H. RECENT TRENDS

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This section summarizes trends in drug use, comparing the eight graduating classes of 1975 through 1982. As in the previous section, the outcomes discussed include measures of lifetime use, use during the past year, use during the past month, and daily use. Also, trends are compared among the key subgroups.

Trends in Prevalence 1975-1982: All Seniors

- The years 1978 and 1979 marked the crest of a long and dramatic rise in marijuana use among American high school students. As Tables 6 through 9 illustrate, annual and 30-day prevalence of marijuana use hardly changed at all between 1978 and 1979, following a steady rise in the preceding years. In 1980 both statistics dropped for the first time, and they have continued to decline in the two years since. Both are now 7% to 9% below their all-time highs. Lifetime prevalence, which had remained unchanged in 1980, finally began to drop in '81, though more gradually. As we discuss later, there have been some significant changes in the attitudes and beliefs these young people hold in relation to marijuana; these changes suggest that the downward shift in marijuana use is likely to continue.

- Of greater importance is the even sharper downward trend now occurring for daily marijuana use. Between 1975 and 1978 there was an almost two-fold increase in daily use. The proportion reporting daily use in the class of 1975 (6.0%) came as a surprise to many. That proportion then rose rapidly, so that by 1978 one in every nine high school seniors (10.7%) indicated that he or she used the drug on a daily or nearly daily basis (defined as use on 20 or more occasions in the last 30 days). In 1979 we reported that this rapid and troublesome increase had come to a halt, with a 0.4% drop occurring that year. By 1982 the daily usage rate dropped to 6.3%—about one in every sixteen

seniors—or to about the same level we first observed in 1975. As later sections of this report document, much of this reversal appears to be due to increasing concerns about possible adverse effects from regular use, as well as to the perception that peers are now more disapproving of regular marijuana use.

- Until 1978, the proportion of seniors involved in <u>any illicit drug use</u> had increased, primarily because of the increase in marijuana use. About 54% of the classes of 1978 and 1979 reported having tried at least one illicit drug during the last year, up from 45% in the class of 1975. Since 1979, however, the proportion reporting using any illicit drug during the year has dropped by 1% each year. This reversal appears to be due primarily to the change in marijuana use.

- But, as Figure C illustrates, since 1976 there has been a very gradual, steady increase in the proportion who have ever used <u>some illicit drug other than marijuana</u>—an increase which continued this year. The proportion going beyond marijuana in their lifetime has risen from 35% to 43% between 1976 and 1981, and to 45% in 1982. However, the annual prevalence of such behaviors, which had risen from 25% to 34% in 1981, showed no further change this year. (Most of the earlier rise appeared to be due to the increasing popularity of cocaine with this age group between 1976 and 1979, and then due to the increasing use of stimulants since 1979.)

  However, as stated earlier, we believe that this upward shift has been exaggerated by respondents including instances of using over-the-counter substances in their reports of amphetamine use. (See discussion at the end of the introductory section.) A rather different picture of what trends have been occurring in the proportions using illicit drugs other than marijuana emerges when self-reported amphetamine use is excluded from the calculations altogether. (This obviously understates the percent using illicits other than marijuana in any given year, but it might yield a more accurate picture of <u>trends</u> in proportions.) Figure C (and other figures to follow) have been annotated with small markings ( ) next to each year's bar, showing where the shaded area would stop if amphetamines were excluded. The cross-time trend in these markings shows that the proportion going beyond marijuana to illicits other than amphetamines was virtually constant between 1979 and 1981 at a peak level of 24% (which is only 1.4% above the 1975 level). The figure for 1982 is down for the first time to 22%—a drop of 2%. Thus with stimulants (including incorrectly reported ones)

included, we see a leveling in the proportion of seniors going beyond marijuana use during the prior year. If all stimulant use is excluded from consideration, we actually see a drop.

- Although the overall proportion using illicit drugs other than marijuana has changed fairly gradually during recent years, more varied and turbulent changes have been occurring for specific drugs within the class. (See Tables 6, 7, and 8 for trends in lifetime, annual, and monthly prevalence figures for each class of drugs.)

