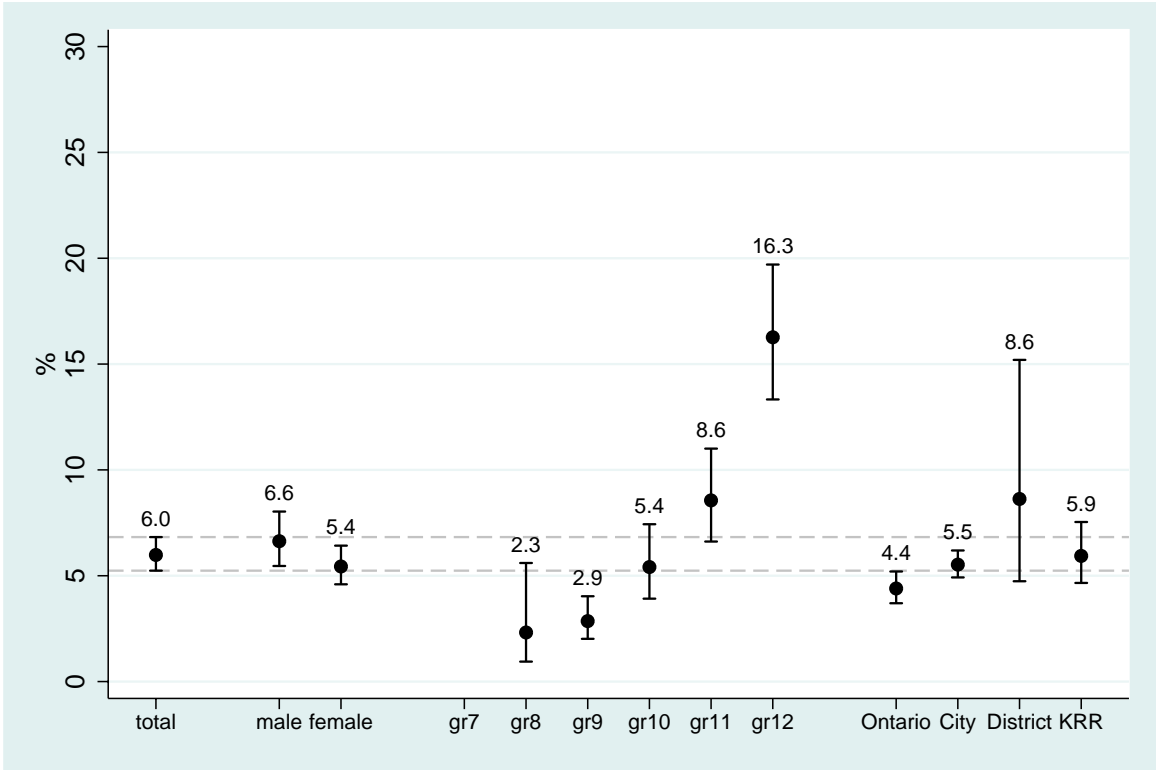


Figure 4.12.1. Past year cocaine use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimate for grade 7 too small to be reported.)

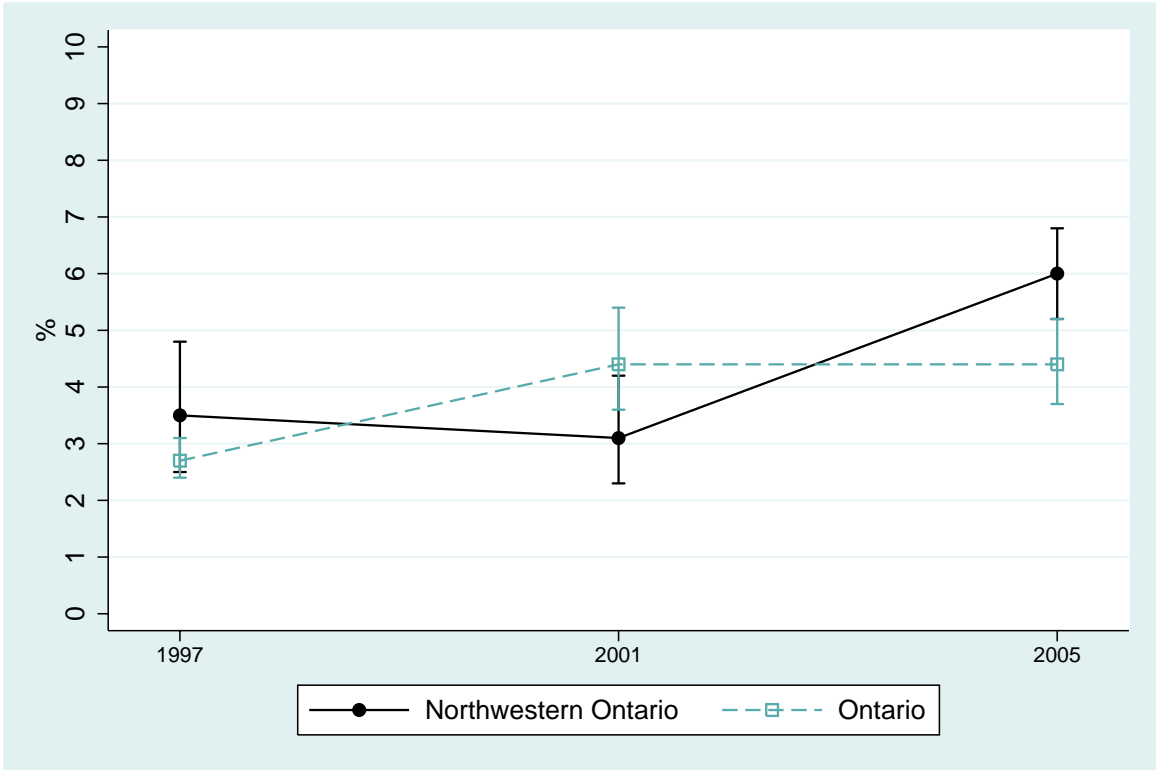
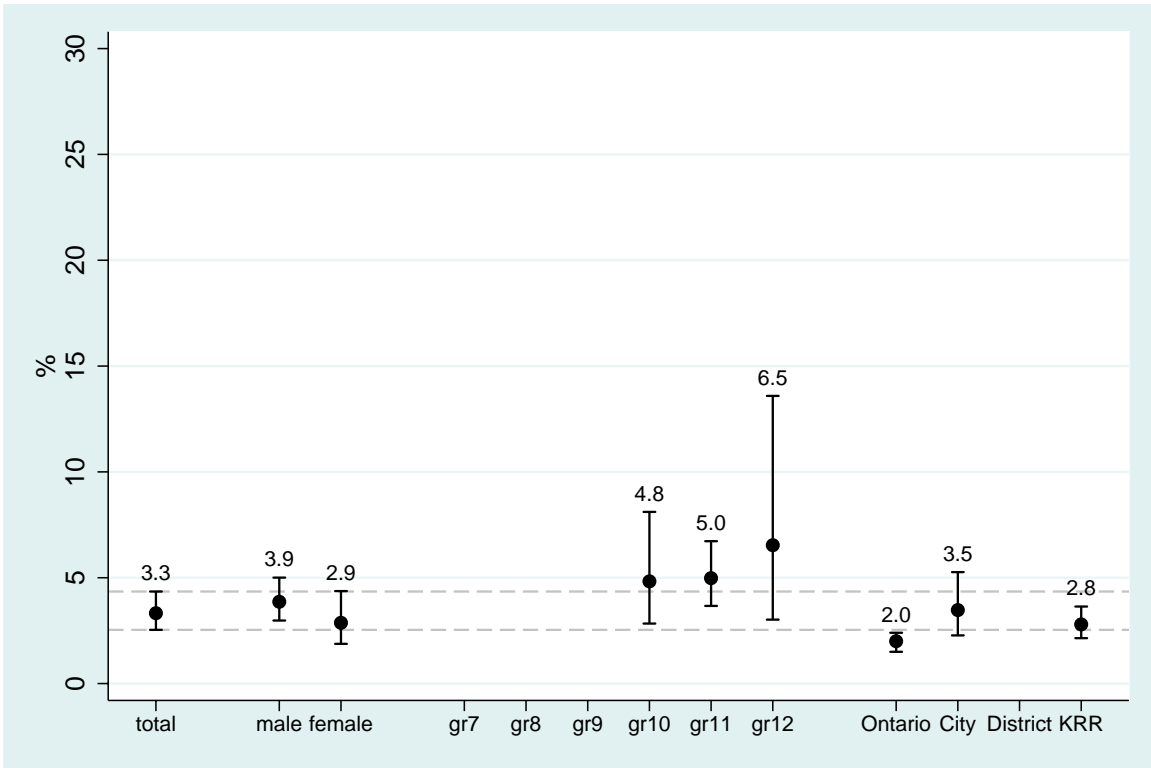


Figure 4.12.2. Past year use of cocaine by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.

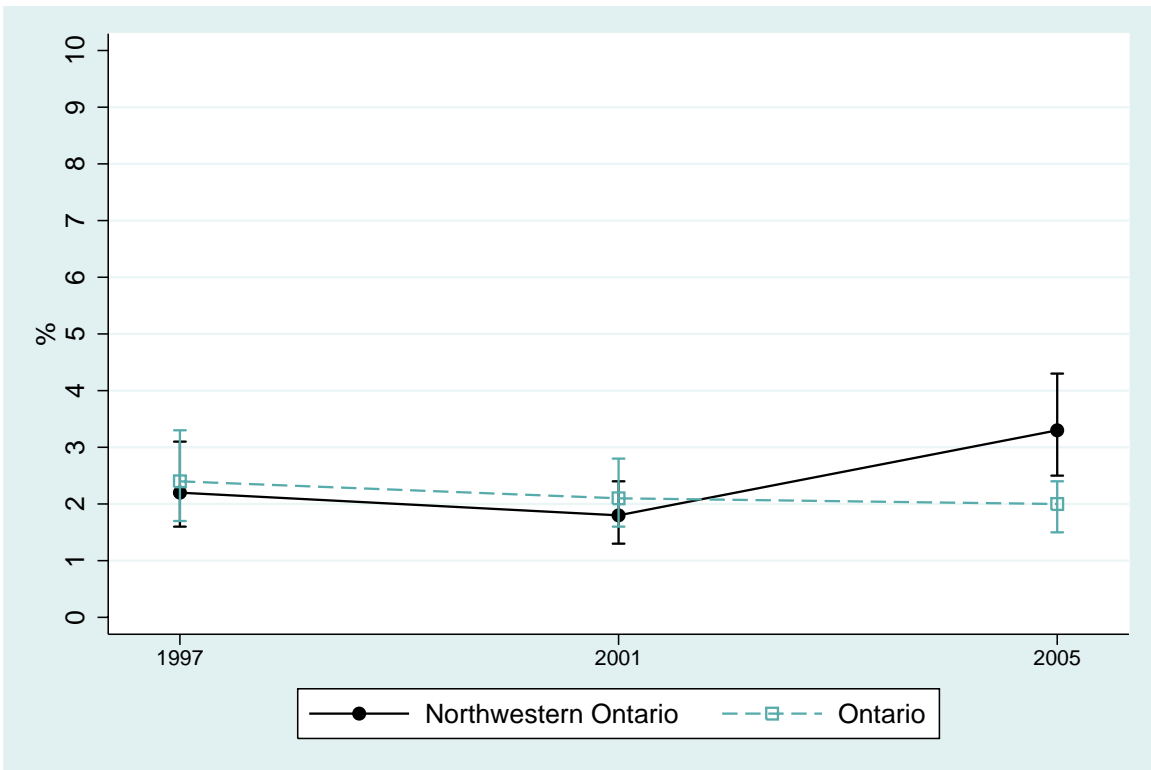
## 4.12.2 Crack Use

**Table 4.12.2. Percentage of students reporting past year crack use by sex, grade, and region, 1997-2005.**

Year		1997	2001	2005
(N)		(2238)	(2704)	(1374)
<b>Total</b>		<b>2.2</b>	<b>1.8</b>	<b>3.3</b>
<i>(95% CI)</i>		<i>(1.6, 3.1)</i>	<i>(1.3, 2.4)</i>	<i>(2.5, 4.3)</i>
Sex	Male	<b>2.0</b> <i>(1.3, 3.1)</i>	<b>1.7</b> <i>(1.1, 2.6)</i>	<b>3.9</b> <i>(3.0, 5.0)</i>
	Female	<b>2.4</b> <i>(1.7, 3.5)</i>	<b>1.8</b> <i>(1.1, 3.0)</i>	<b>2.9</b> <i>(1.9, 4.4)</i>
Grade	Grade 7	<b>1.9</b> <i>(0.9, 4.1)</i>	<b>1.6</b> <i>(0.7, 3.8)</i>	--
	Grade 8	--	<b>3.0</b> <i>(1.6, 5.6)</i>	--
	Grade 9	<b>3.0</b> <i>(2.0, 4.5)</i>	<b>2.0</b> <i>(1.2, 3.3)</i>	--
	Grade 10	--	<b>0.6</b> <i>(0.3, 1.2)</i>	<b>4.8</b> <i>(2.8, 8.1)</i>
	Grade 11	<b>2.2</b> <i>(1.7, 3.0)</i>	<b>2.9</b> <i>(1.5, 5.7)</i>	<b>5.0</b> <i>(3.7, 6.7)</i>
	Grade 12	--	<b>0.9</b> <i>(0.3, 2.2)</i>	<b>6.5</b> <i>(3.0, 13.6)</i>
	Grade 13	<b>1.1</b> <i>(0.6, 2.0)</i>	--	--
	Region	All Ontario	<b>2.2</b> <i>(1.6, 2.8)</i>	<b>2.0</b> <i>(1.5, 2.6)</i>
City of Thunder Bay		<b>2.0</b> <i>(0.9, 4.4)</i>	<b>1.5</b> <i>(0.9, 2.7)</i>	<b>3.5</b> <i>(2.3, 5.3)</i>
District of Thunder Bay		<b>2.9</b> <i>(2.3, 3.6)</i>	<b>3.2</b> <i>(1.6, 6.5)</i>	--
Kenora-Rainy River		<b>2.2</b> <i>(1.4, 3.3)</i>	<b>1.7</b> <i>(1.1, 2.7)</i>	<b>2.8</b> <i>(2.1, 3.6)</i>



**Figure 4.12.3. Past year crack use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 7-9 and for the District of Thunder Bay are too small to be reported.)**



**Figure 4.12.4. Past year use of crack by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

### 4.13 Heroin Use

(Table 4.13.1, Figure 4.13.1, Figure 4.13.2)

Heroin is derived from morphine, which in turn is derived from the opium poppy *Papaver somniferum*. Heroin was developed in 1898 as a more effective painkiller and cough suppressant than morphine. It was also promoted as a treatment for morphine addiction. Ironically, however, heroin turned out to be far more addictive than morphine ever was.

