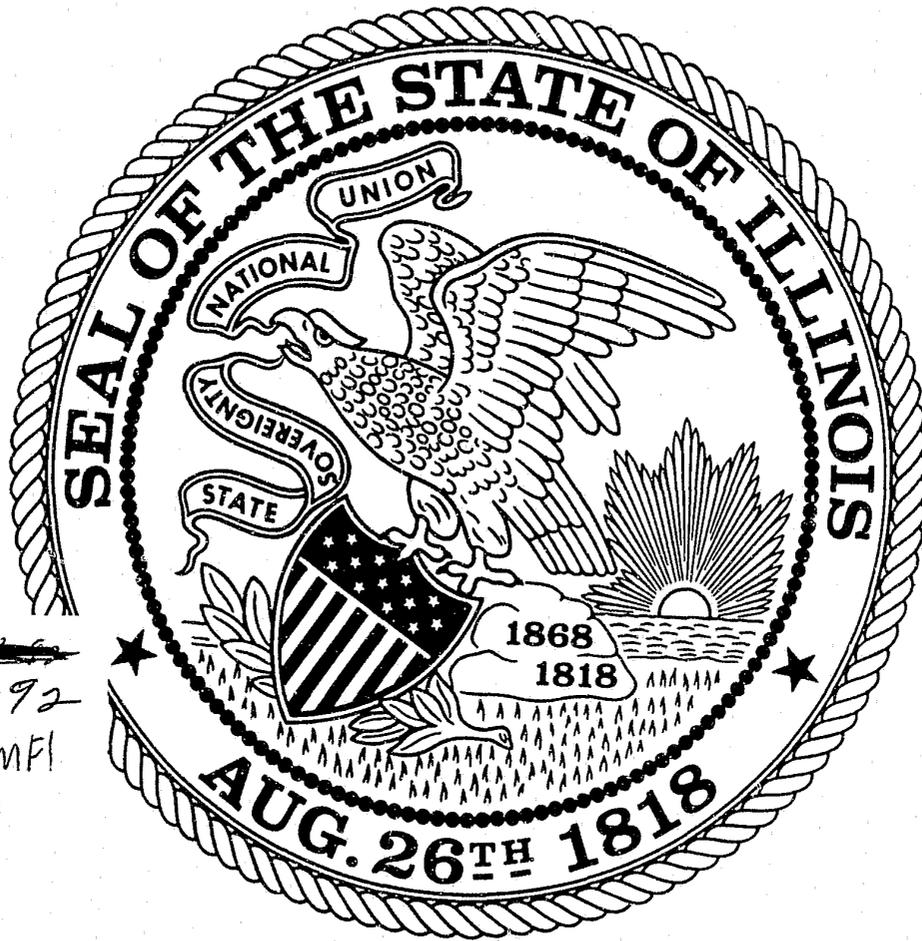


1990 Youth Survey

"Our Youth Is Our Future"



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Edward Senay, M.D., Research Director
Mark Barrett, Ph.D., Principal Investigator

DASA

Illinois Department of
Alcoholism and Substance Abuse
James E. Long
Director

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DASA YOUTH SURVEY: 1990

OUR YOUTH IS OUR FUTURE

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Mark E. Barrett, Principal Investigator
April, 1991

Addictions Research Institute
of the
Illinois Department of Alcoholism and Substance Abuse

ACKNOWLEDGEMENTS

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Jerome A. Gross handled the production of this report and provided many insightful observations and helpful comments.

Sahar Taman-Vazirnezami performed many of the database and computer programming operations necessary to generate prevalence estimates.

Finally, we would like to thank the students of Illinois for participating in this survey.

DASA YOUTH SURVEY

EXECUTIVE SUMMARY

The primary purpose of the survey is to determine the extent of alcohol and other drug use among Illinois youth and to further profile those youth at risk for drug abuse. Additional information is provided on the characteristics of students who exhibit patterns of heavy drug use and students who are considered at risk for dropping out of school.

The DASA Youth Survey examined the drug use of over 15,000 Illinois students in grades 7 through 12 in a probability sample of classrooms throughout Illinois. The survey was conducted during the 1989-1990 school year. Because students were asked to self report alcohol and other drug use, the validity of the data is dependent upon the truthfulness of the students' responses. The survey does not include data on dropouts. This can be a significant factor in some communities, for example, the Chicago Public School dropout rate is approximately 40%.

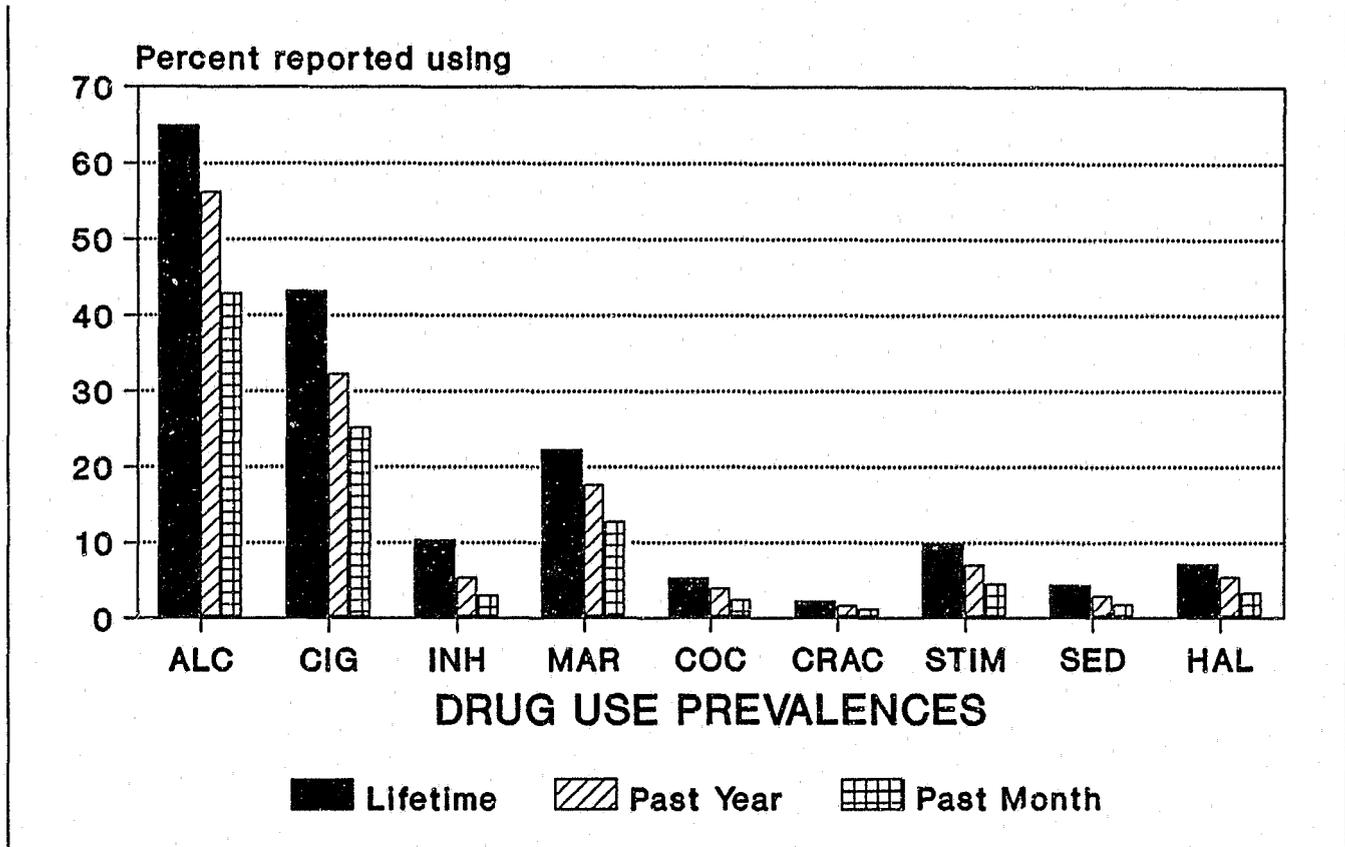
Alcohol and other drug use of Illinois youth resembles usage patterns of youth in the rest of the Nation.

PREVALENCE OF ALCOHOL AND OTHER DRUG USE

- Alcohol and tobacco are the most frequently used drugs (see Exhibit 1). 43% of the students surveyed have used alcohol in the past month and 65% have used it at some time during their life. 25% of the students have smoked cigarettes in the past month and 43% have smoked cigarettes at some time during their life. Alcohol and cigarette use is initiated early as evidenced by many Illinois seventh graders having already experimented with these drugs.
- Males and females report very similar use patterns for alcohol and cigarettes. Boys report higher rates of use of all illicit drugs than do girls.
- Overall, students in higher grades have higher rates of alcohol and other drug use than do younger students.
- Approximately one in five high school seniors reported current use of marijuana.
- Cocaine was tried by one in ten high school seniors surveyed.
- African Americans had the lowest overall rate of alcohol and other drug use (see Exhibits 2 and 3). White students had the highest rate of use of alcohol, tobacco, and stimulants. Hispanics had slightly higher rates of marijuana, cocaine, and hallucinogen use and appear to start using alcohol and other drugs at an earlier age than African Americans or Whites.

Exhibit 1

Illinois Seventh through Twelfth Grades Students



Students in Cook County reported noticeably less alcohol and other drug use than students in the rest of the state with the exceptions of cocaine, PCP, and heroin. The lower rate of alcohol and other drug use is attributed primarily to the large number of African Americans living in Cook County.

Rural and urban students, outside of Cook County, showed comparable usage patterns. The major exception to the similarities was that urban males had higher rate of use of smokeless tobacco than rural males.

FREQUENT USE OF ALCOHOL

Slightly more than 3% of all the students were classified as frequent alcohol users.

High school students and males were most likely to be defined as frequent alcohol users.

There were no appreciable differences between Cook and other Illinois counties; or among African American, Hispanics, or Whites in number of students reporting frequent alcohol use.

