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Comparison of NSDUH Health and Health Care Utilization Estimates to Other National Data Sources

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Abstract

In addition to collecting data on substance use and mental health in the United States, the National Survey on Drug Use and Health also collects data on health conditions and health care utilization. It is important for users of these data to recognize how the NSDUH estimates differ from prevalence estimates produced by other nationally representative data sources, which have various objectives and scope, sampling designs, and data collection procedures. This report compares specific health conditions, overall health, and health care utilization prevalence estimates from the 2006 NSDUH and other national data sources. Methodological differences among these data sources that may contribute to differences in estimates are described. In addition to NSDUH, three of the data sources use respondent self-reports to measure health characteristics and service utilization: the National Health Interview Survey (NHIS), the Behavioral Risk Factor Surveillance System (BRFSS), and the Medical Expenditure Panel Survey (MEPS). One survey, the National Health and Nutrition Examination Survey (NHANES), conducts initial interviews in respondents' homes, collecting further data at nearby locations. Five data sources provide health care utilization data extracted from hospital records; these sources include the National Hospital Discharge Survey (NHDS), the Nationwide Inpatient Sample (NIS), the Nationwide Emergency Department Sample (NEDS), the National Health and Ambulatory Medical Care Survey (NHAMCS), and the Drug Abuse Warning Network (DAWN). Several

methodological differences that could cause differences in estimates are discussed, including type and mode of data collection; weighting and representativeness of the sample; question placement, wording, and format; and use of proxy reporting for adolescents.

There were no differences between the lifetime estimate of diabetes among adults from NSDUH (7.7 percent) and the estimates from NHIS, NHANES, BRFSS, and MEPS. The lifetime estimate of asthma among adults from NSDUH (10.7 percent) was similar to the estimate from NHIS (11.0 percent); estimates from other sources ranged from 9.6 percent to 14.2 percent. The lifetime estimates of stroke and high blood pressure among adults from NSDUH were both lower than estimates from NHIS, NHANES, and MEPS, and there was considerable variation between surveys in the rate of lifetime heart disease. Estimates of past year inpatient hospitalization among adults did not differ significantly between NSDUH and NHANES, but NSDUH was significantly higher than the estimates derived from NHIS and MEPS. For both adults and adolescents, the NSDUH estimates of receiving treatment in an ER in the past year were higher than estimates from other surveys. Demographic differences in the prevalence of chronic health conditions and health care utilization were similar across multiple surveys. Given all of the methodological differences among these data sources, the similarities among estimates are noteworthy.

1. Introduction

The National Survey on Drug Use and Health (NSDUH) is a major source of statistical information on the use of illegal drugs, alcohol, and tobacco and on mental health among members of the U.S. civilian, noninstitutionalized population aged 12 or older. NSDUH also includes questions on overall health, specific health conditions, and health care utilization, which can be used to generate population-based prevalence estimates. When analyzing health and health care utilization data from NSDUH, it is important to recognize how these data differ between national data sources. Awareness of these differences and the possible causes will enable analysts to appropriately use these data in analyses. Comparing prevalence estimates for health measures from different sources of data can be challenging because national surveys vary in multiple factors that can affect these estimates, such as their objectives and scope, sampling design, data collection procedures, and specific question wording and context.

The main objective of this *Data Review* is to compare health-related estimates based on the 2006 NSDUH with those from other national data sources for adults aged 18 or older and for adolescents aged 12 to 17. The *Data Review* briefly describes relevant methodological features of NSDUH and other selected surveys and data systems, particularly with regard to implications for assessing specific measures of health and health care utilization. Similarities and differences among estimates from NSDUH and other surveys are discussed in relation to these methodological features. Other data sources that were compared with 2006 NSDUH data include the following:

- 2006 National Health Interview Survey (NHIS)
- 2005-2006 National Health and Nutrition Examination Survey (NHANES)
- 2006 Behavioral Risk Factor Surveillance System (BRFSS)
- 2006 Medical Expenditure Panel Survey (MEPS)
- 2006 National Hospital Discharge Survey (NHDS)
- 2006 Nationwide Inpatient Sample (NIS)
- 2006 Nationwide Emergency Department Sample (NEDS)
- 2006 National Health and Ambulatory Medical Care Survey (NHAMCS)

This review focuses on prevalence estimates of specific health conditions generated from NSDUH and other national data sources. Lifetime history (based on self-report at the time of the survey) of the following specific diagnosed health conditions are analyzed: asthma, bronchitis, diabetes, heart disease, hepatitis, high blood pressure, lung cancer, sexually transmitted diseases (STDs), stroke, and ulcer. Although NHANES also collects physical measures for some of these conditions, only self-reports from NHANES were analyzed for this review. Other estimates covered include self-reported ratings of overall health, past year overnight hospitalization, and past year treatment in an emergency room (ER).

Data from 2006 were used for comparisons among these data sources because they were the most current publicly available data for all of these sources at the time that analyses were conducted. An additional set of analyses for internal consistency of the health utilization questions in NSDUH uses combined data from 2004 to 2008.

2. Design and Measures

This section presents a brief overview of the methodological characteristics of the relevant data sources including survey year, sponsor, sampling design, sample size, mode of administration, coverage and representation, and instruments used to develop specific health and health care utilization indicators from NSDUH and other national data sources.

2.1 General Design Characteristics

Table 1 lists the key methodological characteristics and instruments used by each data source. Highlights of the information presented in Table 1 are discussed in the following sections.

2.1.1 Survey Year

A key factor when comparing estimates from different surveys is consistency in the time of data collection.

Table 1. Comparison of Methodologies across National Data Sources

Main Sponsor	NSDUH 2006	NHIS 2006	NHANES 2005-2006	BRFSS 2006	MEPS 2006	NHDS 2006	NIS 2006	NEDS 2006	NHAMCS 2006
	SAMHSA	NCHS	NCHS	CDC	AHRQ	NCHS	AHRQ	AHRQ	NCHS
Purpose	To provide current data on substance use and mental illness prevalence for the U.S. population and each State	To monitor the health of the U.S. population through the collection and analysis of a broad range of health topics	To assess the health and nutritional status of the U.S. population by combining interviews and physical examinations	To collect uniform, State-based data on preventive health practices and risk behaviors	To provide nationally representative estimates of health care use, expenditures, sources of payment, and health insurance coverage for the U.S. population	To gather information on characteristics of inpatients discharged from non-Federal short-stay hospitals in the United States	To identify, track, and analyze national trends in health care utilization, access, charges, quality, and outcomes	To yield national estimates of emergency department visits and enable analyses of utilization patterns	To collect data on the utilization and provision of ambulatory care services in emergency and outpatient departments in the United States
Sampling Design	Household, multistage probability sample of the U.S. civilian, noninstitutionalized population aged 12 years old or older	Household, multistage probability sample of U.S. civilian, noninstitutionalized population (all ages)	Household, multistage, clustered probability sample of U.S. civilian, noninstitutionalized population (all ages)	Household, multistage, state-based random digit dialing sample of U.S. civilian, noninstitutionalized adults (aged 18 years old or older)	Panel survey with household component drawn from the prior year NHIS	Continuous nationally representative sample of inpatient utilization of short-stay non-Federal hospitals	Nationally representative sample of community hospital inpatient stays (all-payers, Federal and non-Federal)	Nationally representative sample of community hospital-based emergency department visits (all-payers, Federal and non-Federal)	Nationally representative sample of visits to emergency departments and outpatient departments of noninstitutional general and short-stay hospitals
Sample	44,931 adults aged 18 or older and 22,771 adolescents aged 12-17	54,553 adults aged 18 or older and 25,307 adolescents aged 12-17 for health status and hospitalization measures (of these, 24,275 adults and 3,536 adolescents were randomly sampled for health condition and ER utilization measures)	4,979 adults aged 20 or older and 2,288 adolescents aged 12-19	355,710 adults aged 18 or older from 50 States and DC; no adolescents sampled	Household component sample (n = 22,955 aged 18 or older) drawn from a subsample of households that participated in NHIS	Approximately 310,000 discharges aged 15 or older and 64,000 non-newborns under age 15 who were discharged from 438 responding hospitals in 2006	Sample drawn from States participating in HCUP. The 2006 NIS contains data for 8,074,825 patients (all ages) discharged from 38 States.	Sample drawn from States participating in HCUP. The 2006 NIS contains data for 25,702,597 visits to 955 hospital-based EDs in 24 States.	Sample drawn using four-stage probability design yielding 35,849 patient record forms from 362 hospitals in 2006
Mode	CAPI; ACASI for sensitive topics	CAPI	CAPI, ACASI, and physical exams	CATI	CAPI	N/A	N/A	N/A	N/A
Health Indicators Included	Specific health conditions General rating of health Health care utilization	Specific health conditions General rating of health Health care utilization	Specific health conditions General rating of health Health care utilization	Specific health conditions General rating of health	Specific health conditions General rating of health Health care utilization	Health care utilization	Health care utilization	Health care utilization	Health care utilization
Weighting	Final annual weights used	Final annual weights used	Two-year interview weights were used in all analyses except for STDs, where two-year exam weights were used	Final annual weights used	Person-level weight for 2006	Weights to account for hospital nonresponse	Discharge weights	Discharge weights	Weights to account for sampling selection probability, hospital nonresponse, and population weighting

NOTES: NSDUH = National Survey on Drug Use and Health; SAMHSA = Substance Abuse and Mental Health Services Administration; ACASI = audio computer-assisted self interviewing; NHIS = National Health Interview Survey; NCHS = National Center for Health Statistics; CAPI = computer-assisted personal interviewing; NHANES = National Health and Nutrition Examination Survey; BRFSS = Behavioral Risk Factor Surveillance System; CDC = Centers for Disease Control and Prevention; CATI = computer-assisted telephone interviewing; MEPS = Medical Expenditure Panel Survey; NHDS = National Hospital Discharge Survey; NIS = Nationwide Inpatient Survey; NEDS = National Emergency Department Sample; AHRQ = Agency for Healthcare Research and Quality; HCUP = Health Care Utilization Project; NHAMCS = National Hospital and Ambulatory Medical Care Survey; N/A = not assessed.

All comparisons among the data sources in this report use 2006 data, with the exception of NHANES, which uses data from 2005 and 2006 because NHANES data are released on public use data files every 2 years. Standardizing the year of data collection across the compared estimates removes differences in data collection period as a potential reason for differences among estimates.

2.1.2 Purpose of Data Collection

The principal purpose of each survey can have a major impact on the content and context of questions about health conditions and health care utilization. For example, the purpose of NSDUH, sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), is to provide data on substance use and mental health for the Nation, and thus chronic health conditions and health care utilization are not the primary focus of the survey. In contrast, the purpose of the NHIS, sponsored by the National Center for Health Statistics (NCHS) within the Centers for Disease Control and Prevention (CDC), is to monitor the health of the Nation, and thus health conditions and health care utilization are highly relevant to and consistent with the main focus of the NHIS interview. This difference could affect where health questions are placed in the interview—including the context in which these questions appear—and how respondents answer them. Differences in the specific measures used in the surveys, which are at least partially determined by variations in the purpose of the surveys, are described in Section 2.2 of this report.

2.1.3 Type and Mode of Data Collection

Four of the data sources (NSDUH, NHIS, BRFSS, and MEPS) are surveys that use respondent self-reports to measure health characteristics and service utilization. NHANES conducts interviews in the respondent's home and later conducts follow-up interviews and physical examinations (including blood collection) for objective measures on health in a mobile examination center (MEC), although data from the physical examinations are not included in this review. The remaining four data sources (NHDS, NIS, NEDS, and NHAMCS) include health care utilization data

extracted from hospital records. Estimates of health care utilization based on hospital records may be subject to very different reporting errors or missing data patterns compared with self-reports.

The mode of survey administration also differed among surveys. Different modes of administration can provide different levels of comfort and privacy for the respondent, which can affect their truthfulness when providing self-reports of sensitive issues such as health conditions. The NHIS and MEPS used computer-assisted personal interviewing (CAPI), which involves an interviewer reading questions to the respondent and recording his or her answers on a computer. NSDUH questions on general health used CAPI, whereas questions about specific health conditions and health care utilization used audio computer-assisted self-interviewing (ACASI), which involves the respondent reading the questions silently on the computer screen and/or listening to the questions read through headphones in a private setting and entering his or her responses directly into the computer. NHANES used CAPI for questions in the household interview and some self-report components of the MEC; however, questions regarding sexually transmitted diseases were administered using ACASI in the MEC to provide increased privacy. The BRFSS utilized computer-assisted telephone interviewing (CATI), which is similar to CAPI except the interview is conducted over the telephone rather than face to face. Important differences in estimates derived from in-person and telephone interviews have been noted (St-Pierre & Beland, 2004). Because telephone interviews are typically shorter, the interviewer lacks an opportunity to develop rapport (e.g., cannot give nonverbal cues) with the respondent as in face-to-face interviewing, and the respondent may feel more anonymous with telephone rather than face-to-face interviewing (Shuy, 2001).

Another issue that could affect estimates for adolescents is whether the adolescents responded for themselves or whether parents answered for the adolescents. Although it may be the case that parents are not always aware of all aspects of their children's health or health care utilization (e.g., an adolescent may have received

treatment in an ER without the responding parent’s knowledge), it may also be the case that the parents have a better memory for specific diagnoses received by their children and that they may better understand the survey questions. For these reasons, it is not possible to determine whether parent or adolescent responses are more reliable and accurate. In NSDUH, adolescents aged 12 to 17 provided responses for themselves, whereas in NHIS and MEPS, parents responded for their adolescent children. In NHANES, adolescents aged 16 or 17 answered for themselves, whereas parents provided responses for their children if they were aged 15 or younger.

2.1.4 Coverage and Representativeness of Data

The samples for NSDUH, NHIS, NHANES, BRFSS, and MEPS are all designed to yield nationally representative estimates of the U.S. civilian, noninstitutionalized population. Note, however, that the BRFSS design included only households with landline telephones, excluding households that have no telephone or have cell phones only. Response rates also tend to be lower for telephone surveys such as BRFSS than for surveys conducted in person (Galea, 2007). First, assumptions need to be made in telephone surveys about whether randomly dialed phone numbers represent eligible households if no one is ever contacted at the selected telephone number. For in-person surveys, interviewers often can screen out ineligible dwelling units (e.g., vacant, not a dwelling unit) by physically visiting the sampled address. Second, once telephone interviewers reach an eligible household, they face greater challenges than in-person interviewers for keeping persons engaged in the process of selecting a sample member and proceeding to an interview.

The representativeness of the data to the civilian noninstitutionalized national population can be an issue for some health care utilization data sources. For example, the data in NHDS were based on discharges from a sample of short-stay non-Federal hospitals (e.g., not including Veterans Administration hospitals), and data in NHAMCS were based on emergency department visits from a sample of noninstitutional general and short-stay, exclusive of Federal, military,

and Veterans Administration hospitals. Data from NIS (based on inpatient discharges) and NEDS (based on ER discharges) include data from a sample of both Federal and non-Federal hospitals. Self-reports of health care utilization from NSDUH and the comparison surveys also include stays at all types of hospitals.

2.2 Instrumentation

This section addresses how differences in wording of the question, the mode, and the order or context in which they are being measured may have affected the estimates obtained from the different surveys.

2.2.1 Measurement of Specific Health Conditions

Table 2 briefly lists the characteristics for specific health conditions and general health measures for each of the data sources. Regarding specific health conditions, NSDUH respondents were presented with a list of 20 health conditions using ACASI, and they were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. The respondents could also select “none of the above.” The increased privacy from the ACASI methodology in NSDUH and for the sexually transmitted disease questions in NHANES is intended to result in more accurate self-reports of sensitive health conditions.