Heroin is typically a powder that is dissolved in water and injected. It can also be snorted or smoked. The short-term effects of heroin include a surge of euphoria accompanied by flushing of the skin, dry mouth, and a heavy feeling in the arms and legs. Following this initial euphoria, the user goes "on the nod," an alternately wakeful and drowsy state.

Other than the addiction itself, with its severe personal and social consequences, and the risk of fatal overdose, most of the physical problems associated with heroin result from the practice of injection. Most street heroin has impurities that can result in the blockage and damage in the blood vessels that lead to major organs. The result is

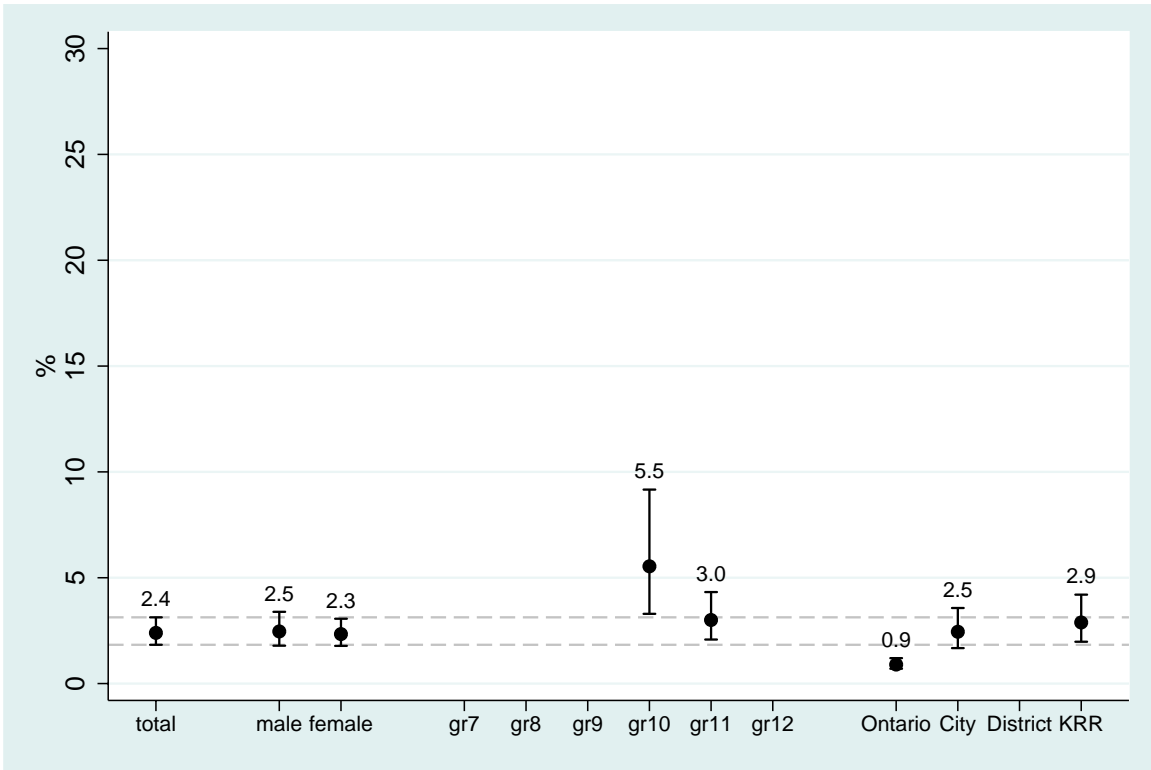
bloodstream infections or localized destruction of cells in vital organs. Other major risks include collapsed veins, abscesses, and infectious diseases, including HIV/AIDS, hepatitis, and pneumonia.

Heroin use produces tolerance and dependence, and withdrawal symptoms are severe. Symptoms include anxiousness, restlessness, muscle and bone pain, insomnia, diarrhea and vomiting, cold flashes with goose bumps ("cold turkey"), kicking movements ("kicking the habit"), and other symptoms. Withdrawal symptoms may occur within a few hours after the last dose, but usually peak between two and three days after the last dose. Sudden withdrawal by heavily dependent users who are in poor health is sometimes fatal, although heroin withdrawal is considered less dangerous than alcohol or barbiturate withdrawal (National Institute on Drug Abuse 2002).

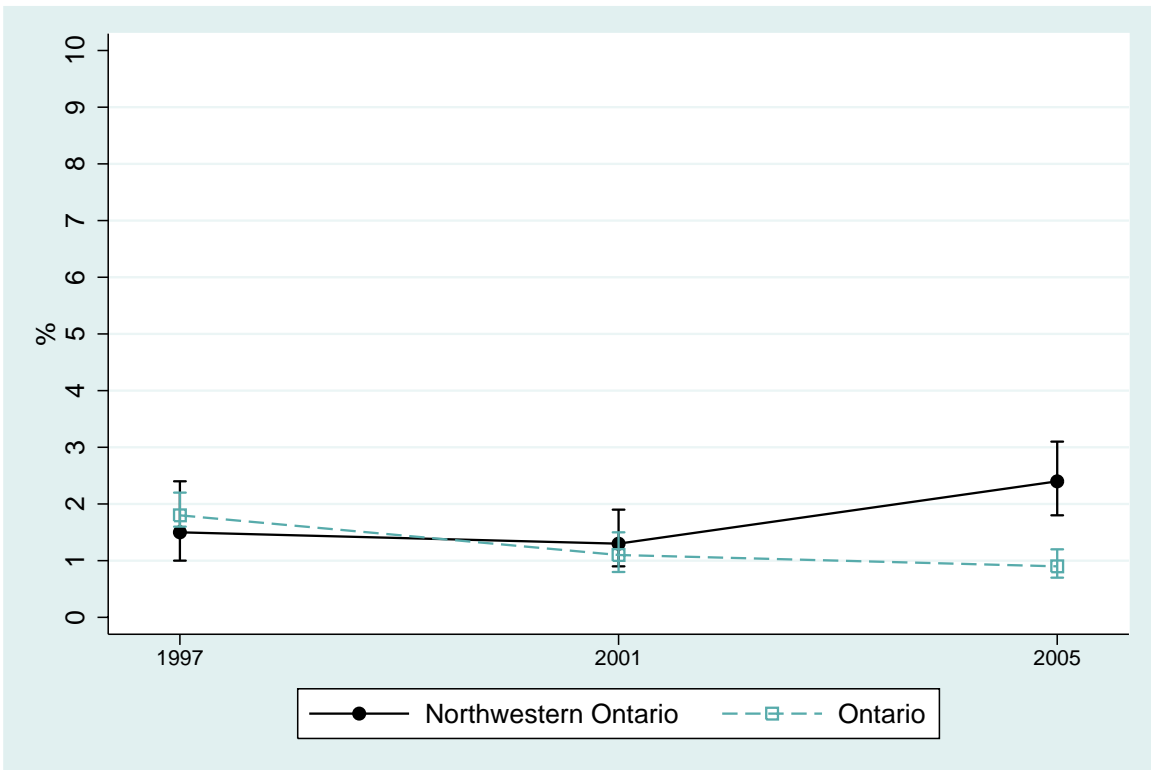
Fortunately, the use of heroin among Northwestern Ontario students is low at 2.4%

**Table 4.13.1. Percentage of students reporting past year heroin use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>1.5</b> (1.0, 2.4)	<b>1.3</b> (0.9, 1.9)	<b>2.4</b> (1.8, 3.1)
Sex			
Male	<b>1.8</b> (1.1, 2.8)	<b>1.3</b> (1.0, 1.9)	<b>2.5</b> (1.8, 3.4)
Female	<b>1.3</b> (0.6, 2.7)	<b>1.2</b> (0.6, 2.6)	<b>2.3</b> (1.8, 3.1)
Grade			
Grade 7	<b>1.0</b> (0.4, 2.8)	<b>1.6</b> (0.6, 4.0)	--
Grade 8	--	<b>2.1</b> (1.1, 4.0)	--
Grade 9	<b>2.6</b> (1.4, 5.0)	<b>2.6</b> (1.5, 4.6)	--
Grade 10	--	<b>0.7</b> (0.3, 1.5)	<b>5.5</b> (3.3, 9.2)
Grade 11	<b>1.7</b> (1.0, 3.0)	<b>1.3</b> (0.6, 2.8)	<b>3.0</b> (2.1, 4.3)
Grade 12	--	--	--
Grade 13	<b>0.2</b> (0.0, 2.4)	--	--
Region			
All Ontario	<b>1.8</b> (1.5, 2.1)	<b>1.0</b> (0.7, 1.4)	<b>0.9</b> (0.7, 1.2)
City of Thunder Bay	<b>1.3</b> (0.6, 3.0)	<b>1.1</b> (0.5, 2.4)	<b>2.5</b> (1.7, 3.6)
District of Thunder Bay	<b>1.7</b> (1.1, 2.8)	<b>1.5</b> (1.0, 2.2)	--
Kenora-Rainy River	<b>1.7</b> (0.8, 3.6)	<b>1.5</b> (0.9, 2.6)	<b>2.9</b> (2.0, 4.2)



**Figure 4.13.1. Past year heroin use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimates for grades 7, 8, 9, 12, and the District of Thunder Bay, are too small to be reported.)**



**Figure 4.13.2. Past year use of heroin by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.**

#### **4.14 Ecstasy Use**

*(Table 4.14.1, Figure 4.14.1, Figure 4.14.2)*

Ecstasy (MDMA or 3,4-methylenedioxyamphetamine) produces both stimulant and psychedelic effects. Its stimulant effects include an enhanced sense of pleasure and self-confidence and increased energy. The effects it has in common with psychedelics include feelings of peacefulness and empathy. Users often feel a sense of closeness with others and a desire to touch them. (U.S. National Institute on Drug Abuse 1999).

Like most powerful psychoactive drugs, however, ecstasy can also produce a bad trip. On a bad trip, ecstasy can produce confusion, depression, sleep disturbance, anxiety, and paranoia, sometimes for weeks after taking the drug. Physical effects can include muscle clenching, nausea, blurred vision, faintness, and cold sweats.

Ecstasy-related fatalities are related to the rave environment. The stimulant effects of the drug enable users to dance for extended periods. This intense physical activity combined with the hot, crowded conditions of a rave can lead to dehydration, hyperthermia, and heart or

kidney failure (U.S. National Institute on Drug Abuse 2002a).

Another issue is that users have no way of knowing what is really in a pill or capsule that the seller says contains ecstasy. Drugs sold at raves may contain methamphetamine, PCP, ketamine, rohypnol, a host of other drugs, or even just a large dose of caffeine (Health Canada & RCMP 2004).

Ecstasy use was first queried on the 1991 OSDUS, but rates were less than 0.5%. It increased to 6.0% between 1991 and 2001 but has declined slightly since then (Adlaf & Paglia-Boak 2005).

Northwestern Ontario students reported a doubling in the use of ecstasy from 1.5% in 1997 to 3.5% in 2001, and in 2005 ecstasy use increased again to 5.8%. In 2005, there was no appreciable difference in ecstasy use between Northwestern Ontario students and the rest of the province. Ecstasy use increased with age, but there were no differences according to gender or among the regions of Northwestern Ontario.

**Table 4.14.1. Percentage of students reporting past year ecstasy use by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>1.5</b> (1.0, 2.2)	<b>3.5</b> (2.8, 4.2)	<b>5.8</b> (4.4, 7.7)
Sex			
Male	<b>1.2</b> (0.7, 2.1)	<b>4.5</b> (4.0, 5.2)	<b>7.0</b> (5.3, 9.2)
Female	<b>1.6</b> (1.0, 2.8)	<b>2.1</b> (1.3, 3.7)	<b>4.8</b> (3.3, 7.0)
Grade			
Grade 7	<b>0.6</b> (0.2, 1.7)	<b>1.4</b> (0.5, 3.9)	<b>1.9</b> (0.5, 6.6)
Grade 8	--	<b>2.3</b> (1.6, 3.4)	--
Grade 9	<b>2.7</b> (1.4, 5.0)	<b>2.2</b> (1.3, 3.5)	<b>2.7</b> (1.7, 4.2)
Grade 10	--	<b>2.1</b> (0.9, 4.6)	<b>8.3</b> (4.2, 15.7)
Grade 11	<b>1.6</b> (0.6, 4.2)	<b>3.6</b> (1.7, 7.5)	<b>7.5</b> (5.7, 9.8)
Grade 12	--	<b>7.6</b> (6.1, 9.5)	<b>14.5</b> (11.9, 17.6)
Grade 13	<b>2.3</b> (1.1, 4.8)	--	--
Region			
All Ontario	<b>3.1</b> (1.8, 4.4)	<b>6.0</b> (5.1, 7.2)	<b>4.5</b> (3.7, 5.3)
City of Thunder Bay	<b>1.3</b> (0.7, 2.6)	<b>3.0</b> (2.4, 3.7)	<b>4.6</b> (3.3, 6.3)
District of Thunder Bay	<b>2.0</b> (1.4, 2.8)	<b>3.7</b> (2.4, 5.9)	<b>8.9</b> (4.7, 16.2)
Kenora-Rainy River	<b>1.5</b> (0.7, 3.1)	<b>4.1</b> (3.0, 5.8)	<b>7.0</b> (3.9, 12.2)

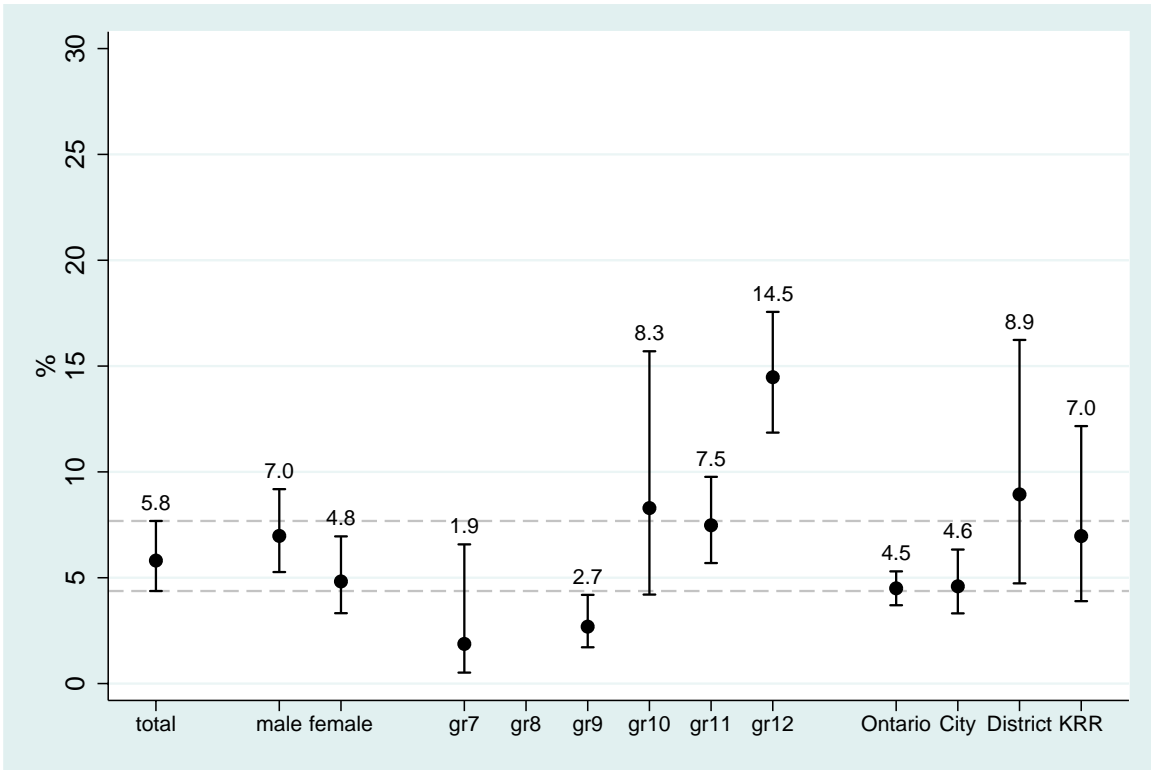


Figure 4.14.1. Past year ecstasy use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimate for grade 8 too small to be reported.)