Exhibit 2

Cook County Junior High School Students

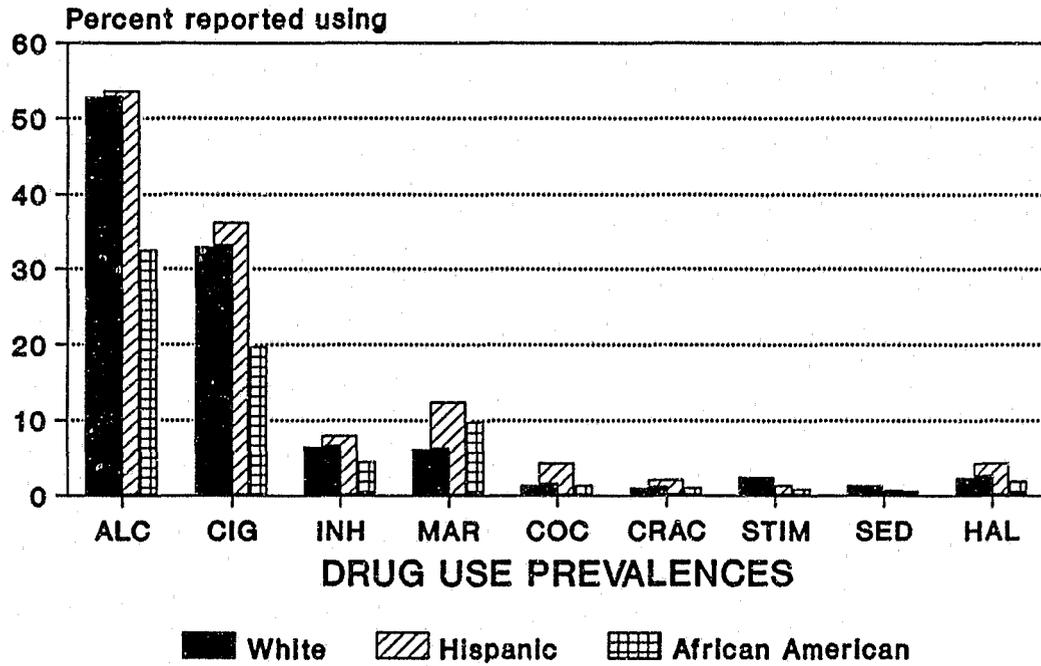
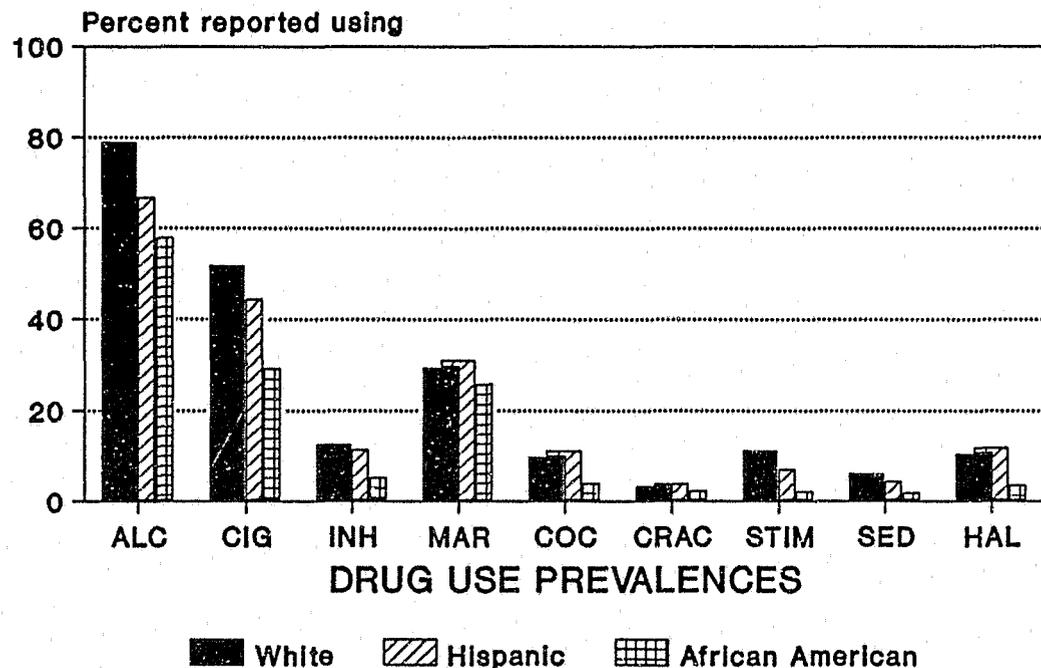


Exhibit 3

Cook County High School Students



ALCOHOL AND OTHER DRUG ABUSE RISK GROUPS

- 13% of the students surveyed, or more than one in 10 students, were classified as being in the high risk group, 15% in the medium risk group, and nearly three-fourths were in the low risk group. High risk was defined as frequent use of marijuana or inhalants, or the use of any illicit drugs other than marijuana or inhalants in the past year.
- A definite progression into the high risk category from junior high to high school was evidenced. 16% of high school students fell into the high risk category, compared to 6% of junior high students.
- More students from other counties (15%) were included in the high risk use group than students from Cook County (9%).
- Males and females were distributed similarly across all risk categories, although males were slightly more likely to be in the high risk category.

DROPOUT PRONE YOUTH

- Dropout proneness was defined as frequent absenteeism, poor grades, suspension for school, or lack of interest in graduation from high school. A dramatic and direct relationship existed between alcohol and other drug use and behavior indicative of students' likelihood to dropout (dropout proneness).
- 53% of the high risk alcohol and other drug use group were dropout prone; 36% of the medium risk group; and only 17% of the low risk alcohol and other drug use group were classified as dropout prone.
- Nearly 3 out of 4 students who reported using cocaine in the last year were determined to be dropout prone. In the last year over half of the marijuana users and nearly one-third of the alcohol users were categorized as dropout prone.
- In Cook County nearly twice as many African American (36%) as compared to White students (19%) were dropout prone. 22% of Hispanics were classified as dropout prone.

PROBLEMS ASSOCIATED WITH SUBSTANCE ABUSE

- Riding around with a teenager who was drinking or using drugs (35%), getting drunk or high (39%), and sexual intercourse while using alcohol and other drugs (21%) were frequent behaviors.
- 12% of students reported getting in trouble at home and 7% reported missing school due to alcohol and other drug use.

SOCIOECONOMIC STATUS AND DRUG USE

- 19% of the students who had low socio-economic status were at high risk for alcohol and other drug use compared to 12% of the students who were not of low socio-economic status. Low socio-economic status was defined as neither parent having graduated from high school.
- 30% of the students of low socio-economic status living in urban areas outside of Cook County were found to be at high risk of alcohol and other drug abuse.

OTHER FINDING

- 6% of males and 3% of females indicated they had used steroids for "bulking up" or building up muscle.
- 2% of the students reported non-medical use of a syringe to inject drugs on at least one occasion, with boys being more than three times more likely to have done so than girls.
- Illicit drugs were reported to be generally easier to obtain in Cook County than in other Illinois counties. Tobacco was reported to be easier to obtain in counties outside of Cook.

MAJOR REASONS FOR QUITTING DRUG USE

- Students reported that the major influences on them to quit using alcohol and other drugs were family and friends, followed by drug related deaths, accidents, and stories. TV/radio alcohol and other drug messages were also important influences.
- Church, law enforcement agencies, school staff, and school drug education programs were rarely cited as being influential.

CONCLUSIONS

Alcohol and tobacco are used by far more students than illicit drugs and are associated with serious health, social, psychological, and legal problems. Illicit drugs are also a major problem as evidenced by 15% of the sample reporting use of an illicit drug during the past year. Youth not enrolled in school who may be more likely to be users must also be added to these numbers. It is apparent that there are serious alcohol and other drug use and abuse problems among Illinois students.

Students in Cook County have a lower use rate of alcohol and almost all other drugs than students in other Illinois counties. This suggests that drug use is not uniquely an urban problem. There were few differences between White students in Cook County and White students in all other counties.

African American, particularly females, have the lowest rate of alcohol and other drug use. These figures compare to National and other states' findings. The low rates of alcohol and other drug usage may be related to the large number of African American youth whose religious affiliation promotes a drug free lifestyle. The findings are contrary to commonly held stereotypes that

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minorities are more prone to drug abuse than Whites. However, it must be noted that this survey included only students who were attending school and did not include dropouts.

The particular socio-demographic risks identified for students in the survey are being male, having a poor adjustment at school, being White or Hispanic, and coming from a lower socio-economic background. These same socio-demographic risk factors may not apply to the significant number of youth who are dropouts.

RECOMMENDATIONS

- Prevention programs should target younger students who have a poor adjustment to school and who come from families with a lower socio-economic status.
- Prevention and intervention programs should focus on family and friends of the alcohol and other drug using youth. The finding that "drug related deaths, accidents, and stories" were cited as major influences among those who stopped using alcohol and other drugs suggest that youth pay attention to what happens to role models such as athletes and celebrities that overdose.
- More work needs to be done to determine what prevents and stops drug use and abuse.
- Ethnographic studies would be helpful to interpret these findings. Such studies allow researchers to go to "hang outs" and get rich descriptive information about what youth mean when they refer to particular drugs, how alcohol and other drugs are being used, and with what consequences.
- Annual surveys are being done to permit the analysis of alcohol and other drug prevalence trends in the Illinois student population. This will provide information on the increase/decrease in the use of alcohol and other drugs over time.

LIMITATIONS TO THE SURVEY: In addition to the limitations of self reporting and the exclusion of dropouts, the survey in the Chicago Public Schools was done using a slightly different methodology. Also, confidence intervals and significance tests were not developed for this report. The cross-sectional design of this study does not allow an evaluation of whether drug use increasing or decreasing in Illinois.

DASA YOUTH SURVEY

The primary purpose of the DASA Youth Survey was to determine the prevalence of alcohol and drug use by Illinois youth and to determine which subpopulations are currently at greatest risk. In the absence of Illinois specific data, synthetic estimates based on National or regional figures are frequently used. However, the problem with synthetic estimates is that they may not be accurate for Illinois, and they cannot provide information on subpopulations within Illinois.

A search of the literature revealed no large-scale studies designed to provide Statewide prevalence estimates in Illinois. The Institute of Juvenile Research conducted a study in the late 1970's (exact year not specified in report) which included an area probability sample of 580 Illinois youth as part of a household drug abuse study. However, nothing more recent was located. Thus, the findings of the DASA Youth Survey provide much needed information about Illinois youth.

In addition to estimating prevalence of drug and alcohol abuse and related behaviors among Illinois youth, other aims of this report are to profile those at risk in terms of sociodemographic characteristics, and to profile the drug use and sociodemographic characteristics of students who are "dropout" prone.

METHODOLOGY

Survey Sample Design

Surveys were conducted independently within the Chicago Public Schools, and the remaining school districts in Illinois. Therefore, in order to appropriately weight and combine the data to make statewide estimates, the Chicago Public Schools (CPS) were considered one domain, and all other public and private school districts in the State of Illinois comprised the other domain. Special education and non-graded schools were not included. The methodologies associated with each of the two domains are described below.

Chicago Public Schools. The Research and Evaluation Department of the Chicago Public Schools conducted a survey of homeroom classrooms in a random sample of 55 elementary and 70 high schools. Thus, a two-stage cluster design was employed, with school buildings one cluster and homerooms the second. No attempt was made to sample the school buildings probability proportionate to size (PPS). However, assuming that CPS buildings are approximately equal in size, this should not have been a serious problem. Otherwise, students from the smaller buildings would have disproportionately high representation, and vice-versa.

There were 5824 seventh through twelfth grade students in the Chicago Public School sample. Data collection was completed during the months of October and November of 1989. Homeroom teachers performed the class room administrations.

Non-Chicago Public Schools. In order to select a sample of school students from public and private secondary schools, a three-stage cluster design was employed. The Research Division of the Illinois

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State Board of Education, in consultation with DASA's Addictions Research Institute, performed all of the actual procedures for sample selection. The three stages were (1) high school districts, (2) high school building within each selected district--although many districts contained only one high school, and (3) two classrooms within each grade. Classrooms were selected from required courses, such as English.

Design effects of similar multi-stage surveys of adolescent drug use (e.g., see National Adolescent Health Survey, 1989), are typically between 2.5 and 3.0. Thus, a minimum of 1200 students per grade level were needed to make reasonably precise estimates for gender groups within each of the six grade levels. Taking into account sample size and anticipated compliance of about 75% of school districts, it was decided to sample 68 high school districts.

A probability proportionate to size (PPS) strategy was employed to select the 68 Illinois public and private secondary school districts. This provided a self weighting sample of districts in Illinois. Although many of the selected districts center around the Cook and collar counties--due to the high density of population in these areas--there were many school districts selected from rural and other urban areas in Illinois. In order to sample seventh and eighth grade classrooms, "feeder" schools from which ninth graders at the high school had come were sampled PPS. Feeder schools were not selected for high schools who did not agree to participate in the survey.

