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EDITORS: Results of this year's Monitoring the Future survey are being released at the White House at 10:00 A.M. on Thursday, December 11, 2008, and at a subsequent briefing for the press at the JW Marriott Hotel at 1:00 P.M. in Washington, D.C. The results are being released by the National Institute on Drug Abuse, which sponsors the study, and the University of Michigan, which designed and conducts the study. Participating will be the director of the White House Office of National Drug Control Policy (ONDCP), John Walters; the acting surgeon general, Rear Admiral Steven Galson; the director of the National Institute on Drug Abuse (NIDA), Nora Volkow; and the principal investigator of the study, Lloyd Johnston. For further information, contact Johnston at (734) 763-5043.

Various stimulant drugs show continuing gradual declines among teens in 2008, most illicit drugs hold steady

ANN ARBOR, Mich.---- U.S. students in 8th, 10th, and 12th grades are continuing to show a gradual decline in their use of certain drugs—amphetamines, methamphetamine, crystal methamphetamine, cocaine, and crack—according to the 34th annual national survey in the Monitoring the Future series conducted by scientists at the University of Michigan's Institute for Social Research.

“These certainly are positive developments and the longer term decline in the use of methamphetamine, which continued this year in grade 12, is particularly important,” said Lloyd Johnston, the study's principal investigator. “The use of this highly addictive drug is now down by about two thirds among teens since 1999, when its use was first measured.”

Johnston noted that all of the drugs that continued to decline this year are central nervous system stimulants. Their decline in use had the effect of lowering the proportion of students reporting use of any illicit drug other than marijuana modestly, statistically significant only in 10th grade, where annual prevalence—the percentage reporting any use in the prior 12 months—declined by 1.7 percentage points to 11.3 percent. (The comparable rates at 8th and 12th grades stood at 7.4 percent and 18.3 percent, respectively, in 2008.)

“The other side of the coin is that many other drugs monitored by the study did not show evidence of further decline this year, though several of them have shown declines in the recent past,” Johnston said.

These drugs include LSD, other hallucinogens taken as a class, PCP specifically, ecstasy, heroin, narcotics other than heroin taken as a class (and OxyContin and Vicodin, specifically), tranquilizers, sedatives (including barbiturates), and three so-called “club drugs”—ketamine, Rohypnol, and GHB.

Several of these drugs have shown considerable decline in recent years, including hallucinogens and “club drugs.” But a number of other drugs remain near their recent peaks in use, in particular many of the prescription drugs—narcotics other than heroin, OxyContin specifically, Vicodin specifically, tranquilizers, and sedatives (including barbiturates). Johnston noted that these prescription drugs are all central nervous system depressants.

The overall proportion of each age group reporting use of any illicit drug in the prior 12 months actually rose this year in grades 8 and 12, though by less than one percentage point. That is because marijuana, which tends to drive this index because it is by far the most widely used of the illicit drugs, rose in grades 8 and 12 by 0.6 and 0.7 percentage points, respectively. (None of these changes are statistically significant.)

“So, overall this would have to be characterized as a year of limited, and rather modest change,” Johnston said.

Drugs Declining in Use

The drugs most responsible for this year’s modest declines in illicit drug use other than marijuana are the various stimulants, including amphetamines, Ritalin (a specific amphetamine), methamphetamine, crystal methamphetamine, cocaine, and crack.

Amphetamine use reached its recent peak in the mid-1990s among 8th and 10th graders. Since then, annual prevalence has fallen by more than one half among 8th graders to 4.5 percent in 2008 and by nearly half among 10th graders to 6.4 percent. Amphetamine use peaked somewhat later among 12th graders, and has fallen by about four tenths since, to 6.8 percent in 2008. The declines continued in the upper grades this year, the one-year decline at 10th grade being statistically significant.

Ritalin is a prescription amphetamine drug that is used to treat attention deficit hyperactivity disorder (ADHD). Its use outside of medical supervision was first measured in the study in 2001; such use has been falling since then, with total declines of one third or more at each grade level. Today, between 1.6 percent and 3.4 percent of students in these grades have abused Ritalin in the prior 12 months, with gradual (nonsignificant) declines continuing this year at grades 8 and 12.