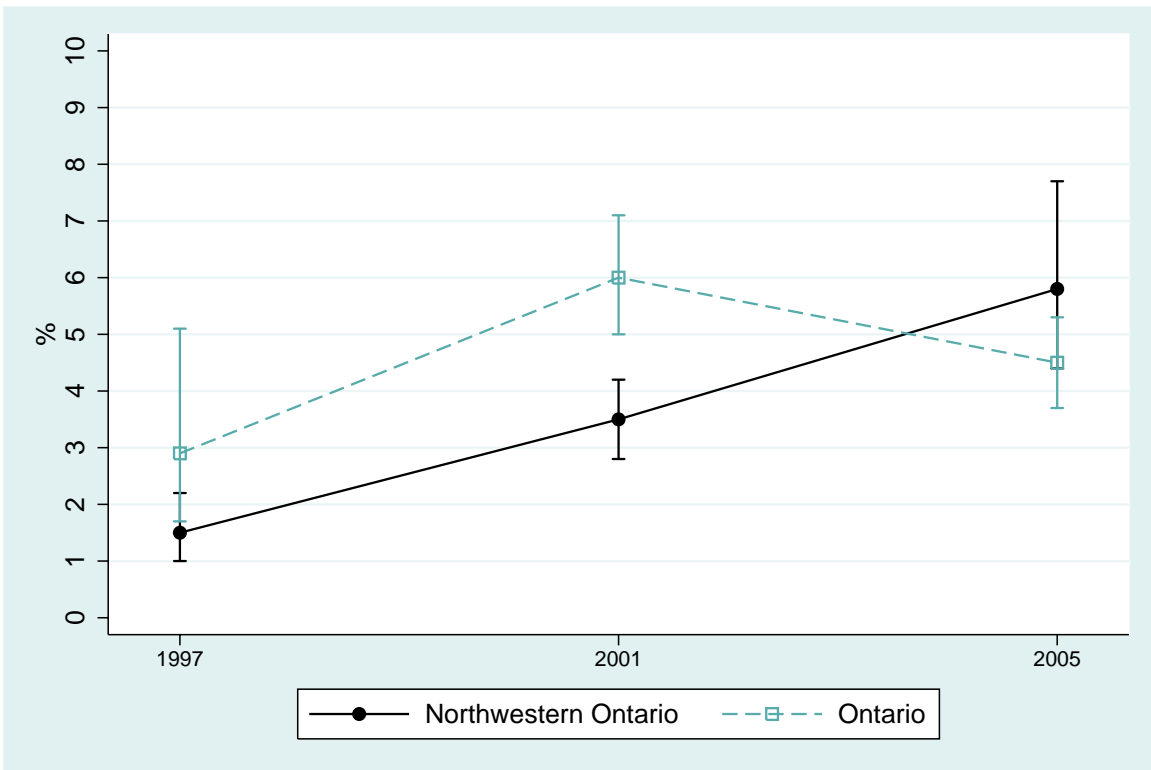


Figure 4.14.2. Past year use of ecstasy by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 1997-2005.

#### **4.15 Anabolic Steroid Use**

*(Table 4.15.1)*

**NOTE: We used a slightly different questionnaire in 2005 and anabolic steroid use was not queried. Thus, what follows is carried forward from the 2001 NWOSDUS.**

Anabolic steroids are a group of chemicals related to male sex hormones (androgens), including testosterone. Their medical uses include treating conditions such as AIDS-related body wasting, delayed onset of puberty, impotence, hypogonadism, and other diseases. Anabolic androgens are also used as hormone replacement therapy in older men to improve energy, well-being, and sex drive as well as prevent decreases in muscle mass and bone loss.

However, the most common use of steroids is by body-builders, athletes, and others who wish to increase lean muscle mass, reduce body fat, and improve their physical performance. The amounts taken for these purposes are up to 100 times the dose used for medical

purposes. Use of high doses of anabolic steroids has many side effects, including shrinking of the testes, development of male breasts, baldness, and excessive aggressiveness.

Use by adolescents can be particularly damaging because high levels of sex hormone can signal the body to halt growth prematurely. This means that the young user who has not yet finished growing may never achieve their full potential height.

The use of anabolic steroids has been increasing in both the United States and Canada. Steroid use in Ontario has approximately quadrupled from 1% in 1989 to almost 4% in 2001 (Adlaf and Paglia 2001). The 2001 NWOSDUS found a very large increase in steroid use between 1997 and 2001, from 1.4% to 6.2% (Table 4.15.1). Not surprisingly, most use of steroids is in males (9.7% compared to 1.9% in females). Most users are in grade 10 or higher.

**Table 4.15.1. Percentage of students reporting lifetime anabolic steroid use by sex, grade, and region, 1997-2001. NOTE: The use of anabolic steroids was not queried on the 2005 NWOSDUS. These results are carried forward from 2001.**

Year (N)	1997 (2090)	2001 (2671)
Total (95% CI)	<b>1.4</b> (1.0, 2.2)	<b>6.2 *</b> (3.7, 10.1)
Sex		
Male	<b>2.2</b> (1.5, 3.3)	<b>9.7 *</b> (5.9, 15.6)
Female	<b>0.7</b> (0.4, 1.4)	<b>1.9</b> (0.9, 3.8)
Grade		
Grade 7	<b>0.4</b> (0.1, 1.0)	<b>2.1 *</b> (1.2, 3.4)
Grade 8	--	<b>2.7</b> (1.0, 7.3)
Grade 9	<b>2.7</b> (1.3, 5.5)	<b>3.5</b> (2.6, 4.7)
Grade 10	--	<b>8.2</b> (5.5, 12.2)
Grade 11	<b>1.8</b> (1.2, 2.5)	<b>8.1 *</b> (6.8, 9.6)
Grade 12	--	<b>10.1</b> (2.1, 37.6)
Grade 13	<b>2.3</b> (1.3, 4.0)	--
Region		
All Ontario	<b>1.5</b> --	<b>3.9 *</b> (3.2, 4.8)
City of Thunder Bay	<b>0.4</b> (0.1, 1.6)	<b>6.1 *</b> (2.6, 13.5)
District of Thunder Bay	<b>2.6</b> (1.6, 4.2)	<b>5.5</b> (3.1, 9.7)
Kenora-Rainy River	<b>2.1</b> (1.2, 3.6)	<b>6.5 *</b> (3.7, 11.3)

\* Difference between 1997 and 2001 significant at  $p < 0.05$

#### **4.16 Ritalin Use (Medical and Non-medical)**

(Table 4.16.1, Figure 4.16.1, Figure 4.16.2, Table 4.16.2, Figure 4.16.3)

Ritalin (methylphenidate) is prescribed for children with attention-deficit hyperactivity disorder (ADHD). Studies since 1980 have revealed ADHD prevalence figures from 4% to 12% of the 6- to 12-year-old age group (Anderson et al 1987, Szatmari, Offord, and Boyle 1989, Wolraich 1998). In

Ontario, the Ontario Child Health Survey estimated that about 6% of children (3% of girls and 9% of boys) have ADHD (Szatmari, Offord, and Boyle 1989).

Though it may seem counter-intuitive, methylphenidate is a central nervous

system (CNS) stimulant. Yet, it has a calming effect on hyperactive children and improves the ability to focus among those with the inattentive form of ADHD (U.S. National Institute on Mental Health 2002). For those who do not have ADHD, methylphenidate does act as a stimulant, and some people have used it recreationally for that purpose.

Untreated ADHD has been found to be associated with an increased likelihood of problematic drug use, an effect that is significantly reduced by treatment with stimulants such as methylphenidate (Biederman et al 1999).

The medical use of methylphenidate in Northwestern Ontario has remained essentially constant since 1997 and, at 3.6%, falls within the range expected given the estimates of the number of children with ADHD. The non-medical use of methylphenidate was first queried on the 2005 NWOSDUS.

The Northwestern Ontario rate of non-medical methylphenidate use is about the same as the Ontario provincial rate. For both medical and non-medical use, there were no gender-based differences, nor any differences among the three regions of Northwestern Ontario.

**Table 4.16.1. Percentage of students reporting past year medical use of ritalin by sex, grade, and region, 1997-2005.**

Year (N)	1997 (2238)	2001 (2704)	2005 (1374)
Total (95% CI)	<b>2.8</b> (1.7, 4.6)	<b>2.8</b> (2.2, 3.6)	<b>3.6</b> (2.5, 5.1)
Sex			
Male	<b>3.0</b> (1.9, 4.7)	<b>3.9</b> (3.1, 4.8)	<b>4.3</b> (2.9, 6.5)
Female	<b>2.7</b> (1.0, 7.1)	<b>1.6</b> (0.9, 2.6)	<b>3.0</b> (1.8, 4.9)
Grade			
Grade 7	<b>4.0</b> (2.0, 7.9)	<b>4.4</b> (2.9, 6.5)	<b>6.5</b> (4.3, 9.5)
Grade 8	--	<b>4.3</b> (1.8, 9.9)	<b>2.6</b> (1.2, 5.6)
Grade 9	<b>3.1</b> (1.3, 7.3)	<b>4.5</b> (3.8, 5.4)	<b>3.2</b> (1.9, 5.3)
Grade 10	--	<b>3.6</b> (2.2, 5.7)	<b>4.7</b> (1.8, 11.7)
Grade 11	<b>0.9</b> (0.5, 1.5)	<b>1.0</b> (0.5, 1.9)	<b>3.0</b> (1.7, 5.4)
Grade 12	--	<b>0.5</b> (0.2, 1.0)	--
Grade 13	<b>0.2</b> (0.0, 2.2)	--	--
Region			
All Ontario	<b>3.4</b> (2.7, 4.1)	<b>2.8</b> (2.2, 3.4)	--
City of Thunder Bay	<b>4.4</b> (2.2, 8.4)	<b>3.3</b> (2.4, 4.5)	<b>3.8</b> (2.4, 7.0)
District of Thunder Bay	<b>2.5</b> (1.6, 3.8)	<b>2.9</b> (1.9, 4.5)	<b>4.2</b> (2.6, 7.0)
Kenora-Rainy River	<b>1.3</b> (0.5, 3.2)	<b>2.0</b> (1.3, 3.2)	<b>3.0</b> (1.4, 6.4)

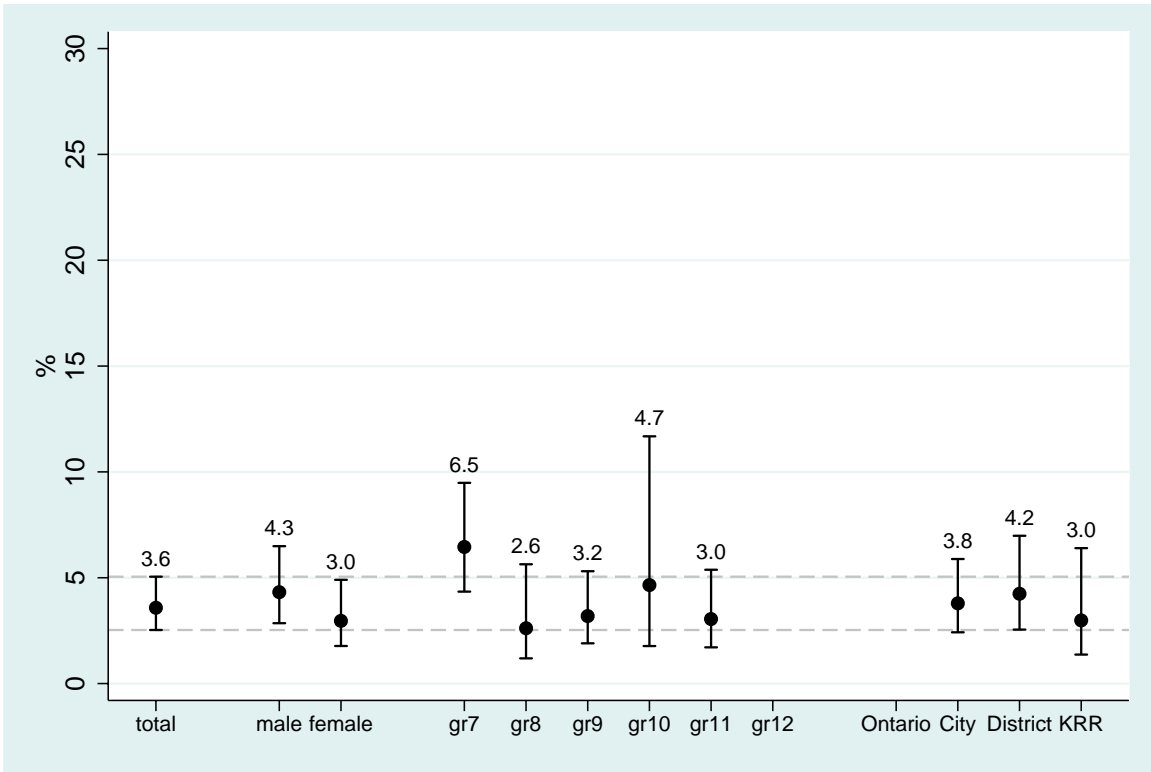


Figure 4.16.1. Past year medical ritalin use by sex, grade, and region, with 95% confidence intervals, 2005. (Estimate for grade 12 too small to be reported.)