Of the 68 districts in the sample, 42 (62%) chose to participate. Four of the 42 feeder schools did not participate. The most frequent reasons given for not participating included: 1) timing--the months of March and April were not good for surveys, 2) some schools had already done drug surveys, and 3) generalized negative attitudes about being overburdened by requests of this nature. Very few expressed negative attitudes about doing "drug surveys," per se.

The 42 high school districts that participated were compared with the 26 districts who declined in terms of status as public or private schools and district size. The final sample contained seven private and 35 public schools. A test for statistical independence indicated that participation was not related to public versus private status ($\chi^2 = 1.126, p < .289$). The mean size was 2153 for the 26 schools that declined and 1739 for those who participated. These differences were not significant, $t(66) = 0.86, p < .39$. Thus, the sample of participants was not biased in terms of district size or public versus private status.

InTouch coordinators were responsible in each of the 18 DASA Prevention Service Areas (PSAs) for going to the schools, obtaining permission to do the survey, selecting classrooms, administering the survey, and mailing the data to National Computer Systems, Inc. for processing. Classrooms were selected by asking for lists of required English classes at each grade level and selecting two by either using random number tables or marking the names of each section on slips of paper and drawing a sample. Field reports indicated that this process was not difficult to implement. The Non-Chicago Public Schools were surveyed during the months of March and April 1990. There were 9421 students in grades seven through twelve in the Non-Chicago Public School sample.

Combining the Chicago and Non-Chicago Public school data. The data from the Chicago Public Schools and non-Chicago Public Schools domains were appropriately weighted and combined to form estimates of the State as a whole and for Cook and other Illinois counties (see Appendix A for

discussion of post-stratification and weighting). In order to adjust for absenteeism, students who reported more frequent absences from school were weighted more heavily than those with less absences.

There were 15245 students in the combined sample of seventh through twelfth grade students; 108 students were excluded because they did not provide information on gender which yielded 15137 students with usable data. In general, there were about 2-3% who provided incomplete information for survey items, and these were excluded from the analysis. The sample sizes (N's) reported in tables do not reflect missing values or weights but are raw sample sizes. They are provided to give the reader some sense of the reliability of estimates (see Appendix B for discussion of standard errors of estimates).

Survey Instrument

The I-SAY drug use questionnaire, developed by National Computer Systems, Inc., was used in both Chicago Public Schools and the rest of the State, although additional questions were added to the instrument used with schools in the rest of the State. The I-SAY questionnaire covers select sociodemographic characteristics as well as drug use behaviors (first and last use, where used, frequency of use, problems associated with use, availability of drugs), attitudes and intentions toward drug use, and items relevant for drug abuse prevention, such as perception of sources of information about drugs.

Nineteen additional questions were added to the I-SAY questionnaire in order to obtain information on steroid use, intravenous drug use, 30-day and past year drug use items more directly comparable to NIDA's survey, reasons for drug use, health risk behaviors, attitudes about doing the survey, and items assessing peer and family attitudes toward drug use. Unfortunately, these questions were not asked of the Chicago Public School sample (which represents 18.3% of Illinois students), and so estimates of these behaviors for Cook County may not accurately reflect students from the Chicago Public Schools.

Validity of Data

The validity of the estimates reported from this survey are dependent to a large extent on the truthfulness of responses given by students. There is some concern about students' attitudes concerning disclosing sensitive information regarding illegal activities such as alcohol and other drug abuse. Also, there are the issues of whether or not students understood the questions in the questionnaire and responded in a consistent manner. These issues were addressed through questions added to the I-SAY survey (the Chicago Public Schools did not use these additional questions). Students were asked if they understood the questions in the survey (yes/no); how they felt about answering the questions (ok/not ok); and if they were honest in answering the questions (yes, honest on all questions; yes, honest on most; and no). The frequencies of response were as follows, 94.0% indicated that they understood the questions, and 91.5% indicated that they felt OK about answering questions. When asked about honesty, 88.6% said they were honest on all questions, 10.3% on most questions, and 1.0% said no. These findings suggest that understanding was not a major problem.

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However, approximately one out of ten students felt somewhat uncomfortable, and one out of ten were not entirely honest. Therefore, there is the possibility of bias in the estimates.

Questions were asked in two different places on the questionnaire about use of specific drugs during the past year and month, thus permitting cross checks for internal consistency--i.e, do students respond the same for questions containing identical content. Concordances between equivalent items ranged from 85% to 98%.

FINDINGS

Drug Use Prevalences

Prevalence estimates for use of each drug were developed for three time periods, lifetime or "ever" use, recent use in the past year, and current use within the past 30 days, which correspond to the format used in National reports. These prevalence estimates refer to any use during a period of time and represent a range of frequency and intensity of use, from trying it on only one occasion to daily use. Later sections of this report will address frequency of use and problems associated with use.

Lifetime prevalence is useful because it indicates exposure to various drugs and willingness to try them. Past year and past month prevalences are useful for getting the current picture of drug use and for indicating the ages during which students tend to use particular drugs.

Each of the prevalence estimates was developed from the question, "When did you last use the following drugs?" Prevalence estimates were developed for males and females in grades seven through twelve in Illinois, in Cook County, and in the other Illinois counties. In addition, within Cook County, estimates were developed for the three major race-ethnic groups, and within the other counties for students from urban versus rural school districts. (See Appendix B for discussion of standard errors of estimates.)

Illinois as a Whole

Lifetime, past year, and past month drug use prevalence estimates are given in Exhibit 4 for males and females in grades seven through twelve (see Appendix C for explanation of drug abbreviations). As expected, alcohol and tobacco are the most frequently used drugs, and about one in five have tried marijuana. As a general pattern, students in higher grades have higher rates than younger students, and males report slightly higher percentages than females.

Estimates of use during the past 30 days suggest that few Illinois students are currently involved with illicit drugs other than marijuana. Alcohol and tobacco are the drugs of choice for most students. Marijuana use increased in high school (grades 9-12), where about one in five report current use. With regard to use of illicit drugs other than marijuana, estimates of current use varied from less than 1% to around 5%.

How do these estimates for Illinois compare to estimates from recent National surveys? It has been assumed that Illinois reflects the rest of the Nation fairly well; consequently, surveys done by the National Institute on Drug Abuse (NIDA) have been used to develop "synthetic" estimates of drug

Exhibit 4

Alcohol and Other Drug Use Prevalences for Illinois Youth

	N	ALCO	CIG	CHEW	INHAL	MARIJ	COCA	CRACK	STIM	SED	HAL	LSD	PCP	XTC	HEROIN	INJECT*
LIFETIME:																
Grade																
7	2446	43.1	28.9	7.4	6.5	5.3	1.8	1.2	3.0	1.5	2.7	1.5	0.7	1.7	0.9	1.8
8	2665	55.5	38.2	11.1	9.1	11.5	2.5	1.8	5.7	3.4	4.0	2.8	1.3	1.9	1.0	1.5
9	2822	62.1	42.8	12.9	10.1	19.5	4.7	2.1	10.1	4.6	7.4	5.6	2.4	3.3	1.7	1.8
10	2530	71.6	48.9	17.3	12.3	29.1	6.1	2.4	12.3	5.1	8.7	7.7	3.0	2.6	1.6	1.8
11	2492	78.0	49.3	20.2	11.3	31.9	7.2	3.0	12.9	5.9	8.7	7.9	3.5	3.3	2.2	3.0
12	2182	83.4	53.5	21.0	13.3	40.4	9.8	2.6	15.9	5.5	11.8	11.1	3.0	2.7	1.5	1.6
Males**	7375	65.5	43.9	25.9	12.3	24.7	6.5	3.0	10.1	4.4	8.9	7.5	3.2	3.4	2.4	3.2
Female**	7762	64.3	42.6	4.3	8.5	20.1	4.0	1.3	9.4	4.2	5.4	4.5	1.3	1.7	0.6	0.8
Total**	15137	64.9	43.2	14.7	10.3	22.3	5.2	2.2	9.8	4.3	7.1	5.9	2.3	2.5	1.5	1.9
PAST YEAR:																
Grade																
7	2446	30.9	18.3	3.7	3.0	3.8	1.2	0.8	2.2	0.9	2.2	1.1	0.4	1.4	0.6	
8	2665	45.6	27.8	6.8	5.2	9.1	2.2	1.4	4.3	2.4	2.9	2.1	1.0	1.4	0.6	
9	2822	55.0	32.2	8.4	5.7	16.5	4.0	1.6	8.3	3.7	5.9	4.6	1.9	2.6	1.5	
10	2530	64.0	38.4	12.3	6.8	23.6	4.2	1.7	8.9	3.4	6.7	5.8	2.3	2.1	1.1	
11	2492	70.0	38.6	13.1	5.3	24.5	5.6	2.4	9.4	4.0	6.6	5.9	2.6	2.4	1.6	
12	2182	76.6	40.5	12.7	5.6	31.1	7.0	2.0	9.7	3.4	8.6	8.2	1.6	1.9	1.3	
Males**	7375	56.4	32.7	17.3	6.8	19.5	5.1	2.4	7.4	3.2	6.9	5.8	2.5	2.7	1.9	
Female**	7762	56.0	31.9	1.9	3.8	15.9	2.8	0.9	6.6	2.7	4.0	3.3	0.8	1.3	0.3	
Total**	15137	56.2	32.3	9.3	5.3	17.6	3.9	1.6	7.0	2.9	5.4	4.5	1.6	2.0	1.1	
PAST MONTH:																
Grade																
7	2446	19.2	12.3	2.4	1.9	2.8	0.6	0.4	1.4	0.7	1.5	0.7	0.4	1.0	0.4	
8	2665	30.8	19.5	3.8	3.4	6.4	1.3	0.9	2.7	1.3	1.9	1.2	0.8	1.1	0.4	
9	2822	40.8	25.0	5.4	3.0	11.6	2.6	1.2	5.5	2.1	4.0	2.8	1.1	2.1	1.2	
10	2530	50.7	31.3	8.4	4.3	17.5	3.1	1.4	6.2	2.3	4.5	3.8	1.3	1.4	1.1	
11	2492	55.7	31.0	8.5	2.9	17.7	3.4	2.0	5.8	2.5	3.9	3.2	1.9	1.9	1.2	
12	2182	64.8	34.1	7.9	2.7	22.4	3.6	1.4	5.6	1.9	4.2	3.9	1.2	1.1	1.2	
Males**	7375	43.6	25.7	11.4	4.2	14.7	3.5	2.0	4.7	2.0	4.5	3.7	1.8	2.0	1.5	
Female**	7762	42.1	24.7	0.9	1.9	10.9	1.3	0.5	4.2	1.6	2.2	1.5	0.4	0.9	0.3	
Total**	15137	42.9	25.2	6.0	3.0	12.7	2.4	1.2	4.5	1.8	3.3	2.6	1.1	1.4	0.9	

* Questions concerning drug injection were not asked of the Chicago Public School students; also, these questions were not asked for past month and past year.

** Includes grades 7-12 combined. Other tables use a similar grouping.

use for the Illinois population. For example, NIDA conducts the annual High School Senior Survey to estimate drug use in seniors across the Nation. The most recent of these for which results were available, was completed in 1989, and the results for lifetime prevalence of several drugs are given in comparison to those from the DASA Youth Survey in Exhibit 5 (Johnston, O'Malley, & Bachman, 1990). (It must be noted that these surveys were done approximately one year apart. Although lifetime prevalence estimates should not fluctuate dramatically from one year to the next, past year and past month might. Also, each survey used different procedures and measurement instruments, in which questions are asked slightly differently.)