In the comparison surveys, the respondents were directly asked by the interviewer whether a doctor or other health professional had ever told them they had each health condition (separate questions for each condition). Having to provide a “yes” or “no” answer for each specific question, rather than selecting all relevant conditions that apply from a list, could result in higher estimates in the comparison surveys relative to NSDUH. Survey experiments using self-administered paper-and-pencil or Web questionnaires have indicated that respondents may not choose all applicable responses when presented with a list and instructed to choose all that apply (Rasinsky, Mingay, & Bradburn, 1994; Smith, Dillman, Christian, & Stern, 2006). Furthermore, respondents who choose applicable response options closer to the top of a list may consider their task in answering the question to be finished,

Table 2. Comparison of Specific Health Condition and General Health Measures across National Data Sources

Measure	NSDUH 2006	NHIS 2006	NHANES 2005-2006	BRFSS 2006	MEPS 2006
Specific Health Conditions (Lifetime Stem Question)	Presented with list of health conditions, self-reported whether a doctor or other medical professional had ever told respondent that they had each condition.	For all conditions except hepatitis: Have you ever been told by a doctor or other health professional that you had {condition}? For hepatitis: Have you ever had hepatitis?	Has a doctor or other health professional ever told you that you had {condition}?	Have you ever been told by a doctor, nurse, or other health professional that you had {condition}?	Have you ever been told by a doctor or other health professional that you had {condition}?
Specific Health Conditions Measured (Lifetime), in Order Administered	<p>Adults</p> <ul style="list-style-type: none"> • Asthma • Bronchitis • Diabetes • Heart disease • Hepatitis • High blood pressure • Lung cancer • Sexually transmitted disease, such as chlamydia, gonorrhea, herpes, or syphilis • Stroke • Ulcer or ulcers <p>Adolescents (self-reports)</p> <ul style="list-style-type: none"> • Asthma • High blood pressure 	<p>Adults</p> <ul style="list-style-type: none"> • Hypertension, also called high blood pressure (and one follow-up question) • Heart disease <ul style="list-style-type: none"> – Coronary heart disease – Angina, also called angina pectoris – Heart attack (also called myocardial infarction) – Any kind of heart conditions (other than those above) • Stroke (two questions after stroke) • Asthma (and three follow-up questions) • Ulcer (examples given of stomach, duodenal, or peptic, and one follow-up question) • Cancer or any malignancy (can report up to three kinds of cancer, and one follow-up question for each kind of cancer) <ul style="list-style-type: none"> – Lung cancer (if any cancer reported) • Diabetes or sugar diabetes (other than during pregnancy, and up to 14 follow-up questions) • Hepatitis (in the Adult Access to Care and Utilization Section) <p>(Note that chronic bronchitis also is included but only for the past 12 months.)</p>	<p>Adults</p> <ul style="list-style-type: none"> • Asthma (and up to four follow-up questions) • Heart disease (preceded by questions about overweight, anemia, blood transfusions, vision, menstrual periods [females], school days missed because of illness/injury [18- or 19-year-olds]) <ul style="list-style-type: none"> – Congestive heart failure – Coronary heart disease – Angina, also called angina pectoris – Heart attack (also called myocardial infarction) • Stroke • Chronic bronchitis (preceded by question about emphysema) • Cancer or any malignancy <ul style="list-style-type: none"> – Lung cancer (if any cancer reported) • Diabetes or sugar diabetes (other than during pregnancy; preceded by up to 13 questions about kidney problems, and up to 31 follow-up questions) • Hypertension, also called high blood pressure (and up to 14 follow-up questions for hypertension and cholesterol) • Sexually transmitted diseases (aged 20-59 only) <ul style="list-style-type: none"> – Genital herpes – Genital warts – Gonorrhea – Chlamydia <p>Adolescents (self-reports for those aged 16 or 17, joint proxy report with parent/guardian for respondents under 16 years old)</p> <ul style="list-style-type: none"> • Asthma • Diabetes or sugar diabetes (other than during pregnancy) • Hypertension, also called high blood pressure (aged 16 or 17 only) 	<p>Adults</p> <ul style="list-style-type: none"> • Diabetes (follow-up question regarding diabetes during pregnancy allows for exclusion) • Angina or coronary heart disease (preceded by three questions about oral health) <ul style="list-style-type: none"> – Heart attack (also called myocardial infarction) • Stroke • Asthma 	<p>Adults</p> <ul style="list-style-type: none"> • Diabetes or sugar diabetes (other than during pregnancy) • Asthma (and up to nine follow-up questions) • Hypertension, also called high blood pressure (other than during pregnancy) (and up to three follow-up questions, followed by up to two questions about high cholesterol) • Heart disease <ul style="list-style-type: none"> – Coronary heart disease – Angina, also called angina pectoris – Heart attack (also called myocardial infarction) – Any kind of heart conditions (other than the ones asked about) • Stroke or TIA (transient ischemic attack, sometimes referred to as a ministroke) <p>Adolescents (parental reports)</p> <ul style="list-style-type: none"> • Asthma • Diabetes or sugar diabetes (other than during pregnancy)

(continued)

Table 2. Comparison of Specific Health Condition and General Health Measures across National Data Sources (continued)

Measure	NSDUH 2006	NHIS 2006	NHANES 2005-2006	BRFSS 2006	MEPS 2006
General Health Stem Question	<p>Located in core demographics section</p> <ul style="list-style-type: none"> • Would you say your health in general is excellent, very good, good, fair, or poor? <p>Adolescent rating from self-report</p>	<p>Located in the family questionnaire; the respondent is asked to rate the health status of all family members</p> <ul style="list-style-type: none"> • Would you say your (or their) health in general is excellent, very good, good, fair, or poor? <p>Adolescent rating from parent-report</p>	<p>First question in the Hospital Utilization and Access to Care section of the home interview</p> <ul style="list-style-type: none"> • Would you say your health in general is excellent, very good, good, fair, or poor? <p>Adolescent rating from parent-report</p>	<p>First question of survey</p> <ul style="list-style-type: none"> • Would you say that in general your health is excellent, very good, good, fair, or poor? 	<p>Respondents were asked to rate the health of every member of the family</p> <ul style="list-style-type: none"> • In general, compared to other people of (PERSON)'s age, would you say that (PERSON)'s health is excellent, very good, good, fair, or poor? <p>Adolescent rating from parent-report</p>

NOTES: NSDUH = National Survey on Drug Use and Health; NHIS = National Health Interview Survey; NHANES = National Health and Nutrition Examination Survey; BRFSS = Behavioral Risk Factor Surveillance System; MEPS = Medical Expenditure Panel Survey; TIA = transient ischemic attack; N/A = not assessed.

even if they do not endorse applicable responses closer to the bottom of the list (i.e., satisficing) (Galesic, Tourangeau, Couper, & Conrad, 2008; Rasinsky et al., 1994). Thus, if instructing respondents to choose all applicable health conditions from a list yields lower estimates in NSDUH than in surveys that use separate yes/no questions, differences between NSDUH and other surveys might be expected to be more pronounced for health conditions in NSDUH that are closer to the bottom of the list.

There was also some variation among surveys in the specific wording of questions related to specific health conditions. These specific variations are presented in **Table 3** and are discussed alongside the presentation of estimates in Section 3. As noted previously, NHANES collected numerous physical measures in addition to self-reported data. NHANES data presented in this review are based on respondent self-reports from survey components in NHANES, but NHANES participants may have anticipated subsequent physical measurements of some health conditions to verify their responses. The existence of the MEC component

may have led respondents to be more truthful when reporting some health conditions, although the literature regarding possible increases in the validity of self-report data based on the perception of subsequent physical measurement is mixed (Aguinis, Pierce, & Quigley, 1993; Brener, Billy, & Grady, 2003).

Variations in the placement of questions within the overall survey might also affect comparisons among these surveys. For example, the main focus of NSDUH is to measure substance use prevalence; measurement of specific health conditions occurs relatively late in the interview, following several sections containing questions about substance use, problems associated with substance use, and substance abuse treatment. In contrast, the other surveys, which have a greater focus on physical health issues, include the questions about specific health conditions relatively earlier in the interview. Thus, NSDUH respondents might have been more fatigued, wary of possible follow-up questions, and susceptible to response burden when arriving at the specific health condition module. These factors could have had the effect of reducing the prevalence of the

Table 3. Differences in Wording of Specific Health Condition Assessments, by Survey¹

NSDUH 2006	NHIS 2006	NHANES 2005-2006	BRFSS 2006	MEPS 2006
Diabetes	Diabetes or sugar diabetes ... other than during pregnancy	Diabetes or sugar diabetes	Diabetes other than during pregnancy	Diabetes or sugar diabetes... other than during pregnancy
Heart Disease	Coronary heart disease, angina, heart attack (myocardial infarction), or any other type of heart disease	Congestive heart failure, coronary heart disease, angina pectoris, and heart attack (myocardial infarction)	Coronary heart disease, including angina, and heart attack (myocardial infarction)	Coronary heart disease, angina, heart attack (myocardial infarction), or any other type of heart disease
High Blood Pressure	Hypertension, also called high blood pressure	Hypertension, also called high blood pressure	N/A	Hypertension, also called high blood pressure
Sexually Transmitted Disease (such as Chlamydia, Gonorrhea, Herpes, or Syphilis)	N/A	Genital herpes, genital warts, gonorrhea, and chlamydia	N/A	N/A
Lung Cancer (Stand-alone Question)	First asked about cancer in general, followed by asking about type of cancer	First asked about cancer in general, followed by asking about type of cancer	N/A	N/A
Stroke	Stroke	Stroke	Stroke	Stroke or TIA, followed by a definition: TIA is a transient ischemic attack which is sometimes referred to as a ministroke
Ulcer or Ulcers	Ulcer (this could be a stomach, duodenal, or peptic ulcer)	N/A	N/A	N/A
Bronchitis	Chronic bronchitis	Chronic bronchitis	N/A	N/A

¹ Other specific health conditions investigated did not have wording differences across surveys.

NOTES: NSDUH = National Survey on Drug Use and Health; NHIS = National Health Interview Survey; NHANES = National Health and Nutrition Examination Survey; BRFSS = Behavioral Risk Factor Surveillance System; MEPS = Medical Expenditure Panel Survey; TIA = transient ischemic attack; N/A = not assessed.

specific health conditions in NSDUH relative to the other surveys.

A final issue is that in some surveys, questions about some specific health conditions are asked only of respondents in specific age groups. For example, NHANES questions regarding sexually transmitted diseases are only available for respondents aged 20 to 59, whereas NSDUH questions on sexually transmitted diseases are asked of all respondents aged 12 or older. In certain cases (as in this example), direct comparisons between NSDUH and NHANES are still possible by subsetting the dataset to comparable subpopulations.

2.2.2 Measurement of General Health

To assess general health, NSDUH and the four comparison national datasets all utilize a variation of one of the items included in the CDC Health Related Quality of Life-4 (HRQOL-4), which asks respondents to rate their general health on a five-point scale from “excellent” to “poor.” This instrument has moderate to excellent test-retest reliability (Andresen, Catlin, Wyrwich, & Jackson-Thompson, 2003), good predictive validity of morbidity, health care utilization, and mortality and concurrent validity of chronic diseases and disability (Campbell, Crews, Moriarty, Zack, & Blackman, 1999; Currey, Rao, Winfield, & Callahan, 2003; Dominick, Ahern, Gold, & Heller, 2002). As Table 3 shows, despite slight differences in the order of the wording of the general health question, the response categories are the same in each of the five nationally representative surveys. Among adolescents aged 12 to 17, general rating of health can be compared between NSDUH and three other datasets (NHIS, NHANES, and MEPS).

2.2.3 Measurement of Health Care Utilization

Table 4 briefly lists the characteristics for inpatient hospitalization and ER utilization measures for each of the data sources. Although the health care utilization estimates from each of the five surveys were derived from retrospective respondent self-reports, the estimates from each of the four administrative records-based surveys used data from the sampled hospital discharges. These hospital administrative databases include

information for selected discharges from the hospital, giving persons discharged from a hospital multiple times in a year an increased probability of being included in the discharge dataset.

For comparison with the surveys that provide person-level estimates, the NHDS and NIS counts of total hospital discharges were converted to estimated unduplicated persons (based on the distribution of annual hospital admissions per person in MEPS) and divided by midyear census population estimates to derive prevalence rates. For NEDS and NHAMCS, total ER discharges were converted to estimated unduplicated persons (based on the distribution of annual ER visits per person in MEPS) and divided by midyear census population estimates to derive prevalence rates. Using this methodology, the overall average number of admissions or ER visits in the MEPS was used to calculate the proportion of people with a visit in each of these data sources (NHDS, NIS, NEDS, NHAMCS) for which the average numbers were not available. However, it may be that the average number of admissions or ER visits per person obtained from MEPS is different than the average number per person obtained from other surveys. Also, the overall MEPS average that was used may not accurately reflect the average number of admissions or ER visits for specific gender and race/ethnicity subgroups. Because of the questionable validity of these methods, we consider estimates of the number of persons with a hospital or ER visit included in this report to be exploratory.

In addition, there were differences among the surveys in the questions used to measure hospitalizations and ER visits (Table 4). Regarding hospital stays, NSDUH required that the hospitalization last at least overnight and specified “admitted as an inpatient” in the question. NHIS, NHANES, and MEPS surveys did not specify “inpatient” in the question about hospitalizations, and MEPS did not specify that the hospital stay be overnight. Overnight stays in the ER were excluded from hospital stays for NHIS and zero night hospital stays were excluded for MEPS. Regarding ER visits, NSDUH asked how many different times the respondent had been treated in an ER for any reason in the past 12 months, MEPS asked whether

Table 4. Comparison of Health Care Utilization Measures across National Data Sources

Measure	NSDUH 2006	NHIS 2006	NHANES 2005-2006	MEPS 2006	NHDS 2006	NIS 2006	NEDS 2006	NHAMCS 2006
Inpatient Hospitalization Assessment	General: During the past 12 months, have you stayed overnight or longer as an inpatient in a hospital (also, later in the survey ...for a mental health problem and ...for alcohol or drug use)? How many nights were you an inpatient in a hospital (also, later in the survey...for mental health treatment, ...private or public psychiatric hospital, ...psychiatric unit of a general hospital, ...medical unit of a general hospital for mental health care, ... some other type of hospital for mental health care, and... to receive treatment or counseling for emotional or behavioral problems not caused by alcohol or drugs)?	“Including all infants born in a hospital, has anyone in the family been hospitalized OVERNIGHT in the past 12 months? Do not include an overnight stay in the emergency room.” Were you hospitalized overnight in the past 12 months? [If yes to above]: How many nights were you in the hospital?	During the past 12 months, were you a patient in a hospital overnight?	Between {two dates: one year ago through today’s date}, were you a patient in a hospital? How many nights were you in the hospital?	Total hospital discharges were converted to estimated unduplicated persons (based on the distribution of annual hospitalizations in the MEPS) and divided by midyear census population estimates to derive prevalence (exploratory).	Total hospital discharges in the NIS were converted to estimated unduplicated persons (based on the distribution of annual hospitalizations in the MEPS) and divided by midyear census population estimates to derive prevalence (exploratory).	N/A	N/A
Emergency Room Assessment	During the past 12 months, that is, since {date 1 year ago}, how many different times have you been treated in an emergency room (ER) for any reason (also, ...for alcohol, drugs, or both, and ...for cocaine, heroin, marijuana, PCP, LSD, or methamphetamine)?	During the past 12 months, how many times have you gone to a hospital emergency room about your own health?	N/A	Between {two dates: one year ago through today’s date}, were you seen in a hospital emergency room?	N/A	N/A	Total emergency department visits in the NEDS were converted to estimated unduplicated persons (based on the distribution of annual emergency department visits in the MEPS) and divided by midyear census population estimates (exploratory).	Total emergency department visits in the NHAMCS were converted to estimated unduplicated persons (based on the distribution of annual emergency department visits in the MEPS) and divided by midyear census population estimates (exploratory).

NOTES: NSDUH = National Survey on Drug Use and Health; NHIS = National Health Interview Survey; NHANES = National Health and Nutrition Examination Survey; MEPS = Medical Expenditure Panel Survey; NHDS = National Hospital Discharge Survey; NIS = Nationwide Inpatient Survey; NEDS = National Emergency Department Sample; NHAMCS = National Hospital and Ambulatory Medical Care Survey; N/A = not assessed.

the respondent had been seen in an ER in the past year, and NHIS asked whether an individual had gone to a hospital ER for their own health in the past 12 months.

2.3 Data Analysis

All analyses utilized publicly available data sources, except NSDUH, for which the restricted-use data file for 2006 was used. If the public-use NSDUH dataset was used to examine individual health indicators, the estimates would be slightly different because of the statistical disclosure limitation methods applied to the NSDUH public-use file, though the overall conclusions would probably not change. Weighted population estimates and associated standard errors for all data were obtained using SUDAAN to take into account the complex survey designs. For the BRFSS, a final analysis weight was assigned to each respondent according to the adult population in each State (CDC, 2007b). However, weighted national estimates presented for the BRFSS may differ somewhat from median percentages for the 50 States and the District of Columbia from the 2006 BRFSS published elsewhere.

Statistical tests (t-tests) have been conducted for all statements appearing in the text that compare estimates between surveys (e.g., NSDUH vs. NHIS). Tests between estimates from NSDUH and other datasets assumed no covariance (i.e., independent, mutually exclusive samples). Because the degrees of freedom (DF) for the other studies were not known, statistical tests of estimates between NSDUH and other surveys each assumed 900 degrees of freedom, which is the degrees of freedom based on the NSDUH sampling design. Unless explicitly stated that a difference is not statistically significant, all statements that describe differences are significant at the .05 level.

For selected measures, pairwise t-tests also were conducted between estimates from demographic subgroups within surveys (e.g., members of different age groups within a survey) to examine the consistency of the patterns within demographic subgroups across the datasets. These pairwise tests assumed that these demographic groups were independent within each survey. To avoid erroneous conclusions being drawn based on these significance tests between subgroup

members within a given survey, a conservative threshold ($p < .01$) was used for defining a difference as statistically significant.

Statistically significant differences are described using terms such as “higher,” “lower,” “more likely,” and “less likely.” Statements that use terms such as “similar to” or “consistent with” denote that a difference between estimates is not statistically significant. In addition, a set of estimates for a given survey (or surveys) or for population subgroups may be presented without a statement of comparison; in these instances, a statistically significant difference between these estimates is not implied, and testing may not have been conducted.

NCHS does not recommend publishing estimates for all Hispanics for 2005-2006 NHANES data because the proportion of non-Mexican American Hispanics in the NHANES sample from these years is much smaller than in the U.S. population, and thus the national estimates for all Hispanics is considered unreliable. However, estimates are provided in this report for the purpose of comparison across surveys.

3. Results and Comment

3.1 Comparison of Estimates for Specific Health Conditions

This section includes comparisons among surveys in the lifetime history of diagnosis of specific health conditions. These comparisons are presented separately for adults aged 18 or older and adolescents aged 12 to 17.

3.1.1 Adults

Table 5 presents lifetime estimates among adults aged 18 or older for the specific health conditions included in NSDUH and other national data sources that have corresponding measures of specific health conditions (NHIS, NHANES, BRFSS, and MEPS).