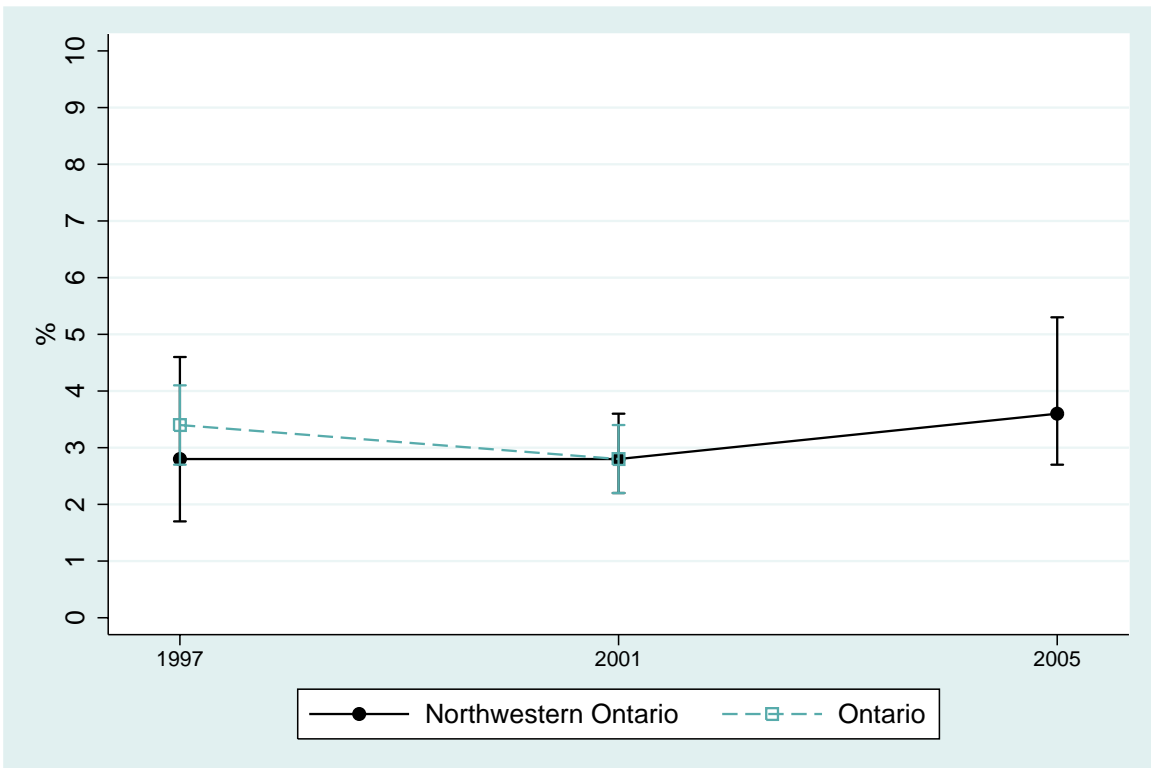
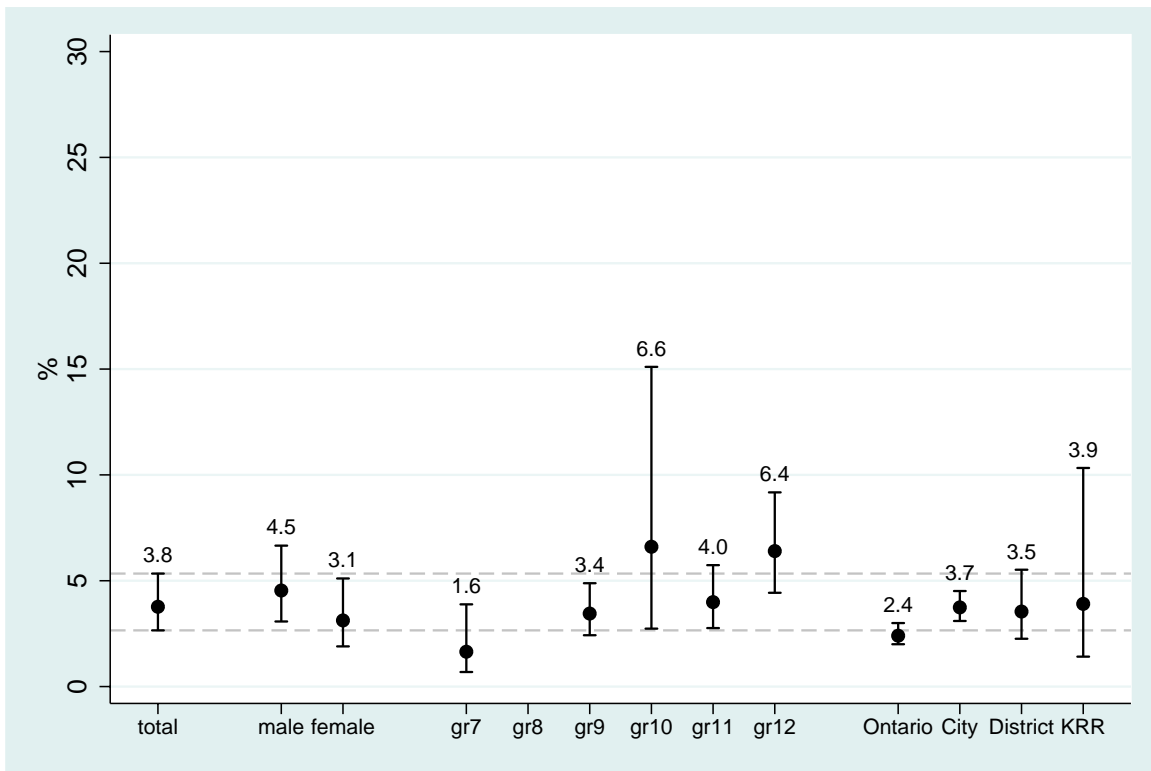


Figure 4.16.2. Past year medical use of ritalin by year, Northwestern Ontario and provincial averages with 95% confidence intervals, 2005.

**Table 4.16.2. Percentage of students reporting past year non-medical use of ritalin by sex, grade, and region, 1997-2005.**

Year		2005
(N)		(1374)
Total		<b>3.8</b>
(95% CI)		(2.7, 5.3)
Sex	Male	<b>4.5</b>
		(3.1, 6.7)
	Female	<b>3.1</b>
		(1.9, 5.1)
Grade	Grade 7	<b>1.6</b>
		(0.7, 3.9)
	Grade 8	--
	Grade 9	<b>3.4</b>
		(2.4, 4.9)
	Grade 10	<b>6.6</b>
		(2.7, 15.1)
	Grade 11	<b>4.0</b>
		(2.8, 5.7)
	Grade 12	<b>6.4</b>
		(4.4, 9.2)
Region	All Ontario	<b>2.4</b>
		(2.0, 3.0)
	City of Thunder Bay	<b>3.7</b>
		(3.1, 4.5)
	District of Thunder Bay	<b>3.5</b>
		(2.3, 5.5)
	Kenora-Rainy River	<b>3.9</b>
		(1.4, 10.3)



**Figure 4.16.3. Past year non-medical use of ritalin by sex, grade, and region, with 95% confidence intervals, 2005. (Estimate for grade 8 too small to be reported.)**

#### 4.17 Problematic drug use (CRAFFT scale)

(Table 4.17.1, Figure 4.17.1)

The CRAFFT screening tool is used to detect problematic drug use. In the NWOSDUS, we used it only to detect non-alcohol drug-related problems. We use the AUDIT screening tool to detect alcohol problems (Section 4.4.3 above).

The NWOSDUS questionnaire items used to derive the CRAFFT are:

In the LAST 12 MONTHS:

1. did you use drugs to relax, feel better about yourself, or fit in?
2. did you use drugs while you were by yourself?
3. did you forget things you did while using drugs?
4. did you get into trouble while you were using drugs?

5. did your family or friends tell you that you should cut down on your drug use?
6. did you ride in a car or other vehicle driven by someone who had been using drugs (other than alcohol)

A positive response is scored as one point, for a possible total of six on the scale. As a screening tool for adolescents, with a cut-off point of 2 or higher on the scale it is reasonably sensitive and very specific in finding drug-related problems (Knight et al 2002). It has been found to work well in the general adolescent population, but also among Native American adolescents (Cummins et al 2003). The past-year version used in the

NWOSDUS also has high test-retest reliability among adolescents (Levy et al 2004).

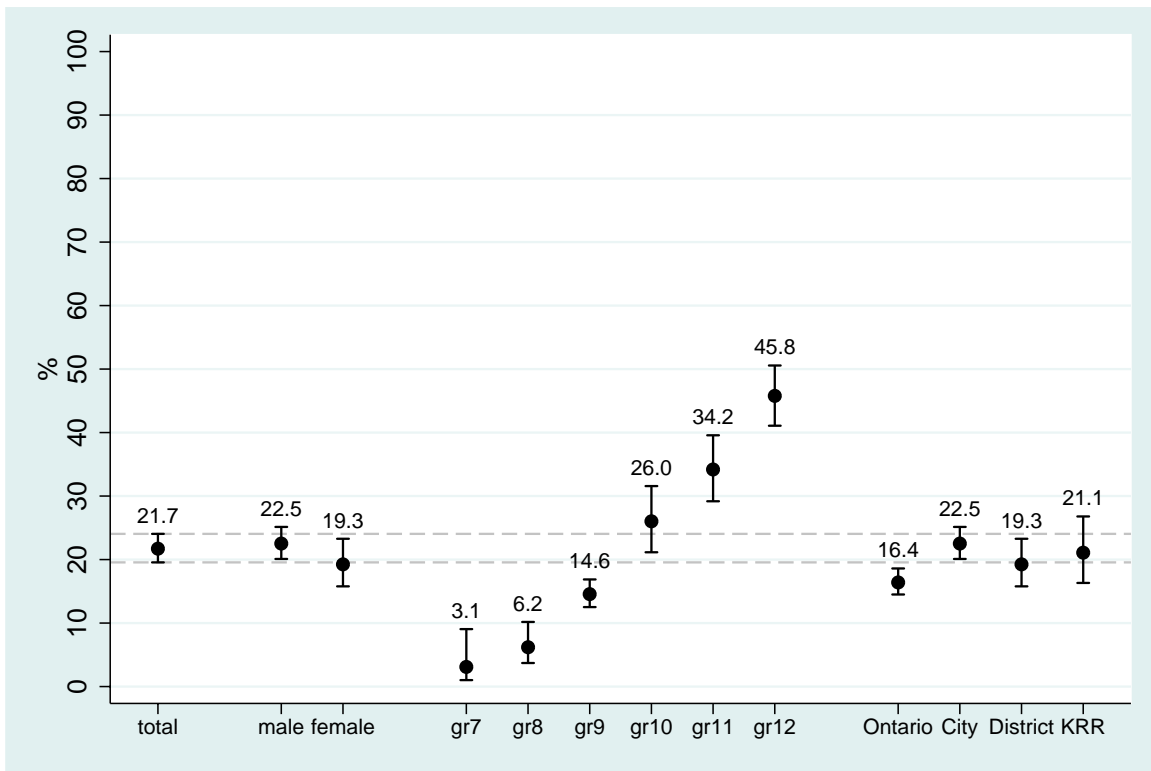
The CRAFFT scale was new to the 2005 NWOSDUS, so data from previous years is unavailable.

In 2005, 21.7% of Northwestern Ontario students scored 2 or higher on the

CRAFFT scale. This rate was significantly higher than the provincial rate of 16.4%. The probability of a positive result on the CRAFFT scale increased with age. There was no difference between males and females, or among the regions of Northwestern Ontario.

**Table 4.17.1. Percentage of students scoring 2 or higher on the CRAFFT scale by sex, grade, and region, 1997-2005.**

Year		2005
(N)		(1374)
Total		<b>21.7</b>
(95% CI)		(19.6, 24.0)
Sex	Male	<b>22.5</b>
		(20.1, 25.1)
	Female	<b>19.3</b>
		(15.8, 23.3)
Grade	Grade 7	<b>3.1</b>
		(1.0, 9.0)
	Grade 8	<b>6.2</b>
		(3.7, 10.2)
	Grade 9	<b>14.6</b>
		(12.5, 16.9)
	Grade 10	<b>26.0</b>
		(21.1, 31.6)
	Grade 11	<b>34.2</b>
		(29.2, 39.6)
	Grade 12	<b>45.8</b>
		(41.1, 50.6)
Region	All Ontario	<b>16.4</b>
		(14.5, 18.6)
	City of Thunder Bay	<b>22.5</b>
		(20.1, 25.1)
	District of Thunder Bay	<b>19.3</b>
		(15.8, 23.3)
	Kenora-Rainy River	<b>21.1</b>
		(16.3, 26.8)



**Figure 4.17.1. Percentage of students reporting a CRAFFT score of 2 or greater (indicating a potential substance use problem) by sex, grade, and region, with 95% confidence intervals 1997-2005.**

#### **4.18 Impaired Driving (Alcohol and Cannabis)**

*(Table 4.18.1, Figure 4.18.1, Table 4.18.2, Figure 4.18.2)*

Impaired driving is a major safety concern. The NWOSDUS asked students about driving within an hour of drinking two or more alcoholic drinks or within an hour of using marijuana or hashish. We only analyzed the data for students in grades 10 through 12 who indicated elsewhere that they had a driver's license.

Students living in rural and remote areas, or in smaller cities and towns, are less likely to have access to convenient public transit. As well, winter in Northwestern Ontario is considerably longer and colder than in southern Ontario. These two facts make it more likely that Northwestern Ontario

students would need to drive a vehicle to get around. We have also seen that Northwestern Ontario students have rates of substance use that are generally higher than the provincial average. Based on these considerations, it might be expected that Northwestern Ontario students would have higher-than-average rates of impaired driving, and that is exactly the case.