- From 1976 to 1979 cocaine exhibited a dramatic and accelerating increase in popularity, with annual prevalence going from 6% in the class of 1976 to 12% in the class of 1979—a two-fold increase in just three years. Little further increase occurred in 1980 and 1981, however, and this year there is evidence of a gradual decline in use (with annual prevalence dropping from 12.4% in 1981 to 11.5% in 1982).

- Like cocaine use, inhalant use had been rising steadily in the mid 1970's, though more slowly and from a lower overall level. Annual prevalence (in the unadjusted version) rose from 3.0% in 1976 and reached a peak of 5.4% in 1979. Since then, however, there has been an overall decline—in part due to a substantial drop in the use of the amyl and butyl nitrites, for which annual prevalence declined from 6.5% in 1979 to 3.6% in 1982. However, while nitrite use fell slightly this year, total inhalant use actually rose a little. Whether this reflects a reversal of the downward trend, or simply a statistical aberration, however, remains to be determined.

- Stimulant use, which had remained relatively unchanged between 1975 and 1978, began to show evidence of a gradual increase in use in 1979. A further increase occurred in 1980, and an even greater increase in 1981. Between 1976 and 1981, reported annual prevalence rose by a full 10.2% (from 15.8% in 1976 to 26.0% in 1981); and daily use tripled, from 0.4% in 1976 to 1.2% in 1981. As stated earlier, we think these increases were exaggerated—perhaps sharply exaggerated—by respondents in recent surveys including non-amphetamine, over-the-counter diet pills (as well as look-alike and sound-alike pills) in their answers. In 1982, we added new versions of the questions on amphetamine use, which were more explicit in instructing respondents not to include over-the-counter pills. (These were added to only three of the five forms of the questionnaire being used: the amphetamine questions were left unchanged in the other two forms.) Tables 6, 7, 8, and 9 now show two

rows for amphetamines. The first, which is based on the unchanged questions, provides comparable data across time for trend estimates. The second row, based on the revised questions, provides for the first time in 1982 an adjusted value which is our best estimate of prevalence of true amphetamine use.*

The unadjusted values in Tables 6, 7, 8, and 9 show a mixed picture in the 1981 to 1982 changes: lifetime prevalence increased by 3.4% (from 32.2% to 35.6%); annual prevalence was virtually unchanged (26.0% vs. 26.1%); and monthly prevalence decreased significantly (by 2.1% from 15.8% to 13.7%). Daily prevalence was down slightly, from 1.2% to 1.1%. These trends suggest a recent decline in stimulant use, so recent that only daily or monthly figures reflect the change. It seems likely that recent publicity on the dangers of over-the-counter diet and stay-awake pills and/or changes in the availability of the "look-alikes" resulting from new restrictive legislation in many states account for some or all of the recent decrease in stimulant use. (Recall that these unadjusted figures erroneously include some use of these substances.)

Trends in true amphetamine use will be available beginning next year, as cross-time data on the revised questions begin to cumulate. However, we do know from a completely separate set of questions, which will be discussed further below, that the number of young people reporting that during the prior twelve months they were around people who are taking amphetamines "to get high or for kicks" has leveled off this year, after a sharp increase over the prior period. This strongly suggests that the rise in the recreational use of stimulants has halted. (Recall that annual prevalence in self-reported use also remained unchanged.) The possibility of a very recent decline in current use, suggested by the monthly and daily use statistics, cannot be addressed in these less precise questions dealing with exposure to use.

- For sedatives the sustained, gradual decline between 1975 and 1979 halted in 1980 and 1981. For example, annual prevalence, which dropped steadily from 11.7% in 1975 to 9.9% in 1979, increased slightly to 10.5% in 1981. This year, though, the longer-term decline continued, as annual prevalence fell to 9.1%—its lowest level yet.

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*We think the unadjusted estimates for the earliest years of the survey were probably little affected by the improper inclusion of non-prescription stimulants, since sales of the latter did not burgeon until after the 1979 data collection.

But, the overall trend lines for sedatives mask differential trends occurring for the two components of the measure (see Figure E). Barbiturate use has declined rather steadily since 1975. Methaqualone use, on the other hand, rose sharply from 1976 until last year. (In fact, it was the only drug other than stimulants that was still rising.) In 1982, the use of methaqualone finally began to decline, which accounts for the overall sedative category resuming its decline.

