

# NSDUH DATA REVIEW

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## Risk and Protective Factors and Estimates of Substance Use Initiation: Results from the 2015 National Survey on Drug Use and Health

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### Abstract

**Background.** Risk factors are typically associated with an increased likelihood of substance use, and protective factors are typically associated with a decreased likelihood of substance use. Efforts to prevent substance use generally aim to reduce the influence of risk factors and to enhance the effectiveness of protective factors. One major goal of substance use prevention programs is to prevent or delay the initiation of substance use (i.e., first use).

**Methods.** This report presents results from the 2015 National Survey on Drug Use and Health (NSDUH) for people aged 12 or older regarding the perceived harmfulness of using cigarettes, alcohol, and specific illicit drugs and the perceived availability of substances. Estimates are presented for specific age groups. Estimates of the perceived great risk of harm associated with the use of marijuana, cocaine, alcohol, and cigarettes also are presented according to whether people initiated use of these substances in the past year. In addition, the report presents estimates for youth-specific protective factors, such as perceptions about parents strongly disapproving of youth substance use. Finally, this report presents the estimated numbers of individuals who initiated substance use in the past year and the average age at first use among people who initiated use in the past year (i.e., past year initiates). Statistically significant differences are noted for these various estimates.

**Results.** Although more than 3 out of 4 people aged 12 or older in 2015 perceived great risk of harm from weekly use of cocaine, heroin, or lysergic acid diethylamide (LSD), only about one third perceived great risk from weekly marijuana use. An estimated 68.7 percent of people also perceived great risk from having four or five drinks of alcohol nearly every day, and 72.8 percent perceived great risk from smoking one or more packs of cigarettes a day. Perceptions of risk from substance use varied across age groups. For example, about 2 out of 5 youths aged 12 to 17 perceived great risk from weekly marijuana use compared with about 1 in 5 young adults aged 18 to 25. For marijuana, cocaine, cigarettes, and alcohol, people who had never initiated use of the

substance were most likely to perceive great risk from using the substance. For marijuana and cocaine, people who had initiated use over a year ago were also more likely than past year initiates to perceive great risk from using those substances.

The illicit drugs with the largest number of recent initiates aged 12 or older in 2015 were marijuana (2.6 million new users), prescription pain relievers (2.1 million new misusers), prescription tranquilizers (1.4 million new misusers), prescription stimulants (1.3 million new misusers), and hallucinogens (1.2 million new users). The number of people in 2015 who initiated marijuana use in the past year was higher than the numbers in 2002 through 2008, but the numbers of recent marijuana initiates were stable from 2009 to 2015. For cocaine, the number of recent initiates in 2015 was higher than the numbers in 2008 to 2014 and had risen to levels that were comparable with the numbers in the early 2000s. For heroin, the number of past year initiates in 2015 was similar to the numbers of recent initiates in 2002 to 2014.

There were 4.8 million new users of alcohol, 2.0 million people who tried a cigarette for the first time in the past year, and 1.3 million people who first used smokeless tobacco in the past year. The number of people in 2015 who smoked part or all of a cigarette for the first time in the past year was lower than the numbers in 2005 to 2012, but it was similar to the numbers in 2002 to 2004 and in 2013 and 2014.

**Conclusions.** Findings from NSDUH on risk perceptions and initiation of substance use are useful to the Substance Abuse and Mental Health Services Administration for gauging the overall effectiveness of prevention efforts on a broad national level. However, these NSDUH data are not intended to be used to evaluate the effectiveness of individual prevention programs. Because NSDUH is a cross-sectional study, its data cannot be used to track changes in respondents' perceptions of risk of harm from substance use over their lifetime and directly relate these changes to specific chronological events, such as the initiation of substance use.

## Introduction

Substance use is a major public health problem in the United States. In 2015, for example, 10.1 percent of people aged 12 years or older used illicit drugs in the past month, and 7.8 percent had a substance use disorder in the past year.<sup>1</sup> Nevertheless, many individuals do not engage in substance use. Whether someone engages in substance use is associated with a number of risk factors that are typically correlated with an increased likelihood of substance use (e.g., perception of low risk of harm from using a substance, easy availability of substances) and protective factors that are typically associated with a decreased likelihood of substance use (e.g., exposure to prevention messages).<sup>2</sup> Risk and protective factors include variables that reflect different domains of influence, including the individual, family, peer, school, community, and society.<sup>3,4,5</sup> Interventions to prevent substance use are commonly designed to reduce the influence of risk factors and enhance the effectiveness of protective factors. One goal of substance use prevention programs is to prevent or delay the initiation (first use) of substances. Multiple studies have found associations between early initiation of alcohol or illicit drug use (e.g., in adolescence) and an increased likelihood of developing substance use disorders, although there are competing explanations for the underlying reasons for the associations.<sup>6,7,8</sup> Information on trends in initiation also can provide information on the long-term effectiveness of prevention programs as a whole (i.e., but not the effectiveness of individual programs).

The National Survey on Drug Use and Health (NSDUH) provides information on risk and protective factors that are related to the likelihood that individuals will either initiate or continue to engage in substance use. The survey also collects information on the initiation of use of illicit drugs, alcohol, and tobacco in the past year, as well as information on the age at first use of these substances.

This report contains the first findings from the 2015 NSDUH for substance use prevention issues, including the perceived risk of harm from substance use and the perceived availability of substances. The report also presents findings for the initiation of substance use (i.e., first use) in the United States. Estimates for initiation include the number of individuals who used a substance for the first time in the past year and the average age at first use among people who initiated use in the past year. Comprehensive 2015 NSDUH detailed tables that show additional substance use-related outcomes, including data for various subpopulations covered in NSDUH, are available separately at <http://www.samhsa.gov/data/>.<sup>9</sup>

## Survey Background

NSDUH is an annual survey of the civilian, noninstitutionalized population of the United States aged 12 years old or older.<sup>10</sup> The survey is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) within the U.S. Department of Health and Human Services (HHS). The survey covers residents of households and individuals in noninstitutional group quarters (e.g., shelters, boarding houses, college dormitories, migratory workers' camps, halfway houses). The survey excludes people with no fixed address (e.g., homeless people not in shelters), military personnel on active duty, and residents of institutional group quarters, such as jails, nursing homes, mental institutions, and long-term care hospitals.

NSDUH employs a stratified multistage area probability sample that is designed to be representative of both the nation as a whole and for each of the 50 states and the District of Columbia. The 2015 NSDUH annual target sample size of 67,500 interviews was distributed across three age groups, with 25 percent allocated to adolescents aged 12 to 17, 25 percent allocated to young adults aged 18 to 25, and 50 percent allocated to adults aged 26 or older. From 2002 through 2013, the NSDUH sample was allocated equally across these three age groups. Although the sample design changed in 2014, NSDUH had the same total target sample size per year of 67,500 interviews between 2002 and 2015.<sup>11</sup>

NSDUH is a face-to-face household interview survey that is conducted in two phases: the screening phase and the interview phase. The interviewer conducts a screening of the eligible household with an adult resident (aged 18 or older) in order to determine whether zero, one, or two residents aged 12 or older should be selected for the interview.<sup>12</sup> NSDUH collects data using audio computer-assisted self-interviewing (ACASI) in which respondents read or listen to the questions on headphones, then enter their answers directly into a NSDUH laptop computer. ACASI is designed to encourage accurate reporting of information by providing respondents with a highly private and confidential mode for responding to questions about illicit drug use, mental health, and other sensitive behaviors. NSDUH also uses computer-assisted personal interviewing (CAPI) in which interviewers read less sensitive questions to respondents and enter the respondents' answers into a NSDUH laptop computer.

In 2015, screening was completed at 132,210 addresses, and 68,073 completed interviews were obtained, including 16,955 interviews from adolescents aged 12 to 17 and 51,118 interviews from adults aged 18 or older. Weighted response rates for household screening and for interviewing were 79.7 and 69.3 percent, respectively, for an overall response rate of 55.2 percent for people aged 12 or older. The weighted interview response rates were 77.7 percent for adolescents and 68.4 percent for adults.<sup>13</sup> Further details about the 2015 NSDUH design and methods can be found on the web at <http://www.samhsa.gov/data/>.<sup>14</sup>

### Notable 2015 NSDUH Questionnaire Changes

The NSDUH questionnaire underwent a partial redesign in 2015 to improve the quality of the NSDUH data and to address the changing needs of policymakers and researchers with regard to substance use and mental health issues. The prescription drug questions were redesigned to shift the focus from lifetime misuse to past year misuse. Additionally, questions were added about any past year prescription drug use rather than just misuse. New methamphetamine questions were added, replacing the methamphetamine questions that were previously asked within the context of prescription stimulants. Substantial changes were also made to questions about smokeless tobacco, binge alcohol use, inhalants, and hallucinogens. These changes led to potential breaks in the comparability of 2015 estimates with estimates from prior years. Consequently, these changes potentially affected overall summary measures, such as illicit drug use, and other measures, such as the initiation of substance use, substance use disorders, and substance use treatment. Additionally, certain demographic items were changed as part of the partial redesign. Education questions were updated, and new questions were added on disability, English-language proficiency, sexual orientation of adults, and military families.

Due to these changes, only 2015 data are presented for certain estimates until comparability with prior years can be established. Trends will continue to be presented for items that are assumed to have remained comparable with earlier years. Also, because the changes to earlier sections of the questionnaire may have affected the comparability of the 2015 estimates for risk and protective factors with estimates from prior years, only 2015 estimates are presented. Details on the 2015 NSDUH questionnaire changes, reasons for the changes, and implications of the changes for NSDUH data users are included in a brief report on these questionnaire

changes, in a report on the design changes for the 2014 and 2015 NSDUHs, and in the methodological summary and definitions report for 2015.<sup>15,16,17</sup>

### Data Presentation and Interpretation

In this report, as stated previously, only 2015 estimates are presented for the perceived risk of harm from substance use and the perceived availability of specific drugs, as well as for the initiation of use or misuse of illicit drugs that were affected by the 2015 questionnaire changes. Comparisons of 2015 estimates with those from prior years are presented for youths' perceptions of parental disapproval of youth substance use, youths' disapproval of peers' substance use, youths' exposure to substance use prevention messages, and the initiation of the use of substances that were not affected by the questionnaire changes described in the previous section. Most 2015 estimates in this report are presented separately for individuals aged 12 or older, adolescents aged 12 to 17, and adults aged 18 or older. However, some estimates are presented only for those aged 12 to 17 because questions on the perceptions of parental disapproval of substance use, youths' disapproval of peers' substance use, and exposure to substance use prevention messages were asked only of adolescents.

All estimates (e.g., percentages and numbers) presented in the report are derived from NSDUH survey data that are subject to sampling errors. The estimates have met the criteria for statistical reliability. Estimates that do not meet these criteria for reliability have been suppressed and are not shown.<sup>18</sup> Trend analyses for youths' perceptions of parental disapproval of youth substance use, youths' disapproval of peers' substance use, and youths' exposure to substance use prevention messages in this report focus on percentages because the percentages take into account any changes in the size of the total population and facilitate the comparison of estimates across years.<sup>19</sup> Where trends are presented, this report focuses on long-term trends by comparing estimates in 2015 with estimates in each of the years from 2002 to 2014. Statistical tests also have been conducted for comparisons that appear in the text of the report. Statistically significant differences are described using terms such as "higher," "lower," "increased," or "decreased." Statements use terms such as "similar," "remained steady," or "stable" when a difference is not statistically significant. Analyses of long-term trends in this report summarize whether the 2015 estimates are generally different from or similar to estimates in most or all previous years,<sup>20</sup> while minimizing discussion

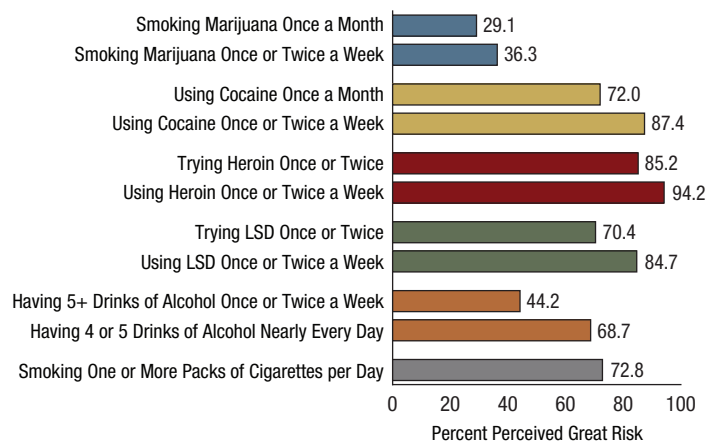
of anomalous differences between any 2 years that can occur due to these estimates being based on samples.<sup>21</sup> Graphics and tables contain estimates that support the statements in this report, and supplementary tables of estimates (including standard errors) are included in Appendix A.

## Perceived Risk from Substance Use

One factor that can influence whether individuals will use tobacco, alcohol, or illicit drugs is the extent to which they believe these substances might cause them harm. In 2015, NSDUH respondents were asked how much they thought people risk harming themselves physically and in other ways when they use various substances in certain amounts or frequencies. Response choices for these items were “great risk,” “moderate risk,” “slight risk,” or “no risk.” For many of these substances, respondents were asked about their perceived risk of harm from using substances once a month (i.e., monthly use) or once or twice a week (i.e., weekly use). As mentioned previously, only estimates from 2015 are presented for perceived risk because the comparability of the 2015 estimates with those from previous years has not been established.

Figure 1 presents the percentages of people aged 12 or older in 2015 who perceived great risk from each of the substance use measures. However, caution should be used when comparing perceptions of risk across certain substances because of variations in the content of questions.<sup>22</sup> For substances where the same quantity and frequency of use were used, comparing risk perceptions across substances becomes more straightforward. For example, respondents were asked

**Figure 1. Perceived Great Risk from Substance Use among People Aged 12 or Older: Percentages, 2015**



LSD = lysergic acid diethylamide.

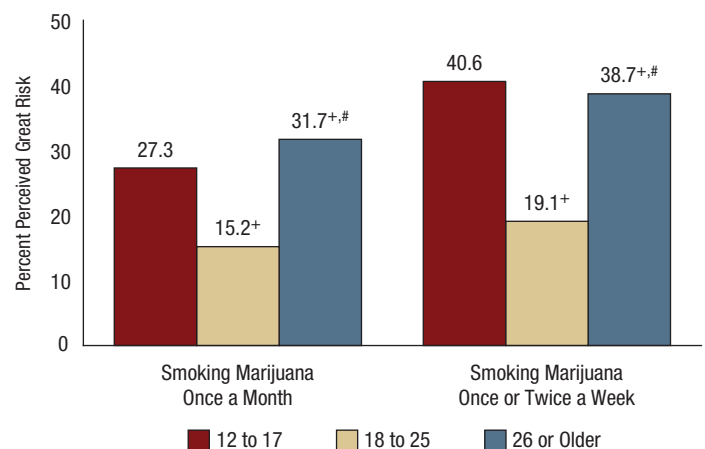
about the perceived risk of harm associated with any use of the following drugs once or twice a week: marijuana, cocaine, heroin, and lysergic acid diethylamide (LSD). Therefore, it is appropriate to note that in 2015, the percentage of individuals aged 12 or older who perceived great risk from using these drugs once or twice a week was higher for heroin (94.2 percent) than for cocaine (87.4 percent), LSD (84.7 percent), or marijuana (36.3 percent).

## Perceived Risk from Marijuana Use

In 2015, 29.1 percent of individuals aged 12 or older perceived great risk from smoking marijuana once a month (i.e., monthly marijuana use), and 36.3 percent perceived great risk from smoking marijuana once or twice a week (i.e., weekly marijuana use) (Figure 1). Perceptions of risk varied by age, with young adults aged 18 to 25 being less likely than adolescents aged 12 to 17 or adults aged 26 or older to perceive great risk from smoking marijuana on either a monthly basis or a weekly basis (Figure 2).

In 2015, 27.3 percent of adolescents aged 12 to 17 perceived great risk from monthly marijuana use, and about 2 in 5 adolescents perceived great risk from weekly marijuana use (40.6 percent) (Figure 2). An estimated 15.2 percent of young adults aged 18 to 25 in 2015 perceived great risk from monthly marijuana use, and 19.1 percent perceived great risk from weekly marijuana use. Among adults aged 26 or older, 31.7 percent indicated there was a great risk from smoking marijuana monthly, and about 2 out of 5 indicated there was a great risk from smoking marijuana weekly (38.7 percent).