Twenty-five percent of Northwestern Ontario students in grades 10-12 with a driver's license reported driving within an hour of consuming two or more alcoholic drinks, compared to only 13.6% province-wide (Table 4.18.1, Figure 4.18.1). Similarly, 29.2% of these

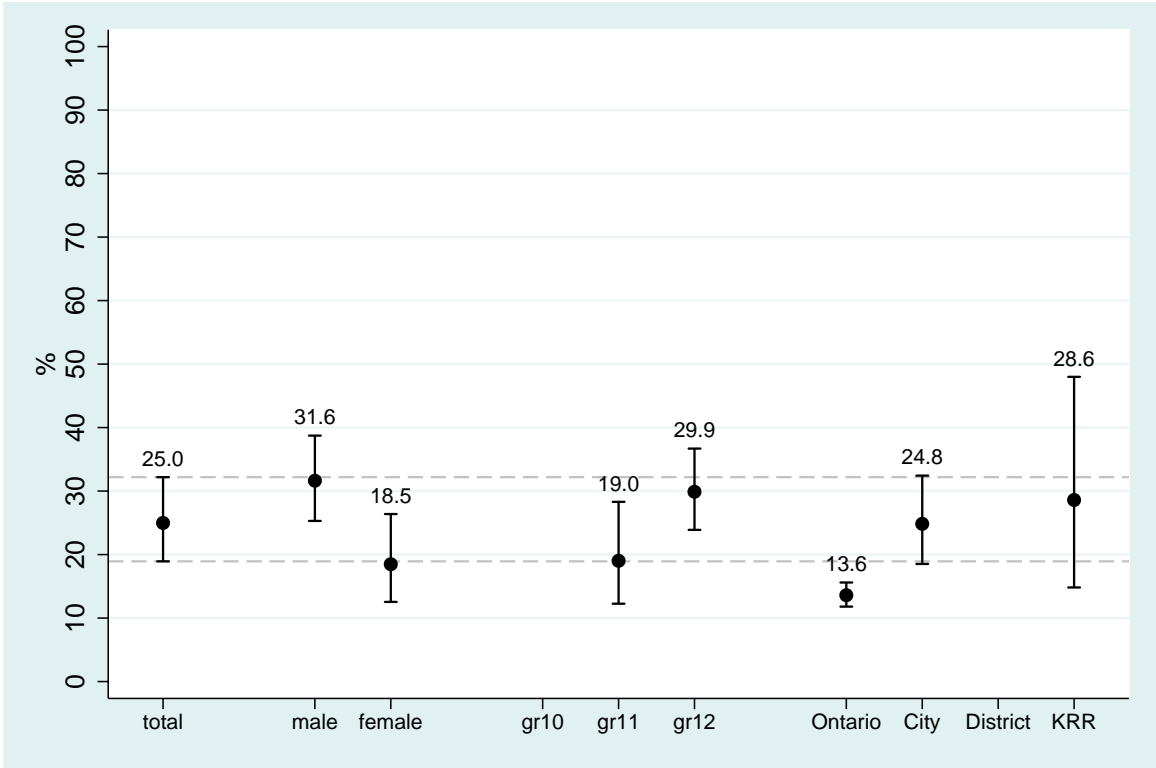
students reported driving within an hour of using cannabis, compared to only 20% province-wide.

Despite the fact that many more students use alcohol than cannabis (Sections 4.4 and 4.5), more students reported driving

under the influence of cannabis than of alcohol. It is not known how much of this result is due to intrinsic factors that differ between alcohol and cannabis users, or because of the comparatively intense social pressure against driving drunk compared to driving high.

**Table 4.18.1. Percentage of students in grades 10-12 with a driver's license who report driving a vehicle within an hour of consuming two or more alcoholic drinks, by sex, grade, and region, 2005.**

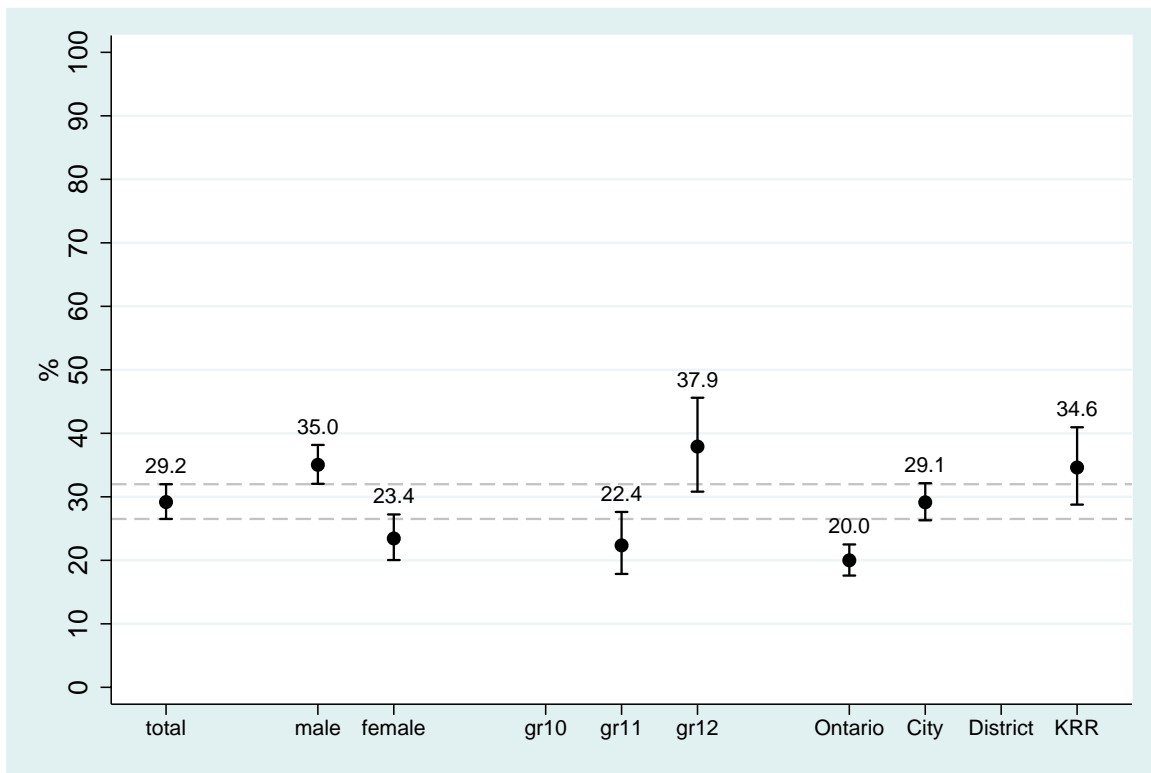
Year		2005
(N)		(748)
Total		<b>25.0</b>
(95% CI)		(18.9, 32.2)
Sex	Male	<b>31.6</b>
		(25.3, 38.7)
	Female	<b>18.5</b>
		(12.5, 26.4)
Grade	Grade 10	--
	Grade 11	<b>19.0</b>
		(12.3, 28.3)
	Grade 12	<b>29.9</b>
		(23.9, 36.7)
Region	All Ontario	<b>13.6</b>
		(11.8, 15.6)
	City of Thunder Bay	<b>24.8</b>
		(18.5, 32.4)
	District of Thunder Bay	--
	Kenora-Rainy River	<b>28.6</b>
		(14.8, 48.0)



**Figure 4.18.1. Percentage of grade 10-12 students who reported driving within an hour of drinking two or more alcoholic drinks, with 95% confidence intervals, by sex, grade, and region, 2005. (Estimates for grade 10 and the District of Thunder Bay are too small to be reported.)**

**Table 4.18.2. Percentage of students in grades 10-12 with a driver's license who reported driving a vehicle within an hour of using cannabis, by sex, grade, and region, 2005.**

Year		2005
(N)		(748)
Total		<b>29.2</b>
(95% CI)		(26.5, 32.0)
Sex	Male	<b>35.0</b>
		(32.0, 38.2)
	Female	<b>23.4</b>
		(20.0, 27.2)
Grade	Grade 10	--
	Grade 11	<b>22.4</b>
		(17.9, 27.6)
	Grade 12	<b>37.9</b>
		(30.8, 45.6)
Region	All Ontario	<b>20.0</b>
		(17.6, 22.5)
	City of Thunder Bay	<b>29.1</b>
		(26.3, 32.1)
	District of Thunder Bay	--
	Kenora-Rainy River	<b>34.6</b>
		(28.8, 41.0)



**Figure 4.18.2. Percentage of grade 10-12 students who reported driving within an hour of using cannabis, with 95% confidence intervals, by sex, grade, and region, 2005. (Estimates for grade 10 and the District of Thunder Bay are too small to be reported.)**



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**APPENDIX A – SURVEY INFORMATION LETTER TO SCHOOL  
BOARDS AND PRINCIPALS**

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[To be on Letter Head]

[Address]

[Date]

Dear [Name of Board Representative or Principal],

We are writing to enlist the cooperation of the [Name of Board or School] in the upcoming *Northwestern Ontario Student Drug Use Survey (NWOSDUS)*, scheduled to begin in the spring of 2005. This is the third cycle of the NWOSDUS. We appreciate your past participation in previous cycles of the survey, which were conducted in 1997 and 2001.

The NWOSDUS is a regional version of the larger *Ontario Student Drug Use Survey (OSDUS)* that gives a much more accurate representation of Northwestern Ontario. The OSDUS has been conducted every two years since 1977 by the Centre for Addiction and Mental Health and is the longest on-going student survey in Canada. Since its inception over two decades ago, more than 50,000 Ontario students from over 60 school boards have participated in the study.

Although we have kept the NWOSDUS title, the survey has developed beyond drug use into a broad health study that also addresses other important issues such as mental health (e.g. depression), physical activity and risk behaviour. Indeed, our findings frequently draw national media attention on issues related to adolescent health.

We have attached a list of schools we would like to survey. For school boards that participated in the 2001 survey, the schools are the same ones approached in that year. Our survey covers students from grades 7 through 12. As in prior surveys, staff from the [Thunder Bay District Health Unit/Northwestern Health Unit] and local CAMH office are available to administer the questionnaire in the classrooms.

Enclosed is the 2001 questionnaire for your perusal. Student responses will remain anonymous, as names are not recorded on the questionnaire. All information regarding schools and school boards will also remain confidential. No study results will identify specific schools or school boards. All surveys are administered within a single 30-40 minutes class period.

The survey has been an important vehicle in providing timely data to inform policy and programming developed by public health units, CAMH and other provincial agencies. Recent examples of programs available to Northwestern Ontario schools include the following:

Safe Party Project

This annual, peer-led harm reduction event uses senior students to develop and deliver messages to junior students about the risks of alcohol and substance use.

#### Plan B media campaign

A media campaign developed with support from corporate donations based on NWOSDUS statistics. This campaign targeted secondary students with a harm reduction message to encourage planning ahead to ensure a safe and sober way home.

#### Peer Mentor Pilot Project:

A pilot project funded by the Crime Prevention Community Mobilization Strategy. This program trains high school students in effective listening, referral and supportive skills to enable peer mentoring.

**The CAMH Thunder Bay Office Administrative Assistant, Carmen Dore, will be contacting you later this fall to confirm your Board's participation in the 2005 NWOSDUS and to obtain permission to contact the Principals of the selected schools.** As in the past, we realize that even if your Board agrees to participate, Principals may decide to decline involvement. Please note that the 2005 *NWOSDUS* has been approved by the joint CAMH/University of Toronto Research Ethics Board. If your Board does agree to participate, the Principals will be contacted by the Thunder Bay CAMH office to discuss participation and to schedule the most convenient time for survey administration.

Data analysis and reports will be prepared by Lee Sieswerda, B.Ed., M.Sc., Epidemiologist, Thunder Bay District Health Unit. He was the lead author of the 2001 NWOSDUS report, a copy of which was mailed to you in 2002. The 2001 report is also available on the internet at <http://www.tbdhu.com/reports/2001StudentDrugUse.pdf> . If you have any questions about the survey, please contact him at (807) 625-5957.

We understand that Northwestern Ontario school boards have been in a period of great organizational change and that class time is at a premium, but we hope you will find this study worthy of your Board's participation.

Sincerely,

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Kim Karioja  
Project Consultant  
Thunder Bay Office

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[Lori M / Cherry L]  
[Title]  
[Health Unit]

**APPENDIX B - SCHOOL PARTICIPATION CONFIRMATION FORM**



**2005  
NORTHWESTERN ONTARIO  
STUDENT DRUG USE  
SURVEY**

**SCHOOL PARTICIPATION  
CONFIRMATION**

**Name of School:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **Postal Code:** \_\_\_\_\_

**School Contact:** \_\_\_\_\_

**Position:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_ **FAX:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Please check one of the following:**

**Our school will participate in the 2005 NWOSDUS**

**or**

**Our school will NOT participate in the 2005 NWOSDUS**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Please FAX this form to:  
Centre for Addiction and Mental Health  
Attention: Carmen Dore  
(807) 626-9090**



**APPENDIX C - PARENTAL INFORMATION AND CONSENT FORM**



[To be on CAMH Letter Head]

**The 2005 Northwestern Ontario Student Drug Use Survey (NWOSDUS)**

***Parental Information and Consent Form***

Dear Parents/Guardians:

The *Centre for Addiction and Mental Health* conducts the longest on-going school survey in Canada. Since 1977, students have been asked about their beliefs and use (if any) of tobacco, alcohol and other drugs (for example, cannabis, hallucinogens, cocaine, heroin and medical drugs).

The NWOSDUS is a regional version of the larger *Ontario Student Drug Use Survey (OSDUS)* that gives a much more accurate representation of Northwestern Ontario. A sample of about 3, 000 Northwestern Ontario students will be asked to complete a pencil and paper questionnaire in the Spring of this year. Your child's class has been asked to participate. Both the class and school were randomly selected. Students do not write their name on the questionnaire and neither students nor classes can ever be identified. The findings will be reported to ensure complete confidentiality and the information cannot appear in any school records. Because we are interested in both the use and non-use of drugs, **there is no assumption that students who complete the survey have ever used tobacco, alcohol or other drugs.** The survey also covers topics such as physical health, mental well-being, and illegal behaviours such as theft, assault and drug-selling. Students do not have to answer every question, and they have the choice to stop at any time. The survey will be completed in a single 30 to 40 minute class period. For your interest, the full 2003 report and the 2005 questionnaire are available on our web site: [http://www.camh.net/research/population\\_life\\_course.html](http://www.camh.net/research/population_life_course.html).