- Tranquilizers continued their steady decline this year—a decline which began in 1977. Annual prevalence has dropped from 11% in 1977 to 7% in 1982.

- Between 1975 and 1979 the prevalence of heroin use had been dropping rather steadily. Lifetime prevalence dropped from 2.2% in 1975 to 1.1% in 1979 and annual prevalence has also dropped by half, from 1.0% in 1975 to 0.5% in 1979. This decline halted in 1980 and the statistics have remained almost constant since then. But perhaps the fact of greatest significance is that overall use did not increase, considering the greater availability and purity of heroin reported to be entering the United States as a result of instability in opium producing countries in the Middle East.**

- From 1975 to 1981 the use of opiates other than heroin remained fairly stable, with annual prevalence at or near 6%. This year for the first time there is a statistically significant decline observed (from 5.9% to 5.3%).

- Hallucinogen use (unadjusted for underreporting of PCP) declined some in the middle of the decade (from 11.2% in 1975 to 9.6% in 1978 on annual prevalence). Since 1979, when the first adjusted figures are available, there has been a steady decline in that statistic, with adjusted annual prevalence dropping from 12.8% in 1979 to 9.3% in 1982).

- LSD, one of the major drugs comprising the hallucinogen class, showed a decline from 1975 to 1978, followed by considerable stability since then.

- The specific hallucinogen PCP showed a sizeable (and statistically significant) decrease again this year, after even larger drops in 1980 and 1981. (Measures for the

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**Since the impact to date is alleged to be greatest in the Northeastern cities, we examined heroin statistics for the Northeast specifically (see the full 1981 volume for these details) and found no increase there either.

use of this drug were started in 1979.) Annual prevalence, for example, dropped by more than two-thirds in three years, from 7.0% in 1979 to 2.2% in 1982.

- As can be seen from these varied patterns for the several drug classes, while the overall proportion of seniors using any illicit drugs other than marijuana or amphetamines has changed rather little, the mix of drugs they are using has been changing.

- Turning to the licit drugs, between 1975 and 1978 there was a small upward shift in the prevalence of alcohol use (except for daily use) among seniors. To illustrate, the annual prevalence rate rose steadily from 85% in 1975 to 88% in 1978, and monthly prevalence rose from 68% to 72%. Between 1978 and 1980, however, the alcohol prevalence figures remained nearly constant. In the past two years there has been a very slight decline in annual and 30-day prevalence rates; however, this falls short of statistical significance.

- The rate of daily alcohol use has been exceeded by the daily marijuana use rate in this age group since the study began in 1975. It remained quite steady, at about 6%, since the first survey. In fact, it stands at exactly the same level this year (5.7%) as in 1975.

- There had been some increase in the frequency of binge drinking in the last half of the 1970's. When asked whether they had taken five or more drinks in a row during the prior two weeks, 37% of the seniors in 1975 said they had. This proportion rose gradually to 41% by 1979, but then remained perfectly level through 1981. This year that statistic dropped by 1.1%. Thus, to answer a frequently asked question, there is no evidence that the currently observed drop in marijuana use is leading to a concomitant increase in alcohol use. If anything, there may be some parallel drop in alcohol use, just as there was some parallel rise in earlier years.

- As for cigarette use, 1976 and 1977 appear to have been the peak years for lifetime, thirty-day, and daily prevalence. (Annual prevalence is not asked.) Over the subsequent graduating classes, thirty-day prevalence had been dropping, from 38% in the class of 1977 to 29% in the class of 1981. More importantly, daily cigarette use dropped over that same interval from 29% to 20%, and daily use of half-pack-a-day or more had fallen from 19.4% to 13.5% between 1977 and 1981 (nearly a one-third decrease). Last year we reported that the decline appeared to be decelerating; and this

year it halted and perhaps even reversed slightly, with the proportion smoking half-a-pack or more per day rising from 13.5% in 1981 to 14.2% in 1982, and the proportion reporting daily use at any level rising slightly from 29.4% to 30.0%. (Neither of these shifts is statistically significant).

As with daily marijuana use, it appears that the rather large drop in daily smoking rates was in response to both personal concerns about the health consequences of use, and a perceived peer disapproval of regular use—both of which rose steadily until last year. (See the relevant sections below.)