Asthma. The lifetime estimate of asthma from NSDUH (10.7 percent) was similar to the estimate from NHIS (11.0 percent), lower than the estimate from NHANES (14.2 percent) and BRFSS (12.8 percent), and higher than the estimate from MEPS

(9.6 percent). The wording of the questions was similar among surveys, suggesting that factors other than question wording account for these differences. Although NSDUH used a checklist format to ask respondents about all health conditions and the other surveys repeated the introductions for whether a doctor ever told respondents that they had asthma, this was the second health condition listed in NSDUH, after anxiety disorder. Consequently, placement of asthma in the list of NSDUH health conditions is not a likely explanation for differences between NSDUH and other surveys. The asthma question was placed early in the NHANES questionnaire, prior to questions regarding other health conditions. The NHANES estimates are the highest. Questionnaires for BRFSS, NHIS, and MEPS also placed the asthma question later, after sections addressing other health conditions. However, the variability in the rates among surveys argues against respondent fatigue accounting for these differences.

Bronchitis. The lifetime estimate of bronchitis from NSDUH (11.0 percent) was higher than the estimate for NHANES (6.6 percent), which is the only other data source that includes a measure of lifetime

diagnosis of bronchitis. One possible explanation for this difference is that the NSDUH question asks only about “bronchitis,” whereas the NHANES question asks specifically about “chronic bronchitis.” Bronchitis was the third health condition listed in NSDUH. As a result, the order of placement of bronchitis within the list of health conditions is not a likely explanation of this difference.

Diabetes. There were no differences between the lifetime estimate of diabetes from NSDUH (7.7 percent) and the estimates from NHIS, NHANES, BRFSS, and MEPS. NHIS, NHANES, and MEPS instructed respondents to exclude diabetes related to pregnancy, and in the current study, gestational diabetes was excluded from BRFSS estimates. The NSDUH question does not indicate such an exclusion for diabetes during pregnancy. Estimates from the 2006 BRFSS show that 0.8 percent of adult females had a history of diagnosed diabetes during pregnancy, suggesting that the NSDUH estimate may have been slightly lower if this exclusion had been specified. Diabetes was the sixth health condition listed in NSDUH.

Table 5. Percent of Persons Aged 18 or Older Who Had Ever Been Told They Had Different Chronic Health Conditions

Chronic Health Condition	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006 : Percent (SE)
Asthma	10.7 (0.23)	11.0 (0.26)	14.2 (0.68)	12.8 (0.13)	9.6 (0.28)
Bronchitis	11.0 (0.24)	N/A	6.6 (0.44)	N/A	N/A
Diabetes	7.7 (0.26)	7.8 (0.22)	7.6 (0.48)	8.0 (0.09)	7.9 (0.23)
Heart Disease	5.9 (0.22)	11.0 (0.25)	8.8 (0.61)	6.8 (0.08)	3.2 (0.17)
Hepatitis	1.7 (0.12)	2.9 (0.13)	N/A	N/A	N/A
High Blood Pressure	21.8 (0.37)	27.0 (0.39)	28.7 (1.03)	N/A	26.7 (0.45)
Lung Cancer	0.2 (0.03)	0.2 (0.03)	N/A	N/A	N/A
Sexually Transmitted Disease ²	3.8 (0.13)	N/A	10.3 (1.01)	N/A	N/A
Stroke	1.2 (0.10)	2.6 (0.12)	2.9 (0.36)	2.7 (0.05)	2.4 (0.12)
Ulcer or Ulcers	4.0 (0.16)	6.6 (0.21)	N/A	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

² Estimates for sexually transmitted diseases were only available for those aged 20 to 59 in NHANES.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = not assessed.

SE = standard error.

Heart Disease. There was considerable variation between surveys in the rate of lifetime heart disease, with the NSDUH estimate of 5.9 percent being lower than the estimate from NHIS (11.0 percent), NHANES (8.8 percent), and BRFSS (6.8 percent) and higher than the estimate from MEPS (3.2 percent). One possible explanation for the lower rate in NSDUH relative to NHIS is that NHIS asks separate questions for four types of conditions: coronary artery disease, angina pectoris, a heart attack, or any other type of heart disease. NHANES has four separate questions for congestive heart failure, coronary heart disease, angina pectoris, and heart attack. BRFSS estimates are based on two questions, one that asks about heart disease (including angina) and a second that asks specifically about heart attack; however, other heart diseases are not assessed. NSDUH captures information about this condition in a single response that asks about heart disease (no further definition given). Asking multiple questions in NHIS, NHANES, and BRFSS gives respondents multiple opportunities to report heart disease, and the specific definitions provided may have given respondents a clearer idea of what conditions are considered heart disease. Heart disease was the seventh health condition listed in NSDUH.

Both NHIS and MEPS ask about heart disease using the same question design. In both surveys, questions about heart disease also follow questions about hypertension (i.e., another cardiovascular disorder). In NSDUH, heart disease appears in the list of health conditions between diabetes and hepatitis. Given that the NHIS estimate was higher than the NSDUH estimate but the MEPS estimate was lower than the NSDUH estimate, these differences in question wording and context do not explain the differences in estimates from these three surveys.

Hepatitis. The lifetime estimate of hepatitis from NSDUH (1.7 percent) was lower than the estimate for NHIS (2.9 percent), which is the only other data source that includes a measure of hepatitis. NHIS asks whether respondents ever had hepatitis without specifying that a doctor told them they had it. Hepatitis was the eighth health condition listed in NSDUH. The NHIS question about hepatitis occurred in a later section of

the interview relative to questions about other health conditions.

High Blood Pressure. The lifetime estimate of high blood pressure from NSDUH (21.8 percent) was lower than the estimate from NHIS (27.0 percent), NHANES (28.7 percent), and MEPS (26.7 percent). One possible explanation for this is that the NSDUH question asked only about “high blood pressure.” The other surveys asked about “hypertension, also called high blood pressure.” Regarding the order in which health conditions were assessed, high blood pressure was near the middle of the alphabetized list of 16 health conditions included in NSDUH, whereas hypertension was the first health condition about which NHIS respondents were asked, and NHANES respondents were asked questions about several other health conditions before they were asked about hypertension. As noted previously, the perception of physical measurement in the MEC component of NHANES may have influenced respondents to be more truthful than respondents in other surveys, although the similar rates for NHANES, NHIS, and MEPS argues against this. In all surveys, a single question inquiring about hypertension may have caused respondents to report any isolated instances of high blood pressure, regardless of whether a chronic health problem exists; therefore, all surveys likely overestimate hypertension prevalence in the population. NHIS respondents were also asked, “Were you told on two or more DIFFERENT visits that you had hypertension, also called high blood pressure?” later in the questionnaire; this question yields a lower prevalence (23.5 percent).

Lung Cancer. The lifetime history of diagnosed lung cancer was 0.2 percent both from NSDUH and from NHIS. NHANES also includes a measure of lifetime lung cancer, but that estimate is not presented due to low precision.

Sexually Transmitted Diseases. There was considerable variation in the lifetime history of STDs between NSDUH (3.8 percent) and NHANES (10.3 percent). Both NSDUH and NHANES asked questions related to STDs using ACASI, which provides privacy. NHANES limited these questions to individuals aged 14 to 59; however, public data were available only for

those aged 20 to 59. When restricted to respondents aged 20 to 59, the NSDUH estimate of lifetime history of STDs was still comparatively low (4.7 percent). The lower rate in NSDUH relative to NHANES could be due to the format and content of the questions; NSDUH includes a single question that asks about STDs such as chlamydia, gonorrhea, herpes, or syphilis. NHANES includes four different questions that ask about genital herpes, genital warts, gonorrhea, and chlamydia. Asking four separate questions in NHANES rather than one single question in NSDUH could result in a higher prevalence, as could the specific mention of genital warts in NHANES; one recent study estimated that nearly 6 percent of the adult population has been diagnosed with genital warts (Dempsey & Koutsky, 2008). Note that the NHIS includes a measure of STDs in the past 5 years, but this estimate is not presented because it is not directly comparable with the lifetime history estimates from NSDUH and NHANES.

Stroke. The lifetime history of diagnosed stroke from NSDUH (1.2 percent) was lower than estimates from the NHIS, NHANES, BRFSS, and MEPS, which ranged from 2.4 to 2.9 percent. The wording of the question on stroke was similar with the exception of MEPS, which asked about stroke or transient ischemic attack (TIA) or ministroke. Because the NSDUH estimate was lower than all of the other surveys, including MEPS, differences in estimates for stroke are not likely to be attributable to wording differences alone. Item placement might explain the lower estimate of stroke in NSDUH. Specifically, stroke was the 17th out of 20 health conditions listed in NSDUH, appearing between sleep apnea and tinnitus. In contrast, stroke was the third health condition in NHIS, after questions about hypertension and heart disease). In NHANES, BRFSS, and MEPS, the question about stroke appeared immediately after questions about heart disease. Consequently, asking questions about stroke in the context of questions about other cardiovascular conditions could have affected reports in these other surveys. In addition, although stroke was asked relatively late in the BRFSS telephone interview, BRFSS asked fewer follow-up questions about specific health conditions than NHIS and NHANES did.

Ulcer. The lifetime history of diagnosed ulcers in NSDUH for adults was lower than the corresponding NHIS estimate (4.0 vs. 6.6 percent). One possible reason is that the NSDUH question asked only about “ulcer or ulcers,” whereas the NHIS question specified that an ulcer could refer to a stomach, duodenal, or peptic ulcer. Also, the NSDUH questionnaire includes ulcer at the end of the medical conditions checklist (last out of 20 conditions), after respondents may have grown fatigued with the questions or forgotten that the stem question asked whether they had ever been told that they had each condition.

Specific Health Conditions by Demographic Characteristics.

Patterns of self-reported lifetime history of diagnosis of selected specific health conditions (asthma, bronchitis, diabetes, heart disease, and high blood pressure) across demographic subgroups for each survey are presented in Appendix A (**Tables A1 to A5**). For ease of presentation, the discussion in the text will be limited to two health conditions included in all the comparison surveys, asthma and diabetes, which are presented in **Figures 1 to 6**.

Although in some instances there was considerable variation among surveys in the lifetime history of diagnosed asthma for demographic subgroups, overall the patterns of differences between demographic groups were generally consistent across surveys. For example, data from all five surveys indicate that asthma in adults was more prevalent among females than males and was less prevalent among Hispanics than among non-Hispanic whites or blacks (Figures 1 and 3). In NSDUH, for example, the lifetime history of diagnosed asthma in adults was 12.4 percent for females versus 9.0 percent for males and was 7.6 percent for Hispanics versus 11.1 percent for non-Hispanic whites and 12.2 percent for non-Hispanic blacks. As shown in Figure 2, all the surveys other than MEPS found that the lifetime history of diagnosed asthma was highest among young adults aged 18 to 25 than for persons in other age groups; MEPS indicated that young adults were more likely to have had asthma than adults aged 26 to 44 and those aged 45 to 64 (11.2 vs. 8.7 and 9.5 percent, respectively) but differences between adults aged 18 to 25 and those aged 65 or older were not significant at the $p < .01$ level.

Figure 1. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Asthma, by Gender: 2006 NSDUH, NHIS, NHANES, BRFSS, and MEPS¹

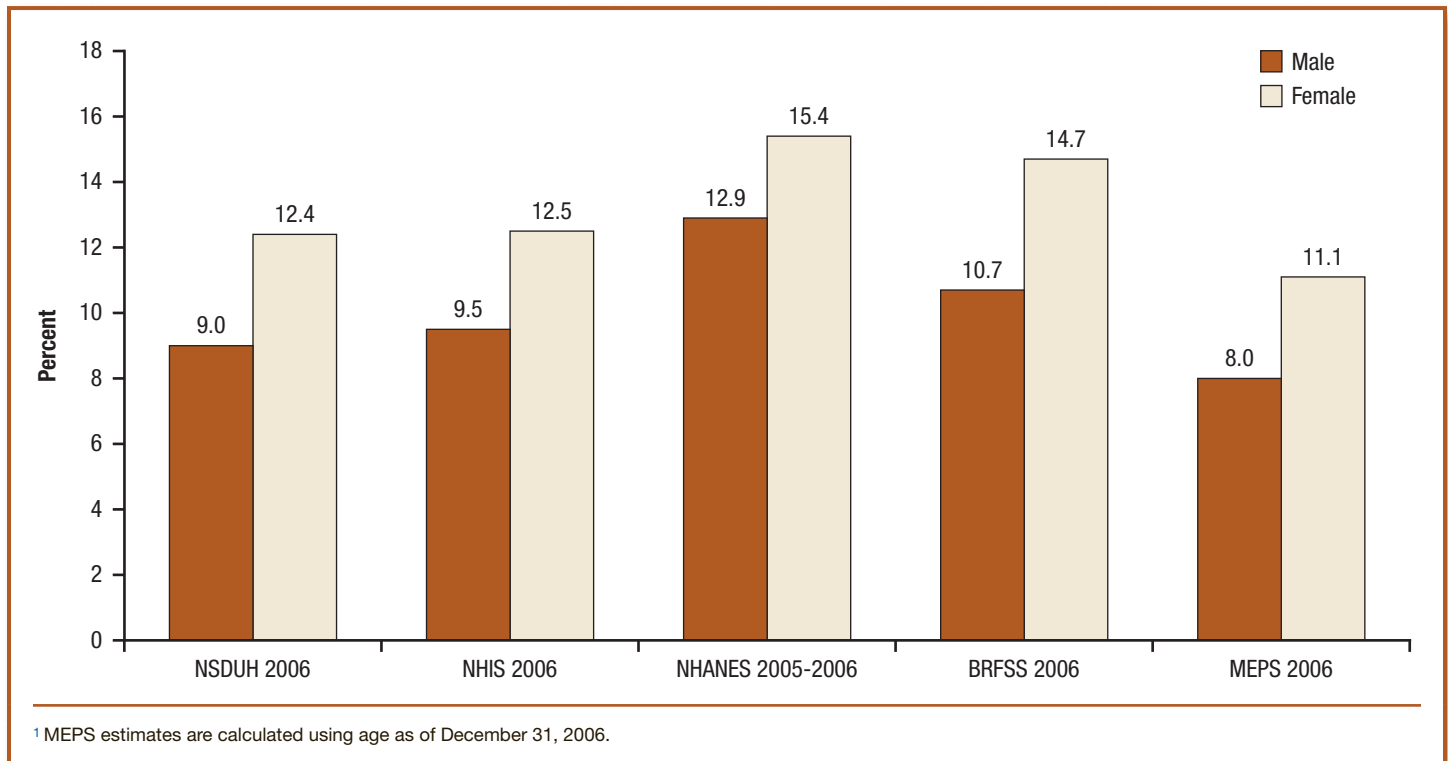


Figure 2. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Asthma, by Age Group: 2006 NSDUH, NHIS, NHANES, BRFSS, and MEPS¹

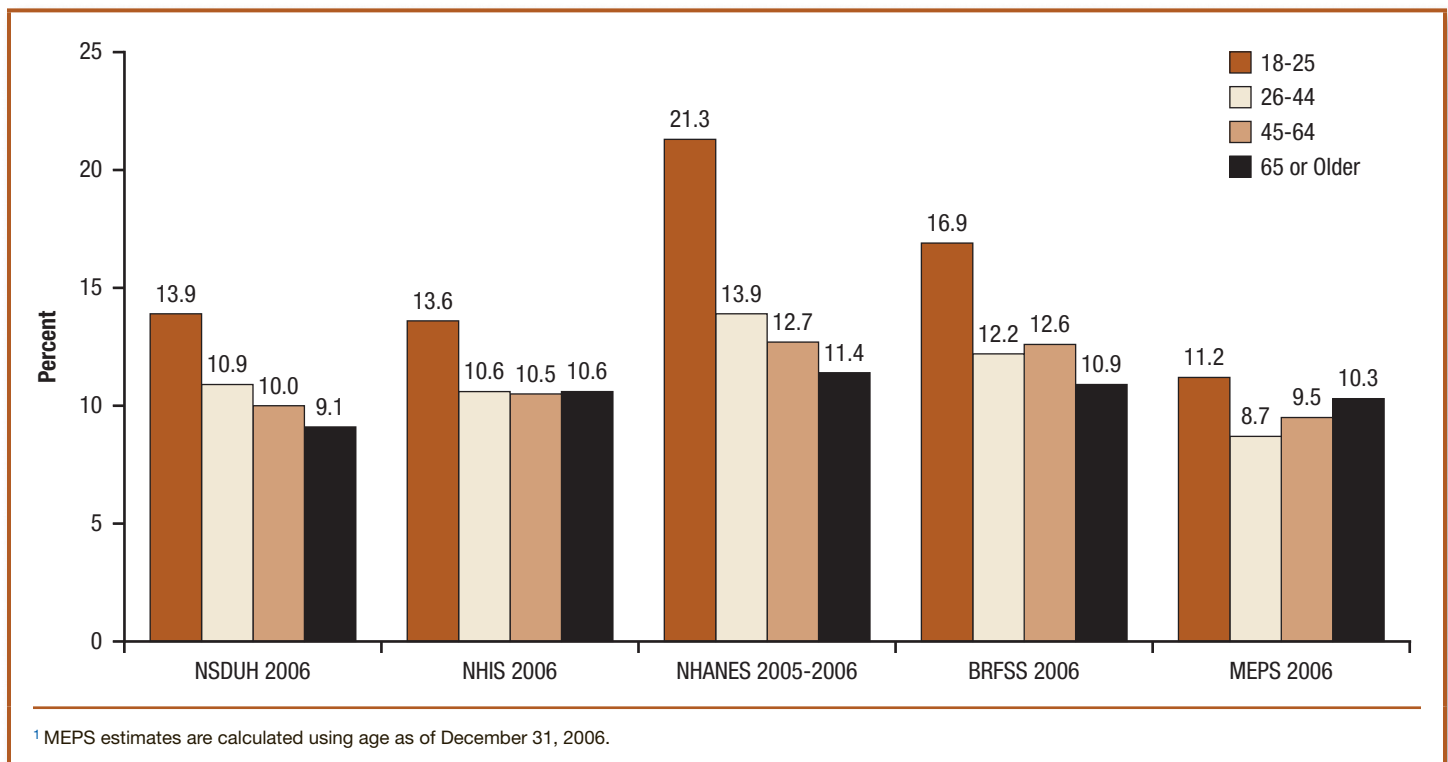


Figure 3. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Asthma, by Race/Ethnicity: 2006 NSDUH, NHIS, NHANES, BRFSS, and MEPS¹