The results of the survey will be used to help Boards of Education and health professionals across Northwestern Ontario to identify key health issues and to develop health and education programs. We believe this study is important and we hope you will allow your child to participate by signing the form below.

I sincerely appreciate your co-operation. If you would like to receive more information about the study or questionnaire, please contact me at 416-535-8501 ext. 4506 (or email: [edward\\_adlaf@camh.net](mailto:edward_adlaf@camh.net)). If you would like to discuss your child's rights regarding participation in this survey, please contact Dr. Pdraig Darby, Chair, Research Ethics Board, Centre for Addiction and Mental Health, at 416-535-8501 ext. 6876.

Thank you,

Edward M. Adlaf, Ph.D.  
Study Director

.....✂  
I have read the request for my son/daughter to participate in the study of the **2005 Northwestern Ontario Student Drug Use Survey**. I have discussed it with my son/daughter and...

- I give permission for my son/daughter to participate.
- I do **not** give permission for my son/daughter to participate.

Name of Student: *(please print)*: \_\_\_\_\_

Signature of Parent/Guardian: \_\_\_\_\_

Date: \_\_\_\_\_



**APPENDIX D – CONSENT FORM INFORMATION FOR  
PRINCIPALS**

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[To be on Letter Head]

[Date]

[Address]

Dear [School Principal]:

The student consent forms have been sent to your school in preparation for the upcoming Northwestern Ontario Student Drug Use Survey (NWOSDUS). The survey will be conducted after the March Break, giving student participants enough time to have their parent/guardian sign the form and have it returned to the school.

It would be appreciated if the home room teacher could collect the forms as they are returned and hold them until the day of the survey. On the day of the survey, the NWOSDUS administrator will collect the consent forms and verify those students who will take the survey. The consent forms will be couriered to the Centre for Addiction and Mental Health research office in Toronto along with the completed surveys.

Jill Starkes, Epidemiologist with the Thunder Bay District Health Unit, will be contacting you to set a time for administering the survey at your school. If you have any questions regarding the survey administration, please contact Jill at (807) 625-8322.

Sincerely,

Kim Karioja  
Project Consultant  
District of Thunder Bay

Enclosure  
KK:cd



**APPENDIX E – CONSENT FORM INSTRUCTIONS FOR HOME  
ROOM TEACHERS**

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[To be on Letter Head]

**ATTENTION HOMEROOM TEACHERS:**

These student consent forms have been sent to your school in preparation for the upcoming Northwestern Ontario Student Drug Use Survey (NWOSDUS). The NWOSDUS is a regional version of the larger *Ontario Student Drug Use Survey (OSDUS)* and gives a much more accurate representation of Northwestern Ontario. The OSDUS has been conducted every two years since 1977 by the Centre for Addiction and Mental Health and is the longest on-going student survey in Canada. Since its inception over two decades ago, more than 50,000 Ontario students from over 60 school boards have participated in the study.

This survey will be conducted in the next few weeks, giving student participants enough time to have a parent/guardian sign the form and return it to the school. **It would be appreciated if the home room teacher could collect the forms as they are returned and hold them until the day of the survey.**

On the day of the survey, staff from the Thunder Bay District Health Unit will collect the consent forms and distribute questionnaires to eligible students. All surveys will be administered within a single 30-40 minute class period.

Thank you for your assistance with this project. We understand that class time is at a premium, but we hope that you can appreciate the potential positive impact of this survey on programs and policies affecting local youth.

Jill Starkes  
Epidemiologist  
Thunder Bay District Health Unit



## **APPENDIX F - ADMINISTRATION INSTRUCTIONS**

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[To be on Letter Head]

## **NORTHWESTERN ONTARIO STUDENT DRUG USE SURVEY 2005 ADMINISTRATION INSTRUCTIONS**

Your school has agreed to participate in the 2005 Northwestern Ontario Student Drug Use Survey, and we appreciate your assistance with this important project.

Students have already received consent forms to take home for parents/guardians to sign. As part of the active consent process, all students under the age of 18 must have a signed consent form in order to complete the survey questionnaire. Classroom teachers are asked to ensure that only students with parent/guardian consent participate in the survey. Signed consent forms can be returned to the Thunder Bay District Health Unit with the completed survey questionnaires.

The survey should take approximately 30-45 minutes to administer. Instructions for completing the questions can be found on the cover page of the survey. Students should be reminded that their answers are meant to be anonymous, and they should not write their name anywhere on the questionnaire. In order to respect students' confidentiality, teachers and other survey administrators should not review the completed questionnaires. If students do not understand a question, they are asked to leave it blank.

When the time allotted for completing the survey has passed, a teacher or survey administrator should collect the questionnaires. Bundles of surveys can be returned to the Thunder Bay District Health Unit in the envelope or box provided. A cover sheet has been provided on which the school name, number of completed surveys, and the number of students present that day should be recorded. Any additional comments regarding survey administration should also be listed.

If you have any questions regarding administration of the Northwestern Ontario Student Drug Use Survey, please contact Jill Starkes, Epidemiologist with the Thunder Bay District Health Unit, at (807)625-8322.

Thank you for supporting this survey. Your time and effort will help us generate a detailed description of substance use and mental health issues among youth in Northwestern Ontario.

Yours truly,

Jill Starkes, BScH MSc  
Epidemiologist  
Thunder Bay District Health Unit  
Phone: 807-625-8322  
Fax: 807-625-4824  
E-Mail: [Jill.Starkes@tbdhu.com](mailto:Jill.Starkes@tbdhu.com)



## **APPENDIX G – ENGLISH QUESTIONNAIRE**

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Note: A French translation was also available to schools.



# 2005 STUDENT QUESTIONNAIRE

These questions are to find out what students, like yourself, know about alcohol and other drugs (for example, tobacco, cannabis, hallucinogens, cocaine, heroin and medical drugs), how you feel about alcohol and other drugs, and what you do about using alcohol and other drugs. **There is no assumption that students who answer the questionnaire have ever used alcohol or other drugs.**

Do NOT put your name on the questionnaire. The information you give is to be kept completely secret and confidential. We ask you, therefore, to be completely honest and accurate when you answer the questions. If you do not wish to answer a question leave it blank. Also, you may withdraw from the survey at any time. THANK YOU FOR YOUR HELP.

## INSTRUCTIONS FOR COMPLETING THIS QUESTIONNAIRE

Most questions are followed by a list of answers. Please choose the answer that is right for you and indicate your choice in one of the boxes to the left.

FOR EXAMPLE:

**Which of the following best describes the reason you have chosen your subjects while in school?**

- 1  I will need them to go further in school
- 2  They will help me get the sort of job I want later on
- 3  I like them and find them interesting
- 4  I am good at them
- 5  My friends will be taking them

**BEFORE STARTING TO ANSWER THIS SURVEY, PLEASE INDICATE THE CURRENT TIME.**

\_\_\_ \_\_\_ : \_\_\_ \_\_\_ (For example, 10:05)

**THE FIRST FEW QUESTIONS ARE ABOUT YOUR BACKGROUND, YOUR SCHOOL, AND HOW YOU SPEND YOUR TIME.**

**1. How old are you?**

- 10  10 years of age or younger
- 11  11 years
- 12  12 years
- 13  13 years
- 14  14 years
- 15  15 years
- 16  16 years
- 17  17 years
- 18  18 years
- 19  19 years
- 20  20 years or older

**2. Are you male or female?**

- 1  Male
- 2  Female

**3. In what grade are you?**

- 06  Grade 6
- 07  Grade 7
- 08  Grade 8
- 09  Grade 9
- 10  Grade 10
- 11  Grade 11
- 12  Grade 12

**4. With whom are you currently living?  
(Please choose only one answer.)**

- 01  Both biological parents
- 02  Biological mother only
- 03  Biological father only
- 04  One biological parent and one stepparent
- 05  Shared custody
- 06  Adoptive parent(s)
- 07  Foster parent(s)
- 08  Other relative(s)
- 09  Living in a group home
- 10  Living on my own or with a friend

**5. Were you born in Canada?**

- 1  Yes
- 2  No

**6. How many times have you moved to a different home in the last 5 years?**

- 1  Never
- 2  Once
- 3  2 or 3 times
- 4  4 or 5 times
- 5  6 to 9 times
- 6  10 times or more

**7. Overall, what marks do you usually get in school?**

- 1  A – (80% - 100%)
- 2  B – (67% - 79%)
- 3  C – (60% - 66%)
- 4  D – (50% - 59%)
- 5  Less than D – (below 50%)

**8. Not everyone expects to go as far in school as they would like. How likely is it that you will stay in school until you graduate?**

- 1  Not at all likely
- 2  Not very likely
- 3  Fairly likely
- 4  Very likely

**9. At school, how worried are you that someone will harm you, threaten you, or take something from you?**

- 1  Very worried
- 2  Somewhat worried
- 3  Not very worried
- 4  Not at all worried

**FOR THE NEXT FIVE QUESTIONS, PLEASE TELL US WHETHER YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS.**

**10. I feel safe in my school.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**11. I feel close to people at this school.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**12. I feel like I am part of this school.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**13. Most teachers in my school are excellent.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**14. Most classes offered in my school are challenging.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**15. During the LAST 5 YEARS, how many times have you changed schools? (Do not include changing from elementary or middle school to high school.)**

- 1  Never
- 2  Once
- 3  2 times
- 4  3 times
- 5  4 or more times

**16. In the LAST 4 WEEKS (that is, during the last 20 school days), how many days of school did you miss because of your health?**

I missed \_\_\_\_\_ days of school during the last 4 weeks because of my health. (Write '0' if you missed no days.)

**17. During the LAST 4 WEEKS, how often have you gone to school, but skipped a class when you weren't supposed to?**

- 1  Never in the last 4 weeks
- 2  1 or 2 times
- 3  3 to 5 times
- 4  6 to 10 times
- 5  11 to 20 times
- 6  More than 20 times

**18. Since September, how many times have you been suspended from school?**

\_\_\_\_\_ times (Write '0' if you have not been suspended since September.)

**19. On average, how many hours A WEEK do you spend working for pay outside the home?**

- 1  5 hours or less a week
- 2  6 to 10 hours a week
- 3  11 to 15 hours a week
- 4  16 to 20 hours
- 5  More than 20 hours
- 6  Don't work for pay outside the home

**19a. On average, how many hours do you spend A DAY on the Internet (for fun or for school)?**

- 1  Less than 1 hour a day
- 2  1 to 2 hours a day
- 3  3 to 4 hours
- 4  5 or more hours
- 5  Use the Internet, but not every day
- 6  Never used the Internet

**20. How would you describe your family's financial situation?**

- 1  Well above average
- 2  Somewhat above average
- 3  About average
- 4  Somewhat below average
- 5  Well below average

**21. How far did your father go in school?**

- 1  Graduated university
- 2  Attended university
- 3  Graduated college
- 4  Attended college
- 5  Graduated high school
- 6  Attended high school
- 7  Did not attend high school
  
- 8  Don't know
- 9  No father

**22. How far did your mother go in school?**

- 1  Graduated university
- 2  Attended university
- 3  Graduated college
- 4  Attended college
- 5  Graduated high school
- 6  Attended high school
- 7  Did not attend high school
  
- 8  Don't know
- 9  No mother

**23. What language do you usually speak at home?**

- 1  English
- 2  French
- 3  Other

**24. Including stepbrothers and stepsisters, how many brothers and sisters do you have?**

\_\_\_\_\_ brothers/sisters (Write in '0' if you have none.)

**25. How many automobiles does your family have? (Do not count motorcycles.)**

- 1  None
- 2  1
- 3  2 or more

**26. How many personal computers (PCs) does your family have at home?**

- 1  None
- 2  1
- 3  2 or more

**27. Were your parents born in Canada?**

- 1  Both parents were born in Canada
- 2  One parent
- 3  Neither parent

**28. How well would you say you are getting along with your parents?**

- 1  I am getting along very well with my parents
- 2  I am getting along OK with my parents
- 3  I am not getting along well with my parents

**29. In your free time away from home, how often does one of your parents know where you are?**

- 1  Always
- 2  Usually
- 3  Sometimes
- 4  Seldom
- 5  Never

**30. How many parents of your close friends do your parents know well?**

- 1  None
- 2  1 parent
- 3  2 to 3 parents
- 4  4 to 6 parents
- 5  7 to 10 parents
- 6  11 or more parents

**31. Is getting along well with your parents very important, somewhat important or not important to you?**

- 1  Very important
- 2  Somewhat important
- 3  Not important

**32. When you have problems, how often do you talk to your mother about them?**

- 1  Always
- 2  Usually
- 3  Sometimes
- 4  Seldom
- 5  Never
  
- 6  No mother

**33. When you have problems, how often do you talk to your father about them?**

- 1  Always
- 2  Usually
- 3  Sometimes
- 4  Seldom
- 5  Never
  
- 6  No father

**34. Have you or your family ever been involved with any Children's Aid Society?**

- 1  Yes
- 2  No
- 3  Don't Know

**35. Which of your parents/guardians currently smoke(s) cigarettes?**

- 1  Both parents smoke
- 2  Only my mother smokes
- 3  Only my father smokes
- 4  My parent(s) do not smoke
  
- 5  Don't Know

**THE NEXT SECTION IS ABOUT ALCOHOL AND OTHER DRUGS. PLEASE ANSWER ALL QUESTIONS EVEN IF YOU HAVE NEVER TRIED THESE DRUGS.**

**35a. In the LAST 12 MONTHS, how often did you smoke CIGARETTES?**

- 01  Tried one cigarette
- 02  Less than 1 cigarette a day
- 03  1 or 2 cigarettes a day
- 04  3 to 5 cigarettes a day
- 05  6 to 10 cigarettes a day
- 06  11 to 15 cigarettes a day
- 07  16 to 20 cigarettes a day
- 08  More than 20 cigarettes a day
  
- 09  Smoked, but not in the last 12 months
- 10  Never smoked cigarettes in lifetime

**36. Which of the following statements best describes your use of cigarettes IN YOUR LIFETIME?**

- 1  Never had a cigarette, not even one puff in my life
- 2  Smoked from a few puffs to a whole cigarette in my life
- 3  Only 2 to 3 cigarettes in my life
- 4  More than 3, but fewer than 100 cigarettes in my life
- 5  100 or more cigarettes in my life, but none in the last month
- 6  100 or more cigarettes in my life and some during the last month

**37. In the LAST 12 MONTHS, how often did you drink ALCOHOL — liquor (rum, whiskey, etc.), wine, beer, coolers?**

- 01  Drank only at special events (for example, Christmas or at weddings)
- 02  Had a sip of alcohol to see what it's like
- 03  Once a month or less often
- 04  2 or 3 times a month
- 05  Once a week
- 06  2 or 3 times a week
- 07  4 or 5 times a week
- 08  Almost every day – 6 or 7 times a week
  