Trend Comparisons for Important Subgroups

Sex Differences in Trends

- Most of the sex differences mentioned earlier for individual classes of drugs have remained relatively unchanged over the past seven years—that is, any trends in overall use have occurred about equally among males and females, as the trend lines in Figures D and E illustrate. There are however, a few exceptions.

- Since 1977, the small sex difference involving tranquilizer use (men this age had used them less frequently than women) has disappeared, due to a faster decline among females.

- The ratio of male-female prevalence rates in cocaine use, which was rather large in the mid-1970's, has diminished somewhat in the early 1980's; nevertheless, there remains a sizeable sex difference, with males using more frequently.

- An examination of the trends in the proportion of each sex using any illicit drug (see Figure D) suggests that use among males rose between 1975 and 1978, and has been declining since then (from 59% in 1978 to 52% in 1982). Use among females also increased between 1975 and 1978, and then continued to increase until 1981 (from 41% in 1975 to 51% in 1981) before dropping slightly this year (to 49%). However, if amphetamine use is deleted from the statistics (see notations in Figure D) female use peaked in 1979 and then declined as well. (Note that the declines for both males and females are attributable to the declining marijuana use rates.) Obviously, the recent climb in reported amphetamine use has occurred somewhat more among females. For example, between 1978 and 1982 female amphetamine use (lifetime) rose by 16.4% (from 23.2% to 39.6%) while male use rose by 9.5%

(from 22.3% to 31.8%). As noted earlier, these figures undoubtedly overestimate "true" amphetamine prevalence figures. The 1982 lifetime-prevalence estimate for females, based on the two unrevised questionnaire forms, is a startling 39.6%; however, based on the three revised questionnaire forms, the corresponding estimate is considerably lower, 28.2%. This means, of course, that a high proportion (almost 30%) of the unrevised estimate for females is due to erroneous inclusion of non-prescription stimulants (largely diet pills). For males, the discrepancy is considerably smaller: the revised estimate is 26.8% vs. 31.8% for the unrevised estimate.

- Regarding the apparent parity between the sexes in the trends in the use of illicit drugs other than marijuana, it can be seen in Figure D that, when amphetamine use is excluded from the calculations, somewhat differential trends emerge for males vs. females. This is because there are more females today who use only amphetamines and the exclusion of amphetamines from the calculations results in a virtually stable trend line for females in the use of illicits other than marijuana or amphetamines.

- The sex differences in alcohol use have narrowed gradually since 1975. For example, the thirty-day prevalence rates for males and females differed by 12.8% in 1975 (75.0% vs. 62.2% respectively), but that difference was down to 8.7% by 1982. And, although there still remain substantial sex differences in daily use and occasions of binge drinking, there has been some narrowing of the differences there, as well. For example, between 1975 and 1982 the proportion of males admitting to having five drinks in a row during the prior two weeks showed a net increase of only .8% (from 49.0% to 49.8%), whereas a net increase of 4.7% occurred for females (from 26.4% to 31.1%). In essence, females accounted for nearly all of the overall increase.*

- Regarding cigarette smoking, we observed in 1977 that females for the first time caught up to males at the half-a-pack per day smoking level (Figure E). Then, between 1977 and 1981, both sexes showed a decline in the prevalence of such smoking; but use among males dropped more, resulting in a reversal of the sex

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*It is worth noting that the same number of drinks produces substantially greater impact on the blood alcohol level of the average female than the average male, because of sex differences in body weight. Thus, sex differences in frequency of actually getting drunk may not be as great as the binge drinking statistics would indicate, since they are based on a fixed number of drinks.

differences. This year both sexes showed a small increase in half-pack-a-day use, and females still remain slightly higher—14.7% vs. 13.1%. (At less frequent levels of smoking there is a somewhat larger sex difference, since there are more occasional smokers among females than among males.)

Trend Differences Related to College Plans

- Both college-bound and noncollege-bound students have been showing fairly parallel trends in overall illicit drug use over the last several years (see Figure G).*

- Changes in use of the specific drug classes have also been quite parallel for the two groups since 1976, except for sedatives and inhalants.