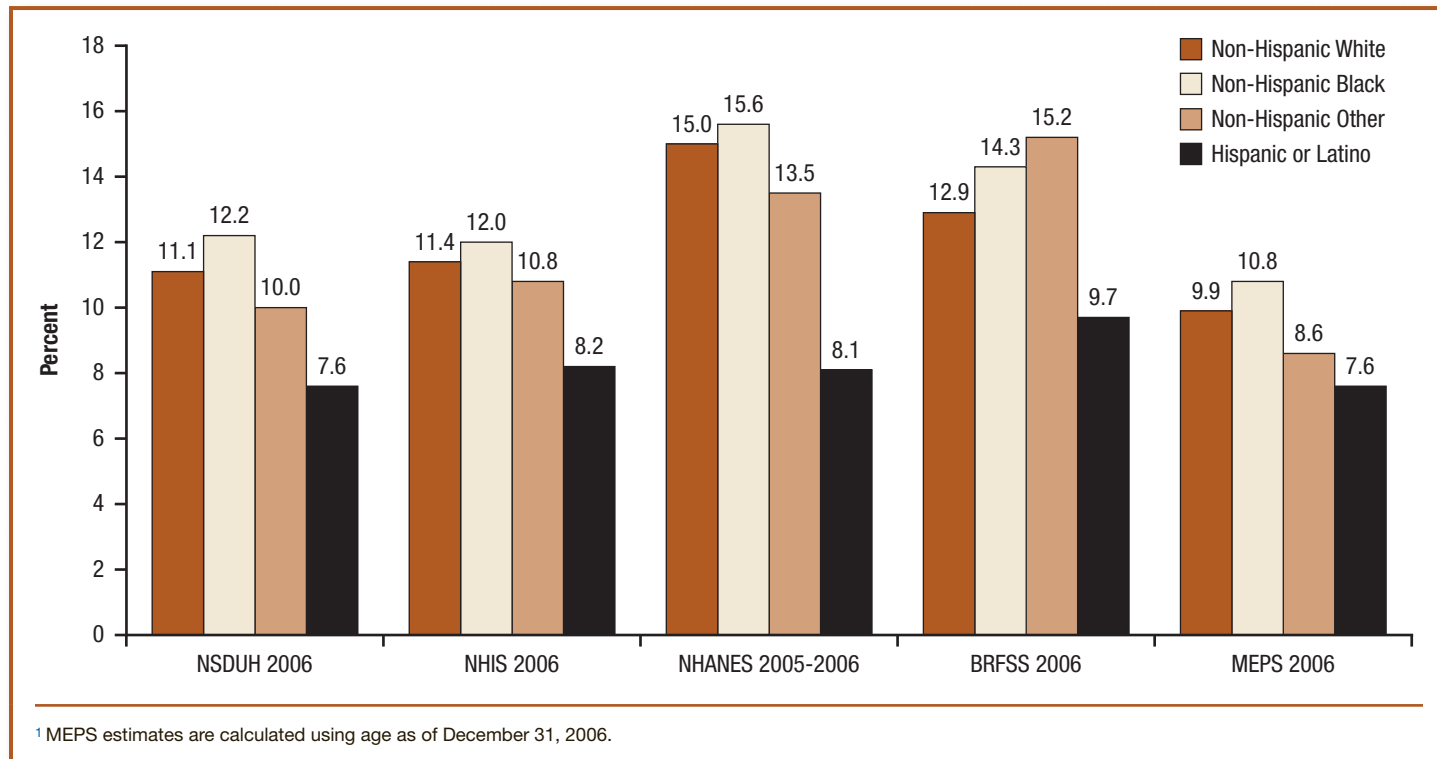


Figure 4. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Diabetes, by Gender: 2006 NSDUH, NHIS, NHANES, BRFSS, and MEPS¹

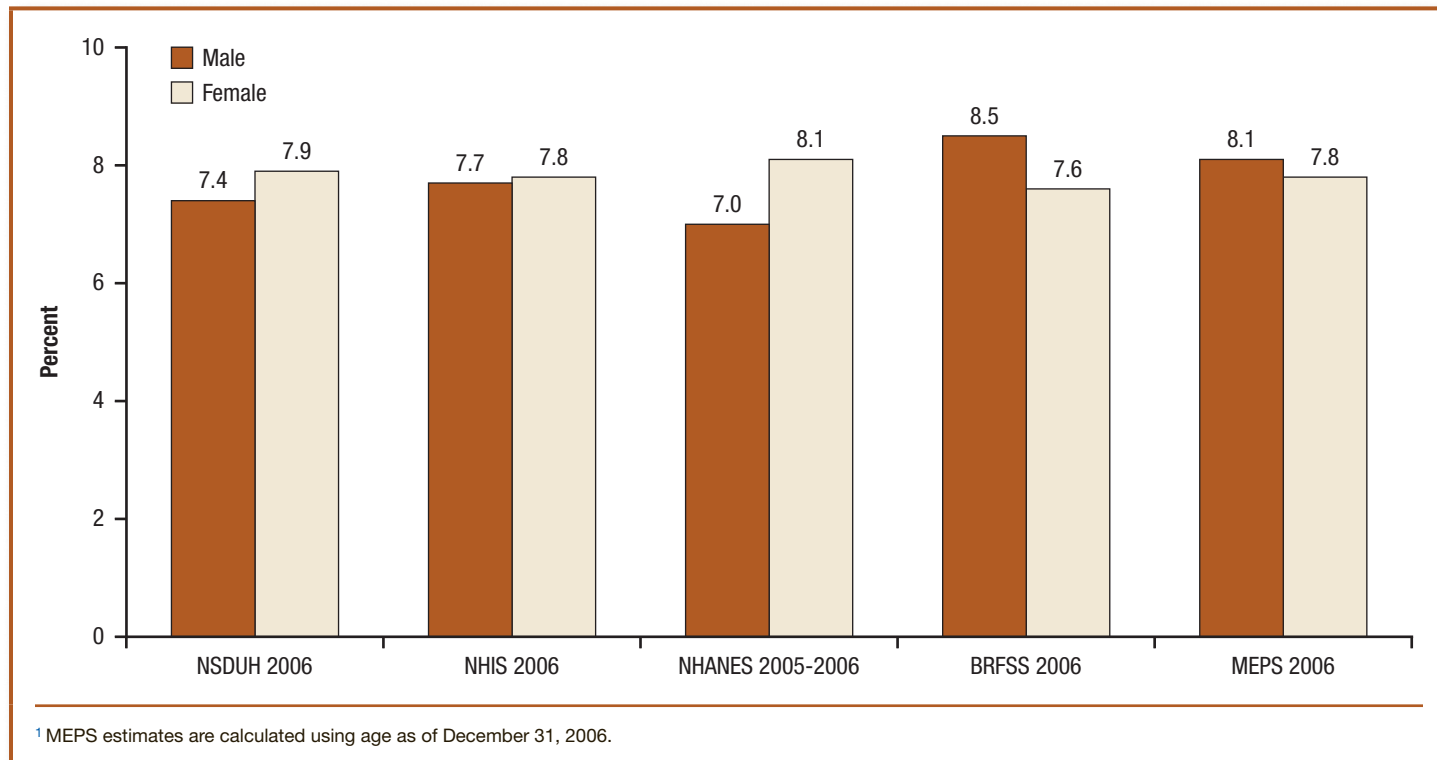


Figure 5. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Diabetes, by Age Group: 2006 NSDUH, NHIS, NHANES, BRFSS, and MEPS¹

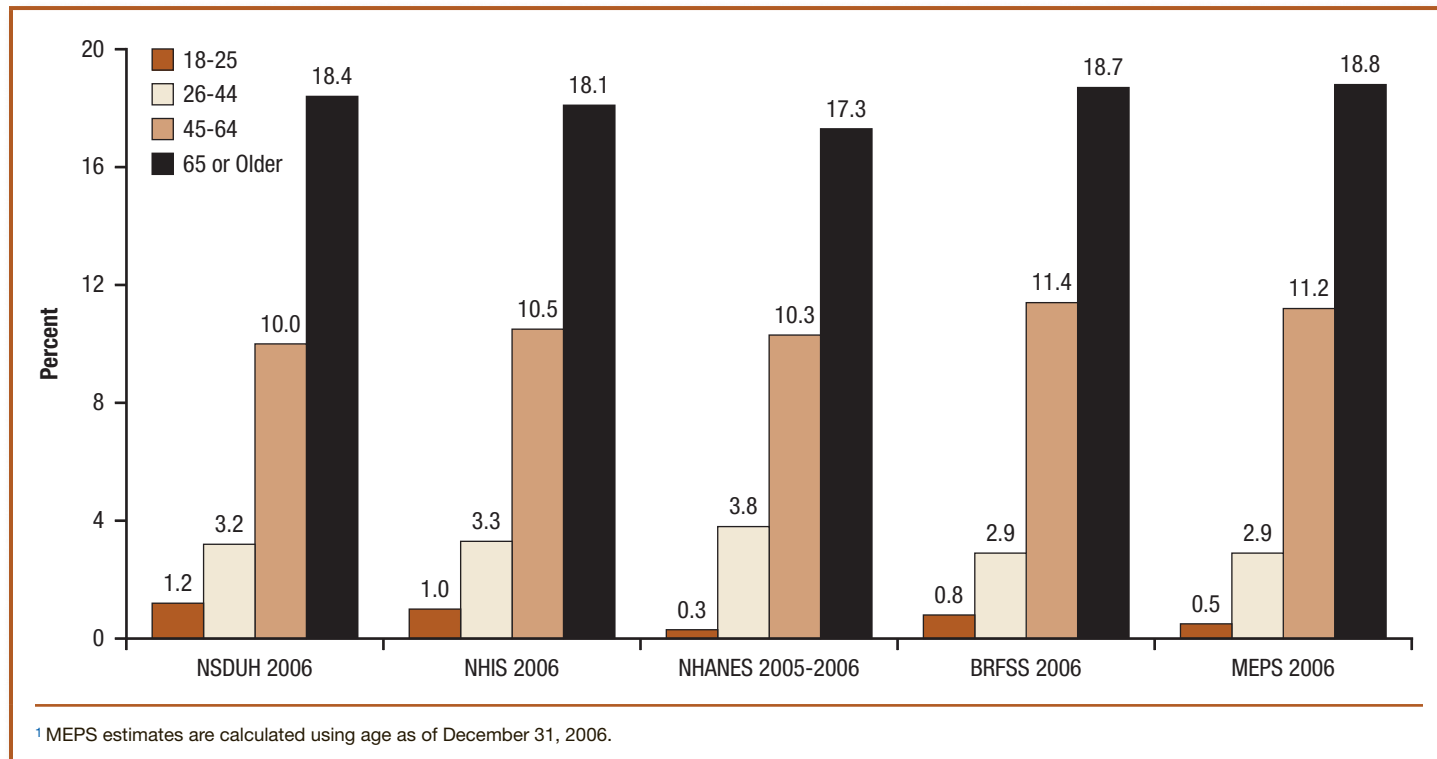
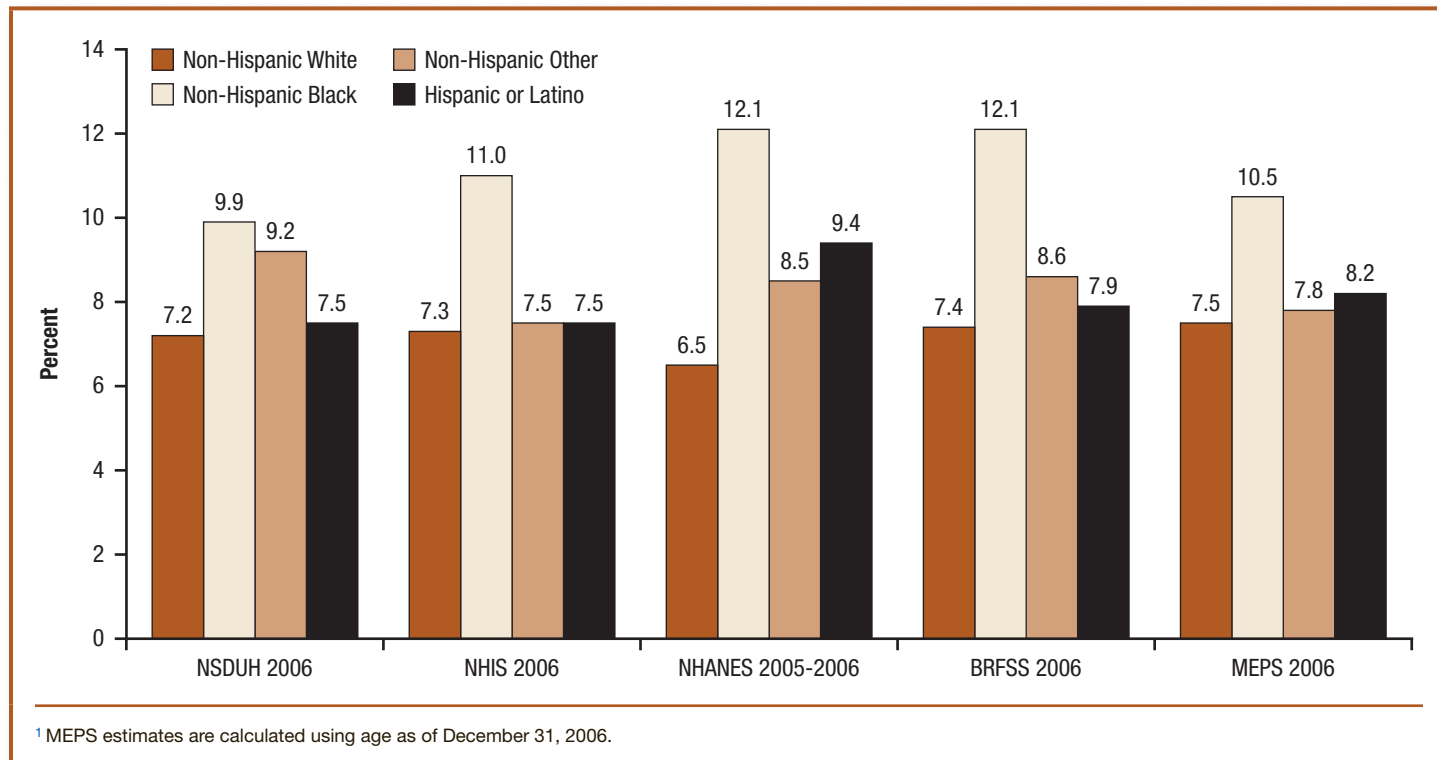


Figure 6. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Diabetes, by Race/Ethnicity: 2006 NSDUH, NHIS, NHANES, BRFSS, and MEPS¹



Lifetime history of diagnosed asthma decreased with age, which was a consistent pattern for all five data sources. There are multiple possible explanations for this pattern. First, asthma is often diagnosed in childhood, and younger generations may have been exposed to more environmental asthma triggers during childhood than older generations. Second, symptoms that were once diagnosed as chronic bronchitis have been increasingly diagnosed as asthma in recent decades. Third, older individuals may be less likely to recall an asthma diagnosis because asthma symptoms often cease in adulthood. Finally, childhood deaths caused by severe asthma may have led to a lower prevalence in older populations (Akinbami & Shoendorf, 2002).

There was more consistency among the surveys in the lifetime history of diagnosed diabetes. As Figure 4 shows, data from BRFSS and MEPS—but not NSDUH, NHIS, and NHANES—indicated that adult males were slightly more likely than females to have had diabetes. As Figure 5 shows, there was little variation among surveys in the estimates of diabetes for individual age groups, and all surveys indicated that adults aged 65 or older had the highest prevalence, with lower rates for adults aged 45 to 64, adults aged 26 to 44, and adults aged 18 to 25. For example, the prevalence of lifetime diabetes among adults aged 65 or older in NSDUH (18.4 percent) was more than 5 times that among adults aged 26 to 44 (3.2 percent).

As Figure 6 shows, data from all surveys indicated that adult blacks had significantly higher rates of diabetes than adult whites, persons of other non-Hispanic races, and Hispanics.

The overall similarities among surveys in the demographic correlates of the lifetime history of diagnosed asthma and diabetes were generally found for the other health conditions. This suggests that even though there are frequently differences in the prevalence estimates among surveys, the surveys are consistent in their indications of which demographic subgroups are at increased risk for reporting a history of these diagnosed health conditions.

3.1.2 Adolescents

Table 6 presents the lifetime history estimates among adolescents aged 12 to 17 for specific diagnosed health conditions included in NSDUH and other national data sources. Most of the comparison data sources focus only on adults aged 18 or older, so there are only three measures from other data sources available for adolescent comparisons: asthma from NHANES, MEPS, and NHIS; diabetes from NHIS; and high blood pressure from NHANES (aged 16 and 17 only).