**Figure 2. Perceived Great Risk from Smoking Marijuana among People Aged 12 or Older, by Age Group: Percentages, 2015**



<sup>+</sup> Difference between this estimate and the estimate for youths aged 12 to 17 is statistically significant at the .05 level.

<sup>#</sup> Difference between this estimate and the estimate for young adults aged 18 to 25 is statistically significant at the .05 level.

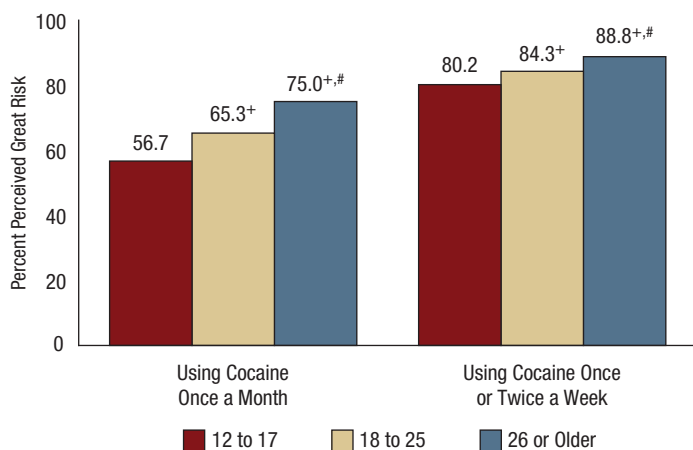


### Perceived Risk from Cocaine Use

In 2015, most individuals aged 12 or older perceived great risk from using cocaine either once a month or once or twice a week (72.0 and 87.4 percent, respectively) (Figure 1). Perceptions of risk varied by age, with adolescents aged 12 to 17 being less likely than young adults aged 18 to 25 or adults aged 26 or older to perceive great risk from using cocaine either monthly or weekly (Figure 3). Additional data from the 2015 detailed tables indicate that the percentage of adolescents who perceived great risk from monthly cocaine use ranged from 48.6 percent of adolescents aged 12 or 13 to 65.5 percent of those aged 16 or 17.<sup>9</sup> The percentage of adolescents who perceived great risk from weekly cocaine use ranged from 74.0 percent of those aged 12 or 13 to 85.4 percent of those aged 16 or 17. Therefore, the lower likelihood of adolescents than adults to perceive great risk of harm from cocaine use may reflect a general lack of knowledge about cocaine among adolescents, especially among younger adolescents.

In 2015, more than half of adolescents perceived great risk from monthly cocaine use (56.7 percent), and about 4 out of 5 adolescents (80.2 percent) perceived great risk from weekly cocaine use (Figure 3). In 2015, 65.3 percent of young adults aged 18 to 25 perceived great risk from monthly cocaine use, and 84.3 percent perceived great risk from weekly cocaine use. About 3 out of 4 adults aged 26 or older in 2015 indicated there was a great risk from monthly cocaine use (75.0 percent), and 88.8 percent indicated there was a great risk from weekly cocaine use.

**Figure 3. Perceived Great Risk from Using Cocaine among People Aged 12 or Older, by Age Group: Percentages, 2015**



<sup>+</sup> Difference between this estimate and the estimate for youths aged 12 to 17 is statistically significant at the .05 level.

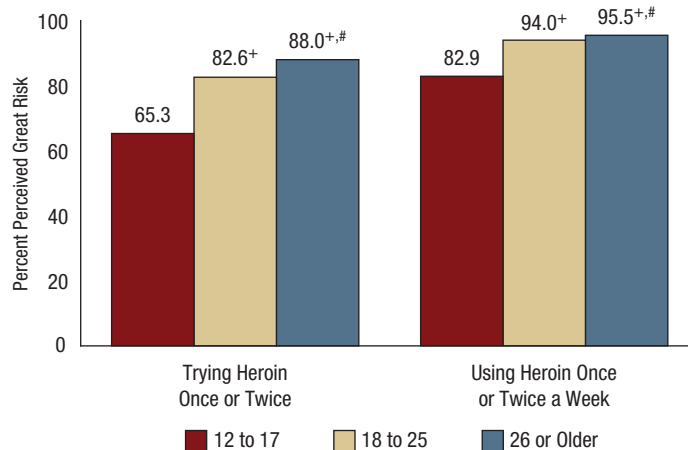
<sup>#</sup> Difference between this estimate and the estimate for young adults aged 18 to 25 is statistically significant at the .05 level.

### Perceived Risk from Heroin Use

In 2015, most individuals aged 12 or older perceived great risk from trying heroin once or twice (85.2 percent) or from using heroin on a weekly basis (94.2 percent) (Figure 1). Perceptions of risk varied by age group, with adolescents aged 12 to 17 being less likely than young adults aged 18 to 25 or adults aged 26 or older to perceive great risk from trying heroin once or twice or using it on a weekly basis (Figure 4). As for risk perceptions for cocaine use, younger adolescents aged 12 or 13 were less likely than older adolescents to perceive great risk from heroin use (e.g., 52.7 percent of 12 or 13 year olds perceived great risk from trying heroin once or twice vs. 77.1 percent of 16 or 17 year olds).<sup>9</sup> Thus, the lower likelihood of adolescents than adults to perceive great risk of harm from heroin use may be attributable to a general lack of knowledge about heroin among adolescents, especially among younger adolescents.

The lower perceptions of the risk of harm from heroin use among adolescents relative to older age groups was most evident in the percentage who perceived great risk of harm from trying heroin once or twice. In 2015, 65.3 percent of adolescents aged 12 to 17 perceived great risk from trying heroin once or twice (Figure 4). In comparison, 82.6 percent of young adults aged 18 to 25 and 88.0 percent of adults aged 26 or older in 2015 perceived great risk from trying heroin once or twice. An estimated 82.9 percent of adolescents perceived great risk from weekly heroin use compared with 94.0 percent of young adults and 95.5 percent of adults aged 26 or older.

**Figure 4. Perceived Great Risk from Heroin Use among People Aged 12 or Older, by Age Group: Percentages, 2015**



<sup>+</sup> Difference between this estimate and the estimate for youths aged 12 to 17 is statistically significant at the .05 level.

<sup>#</sup> Difference between this estimate and the estimate for young adults aged 18 to 25 is statistically significant at the .05 level.

### Perceived Risk from LSD Use

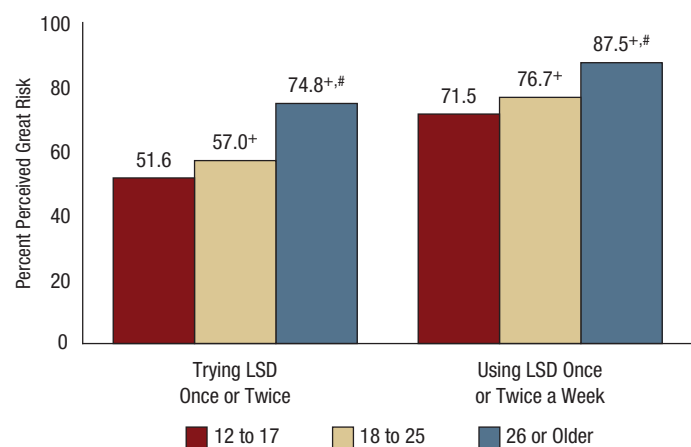
In 2015, most individuals aged 12 or older perceived great risk from trying LSD once or twice (70.4 percent) or from using LSD on a weekly basis (84.7 percent) (Figure 1). Perceptions of risk varied by age, with adolescents aged 12 to 17 and young adults aged 18 to 25 being less likely than adults aged 26 or older to perceive great risk from trying LSD once or twice, or using it on a weekly basis (Figure 5).

In 2015, about half of adolescents (51.6 percent) perceived great risk of harm from trying LSD once or twice, and 71.5 percent perceived great risk of harm from weekly LSD use (Figure 5). More than half of young adults aged 18 to 25 (57.0 percent) perceived great risk of harm from trying LSD once or twice, and about 3 out of 4 (76.7 percent) perceived great risk of harm from weekly LSD use. Among adults aged 26 or older, 3 out of 4 (74.8 percent) indicated there was a great risk from trying LSD once or twice, and 87.5 percent perceived great risk from using LSD on a weekly basis.

### Perceived Risk from Binge Alcohol Use

In 2015, about 2 out of 3 individuals aged 12 or older perceived great risk from having four or five drinks of an alcoholic beverage nearly every day (68.7 percent), but 44.2 percent perceived great risk from having five or more drinks once or twice a week (Figure 1). For brevity, these

Figure 5. Perceived Great Risk from LSD Use among People Aged 12 or Older, by Age Group: Percentages, 2015



<sup>+</sup> Difference between this estimate and the estimate for youths aged 12 to 17 is statistically significant at the .05 level.  
<sup>#</sup> Difference between this estimate and the estimate for young adults aged 18 to 25 is statistically significant at the .05 level.

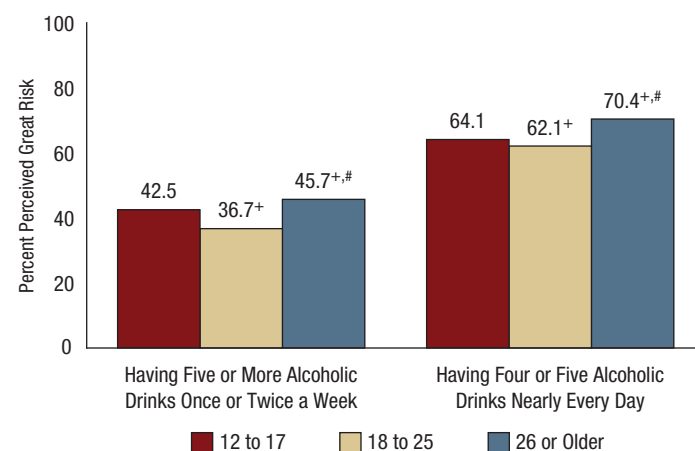
levels of alcohol consumption are subsequently referred to as “binge alcohol use” or “binge drinking” in this section.<sup>23</sup> Thus, despite the well-documented health problems and increased risk for serious injuries that are associated with excessive alcohol use,<sup>24</sup> less than half of those aged 12 or older in 2015 perceived great risk from weekly binge alcohol use.

Perceptions of risk from binge alcohol use varied by age in 2015. Young adults aged 18 to 25 were less likely to perceive great risk from binge drinking once or twice a week (36.7 percent) compared with adolescents aged 12 to 17 or adults aged 26 or older (42.5 and 45.7 percent, respectively) (Figure 6). Adolescents and young adults were less likely to perceive great risk from binge drinking nearly every day (64.1 and 62.1 percent, respectively) compared with adults aged 26 or older (70.4 percent).

### Perceived Risk from Smoking a Pack or More of Cigarettes Daily

In 2015, 72.8 percent of individuals aged 12 or older perceived great risk from smoking one or more packs of cigarettes per day (Figure 1). Perceptions of risk varied by age, with adults aged 26 or older being more likely than adolescents aged 12 to 17 and young adults aged 18 to 25 to perceive great risk from smoking one or more packs of cigarettes per day (Figure 7). Nevertheless, about two thirds

Figure 6. Perceived Great Risk from Alcohol Use among People Aged 12 or Older, by Age Group: Percentages, 2015



<sup>+</sup> Difference between this estimate and the estimate for youths aged 12 to 17 is statistically significant at the .05 level.  
<sup>#</sup> Difference between this estimate and the estimate for young adults aged 18 to 25 is statistically significant at the .05 level.

or more of people in each age group perceived great risk from smoking a pack or more of cigarettes per day.

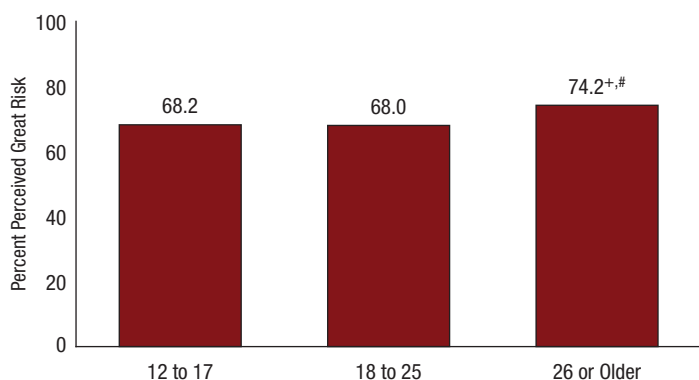
About 2 out of 3 adolescents and young adults perceived great risk from smoking one or more packs of cigarettes per day (68.2 and 68.0 percent) (Figure 7). Nearly three fourths of adults aged 26 or older (74.2 percent) perceived great risk from smoking one or more packs of cigarettes per day.

### Perceived Availability of Specific Drugs

Many studies have demonstrated that the availability of drugs (i.e., ease of obtaining drugs) is associated with drug initiation and use.<sup>2,3,25</sup> Perceptions of drug availability are also important because they may affect how prevention programs are structured, such as in states with laws related to marijuana use that can directly affect availability.<sup>26</sup>

In 2015, NSDUH respondents were asked how easy it would be for them to obtain substances, if they wanted some; they were given the response options of “very easy,” “fairly easy,” “fairly difficult,” “very difficult,” or “probably impossible.” This section provides estimates for people in different age groups who thought it would be “fairly easy” or “very easy” to obtain the substance. However, respondents could report that they did not know how easy or difficult it would be to obtain a substance, or they could refuse to answer the question; these respondents were excluded from the analysis.<sup>27</sup>

**Figure 7. Perceived Great Risk from Smoking One or More Packs of Cigarettes a Day among People Aged 12 or Older, by Age Group: Percentages, 2015**



+ Difference between this estimate and the estimate for youths aged 12 to 17 is statistically significant at the .05 level.

# Difference between this estimate and the estimate for young adults aged 18 to 25 is statistically significant at the .05 level.

### Aged 12 to 17

In 2015, about half (46.0 percent) of youths aged 12 to 17 reported that it would be fairly easy or very easy for them to obtain marijuana if they wanted some (Figure 8). Slightly less than 1 in 10 (8.1 percent) indicated that heroin would be easily obtainable. About 1 in 9 reported that it would be easy to obtain LSD (11.5 percent), and 1 in 8 (12.5 percent) reported that it would be easy to obtain cocaine.

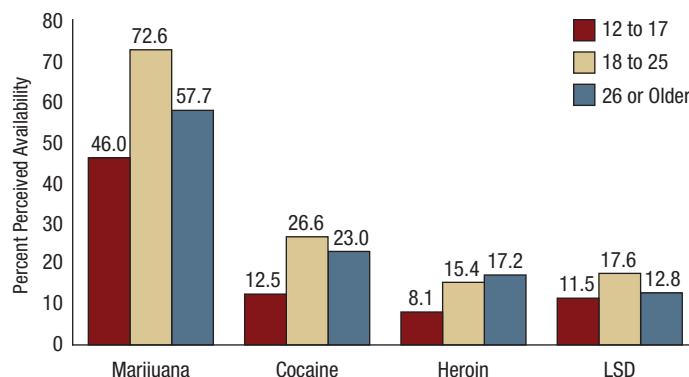
### Aged 18 to 25

Nearly 3 out of 4 young adults aged 18 to 25 in 2015 reported that it would be easy for them to get marijuana if they wanted some (72.6 percent) (Figure 8). About 1 in 7 young adults (15.4 percent) reported that it would be easy for them to get heroin. In 2015, about 1 in 6 reported that they could easily get LSD (17.6 percent). About one fourth of young adults reported that they could easily get cocaine (26.6 percent).

### Aged 26 or Older

In 2015, more than half of adults aged 26 or older (57.7 percent) believed it would be easy for them to get marijuana if they wanted some (Figure 8). About 1 in 6 adults aged 26 or older (17.2 percent) reported that it would be easy for them to get heroin. About 1 in 8 adults in this age group (12.8 percent) reported that it would be easy for them to get LSD if they wanted some. Nearly one fourth of adults aged 26 or older believed it would be easy for them to get cocaine (23.0 percent).