Exhibit 5

Prevalence Estimates for Nation Seniors (1989)*
and Illinois Seniors (1989/1990)

	Past Month		Past Year		Lifetime	
	IL	US	IL	US	IL	US
Alcohol	64.8	60.0	76.6	82.7	83.4	90.7
Cigs	34.1	28.6	40.5	NA	53.5	65.7
Inhal	2.7	2.7	5.6	6.9	13.3	18.6
Marij	22.4	16.7	31.1	29.6	40.4	43.7
Cocaine	3.6	2.8	7.0	6.5	9.8	10.3
Crack	1.4	1.4	2.0	3.1	2.6	4.7
Stimul	5.6	4.2	9.7	10.8	15.9	19.1
Seda	1.9	1.6	3.4	3.7	5.5	7.4
Halluc	4.2	2.9	8.6	6.2	11.8	9.9
Heroin	1.2	0.3	1.3	0.6	1.5	1.3
Steroids	NA	0.8	NA	1.9	5.1	3.0

*Source: National High School Senior Survey: 1989 (Johnston, O'Malley, & Bachman, 1990)

As can be seen in Exhibit 5, there is a pattern wherein Illinois (IL) seniors reported lower rates than National (US) seniors for lifetime use of most drugs. Although many of these differences are not of very large magnitude, the pattern is consistent. One explanation for these differences, which are elaborated below, is that African Americans, who make up a substantial percentage of the Cook County population, reported dramatically less alcohol and drug use than other students. Also, the Chicago Public Schools have a higher percentage of dropouts than the National average (estimated to be over 40%, as compared to the National average of 15% to 20%); thus, fewer drug using students would

be expected to remain through their senior year.

Paradoxically, although Illinois Seniors had lower rates of lifetime use for most drugs, past year estimates are nearly identical for the two populations, and Illinois Seniors actually reported higher rates of drug use during the past month. It should be noted that past month drug use might be expected to vary from month to month, due to events such as holidays, Spring Break, exams, etc.

In conclusion, seniors in Illinois and the Nation as a whole showed, on average, similar prevalences of drug use. It must be noted that any observed differences, particularly between past year and past month estimates, may have been due to sampling error or seasonal fluctuations. The more detailed breakdowns that follow provide insight into the subpopulations which comprise the total Illinois student population.

Cook and Other Illinois Counties

In Illinois it is important to distinguish between Cook County and the other counties because Cook is a large metropolitan area and has a very different sociodemographic profile than the rest of the State. For example, there are much higher percentages of African Americans, Hispanics, and other minorities in Cook County. Therefore, estimates were developed for males and females at each grade level in both Cook and the other counties, and can be found in Exhibit 6 (see next page).

The findings suggest that use of many drugs was more prevalent in the other Illinois counties than Cook County, with the exception of cocaine, crack, hallucinogens, PCP, and heroin. This was especially true for alcohol, tobacco, inhalants, smokeless tobacco, and stimulants. As will be explained in the following section, the differences between Cook and the other Illinois counties are due in large part to the high percentage of African Americans living in Cook County.

Exhibit 6
Alcohol and Other Drug Use Prevalences: Cook vs. Non-Cook Counties

	N	ALCO	CIG	CHEW	INHAL	MARIJ	COCA	CRACK	STIM	SED	HAL	LSA	PCP	XTC	HEROIN	INJECT*	
LIFETIME:																	
Cook County																	
Grade	7	1482	39.3	25.5	3.0	5.6	4.5	1.3	0.8	1.0	1.0	1.3	0.7	0.5	0.4	0.4	0.6
	8	1685	53.4	34.2	6.1	7.8	12.2	2.3	1.6	2.5	1.2	4.1	3.2	1.0	1.2	0.9	0.8
	9	1575	56.2	34.9	4.8	6.8	15.9	4.1	1.7	4.1	1.9	5.0	4.3	1.7	1.7	1.1	0.4
	10	1339	66.0	41.8	7.1	9.1	25.0	6.5	2.7	5.3	3.1	7.1	6.1	2.9	2.5	1.6	1.1
	11	1333	71.1	41.8	12.2	10.0	30.3	8.9	4.5	8.8	6.2	9.5	8.4	4.8	3.8	3.2	4.6
	12	1162	80.0	47.9	11.6	12.4	42.8	12.9	3.4	10.8	5.7	11.4	10.7	4.5	3.4	1.9	2.0
Males		4025	60.0	37.3	13.0	10.1	24.8	7.5	3.8	6.1	3.5	8.0	7.0	3.8	3.0	2.5	2.6
Females		4551	59.9	37.0	2.3	7.1	17.4	4.1	1.1	4.3	2.6	4.6	3.9	1.3	1.3	0.6	0.7
Total		8576	59.9	37.1	7.2	8.4	20.8	5.7	2.3	5.1	3.0	6.1	5.3	2.4	2.1	1.4	1.5
Other Counties																	
	7	964	45.8	31.4	10.7	7.2	5.9	2.1	1.5	4.4	1.9	3.8	2.0	0.8	2.6	1.3	2.3
	8	980	57.0	41.2	14.7	10.1	10.9	2.6	2.0	7.9	4.9	3.9	2.5	1.5	2.3	1.0	1.8
	9	1247	66.7	48.9	19.1	12.5	22.3	5.3	2.4	14.7	6.7	9.2	6.7	2.9	4.4	2.2	2.3
	10	1191	75.8	54.2	25.0	14.7	32.2	5.9	2.2	17.6	6.6	10.0	8.8	3.0	2.6	1.6	2.1
	11	1159	82.5	54.2	25.4	12.1	33.0	6.1	2.1	15.5	5.6	8.1	7.5	2.5	2.9	1.5	2.4
	12	1020	85.6	57.0	27.0	13.9	38.8	7.8	2.0	19.2	5.4	12.1	11.4	2.0	2.3	1.2	1.5
Males		3350	69.0	48.1	34.1	13.6	24.6	5.8	2.6	12.7	4.9	9.5	7.8	2.9	3.7	2.4	3.4
Females		3211	67.8	46.9	5.8	9.7	22.2	4.0	1.5	13.4	5.4	6.0	5.0	1.3	2.0	0.5	0.8
Total		6561	68.4	47.5	20.1	11.7	23.4	4.9	2.0	13.1	5.2	7.8	6.4	2.1	2.9	1.5	2.1
PAST YEAR:																	
Cook County																	
Grade	7	1482	28.4	13.8	1.3	2.4	2.8	0.7	0.3	0.5	0.7	1.0	0.6	0.3	0.4	0.2	
	8	1685	42.4	23.2	3.2	3.7	9.1	1.9	1.2	1.8	0.9	3.1	2.5	0.8	0.9	0.4	
	9	1575	48.9	25.7	3.2	3.4	13.1	3.7	1.5	3.2	1.7	4.3	3.5	1.5	1.4	1.0	
	10	1339	58.4	32.6	5.0	4.5	19.7	4.7	2.2	3.7	2.4	5.6	4.6	2.5	2.3	1.1	
	11	1333	63.5	32.3	7.9	4.9	23.1	7.3	3.8	6.3	4.1	7.1	6.2	3.9	3.1	2.5	
	12	1162	73.4	36.9	6.7	4.0	31.8	8.9	2.6	7.3	4.1	8.2	7.8	2.4	2.5	1.8	
Males		4025	51.3	26.7	8.2	5.0	19.2	6.2	3.3	4.3	2.8	6.1	5.4	3.1	2.5	2.1	
Females		4551	51.5	27.0	1.2	2.8	13.1	2.7	0.6	3.0	1.7	3.5	2.9	0.8	1.0	0.3	
Total		8576	51.4	26.9	4.3	3.8	15.8	4.3	1.8	3.6	2.2	4.7	4.0	1.8	1.7	1.1	
Other Counties																	
	7	964	32.8	21.6	5.5	3.5	4.5	1.5	1.2	3.4	1.1	3.1	1.5	0.6	2.2	0.8	
	8	980	48.0	31.1	9.3	6.3	9.1	2.4	1.6	6.1	3.6	2.7	1.9	1.0	1.7	0.7	
	9	1247	59.7	37.2	12.4	7.5	19.2	4.2	1.8	12.2	5.2	7.2	5.3	2.2	3.5	1.8	
	10	1191	68.1	42.8	17.8	8.6	26.6	3.8	1.4	12.9	4.2	7.6	6.7	2.2	1.9	1.1	
	11	1159	74.2	42.8	16.5	5.5	25.5	4.4	1.5	11.3	3.9	6.2	5.6	1.7	2.0	1.0	
	12	1020	78.6	42.8	16.5	6.6	30.6	5.8	1.6	11.3	2.9	8.8	8.4	1.0	1.6	0.9	
Males		3350	59.7	36.5	23.1	8.0	19.7	4.4	1.9	9.4	3.5	7.4	6.1	2.1	2.8	1.7	
Females		3211	59.6	35.7	2.5	4.6	18.2	2.9	1.1	9.4	3.5	4.4	3.5	0.8	1.6	0.3	
Total		6561	59.7	36.1	12.9	6.3	18.9	3.6	1.5	9.4	3.5	5.9	4.8	1.4	2.2	1.1	
PAST MONTH:																	
Cook County																	
Grade	7	1482	17.1	10.1	0.8	1.5	1.9	0.2	0.0	0.1	0.7	0.4	0.3	0.1	0.1	0.2	
	8	1685	29.3	15.8	1.7	2.6	6.3	0.9	0.6	1.1	0.6	2.0	1.4	0.7	0.8	0.3	
	9	1575	34.6	19.0	2.1	1.8	9.2	2.8	1.1	2.1	1.1	2.9	2.2	1.1	1.1	0.9	
	10	1339	45.7	26.0	3.4	2.6	15.0	3.6	1.9	2.6	1.9	3.8	3.1	1.8	1.7	1.1	
	11	1333	51.6	27.0	5.2	3.0	17.3	4.8	3.2	4.9	3.3	4.4	3.7	2.8	2.5	2.1	
	12	1162	63.7	31.0	2.9	2.0	23.7	5.4	2.2	4.3	2.5	4.3	3.9	1.8	1.6	1.6	
Males		4025	39.9	21.6	5.0	3.2	14.5	4.7	2.7	2.9	2.3	4.3	3.7	2.4	2.2	1.8	
Females		4551	38.5	20.4	0.6	1.4	9.3	1.2	0.4	2.0	1.0	1.7	1.2	0.5	0.5	0.3	
Total		8576	39.1	20.9	2.6	2.2	11.7	2.8	1.4	2.4	1.6	2.9	2.3	1.3	1.2	1.0	
Other Counties																	
	7	964	20.8	13.9	3.6	2.1	3.6	0.9	0.7	2.3	0.8	2.4	1.1	0.6	1.6	0.6	
	8	980	31.9	22.3	5.3	4.0	6.5	1.5	1.2	3.8	1.8	1.9	1.0	0.9	1.3	0.5	
	9	1247	45.5	29.6	8.0	3.9	13.5	2.5	1.3	8.1	2.9	4.8	3.3	1.1	2.8	1.4	
	10	1191	54.4	35.2	12.1	5.5	19.3	2.7	1.1	9.0	2.7	5.0	4.3	1.0	1.2	1.0	
	11	1159	58.4	33.7	10.7	2.7	18.0	2.5	1.1	6.5	2.0	3.6	2.9	1.3	1.4	0.6	
	12	1020	65.6	36.1	11.1	3.2	21.5	2.5	0.9	6.4	1.6	4.2	3.9	0.7	0.8	0.9	
Males		3350	46.1	28.3	15.5	4.8	14.9	2.8	1.5	5.9	1.9	4.7	3.7	1.4	1.9	1.3	
Females		3211	45.0	28.1	1.1	2.3	12.1	1.4	0.6	6.0	2.0	2.6	1.8	0.4	1.1	0.3	
Total		6561	45.6	28.2	8.3	3.6	13.5	2.1	1.0	6.0	1.9	3.6	2.7	0.9	1.5	0.8	

* Questions concerning drug injection were not asked of the Chicago Public School students; also, these questions were not asked for past month and past year.