- Sedative use rose somewhat between 1978 and 1980 among the noncollege segment, while falling slightly among the college-bound. Looking at the two ingredient subclasses of sedatives, barbiturates and methaqualone, we find that the groups show somewhat differential trends on both. Barbiturate use for both groups dropped some over that period, but only slightly for the noncollege (annual prevalence down 0.1% to a level of 9.0% in 1980) compared to the college-bound (down 2.0% to a level of 4.8%). Over the same interval methaqualone use increased in both groups, but less among the collegebound (up 1.2% to a level of 5.5%) than among the noncollege-bound (up 3.8% to a level of 8.9%). The net result was a considerable divergence in sedative use. Between 1980 and 1982, however, there has been no further divergence between these groups.

- There was some convergence in annual prevalence of inhalant use (unadjusted) between 1979 and 1981; although both groups showed a decline over those two years, the noncollege-bound showed a faster decline, particularly in the use of the nitrites.

Regional Differences in Trends

- In terms of the proportion of seniors using any illicit drug during the year, all four regions of the country reached their peaks in 1978 or 1979. The West, however, did not actually start to decline until this year.

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*Because of excessive missing data in 1975 on the variable measuring college plans, group comparisons are not presented for that year.

- Until this year, the proportion using an illicit drug other than marijuana (unadjusted) had been increasing in all regions (though only slightly in the South). This year, however, all regions (except the South) showed a substantial decline. The South remained unchanged. (As noted earlier, a major factor in the rise of illicit drug use other than marijuana had been an increase in reported amphetamine use. Such a rise appeared in all four regions; however the rise from 1978 to 1981 was only 2% in the South, whereas in the other regions the percentages all had risen between 7% and 10%. In essence, the South has been least affected by both the rise and the fall in reported amphetamine use.)

- When amphetamine use is excluded, as shown by the arrow ( ) in Figure H, then a rather different picture appears for regional trends during the late seventies and early eighties. Use of illicits other than marijuana and amphetamines actually started to decline in the South and North Central in 1981—both regions having had fairly level rates of use prior to that. Rates in the West and the Northeast did not begin their decline until 1982, after a period of some increase in student involvement with such drugs (but not as great an increase as the "uncorrected" figures would suggest).

- Cocaine use is primarily responsible for the above-noted trends in the West and the Northeast. Between 1976 (when cocaine use in all four regions ranged from 5% to 8%) and 1978, annual prevalence rates in the West and the Northeast roughly tripled. In the North Central regions these rates only doubled by 1979 and 1980, and then began declining in 1981; while in the South annual prevalence of cocaine use showed a smaller rise through 1979, and then began declining. This year cocaine use finally began to decline in the West (and it has leveled in the Northeast). The regional differences in cocaine use (e.g., in 1981 three times as many seniors in the West as in the South reported any use during the past year) have been among the most dramatic we have seen (see Table 4, also Tables 3 and 5).

- There is some evidence to suggest an increase in heroin use this year in the Northeast, although we consider the change to be too small to be conclusive (annual prevalence rose from .5% to .9%).

- Regarding alcohol use, there is evidence of a decline this year in the Northeast, where thirty-day prevalence, daily use, and binge drinking statistics all dropped. Another year's data are required to confirm this trend.

Trend Differences Related to Population Density

- There now appears to have been a peaking in 1979 in the proportions using any illicit drug in all three levels of community size (Figure I). Although the smaller metropolitan areas and the non-metropolitan areas never caught up completely with their larger counterparts, they did narrow the gap some between 1975 and 1979. Most of that narrowing was due to changing levels of marijuana use, and most of it occurred prior to 1978.

- The overall proportion involved in illicit drugs other than marijuana also has peaked in communities of all sizes, but not until this year. Up to 1981, the proportions reporting the use of some illicit drug other than marijuana had been increasing continuously (over a four year period in the very large cities, and over a three year period in the smaller metropolitan and non-metropolitan areas). As can be seen by the special notations in Figure I, almost all of this increase is attributable to the rise in reported amphetamine use (which likely is artifactual in part).

- The increase in cocaine use, although dramatic at all levels of urbanicity between 1976 and 1979, was greatest in the large cities. There has been a slight (but not statistically significant) decline in use in the large cities since 1980, and in the smaller cities since 1981. Cocaine use has been fairly stable for the last two years in the non-metropolitan areas.

- The large cities are the only category of community size showing an increase in heroin use this year. (Annual prevalence rose from 0.3% in 1981 to 0.7% in 1982.)