Asthma. The estimate of the lifetime history of diagnosed asthma among adolescents from NSDUH (16.4 percent) was similar to the NHIS estimate (15.4 percent), lower than the NHANES estimate (19.2 percent), and higher than the MEPS estimate

Table 6. Percent of Persons Aged 12 to 17 Who Had Ever Been Told They Had Different Chronic Health Conditions

Chronic Health Condition—Ever	NSDUH 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006 ¹ : Percent (SE)	NHIS 2006: Percent (SE)
Asthma	16.4 (0.32)	19.2 (1.01)	11.9 (0.81)	15.4 (0.81)
Diabetes	0.6 (0.06)	*	*	0.5 (0.15)
High Blood Pressure	1.9 (0.12)	1.2 (0.32) [†]	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

* Low precision; no estimate reported. Standard NSDUH suppression rule was used for NSDUH estimates; for other surveys, estimates were suppressed if relative standard error of prevalence estimate > 30 percent.

[†] High blood pressure was only assessed for respondents aged 16 or older in NHANES.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = not assessed.

SE = standard error.

(11.9 percent). These findings are consistent with the differences between NSDUH and these other two surveys presented earlier for adults. As noted previously, these surveys have similar wording in their questions, which suggests that something other than question wording accounts for these differences. One thing to note is that NSDUH adolescent respondents self-reported their conditions, whereas for all adolescents in MEPS and for adolescents aged 15 or younger in NHANES, parents reported on the adolescents' conditions. The inconsistency between the estimates from NHANES (higher than NSDUH) and MEPS (lower than NSDUH) and the consistency in the pattern of differences between adults and adolescents suggest that this variation in methodology cannot fully account for these differences.

Diabetes. The NSDUH estimate of diabetes (0.6 percent) was similar to the estimate from NHIS (0.5 percent). Estimates of adolescent diabetes from NHANES and MEPS were suppressed due to low precision.

High Blood Pressure. The NSDUH estimate of high blood pressure (1.9 percent) was slightly (but significantly) higher than the estimate from NHANES (1.2 percent). As discussed previously for adults, NHANES asked about "hypertension, also called high blood pressure," and the NSDUH question asked about "high blood pressure." NHANES also limits this question to individuals aged 16 or older, whereas the NSDUH question is asked of all adolescents aged 12 to 17; when restricted to adolescents aged 16 or 17, the NSDUH estimate for lifetime history of high blood pressure was 2.3 percent. The broader definition in NHANES would suggest that the NHANES estimate would be expected to be higher than the NSDUH estimate; this was true for adults, but the opposite pattern was found for adolescents.

3.2 Comparison of Estimates for General Health Ratings

This section includes comparisons among surveys in self-reported overall health status. These comparisons are presented separately for adults aged 18 or older and adolescents aged 12 to 17.

3.2.1 Adults

Table 7 presents estimates of self-reported overall health status among adults for NSDUH and four other national data sources that measure perceptions of general health (NHIS, NHANES, BRFSS, and MEPS) and among adolescents for NSDUH and three other national data sources that measure perceptions of general health (NHIS, NHANES, and MEPS).

There was considerable variation in the self-reported general health ratings across NSDUH and four other national data sources. The NSDUH estimate of the prevalence of adults who rated their overall health as "excellent" (23.1 percent) was lower than the estimates from NHIS (29.1 percent) and MEPS (24.7 percent) and was higher than the estimates from NHANES (17.7 percent) and BRFSS (20.9 percent). The NSDUH estimate of the percentages of adults rating their overall health as "poor" (2.6 percent) was lower than the estimates from MEPS (3.3 percent) and BRFSS (4.3 percent). All of these surveys included the same question wording for the rating of overall health, so variations in question wording cannot explain these differences. However, for the NHANES, this question is asked in the MEC component during which the respondents receive medical tests and physical measurements, which may have influenced respondents to be more objective about their overall health. Landline telephone coverage may be a factor in BRFSS because younger individuals (who are more likely to report excellent health) are more likely to live in cell phone-only households (Blumberg, Luke, & Cynamon, 2006). Although the weighting methods for BRFSS accounted for population age distribution, the health status of young adults may be different for those living in cell phone-only households (which are excluded from BRFSS) than those living in households with landlines.

3.2.2 Adolescents

Among adolescents, the percentage of adolescents who reported being in excellent health was smaller in NSDUH (33.2 percent) than in NHIS (50.5 percent), NHANES (42.6 percent), and MEPS (48.0 percent). In turn, the NSDUH estimate of self-reported very good

overall health (42.0 percent) was higher than estimates in the other three surveys, which ranged from 28.2 to 30.6 percent. As a result, the proportion of adolescents with excellent or very good health is very similar across the four surveys, ranging from 72.2 percent to 78.6 percent. The NSDUH estimates were based on adolescent self-reports, whereas parental reports of adolescent health were used for all adolescents in MEPS and for NHANES respondents aged 15 or younger. For the NHIS module that contains the general health question, a knowledgeable adult living in the household provided information about respondents younger than 18. It may be that parents thought that the overall level of health of their adolescent children was better than the adolescents themselves thought, which could partially explain the lower prevalence of adolescents in “excellent” health from NSDUH relative to the other

data sources. In NHIS and MEPS, an adult respondent was asked to rate the health status of adolescent family members, which may have caused them to consider the health status of adolescents within the context of other members of the family. In addition, in MEPS, the respondent was asked to rate the health of each family member compared to other persons the same age as that family member, which may also change the context of their ratings.

3.3 Comparison of Estimates for Health Care Utilization

This section includes comparisons among national data sources in the estimates of health care utilization. The utilization measures include overnight hospital stays and visits to ERs. As with the previous sections, these comparisons are presented separately for adults aged 18 or older and adolescents aged 12 to 17.

Table 7. Percent of Persons Self-Reporting Ratings of Overall Health, by Age Group

Self-Report of Overall Health/Age Group	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006 ¹ : Percent (SE)
Aged 12 to 17					
Excellent	33.2 (0.42)	50.5 (0.91)	42.6 (2.30)	N/A	48.0 (1.36)
Very Good	42.0 (0.42)	28.2 (0.74)	29.6 (2.18)	N/A	30.6 (1.20)
Good	21.4 (0.37)	19.3 (0.67)	22.5 (0.97)	N/A	19.1 (1.01)
Fair	3.3 (0.15)	1.8 (0.17)	4.7 (0.62)	N/A	2.0 (0.28)
Poor	0.1 (0.03)	0.2 (0.05)	*	N/A	*
Aged 18 or Older					
Excellent	23.1 (0.33)	29.1 (0.35)	17.7 (0.76)	20.9 (0.16)	24.7 (0.47)
Very Good	35.8 (0.38)	31.8 (0.30)	32.1 (1.30)	32.7 (0.18)	34.3 (0.45)
Good	27.7 (0.35)	27.1 (0.29)	34.1 (0.60)	30.2 (0.18)	28.4 (0.43)
Fair	10.7 (0.28)	9.2 (0.19)	12.9 (0.75)	12.0 (0.13)	9.3 (0.27)
Poor	2.6 (0.15)	2.9 (0.09)	3.2 (0.28)	4.3 (0.07)	3.3 (0.14)

¹ MEPS estimates are calculated using age as of December 31, 2006.

* Low precision; no estimate reported. Standard NSDUH suppression rule was used for NSDUH estimates; for other surveys, estimates were suppressed if relative standard error of prevalence estimate > 30 percent.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = not assessed.

SE = standard error.

3.3.1 Adults

Tables 8 and 9 present estimates from NSDUH and other national data sources of hospitalization and ER visits among adults and adolescents by age group. Table 8 presents the percentage of persons reporting one or more hospitalizations or ER visits in the past year, and Table 9 presents estimates for the mean number of hospitalizations and ER visits among those with at least one hospitalization or visit, respectively. Note that it is not possible to do statistical tests of differences between data sources in the total number of overnight hospital stays or the total number of ER visits.

Inpatient Hospitalization. As Table 8 shows, estimates of past year inpatient hospitalization among all adults did not differ significantly among NSDUH (11.1 percent), and NHANES (10.4 percent) and were similar to the exploratory estimates from NIS (also 11.1 percent) and NHDS (10.8 percent). The NSDUH estimate was significantly higher than the estimates derived from NHIS (8.8 percent) and MEPS (8.2 percent). As Table 9 shows, from NSDUH, the mean number of nights in the hospital per adult who was hospitalized (6.4 nights) was comparable to estimates from NHIS and MEPS (7.3 and 6.7 nights, respectively); NIS and NHDS each estimated a mean of 4.8 nights per adult who was hospitalized. The total number of nights stayed in a hospital in the past year ranged from 121.5 million from MEPS to 157.2 million from NIS.

The question about hospitalization is self-administered using ACASI in NSDUH, and it is interviewer-administered using CAPI in NHIS, NHANES, and MEPS. The higher level of privacy with a self-administered questionnaire may partially explain why the NSDUH estimate of the percentage with one or more overnight hospital stays was higher than the estimates for NHIS and MEPS. Neither NHIS nor MEPS specified that the overnight hospitalization specifically had to be as an inpatient. MEPS collected information on zero night hospital stays, but they were excluded from the analyses. The greater specificity in NSDUH relative to these other surveys would suggest that the NSDUH estimate would be lower than the estimates from these other surveys, which was not the

case. It is possible that the NIS estimate was the highest because persons with long-term hospital stays would be included in the NIS but would be less likely to be included in a household survey like NSDUH.

Inpatient Hospitalization by Demographic Characteristics.

The overall patterns in past year inpatient hospitalization were generally consistent across demographic subgroups as well as by categories of perceived health status (see **Tables A6 and A7** in Appendix A and **Figures 7 to 9**). For example, all surveys showed higher rates of past year overnight hospitalization for females than for males (Figure 7), and all surveys showed much higher rates of past year hospitalization among those aged 65 or older than those in younger age groups (Figure 8). There was more variation by race/ethnicity, with similar patterns between NSDUH and NHANES (higher prevalence for non-Hispanic blacks than for any other racial/ethnic group). NHIS and MEPS estimates did not show this same race/ethnicity pattern (similar prevalence for Hispanics and for non-Hispanic whites and blacks). Both NHDS and NIS included deaths in the number of discharges, which may explain the higher rates of hospitalization among adults aged 65 or older in these two data sources; by definition, information about hospitalizations that resulted in deaths would not be captured in NSDUH, NHANES, NHIS, and MEPS. In addition, the NSDUH percentage of adults who perceived their health as being poor and were hospitalized in the past year (39.4 percent) was comparable to the estimates in NHIS (37.0 percent), NHANES (33.4 percent), and MEPS (32.2 percent).

ER Utilization. There was more variation in the ER estimates than there was for the hospitalization estimates. As Table 8 shows, the NSDUH estimate of receiving treatment in an ER in the past year among adults (28.8 percent) was more than twice the MEPS estimate (14.0 percent) and also was higher than the estimate from NHIS (20.4 percent). Both MEPS and NHIS specifically mention “hospitals” in their question, whereas the NSDUH question does not specifically mention hospitals; it could be that NSDUH respondents were including emergency visits to trauma or urgent care centers that were not associated with

Table 8. Percent of Persons Reporting an Inpatient Overnight Hospitalization or Being Treated in an Emergency Room in the Past Year, by Age Group

Measure/Age Group	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006 : Percent (SE)	NHDS 2006 : Percent (SE)	NIS 2006 : Percent (SE)	NEDS 2006 : Percent (SE)	NHAMCS 2006 : Percent (SE)
Aged 12 to 17								
Overnight Hospitalizations	4.9 (0.20)	2.3 (0.22)	3.1 (0.48)	2.2 (0.34)	2.7 (--)	N/A	N/A	N/A
Treated in an Emergency Room	31.9 (0.43)	17.8 (0.87)	9.7 (0.61)	9.7 (0.61)	N/A	N/A	N/A	24.3 (--)
Aged 18 or Older								
Overnight Hospitalizations	11.1 (0.26)	8.8 (0.14)	10.4 (0.53)	8.2 (0.22)	10.8 (--)	11.1 (N/A)	N/A	N/A
Treated in an Emergency Room	28.8 (0.36)	20.4 (0.30)	N/A	14.0 (0.33)	N/A	N/A	30.6 (--)	30.0 (--)

¹ MEPS estimates are calculated using age as of December 31, 2006.

² For NHDS and NIS, exploratory estimates obtained by converting total hospital discharges to estimated unduplicated persons (based on the distribution of annual hospital admissions in the MEPS) and divided by midyear census population estimates to derive prevalence. Standard errors cannot be calculated for these estimates.

³ For NEDS and NHAMCS, exploratory estimates obtained by converting total emergency department discharges to estimated unduplicated persons (based on the distribution of annual emergency department visits in the MEPS) and divided by midyear census population estimates to derive prevalence. Standard errors cannot be calculated for these estimates.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHDS = National Hospital Discharge Survey. Source: National Center for Health Statistics, CDC, 2006.

NIS = Nationwide Inpatient Sample. Source: AHRQ, Department of Health and Human Services, 2006.

NEDS = Nationwide Emergency Department Sample. Source: AHRQ, Department of Health and Human Services, 2006.

NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006.

-- = unable to calculate.

N/A = not assessed.

SE = standard error.

Table 9. Estimated Number (in Thousands), Mean, and Standard Error of Number of Nights Stayed at the Hospital and Number of Times Treated in an Emergency Room, by Age Group

Measure/ Age Group	NSDUH 2006		MEPS 2006 ¹		NHIS 2006		NHDS 2006		NIS 2006		NEDS 2006		NHAMCS 2006	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Aged 12 to 17														
Nights Stayed at the Hospital	4,781	4.0 (0.31)	2,849	5.2 (1.00)	3,266	5.7 (0.92)	4,317	4.7 (N/A)	N/A	N/A	N/A	N/A	N/A	N/A
Times Treated in an Emergency Room	15,145	1.9 (0.03)	3,001	1.2 (0.03)	7,452	1.7 (0.07)	N/A	N/A	N/A	N/A	N/A	N/A	7,426	N/A
Aged 18 or Older														
Nights Stayed at the Hospital	154,484	6.4 (0.51)	121,521	6.7 (0.31)	137,201	7.3 (0.26)	152,645	4.8 (N/A)	157,201	4.8 (N/A)	N/A	N/A	N/A	N/A
Times Treated in an Emergency Room	126,918	2.0 (0.05)	42,977	1.4 (0.02)	87,782	2.0 (0.04)	N/A	N/A	N/A	N/A	94,902	N/A	92,882	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

NOTE: Respondents with unknown health care utilization data were excluded.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHDS = National Hospital Discharge Survey. Source: National Center for Health Statistics, CDC, 2006.

NIS = Nationwide Inpatient Sample. Source: AHRQ, 2006.

NEDS = Nationwide Emergency Department Sample. Source: AHRQ, 2006.

NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006.

-- = unable to calculate.

N/A = not assessed.

SE = standard error.

Figure 7. Percent of Persons Aged 18 or Older Who Were Hospitalized Overnight in the Past Year, by Gender: 2006 NSDUH, NHIS, NHANES, MEPS,¹ NHDS, and NIS