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Cook County. Within Cook County there is greater race-ethnic heterogeneity than in the other counties of Illinois. Therefore, in order to understand in greater detail which of these particular subpopulations were using each drug, prevalence estimates were developed for junior high, high school, male, and female students within the White, African American, and Hispanic subpopulations in Cook County (see Exhibit 7 next page). Among junior high students, Hispanics reported the highest rates of alcohol and other drug use (with the exception of smokeless tobacco, stimulants and sedatives), followed by Whites, and then African Americans. Among high school students, Hispanics reported higher rates of marijuana, cocaine, crack, Hallucinogens, PCP, LSD, and IV drug use, whereas Whites reported higher rates of alcohol, tobacco, smokeless tobacco, inhalants, stimulants, sedatives and Ecstasy use. African Americans reported the lowest levels of alcohol and other drug use, except for heroin. *(It must be noted that many of the differences mentioned above are of very low magnitude.)*

How does the finding that African Americans have lower rates of alcohol and other drug use compare with other research studies? An examination of the literature concerning racial differences in alcohol and drug abuse as carried out by Prendergast, Austin, Maton, and Baker (1989) found : "In general, contrary to popular stereotypes that drug use is pervasive among Blacks, the evidence indicates that AOD [alcohol and other drug] use is lower among Black adolescents than among Whites. However, although less clear, the evidence also suggests that Blacks may be at greater risk of experiencing alcohol and drug-related problems." (p.1) The 1988 National Household Survey (NIDA, 1989) found 12-17 year old African Americans to have lower rates of alcohol, marijuana, and cocaine use than Hispanics and Whites. The 1990 Texas School Survey of Substance Abuse (Texas Commission on Alcohol and Drug Abuse, 1990) reported that "Blacks reported the lowest use of virtually all drugs."(p.4)

Although prevalence of drug use among African American adolescents is lower than that of Whites and other minorities, this does not necessarily hold true for African American adults. For example, the 1988 NIDA Household Survey (NIDA, 1989) found that in the 35 and over age group, African Americans had similar rates of illicit drug use compared with Whites and Hispanics in that age group. One possible explanation for high abstinence rates among young African Americans is that many come from conservative, Fundamentalist Christian backgrounds that prohibit alcohol and drug use (Austin et al, 1989, p. 10).

Other Illinois counties. Probably the most important demographic distinction among the other counties of Illinois is that of the urban and rural areas. Therefore, prevalence estimates were developed for school districts that were urban/suburban (urban) as opposed to those that were small city or town/rural (rural), and these can be found in Exhibit 8 (see page after next). In general there were higher rates of alcohol and other drug use in the urban areas, although most differences between the two areas are minor. One exception was the higher rate of smokeless tobacco use by males in the urban (38.4%) versus rural areas (23.7%). The pattern of drug use rates by the primarily White student population from the other Illinois counties resembled the pattern of Cook County White students (except for higher rates of smokeless tobacco use among males and higher rates of stimulant use by females in the other counties).

Exhibit 7
Cook County Prevalences: Three Major Race-Ethnic Groups,
Junior High School (JH), High School (HS), Males (M), Females (F)

		N	ALCO	CIG	CHEW	INHAL	MARIJ	COCA	CRACK	STIM	SED	HAL	LSD	PCP	XTC	HEROIN	INJECT*
LIFETIME:																	
Afr. Amer.	JH	1420	32.4	19.7	2.1	4.5	9.7	1.4	1.0	0.9	0.6	1.9	1.5	0.7	0.5	0.6	0.0
	HS	2373	57.9	29.1	3.1	5.2	25.8	4.0	2.3	2.1	1.8	3.5	2.6	2.1	2.3	1.9	1.7
	M	1812	50.5	26.5	4.8	5.6	25.0	5.2	3.2	2.9	2.6	4.4	3.6	2.9	2.9	2.5	2.8
	F	1981	50.0	26.0	1.1	4.5	17.5	1.4	0.7	0.8	0.4	1.8	1.1	0.6	0.8	0.7	0.5
Hispanic	JH	602	53.6	36.2	0.9	8.0	12.4	4.3	2.1	1.4	0.5	4.3	2.9	0.8	1.3	1.3	0.0
	HS	966	66.7	44.3	6.2	11.4	31.0	11.1	3.8	7.1	4.4	11.8	10.4	4.2	2.9	2.5	3.0
	M	701	63.6	42.0	8.1	13.4	34.8	12.5	5.7	5.5	2.8	14.1	11.2	5.3	3.1	3.6	5.5
	F	867	61.8	41.5	2.1	8.2	18.1	6.4	1.5	5.2	3.4	6.1	5.7	1.6	1.9	1.1	0.9
White	JH	886	52.7	32.9	6.2	6.4	6.1	1.4	1.0	2.5	1.4	2.4	2.0	0.6	0.6	0.4	0.7
	HS	1650	78.8	51.7	14.2	12.6	29.3	9.7	3.3	11.1	6.0	10.4	9.7	4.0	3.2	1.6	1.8
	M	1160	69.1	44.1	20.7	12.6	23.2	7.8	3.8	9.0	4.5	8.7	8.4	3.9	3.3	2.2	2.4
	F	1376	68.1	44.4	3.3	8.2	17.9	5.4	1.3	6.7	3.9	6.1	5.3	1.7	1.3	0.2	0.6
Total		7897	61.1	37.6	7.1	8.4	21.3	5.7	2.4	5.3	3.0	6.2	5.4	2.4	2.1	1.4	1.5
PAST YEAR:																	
Afr. Amer.	JH	1420	23.4	12.7	1.0	2.8	6.1	1.1	0.6	0.7	0.5	1.3	1.0	0.4	0.4	0.5	
	HS	2373	48.6	20.1	2.3	1.9	18.2	3.1	2.0	1.9	1.6	2.7	1.9	1.8	2.0	1.6	
	M	1812	42.7	19.1	3.6	3.1	17.8	4.7	3.0	2.7	2.5	3.5	2.8	2.6	2.6	2.3	
	F	1981	39.6	16.8	0.4	1.4	11.8	0.6	0.3	0.5	0.3	1.2	0.6	0.4	0.6	0.4	
Hispanic	JH	602	43.3	24.6	0.5	3.3	8.9	4.0	1.7	0.8	0.1	3.4	2.0	0.6	1.3	0.7	
	HS	966	59.0	34.5	4.0	5.0	23.7	9.4	3.2	4.4	3.4	9.2	8.1	3.1	2.4	1.7	
	M	701	55.6	32.0	5.6	5.7	26.9	11.2	5.2	3.3	1.8	10.9	8.9	4.2	2.6	2.5	
	F	867	52.8	30.8	0.9	3.6	13.3	5.2	1.0	3.3	2.7	4.9	4.3	0.9	1.7	0.7	
White	JH	886	40.7	19.6	3.0	3.0	4.9	0.7	0.5	1.6	1.0	2.0	1.8	0.6	0.4	0.0	
	HS	1650	73.2	40.8	8.9	6.1	24.1	7.1	2.6	7.9	4.2	8.1	7.4	3.0	2.5	1.5	
	M	1160	59.8	30.9	12.6	6.6	19.2	6.0	3.2	6.3	3.5	7.0	6.6	3.3	2.7	1.9	
	F	1376	61.0	33.7	1.8	3.5	14.5	3.5	0.6	4.7	2.5	4.7	4.1	1.0	0.8	0.1	
Total		7897	52.6	27.2	4.3	3.9	16.3	4.4	1.9	3.7	2.3	4.8	4.1	1.9	1.7	1.1	
PAST MONTH:																	
Afr. Amer.	JH	1420	14.2	8.2	0.6	2.0	4.1	0.6	0.4	0.5	0.3	0.6	0.4	0.3	0.1	0.2	
	HS	2373	36.0	15.3	1.8	1.5	13.2	2.8	1.8	1.7	1.6	2.4	1.6	1.7	1.9	1.4	
	M	1812	31.2	15.0	2.7	2.6	13.3	4.2	2.7	2.6	2.4	3.0	2.3	2.4	2.3	2.0	
	F	1981	28.1	11.5	0.3	0.8	8.1	0.3	0.2	0.4	0.2	0.9	0.4	0.3	0.6	0.2	
Hispanic	JH	602	29.4	18.5	0.3	2.2	6.7	1.9	1.0	0.2	0.1	2.3	1.0	0.6	1.1	0.5	
	HS	966	46.7	27.5	2.1	3.1	17.1	5.7	2.3	3.0	2.2	5.8	5.2	2.4	1.5	1.7	
	M	701	45.6	25.4	3.3	4.1	20.6	7.6	3.6	2.2	1.7	7.7	6.1	3.0	2.4	2.2	
	F	867	38.1	24.1	0.3	1.9	8.9	2.3	0.6	2.1	1.4	2.6	2.3	0.9	0.6	0.7	
White	JH	886	27.6	14.0	1.6	1.7	3.2	0.2	0.0	0.8	0.8	1.2	1.0	0.3	0.3	0.0	
	HS	1650	61.2	33.7	5.3	2.8	18.5	4.5	2.1	5.0	2.7	4.4	3.9	1.8	1.7	1.2	
	M	1160	48.0	26.0	7.6	3.6	14.8	4.5	2.5	3.6	2.6	4.8	4.5	2.3	2.1	1.6	
	F	1376	48.1	26.0	0.9	1.4	10.7	1.5	0.3	3.2	1.4	1.9	1.4	0.3	0.4	0.0	
Total		7897	40.4	21.3	2.6	2.2	12.0	2.9	1.4	2.5	1.6	3.0	2.4	1.3	1.3	0.9	

* Questions concerning drug injection were not asked of the Chicago Public School students; also, these questions were not asked for past month and past year.

NOTE: "CHEW" refers to smokeless tobacco and "XTC" refers to "Ecstasy" or MDMA.