**Figure 8. Perceived Availability of Substances among People Aged 12 or Older, by Age Group: Percentages, 2015**



LSD = lysergic acid diethylamide.

Note: Percentages refer to reports that it would be fairly easy or very easy to obtain the substance.

## Being Approached by Someone Selling Drugs

Another way to assess an individual's risk of drug initiation or use is to determine if an individual has been actively solicited by people selling drugs. NSDUH respondents are asked if they had been approached by someone selling drugs in the past month. Young adults aged 18 to 25 were more likely than adolescents aged 12 to 17 to indicate that they had been approached in the past month by someone selling drugs (14.9 vs. 11.2 percent) (Table A.1B in Appendix A). Adults aged 26 or older were less likely than adolescents or young adults to be approached by someone selling drugs (3.8 percent).

## Youth Perceptions of Parental Disapproval of Youth Substance Use

Adolescents' perceptions of the level of parental disapproval of youth substance use has been associated with the initiation of substance use and substance use in general among adolescents.<sup>2</sup> In 2015, NSDUH respondents aged 12 to 17 were asked whether their parents would "neither approve nor disapprove," "somewhat disapprove," or "strongly disapprove" if they used different substances. This section presents percentages of youths who believed that their parents would "strongly disapprove" of them using specific substances.

Most adolescents in 2015 believed that their parents would strongly disapprove of them using marijuana on a monthly basis, drinking alcohol nearly every day, or smoking one or more packs of cigarettes per day. The percentages of youths who believed that their parents would strongly disapprove of these behaviors increased between 2002 and 2015 for cigarette smoking and alcohol use. However, the percentage of adolescents who believed that their parents would disapprove of them using marijuana declined over this time period.

In 2015, 89.8 percent of youths reported that their parents would strongly disapprove of them using marijuana once a month or more (Table A.4B in Appendix A). This percentage was slightly lower than the percentages in 2002 to 2013, which ranged from 90.6 to 93.3 percent, but it was similar to the 2014 percentage (90.0 percent).

Most youths in 2015 (90.9 percent) reported that their parents would strongly disapprove of them having one or two drinks of an alcoholic beverage nearly every day (Table A.4B). This percentage was similar to the percentages

in 2009 to 2014, but it was somewhat higher than the percentages in 2002 to 2008, which ranged from 88.5 to 89.7 percent.

In 2015, most youths (93.6 percent) reported that their parents would strongly disapprove of them smoking one or more packs of cigarettes per day (Table A.4B). This percentage was similar to the percentages in 2011 to 2014, but it was higher than the percentages in 2002 to 2010, which ranged from 89.5 to 92.6 percent.

## Youth Disapproval of Peers' Substance Use

Research has also shown associations between adolescents' attitudes about their peers' substance use and their initiation of substance use.<sup>2</sup> In 2015, NSDUH respondents aged 12 to 17 were asked whether they would "neither approve nor disapprove," "somewhat disapprove," or "strongly disapprove" if someone their age used different substances. This section presents percentages of youths who either "somewhat disapproved" or "strongly disapproved" of specific substance use by their peers.

Most adolescents strongly or somewhat disapproved of their peers using marijuana on a monthly basis, drinking alcohol nearly every day, or smoking one or more packs of cigarettes per day. The percentages of youths who strongly or somewhat disapproved of these behaviors increased between 2002 and 2015 for cigarette and alcohol use.

In 2015, 90.1 percent of youths strongly or somewhat disapproved of their peers having one or two drinks of an alcoholic beverage nearly every day (Table A.5B in Appendix A). This percentage was higher than the percentages in 2002 to 2013, but it was similar to the percentage in 2014. Nevertheless, about 85 percent or more of adolescents in most of the years between 2002 and 2015 strongly or somewhat disapproved of their peers having one or two drinks of an alcoholic beverage nearly every day.

In 2015, 93.4 percent of youths strongly or somewhat disapproved of their peers smoking one or more packs of cigarettes per day (Table A.5B). This percentage was higher than the percentages in 2002 to 2014, which ranged from 87.1 to 92.5 percent.

About 4 out of 5 youths in 2015 (80.1 percent) strongly or somewhat disapproved of their peers using marijuana once a month or more (Table A.5B). The percentage of youths who disapproved of their peers using marijuana once a month or more was lower in 2015 than in 2004 to 2010,



but it was similar to the percentages in 2002, 2003, and 2011 to 2014. Despite these differences, about 80 percent or more of adolescents in most of the years between 2002 and 2015 strongly or somewhat disapproved of their peers using marijuana once a month or more.

## Youth Exposure to Substance Use Prevention Messages

Substance use prevention programs are designed to discourage children and adolescents from starting to use tobacco, alcohol, or illicit drugs by reducing the influence of risk factors for substance use and increasing the influence of protective factors.<sup>28,29</sup> Substance use prevention messages and programs are provided through schools, the media, and other sources. Since 2002, NSDUH has included a series of questions about youth exposure to substance use prevention messages from different sources. Adolescents are asked whether they have been exposed to prevention messages in the past 12 months through school sources (i.e., special classes about drugs or alcohol in school; films, lectures, discussions, or printed information about drugs or alcohol in regular school classes such as health or physical education; or films, lectures, discussions, or distribution of printed information about drugs or alcohol outside of regular classes such as in a special assembly). Adolescents also are asked whether they have participated in the past 12 months in an alcohol, tobacco, or drug prevention program outside of school.

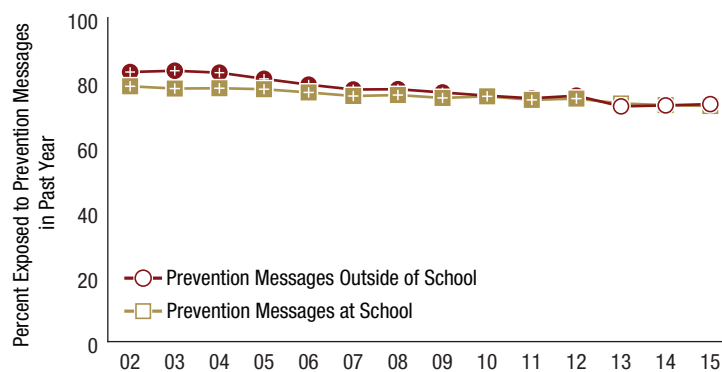
In 2015, 73.3 percent of youths aged 12 to 17 reported having seen or heard drug or alcohol use prevention messages in the past year from sources outside of school, such as posters, pamphlets, the radio, or television (Figure 9). The percentage in 2015 was lower than the percentages in 2002 to 2012, but it was similar to the percentages in 2013 and 2014.

In 2015, 72.7 percent of youths aged 12 to 17 who were enrolled in school in the past year reported having seen or heard drug or alcohol use prevention messages at school (Figure 9). This percentage was lower than the percentages in 2002 to 2012, but it was similar to the percentages in 2013 and 2014. In 2002, for example, 78.8 percent of adolescents who were enrolled in school reported exposure to substance use prevention messages at school.

In 2015, 1 in 9 youths aged 12 to 17 (11.3 percent) reported that they had participated in alcohol, tobacco, or drug use prevention programs outside of school in the past year

(Table A.6B in Appendix A). This estimate was similar to the percentages from 2005 to 2014, but it was lower than the percentages in 2002 to 2004. Nevertheless, in any given year since 2002, the majority of youths did not participate in prevention programs outside of school in the past year.

**Figure 9. Exposure to Substance Use Prevention Messages among Youths Aged 12 to 17: Percentages, 2002-2015**



\* Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

**Figure 9 Table. Exposure to Substance Use Prevention Messages among Youths Aged 12 to 17: Percentages, 2002-2015**

Exposure	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Prevention Messages Outside of School	83.2*	83.6*	83.0*	81.1*	79.3*	77.8*	77.9*	76.9*	75.9*	75.1*	75.9*	72.6	72.9	73.3
Prevention Messages at School	78.8*	78.1*	78.2*	77.9*	76.9*	75.8*	76.1*	75.2*	75.7*	74.6*	75.0*	73.5	73.0	72.7

\* Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

## Initiation of Substance Use

The 2015 NSDUH had two key measures related to substance use initiation (i.e., the first use of a particular substance). One of the measures examined the age at which a person first used a given substance (age at first use). The other key measure identified whether a person started using or misusing a substance for the first time over the past year (recent initiate).<sup>30</sup> The estimates of the number of substance use initiates or prescription drug misuse initiates in this report are limited to recent initiates.<sup>31</sup> Recent initiates were defined as substance users or prescription drug misusers who reported that they first used or misused, respectively, a particular substance within 12 months of the date of their interview.<sup>32,33</sup> Misuse of prescription drugs is defined as use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told to take a drug; or use in any other way not directed by a doctor. More information about the methods for measuring and estimating the initiation of

substance use and prescription drug misuse in NSDUH can be found on the web in Section B.4.2 of the 2015 NSDUH's methodological summary and definitions report (see the reference in endnote 11) and in a separate 2015 NSDUH report on the use and misuse of prescription drugs in the past year.<sup>34</sup>

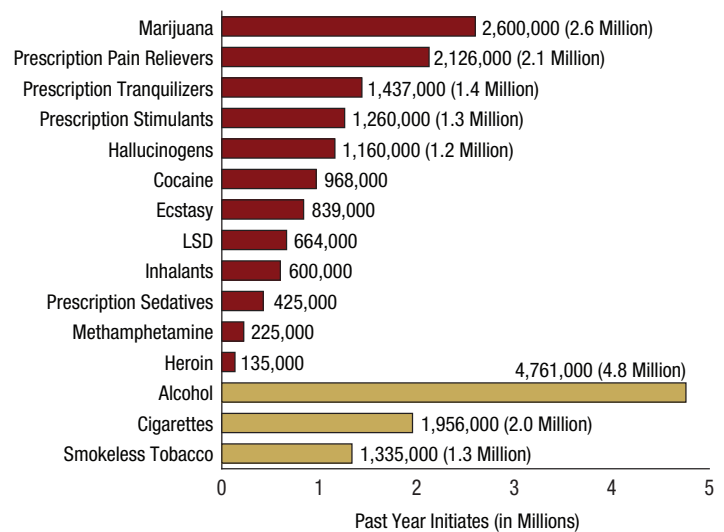
Unlike previous sections, this section focuses on the *number* of people who were recent initiates (e.g., the number of people aged 12 or older who were recent initiates of marijuana use) rather than on percentages. Information on the number of recent initiates can be useful to policymakers and program planners for anticipating future needs for health services both in the short term and in the longer term. For example, the number of people who have initiated use of substances such as heroin could signal future needs for emergency medical services, treatment for infectious diseases such as hepatitis, or substance use treatment. However, care should be taken in interpreting increases over time in the estimated number of past year initiates because some of these increases could reflect growth in the size of the population over time. Due to changes to the 2015 NSDUH questionnaire, initiation estimates for prescription drugs (i.e., pain relievers, tranquilizers, stimulants, and sedatives), methamphetamine, hallucinogens, inhalants, and smokeless tobacco are not compared with estimates from prior years.

This section also presents the average age at first use (or misuse for prescription drugs) among recent initiates for specific substances. Although the numbers of initiates are shown for individuals aged 12 or older as well as by age group, the average ages at first use (or first misuse) in this report are limited to all past year initiates aged 12 to 49 to avoid having the averages be influenced by extreme values. For example, a small number of people who started using a substance at very late ages could heavily influence the average age at first use among all initiates and cause instability in the estimated average. Also, NSDUH respondents who started using a substance recently would be expected to have less difficulty remembering how old they were when they first used it compared with respondents whose first use occurred several years prior to the interview. The same is expected for misusers of prescription drugs. Due to the survey revisions in 2015, estimates of the average age at first misuse for the prescription drug categories and estimates of the average age at first use among methamphetamine, hallucinogen, inhalant, and smokeless tobacco initiates are not compared with estimates from prior years.

Figure 10 provides an overview of the numbers of past year initiates in 2015 for the majority of substances that are discussed in this section of the report. The illicit drugs with the largest number of recent initiates in 2015 were marijuana (2.6 million new users), prescription pain relievers (2.1 million new misusers), prescription tranquilizers (1.4 million new misusers), prescription stimulants (1.3 million new misusers), and hallucinogens (1.2 million new users). In addition, there were 4.8 million new users of alcohol, 2.0 million people who tried a cigarette for the first time in the past year, and 1.3 million people who first used smokeless tobacco in the past year.<sup>35</sup>

Figure 11 provides an overview of the average age at first use (or first misuse for prescription drugs) among recent initiates aged 12 to 49. For many substances, the average age at initiation in 2015 was under the age of 20, with average ages of 17.4 years for inhalants, 17.6 years for alcohol, 17.9 years for cigarettes, 19.0 years for marijuana, and 19.6 years for any hallucinogen and for LSD. However, there were some substances with older average initiation ages, such as heroin (25.4 years) and methamphetamine (25.8 years). The average ages at initiation for the misuse of prescription psychotherapeutics were in the early to late 20s (22.3 years for prescription stimulants, 25.8 years for prescription pain relievers, 25.9 years for prescription tranquilizers, and 28.3 years for prescription sedatives).

**Figure 10. Numbers of Past Year Initiates of Substances among People Aged 12 or Older: 2015**



LSD = lysergic acid diethylamide.

Note: Estimates for prescription pain relievers, prescription tranquilizers, prescription stimulants, and prescription sedatives are for the initiation of misuse. Misuse is defined as use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told to take a drug; or use in any other way not directed by a doctor.

### Initiation of Marijuana Use

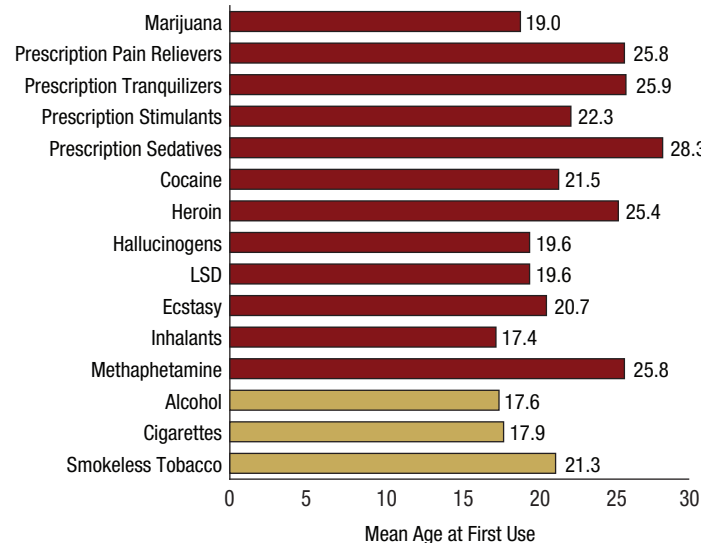
In 2015, about 2.6 million people aged 12 or older used marijuana for the first time within the past 12 months (Figure 10). This averages to about 7,100 new marijuana users each day. The 2015 estimate was similar to the estimates in 2009 through 2014, but it was higher than the estimates from 2002 through 2008 (Figure 12). Nevertheless, at least 2.0 million people per year were recent initiates for marijuana use since 2002.

In 2015, the average age at first marijuana use among recent marijuana initiates aged 12 to 49 was 19.0 years, which was higher than the average ages in most years from 2002 through 2013, but it was similar to the average age in 2014 (see the table below Figure 12). Although new marijuana users aged 12 to 49 initiated use on average in their late teens, these trend data suggest that new users on average were initiating use at a slightly later age in 2015 compared with new users in some earlier years.

#### By Age Group

In 2015, an estimated 1.2 million adolescents aged 12 to 17 used marijuana for the first time in the past year (Figure 12),

**Figure 11. Mean Age at First Use or First Misuse of Substances among Past Year Initiates Aged 12 to 49: 2015**



LSD = lysergic acid diethylamide.