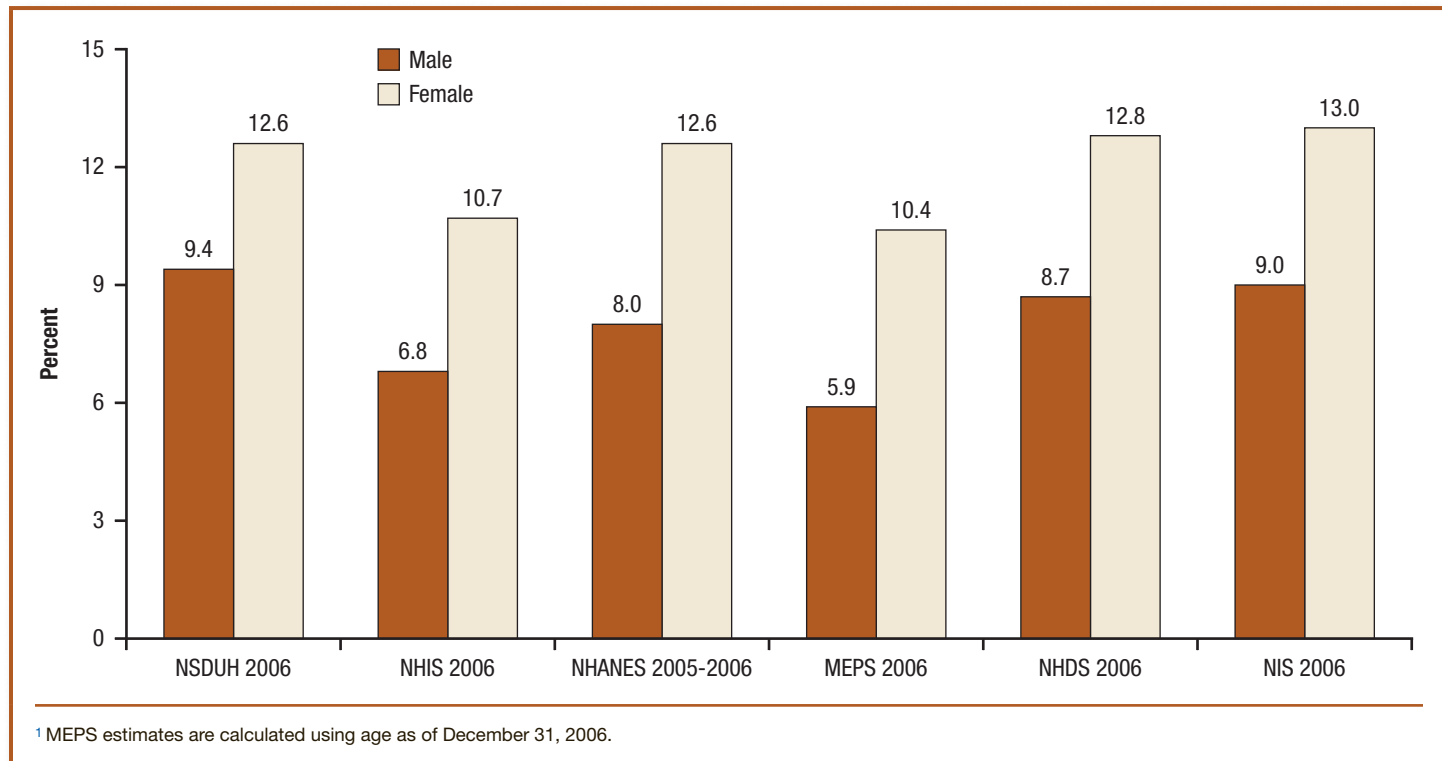
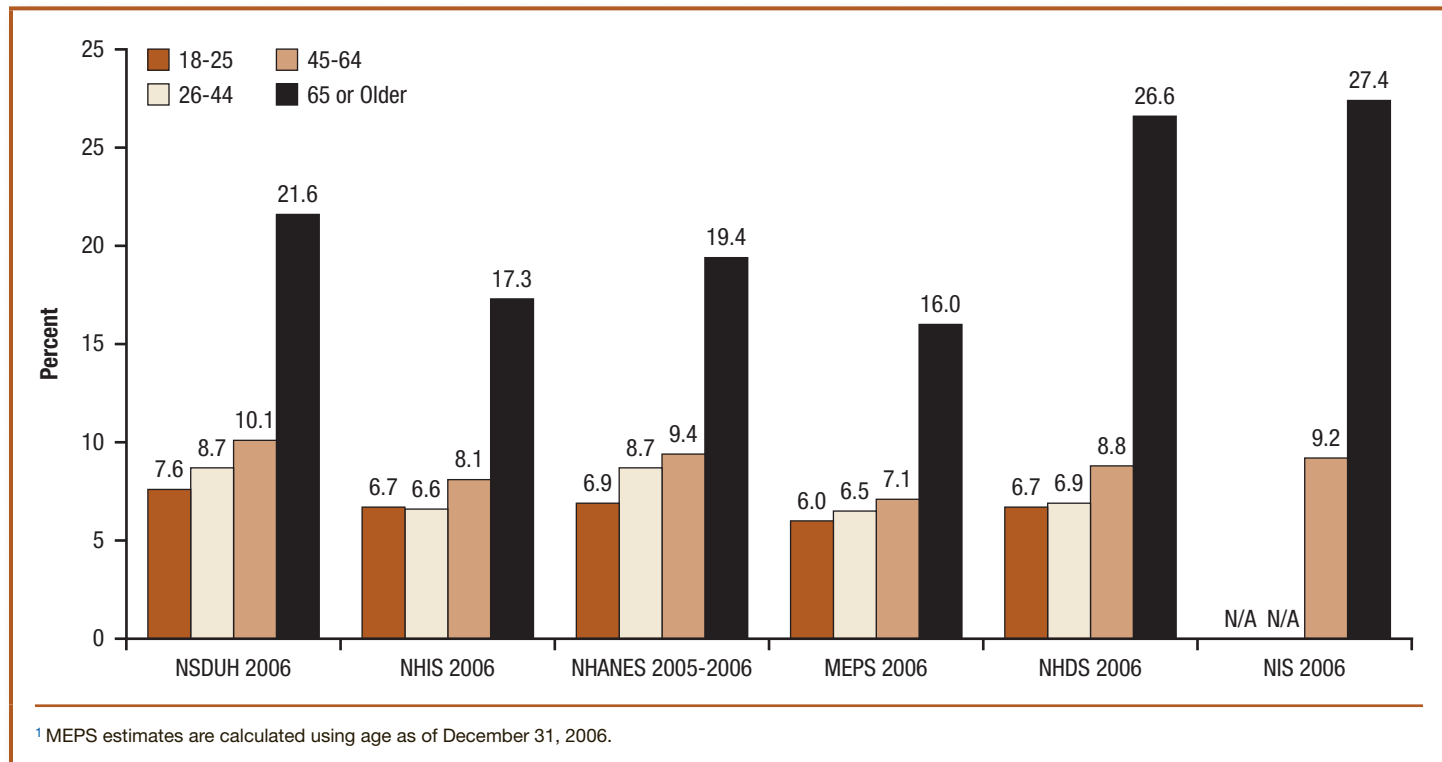


Figure 8. Percent of Persons Aged 18 or Older Who Were Hospitalized Overnight in the Past Year, by Age Group: 2006 NSDUH, NHIS, NHANES, MEPS,¹ NHDS, and NIS



a hospital ER. The NSDUH estimate was similar to the exploratory estimates from NEDS (30.6 percent) and NHAMCS (30.0 percent). The similarity between NSDUH and both NEDS and NHAMCS data is noteworthy because one is a household survey and the other is a facility survey. The total number of visits by adults to the ER in the past year shows even more variation by data source. NSDUH continues to have higher estimates. As Table 9 shows, the estimate of the total number of visits by adults to ERs in the past year was 127.0 million for NSDUH, 94.9 million for NEDS, 92.9 million for NHAMCS, 87.8 million for NHIS, and 43.0 million for MEPS. The lower NHIS estimates may be explained by the exclusion of non-hospital ERs, but it is not clear why the NEDS and NHAMCS numbers are lower than those in NSDUH. MEPS numbers were lower than NSDUH, both because of a lower percentage of adults reporting using the ER and a lower mean number of times per person—1.4 times for MEPS compared to 2.0 times for NSDUH.

ER Utilization by Demographic Characteristics. There was also general consistency among surveys in terms of demographic differences in ER use, as well as ER use according to self-reported general health in past year (see **Tables A8 and A9** in Appendix A and **Figures 10 to 12**). For example, all surveys showed that a higher percentage of females than males received treatment in an ER in the past year (Figure 10). In NSDUH, NHIS, MEPS, and NHAMCS (exploratory), young adults aged 18 to 25 and older adults aged 65 or older also had higher rates of past year ER visits than persons aged 26 to 44 or persons aged 45 to 64 (Figure 11). In addition, the surveys showed similar patterns with respect to race/ethnicity, with blacks having higher rates of past year ER visits than any other racial/ethnic group in NSDUH, NHIS, MEPS, and NHAMCS (Figure 12). The estimated mean number of ER visits per adult in NSDUH who visited the ER was about the same as the estimated number in NHIS (2.0 in both surveys). Patterns of the total number and mean number of ER visits by age, gender, and race/ethnicity were similar across surveys (Table A9).

Figure 9. Percent of Persons Aged 18 or Older Who Were Hospitalized Overnight in the Past Year, by Race/Ethnicity: 2006 NSDUH, NHIS, NHANES, and MEPS¹

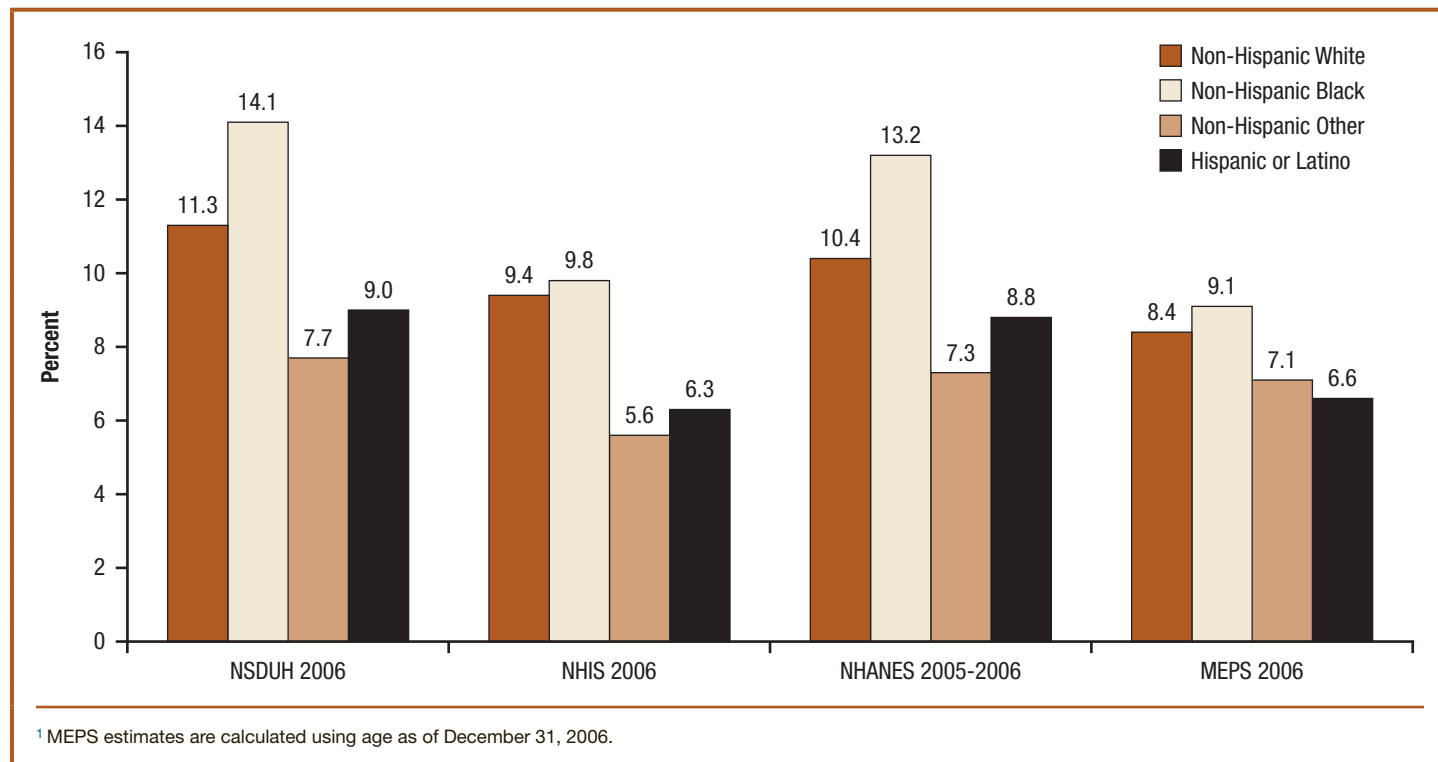


Figure 10. Percent of Persons Aged 18 or Older Who Were Treated in an Emergency Room in the Past Year, by Gender: 2006 NSDUH, NHIS, MEPS,¹ NEDS, and NHAMCS

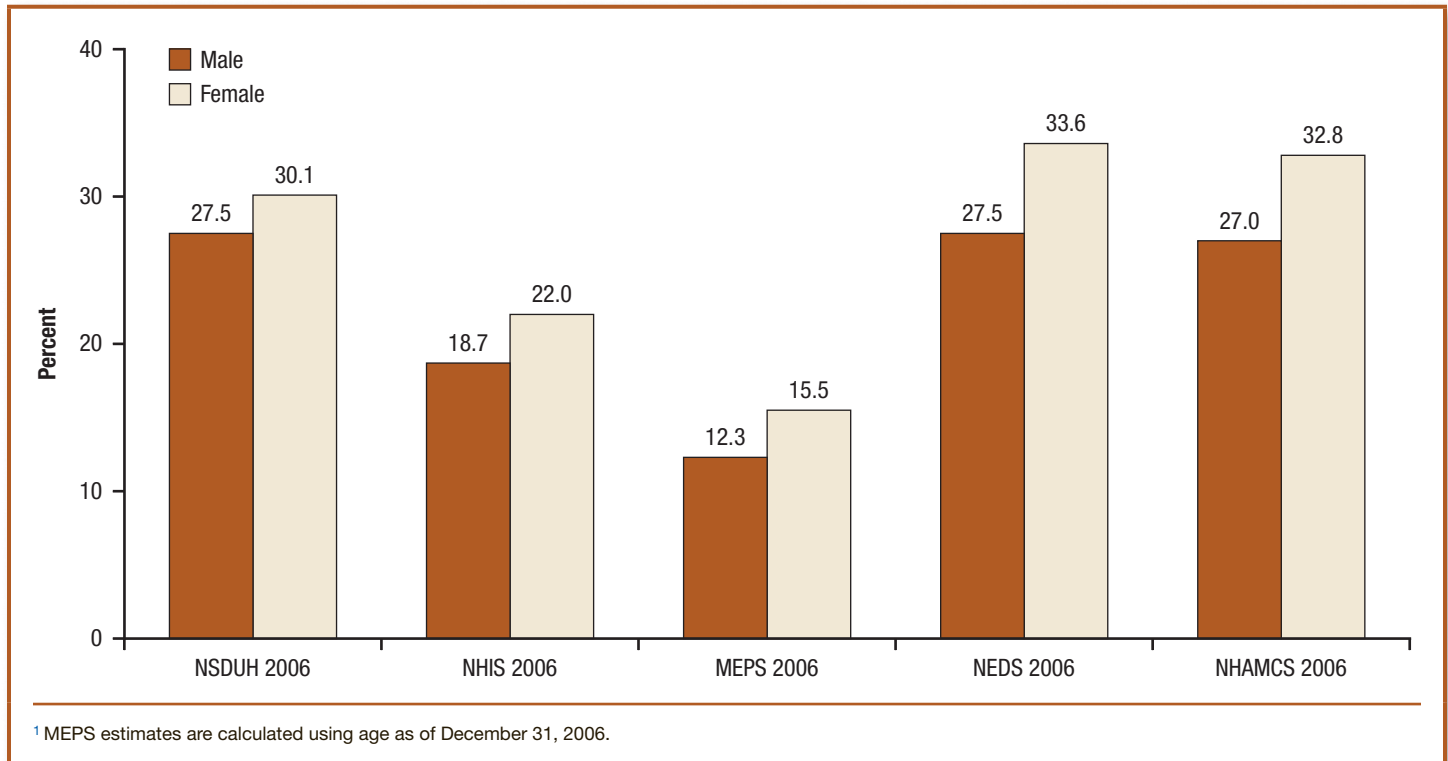
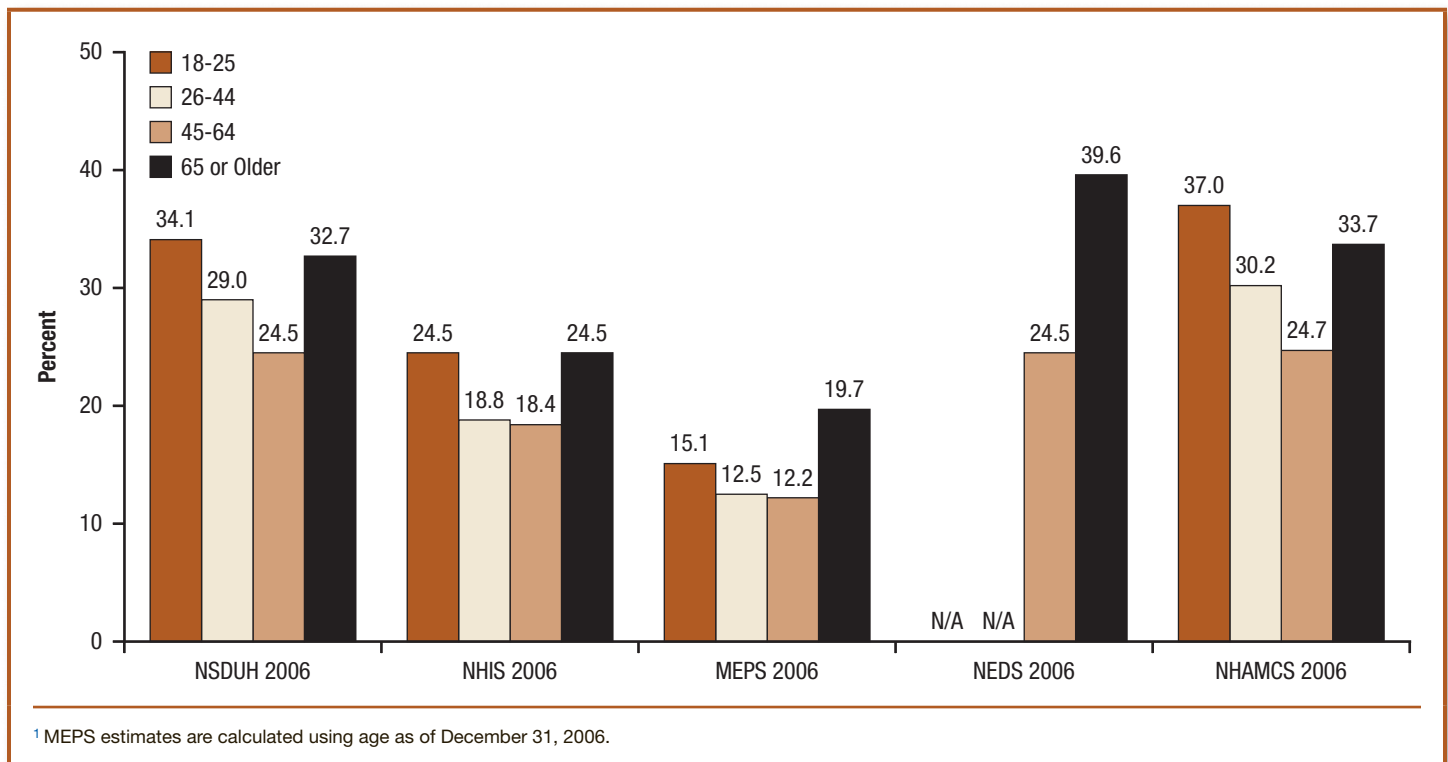


Figure 11. Percent of Persons Aged 18 or Older Who Were Treated in an Emergency Room in the Past Year, by Age Group: 2006 NSDUH, NHIS, MEPS,¹ NEDS, and NHAMCS