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Exhibit 8

**Prevalences for Non-Cook Counties: Urban and Rural,
Junior High School (JH), High School (HS), Males (M), Females (F)**

		N	ALCO	CIG	CHEW	INHAL	MARIJ	COCA	CRACK	STIM	SED	HAL	LSD	PCP	XTC	HEROIN	INJECT*
LIFETIME:																	
Urban	JH	1273	54.1	37.5	15.8	9.1	8.6	2.4	1.8	7.1	3.8	4.6	2.6	1.3	3.4	1.4	2.6
	HS	2898	79.5	56.0	25.9	13.5	30.9	6.3	2.3	19.5	6.7	9.4	8.0	2.4	3.4	1.5	2.2
Rural	JH	630	48.1	34.9	5.7	7.9	8.4	2.3	1.8	4.6	2.8	2.5	1.7	1.0	0.8	0.7	1.0
	HS	1444	74.0	49.8	19.4	13.2	34.5	7.0	2.1	12.1	5.0	11.6	10.8	3.2	2.5	2.0	1.9
Urban	Males	2138	71.7	50.6	38.4	13.8	24.6	5.8	2.4	14.8	5.4	9.3	7.2	2.6	4.4	2.3	3.8
	Females	2033	69.4	48.2	5.8	10.1	21.3	4.0	1.8	15.4	6.0	6.1	5.1	1.4	2.3	0.6	0.9
Rural	Males	1042	64.7	44.0	23.7	13.4	25.5	6.3	3.0	8.9	4.2	10.4	9.8	3.6	2.4	2.6	2.6
	Females	1032	65.0	45.0	5.7	9.3	25.2	4.4	1.1	10.1	4.3	6.4	5.3	1.2	1.5	0.5	0.6
Total		6245	68.6	47.8	19.7	11.8	23.8	5.0	2.1	13.2	5.2	7.9	6.6	2.1	2.9	1.5	2.1
PAST YEAR:																	
Urban	JH	1273	41.4	26.5	9.2	4.9	6.9	2.1	1.4	5.2	2.3	3.5	1.9	0.8	2.8	1.0	
	HS	2898	71.6	43.6	16.9	6.8	24.5	4.8	1.7	14.0	4.6	7.0	5.9	1.6	2.3	1.1	
Rural	JH	630	40.2	26.8	3.5	5.0	6.8	1.9	1.4	4.0	2.3	1.9	1.3	0.8	0.5	0.3	
	HS	1444	67.4	38.5	12.7	7.9	28.9	4.4	1.3	8.3	3.1	9.1	8.4	2.2	2.1	1.5	
Urban	Males	2138	61.7	38.3	25.8	7.5	19.4	4.6	1.7	10.9	3.7	7.0	5.4	1.8	3.0	1.7	
	Females	2033	60.1	36.8	2.3	4.7	17.1	3.1	1.4	10.9	3.9	4.5	3.6	0.8	1.9	0.4	
Rural	Males	1042	56.8	33.7	15.7	9.0	20.8	4.4	2.1	6.8	3.2	8.6	8.0	2.7	2.1	2.0	
	Females	1032	58.7	35.0	3.3	4.8	21.5	2.6	0.6	6.8	2.5	4.5	3.8	0.8	1.0	0.2	
Total		6245	59.9	36.5	12.6	6.4	19.2	3.7	1.5	9.5	3.5	6.0	5.0	1.5	2.2	1.1	
PAST MONTH:																	
Urban	JH	1273	27.0	17.9	5.6	2.9	5.5	1.2	0.9	3.0	1.4	2.6	1.3	0.8	2.0	0.7	
	HS	2898	57.1	36.2	11.2	3.8	16.6	2.5	1.1	8.9	2.5	4.3	3.4	0.9	1.8	0.9	
Rural	JH	630	26.1	19.1	1.8	3.4	4.3	1.3	1.2	3.1	1.1	1.2	0.6	0.6	0.5	0.3	
	HS	1444	55.4	31.1	8.0	4.3	22.4	2.7	1.1	5.2	1.9	5.0	4.5	1.3	1.2	1.2	
Urban	Males	2138	48.3	30.2	17.1	4.7	14.4	2.5	1.4	6.7	2.0	4.4	3.2	1.3	2.2	1.2	
	Females	2033	44.5	29.1	1.1	2.2	10.9	1.6	0.6	6.9	2.1	3.0	2.1	0.5	1.4	0.4	
Rural	Males	1042	42.5	25.8	10.5	5.4	16.7	3.4	1.7	4.5	1.6	5.5	5.0	1.8	1.2	1.6	
	Females	1032	47.5	27.9	1.1	2.6	15.4	1.1	0.5	4.5	1.7	1.9	1.3	0.4	0.7	0.2	
Total		6245	46.0	28.7	8.1	3.7	13.8	2.1	1.0	6.0	1.9	3.7	2.8	0.9	1.5	0.9	

* Questions concerning drug injection were not asked of the Chicago Public School students; also, these questions were not asked for past month and past year.

NOTE: "CHEW" refers to smokeless tobacco and "XTC" refers to "Ecstasy" or MDMA.

Perceived Availability of Drugs

Students were asked, "how easy or hard would it be for you to get any of the following drugs?" (These drugs included those listed in the tables.) This item presumably taps student perceptions of availability and may or may not reflect actual availability. One in five students reported that it would be easy to obtain heroin, and one in four, crack. Paralleling drug use itself, there were steep increases of perceived availability from seventh through ninth grade and a leveling off during high school. In general, drugs were reported to be somewhat easier to obtain in Cook County than in the other Illinois counties. In particular, heroin, cocaine, crack, marijuana, and hallucinogenic drugs (Ecstasy, LSD, PCP) were reported to be easier to obtain in Cook County, whereas tobacco and smokeless tobacco were reported to be easier to obtain in the other counties (as were alcohol, stimulants, and inhalants, to a lesser degree).

Alcohol and Other Drug Abuse Risk Groups

The previous sections of this report have discussed the use of alcohol and other drugs over the lifetime and during recent time periods, as well as the perceived availability of various drugs. Although anyone who uses alcohol or other drugs is at risk of developing a problem, many experiment with drugs, perhaps out of curiosity, and discontinue use without serious adverse consequences. The next question to be addressed is "how many show signs of deeper involvement with drugs and are at probable risk of developing serious problems?" Measures of frequency of alcohol and other drug use were used to develop a measure of seriousness of involvement.

Previous studies have established that youth tend to use drugs in a progressive fashion, starting first with alcohol and tobacco, progressing to marijuana or inhalants, and then moving into "hard drugs", i.e. stimulants, sedatives, hallucinogens, cocaine, or heroin (e.g., Kandel, 1980, Donovan & Jessor, 1983). This does not imply that all youth who use marijuana or inhalants will go on to use other drugs, but that those who have gone on to use drugs like heroin or cocaine usually follow this sequence. Based on this model, and taking into account frequency of use, a categorical measure was developed to characterize the pattern of alcohol and other drug use of each student during the past year. "Light use" refers to less than once per week, and "frequent use" refers to once a week or more during the past year.

Low risk

Level 1: No alcohol or illicit drug use
Level 2: Light use of alcohol/no illicit drugs

Moderate Risk

Level 3: Frequent use of alcohol/no illicit drugs
Level 4: Light use of marijuana or inhalants/no other illicit drugs

High risk

Level 5: Frequent use of marijuana or inhalants/no other illicit drugs
Level 6: Light use of illicit drugs other than marijuana or inhalants
Level 7: Frequent use of other illicit drugs

Each student was categorized at the highest level for which they qualified. For example, this meant that if a student was a frequent user of alcohol and a light user of marijuana or inhalants, then

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he/she would be categorized as Level 4. It should be noted that this scale focuses on the progression into illicit drug use and does not necessarily reflect problem drinking as a serious problem in its own right; alcohol is considered separately in a subsequent section of this report.

In the interest of forming more parsimonious categories, the seven levels are further subsumed into three alcohol and other drug abuse risk groups (low, moderate, and high risk, as shown above). The high risk group (levels 5, 6 and 7) is used to illustrate differences between the sociodemographic groups.

Exhibit 9

Alcohol and Other Drug Abuse Risk Groups

(Percentages)	LOW RISK		MEDIUM RISK		HIGH RISK			TOTAL
	1	2	3	4	5	6	7	
Junior HS	61.1	26.7	3.3	2.5	0.7	3.7	2.0	100
High School	33.3	30.5	9.6	10.5	2.3	7.4	6.3	100
Males	42.4	28.0	7.7	7.7	2.1	6.1	6.1	100
Females	43.5	30.4	7.2	7.8	1.4	6.2	3.6	100
Total	43.0	29.2	7.4	7.7	1.7	6.1	4.8	100

Exhibit 10

High Risk Youth

	N	MALE %	FEMALE %	TOTAL %
ILLINOIS:				
Junior High	5111	7.1	5.7	6.4
High School	10026	18.3	14.0	16.0
COOK COUNTY				
African American	3793	8.4	4.3	6.2
Hispanic	1568	15.8	9.7	12.2
White	2536	13.0	9.2	10.9
Cook County Total	8576	11.5	7.5	9.3
NON-COOK COUNTIES				
Urban	4171	16.7	14.7	15.7
Rural	2074	15.6	13.0	14.3
Non-Cook Total	6561	16.0	14.0	15.0
Total	15137	14.3	11.2	12.7

Exhibit 9 provides the distribution across the seven levels of alcohol and other drug abuse risk for junior high, high school, male and female students. Over two-thirds of all students (72.2%) fell into the low risk group (levels 1 and 2); 15.1% were in the medium risk group (levels 3 and 4); and 12.7% in the high risk group (levels 5-7). Males and females were distributed similarly across the categories; there was a definite progression into higher risk categories from junior high to high school.

The next question of interest is, "which sociodemographic groups are associated with high risk?" Exhibit 10 provides the percentage of "high risk" students, for grade level, region of State, race-ethnic groups in Cook County, and urban and rural areas in the other Illinois counties. As expected, the sociodemographic differences for high risk are consistent with the drug use prevalence findings. As mentioned above, slightly more than one out of ten (12.7%) Illinois youth fell into the high risk category, and there were much higher rates

among high school students (16.0%) than junior high students (6.4%). There were higher rates in the other Illinois counties (15.0%) than in Cook County (9.3%). In Cook County fewer African Americans (6.2%) were high risk than Whites (10.9%) or Hispanics (12.2%). There were more pronounced gender differences in Cook County than in other Illinois Counties. Within other Illinois counties there was a high degree of similarity between urban and rural, and male and female students.

Frequent Use of Alcohol

In addition to considering movement along the alcohol and other drug abuse continuum from licit to illicit drugs, it is also important to examine frequent use of alcohol, the drug most often abused by youth (and adults). Frequent alcohol use was defined as using alcohol "daily" or "three or more times per week" over the past year. Overall, about three percent (3.2%) were classified as frequent users of alcohol. (See Exhibit 11.)

Whereas males and females were not appreciably different in prevalences of alcohol use, males were more likely to be frequent alcohol users. High school students were more likely than junior high students to be frequent alcohol users. Unlike the prevalence estimates there were no appreciable differences in frequent use rates between Cook and other Illinois counties, or among African-Americans, Hispanics, and Whites within Cook County. This suggests that although there may be different rates of abstinence between race/ethnic groups, there are similar rates of those who use frequently and who may experience problems with use. National studies have suggested that African American adolescents, while having lower prevalence rates of alcohol and other drug use than Whites and other minorities, "may be at greater risk for experiencing substance abuse-related problems." (Austin et al, 1989, p.1)

Exhibit 11				
Frequent Use of Alcohol				
	N	MALES	FEMALES	TOTAL
<u>ILLINOIS:</u>				
Junior HS	5111	2.1	1.0	1.5
High School	10026	5.9	2.6	4.2
<u>COOK COUNTY:</u>				
Afr. Amer.	3793	5.1	1.5	3.2
Hispanic	1568	5.0	2.7	3.6
White	2536	5.2	1.6	3.2
Cook Cty Total	8576	4.9	1.8	3.2
<u>OTHER COUNTIES:</u>				
Urban	4171	4.1	2.1	3.1
Rural	2074	4.9	2.4	3.7
Other Ctys Tot.	6561	4.3	2.2	3.3
Total	15137	4.5	2.0	3.2

Problems Associated with Alcohol and Other Drug Abuse

Students were asked about problems and risky behaviors associated with alcohol and other drug abuse during the past year (see Exhibit 12 next page). These problems included riding with a teenager who was drinking or high, getting drunk or high, missing school as a result of using drugs or alcohol, and having sexual intercourse while the student or a partner was using drugs or alcohol. Riding around (35.2%), getting drunk or high (39.4%), and sexual intercourse (21.0%) were common behaviors, whereas fewer reported missing school (6.8%) or getting in trouble at home (12.4%) as a result of drinking and drugs. Consistent with other findings, high school students were

Exhibit 12

Problems and Risk Behaviors

	N	RIDING	HIGH	SCHOOL	HOME	SEX
ILLINOIS:						
Junior HS	5111	15.7	18.8	3.1	5.7	8.6
High School	10026	45.4	50.4	8.8	15.9	26.0
Males	7375	34.5	40.6	7.9	13.6	22.2
Females	7762	35.8	38.3	5.8	11.2	19.9
COOK COUNTY:						
African American	3793	23.9	31.6	5.0	5.5	18.0
Hispanics	1568	31.5	37.7	9.2	11.3	18.0
White	2536	34.2	40.4	6.9	12.1	19.6
Cook County Total	7897	29.3	35.9	6.5	9.5	18.5
OTHER COUNTIES:						
Urban	4171	41.5	43.0	7.2	16.1	24.2
Rural	2074	34.5	40.8	7.1	11.5	18.0
Other Counties Tot.	6561	39.4	42.0	7.1	14.4	21.8
Total	15137	35.2	39.4	6.8	12.4	21.0

NOTE: "Riding" refers to riding with teenage driver who was drinking or high during past year; "High" refers to getting drunk or high in the past year; "School" refers to missing school due to drinking or drugs in past year; "Home" refers to getting into trouble at home because of drinking or drugs in past year; and "Sex" refers to having sexual intercourse while using drugs or alcohol one or more times in lifetime.

approximately three times more likely than junior high students to have done each of these behaviors. There were few differences between males and females for these behaviors, in fact slightly more females than males reported riding with a teenager who was drinking or high.