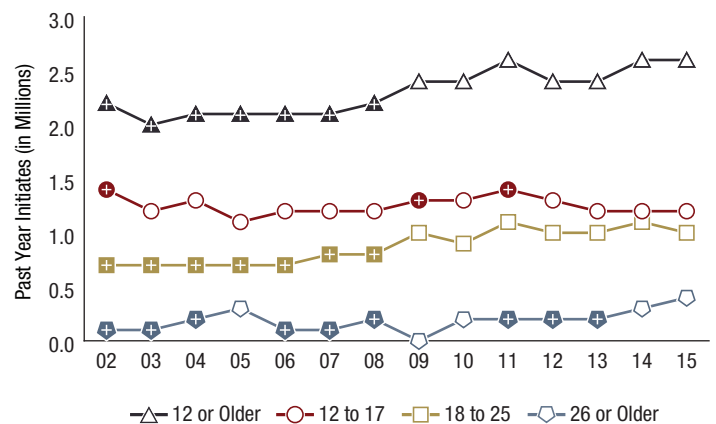
Note: The term "first misuse" applies to the misuse of prescription pain relievers, tranquilizers, stimulants, and sedatives. Misuse is defined as use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told to take a drug; or use in any other way not directed by a doctor.

which translates to approximately 3,200 adolescents each day who initiated marijuana use. About 1.1 million to 1.4 million adolescents per year in 2002 to 2014 were recent marijuana initiates. The 2015 estimate was similar to the estimates in most years from 2002 to 2014.

There were 1.0 million young adults aged 18 to 25 in 2015 who initiated marijuana use in the past year, or an average of about 2,900 recent initiates per day in this age group (Figure 12). The 2015 estimate for young adults was similar to the estimates in each year since 2009, but it was higher than the estimates in 2002 to 2008.

An estimated 383,000 adults aged 26 or older in 2015 initiated marijuana use in the past year, which rounds to the estimate of 0.4 million initiates in this age group in Figure 12. The number of recent marijuana initiates in this age group in 2015 was higher than the numbers of initiates in most years from 2002 to 2013, but it was similar to the number who initiated in 2014.

**Figure 12. Past Year Marijuana Initiates among People Aged 12 or Older, by Age Group (in Millions): 2002-2015**



+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

**Figure 12 Table. Past Year Marijuana Initiates among People Aged 12 or Older, by Age Group (in Millions), Mean Age at First Use of Marijuana among Past Year Marijuana Initiates Aged 12 to 49: 2002-2015**

Age	02	03	04	05	06	07	08	09	10	11	12	13	14	15
≥12	2.2 <sup>+</sup>	2.0 <sup>+</sup>	2.1 <sup>+</sup>	2.1 <sup>+</sup>	2.1 <sup>+</sup>	2.1 <sup>+</sup>	2.2 <sup>+</sup>	2.4	2.4	2.6	2.4	2.4	2.6	2.6
12-17	1.4 <sup>+</sup>	1.2	1.3	1.1	1.2	1.2	1.2	1.3 <sup>+</sup>	1.3	1.4 <sup>+</sup>	1.3	1.2	1.2	1.2
18-25	0.7 <sup>+</sup>	0.7 <sup>+</sup>	0.7 <sup>+</sup>	0.7 <sup>+</sup>	0.7 <sup>+</sup>	0.8 <sup>+</sup>	0.8 <sup>+</sup>	1.0	0.9	1.1	1.0	1.0	1.1	1.0
≥26	0.1 <sup>+</sup>	0.1 <sup>+</sup>	0.2 <sup>+</sup>	0.3	0.1 <sup>+</sup>	0.1 <sup>+</sup>	0.2 <sup>+</sup>	0.0	0.2	0.2 <sup>+</sup>	0.2 <sup>+</sup>	0.2 <sup>+</sup>	0.3	0.4
Mean Age at First Use	17.0 <sup>+</sup>	16.8 <sup>+</sup>	17.1 <sup>+</sup>	17.4 <sup>+</sup>	17.4 <sup>+</sup>	17.6 <sup>+</sup>	17.8 <sup>+</sup>	17.0 <sup>+</sup>	18.4	17.5 <sup>+</sup>	17.9 <sup>+</sup>	18.0 <sup>+</sup>	18.5	19.0

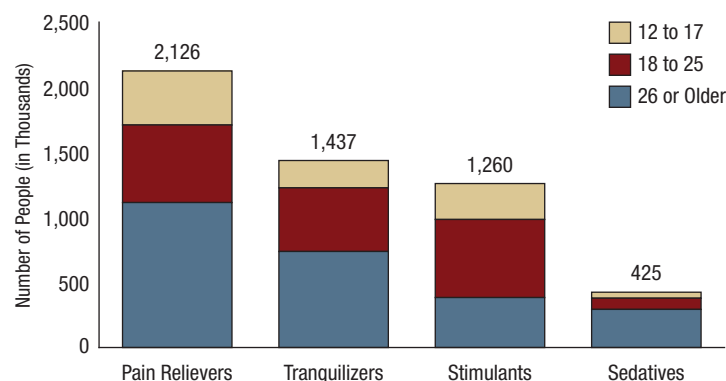
+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

### Initiation of Prescription Pain Reliever Misuse

In 2015, the number of recent initiates for the misuse of prescription pain relievers (2.1 million) was second among the illicit drugs to the number of marijuana initiates (Figure 10). The number of people aged 12 or older who misused prescription pain relievers for the first time within the past year averages to about 5,800 initiates per day. In 2015, the average age at first misuse of prescription pain relievers among recent prescription pain reliever initiates aged 12 to 49 was 25.8 years (Figure 11).

Approximately 415,000 adolescents aged 12 to 17 misused prescription pain relievers for the first time in the past year (Figure 13). This averages to approximately 1,100 adolescents each day who initiated misuse of prescription pain relievers. There were 596,000 young adults aged 18 to 25 and 1.1 million adults aged 26 or older in 2015 who initiated the misuse of prescription pain relievers in the past year. These numbers average to about 1,600 young adults and about 3,100 adults aged 26 or older each day who initiated the misuse of prescription pain relievers.

**Figure 13. Numbers of People Aged 12 or Older (in Thousands) Who Initiated Prescription Drug Misuse in the Past Year, by Age Group: 2015**



**Figure 13 Table. Numbers of People Aged 12 or Older (in Thousands) Who Initiated Prescription Drug Misuse in the Past Year, by Age Group: 2015**

Age Group	Pain Relievers	Tranquilizers	Stimulants	Sedatives
12 or Older	2,126	1,437	1,260	425
12 to 17	415	210	276	46
18 to 25	596	489	600	86
26 or Older	1,114	738	384	293

### Initiation of Prescription Tranquilizer Misuse

About 1.4 million people aged 12 or older in 2015 misused prescription tranquilizers for the first time within the past year (Figure 13). This averages to about 3,900 initiates per day. In 2015, the average age at first misuse of prescription tranquilizers among recent prescription tranquilizer initiates aged 12 to 49 was 25.9 years (Figure 11).

Approximately 210,000 adolescents aged 12 to 17, 489,000 young adults aged 18 to 25, and 738,000 adults aged 26 or older misused prescription tranquilizers for the first time in the past year (Figure 13). Thus, about 600 adolescents, 1,300 young adults, and 2,000 adults aged 26 or older each day initiated the misuse of prescription tranquilizers in 2015.

### Initiation of Prescription Stimulant Misuse

In 2015, approximately 1.3 million people aged 12 or older misused prescription stimulants for the first time within the past year (Figure 13). This estimated number of initiates in 2015 averages to about 3,500 initiates per day for the misuse of prescription stimulants. In 2015, the average age at first use of prescription stimulants among recent initiates aged 12 to 49 was 22.3 years (Figure 11).

Approximately 276,000 adolescents aged 12 to 17, 600,000 young adults aged 18 to 25, and 384,000 adults aged 26 or older misused prescription stimulants for the first time in the past year (Figure 13). Thus, about 800 adolescents, 1,600 young adults, and 1,100 adults aged 26 or older each day initiated the misuse of prescription stimulants in 2015.

### Initiation of Prescription Sedative Misuse

In 2015, approximately 425,000 people aged 12 or older misused prescription sedatives for the first time within the past year (Figure 13). This estimated number of initiates in 2015 averages to about 1,200 initiates per day for the misuse of prescription sedatives. In 2015, the average age at first misuse of prescription sedatives among recent initiates aged 12 to 49 was 28.3 years (Figure 11).

Approximately 46,000 adolescents aged 12 to 17, 86,000 young adults aged 18 to 25, and 293,000 adults aged 26 or older misused prescription sedatives for the first time in the past year (Figure 13). Thus, more than 100 adolescents, 200 young adults, and 800 adults aged 26 or older each day initiated the misuse of prescription sedatives.



### Initiation of Cocaine Use

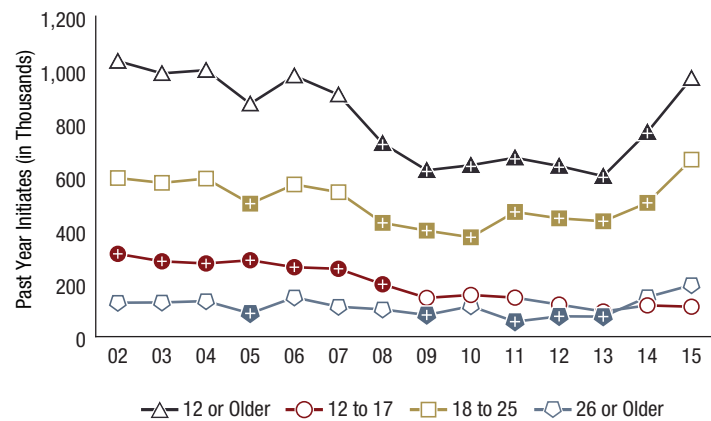
In 2015, there were 968,000 people aged 12 or older who used cocaine for the first time in the past year (Figure 10). This averages to approximately 2,700 cocaine initiates per day. The 2015 estimate was higher than the estimates in 2008 to 2014, but it was similar to the estimates in 2002 to 2007 (Figure 14).<sup>36</sup> Thus, the number of people who were initiating cocaine use may have risen to levels comparable with the numbers seen in the early 2000s. Data from future years would be useful for monitoring whether the numbers of past year initiates for cocaine use continue to increase.

In 2015, the average age at first cocaine use among recent cocaine initiates aged 12 to 49 was 21.5 years (Figure 11). This average increased slightly from the very late teens in most years from 2002 to 2009 to the early 20s in 2015 (see the table below Figure 14).

#### By Age Group

In 2015, an estimated 112,000 adolescents aged 12 to 17 used cocaine for the first time in the past year, which rounds to the estimate of 0.1 million adolescents in Figure 14. Also

Figure 14. Past Year Cocaine Initiates among People Aged 12 or Older, by Age Group (in Thousands): 2002-2015



+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

Figure 14 Table. Past Year Cocaine Initiates among People Aged 12 or Older, by Age Group (in Thousands), Mean Age at First Use of Cocaine among Past Year Cocaine Initiates Aged 12 to 49: 2002-2015

Age	02	03	04	05	06	07	08	09	10	11	12	13	14	15
≥12	1,032	986	998	872	977	906	724+	623+	642+	670+	639+	601+	766+	968
12-17	310+	282+	274+	286+	260+	254+	196+	145	156	146	120	94	117	112
18-25	594	576	592	498+	570	541	426+	397+	372+	467+	443+	432+	501+	663
≥26	127	128	133	87+	147	112	102	81+	114	56+	76+	75+	148	193
Mean Age at First Use	19.8+	19.8+	20.0+	19.7+	20.3	20.2	19.8+	19.9+	21.2	20.1+	20.0+	20.4+	21.8	21.5

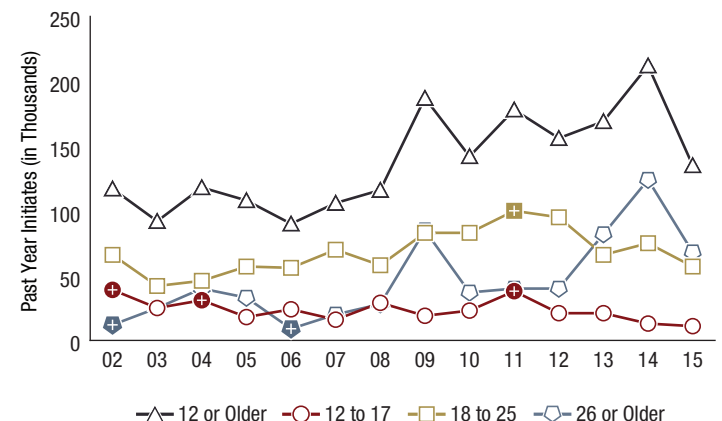
+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

in 2015, 663,000 young adults aged 18 to 25 and 193,000 adults aged 26 or older initiated cocaine use in the past year. Among adolescents, the number of cocaine initiates in 2015 was lower than those in 2002 to 2008, but it was similar to the numbers in 2009 to 2014. Among young adults, the number of cocaine initiates in 2015 was higher than those in 2008 to 2014, but it was similar to the numbers in most years prior to 2008. Among adults aged 26 or older, the number of cocaine initiates in 2015 was higher than those in most years from 2009 to 2013 (ranging from 56,000 to 114,000 initiates), but it was similar to the number in 2014 (148,000) and in most years prior to 2009 (ranging from 87,000 to 147,000 initiates) (Table A.10A in Appendix A).

### Initiation of Heroin Use

In 2015, there were 135,000 people aged 12 or older who used heroin for the first time within the past year (Figure 10). On average, this represents roughly 370 people each day who initiated heroin use. The number of past year heroin initiates in 2015 was similar to the numbers of recent heroin initiates in 2002 to 2014 (Figure 15).

Figure 15. Past Year Heroin Initiates among People Aged 12 or Older, by Age Group (in Thousands): 2002-2015



+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

Figure 15 Table. Past Year Heroin Initiates among People Aged 12 or Older, by Age Group (in Thousands), Mean Age at First Use of Heroin among Past Year Heroin Initiates Aged 12 to 49: 2002-2015

Age	02	03	04	05	06	07	08	09	10	11	12	13	14	15
≥12	117	92	118	108	90	106	116	187	142	178	156	169	212	135
12-17	39+	25	31+	18	24	16	29	19	23	38+	21	21	13	11
18-25	66	42	46	57	56	70	58	83	83	100+	95	66	75	57
≥26	12+	25	40	33	9+	20	28	85	37	40	40	82	124	68
Mean Age at First Use	21.0	20.9+	24.4	22.2	20.7+	21.8+	23.5	25.3	21.4+	22.1+	23.0	24.5	28.0	25.4

+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

In 2015, the average age at first heroin use among recent heroin initiates aged 12 to 49 was 25.4 years (Figure 11). This average age was similar to the average ages in most of the years between 2002 and 2014, except for the average ages in 2003, 2006, 2007, 2010, and 2011, which ranged from 20.7 to 22.1 years (see the table below Figure 15).

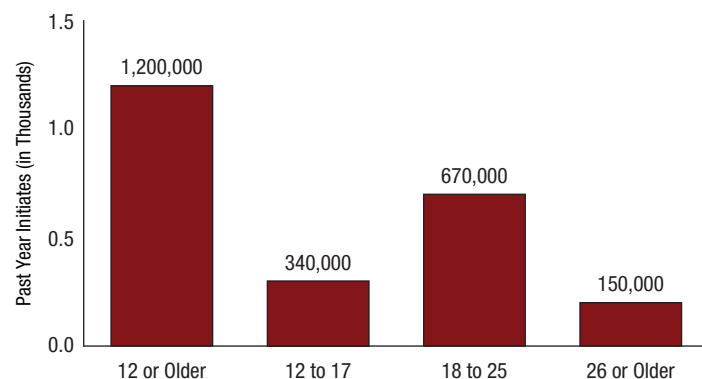
### By Age Group

In 2015, an estimated 11,000 adolescents aged 12 to 17, 57,000 young adults aged 18 to 25, and 68,000 adults aged 26 or older used heroin for the first time in the past year (Figure 15). The numbers of adolescents, young adults, and adults aged 26 or older in 2015 who were recent heroin initiates were similar to the numbers in most years between 2002 and 2014. Caution is advised in interpreting the fluctuations in the numbers of heroin initiates in single years because the relatively small numbers of respondents aged 26 or older who reported that they initiated heroin use in the past year can greatly influence estimates of initiates aged 26 or older in a single year; these respondents aged 26 or older often represent large numbers of people in that age group.<sup>37</sup>

### Initiation of Hallucinogen Use

Several drugs are grouped under the category of hallucinogens, including LSD, PCP, peyote, mescaline, psilocybin mushrooms, “Ecstasy” (MDMA or “Molly”), ketamine, AMT/DMT/“Foxy,” and *Salvia divinorum*.<sup>38,39</sup> In 2015, the NSDUH questions for hallucinogen use were expanded to include the use of ketamine, AMT/DMT/“Foxy,” and *Salvia divinorum*. Due to these changes in the NSDUH questionnaire, estimates of hallucinogen use initiation for 2015 are not compared with estimates from prior years.