3.3.2 Adolescents

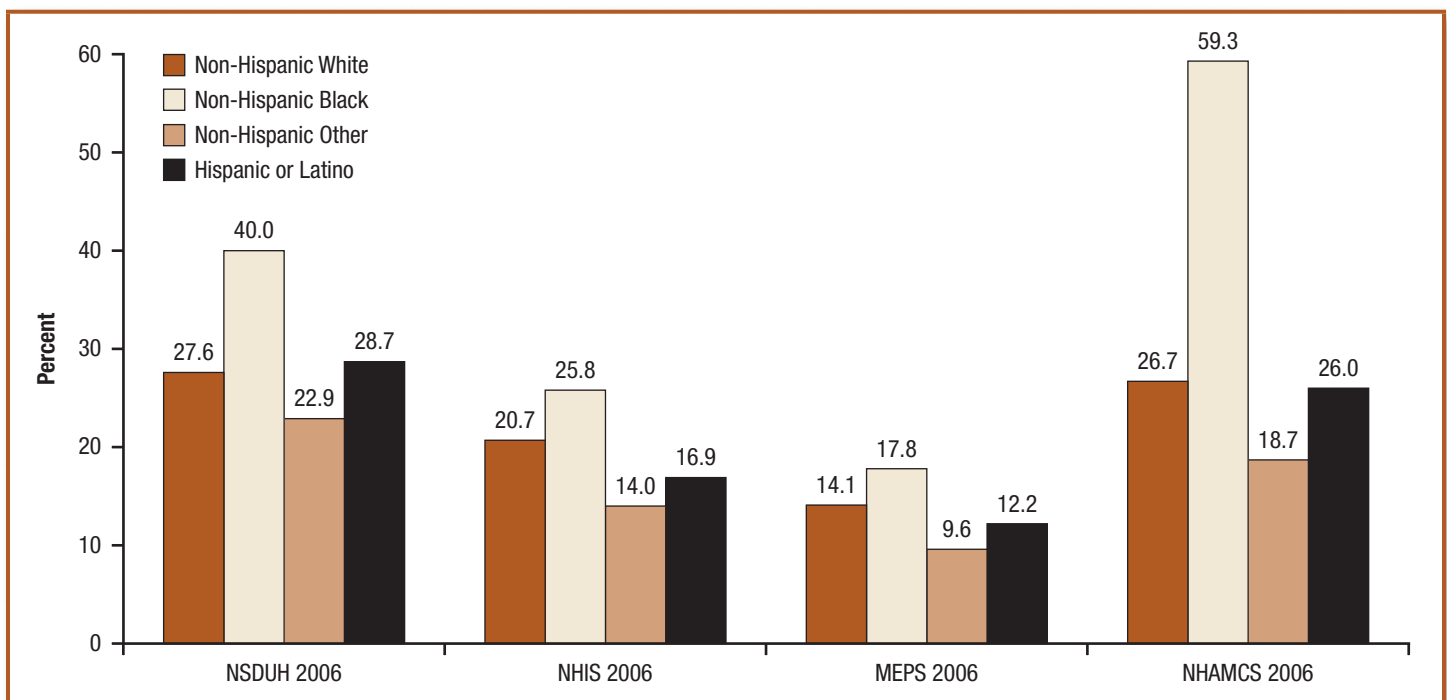
Estimates from NSDUH and other surveys of health care utilization among adolescents aged 12 to 17 are also presented in Tables 8 and 9.

Inpatient Hospitalization. As Table 8 shows, the estimate of past year overnight hospitalization for adolescents aged 12 to 17 was higher in NSDUH (4.9 percent) than in NHIS (2.3 percent), NHANES (3.1 percent), and MEPS (2.2 percent). The corresponding estimate of past year overnight hospitalization was 2.7 percent in the exploratory NHDS estimate. As Table 9 shows, adolescents had a total of an estimated 4.8 million nights stayed in the hospital, as compared to 4.3 million nights in NHDS, 3.3 million nights in NHIS, and 2.8 million nights in MEPS. The mean number of nights hospitalized in NSDUH did not differ significantly from MEPS and NHIS (4.0 vs. 5.2 and 5.7, respectively).

Past year overnight hospitalization estimates were higher in NSDUH compared to NHIS for both adults and adolescents. Among adults, the estimates in NSDUH were similar to NHANES and MEPS, but estimates from these surveys were lower than NSDUH for adolescents.

Emergency Room Treatment. As Table 8 shows, the NSDUH estimate of past year treatment in an ER among adolescents aged 12 to 17 (31.9 percent) was more than three times the estimate from MEPS (9.7 percent) and almost twice the estimate found in NHIS (17.8 percent). The NHAMCS exploratory estimate (24.3 percent) was closer to the NSDUH estimate. As Table 9 shows, the total number of ER visits followed the same pattern, with NSDUH observing 5 times as many total ER visits in this age group than MEPS (15.1 million vs. 3.0 million) and about twice that in NHIS (7.5 million) and NHAMCS (7.4 million). The estimated mean number of ER visits was greater in NSDUH than MEPS (1.9 vs. 1.2) and was similar in NSDUH and NHIS (1.9 vs. 1.7). As discussed previously for adults, the NSDUH estimate did not specifically mention ER visits at hospitals, whereas the MEPS and NHIS estimates were specific about visits to hospitals. Also, NSDUH adolescent estimates were based on self-reports, whereas MEPS estimates were based on parent responses. NHIS estimates were based on adolescent responses if the adolescent was available to respond and were based on parent responses if the

Figure 12. Percent of Persons Aged 18 or Older Who Were Treated in an Emergency Room in the Past Year, by Race/Ethnicity: 2006 NSDUH, NHIS, MEPS,¹ and NHAMCS



¹ MEPS estimates are calculated using age as of December 31, 2006.

adolescent was not available to respond. NHAMCS was a survey of facilities and not individuals.

The number of past year ER visits was greater in NSDUH than in MEPS for both adults and adolescents. Among adults, the estimate in NSDUH was similar to NHIS, but the estimate from this survey was lower than NSDUH for adolescents.

Health Care Utilization by Demographic Characteristics.

Similar patterns across surveys were observed for adolescents by gender, race/ethnicity, and perceived health status. Adolescent males and females in NSDUH had a similar prevalence of past year hospitalization, but the estimates of hospitalization were higher for adolescent females than males in NHIS, NHANES, MEPS, and NHDS (**Table A10**). As **Table A11** shows, the estimates of the total number of nights hospitalized from NSDUH were similar between males and females, but in MEPS, the estimate was higher for females (2.1 million) than for males (715,000). In addition, the NSDUH and MEPS estimates of the total number of hospitalizations for females were similar, but the NSDUH estimate for males (2.6 million) was higher than the MEPS estimate for males. Again, differences in survey mode (self-administered vs. interviewer-administered) or adult proxy versus adolescent reports may have contributed to differences in estimates between these surveys.

As **Tables A12 and A13** show, the pattern of differences in ER visits that was found in the full adolescent population (NSDUH estimates higher than estimates from NHIS, MEPS, or NHAMCS) was consistent across gender, race/ethnicity, and category of perceived health status.

3.3.3 Emergency Room Treatment for Specific Illegal Drugs

In addition to the overall information on ER visits, NSDUH gathers information from persons aged 12 or older on the number of visits to an ER in the past year specifically to receive treatment for their use of cocaine, heroin, marijuana, PCP, LSD, or methamphetamine. This question was included in NSDUH to provide information for comparison with information obtained on drug-related ER visits from the Drug Abuse Warning Network (DAWN), a public health

surveillance system that monitors drug-related visits to hospital emergency departments.

Table 10 presents information on the number of annual ER visits by persons aged 12 or older to receive treatment for use of these drugs from the combined 2004 to 2008 NSDUHs, as well as annual estimates of all ER visits by persons aged 12 or older related to the use of these drugs from the 2004 to 2008 DAWN. The estimated number of visits from DAWN (940,000 per year) was considerably higher than the estimate from NSDUH (311,000 per year). One possible reason for this difference is that the DAWN estimates were based on all ER visits related to the use of these drugs, even if the visit was not for drug treatment (e.g., injuries suffered under the influence of these drugs). In contrast, the NSDUH estimates were specifically for visits to receive treatment for drug use. In an attempt to make the DAWN data more comparable with NSDUH, the analyses of DAWN data were subset to the ER visits involving these substances that were specifically for drug withdrawal, drug overdose, or for detoxification. This reduced the DAWN estimate to 230,000 ER visits. Additional research into the specific reasons for the ER visits other than drug withdrawal, drug overdose, or detoxification included in DAWN are needed in order to better understand the differences in the estimates from these two data sources.

3.4 Internal Consistency of NSDUH Health Care Utilization Measures

In addition to comparisons with other data sources, another issue relevant to the validity of NSDUH estimates of health care utilization is the internal consistency within NSDUH of different measures of health care utilization. NSDUH includes a general question about staying overnight in a hospital and later in the interview includes additional questions specifically about overnight hospital stays for a mental health or substance use problem. It would be logical to assume that individuals who reported an overnight hospital stay for a mental health or substance use problem would also report an overnight hospital stay when asked the general question that was not specific to the reason for the hospitalization. If this is not the case, it would demonstrate a lack of internal consistency

between these measures. These issues are addressed in the section below using combined 2004 to 2008 NSDUH data; for the sake of brevity, these analyses are described only in the text with no accompanying tables.

Considerable inconsistencies were found among the different questions related to hospitalization. Among adults aged 18 or older, 30.2 percent of those who reported an overnight stay for a mental health problem and 55.8 percent of those who reported an overnight stay specifically in a hospital for a substance use problem (i.e., as opposed to a residential treatment facility) did not report an overnight hospital stay when asked the general question that did not include the reason for the hospitalization. The results were similar for adolescents aged 12 to 17: 54.3 percent of those who reported an overnight stay for a mental health

problem and 54.2 percent of those who reported an overnight stay for a substance use problem did not report an overnight hospital stay when asked the general question.

There are a number of possible explanations for these inconsistencies. First, the general question regarding an overnight hospital stay specifically asked whether the respondents had “stayed overnight or longer as an inpatient,” and the question regarding overnight stays for alcohol or drug treatment asked whether respondents had “received treatment for your [specific type of drug or alcohol] use in a hospital overnight as an inpatient;” the questions about hospitalization for a mental health problem asked whether they had “stayed overnight or longer in a hospital or other facility” (which included facilities other than hospitals

Table 10. Estimated Number (in Thousands), Mean, and Standard Error of Number of Times Treated in an Emergency Room among Persons Aged 12 or Older, by Demographic Characteristic

Demographic Characteristic	Number of Visits to an Emergency Room for Cocaine, Heroin, Marijuana, PCP, LSD, or Methamphetamine			
	DAWN 2004-2008 (Includes Miscellaneous Hallucinogens and Combinations NTA)		NSDUH 2004-2008	
	Number (Total)	Number (Withdrawal, Overdose, or Seeking Detox)	Number	Mean (SE)
Total	940	230	311	2.6 (0.34)
Age Group				
12-17	54	8	31	2.5 (0.72)
18-25	203	53	93	2.8 (0.85)
26-44	468	121	155	2.6 (0.45)
45-64	210	48	33	2.0 (0.52)
65 or Older	5	1	*	*
Gender				
Male	620	149	189	2.6 (0.48)
Female	321	82	122	2.4 (0.45)
Hispanic Origin and Race				
Non-Hispanic White	412	123	154	2.2 (0.38)
Non-Hispanic Black or African American	292	55	106	4.1 (1.11)
Non-Hispanic Other	10	2	28	2.2 (0.86)
Hispanic or Latino	122	24	23	1.6 (0.24)

* Low precision; no estimate reported.

NOTE: Respondents with unknown health care utilization data were excluded.

NOTE: DAWN has considerable missing data for race/ethnicity.

DAWN = Drug Abuse Warning Network. Source: Drug Abuse Warning Network, 2004-2008.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004-2008.

NTA = not tabulated above.

SE = standard error.

and made no mention of being an inpatient). The inclusion of other facilities, and the possibility that some individuals who stayed overnight in a hospital for a mental health problem may not have thought of themselves as an inpatient (e.g., those kept overnight in a psychiatric unit for observation), may partially explain why some respondents reported an overnight stay for a mental health problem but did not report a general overnight hospital stay. In support of this, of those who reported an overnight stay for mental health problems, 17.3 percent indicated that the overnight stay had been at a residential treatment facility or some other non-hospital facility. Note that the wording of the questions regarding general hospital stays and hospital stays for drug or alcohol treatment were similar, so these types of wording differences cannot explain the inconsistencies between those measures. A second possibility is that these differences could indicate that when first asked about overnight hospitalization, some respondents may have reported hospitalizations for physical medical problems but not for mental health or substance use treatment. A third possibility is that some respondents who were not hospitalized in the past year could have incorrectly reported in the later questions that they were hospitalized for treatment of a mental health or substance use problem in that period (i.e., “telescoping”). However, this last explanation is less plausible because NSDUH respondents who reported that they stayed overnight as an inpatient for treatment of a mental health or substance use problem were asked further questions about their hospitalization, and these additional questions would have acted as prompts to alert the respondents to their error; the respondents would have had the opportunity to correct their previous incorrect answer. Whatever the explanation, it is clear that NSDUH estimates of the number of persons who were hospitalized overnight in the past year are an underestimate in that they appear to undercount persons who were hospitalized overnight for mental health or substance use problems. Although there is no way to evaluate the estimates from the other surveys, it is possible that other surveys also underestimate these types of overnight hospitalizations.

4. Discussion

The main objective of this report was to compare prevalence estimates of specific health conditions, general health, and health care utilization from NSDUH with estimates from other national data sources. These comparisons and the discussion of the differences in data collection and estimation methodologies provide information to guide persons using these data in analysis and decision making. The surveys that were compared differ across multiple dimensions, such as questionnaire wording and format, whether questions are self-administered or interviewer-administered, and whether some individuals responded for themselves or others responded for them. There are also differences among surveys in the context of the questions, which could lead to different estimates among the surveys. Other differences may have included differing item nonresponse; a procedure used to account for unknown responses in analyses; different interviewer backgrounds such as education, training, and experience; deviations from standard scripts employed by interviewers; and use of flash cards. Given all of the methodological differences among these data sources, the similarities among estimates from these data sources may be more noteworthy than the differences in what they tell policymakers and others about the health of persons in the United States.

For example, estimates of lifetime diabetes and lung cancer and of past year hospitalizations and ER use were similar in NSDUH and other national surveys among all adults and for most subgroups of adults. In particular, the close proximity of the lifetime estimates for diabetes among adults can increase policymakers’ confidence about where the “true” population prevalence lies; however, the NSDUH estimate may have been somewhat lower if the survey directed female respondents to exclude gestational diabetes as was done in the comparison surveys. Similarly, data from NSDUH, NHIS, and NHANES all indicated that more than one in five adults has ever had high blood pressure, although NSDUH was at the low end of the range (21.8 percent). Among the health conditions that were reviewed for adults, hypertension also had the highest lifetime prevalence in each of the surveys that measured

this condition (Table 5). A summary of the specific health condition comparisons between NSDUH and other national surveys is presented in **Table 11**.

This report further showed that demographic differences in the prevalence of chronic health conditions such as asthma and diabetes among adults were similar across multiple surveys. Thus, policymakers and other data users who utilize these different surveys would reach similar conclusions about which subgroups of the adult population are in greatest need of prevention or treatment resources, which allows for more informed decisions for resource allocation.

Estimates of health care utilization were relatively similar between NSDUH and other surveys, with few exceptions (**Table 12**). Patterns of health care utilization by demographic characteristics were similar across surveys as well.

The NSDUH estimates of the percentage of adults hospitalized overnight and having at least one ER visit in the past year were statistically higher than NHIS and MEPS estimates. However, the internal consistency data from NSDUH that were presented in Section 3.4 suggest that respondents may not have included all overnight hospital stays for mental health or substance use problems; if this is true and NSDUH respondents reported their overnight hospitalizations accurately, the difference in the percentage of adults hospitalized overnight between NSDUH and these other surveys would be even larger. In addition, NSDUH estimates of both overnight hospitalizations and ER visits in the past year for adolescents appeared to be much higher than estimates from all other surveys examined. Some of these differences for adolescents may be explained by NSDUH adolescents self-reporting health care utilization information, while some other surveys, such as MEPS, rely on adult reports of adolescent behavior.

When data sources yield estimates across a fairly wide range (such as for the lifetime history of diagnosed heart disease), data users should consider how methodological differences might account for the range in estimates. For example, the higher estimate of lifetime heart disease in NHIS than in NSDUH among adults could be explained by use of four questions in

NHIS to measure this characteristic rather than the single response category in NSDUH for this condition out of 20 categories that encompass a wide variety of health conditions. The separate questions used in NHIS add breadth and clarity to the definition of heart disease, making it possible for respondents to report specific symptoms or health problems (i.e., angina and heart attack); however, this expanded definition may be more broad than necessary, depending on the purpose of data collection. The differences in estimates for conditions such as heart disease and asthma may be more a reflection of imprecise clinical definitions, rather than survey or sampling error; estimates for conditions such as diabetes, which has an explicit clinical definition based on laboratory results, showed close agreement among surveys. For health measures among adolescents, a possible explanation for differences between NSDUH and MEPS is that NSDUH adolescent data were reported by the adolescents in self-administered questions, whereas in MEPS, the data for adolescents were provided by a parent or guardian. Further studies might investigate ways to reduce the divergence in estimates, such as through methodological research to test alternate questions or modes of survey administration.