Methamphetamine, often called “meth,” has been in decline since its use was first measured in 1999. Annual prevalence is now down by about two thirds in all three grades from what it was in 1999. (Annual prevalence rates now stand at 1.2 percent in 8th and 12th grades and 1.5 percent in 10th grade.)

Crystal methamphetamine, which attained its lowest point this year since its recent peak level in 2002, had an annual prevalence of only 1.1 percent in 2008. This is down by about two thirds from the 2002 level of 3.0 percent. This year's decline of 0.6 percent was significant.

"The fact that meth and crystal meth use have not caught on among adolescents, and in fact are declining steadily in popularity, is very important given the high potential for dependence that these drugs carry," Johnston said.

Cocaine use reached a recent peak among teens in the late 1990s, declined for a year or two, and then held relatively steady for some years. However, in 2008, it showed some further decline in all three grades, though none of those changes reached statistical significance. Today's annual prevalence rates of 1.8 percent, 3 percent, and 4.4 percent in grades 8, 10, and 12, respectively, are down between 30 percent and 40 percent from the peaks reached in the late 1990s.

Crack use, which also reached its recent peak in the late 1990s, previously declined some in all three grades, but showed no further decline last year. However, annual prevalence fell this year in grades 8 and 12, significantly so at 12th grade. It now ranges between 1.1 percent and 1.6 percent across the three grades; these rates are down by between 40 and 50 percent from what they were at their recent peaks.

Drugs Holding Steady

A number of illicit drugs showed little change this year. Many are at rates well below their recent peak levels of use, however. These include LSD, hallucinogens other than LSD, ecstasy, heroin, and most of the prescription psychoactive drugs used outside of medical supervision, including sedatives (barbiturates), tranquilizers, narcotics other than heroin, OxyContin specifically, and Vicodin specifically. (Both OxyContin and Vicodin are narcotic drugs.)

LSD, once a widely used drug, showed a very sharp decline in use from about 2001 to 2005. There has not been much change since then, and annual prevalence now ranges between 1.3 percent and 2.7 percent in the three grades. These rates are down from recent peak levels by about three quarters. Perceived availability of LSD has been in decline for some years; but so have perceived risk and disapproval among 8th and 10th graders. The investigators warn that, were availability to rise, young people might be ill-equipped to resist the temptation to use this drug. Perceived risk and disapproval have proven to be major deterrents to the use of many drugs, so their decline in recent years is not a positive development.

Hallucinogens other than LSD, taken as a class, show much less decline in recent years than LSD; but they are still somewhat below their recent peak levels. (Psilocybin, also known as "shrooms" or "magic mushrooms," is the most widely used of these drugs today.) There was little change in their use this year. Annual prevalence ranges from 1.6 percent in 8th grade to 5.0 percent in 12th grade.

Ecstasy (MDMA) is not generally classified as a hallucinogen, but is used largely for its hallucinogenic properties. Its use among teens rose dramatically in the late 1990s and then plummeted just as sharply in the early 2000s, as concern about the consequences of use grew.

Low points were reached around 2005, after which some evidence of a rebound appeared. However, this year saw declines in use in the upper grades and a near leveling in 8th grade; so this drug is categorized as holding steady this year.

The investigators do not rule out the possibility of a rebound in the use of ecstasy, because the proportion of students seeing great risk in using this drug has been in decline for the past three or four years at all three grade levels, likely reflecting the result of what we have called “generational forgetting” of the dangers of a drug due to generational replacement, as new cohorts of students enter adolescence and replace those who knew more about the consequences of use. (The same dynamic may be relevant for LSD.) Students’ disapproval of using ecstasy has also been slipping in recent years, particularly among 8th graders.

Heroin use by students in the survey was down by a third to a half from recent peak rates seen in the mid- to late 1990s, but there has been little further change since about 2005. Less than 1 percent of students in any of the three grades report any use of heroin in the prior 12 months.

Prescription psychotherapeutic drugs. While most of the illicit drugs have shown considerable declines in use over the past decade or so, most prescription drugs have not, with the notable exception of amphetamines. In fact, a number of them showed steady growth in use outside of their legitimate medical use through most of the 1990s. These include sedatives, tranquilizers, and narcotic drugs other than heroin (most of which are analgesics). As a result, they have become a relatively more important part of the nation’s drug abuse problem. Fortunately, over the past few years, most of them have shown signs of leveling or even of beginning a gradual decline.