**Figure 16. Past Year Hallucinogen Initiates among People Aged 12 or Older, by Age Group (in Thousands): 2015**



Also, estimates for the initiation of Ecstasy use in 2015 are not compared with estimates from prior years because of the addition of “Molly” as a slang term for Ecstasy in 2015.

In 2015, there were 1.2 million people aged 12 or older who used hallucinogens for the first time in the past year (Figure 16).<sup>40</sup> This averages to about 3,200 new hallucinogen users each day. In 2015, an estimated 340,000 adolescents aged 12 to 17, 670,000 young adults aged 18 to 25, and 150,000 adults aged 26 or older used hallucinogens for the first time in the past year. In 2015, the average age at first hallucinogen use among recent hallucinogen initiates aged 12 to 49 was 19.6 years (Figure 11).

### Initiation of LSD Use

There were 664,000 people aged 12 or older in 2015 who were past year initiates of LSD (Figure 10). On average, this represents roughly 1,800 people each day who initiated LSD use. The number of past year LSD initiates in 2015 was higher than the numbers in 2002 to 2013, but it was similar to the number in 2014 (Table A.7A in Appendix A).

In 2015, the average age at first LSD use among recent initiates aged 12 to 49 was 19.6 years (Figure 11). The average age at first use of LSD in 2015 was greater than the averages in most years from 2002 to 2009 (except for 2004 to 2006), but it was similar to the averages in 2010 through 2014 (Table A.11B).

### By Age Group

In 2015, an estimated 206,000 adolescents aged 12 to 17, 387,000 young adults aged 18 to 25, and 71,000 adults aged 26 or older used LSD for the first time in the past year. The number of recent adolescent initiates in 2015 was greater than the numbers in 2003 to 2013, but it was similar to the numbers in 2002 and 2014 (Table A.8A in Appendix A). The number of recent young adult LSD initiates in 2015 was greater than the numbers in 2002 to 2012, but it was similar to the numbers in 2013 and 2014 (Table A.9A). The number of recent LSD initiates aged 26 or older in 2015 was similar to the available estimates in most prior years (Table A.10A).

### Initiation of Ecstasy Use

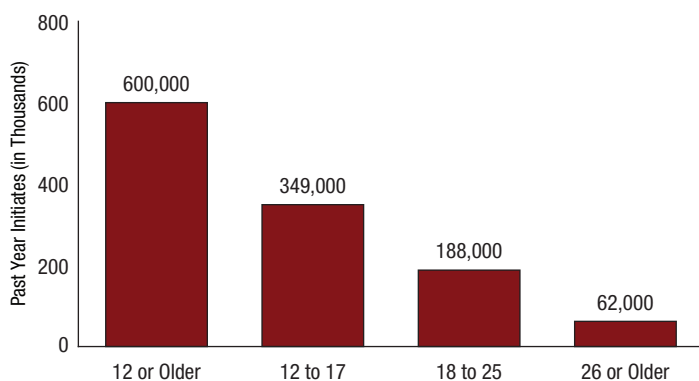
As noted previously, estimates of Ecstasy initiation in 2015 are not compared with estimates from prior years because of the addition of “Molly” as a slang term for Ecstasy in 2015. There were 839,000 past year initiates of Ecstasy aged 12 or older in 2015 (Figure 10), which averages to about 2,300 people each day who initiated Ecstasy use. In 2015, an estimated 168,000 adolescents aged 12 to 17 (Table A.8A in Appendix A), 531,000 young adults aged 18 to 25 (Table A.9A), and 141,000 adults aged 26 or older (Table A.10A) used Ecstasy for the first time in the past year. In 2015, the average age at first Ecstasy use among recent Ecstasy initiates aged 12 to 49 was 20.7 years (Figure 11).

### Initiation of Inhalant Use

Inhalants include a variety of substances, such as nitrous oxide, amyl nitrite, cleaning fluids, gasoline, spray paint, computer keyboard cleaner, other aerosol sprays, felt-tip pens, and glue. Respondents were asked to report use of inhalants to get high but not to include accidental inhalation of a substance. In 2015, the NSDUH questions for inhalant use were expanded to include the use of computer keyboard cleaner and felt-tip pens. Due to these changes in the NSDUH questionnaire, estimates of inhalant initiation in 2015 are not compared with estimates in prior years.

In 2015, there were 600,000 people aged 12 or older who had used inhalants for the first time within the past 12 months (Figure 17), which averages to about 1,600 people per day who initiated inhalant use. In 2015, the average age at first inhalant use among recent inhalant initiates aged 12 to 49 was 17.4 years (Figure 11).

**Figure 17. Past Year Inhalant Initiates among People Aged 12 or Older, by Age Group (in Thousands): 2015**



### By Age Group

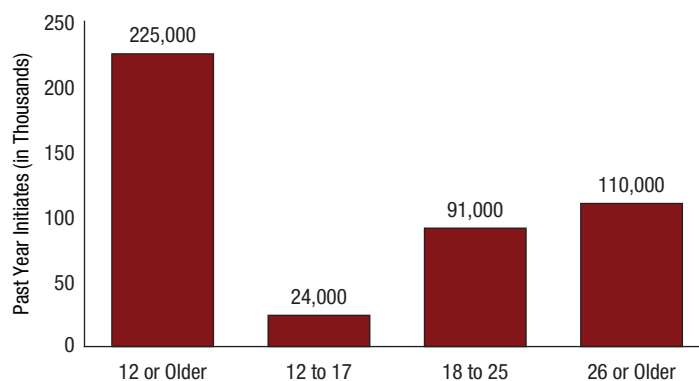
Inhalants are more commonly used by adolescents than by people in other age groups,<sup>1</sup> and this is reflected in the number of inhalant initiates by age group. In 2015, an estimated 349,000 adolescents aged 12 to 17 used inhalants for the first time in the past year (Figure 17). This averages to approximately 1,000 adolescents each day who initiated the use of inhalants. There were 188,000 young adults aged 18 to 25 in 2015 who initiated use of inhalants in the past year. An estimated 62,000 adults aged 26 or older in 2015 used inhalants for the first time in the past year.

### Initiation of Methamphetamine Use

Prior to 2015, questions about methamphetamine use were asked in the context of questions about the misuse of prescription stimulants because methamphetamine historically has been legally available by prescription (e.g., Desoxyn®). For 2015, however, a new set of questions specific to methamphetamine was created and administered separately from the prescription drug items because most methamphetamine is currently produced and consumed illicitly in the United States. Due to these changes in the NSDUH questionnaire, estimates of methamphetamine initiation in 2015 are not compared with estimates in prior years.

There were 225,000 past year initiates of methamphetamine aged 12 or older in 2015 (Figure 18), which averages to about 600 people per day who initiated methamphetamine use. In 2015, an estimated 24,000 adolescents aged 12 to 17, 91,000 young adults aged 18 to 25, and 110,000 adults aged 26 or older used methamphetamine for the first time in the past year. In 2015, the average age at first methamphetamine use among recent methamphetamine initiates aged 12 to 49 was 25.8 years (Figure 11).

**Figure 18. Past Year Methamphetamine Initiates among People Aged 12 or Older, by Age Group (in Thousands): 2015**



### Initiation of Alcohol Use

About 4.8 million people aged 12 or older in 2015 used alcohol for the first time within the past year, not counting sips from another person's drink (Figure 19). This averages to approximately 13,000 initiates per day. The number of initiates aged 12 or older was higher than the numbers in 2002 to 2006, but it was similar to the numbers between 2007 and 2014.

In 2015, the average age at first use of alcohol among recent alcohol initiates aged 12 to 49 was 17.6 years (Figure 11). The average age at first use of alcohol in 2015 was higher than the average ages in most years from 2002 through 2014 (see the table below Figure 19). Nevertheless, in each year between 2002 and 2015, recent alcohol initiates on average first used alcohol well before the legal drinking age of 21.

#### By Age Group

In 2015, an estimated 2.4 million adolescents aged 12 to 17 used alcohol for the first time in the past year (Figure 19), which averages to approximately 6,500 adolescents each day who initiated alcohol use. Also, 2.2 million young adults

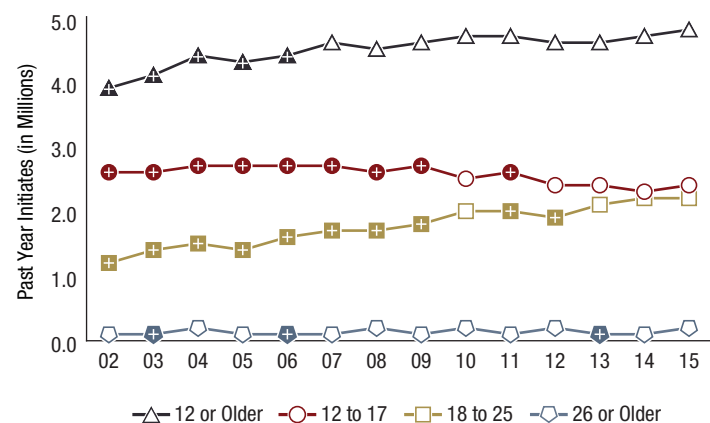
aged 18 to 25 and 200,000 adults aged 26 or older in 2015 initiated alcohol use in the past year.

The number of adolescents in 2015 who recently initiated alcohol use was lower than the numbers in most years from 2002 to 2011, but it was similar to the numbers in 2012 to 2014 (Figure 19). Among young adults, the number of recent initiates in 2015 was higher than the numbers in most years from 2002 to 2012, but it was similar to the numbers in 2013 and 2014. For adults aged 26 or older, the number of initiates in 2015 was similar to most of the numbers from 2002 to 2014. These trend data for adults aged 26 or older consistently indicate that relatively few people start to use alcohol for the first time after the age of 25.

### Initiation of Cigarette Use

In 2015, about 2.0 million people aged 12 or older smoked part or all of a cigarette for the first time within the past 12 months (Figure 20). This averages to about 5,400 people each day who smoked part or all of a cigarette for the first time. The number of initiates of cigarette smoking in 2015 who were aged 12 or older was similar to the numbers

**Figure 19. Past Year Alcohol Initiates among People Aged 12 or Older, by Age Group (in Millions): 2002-2015**



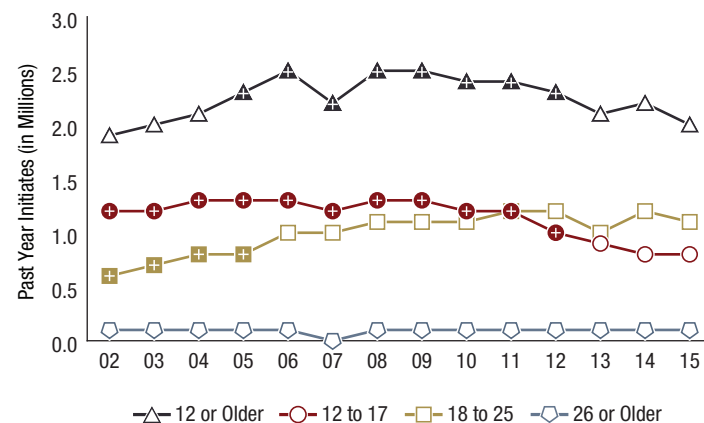
+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

**Figure 19 Table. Past Year Alcohol Initiates among People Aged 12 or Older, by Age Group (in Millions), Mean Age at First Use of Alcohol among Past Year Alcohol Initiates Aged 12 to 49: 2002-2015**

Age	02	03	04	05	06	07	08	09	10	11	12	13	14	15
≥12	3.9*	4.1*	4.4*	4.3*	4.4*	4.6	4.5	4.6	4.7	4.7	4.6	4.6	4.7	4.8
12-17	2.6*	2.6*	2.7*	2.7*	2.7*	2.7*	2.6*	2.7*	2.5	2.6*	2.4	2.4	2.3	2.4
18-25	1.2*	1.4*	1.5*	1.4*	1.6*	1.7*	1.7*	1.8*	2.0	2.0*	1.9*	2.1	2.2	2.2
≥26	0.1	0.1*	0.2	0.1	0.1*	0.1	0.2	0.1	0.2	0.1	0.2	0.1*	0.1	0.2
Mean Age at First Use	16.6*	16.4*	16.4*	16.4*	16.6*	16.8*	17.0*	16.9*	17.1*	17.1*	17.4	17.3	17.3*	17.6

+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

**Figure 20. Past Year Cigarette Initiates among People Aged 12 or Older, by Age Group (in Millions): 2002-2015**



+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.

**Figure 20 Table. Past Year Cigarette Initiates among People Aged 12 or Older, by Age Group (in Millions), Mean Age at First Use of Cigarettes among Past Year Cigarette Initiates Aged 12 to 49: 2002-2015**

Age	02	03	04	05	06	07	08	09	10	11	12	13	14	15
≥12	1.9	2.0	2.1	2.3*	2.5*	2.2*	2.5*	2.5*	2.4*	2.4*	2.3*	2.1	2.2	2.0
12-17	1.2*	1.2*	1.3*	1.3*	1.3*	1.2*	1.3*	1.3*	1.2*	1.2*	1.0*	0.9	0.8	0.8
18-25	0.6*	0.7*	0.8*	0.8*	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.0	1.2	1.1
≥26	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Mean Age at First Use	16.9*	16.9*	16.7*	17.3	17.1*	16.9*	17.4	17.5	17.3*	17.2*	17.8	17.8	18.6*	17.9

+ Difference between this estimate and the 2015 estimate is statistically significant at the .05 level.



in 2013 and 2014 and in 2002 to 2004, but it was lower than the numbers in 2005 to 2012.

In 2015, the average age at first cigarette use among recent cigarette initiates aged 12 to 49 was 17.9 years (Figure 11). The average age at first use of cigarettes in 2015 was lower than in 2014. The average age in 2015 was higher than the average age in most years between 2002 and 2007, but it was similar to the average ages in most years between 2008 and 2013 (see the table below Figure 20).

### By Age Group

In 2015, an estimated 823,000 adolescents aged 12 to 17 smoked part or all of a cigarette for the first time in the past year, which rounds to the estimate of 0.8 million adolescents in Figure 20. This number of recent initiates among adolescents averages to approximately 2,300 adolescents each day who initiated cigarette smoking. Also, 1.1 million young adults aged 18 to 25 in 2015 initiated cigarette use in the past year, which translates to about 2,900 young adults each day who initiated cigarette use. Among adults aged 26 or older in 2015, 84,000 (which rounds to 0.1 million) initiated cigarette use in the past year.

Among adolescents, the number of recent initiates of any cigarette smoking in 2015 was lower than the numbers in 2002 to 2012, although it was similar to the numbers in 2013 and 2014 (Figure 20). There were about 1.2 million to 1.3 million adolescents each year from 2002 to 2011 who smoked part or all of a cigarette for the first time in the past year. However, the number of initiates among adolescents decreased to 1.0 million or fewer in subsequent years. Among young adults, the number of recent initiates of any cigarette smoking in 2015 was greater than the numbers in 2002 to 2005, and it was similar to the numbers in subsequent years. The number of recent cigarette initiates in 2015 who were aged 26 or older was similar to the numbers in 2002 to 2014. As was the case with alcohol initiation, these trend data for cigarettes consistently indicate that relatively few people smoke part or all of a cigarette for the first time after the age of 25.

## Initiation of Smokeless Tobacco Use

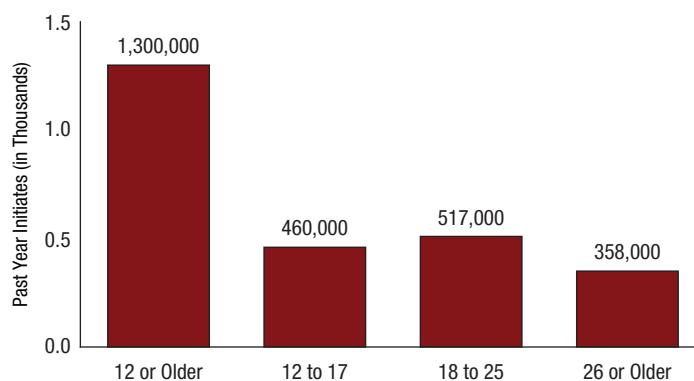
In 2015, questions on snuff and chewing tobacco were combined into a single set of questions about smokeless tobacco use, and the tobacco product “snus” was added as an example of smokeless tobacco. These changes established a new baseline for measuring smokeless tobacco use. Therefore, comparisons of estimates of smokeless tobacco initiation in 2015 are not made with estimates in prior years.