- 09  Drank, but not in the last 12 months
- 10  Never drunk alcohol in lifetime

**38. In the LAST 12 MONTHS, how often did you use CANNABIS (also known as marijuana, "weed", "grass", "pot", hashish, "hash", hash oil, etc.)?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what cannabis is

**39. In the LAST 12 MONTHS, how often did you use BARBITURATES (such as Seconal, also known as "barbs", "rainbows", etc.) WITHOUT A PRESCRIPTION or without a doctor telling you to take them?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used non-medically, but not in the last 12 months
- 8  Never used non-medically in lifetime
- 9  Don't know what barbiturates are

**39a. In the LAST 12 MONTHS, how often did you use SMOKELESS TOBACCO (also known as "snuff", dipping tobacco, chewing tobacco, etc.)**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what smokeless tobacco is

**40. In the LAST 12 MONTHS, how often did you use HEROIN (also known as "H", "junk", "smack", etc.)?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what heroin is

**41. In the LAST 12 MONTHS, how often did you use METHAMPHETAMINES or "speed"?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what "speed" is

**42. In the LAST 12 MONTHS, how often did you use STIMULANTS other than cocaine (such as diet pills, also known as "uppers", "bennies", "dexies", etc.) WITHOUT A PRESCRIPTION or without a doctor telling you to take them?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used non-medically, but not in the last 12 months
- 8  Never used non-medically in lifetime
- 9  Don't know what stimulants are

**42a. In the LAST 12 MONTHS, how often did you use STIMULANTS WITH A PRESCRIPTION or because a doctor told you to take them?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Use medically, but not in the last 12 months
- 8  Never used medically in lifetime
- 9  Don't know what stimulants are

**43. In the LAST 12 MONTHS, how often did you use TRANQUILIZERS (such as Valium, Librium, also known as "tranqs", "downers", etc.) WITHOUT A PRESCRIPTION or without a doctor telling you to take them?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used non-medically, but not in the last 12 months
- 8  Never used non-medically in lifetime
- 9  Don't know what tranquilizers are

**43a. In the LAST 12 MONTHS, how often did you use TRANQUILLIZERS WITH A PRESCRIPTION or because a doctor told you to take them?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used medically, but not in the last 12 months
- 8  Never used medically in lifetime
- 9  Don't know what tranquilizers are

**44. In the LAST 12 MONTHS, how often did you use LSD or "acid"?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what LSD is

**45. In the LAST 12 MONTHS, how often did you use the drug PCP (also known as "angel dust", "dust", "horse tranquilizer", etc.)?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what PCP is

**46. In the LAST 12 MONTHS, how often did you use HALLUCINOGENS, OTHER THAN LSD OR PCP (such as Mescaline and Psilocybin, also known as "magic mushrooms", "mesc", etc.)?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what hallucinogens are

**47. In the LAST 12 MONTHS, how often did you use COCAINE (also known as "coke", "snow", "snort", "blow", etc.)?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what cocaine is

**48. In the LAST 12 MONTHS, how often did you use cocaine in the form of "CRACK"?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what "crack" is

**49. In the LAST 12 MONTHS, how often did you use MDMA OR "ECSTASY"?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what "ecstasy" is

**50. In the LAST 12 MONTHS, how often did you use OXYCONTIN (also known as "oxy", "OC")?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what OxyContin is

**51. In the LAST 12 MONTHS, how often did you use ADRENOCROMES (also known as "wagon wheels")?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used, but not in the last 12 months
- 8  Never used in lifetime
- 9  Don't know what adrenochromes are

**52. Sometimes doctors give medicine such as Ritalin to students who are hyperactive or have problems concentrating in school. This is sometimes called Attention Deficit Disorder.**

**In the LAST 12 MONTHS, how often did you use RITALIN WITH A PRESCRIPTION or because a doctor told you to take it?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used medically, but not in the last 12 months
- 8  Never used medically in lifetime
- 9  Don't know what Ritalin is

**53. In the LAST 12 MONTHS, how often did you use RITALIN WITHOUT A PRESCRIPTION or without a doctor telling you to take it?**

- 1  1 or 2 times
- 2  3 to 5 times
- 3  6 to 9 times
- 4  10 to 19 times
- 5  20 to 39 times
- 6  40 or more times
  
- 7  Used non-medically, but not in the last 12 months
- 8  Never used non-medically in lifetime
- 9  Don't know what Ritalin is

**THE NEXT FEW QUESTIONS ARE ABOUT ALCOHOL.**

**54. When (if ever) did you first drink more than just a sip of alcohol?**

- 01  Grade 4 or before
- 02  Grade 5
- 03  Grade 6
- 04  Grade 7
- 05  Grade 8
- 06  Grade 9
- 07  Grade 10
- 08  Grade 11
- 09  Grade 12
  
- 10  Never used alcohol in lifetime

**55. During the LAST 4 WEEKS how often did you drink alcohol (liquor, wine, beer, or coolers)?**

- 1  Once or twice
- 2  Once or twice each week
- 3  3 or 4 times each week
- 4  5 or 6 times each week
- 5  Once each day
- 6  More than once each day
  
- 7  Did not drink alcohol in the last 4 weeks
- 8  Don't drink alcohol

**56. How many times in the LAST 4 WEEKS have you had FIVE OR MORE DRINKS of alcohol on the SAME OCCASION?**

- 1  Once
- 2  2 times
- 3  3 times
- 4  4 times
- 5  5 or more times
  
- 6  Did not drink alcohol in the last 4 weeks
- 7  Did not have five or more drinks of alcohol on the same occasion in the last 4 weeks
- 8  Don't drink alcohol

**56a. How many drinks containing alcohol do you have on a typical day when you are drinking?**

- 1  1 to 2 drinks
- 2  3 to 4 drinks
- 3  5 to 6 drinks
- 4  7 to 9 drinks
- 5  10 or more drinks
  
- 6  Don't drink alcohol

**56b. How often do you have five or more drinks on one occasion?**

- 1  Never
- 2  Less than once a month
- 3  About once a month
- 4  About once a week
- 5  Daily or almost daily
  
- 6  Don't drink alcohol

**56c. How often during the LAST 12 MONTHS have you found that you were not able to stop drinking once you had started?**

- 1  Never
- 2  Less than once a month
- 3  About once a month
- 4  About once a week
- 5  Daily or almost daily
  
- 6  Don't drink alcohol

**56d. How often during the LAST 12 MONTHS have you not done things you were supposed to because of drinking?**

- 1  Never
- 2  Less than once a month
- 3  About once a month
- 4  About once a week
- 5  Daily or almost daily
  
- 6  Don't drink alcohol

**56e. How often during the LAST 12 MONTHS have you needed a first drink in the morning to get yourself going after a heavy drinking session?**

- 1  Never

- 2  Less than once a month
- 3  About once a month
- 4  About once a week
- 5  Daily or almost daily
- 6  Don't drink alcohol

**56f. How often during the LAST 12 MONTHS have you had a feeling of guilt or remorse after drinking?**

- 1  Never
- 2  Less than once a month
- 3  About once a month
- 4  About once a week
- 5  Daily or almost daily
- 6  Don't drink alcohol

**56g. How often during the LAST 12 MONTHS have you been unable to remember what happened the night before because you had been drinking?**

- 1  Never
- 2  Less than once a month
- 3  About once a month
- 4  About once a week
- 5  Daily or almost daily
- 6  Don't drink alcohol

**56h. Have you or someone else been injured as a result of your drinking?**

- 1  No
- 2  Yes, but not in the last 12 months
- 3  Yes, during the last 12 months
- 4  Don't drink alcohol

**56i. Has a relative or friend or a doctor or other health care worker been concerned about your drinking or suggested you cut down?**

- 1  No
- 2  Yes, but not in the last 12 months
- 3  Yes, during the last 12 months
- 4  Don't drink alcohol

**57. Have you been in a treatment program during the LAST 12 MONTHS because of your alcohol or drug use?**

- 1  Yes, for alcohol only
- 2  Yes, for drugs only
- 3  Yes, for both alcohol and drugs
- 4  No

**NOW WE HAVE A FEW QUESTIONS ABOUT DRUGS OTHER THAN ALCOHOL.**

**57a. In the LAST 12 MONTHS, did you use drugs to relax, feel better about yourself, or fit in?**

- 1  Yes
- 2  No
- 3  Never used drugs

**57b. In the LAST 12 MONTHS, did you use drugs while you were by yourself?**

- 1  Yes
- 2  No
- 3  Never used drugs

**57c. In the LAST 12 MONTHS, did you forget things you did while using drugs?**

- 1  Yes
- 2  No
- 3  Never used drugs

**57d. In the LAST 12 MONTHS, did you get into trouble while you were using drugs?**

- 1  Yes
- 2  No
- 3  Never used drugs

**57e. In the LAST 12 MONTHS, did your family or friends tell you that you should cut down on your drug use?**

- 1  Yes
- 2  No
- 3  Never used drugs

**THE NEXT FEW QUESTIONS ARE ABOUT CANNABIS. PLEASE ANSWER ALL QUESTIONS, EVEN IF YOU HAVE NEVER USED CANNABIS.**

**57.1a. When (if ever) did you first try CANNABIS (also known as marijuana, "weed", "grass", "pot", hashish, "hash", hash oil)?**

- 01  Don't know what cannabis is
- 02  Never tried cannabis in lifetime
  
- 03  Grade 4 or before
- 04  Grade 5
- 05  Grade 6
- 06  Grade 7
- 07  Grade 8
- 08  Grade 9
- 09  Grade 10
- 10  Grade 11
- 11  Grade 12

**57.1b. During the LAST 4 WEEKS how often (if ever) did you use cannabis (also known as marijuana, "weed", "grass", "pot", hashish, "hash", hash oil)?**

- 1  Don't know what cannabis is
- 2  Never used cannabis in lifetime
- 3  Did not use in the last 4 weeks
  
- 4  Used once or twice
- 5  Once or twice each week
- 6  3 or 4 times each week
- 7  5 or 6 times each week
- 8  Once each day
- 9  More than once each day

**57.1c. During the LAST 4 WEEKS, on occasions when you have used marijuana, how many joints did you typically smoke? (If you shared joints with others, count only the amount that YOU smoked.)**

- 1  Don't know what marijuana is
- 2  Never used marijuana in lifetime
- 3  Did not use in the last 4 weeks
  
- 4  Less than 1 joint
- 5  About 1 joint
- 6  2 to 3 joints
- 7  4 or more joints

**57.1d. In the LAST 12 MONTHS, have you tried to stop using marijuana or hashish but found that you couldn't stop?**

- 1  Yes
- 2  No
  
- 3  Did not use in the last 12 months
- 4  Never used in lifetime

**57.1e. In the LAST 12 MONTHS, has there been a period when you used marijuana or hashish every day or almost every day for at least a month?**

- 1  Yes
- 2  No
  
- 3  Did not use in the last 12 months
- 4  Never used in lifetime

**57.1f. In the LAST 12 MONTHS, have you tried to cut down your use of marijuana or hashish?**

- 1  Yes
- 2  No
  
- 3  Did not use in the last 12 months
- 4  Never used in lifetime

**57.1g. How many of your CLOSEST friends use marijuana or hashish?**

- 1  None of my friends
- 2  Some of my friends
- 3  About half of my friends
- 4  Most of my friends
- 5  All of my friends

**THE NEXT SECTIONS ARE ABOUT YOUR HEALTH AND FEELINGS.**

**58. On how many of the LAST 7 DAYS did you exercise or participate in sports activities for AT LEAST 20 MINUTES THAT MADE YOU SWEAT AND BREATHE HARD? Please include activities such as basketball, jogging, fast dancing, swimming laps, tennis, fast bicycling, or similar aerobic activities (include both school and non-school activities).**

- 1  0 days
- 2  1 day
- 3  2 days
- 4  3 days
- 5  4 days
- 6  5 days
- 7  6 days
- 8  7 days

**59. On how many of the LAST 5 SCHOOL DAYS did you participate in physical activity for AT LEAST 20 MINUTES THAT MADE YOU SWEAT AND BREATHE HARD in physical education class in your school?**

- 1  0 days
- 2  1 day
- 3  2 days
- 4  3 days
- 5  4 days
- 6  5 days
- 7  Not enrolled in physical education right now

**60. How would you rate your physical health?**

- 1  Excellent
- 2  Very good
- 3  Good
- 4  Fair
- 5  Poor

**61. In the LAST 12 MONTHS, how many times have you seen a doctor about your physical health or for a check-up?**

\_\_\_\_\_ times (Write in '0' if you have not seen a doctor for your physical health in the last 12 months.)

**62. In the LAST 12 MONTHS, how often have you seen a doctor, nurse or counsellor about your emotional or mental health?**

\_\_\_\_\_ times (Write in '0' if you have not seen any of the above in the last 12 months.)