Sedative use, reported only for 12th grade, did not hit its recent peak until 2005, when annual prevalence reached 7.2 percent. Today, use is down only modestly to 5.8 percent with a drop of just 0.4 percent in 2008.

Tranquilizer use made a real comeback in the early 1990s, and increases continued into 2001 or 2002 in all grades. Since then there has been a gradual decline in use in all three grades, including a small further decline this year in 10th grade, but the rates are still not far from the recent peaks. Annual prevalence ranges from 2.4 percent in 8th grade to 6.2 percent in 12th grade.

Narcotics other than heroin are reported only for 12th graders. Their annual prevalence in 2008 of 9.1 percent is just barely below that reached in the recent peak year of 2004 (9.5 percent). Two specific drugs in this class, OxyContin and Vicodin, also did not show much change this year. **OxyContin** use was first measured in 2002. The 2008 figures for all three grades are not much different from what they were in 2002, standing at 2.1 percent, 3.6 percent, and 4.7 percent in grades 8, 10, and 12, respectively.

Vicodin was also measured for the first time in 2002. Annual prevalence rates are very close to their recent peak levels: 2.9 percent, 6.7 percent, and 9.7 percent in 8th, 10th, and 12th grades, respectively, in 2008.

Drugs Showing Signs of Increasing Use

There have been relatively few drugs in this category in recent years, and the one candidate this year is not a certain call, according to researchers.

Marijuana use has generally been in a gradual and steady decline since 1996 in the case of 8th graders, and since about 2001 in the upper grades. However, the results of the 2008 survey suggest that this pattern of steady decline may be ending. The 8th and 12th grades showed modest increases of 0.6 and 0.7 percentage points, respectively, this year—the second year that 12th-grade use did not decline.

The 10th graders, who generally have shown the most decline across a number of drugs this year, did show a continuing decline of 0.6 percentage points in marijuana use. (None of the 2008 changes reached statistical significance.) It is noteworthy that perceived risk associated with regular marijuana use—usually a deterrent to use—has fallen for the past two years among 12th graders and for the past year (significantly) for 8th graders. Only 10th graders showed a small further increase in perceived risk.

Disapproval of marijuana remains relatively high in all three grade levels, while perceived availability has been declining in recent years, especially in the lower grades. The decline in availability did not continue in either 8th or 12th grade this year, however.

Over-the-Counter Cough and Cold Medications

Questions were introduced into the study in 2006 about the use of over-the-counter cough and cold medications taken for the purpose of getting high. Most drugs abused in this way contain the cough suppressant dextromethorphan as an active ingredient. The rates observed in 2006 were fairly high, with annual prevalence rates of 4 percent, 5 percent, and 7 percent in grades 8, 10, and 12.

While the annual prevalence rate is the same for 10th graders as in 2006, the 8th and 12th graders show evidence of declines in their use. Eighth graders' prevalence has fallen by 0.6 percentage points and 12th graders' by 1.3 percentage points (a statistically significant decline). It thus appears that attempts to discourage misuse of dextromethorphan have proven somewhat successful, though certainly not entirely so.

Anabolic Steroids

Monitoring the Future tracked a fairly sharp increase in the use of anabolic steroids by male teens in the late 1990s, with peak levels reached in 1999 among 8th-grade males, in 2000 among 10th-grade males, and in 2001 and 2002 among 12th-grade males. Since those peak years, the annual prevalence rate has dropped by more than half among 8th and 10th grade males (to 1.2 percent and 1.4 percent, respectively), and by one third among 12th grade males (to 2.5 percent annual prevalence in 2008). While the prevalence rates tend to be much lower among females, their trend story is much the same.

Over the past five-year interval there has been an increase in the proportion of 12th-grade males—12th grade being the only grade asked the question—who see *great risk* in trying anabolic steroids,

which may help to account for the decline in use. There was also a sharp drop in 2005 in the perceived availability of these drugs, very likely due to the Anabolic Control Act of 2004 which placed 32 additional steroids into Schedule III and expanded the Drug Enforcement Agency's regulatory and enforcement authority regarding their sale and possession.