About 1.3 million people aged 12 or older in 2015 initiated use of smokeless tobacco in the past year (Figure 21). This averages to about 3,700 people each day who initiated smokeless tobacco use. In 2015, the average age at first smokeless tobacco use among recent smokeless tobacco initiates aged 12 to 49 was 21.3 years (Figure 11).

### By Age Group

In 2015, an estimated 460,000 adolescents aged 12 to 17 used smokeless tobacco for the first time in the past year (Figure 21), which averages to approximately 1,300 adolescents each day who initiated smokeless tobacco use. There were 517,000 young adults aged 18 to 25 in 2015 who initiated smokeless tobacco use in the past year, or about 1,400 new initiates per day. Among adults aged 26 or older in 2015, 358,000 initiated smokeless tobacco use in the past year.

**Figure 21. Past Year Smokeless Tobacco Initiates among People Aged 12 or Older, by Age Group (in Thousands): 2015**



## Risk Perceptions and the Initiation of Substance Use

This section discusses the association between the perceived risk of harm from substance use and the initiation of marijuana, cocaine, cigarettes, and alcohol. State and federal laws regarding the legal use of substances may affect people's risk perceptions and their decisions regarding initiating substance use. In most states, cigarette use and alcohol use are legal for adults aged 18 or older (for cigarettes) or adults aged 21 or older (for alcohol). Although the laws regarding marijuana use have changed in several states over the past decade, marijuana use remains illegal under federal laws.<sup>41,42</sup>

This discussion of the association between risk perceptions and substance use initiation builds upon previous research on associations between risk perceptions and substance use. National cross-sectional surveys of secondary school students have indicated that attitudes about the risks associated with substance use are often closely related to use, with an inverse association between use and risk perceptions. For example, youths who perceive great risk of harm from substance use are less likely to be substance users compared with youths who perceive a lower risk of harm from use.<sup>43</sup>

Analysis of NSDUH data in previous years also has found that the percentages of people perceiving great risk of harm from substance use historically have coincided with decreases in use. Conversely, decreases in the percentages of people perceiving great risk of harm have historically coincided with increases in use.<sup>44</sup> Because of the cross-sectional nature of NSDUH data (i.e., estimates taken from people at a single point in time instead of from the same individuals over multiple points in time), causal connections cannot be made between perceptions of risk and actual substance use initiation. However, NSDUH data do allow for comparisons of risk perceptions among respondents with varying characteristics, such as substance use initiation history.

This section of the report expands upon prior research by examining the differences in the percentages of people who perceived great risk of harm from substance use across three mutually exclusive groups according to their initiation of substance use: (1) people aged 12 or older who initiated use in the past year, (2) those who initiated use prior to the past year (regardless of whether or not they also used in the past year), and (3) those who had never used specific substances. Comparisons are limited to 2015 because the changes to earlier sections of the questionnaire may have

affected the comparability of the 2015 estimates for risk and protective factors with estimates from prior years.

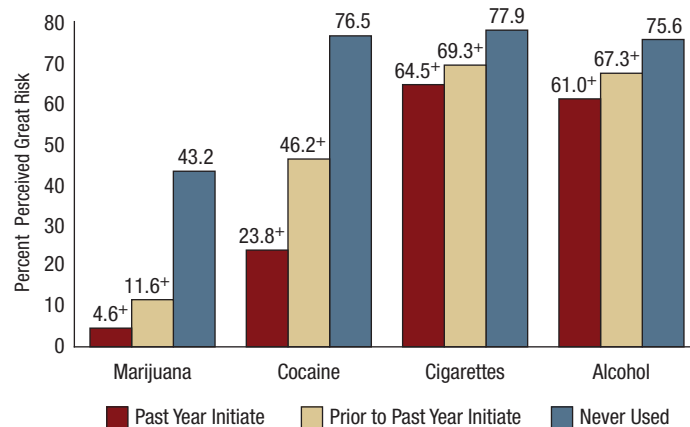
### Risk Perceptions and Marijuana Initiation

In 2015, 76.6 million people aged 12 or older perceived great risk of harm from smoking marijuana once a month. People who had initiated marijuana use in the past year were the least likely to perceive great risk of harm. Among people aged 12 or older who had never used marijuana, 43.2 percent perceived great risk of harm from monthly marijuana use (Figure 22). In comparison, 11.6 percent of people who initiated marijuana use over a year ago and 4.6 percent of those who initiated marijuana use in the past year perceived great risk of harm from monthly marijuana use.

### Risk Perceptions and Cocaine Initiation

In 2015, about 189.2 million people aged 12 or older perceived great risk of harm from using cocaine once a month. As was the case with the initiation of marijuana use, people who initiated cocaine use in the past year were the least likely to perceive great risk of harm from monthly use. Among people who had never used cocaine, about

**Figure 22. Perceived Great Risk from Using Marijuana, Cocaine, Cigarettes, or Alcohol among People Aged 12 or Older, by Initiation Status: Percentages, 2015**



+ Difference between this estimate and the estimate for never used is statistically significant at the .05 level.

Note: Perceived great risk for these substances refers to smoking marijuana once a month, using cocaine once a month, smoking one or more packs of cigarettes a day, and having four or five drinks of alcohol nearly every day.

Note: Past Year Initiates are defined as individuals who used the specific substance for the first time in the 12 months prior to the date of the interview. Prior to Past Year Initiates are defined as individuals who used the specific substance for the first time more than 12 months prior to the date of the interview, regardless of whether they last used that substance in the past 12 months or more than 12 months prior to the interview.

three fourths (76.5 percent) perceived great risk of harm from monthly cocaine use (Figure 22). In comparison, less than half of those who initiated cocaine use over a year ago (46.2 percent) and about one fourth of those who initiated cocaine use in the past year (23.8 percent) perceived great risk of harm from monthly cocaine use.

### **Risk Perceptions and Cigarette Initiation**

In 2015, about 193.3 million people aged 12 or older perceived great risk of harm from smoking one or more packs of cigarettes a day. Among people who had never smoked part or all of a cigarette, 77.9 percent perceived great risk of harm from smoking one or more packs of cigarettes per day (Figure 22). In comparison, lower percentages of people who initiated cigarette smoking over a year ago or who initiated cigarette smoking in the past year perceived great risk from smoking one or more packs of cigarettes per day (69.3 and 64.5 percent, respectively). These findings indicate that a majority of people who initiated cigarette use either in the past year or more than a year ago (defined as smoking part or all of a cigarette at least once) may still perceive great risk of harm from smoking a pack or more of cigarettes per day.

### **Risk Perceptions and Alcohol Initiation**

In 2015, about 182.1 million people aged 12 or older perceived great risk of harm from having four or five drinks nearly every day (i.e., binge drinking). Among people who had never used alcohol, about three fourths (75.6 percent) perceived great risk of harm from binge drinking (Figure 22). About two thirds of people who initiated alcohol use over a year ago (67.3 percent) and three fifths of those who initiated alcohol use in the past year (61.0 percent) perceived great risk of harm from binge drinking. These findings indicate that a majority of people who initiated any use of alcohol either in the past year or more than a year ago may still perceive great risk of harm from binge drinking.

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- In this report, terms such as “Americans,” “people in this country,” “general population,” or similar terms are used broadly to refer to the civilian, noninstitutionalized population that is covered by NSDUH. Although some people in the general population of the United States are outside of the civilian, noninstitutionalized population, information from the 2010 census suggests that the civilian, noninstitutionalized population includes at least 97 percent of the total U.S. population. See the following reference: Lofquist, D., Lugaila, T., O’Connell, M., & Feliz, S. (2012, April). *Households and families: 2010* (C2010BR-14, 2010 Census Briefs). Retrieved from <https://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf>
- Details about the sample design, weighting, and interviewing results for the 2015 NSDUH are provided in Sections A.1, A.3.4, and B.3.1 of CBHSQ (2016). In particular, Tables A.1 and A.2 in CBHSQ (2016) provide sample design information on the targeted numbers of completed interviews by state and by age group, respectively. See the following reference: Center for Behavioral Health Statistics and Quality. (2016). *2015 National Survey on Drug Use and Health: Methodological summary and definitions*. Retrieved from <http://www.samhsa.gov/data/>
- The screening procedure involves listing all household members in order to determine whether zero, one, or two individuals aged 12 or older should be selected for the interview.
- Overall response rates are not calculated for adolescents or adults because the screening response rate is not specific to age groups.
- See the CBHSQ (2016) reference in endnote 11.
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- See Section C in CBHSQ (2016). See endnote 11 for the reference.
- For a discussion of the criteria for suppressing (i.e., not publishing) unreliable estimates, see Section B.2.2 in CBHSQ (2016). See endnote 11 for the reference.
- If the number of people in the population with a characteristic of interest has increased (e.g., the number of substance users) simply because the size of the overall population has increased, then the percentages will control for the increases both in the number of people with the characteristic of interest and the total number of people in the population.
- The term “most years” is used when the 2015 estimate is either similar to or significantly different from the estimates in the majority of prior years. However, estimates may not follow the overall pattern in up to 3 nonsequential years for estimates that are available in 2002 to 2015.
- Anomalous differences between 2 years of data usually “correct” themselves with 1 or 2 additional years of data.
- Survey questions for the perceived risk from using different substances vary in terms of the frequency and quantity of use. For example, comparing perceptions of risk for alcohol and marijuana use is difficult because NSDUH respondents were asked about the perceived harm from having five or more drinks once or twice a week or of having four or five drinks nearly every day. In comparison, respondents were asked about the perceived risk from any use of marijuana on a monthly or weekly basis.
- In NSDUH, a “drink” has been historically defined as a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it. Times when respondents only had a sip or two from a drink are not considered to be alcohol consumption. Binge drinking for males has been historically defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. For females, binge drinking in 2015 was redefined as drinking four or more drinks on an occasion on at least 1 day in the past 30 days.
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27. A special analysis of the 2002 to 2014 NSDUH data indicated that most missing data for perceived availability in each year were accounted for by people not knowing how easy or difficult it would be to get a particular substance. Percentages of adults aged 18 to 25 and those aged 26 or older in 2014 who did not know how easy or difficult it would be to get different substances were similar to the percentages in most years from 2002 to 2013. However, youths aged 12 to 17 were more likely in 2014 not to know how easy or difficult it would be to get different substances than in most years from 2002 to 2011.
28. National Institute on Drug Abuse. (2003). *Preventing drug use among children and adolescents: A research-based guide for parents, educators, and community leaders* (NIH Publication No. 04-4212A, 2nd ed.). Washington, DC: U.S. Department of Health and Human Services, National Institutes of Health. Retrieved from <http://www.drugabuse.gov/sites/default/files/preventingdruguse.pdf>
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30. To measure initiation for most substances, NSDUH respondents who reported that they ever used a particular substance were asked to report their age when they first used it. To measure initiation of prescription drug misuse (i.e., misuse of pain relievers, tranquilizers, stimulants, and sedatives), NSDUH respondents who reported that they misused a particular prescription drug in the past 12 months were asked to report their age when they first misused it. Respondents who reported first use (or misuse in the case of prescription drugs) of a substance within a year of their current age also were asked to report the year and month when they first used it.
31. Estimates relating to the periods prior to the 12-month reference period have not been considered here because of concerns about their validity resulting from recall bias. See the following reference: Gfroerer, J., Hughes, A., Chromy, J., Heller, D., & Packer, L. (2004, July). Estimating trends in substance use based on reports of prior use in a cross-sectional survey. In S. B. Cohen & J. M. Lepkowski (Eds.), *Eighth Conference on Health Survey Research Methods: Conference proceedings [Peachtree City, GA]* (HHS Publication No. PHS 04-1013, pp. 29-34). Hyattsville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics.
32. For substances other than psychotherapeutic drugs, respondents who had ever used the substance (e.g., marijuana) were asked to report when they first used the substance, and respondents who reported first use within a year of their current age were asked to report the year and month when they first used it. Thus, past year initiates of substances other than prescription psychotherapeutic drugs reported their first use within 12 months of the interview date.
33. Assessing whether respondents in the 2015 NSDUH had initiated misuse of a psychotherapeutic drug in the past 12 months differed from assessing whether respondents had initiated the use of other substances in that period because the psychotherapeutic drug categories (e.g., prescription pain relievers) include many different types of prescription drugs in a given category (e.g., pain relievers containing hydrocodone, such as Vicodin®, Lortab®, Norco®, Zohydro® ER, or generic hydrocodone). Respondents in 2015 were asked questions about initiation of misuse only for the specific prescription drugs that they misused in the past 12 months, including their age when they first misused a drug and (if the first misuse occurred within a year of the current age) the year and month of first misuse for that drug. Respondents who reported that they initiated misuse in the past 12 months for all of the specific prescription drugs in a given category that they misused in that period were asked a follow-up question to establish whether they had ever misused prescription drugs in that category more than 12 months before being interviewed. Respondents who answered this follow-up question as “no” were defined as being past year initiates for the misuse of any prescription drug in the overall category. This answer meant that respondents had never misused any prescription drug in that category more than 12 months prior to the interview date.
34. Hughes, A., Williams, M. R., Lipari, R. N., Bose, J., Copello, E. A. P., & Kroutil, L. A. (2016, September). *Prescription drug use and misuse in the United States: Results from the 2015 National Survey on Drug Use and Health*. NSDUH Data Review. Retrieved from <http://www.samhsa.gov/data/>
35. Numbers in Figure 10 refer to people who used a specific substance for the first time in the past year, regardless of whether the initiation of use of other substances occurred prior to the past year.
36. Past year initiates of crack cocaine use were counted as past year initiates for cocaine only if they did not report previous use of cocaine.
37. For more information, see Section B.2.3 of CBHSQ (2016). See endnote 11 for the reference.
38. LSD = lysergic acid diethylamide; PCP = phencyclidine; MDMA = methylenedioxy-methamphetamine. DMT = dimethyltryptamine; AMT = alpha-methyltryptamine; Foxy = N, N-diisopropyl-5-methoxytryptamine (5-MeO-DIPT). Definitions for these hallucinogens also are included in Section D of CBHSQ (2016). See endnote 11 for the reference.
39. One important note for the initiation estimates is the relationship between the main categories and the subcategories of substances (e.g., hallucinogens would be a main category, and LSD, PCP, and Ecstasy would be subcategories in relationship to hallucinogens). For most measures of substance use, any member of a subcategory is by necessity a member of the main category (e.g., if a respondent is a past month user of Ecstasy, then he or she is also a past month user of any hallucinogen). However, this is not the case with regard to incidence statistics. For example, an individual can initiate use of any hallucinogen, LSD, PCP, or Ecstasy only once. A respondent who initiated use of any hallucinogen more than 12 months ago by definition is not a past year initiate of hallucinogen use, even if he or she initiated use of LSD, PCP, or Ecstasy in the past year.
40. Past year initiates of LSD, PCP, or Ecstasy use are counted as past year initiates for hallucinogens only if they had previously not used other hallucinogens.
41. The Controlled Substances Act (CSA) of 1970 gives authority to the Drug Enforcement Administration (DEA) within the U.S. Department of Justice to place controlled substances into “schedules.” See the following reference: Controlled Substances Act, 21 U.S.C., §§ 801-971 (2012). Retrieved from <http://www.deadiversion.usdoj.gov/>

42. Marijuana is classified in Schedule I under the CSA. Substances in Schedule I are deemed to have a high potential for abuse, have no currently accepted medical use in treatment in the United States, and have a lack of accepted safety for use under medical supervision. Drug schedule information is available in the following reference: Drug Enforcement Administration. (2016). *Controlled substances. Alphabetical order*. Retrieved from <http://www.deadiversion.usdoj.gov/>
43. Research on the inverse relationship between the perceptions of harm and use has focused on adolescents. For more information, see the following reference: Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2015). *Monitoring the Future national survey results on drug use, 1975–2014: Volume I, secondary school students*. Ann Arbor, MI: Institute for Social Research, University of Michigan. The results of this study may not generalize to the population of people aged 12 or older.
44. Center for Behavioral Statistics and Quality. (2015). *Risk and protective factors and initiation of substance use: Results from the 2014 National Survey on Drug Use and Health*. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from <http://www.samhsa.gov/data/>