There were fewer youth who experienced these problems in Cook County in comparison with the other Illinois counties, and African Americans reported fewer of these behaviors than did Whites or Hispanics. Hispanics reported less of each of these problems than did Whites, with the exception of missing school (9.2% of Hispanics and 6.9% of Whites). In the other Illinois counties, there were higher rates of problems reported in the urban than in rural areas.

School Dropouts

A frequent criticism of school-based surveys is the failure to reach the dropout population, i.e. those who do not complete school. Current estimates are that 15% to 20% of high school freshmen do not graduate. These rates are even higher within minorities; for example, over one third of Hispanic freshmen will not graduate. Dropouts are considered at higher risk for alcohol and other drug abuse, as shown by studies that estimated prevalence of drug use among dropouts (Mensch & Kandel, 1988).

Two approaches were adopted to address the issue of dropout for this study. First, students in grades seven through nine who had a dropout profile were compared to those who did not. Second, a sample of 225 students, enrolled in an Alternative School in Chicago, were surveyed in order to provide data from a high school dropout comparison group. Although neither of these approaches are a replacement for doing an actual survey of dropouts, they can provide useful comparisons and suggest what, at least, some dropouts are like in terms of alcohol and drug abuse.

Seventh through ninth graders were considered to have a dropout profile if they reported any of the following: absent more than 20 days in past year, suspended during past year, got mostly D's and

F's, or reported that they either intended to "leave school" or were "not sure if they would stay or leave school." There were 21.9% who were classified as having a dropout profile. The relationship between the sociodemographic status and dropout proneness can be seen in Exhibit 13.

There was a dramatic relationship between dropout proneness and alcohol and other drug use. For the alcohol and other drug abuse risk groups, 17.3% of low risk students were classified as dropout prone, which increased to 35.8% for the medium risk group, and further increased to 52.6% for the high risk group. The association of dropout with use of individual drugs during the past year was also examined. For alcohol users, 29.3% were dropout prone, for marijuana users, 57.1%, and for cocaine, nearly three out of four students (73.7%). (Due to the small sample size of cocaine users the estimates for this group have wide margins of error.)

Males (26.4%) were more likely to be dropout prone than females (17.8%). Cook County students (25.2%) were slightly more likely to be dropout prone than students in other Illinois Counties (20.4%). In Cook County, nearly twice as many African Americans students (35.8%) as compared to White students (18.9%) were dropout prone. Only 22.3% of Hispanics were dropout prone, which was lower than expected in light of the association between dropout and Hispanic ethnicity. It may be that reasons for dropout among Hispanic youth are related more to economic reasons, such as leaving school to work and help support the family. There were no appreciable differences between the urban and rural areas of the other Illinois Counties.

Alternative School Students

In order to characterize the drug use of dropouts, a sample of 225 Alternative School students (N = 208 with usable data) were surveyed. These students had dropped out for a variety of reasons, such as discipline problems, and returned to these special schools to get their high school diploma or GED. The lifetime drug use prevalence of these Alternative School students is compared to Cook County Seniors in Exhibit 14 (see next page). The pattern of alcohol and other drug use prevalences does not suggest any major differences between the two groups, although Alternative School Students may be more likely to have used marijuana (59.1% vs. 42.8%). (Due to the small sample

Exhibit 13

Youth in Grades 7th, 8th, & 9th with Dropout Profile

	N	Dropout Prone (%)		
		MALE	FEMALE	TOTAL
<u>DRUG RISK GROUPS</u>				
Low	6359	21.0	14.0	17.3
Medium	646	42.5	29.1	35.8
High	571	59.3	45.5	52.6
Alcohol user*	3066	33.5	25.2	29.3
Marijuana user*	724	62.0	51.2	57.1
Cocaine users*	179	75.9	69.8	73.7
<u>SOCIODEMOGRAPHIC</u>				
<u>Cook County</u>				
Afr. Amer.	2117	41.3	30.7	35.8
Hispanic	918	32.4	14.9	22.3
White	1329	23.7	14.8	18.9
Cook Total	4364	31.2	20.0	25.2
<u>Other Counties</u>				
Urban	2047	25.0	16.8	20.9
Rural	1033	22.5	16.2	19.4
Other total	3080	24.1	16.6	20.4
Total	7576	26.4	17.8	21.9

size of the Alternative School sample, the estimates have wide margins of error and are thus less reliable). (The following section refers back to the Statewide sample.)

Exhibit 14
Alternative School Students
Lifetime Alcohol and Other Drug Use

	Alternative School * Students (N = 208)	Cook County Seniors (N = 1162)
Alcohol	72.5	80.0
Cigarettes	49.0	47.9
Inhalants	8.8	12.4
Marijuana	59.1	42.8
Cocaine	19.2	12.9
Crack	2.1	3.4
Stimulants	5.7	10.8
Sedatives	3.6	5.7
Hallucinogens	15.5	11.4
Heroin	2.1	1.9

* Students sampled from several schools belonging to the Alternative Schools Network in Chicago.

Socioeconomic Status and Drug Use

It has been suggested that youth coming from lower socioeconomic backgrounds are at greater risk of drug abuse. Measures of socioeconomic status (SES) were not included in the survey instrument, but the educational status of parents was available for use as a proxy (substitute) measure of SES. Low SES was defined as having neither parent who had graduated from high school, and overall, 8.1% of students met this criterion for low SES. The percent of high risk students in both the high and low SES subgroups are shown in Exhibit 15 for the major sociodemographic categories. (The percentage of low SES for each sociodemographic category is given in parentheses.)

For every sociodemographic category there were higher rates of high risk students in the low SES subgroups. Overall, 19.0% of the low SES group were high risk compared to 12.0% of other students, with parents that had graduated from high school. Among the various sociodemographic categories examined, low SES students living in urban areas in the other Illinois counties had the highest rate of high risk drug use (29.7%).

Exhibit 15
Socioeconomic Status and
High Risk Drug Abuse

	N	High Risk Youth (%)		
		NO H.S.	H.S.	TOTAL
COOK COUNTY:				
Afr. Amer. (8.9%)	3403	10.4	5.7	6.1
Hisp. (30.1%)	1404	16.0	10.1	11.9
White (5.1%)	2423	14.1	10.4	10.6
Total (10.7%)	8576	13.9	8.7	9.3
NON-COOK COUNTIES:				
Urban (6.2%)	4072	29.7	14.8	15.7
Rural (6.4%)	2017	18.1	13.7	14.0
Total (6.3%)	6561	25.7	14.4	15.1
TOTAL (8.1%)	15137	19.0	12.0	12.6

Note: Percentages of each subgroup who had parents without high school education are given in parentheses. Socioeconomic status is represented by the proxy of high school or higher education in

Steroid Use

Students were asked whether they had ever used steroids for "bulking up" or building muscle. Overall, 5.7% of males and 2.7% of females indicated they had done so. Furthermore, 1.7% of males, but only 0.2% of females, reported that they had injected steroids.

Intravenous Drug Use

There were 1.9% who reported non-medical use of a syringe to inject drugs on at least one occasion. Males (3.2%) were more likely to report use of a syringe than females (0.8%). The most popular drug of injection was steroids (0.9%). Less than one percent had

**Exhibit 16
 Major Reasons for Quitting**

	ALCOHOL (N=3644)	TOBACCO (N=1078)	INHALANT (N=1192)	ILLICIT (N=1775)
Family	31.0	21.6	11.4	21.0
Friends	27.9	30.5	28.6	32.1
Church	6.7	3.9	2.5	4.1
Law enforcement agencies	3.6	1.9	1.9	6.0
School staff	2.0	1.8	3.2	1.7
School drug ed. prog.	7.9	5.7	6.0	5.9
Drug related deaths, accidents, stories	23.4	12.2	11.4	23.9
TV/Radio Drug messages	13.0	1.9	6.4	12.3

* Illicit includes marijuana, cocaine, stimulants, sedatives, hallucinogens, and heroin.

NOTE: For each substance the number (N) indicated are those who reported lifetime use, excluding those who reported that they "have not quit yet."

injected cocaine (0.6%), speed (0.6%), heroin (0.5%), or "other" drugs (0.7%).

Current Disposition of Students Toward Drug Use

Students were asked, "If you have stopped using any of the following drugs, what were the major influences that caused you to quit?" Responses to this question are shown in Exhibit 16 for alcohol, tobacco, inhalants, and illicit drugs (including marijuana). For these analyses, only students who had admitted to using alcohol, tobacco, inhalants, or illicit drugs were used. Also, those who reported that they "have not quit yet" were omitted. The most frequently endorsed reasons for quitting were family and friends. Drug-related deaths, accidents, stories and TV radio drug messages were also important reasons for quitting, particularly alcohol and illicit drug use. These findings underscore the importance of establishing healthy peer and family environments in helping youth to give up drug use. Also, the findings suggest an important role for media presentations that focus on adverse consequences of experimental drug use in the lives of popular adolescent role models. One case in point is the recent tragedy of Len Bias, a college all-star who died as the result of cocaine use. Stories such as these send a strong warning to adolescents who contemplate experimenting with drugs. Quitting was rarely attributed to school drug education programs, school staff, law enforcement agencies, and church, which suggests that traditional programs may need to be combined with more effective strategies involving peer, family, and media approaches.

Conclusions and Recommendations

Conclusions. This report describes the prevalence of drug use among Illinois seventh through twelfth graders. Drug use in Illinois youth resembles that of youth in the rest of the Nation.

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According to the 1988 and 1990 NIDA household surveys, drug use is declining across the US. For example, the preliminary results of the NIDA 1990 Household Survey (US Department of Health and Human Services, 1990) reported a 44 percent reduction in current (past 30 day) illicit drug use and a 49 percent reduction of current adolescent cocaine use. Hopefully, this decline is occurring in Illinois as well.