**63. In the LAST 12 MONTHS, how many times were you hurt or injured, and had to be treated by a doctor or nurse?**

- 1  Was not treated for an injury in the last 12 months
- 2  1 time
- 3  2 times
- 4  3 times
- 5  4 or more times

**IN THE NEXT FEW QUESTIONS WE WOULD LIKE TO KNOW IF YOU HAVE EXPERIENCED ANY MEDICAL COMPLAINTS, AND HOW YOUR HEALTH HAS BEEN IN GENERAL, OVER THE LAST FEW WEEKS. THINK ABOUT PRESENT AND RECENT COMPLAINTS, NOT THOSE THAT YOU HAD IN THE PAST.**

**63.1a. Over the last few weeks, have you been able to concentrate on whatever you're doing?**

- 1  Better than usual
- 2  Same as usual
- 3  Less than usual
- 4  Much less than usual

**63.1b. Over the last few weeks, have you felt that you are playing a useful part in things?**

- 1  More so than usual
- 2  Same as usual
- 3  Less useful than usual
- 4  Much less useful

**63.1c. Over the last few weeks, have you felt capable of making decisions about things?**

- 1  More so than usual
- 2  Same as usual
- 3  Less so than usual
- 4  Much less capable

**63.1d. Over the last few weeks, have you been able to enjoy your normal day-to-day activities?**

- 1  More so than usual
- 2  Same as usual
- 3  Less so than usual
- 4  Much less than usual

**63.1e. Over the last few weeks, have you been able to face up to your problems?**

- 1  More so than usual
- 2  Same as usual
- 3  Less able than usual
- 4  Much less able than usual

**63.1f. Over the last few weeks, have you been feeling reasonably happy, all things considered?**

- 1  More so than usual
- 2  About same as usual
- 3  Less so than usual
- 4  Much less than usual

**63.1g. Over the last few weeks, have you lost much sleep because you were worried about something?**

- 1  Not at all
- 2  No more than usual
- 3  Somewhat more than usual
- 4  Much more than usual

**63.1h. Over the last few weeks, have you felt constantly under stress?**

- 1  Not at all
- 2  No more than usual
- 3  Somewhat more than usual
- 4  Much more than usual

**63.1i. Over the last few weeks, have you felt you couldn't overcome difficulties?**

- 1  Not at all
- 2  No more than usual
- 3  Somewhat more than usual
- 4  Much more than usual

**63.1j. Over the last few weeks, have you been feeling unhappy and depressed?**

- 1  Not at all
- 2  No more than usual
- 3  Somewhat more than usual
- 4  Much more than usual

**63.1k. Over the last few weeks, have you been losing confidence in yourself?**

- 1  Not at all
- 2  No more than usual
- 3  Somewhat more than usual
- 4  Much more than usual

**63.1l. Over the last few weeks, have you been thinking of yourself as a worthless person?**

- 1  Not at all
- 2  No more than usual
- 3  Somewhat more than usual
- 4  Much more than usual

**63.1m. During the LAST 12 MONTHS, did you ever seriously consider attempting suicide?**

- 1  Yes
- 2  No

**63.1n. During the LAST 7 DAYS, how often have you felt sad?**

- 1  Never or rarely
- 2  Sometimes
- 3  Often
- 4  Always

**63.1o. During the LAST 7 DAYS, how often have you felt lonely?**

- 1  Never or rarely
- 2  Sometimes
- 3  Often
- 4  Always

**63.1p. During the LAST 7 DAYS, how often have you felt depressed?**

- 1  Never or rarely
- 2  Sometimes
- 3  Often
- 4  Always

**63.1q. During the LAST 7 DAYS, how often have you felt like crying?**

- 1  Never or rarely
- 2  Sometimes
- 3  Often
- 4  Always

**63.1r. In the LAST 12 MONTHS, have you been prescribed medicine to treat anxiety or depression?**

- 1  Yes, for anxiety only
- 2  Yes, for depression only
- 3  Yes, for both anxiety and depression
- 4  No

**63.2e. Sometimes I think I am no good at all.**

- 1  Almost always true
- 2  Often true
- 3  Sometimes true
- 4  Seldom true
- 5  Never true

**63.2f. I am able to do most things as well as other people can.**

- 1  Almost always true
- 2  Often true
- 3  Sometimes true
- 4  Seldom true
- 5  Never true

**FOR THE NEXT FEW QUESTIONS, PLEASE INDICATE HOW OFTEN EACH OF THE FOLLOWING STATEMENTS IS TRUE FOR YOU.**

**63.2g. About how many people do you know that you can talk to about your problems?**

\_\_\_\_\_ Number of people you can talk to

**63.2a. Sometimes I feel that I can't do anything right.**

- 1  Almost always true
- 2  Often true
- 3  Sometimes true
- 4  Seldom true
- 5  Never true

**63.2h. In the LAST 12 MONTHS, have you phoned any telephone crisis helpline (for example, "Kids Help Phone") because you needed to talk to someone about a problem?**

- 1  Yes
- 2  No

**63.2b. I feel good about myself.**

- 1  Almost always true
- 2  Often true
- 3  Sometimes true
- 4  Seldom true
- 5  Never true

**PLEASE INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS.**

**63.2c. I feel I don't have much to be proud of.**

- 1  Almost always true
- 2  Often true
- 3  Sometimes true
- 4  Seldom true
- 5  Never true

**63.3a. I like new and exciting experiences, even if I have to break the rules.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**63.2d. I feel that I'm a person of worth.**

- 1  Almost always true
- 2  Often true
- 3  Sometimes true
- 4  Seldom true
- 5  Never true

**63.3b. I prefer friends who are exciting and unpredictable.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**63.3c. I like to explore strange places.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**63.3d. I like to do frightening things.**

- 1  Strongly agree
- 2  Somewhat agree
- 3  Somewhat disagree
- 4  Strongly disagree

**THE NEXT QUESTIONS ARE ABOUT HOW YOU FEEL ABOUT PEOPLE WHO ARE ADDICTED TO DRUGS.**

**63.4a. Would you be afraid to talk to someone who is addicted to drugs?**

- 1  Definitely
- 2  Probably
- 3  Probably Not
- 4  Definitely Not
- 5  Not Sure

**63.4b. Would you be upset or disturbed to be in the same class with someone who is addicted to drugs?**

- 1  Definitely
- 2  Probably
- 3  Probably Not
- 4  Definitely Not
- 5  Not Sure

**63.4c. Would you make friends with someone who is addicted to drugs?**

- 1  Definitely
- 2  Probably
- 3  Probably Not
- 4  Definitely Not
- 5  Not Sure

**63.4d. Would you feel embarrassed or ashamed if your friends knew that someone in your family was addicted to drugs?**

- 1  Definitely
- 2  Probably
- 3  Probably Not
- 4  Definitely Not
- 5  Not Sure

**THE NEXT FOUR QUESTIONS ARE ABOUT BULLYING.**

**BULLYING IS WHEN ONE OR MORE PEOPLE TEASE, HURT OR UPSET A WEAKER PERSON ON PURPOSE, AGAIN AND AGAIN. IT IS ALSO BULLYING WHEN SOMEONE IS LEFT OUT OF THINGS ON PURPOSE.**

**63.5a. Since September, in what way were you bullied the most at school? (Please choose only one answer.)**

- 1  Was not bullied at school since September
- 2  Physical attacks (for example, beat you up, pushed or kicked you)
- 3  Verbal attacks (for example, teased, threatened, spread rumours about you)
- 4  Stole from you or damaged your things

**63.5b. Since September, how often have you been bullied at school?**

- 1  Was not bullied at school since September
- 2  Daily or almost daily
- 3  About once a week
- 4  About once a month
- 5  Less than once a month

**63.5c. Since September, in what way did you bully other students the most at school? (Please choose only one answer.)**

- 1  Did not bully other students since September
- 2  Physical attacks (for example, beat up, pushed, or kicked them)
- 3  Verbal attacks (for example, teased, threatened, or spread rumours about them)
- 4  Stole from them or damaged their things

**63.5d. Since September, how often have you taken part in bullying other students at school?**

- 1  Did not bully other students since September
- 2  Daily or almost daily
- 3  About once a week
- 4  About once a month
- 5  Less than once a month

**THE FOLLOWING QUESTIONS ARE ABOUT GAMBLING OR BETTING.**

**63.6a. What is the largest amount of money you have ever gambled in the LAST 12 MONTHS?**

- 1  \$1 or less
- 2  \$2 to \$10
- 3  \$11 to \$49
- 4  \$50 to \$99
- 5  \$100 to \$199
- 6  \$200 or more
- 7  Never gambled in the last 12 months
- 8  Never gambled in my lifetime

**63.6b. Has your betting, in the LAST 12 MONTHS, ever caused any problems for you such as arguments with family and friends, or problems at school or work?**

- 1  Yes
- 2  No
- 3  Never gambled in the last 12 months

**63.6c. In the LAST 12 MONTHS, have you ever gambled more than you had planned to?**

- 1  Yes
- 2  No
- 3  Never gambled in the last 12 months

**63.6d. In the LAST 12 MONTHS, has anyone criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true or not?**

- 1  Yes
- 2  No
- 3  Never gambled in the last 12 months

**63.6e. In the LAST 12 MONTHS, have you had arguments with family or friends because of the money you spend on gambling?**

- 1  Yes
- 2  No
- 3  Never gambled in the last 12 months

**63.6f. In the LAST 12 MONTHS, have you ever skipped or been absent from school or work due to betting activities?**

- 1  Yes
- 2  No
- 3  Never gambled in the last 12 months

**63.6g. In the LAST 12 MONTHS, have you borrowed money or stolen something in order to bet or to cover gambling debts?**

- 1  Yes
- 2  No
- 3  Never gambled in the last 12 months

**63.7. How often (if ever) in the LAST 12 MONTHS, have you done each of the following? (Write '0' if you have not done it.)**

- a) Played CARDS for money? \_\_\_\_\_ times
- b) Played BINGO for money? \_\_\_\_\_ times
- c) Bet money in SPORTS POOLS? \_\_\_\_\_ times
- d) Bought SPORTS LOTTERY tickets (such as Sports Select or Proline)? \_\_\_\_\_ times
- e) Bought any other LOTTERY tickets, including instant lottery (such as 6-49, Scratch & Win, pull-tabs)? \_\_\_\_\_ times
- f) Bet money on VIDEO GAMBLING MACHINES, SLOT machines, or any other gambling machines? \_\_\_\_\_ times
- g) Bet money at a CASINO in Ontario? \_\_\_\_\_ times
- h) Bet money over the INTERNET? \_\_\_\_\_ times
- i) Played DICE for money? \_\_\_\_\_ times
- j) Bet money in OTHER ways not listed above? \_\_\_\_\_ times

**63.8. How often (if ever) in the LAST 12 MONTHS have you done each of the following? (Write '0' if you have not done it).**

- a) Taken a car for a ride without the owner's permission? \_\_\_\_\_ times
- b) Banged up or damaged something (on purpose) that did not belong to you? \_\_\_\_\_ times
- c) Sold marijuana or hashish? \_\_\_\_\_ times
- d) Taken things worth \$50 or less that did not belong to you? \_\_\_\_\_ times
- e) Taken things worth more than \$50 that did not belong to you? \_\_\_\_\_ times
- f) Beat up or hurt anyone (on purpose), not counting fights you may have had with a brother or sister? \_\_\_\_\_ times
- g) Broken into a locked building other than your own home? \_\_\_\_\_ times
- h) Carried a weapon, such as a gun or knife? \_\_\_\_\_ times
- i) Sold drugs other than marijuana or hashish? \_\_\_\_\_ times
- j) Taken part in gang fights? \_\_\_\_\_ times
- k) Were thrown out of your home (that is, you were told to leave your home when you did not want to leave)? \_\_\_\_\_ times
- l) Run away from your home (that is, left home without the permission of one or both of your parents)? \_\_\_\_\_ times
- m) Carried a handgun? \_\_\_\_\_ times

**63.8n. During the LAST 12 MONTHS, how many times were you in a physical fight on school property?**

- 1  Never
- 2  Once
- 3  2 or 3 times
- 4  4 or 5 times
- 5  6 or 7 times
- 6  8 or 9 times
- 7  10 or 11 times
- 8  12 or more times

**63.8o. During the LAST 12 MONTHS, how many times has someone threatened or injured you with a weapon, such as a gun, knife, or club on school property?**

- 1  Never
- 2  Once
- 3  2 or 3 times
- 4  4 or 5 times
- 5  6 or 7 times
- 6  8 or 9 times
- 7  10 or 11 times
- 8  12 or more times

**THE FOLLOWING QUESTIONS ARE ABOUT MATCHES, LIGHTERS OR OTHER THINGS THAT CAN SPARK FIRES.**

**63.8p. In the LAST 12 MONTHS, how often did you carry matches or lighters in your pockets, purse or bag?**

- 1  Never
- 2  Rarely
- 3  Sometimes
- 4  Often
- 5  Always

**63.8q. How old were you the first time you played with matches or lighters, or burned something that you weren't supposed to?**

- 1  Never played with matches or lighters
- 2  5 years old or younger
- 3  Between 6 and 9 years old
- 4  10 years old or older

**63.8r. In the LAST 12 MONTHS, how many times have you set something on fire that you weren't supposed to?**

\_\_\_\_\_ times (Write '0' if you have not done this.)

**THE NEXT QUESTIONS REFER TO DRIVING A CAR, MOTORCYCLE OR OTHER MOTOR VEHICLES.**

**64. What type of driver's licence do you have now?**

- 1  No driver's licence of any type
- 2  Level One graduated licence (G1)
- 3  Level Two graduated licence (G2)
- 4  Full graduated licence
- 5  Don't know

**65. How often in the LAST 12 MONTHS have you driven within an hour of drinking two or more drinks of alcohol?**

- 01  Never
- 02  Once
- 03  2 times
- 04  3 times
- 05  4 times
- 06  5 times
- 07  6 times
- 08  7 times
- 09  8 or more times
- 10  No driver's licence of any type

**66. How often in the LAST 12 MONTHS have you driven within an hour of using marijuana or hashish?**

- 01  Never
- 02  Once
- 03  2 times
- 04  3 times
- 05  4 times
- 06  5 times
- 07  6 times
- 08  7 times
- 09  8 or more times
- 10  No driver's licence of any type

**66a. How often in the LAST 12 MONTHS, did you ride in a car or other vehicle driven by someone who had been using drugs (other than alcohol)?**

- 1  Never
- 2  Once
- 3  2 times
- 4  3 times
- 5  4 times
- 6  5 times
- 7  6 times
- 8  7 times
- 9  8 or more times

**69. In the last 12 months, how many times has someone in another vehicle damaged or attempted to damage the vehicle you were in, or hurt or attempted to hurt you or others with you?**

- 1  Never
- 2  Once
- 3  Twice
- 4  Three or more times
- 5  Don't know

**THE NEXT QUESTIONS ARE ABOUT THINGS THAT MIGHT HAVE HAPPENED WHEN YOU WERE IN A CAR, MOTORCYCLE OR OTHER MOTOR VEHICLE.**

**JUST A FEW FINAL QUESTIONS.**

**67. In the last 12 months, how many times has someone in another vehicle shouted, cursed, or made rude gestures at you or others with you?**

- 1  Never
- 2  Once
- 3  Twice
- 4  Three or more times
- 5  Don't know

**70. Overall, how easy did you find the questionnaire to understand?**

- 1  Not at all easy
- 2  Not very easy
- 3  Fairly easy
- 4  Very easy

**68. In the last 12 months, how many times has someone in another vehicle threatened to hurt you or others with you, or threatened to damage the vehicle you were in?**

- 1  Never
- 2  Once
- 3  Twice
- 4  Three or more times
- 5  Don't know

**71. What about the length of the questionnaire, did you find it . . .**

- 1  Much too long
- 2  A bit too long
- 3  About right
- 4  A bit too short

**72. What are the first three digits of your postal code?**

\_\_\_\_ \_

**Thank you for your participation in this survey!**

**Please indicate the time you finished this survey.**

\_\_\_\_ : \_\_\_\_ (For example, 10:45)