**Appendix A:**  
**Supplemental Tables of Risk and Protective Factors and Estimates of Substance Use Initiation**

**Table A.1B Perceived Great Risk of Harm Associated with Substance Use and Perceived Availability of Substances, by Age Group**

<b>Risk/Availability</b>	<b>Aged 12 or Older</b>	<b>Aged 12 to 17</b>	<b>Aged 18 or Older</b>	<b>Aged 18 to 25</b>	<b>Aged 26 or Older</b>
<b>PERCEPTIONS OF GREAT RISK<sup>1</sup></b>					
Cigarettes					
Smoke One or More Packs per Day	72.8 (0.27)	68.2 (0.46)	73.3 (0.29)	68.0 (0.43)	74.2 (0.32)
Marijuana					
Smoke Once a Month	29.1 (0.32)	27.3 (0.44)	29.3 (0.35)	15.2 (0.35)	31.7 (0.40)
Smoke Once or Twice a Week	36.3 (0.33)	40.6 (0.52)	35.8 (0.35)	19.1 (0.40)	38.7 (0.40)
Cocaine					
Use Once a Month	72.0 (0.27)	56.7 (0.50)	73.6 (0.29)	65.3 (0.51)	75.0 (0.33)
Use Once or Twice a Week	87.4 (0.19)	80.2 (0.40)	88.1 (0.21)	84.3 (0.36)	88.8 (0.23)
Heroin					
Try Once or Twice	85.2 (0.20)	65.3 (0.51)	87.3 (0.21)	82.6 (0.38)	88.0 (0.24)
Use Once or Twice a Week	94.2 (0.13)	82.9 (0.38)	95.3 (0.14)	94.0 (0.24)	95.5 (0.16)
LSD					
Try Once or Twice	70.4 (0.28)	51.6 (0.54)	72.3 (0.31)	57.0 (0.52)	74.8 (0.34)
Use Once or Twice a Week	84.7 (0.20)	71.5 (0.46)	86.0 (0.22)	76.7 (0.42)	87.5 (0.24)
Alcohol					
Have Four or Five Drinks Nearly Every Day	68.7 (0.27)	64.1 (0.50)	69.2 (0.30)	62.1 (0.47)	70.4 (0.34)
Have Five or More Drinks Once or Twice a Week	44.2 (0.30)	42.5 (0.50)	44.4 (0.33)	36.7 (0.50)	45.7 (0.37)
<b>PERCEIVED AVAILABILITY<sup>2</sup></b>					
Fairly or Very Easy to Obtain					
Marijuana	58.6 (0.35)	46.0 (0.51)	59.9 (0.38)	72.6 (0.47)	57.7 (0.43)
Cocaine	22.5 (0.26)	12.5 (0.33)	23.6 (0.28)	26.6 (0.47)	23.0 (0.32)
Crack	19.8 (0.26)	11.8 (0.31)	20.6 (0.28)	17.5 (0.39)	21.1 (0.32)
Heroin	16.1 (0.22)	8.1 (0.27)	16.9 (0.24)	15.4 (0.36)	17.2 (0.28)
LSD	13.3 (0.21)	11.5 (0.33)	13.5 (0.22)	17.6 (0.38)	12.8 (0.26)
Approached in the Past Month by Someone Selling Drugs	6.0 (0.12)	11.2 (0.32)	5.4 (0.13)	14.9 (0.34)	3.8 (0.13)

LSD = lysergic acid diethylamide.

NOTE: Estimates shown are percentages with standard errors included in parentheses.

<sup>1</sup> Respondents with unknown Perceptions of Great Risk data were excluded.

<sup>2</sup> Respondents with unknown Perceived Availability data were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2015.



**Table A.2B Perceived Great Risk of Harm Associated with Cigarette and Alcohol Use among Individuals Aged 12 to 20, by Age Group and Gender**

Age Group and Gender	Smoke One or More Packs of Cigarettes per Day	Have Five or More Drinks of Alcohol Once or Twice a Week	Have Four or Five Drinks of Alcohol Nearly Every Day
<b>TOTAL</b>	68.0 (0.39)	41.0 (0.43)	63.3 (0.43)
<b>AGE</b>			
12-14	67.4 (0.68)	43.5 (0.70)	64.3 (0.70)
15-17	68.9 (0.61)	41.5 (0.68)	63.9 (0.67)
18-20	67.8 (0.74)	38.1 (0.81)	61.8 (0.81)
<b>GENDER</b>			
Male	65.6 (0.55)	37.0 (0.58)	58.0 (0.59)
Female	70.7 (0.53)	45.2 (0.60)	68.9 (0.58)

NOTE: Estimates shown are percentages with standard errors included in parentheses.

NOTE: Respondents with unknown Perceptions of Great Risk data were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2015.

**Table A.3B Substance Use in the Past Month among Individuals Aged 12 or Older, by Age Group**

Substance	Aged 12 or Older	Aged 12 to 17	Aged 18 or Older	Aged 18 to 25	Aged 26 or Older
<b>MARIJUANA</b>	8.3 (0.15)	7.0 (0.24)	8.4 (0.17)	19.8 (0.40)	6.5 (0.17)
<b>COCAINE</b>	0.7 (0.05)	0.2 (0.05)	0.8 (0.05)	1.7 (0.14)	0.6 (0.06)
<b>HEROIN</b>	0.1 (0.02)	0.0 (0.01)	0.1 (0.02)	0.3 (0.05)	0.1 (0.02)
<b>LSD</b>	0.1 (0.01)	0.2 (0.05)	0.1 (0.02)	0.6 (0.08)	0.0 (0.01)
<b>CIGARETTES</b>	19.4 (0.25)	4.2 (0.20)	21.0 (0.28)	26.7 (0.46)	20.0 (0.31)
Daily Cigarette Smoking <sup>1</sup>	58.1 (0.64)	20.0 (1.84)	58.9 (0.65)	42.0 (1.02)	62.7 (0.76)
<b>ALCOHOL</b>	51.7 (0.32)	9.6 (0.29)	56.0 (0.34)	58.3 (0.53)	55.6 (0.38)
Binge Alcohol Use	24.9 (0.27)	5.8 (0.23)	26.9 (0.29)	39.0 (0.51)	24.8 (0.32)
Heavy Alcohol Use	6.5 (0.14)	0.9 (0.10)	7.0 (0.16)	10.9 (0.33)	6.4 (0.17)

LSD = lysergic acid diethylamide.

NOTE: Estimates shown are percentages with standard errors included in parentheses.

<sup>1</sup> Percentages for daily cigarette smoking are among past month cigarette smokers.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2015.

**Table A.4B Youths Felt That Parents Would Strongly Disapprove of Substance Use Behaviors among Youths Aged 12 to 17**

Substance Use Behavior	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Smoking One or More Packs of Cigarettes per Day	89.5* (0.26)	89.8* (0.28)	90.6* (0.28)	91.1* (0.26)	91.4* (0.24)	92.1* (0.25)	92.4* (0.23)	92.6* (0.23)	92.6* (0.24)	93.2 (0.22)	93.1 (0.22)	93.5 (0.23)	93.8 (0.25)	93.6 (0.24)
Trying Marijuana Once or Twice	89.1* (0.29)	89.4* (0.28)	89.8* (0.28)	90.2* (0.26)	90.4* (0.26)	91.0* (0.26)	90.7* (0.26)	90.5* (0.27)	89.6* (0.29)	89.3* (0.28)	89.3* (0.27)	88.4 (0.28)	87.5 (0.34)	87.6 (0.33)
Using Marijuana Once a Month or More	92.0* (0.24)	92.2* (0.22)	93.0* (0.23)	92.9* (0.23)	93.1* (0.22)	93.3* (0.22)	93.1* (0.23)	93.0* (0.23)	91.9* (0.26)	91.6* (0.24)	91.3* (0.25)	90.6* (0.26)	90.0 (0.31)	89.8 (0.30)
Having One or Two Drinks of an Alcoholic Beverage Nearly Every Day	89.0* (0.27)	88.5* (0.29)	89.0* (0.25)	88.9* (0.27)	89.6* (0.28)	89.6* (0.27)	89.7* (0.28)	90.3 (0.26)	90.5 (0.28)	90.5 (0.25)	90.5 (0.27)	90.7 (0.27)	90.6 (0.28)	90.9 (0.27)

NOTE: Estimates shown are percentages with standard errors included in parentheses.

NOTE: Respondents with unknown Perceptions of Parents' Feelings data were excluded.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.

**Table A.5B Youths Strongly Disapproved or Somewhat Disapproved of Peers' Substance Use Behaviors among Youths Aged 12 to 17**

Substance Use Behavior	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Smoking One or More Packs of Cigarettes per Day	87.1* (0.30)	87.6* (0.27)	88.1* (0.29)	88.2* (0.29)	89.1* (0.28)	89.8* (0.27)	89.7* (0.28)	90.3* (0.26)	90.5* (0.28)	91.0* (0.26)	91.4* (0.26)	91.4* (0.27)	92.5* (0.25)	93.4 (0.24)
Trying Marijuana Once or Twice	79.5 (0.35)	80.0 (0.35)	80.6 (0.35)	80.8 (0.37)	81.7* (0.35)	82.5* (0.34)	82.2* (0.35)	81.7* (0.35)	81.3 (0.38)	80.0 (0.36)	80.5 (0.36)	79.5 (0.38)	79.5 (0.41)	80.4 (0.41)
Using Marijuana Once a Month or More	80.4 (0.35)	80.6 (0.35)	81.6* (0.34)	81.4* (0.36)	82.7* (0.33)	82.9* (0.34)	82.7* (0.34)	82.1* (0.36)	81.5* (0.37)	80.3 (0.37)	80.3 (0.35)	79.2 (0.37)	79.2 (0.42)	80.1 (0.39)
Having One or Two Drinks of an Alcoholic Beverage Nearly Every Day	84.7* (0.33)	84.4* (0.31)	85.0* (0.30)	85.6* (0.31)	86.4* (0.31)	86.6* (0.31)	87.1* (0.31)	87.5* (0.31)	88.1* (0.30)	88.1* (0.31)	88.7* (0.29)	88.7* (0.30)	89.7 (0.31)	90.1 (0.31)

NOTE: Estimates shown are percentages with standard errors included in parentheses.

NOTE: Respondents with unknown Feelings about Peers data were excluded.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.

**Table A.6B Exposure to Substance Use Prevention Program or Message in the Past Year among Youths Aged 12 to 17**

Program/Message	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Participated in Alcohol, Tobacco, or Drug Use Prevention Program Outside of School	12.7* (0.28)	13.9* (0.32)	12.2* (0.30)	11.7 (0.29)	11.4 (0.29)	11.4 (0.30)	11.1 (0.29)	12.1 (0.29)	11.5 (0.28)	11.7 (0.29)	11.9 (0.29)	11.5 (0.29)	11.1 (0.30)	11.3 (0.31)
Saw or Heard Alcohol or Drug Use Prevention Message from Sources Outside School	83.2* (0.36)	83.6* (0.33)	83.0* (0.35)	81.1* (0.36)	79.3* (0.36)	77.8* (0.40)	77.9* (0.36)	76.9* (0.40)	75.9* (0.40)	75.1* (0.38)	75.9* (0.40)	72.6 (0.42)	72.9 (0.44)	73.3 (0.43)
Drug or Alcohol Use Prevention Messages Were Seen or Heard in School among Youths Enrolled in School <sup>1</sup>	78.8* (0.38)	78.1* (0.37)	78.2* (0.40)	77.9* (0.37)	76.9* (0.38)	75.8* (0.41)	76.1* (0.41)	75.2* (0.43)	75.7* (0.45)	74.6* (0.43)	75.0* (0.44)	73.5 (0.44)	73.0 (0.47)	72.7 (0.45)

NOTE: Estimates shown are percentages with standard errors included in parentheses.

NOTE: Respondents with unknown Substance Use Prevention Program or Message Exposure data were excluded from the respective analyses.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

<sup>1</sup> Youths who did not report their school enrollment status or reported not being enrolled in school in the past 12 months were excluded from this analysis. Youths reporting that they were "home-schooled" in the past 12 months were considered to be enrolled in school.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.

**Table A.7A Past Year Initiation of Substance Use among Individuals Aged 12 or Older**

Substance	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>ILLICIT DRUGS</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Marijuana	2,196* (70)	1,973* (70)	2,142* (81)	2,114* (121)	2,061* (79)	2,089* (77)	2,224* (89)	2,379 (79)	2,439 (93)	2,617 (97)	2,398 (96)	2,427 (86)	2,568 (95)	2,600 (95)
Cocaine	1,032 (61)	986 (56)	998 (65)	872 (50)	977 (60)	906 (57)	724* (52)	623* (47)	642* (57)	670* (48)	639* (48)	601* (47)	766* (57)	968 (68)
Crack	337* (44)	269* (36)	215* (29)	230* (30)	243* (31)	353* (72)	209* (34)	95* (15)	83* (20)	76* (14)	84* (16)	58 (13)	109* (24)	37 (9)
Heroin	117 (20)	92 (20)	118 (28)	108 (20)	90 (15)	106 (21)	116 (23)	187 (30)	142 (24)	178 (26)	156 (23)	169 (36)	212 (35)	135 (24)
Hallucinogens	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	1,160 (69)
LSD	338* (30)	200* (20)	235* (25)	243* (29)	265* (32)	271* (23)	400* (31)	341* (28)	381* (39)	358* (30)	421* (41)	482* (40)	586 (48)	664 (45)
PCP	123* (15)	105* (14)	106* (20)	77* (13)	70 (13)	58 (11)	53 (10)	45 (9)	46 (11)	48 (10)	90* (21)	32 (7)	41 (10)	42 (11)
Ecstasy	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	839 (62)
Inhalants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	600 (44)
Methamphet-amine	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	225 (37)
Misuse of Psycho-therapeutics	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Pain Relievers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	2,126 (115)
Tranquilizers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	1,437 (94)
Stimulants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	1,260 (80)
Sedatives	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	425 (63)
<b>CIGARETTES</b>	1,940 (75)	1,983 (72)	2,122 (72)	2,282* (86)	2,456* (79)	2,231* (71)	2,453* (90)	2,545* (89)	2,403* (81)	2,394* (86)	2,336* (89)	2,071 (81)	2,164 (90)	1,956 (77)
Daily Cigarette Use	1,016* (64)	1,064* (58)	1,101* (55)	965* (58)	1,049* (54)	983* (52)	945* (57)	1,136* (66)	962* (57)	878* (55)	778* (53)	813* (52)	756* (51)	622 (45)
<b>SMOKELESS TOBACCO</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	1,335 (75)
<b>CIGARS</b>	2,858 (103)	2,736 (99)	3,058* (112)	3,349* (113)	3,061* (104)	3,078* (107)	2,918* (105)	3,146* (121)	2,950* (120)	2,800 (143)	2,664 (108)	2,770 (144)	2,597 (104)	2,569 (110)
<b>ALCOHOL</b>	3,942* (101)	4,082* (104)	4,396* (127)	4,274* (108)	4,378* (107)	4,551 (111)	4,466 (116)	4,561 (112)	4,675 (131)	4,699 (124)	4,589 (130)	4,559 (113)	4,655 (127)	4,761 (126)

LSD = lysergic acid diethylamide; nc = not comparable due to methodological changes; nr = not reported due to measurement issues; PCP = phencyclidine.

NOTE: Estimates shown are numbers in thousands with standard errors included in parentheses.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.