Johnston noted the irony that a number of states and schools are considering implementing expensive programs to test student athletes for anabolic steroid use as a deterrent, just after the problem has diminished sharply.

Trends in Alcohol Use

The use of alcohol by teens has declined considerably since recent peaks in use were reached in the mid-1990s. Thus, alcohol has moved in parallel with illicit drug use to a considerable degree, the investigators note. The 30-day prevalence of use (reporting drinking an alcoholic beverage at least once in the 30 days prior to the survey) has fallen by 40 percent among 8th graders since their peak level in 1996.

The proportional declines since recent peak rates are smaller for the older students, nearly one third for 10th graders and one sixth for 12th graders. The upper grades showed continuing declines in use this year—but the investigators caution that the decline in 10th grade is likely exaggerated because the random sampling process yielded a few schools in the 10th-grade sample this year that had unusually low rates of alcohol use (including two schools with high proportions of Mormons). Thirty-day prevalence now stands at 16 percent, 29 percent, and 43 percent for the three grades surveyed.

The greater long-term decline in use among 8th graders may well reflect the greater decline in their reported *availability* of alcohol. While there has been some decline in reported availability among the upper grades, 8th graders have shown by far the greatest decline. In 1996, 75 percent thought that they could get alcohol if they wanted some, whereas by 2008 the percentage had fallen to 64 percent.

Self-reports of getting drunk are also down after a long slow decline, which continued into 2008 (though the only significant one-year change this year was in 10th grade, and likely is exaggerated for the school sample situation noted above). Again, the long-term decline was most pronounced among 8th graders—the youngest teens being surveyed. The proportion saying that they got drunk in the prior 30 days was 5.4 percent in the 2008 survey, down by more than 40 percent from 1996 (9.6 percent). The proportional declines are much smaller for the older students: for example, 28 percent of 12th graders admitting drunkenness in the prior month in 2008, which was down only about one fifth from their peak rate in 1997.

Cigarette Smoking Trends

Trends in the use of cigarettes and other tobacco products are the subject of a separate news release being issued simultaneously with the present one. (It is available on the study's Web site, www.monitoringthefuture.org.) For the sake of completeness here, it is noted that 30-day smoking rates continued to decline in grades 10 and 12 in 2008—statistically significant for 10th grade only. Thirty-day smoking declined very little in 2008 among 8th graders (-0.2 percentage points),

following a significant decline in 2007. The fact that teen smoking continues to decline is very encouraging, according to the investigators. In recent years it had looked like the long decline might be ending.

Sources of Prescription Drugs

The continuing misuse of *prescription drugs* by young people is a matter of concern, so the investigators added questions to the survey in 2007 to determine how students acquire these drugs. They asked students who used amphetamines, tranquilizers, or narcotics other than heroin in the prior year how they got these drugs. The most commonly reported source was getting them free from a friend or relative, followed closely by being sold the drugs by a friend or relative. About a fifth to a quarter also said they had taken them from friends or relatives without their permission. Only about a fifth to a quarter of users of these drugs said that they had bought them from a dealer or stranger (see Table 14).

“Clearly the informal networks of relatives and friends play a major role in the distribution of these prescription drugs to young users,” Johnston said.

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Monitoring the Future has been funded under a series of competing, investigator-initiated research grants from the National Institute on Drug Abuse, part of the National Institutes of Health. Surveys of nationally representative samples of American high school seniors were begun in 1975, making the Class of 2008 the 34th such class surveyed. Surveys of 8th and 10th graders were added to the design in 1991, making the 2008 nationally representative samples the 18th such classes surveyed. Sample sizes in 2008 are 16,253 eighth graders in 144 schools, 15,518 tenth graders in 122 schools, and 14,577 twelfth graders in 120 schools, for a total of 46,348 students in 386 secondary schools. The samples are drawn separately at each grade level to be representative of students in that grade in public and private secondary schools across the coterminous United States. Schools are selected with probability proportionate to their estimated class size.

The findings summarized here will be published in a forthcoming volume: Johnston, L. D., O’Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2009, in preparation). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2008*. Bethesda, MD: National Institute on Drug Abuse.

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