Even though illicit drug use may be declining, there are still many problems related to alcohol and other drug use that need to be addressed. It is important to remember that by the senior year over 40% had tried marijuana and over half of these (22.4%) were current users. Also, the seemingly small percentages of those involved with the "hard" drugs, such as cocaine, heroin, LSD, or PCP represent many thousands of youth throughout the State who, in turn, will impact upon the lives of many more family members, friends, co-workers, etc. For example, 15.1% of the sample had used illicit drugs during the past year (levels four through seven of the alcohol and other drug abuse risk groups, see Exhibit 15). This implies that approximately 127,387 of the 843,624 seventh through twelfth graders enrolled in school at the time of the study were recent users. To this number must be added those youths not enrolled in school, and studies have shown that dropouts are more likely to be users (Mensch & Kandel, 1988).

Alcohol and tobacco are used by far more students than illicit drugs and are associated with serious health, social, psychological, and legal problems. For example, 39.4% reported getting drunk or high during the past year and 35.2% reported riding around with a teenager who was drinking or high. Furthermore, in spite of years of prevention programming and health warnings, one third of seniors reported current use of cigarettes.

One pattern that emerged in this study was the higher use rates of alcohol and several other drugs reported by students in the other Illinois counties in comparison to Cook County students, which suggests that drug use is not particularly an inner city problem in Illinois. Among Cook County students, African Americans had the lowest rates of a general measure of illicit drug use (and alcohol and other drug use in general). These findings are comparable to National and other state findings regarding race-ethnicity and alcohol and other drug use. Also, in Cook County Hispanics had slightly higher rates of high risk drug use than Whites, but Whites had noticeably higher rates of alcohol, tobacco, and stimulant use. White students in Cook County had a similar profile, but lower prevalence rates of alcohol and other drug use as the predominantly White other counties of Illinois.

The particular sociodemographic risks identified were being male, having a poor adjustment to school, and coming from a lower socioeconomic background. Whites and Hispanics were at greater risk than African Americans. High school students were much more likely to be involved in high risk drug use than junior high students. Also, it should be noted that the particular sociodemographic differences in alcohol and other drug use rates found in the school sample--e.g., race ethnicity and gender differences--may not apply to the dropout population

Limitations. This survey has certain limitations which must be acknowledged. First, dropouts were not included in this survey, therefore the estimates developed in this survey can not be generalized to the entire population of youth, which includes dropouts. A strong association of dropout proneness and drug use was found in this study, which is in line with the results of other studies

that have found high rates of alcohol and other drug use among the dropout population (Kandel & Mensch, 1988).

Second, the estimates of drug use are based on self-reporting and probably underestimate drug use. About 88% of the sample indicated that they were honest on all questions, and about 90% felt OK about doing the survey. To some degree, lack of honesty and negative attitudes may have biased the results toward under-reporting. Every effort was made to guarantee anonymity to respondents, but this may not have been sufficient to convince some students to disclose illicit behaviors.

Another limitation of the study was that the Chicago Public Schools were not done as part of the overall Statewide design. The design of the survey and the administration were done differently, and the Chicago Public School questionnaire did not include the additional items used in the rest of the State. Also, the Chicago Public Schools were surveyed during the fall of 1989 whereas other districts were surveyed in the Spring of 1990.

Confidence intervals and significance tests were not developed for this report. Rather, the focus was on presenting broader patterns of alcohol and other drug use behaviors, and in most cases sample sizes were large enough to permit confidence in the differences reported. However, some breakdowns involved less than 1000 students and may have sizable errors of estimate (see Appendix B).

This cross-sectional study does not allow an evaluation of whether drug use is increasing or decreasing in Illinois. However, the Illinois Department of Alcoholism and Substance Abuse, the Illinois Department of Public Health and the Illinois State Board of Education are conducting an annual Adolescent Health Survey which will permit the analysis of drug prevalence trends in the Illinois student population.

Recommendations. A strong relationship was found between high risk drug use and dropout proneness. Although a cause and effect relationship was not established in this cross-sectional study, the findings suggest that prevention programs should target younger students who have poor adjustments to school and who come from families that may lack the resources and encouragement to help them remain in school. These programs should aim to reach youth very early, in elementary and middle school, in order to prevent the likelihood of dropout, drug use, and other problem behaviors. Also, more broad based community approaches that do not depend only on school participation are recommended.

The finding that "drug related deaths, accidents, and stories" were attributed to be a major influence among those who stopped using illicit drugs, suggests that youth may pay attention to what happens to role models, such as athletes who overdose on drugs. More work needs to be done to establish what major influences prevent or discourage drug use among youth.

This study examines the relationships between several sociodemographic variables and a general measure of alcohol and other drug abuse risk. Further studies are planned which will examine the psychosocial correlates of alcohol and other drug use in this sample, such as family environment, peer relationships, attitudes, rationales for drug use, and psychological status, in order to develop a fuller profile of Illinois students at risk. This information will better enable prevention programs

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to target youth who need help. These profiles will be done separately for specific patterns of use (e.g., alcohol users, polydrug users, intravenous drug users, steroid users, etc.).

Also, it is recommended that ethnographic studies be done to provide more detailed information on the drugs that were reported to be abused. For example, the high prevalence of "stimulant" use by high school students outside of Cook County (19.5%, lifetime prevalence) warrants further study to determine which stimulants are being used, how they are being used, and with what consequences. Ethnographers typically go to "hang outs" and get rich descriptive information about what youth mean when they refer to particular drugs (Wiebel, 1990). Such intensive studies would further strengthen the more extensive approach taken in this study.

Appendix A: Post Stratification and Weighting

Exhibit 17

SAMPLE AND POPULATION DISTRIBUTION

	GRADE	POPULATION		SAMPLE		WEIGHT
COOK COUNTY:						
CHICAGO PUBLIC SCHOOLS (CPS)	7	28,965	3.4%	1134	7.4%	0.459
	8	27,787	3.3%	134	8.8%	0.375
	9	32,181	3.8%	1088	7.1%	0.535
	10	28,957	3.4%	766	5.0%	0.68
	11	20,826	2.5%	837	5.5%	0.455
	12	16,665	2.0%	658	4.3%	0.465
SUBTOTAL		155,381	18.4%	5,824	38.1%	
NON-CPS PUBLIC/ PRIVATE SCHOOLS	7	35,784	4.2%	359	2.4%	1.75
	8	33,714	4.0%	371	2.4%	1.667
	9	34,636	4.1%	494	3.2%	1.281
	10	33,357	4.0%	580	3.8%	1.053
	11	32,787	3.9%	501	3.3%	1.182
	12	33,201	3.9%	513	3.4%	1.147
SUBTOTAL		203,479	24.1%	2,818	18.5%	
NON-COOK COUNTIES:						
PUBLIC AND PRIVATE SCHOOLS	7	86,876	10.3%	971	6.4%	1.609
	8	82,181	9.7%	989	6.5%	1.492
	9	83,681	9.9%	1255	8.2%	1.207
	10	79,864	9.5%	1197	7.9%	1.203
	11	76,186	9.0%	1166	7.6%	1.184
	12	75,976	9.0%	1025	6.7%	1.343
SUBTOTAL		484,764	57.4%	6,603	43.3%	

A post-stratification procedure was used to adjust the data so that it accurately reflects the Illinois student population. In order to combine the data from the Chicago Public Schools with data from the rest of the state, the total sample was divided into three strata. Chicago Public Schools comprised one stratum, the non-Chicago Public Schools in Cook County the second, and the other Illinois counties the third. Additional stratification by grade level was done within the three regional strata. Thus, joint stratification by region and grade level yielded 18 particular substrata. The number of students in the population for each of these substrata, along with the number in the DASA sample, are shown in Exhibit 17. In order to adjust the sample to make it more representative of the population, weights were developed for each of the 18

substrata by dividing the number of students in the subpopulation by the number in the sample ($w_{strat_{ij}} = N_{ij} / n_{ij}$). These weights were then readjusted to reflect the actual sample size.

This weighting procedure assumes that those who are in the sample are reflective of all students in the population, when, in fact, on an average day 18% of students at the Chicago Public Schools are absent (personal communication, Mary Nalbandion, June, 1990). Absentee data obtained from the

teachers of 168 of the Non-Chicago Public School classrooms indicated that 9.07% percent of students were absent. Because of the association between absenteeism and drug use it was considered necessary to reduce this bias. In order to represent students who were absent, responses to an item on the ISAY survey was used which asked: "About how many days are you absent from school during an entire year?" Specifically, the midpoint of the response category (0-9, 10-19, 20-30, more than 30) was used to derive the probability that the student was in school, which was then used to develop a weight as follows:

$$w\text{-abs}_{ij} = \frac{180 (\text{number of days in school year})}{180 - \text{midpoint of "days absent"}}$$

Furthermore, a constraint that the weighted total for Chicago Public Schools be equal to 118% of the sample, and non-Chicago Public Schools be equal to 109% of the sample was introduced in order to make the absentee weights account for the number of students estimated to be absent on the day of the survey. The weights were then readjusted to reflect the actual sample size.

The stratification weights were multiplied by the absenteeism weights to yield final weights that were used to weight each observation to produce the prevalence estimates. Essentially, the final weight reflects the proportion of the Illinois population in the particular grade and region represented by each sample observation, taking into account absenteeism.

Appendix B: Sampling Error and Design Effect

The question of sampling error arises when attempting to make prevalence estimates. This is directly related to both sample design and sample size. The present study used a complex design in which 42 high schools were sampled as primary sampling units (PSUs) in the non-CPS domain, and 70 high schools in the CPS domain. [Other studies with similar designs have found that design effects for drug use estimates ranged between 2.5 and 3.00 (e.g., National Adolescent Health Survey, 1989).] The design effect indicates the differential of sample size needed to produce standard errors equivalent to a simple random sample.

In order to determine what the design effect might be for this survey, several analyses of variance were computed using lifetime marijuana, alcohol, and cocaine as test cases. The design effects averaged at 2.76. Therefore, 2.76 was used as an estimate of design effect for computing standard errors.

Confidence intervals are not presented with each table, but a rough approximation of the 95% confidence intervals can be computed as follows:

(first, convert prevalence estimate from a percent to a proportion by dividing by 100)

$$\begin{aligned} 95\% \text{ CI} &= \text{estimated proportion} \pm 1.96 * (\text{s.e. est}), \text{ where} \\ \text{s.e. est} &= \sqrt{((p * q) / (n / 2.76))}, \text{ where} \\ p &= \text{proportion} \\ q &= 1 - p \\ n &= \text{sample size} \end{aligned}$$

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For example, take the estimated proportion of Illinois 7-12 graders who were classified at high risk, which was 12.7%.

$$p = .127, q = .873, n = 15,137$$

$$s.e \text{ est} = \sqrt{(.873 * .127 / (15,137 / 2.76))} = .0045$$

$$95\% \text{ CI} = .127 \pm 1.96 * .0045 = .127 \pm .0088$$

Converting back to percentages by multiplying by 100, we have the 95% CI = 12.7% \pm 0.88%, or 11.8% to 13.6%.

Appendix C: Drug Name abbreviations

ALC: Alcohol, such as beer, wine, etc.

CIG: Cigarettes, cigars

CHEW: Smokeless tobacco, chew, dip, etc.

INHAL: Inhalants (glue, paint, rush, etc.)

MARIJ: Marijuana

COCA: Cocaine (including crack)

CRACK: Crack cocaine

STIM: Stimulants (uppers, speed)

SED: Sedatives (downers, valium, etc)

HAL: Any of the hallucinogens listed below

LSD: LSD (acid, mushrooms)

PCP: PCP (Phencyclidine)

XTC: Ecstasy (Love Boat, MDMA)

HEROIN: Heroin

INJECT/IV: Intravenous injection of steroids, cocaine, stimulants, heroin, or other drugs for non-medical reasons (not asked of Chicago Public School students)

STER: Steroids, used for body building (not asked of Chicago Public School Students)

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