**Table A.8A Past Year Initiation of Substance Use among Youths Aged 12 to 17**

Substance	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>ILLICIT DRUGS</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Marijuana	1,373* (50)	1,219 (45)	1,252 (45)	1,139 (44)	1,194 (48)	1,168 (45)	1,248 (49)	1,343* (49)	1,274 (51)	1,375* (53)	1,255 (49)	1,200 (46)	1,203 (52)	1,169 (50)
Cocaine	310* (24)	282* (22)	274* (23)	286* (23)	260* (22)	254* (22)	196* (20)	145 (17)	156 (18)	146 (16)	120 (16)	94 (13)	117 (20)	112 (16)
Crack	86 (13)	76 (11)	42 (9)	32 (7)	41 (8)	52 (10)	17 (5)	18 (5)	14 (4)	19 (5)	18 (8)	10 (4)	11 (5)	** (**)
Heroin	39* (10)	25 (7)	31* (8)	18 (5)	24 (7)	16 (5)	29 (10)	19 (5)	23 (7)	38* (10)	21 (7)	21 (6)	13 (7)	11 (4)
Hallucinogens	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	340 (31)
LSD	180 (18)	96* (13)	99* (13)	105* (14)	76* (11)	97* (13)	147* (16)	106* (12)	100* (15)	123* (16)	125* (15)	122* (14)	165 (22)	206 (24)
PCP	77* (11)	59 (10)	43 (9)	55 (11)	43 (10)	38 (8)	37 (7)	26 (7)	22 (6)	29 (7)	45 (11)	19 (6)	17 (6)	34 (11)
Ecstasy	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	168 (22)
Inhalants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	349 (27)
Methamphet-amine	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	24 (8)
Misuse of Psychotherapeutics	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Pain Relievers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	415 (32)
Tranquilizers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	210 (23)
Stimulants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	276 (27)
Sedatives	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	46 (11)
<b>CIGARETTES</b>	1,187* (44)	1,226* (47)	1,294* (50)	1,303* (50)	1,333* (48)	1,198* (48)	1,288* (50)	1,273* (50)	1,205* (47)	1,165* (46)	1,032* (43)	932 (41)	838 (44)	823 (43)
Daily Cigarette Use	403* (27)	439* (27)	417* (32)	334* (24)	386* (27)	333* (23)	277* (23)	313* (24)	286* (24)	268* (22)	197* (22)	209* (19)	165 (19)	119 (15)
<b>SMOKELESS TOBACCO</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	460 (29)
<b>CIGARS</b>	1,113* (40)	1,163* (46)	1,246* (48)	1,270* (47)	1,217* (42)	1,145* (44)	1,120* (43)	1,085* (43)	940* (40)	969* (41)	849* (38)	730 (36)	797* (41)	671 (37)
<b>ALCOHOL</b>	2,588* (64)	2,593* (65)	2,743* (73)	2,749* (69)	2,706* (68)	2,698* (69)	2,568* (64)	2,662* (69)	2,476 (62)	2,622* (69)	2,448 (72)	2,417 (67)	2,335 (67)	2,358 (75)

\*\*Low precision; no estimate reported.

LSD = lysergic acid diethylamide; nc = not comparable due to methodological changes; nr = not reported due to measurement issues; PCP = phencyclidine.

NOTE: Estimates shown are numbers in thousands with standard errors included in parentheses.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.

**Table A.9A Past Year Initiation of Substance Use among Young Adults Aged 18 to 25**

Substance	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>ILLICIT DRUGS</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Marijuana	733* (37)	666* (37)	714* (45)	723* (45)	742* (46)	787* (45)	817* (49)	988 (55)	918 (51)	1,060 (61)	966 (57)	1,017 (54)	1,094 (62)	1,048 (57)
Cocaine	594 (42)	576 (36)	592 (41)	498* (35)	570 (40)	541 (38)	426* (33)	397* (32)	372* (32)	467* (38)	443* (37)	432* (37)	501* (40)	663 (52)
Crack	100* (15)	109* (15)	120* (17)	142* (21)	132* (18)	88* (15)	91* (15)	62 (11)	39 (8)	40 (9)	49 (11)	25 (6)	54 (14)	37 (9)
Heroin	66 (13)	42 (9)	46 (10)	57 (13)	56 (12)	70 (14)	58 (11)	83 (13)	83 (15)	100* (17)	95 (16)	66 (13)	75 (15)	57 (12)
Hallucinogens	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	670 (54)
LSD	142* (18)	98* (14)	112* (16)	114* (16)	162* (22)	171* (18)	235* (23)	228* (25)	261* (33)	222* (23)	264* (33)	312 (31)	371 (37)	387 (35)
PCP	46* (11)	41* (9)	49* (14)	22 (6)	27* (8)	19 (7)	16 (6)	17 (6)	24 (9)	18 (8)	28* (8)	13 (5)	24 (8)	8 (4)
Ecstasy	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	531 (45)
Inhalants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	188 (25)
Methamphet-amine	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	91 (21)
Misuse of Psychotherapeutics	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Pain Relievers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	596 (43)
Tranquilizers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	489 (40)
Stimulants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	600 (48)
Sedatives	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	86 (16)
<b>CIGARETTES</b>	641* (40)	659* (45)	765* (46)	848* (46)	1,041 (52)	989 (48)	1,076 (58)	1,147 (60)	1,120 (54)	1,156 (59)	1,204 (65)	1,031 (57)	1,181 (72)	1,050 (58)
Daily Cigarette Use	447 (31)	474 (35)	566* (36)	493 (33)	554* (36)	566* (38)	549* (35)	618* (39)	599* (44)	525* (37)	488 (39)	505* (36)	479 (40)	403 (34)
<b>SMOKELESS TOBACCO</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	517 (43)
<b>CIGARS</b>	1,031* (46)	1,055* (48)	1,199 (54)	1,332 (58)	1,275 (54)	1,379 (58)	1,277 (54)	1,417 (61)	1,388 (66)	1,238 (58)	1,291 (61)	1,334 (61)	1,311 (67)	1,281 (67)
<b>ALCOHOL</b>	1,230* (51)	1,430* (64)	1,484* (62)	1,421* (61)	1,612* (68)	1,741* (70)	1,706* (68)	1,775* (66)	2,008 (79)	1,971* (80)	1,945* (77)	2,056 (76)	2,225 (86)	2,203 (78)

LSD = lysergic acid diethylamide; nc = not comparable due to methodological changes; nr = not reported due to measurement issues; PCP = phencyclidine.

NOTE: Estimates shown are numbers in thousands with standard errors included in parentheses.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.

**Table A.10A Past Year Initiation of Substance Use among Adults Aged 26 or Older**

Substance	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>ILLICIT DRUGS</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Marijuana	90* (25)	88* (30)	176* (47)	252 (97)	126* (33)	134* (37)	159* (45)	49* (15)	247 (60)	182* (49)	177* (53)	210* (44)	271 (45)	383 (55)
Cocaine	127 (33)	128 (36)	133 (39)	87* (23)	147 (38)	112 (32)	102 (34)	81* (28)	114 (41)	56* (22)	76* (26)	75* (29)	148 (35)	193 (39)
Crack	151 (38)	83 (31)	53 (21)	55 (19)	70 (24)	212 (69)	101 (30)	15 (10)	30 (18)	17 (9)	17 (8)	23 (11)	44 (18)	** (**)
Heroin	12* (11)	25 (16)	40 (25)	33 (15)	9* (6)	20 (14)	28 (17)	85 (27)	37 (17)	40 (17)	40 (15)	82 (32)	124 (31)	68 (20)
Hallucinogens	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	150 (29)
LSD	16* (13)	** (**)	24 (15)	24 (19)	28 (19)	** (**)	18* (12)	** (**)	20* (15)	13* (8)	33 (16)	48 (25)	50 (19)	71 (20)
PCP	** (**)	** (**)	14 (10)	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)	17 (16)	** (**)	** (**)	** (**)
Ecstasy	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	141 (31)
Inhalants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	62 (20)
Methamphet-amine	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	110 (29)
Misuse of Psychotherapeutics	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Pain Relievers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	1,114 (101)
Tranquilizers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	738 (82)
Stimulants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	384 (57)
Sedatives	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	293 (61)
<b>CIGARETTES</b>	111 (36)	98 (31)	63 (20)	131 (40)	83 (30)	45 (15)	89 (31)	124 (35)	78 (24)	73 (25)	101 (28)	108 (32)	144 (29)	84 (20)
Daily Cigarette Use	166 (48)	150 (39)	118 (29)	137 (42)	109 (33)	84 (23)	119 (37)	204 (49)	77 (23)	85 (32)	92 (27)	99 (31)	113 (25)	100 (24)
<b>SMOKELESS TOBACCO</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	358 (53)
<b>CIGARS</b>	714 (82)	518 (74)	614 (79)	747 (86)	570 (77)	555 (73)	521 (77)	644 (90)	622 (87)	593 (119)	524 (72)	706 (126)	489 (62)	617 (75)
<b>ALCOHOL</b>	124 (40)	60* (21)	169 (74)	105 (31)	60* (22)	112 (32)	193 (50)	124 (34)	191 (76)	106 (32)	196 (56)	85* (26)	95 (37)	200 (48)

\*\*Low precision; no estimate reported.

LSD = lysergic acid diethylamide; nc = not comparable due to methodological changes; nr = not reported due to measurement issues; PCP = phencyclidine.

NOTE: Estimates shown are numbers in thousands with standard errors included in parentheses.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.

**Table A.11B Mean Age at First Use among Past Year Initiates of Substance Use Aged 12 to 49**

Substance	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>ILLICIT DRUGS</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	Nc	nr
Marijuana	17.0* (0.19)	16.8* (0.14)	17.1* (0.21)	17.4* (0.22)	17.4* (0.21)	17.6* (0.34)	17.8* (0.35)	17.0* (0.13)	18.4 (0.48)	17.5* (0.18)	17.9* (0.32)	18.0* (0.26)	18.5 (0.28)	19.0 (0.27)
Cocaine	19.8* (0.33)	19.8* (0.36)	20.0* (0.45)	19.7* (0.38)	20.3 (0.51)	20.2 (0.52)	19.8* (0.44)	19.9* (0.42)	21.2 (0.96)	20.1* (0.47)	20.0* (0.32)	20.4* (0.36)	21.8 (0.48)	21.5 (0.38)
Crack	25.0* (1.35)	21.8 (1.01)	21.9 (1.35)	23.4 (1.28)	22.8 (1.47)	29.6* (2.54)	27.1* (1.68)	20.6 (0.66)	24.8 (2.45)	20.8 (1.05)	20.5 (1.03)	24.4 (2.70)	26.4 (2.78)	21.3 (0.57)
Heroin	21.0 (2.51)	20.9* (1.36)	24.4 (2.53)	22.2 (1.55)	20.7* (1.51)	21.8* (1.23)	23.5 (3.18)	25.3 (1.40)	21.4* (1.05)	22.1* (1.22)	23.0 (1.18)	24.5 (1.26)	28.0 (1.28)	25.4 (0.97)
Hallucinogens	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	19.6 (0.32)
LSD	17.4* (0.49)	17.2* (0.32)	18.4 (0.71)	18.3 (0.78)	19.4 (0.72)	18.2* (0.29)	18.4* (0.31)	18.3* (0.21)	19.0 (0.40)	18.6 (0.27)	19.0 (0.44)	19.7 (0.37)	19.7 (0.33)	19.6 (0.44)
PCP	16.0 (0.27)	17.4* (0.49)	18.9* (1.17)	16.5 (0.40)	16.3 (0.61)	16.4 (0.51)	15.9 (0.63)	16.8 (0.80)	17.6* (0.57)	17.8* (0.94)	16.6 (0.50)	17.1 (0.61)	17.7* (0.55)	15.3 (0.68)
Ecstasy	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	20.7 (0.37)
Inhalants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	17.4 (0.58)
Methamphetamine	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	25.8 (1.36)
Misuse of														
Psychotherapeutics	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nr
Pain Relievers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	25.8 (0.58)
Tranquilizers	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	25.9 (0.63)
Stimulants	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	22.3 (0.52)
Sedatives	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	28.3 (1.50)
<b>CIGARETTES</b>	16.9* (0.30)	16.9* (0.26)	16.7* (0.19)	17.3 (0.33)	17.1* (0.21)	16.9* (0.12)	17.4 (0.26)	17.5 (0.25)	17.3* (0.21)	17.2* (0.13)	17.8 (0.23)	17.8 (0.22)	18.6* (0.23)	17.9 (0.17)
Daily Cigarette Use	19.9 (0.72)	19.8 (0.62)	18.8* (0.40)	19.7 (0.71)	18.9* (0.53)	19.2* (0.45)	20.1 (0.78)	20.7 (0.69)	19.1* (0.34)	19.1* (0.44)	19.9 (0.51)	19.8 (0.65)	20.6 (0.49)	20.9 (0.50)
<b>SMOKELESS TOBACCO</b>	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	21.3 (0.50)
<b>CIGARS</b>	21.8 (0.50)	20.3 (0.45)	20.2 (0.37)	21.2 (0.45)	19.9 (0.42)	20.5 (0.42)	20.0 (0.38)	20.7 (0.44)	20.5 (0.37)	19.6* (0.33)	20.5 (0.38)	21.6 (0.62)	20.4 (0.33)	20.9 (0.33)
<b>ALCOHOL</b>	16.6* (0.19)	16.4* (0.10)	16.4* (0.12)	16.4* (0.11)	16.6* (0.11)	16.8* (0.13)	17.0* (0.16)	16.9* (0.13)	17.1* (0.16)	17.1* (0.13)	17.4 (0.19)	17.3 (0.14)	17.3* (0.08)	17.6 (0.13)

LSD = lysergic acid diethylamide; nc = not comparable due to methodological changes; nr = not reported due to measurement issues; PCP = phencyclidine.

NOTE: Estimates shown are means with standard errors included in parentheses.

\* Difference between estimate and 2015 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2002-2015.



**Table A.12B Perceived Great Risk of Harm Associated with Substance Use and Perceived Availability of Substances among Individuals Aged 12 or Older, by Specific Substance Use Initiation Status**

<b>Specific Substance Risk/Availability</b>	<b>Past Year Initiates</b>	<b>Initiated Use Prior to Past Year</b>	<b>Never Used</b>
<b>PERCEPTIONS OF GREAT RISK<sup>1</sup></b>			
Cigarettes			
Smoke One or More Packs per Day	64.5 (1.78)	69.3 (0.38)	77.9 (0.35)
Marijuana			
Smoke Once a Month	4.6 (0.67)	11.6 (0.33)	43.2 (0.44)
Smoke Once or Twice a Week	7.5 (0.93)	16.0 (0.36)	52.7 (0.42)
Cocaine			
Use Once a Month	23.8 (3.03)	46.2 (0.86)	76.5 (0.26)
Use Once or Twice a Week	49.8 (3.38)	71.6 (0.76)	90.2 (0.18)
Heroin			
Try Once or Twice	** (**)	67.3 (2.23)	85.6 (0.20)
Use Once or Twice a Week	** (**)	85.3 (1.61)	94.4 (0.13)
LSD			
Try Once or Twice	15.1 (2.59)	38.1 (1.00)	73.9 (0.27)
Use Once or Twice a Week	46.4 (3.60)	68.9 (0.90)	86.4 (0.20)
Alcohol			
Have Five or More Drinks Once or Twice a Week	39.1 (1.27)	40.8 (0.34)	59.1 (0.61)
Have Four or Five Drinks Nearly Every Day	61.0 (1.30)	67.3 (0.32)	75.6 (0.51)
<b>PERCEIVED AVAILABILITY<sup>2</sup></b>			
Fairly or Very Easy to Obtain			
Marijuana	86.4 (1.28)	76.2 (0.43)	43.7 (0.43)
Cocaine	61.9 (3.31)	39.5 (0.79)	19.4 (0.27)
Crack	** (**)	44.3 (1.61)	18.9 (0.26)
Heroin	** (**)	48.9 (2.40)	15.4 (0.22)
LSD	53.3 (3.39)	17.0 (0.73)	12.8 (0.21)

\*\*Low precision; no estimate reported.

LSD = lysergic acid diethylamide.

NOTE: Estimates shown are percentages with standard errors included in parentheses.

NOTE: Past Year Initiates are defined as individuals who used the specific substance for the first time in the 12 months prior to the date of the interview. Prior to Past Year Initiates are defined as individuals who used the specific substance for the first time more than 12 months prior to the date of the interview, regardless of whether they last used that substance in the past 12 months or more than 12 months prior to the interview.

<sup>1</sup> Respondents with unknown Perceptions of Great Risk data were excluded from the respective analyses.

<sup>2</sup> Respondents with unknown Perceived Availability data were excluded from the respective analyses.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2015.

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