Moreover, even when surveys intend to measure the same health characteristic, no single survey can fully cover all of the issues for a characteristic that might be of interest to policymakers and other data users while maintaining a survey length that would be acceptable to most respondents. For example, NSDUH measures the prevalence of substance use, substance use disorders, mental health conditions, and utilization of substance use and mental health treatment services. Thus, NSDUH data are well suited for examining relationships between these substance use and mental health measures and other health indicators. Other surveys that ask about specific health behaviors and nutrition are better suited for examining relationships between these other health behaviors and health outcomes. For example, NHIS and BRFSS ask about physical exercise, oral health care, and immunizations, but NSDUH does not. Although each survey attempts to accurately represent the population through sampling and weighting techniques, there are

Table 11. Summary of Specific Health Condition Comparisons between NSDUH and Other Surveys

NSDUH Measure	Comparison with Other Surveys	Notes
Anxiety Disorder	N/A	No comparison surveys available.
Asthma	NSDUH estimate for adults was similar to NHIS, lower than NHANES and BRFSS, and higher than MEPS. NSDUH estimate for adolescents was lower than NHANES and higher than MEPS.	Asthma appears second in the list of NSDUH health conditions, first in the set of health questions in NHANES, and second in the health questions in MEPS. Questions about asthma appear relatively later in NHIS and last in BRFSS. NSDUH estimate based on adolescent self-report, estimates from other surveys are proxy measures from parents; note that adolescent self-reports do not necessarily indicate greater accuracy.
Bronchitis	NSDUH estimate was higher than NHANES.	NSDUH condition mentions “bronchitis,” NHANES asks about the more specific “chronic bronchitis.” NHIS asks about “chronic bronchitis” but only for the past 12 months.
Cirrhosis of the Liver	N/A	No comparison surveys available.
Depression	N/A	No comparison surveys available. NSDUH includes a past year measure of major depressive episode, while NHANES and BRFSS assess current depression. Because of differences in question wording and recall periods, no comparisons were made.
Diabetes	NSDUH estimate for adults was similar to NHIS, NHANES, BRFSS, and MEPS; adolescent estimates in NHANES and MEPS were suppressed because of low precision.	Surveys other than NSDUH do not count diabetes during pregnancy for females. NSDUH estimate based on adolescent self-report, estimates from other surveys are proxy measures from parents; note that adolescent self-reports do not necessarily indicate greater accuracy.
Heart Disease	NSDUH estimate was lower than NHIS, NHANES, and BRFSS, and higher than MEPS.	NSDUH estimate based on a single question that did not define “heart disease”; NHIS and MEPS inquire about coronary heart disease, angina, heart attack, and other heart disease; NHANES asks about congestive heart failure, coronary heart disease, angina, and heart attack; BRFSS includes coronary heart disease, angina, and heart attack. Differences between NHIS and MEPS, which have the same wording, suggest that question wording cannot fully explain differences among surveys.
Hepatitis	NSDUH estimate was lower than NHIS.	No differences in question wording between NSDUH and NHIS.
High Blood Pressure	NSDUH estimate for adults was lower than NHIS, NHANES, or MEPS. NSDUH estimate for adolescents was slightly higher than NHANES.	NSDUH condition mentions only about “high blood pressure”; other surveys ask about “hypertension, also known as high blood pressure.” NSDUH estimate based on adolescent self-report, estimates from other surveys are proxy measures from parents; note that adolescent self-reports do not necessarily indicate greater accuracy.
HIV/AIDS	N/A	No comparison surveys available.
Lung Cancer	NSDUH estimate was similar to NHIS.	NHANES also includes a measure of lung cancer but this estimate was suppressed due to low precision.
Pancreatitis	N/A	No comparison surveys available.
Pneumonia	N/A	No comparison surveys available.
Sexually Transmitted Disease, Such as Chlamydia, Gonorrhea, Herpes, or Syphilis	NSDUH estimate lower than NHANES.	NSDUH includes one response category that mentions sexually transmitted disease such as chlamydia, gonorrhea, herpes, or syphilis; NHANES includes four questions that asked about genital herpes, genital warts, gonorrhea, and chlamydia. Separate questions for each sexually transmitted disease could explain higher rate in NHANES, as could the inclusion of genital warts.
Sinusitis	N/A	No comparison surveys available.
Sleep Apnea	N/A	No comparison surveys available.
Stroke	NSDUH estimate lower than NHIS, NHANES, BRFSS, and MEPS.	NSDUH, NHIS, NHANES, and BRFSS all assess stroke while MEPS assesses stroke or TIA, followed by the definition of TIA. Health conditions that immediately precede and follow stroke in NSDUH are sleep apnea and tinnitus, respectively. Questions about stroke in the other surveys follow questions about other cardiovascular conditions.
Ulcer or Ulcers	NSDUH estimate lower than NHIS.	NSDUH category mentions ulcer or ulcers, while NHIS question additionally specifies ulcer type (stomach, duodenal, or peptic ulcer). Ulcer appears last in the list of NSDUH health conditions.

NOTES: Comparisons are for adults unless otherwise noted. NSDUH = National Survey on Drug Use and Health; NHIS = National Health Interview Survey; NCHS = National Center for Health Statistics; NHANES = National Health and Nutrition Examination Survey; BRFSS = Behavioral Risk Factor Surveillance System; MEPS = Medical Expenditure Panel Survey; TIA = transient ischemic attack; N/A = not assessed.

Table 12. Summary of Health Care Utilization Comparisons between NSDUH and Other Surveys

NSDUH Measure	Comparison with Other Surveys	Notes
Percentage with Overnight Hospital Stays in the Past Year	<p>For adults, NSDUH statistically similar to NHANES percentage estimate and statistically higher than NHIS and MEPS estimates. NSDUH estimate comparable to NIS and NHDS exploratory estimate.</p> <p>For adolescents, NSDUH percentage estimate statistically higher than NHIS, NHANES, and MEPS.</p>	<p>NSDUH specified overnight hospitalization and specified “inpatient” in the question. NHIS, NHANES, and MEPS surveys did not specify “inpatient” in the question about hospitalizations.</p> <p>NSDUH question about hospitalization is self-administered and is interviewer-administered in NHIS, NHANES, and MEPS. MEPS data, however, are supplemented by both medical provider and insurance information.</p> <p>For NHDS and NIS, exploratory estimates obtained by converting total hospital discharges to estimated unduplicated persons (based on the distribution of annual hospital admissions in the MEPS) and divided by midyear census population estimates to derive prevalence.</p>
Mean Number of Overnight Hospital Stays in Past Year	<p>For adults, NSDUH mean estimate comparable to estimates from NHIS and MEPS but higher than NIS and NHDS mean number of stays.</p> <p>For adolescents, NSDUH mean estimate statistically similar to MEPS and NHIS estimates.</p>	N/A
Total Number of Overnight Hospital Stays in the Past Year	<p>Adults had similar estimates across surveys.</p> <p>Adolescent NSDUH total number was higher than MEPS, NHIS, and NHDS estimates; however, statistical tests were not performed.</p>	N/A
Percentage with an Emergency Room Visit in the Past Year	<p>For adults, NSDUH percentage estimate statistically higher than MEPS and NHIS estimates but similar to exploratory NEDS and NHAMCS estimates.</p> <p>For adolescents, NSDUH percentage estimate statistically much higher than MEPS and NHIS estimates.</p>	<p>Slight differences in question wording exist among NSDUH, MEPS, and NHIS.</p> <p>For NEDS and NHAMCS, exploratory estimates obtained by converting total emergency room discharges to estimated unduplicated persons (based on the distribution of annual emergency room visits in the MEPS) and divided by midyear census population estimates to derive prevalence.</p>
Mean Number of Emergency Room Visits in the Past Year	<p>For adolescents, NSDUH mean estimate statistically higher than MEPS but similar to NHIS.</p>	N/A
Total Number of Emergency Room Visits in the Past Year	<p>For adolescents, NSDUH total number estimate was five times higher than MEPS and about two times higher than NHIS.</p> <p>NSDUH estimate of number of emergency room visits for cocaine, heroin, marijuana, PCP, LSD, or methamphetamine among persons 12 years or older considerably lower than DAWN estimate.</p>	<p>DAWN estimates were based on all emergency room visits related to the use of these drugs, even if the visit was not for drug treatment, whereas NSDUH estimates were based on just visits to receive treatment for the use of these drugs.</p>

NOTES: NSDUH = National Survey on Drug Use and Health; NHIS = National Health Interview Survey; NCHS = National Center for Health Statistics; NHANES = National Health and Nutrition Examination Survey; BRFSS = Behavioral Risk Factor Surveillance System; MEPS = Medical Expenditure Panel Survey; NHDS = National Hospital Discharge Survey; NIS = Nationwide Inpatient Survey; NEDS = National Emergency Department Sample; DAWN = Drug Abuse Warning Network; NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006; N/A = not assessed.

certain drawbacks to each approach that may cause some surveys to represent a slightly different demographic than others. Thus, some of the variation in estimates may reflect these slight differences. Because of the level of participant burden, no one survey can fully cover all aspects related to the health of the Nation; when making decisions regarding the appropriate source of data for a given health characteristic, policymakers and others need to consider not only the specific methodological details that may affect the estimates but also the core purpose and complementary nature of these different data systems.

Questions on health conditions, health status, and health care utilization were added to NSDUH in order to study the associations between substance use and mental health status and these physical health questions. The data presented in this report indicate that some of the questions in NSDUH on health conditions, health status, and health care utilization (e.g., underreporting of overnight hospital stays) may contain considerable measurement error. Therefore, caution must be taken in interpreting these types of associations, especially for the questions related to health care utilization. Nevertheless, the finding that demographic correlates of the prevalence of chronic health conditions among adults in NSDUH were similar to those found in other surveys provides confidence when the associations are tested between these conditions and other NSDUH measures; the variation among surveys in the actual prevalence of some of these measures still suggests caution in interpreting the strength of these associations. One further topic of research that may provide additional information is to study the strength of these types of associations (e.g., the strength of the associations between history of cigarette smoking and lung cancer) among surveys.

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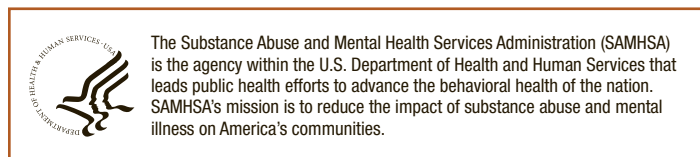
References

- Adams, P. F., Lucas, J. W., & Barnes, P. M. (2008). Summary health statistics for the U.S. population: National Health Interview Survey, 2006. National Center for Health Statistics. *Vital Health Statistics, 10*(236). Retrieved from http://www.cdc.gov/nchs/data/series/sr_10/sr10_236.pdf
- Agency for Healthcare Research and Quality (AHRQ). (2008). *Healthcare Cost and Utilization Project (HCUP): Introduction to the HCUP Nationwide Inpatient Sample (NIS) 2006*. Rockville, MD: Author. Retrieved from http://www.hcup-us.ahrq.gov/db/nation/nis/2006NIS_INTRODUCTION.pdf
- AHRQ. (2010). *Healthcare Cost and Utilization Project (HCUP) introduction to the HCUP Nationwide Emergency Department Sample (NEDS): 2006*. Rockville, MD: Author. Retrieved from http://www.hcup-us.ahrq.gov/db/nation/neds/NEDS_2006v2_IntroductionRevised.pdf
- Aguinis, H., Pierce, C. A., & Quigley, B. M. (1993). Conditions under which a bogus pipeline procedure enhances the validity of self-reported cigarette smoking: A meta-analytic review. *Journal of Applied Social Psychology, 23*(5), 352-373.
- Akinbami, L. J. & Schoendorf, K. C. (2002). Trends in childhood asthma: Prevalence, health care utilization, and mortality. *Pediatrics, 110*(2):315-322.
- Andresen, E. M., Catlin, T. K., Wyrwich, K. W., & Jackson-Thompson, J. (2003). Retest reliability of surveillance questions on health related quality of life. *Journal Epidemiology Community Health, 57*(5), 339-343.
- Bloom, B., & Cohen, R. A. (2007). Summary health statistics for U.S. children: National Health Interview Survey, 2006. National Center for Health Statistics. *Vital Health Statistics 10*(234). Retrieved from http://www.cdc.gov/nchs/data/series/sr_10/sr10_234.pdf
- Blumberg, S. J., Luke, J. V., & Cynamon, M. L. (2006). Telephone coverage and health survey estimates: Evaluating the need for concern about wireless substitution. *American Journal of Public Health, 96*, 926-931.
- Brener, N. D., Billy, J. O. G., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*, 436-457.
- Buie, V. C., Owings, M. F., DeFrances, C. J., & Golosinskiy, A. (2010). National Hospital Discharge Survey: 2006 summary. National Center for Health Statistics. *Vital Health Statistics 13*(168). Retrieved from http://www.cdc.gov/nchs/data/series/sr_13/sr13_168.pdf
- Campbell, V. A., Crews, J. E., Moriarty, D. G., Zack, M. M., & Blackman, D. (1999). Surveillance for sensory impairment, activity limitation, and health-related quality of life among older adults—United States, 1993-1997. *MMWR Surveillance Summary, 48*, 131-156.

- Centers for Disease Control and Prevention (CDC). (2006). *National Center for Health Statistics (NCHS): National Health and Nutrition Examination Survey Data*. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Retrieved from http://www.cdc.gov/nchs/nhanes/response_rates_CPS.htm
- CDC. (2007a). *2006 Behavioral Risk Factor Surveillance System: Summary data quality report*. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved from <ftp://ftp.cdc.gov/pub/Data/Brfss/2006SummaryDataQualityReport.pdf>
- CDC. (2007b). *BRFSS Annual Survey Data: Survey data and documentation*. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved from http://www.cdc.gov/brfss/annual_data/annual_2006.htm
- Cherry, D. K., Hing, E., Woodwell, D. A., & Rechtsteiner, E. A. (2008). *National Ambulatory Medical Care Survey: 2006 summary*. National Health Statistics Reports (No 3). Hyattsville, MD: National Center for Health Statistics. Retrieved from <http://www.cdc.gov/nchs/data/nhsr/nhsr003.pdf>
- Currey, S. S., Rao, J. K., Winfield, J. B., & Callahan, L. F. (2003). Performance of a generic health-related quality of life measure in a clinic population with a rheumatic disease. *Arthritis Care Research*, 49(5), 658-664.
- Dempsey, A. F., & Koutsky, L. A. (2008). National burden of genital warts: A first step in defining the problem. *Sexually Transmitted Diseases*, 35(4), 361-362.
- Dominick, K. L., Ahern, F. M., Gold, C. H., & Heller, D. A. (2002). Relationship of health-related quality of life to health care utilization and mortality among older adults. *Aging Clinical and Experimental Research*, 14, 499-508.
- Ezzati-Rice, T. M., Rohde, F., & Greenblatt, J. (2008). *Sample design of the Medical Expenditure Panel Survey household component, 1998-2007* (Methodology Report No. 22). Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr22/mr22.pdf
- Galea, S., & Tracy, M. (2007). Participation rates in epidemiologic studies. *Annals of Epidemiology*, 17, 643-653.
- Galesic, M., Tourangeau, R., Couper, M. P., & Conrad, F. G. (2008). Eye-tracking data. New insights on response order effects and other cognitive shortcuts in survey responding. *Public Opinion Quarterly*, 72(5), 892-913.
- National Center for Health Statistics. (2007). *2006 National Health Interview Survey: Public use data release*. NHIS Survey Description. Hyattsville, MD: Author. Retrieved from ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2006/srvydesc.pdf
- Pleis, J. R., & Lethbridge-Çejku, M. (2007). *Summary health statistics for U.S. adults: National Health Interview Survey, 2006*. National Center for Health Statistics. *Vital Health Statistics* 10(235). Retrieved from http://www.cdc.gov/nchs/data/series/sr_10/sr10_235.pdf
- Rasinsky, K. A., Mingay, D., & Bradburn, N. M. (1994). Do respondents really "mark all that apply" on self-administered questions? *Public Opinion Quarterly*, 58, 400-408.
- Shuy, R. W. (2001). In-person versus phone interviewing. In J. F. Bugrium & H. A. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 537-555). Thousand Oaks, CA: Sage Publications.
- Smith, J. D., Dillman, D. A., Christian, L. M., & Stern, M. J. (2006). Comparing check-all and forced-choice question formats in Web surveys. *Public Opinion Quarterly*, 70(1), 66-77.
- St-Pierre, M., & Beland, Y. (2004). Mode effects in the Canadian Community Health Survey: A comparison of CAPI and CATI. In *Proceedings of the Joint Statistical Meetings, American Statistical Association Section on Survey Research Methods*.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2007). *Results from the 2006 National Survey on Drug Use and Health: National findings* (NSDUH Series H-32, DHHS Publication No. SMA 07-4293). Rockville, MD: Office of Applied Studies.

List of Data Sources:

- BRFSS 2006: http://www.cdc.gov/brfss/annual_data/annual_2006.htm
- MEPS 2006: http://www.meps.ahrq.gov/mepsweb/data_stats/download_data_files_detail.jsp?cboPufNumber=HC-102I
- NEDS 2006: http://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp to contact HCUP central distributor to purchase data from AHRQ after completion of Data Use Agreement
- NHAMCS 2006: http://www.cdc.gov/nchs/ahcd/ahcd_questionnaires.htm
- NHANES 2005-2006: <http://www.cdc.gov/nchs/nhanes.htm>
- NHDS 2006: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NHDS/nhds06/
- NHIS 2006: http://www.cdc.gov/nchs/nhis/nhis_2006_data_release.htm
- NIS 2006: http://www.hcup-us.ahrq.gov/tech_assist/centdist.jsp to contact HCUP central distributor to purchase data from AHRQ after completion of Data Use Agreement



Appendix Tables

Table A1. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Asthma, by Demographic Characteristic

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006 ¹ : Percent (SE)
Total	10.7 (0.23)	11.0 (0.26)	14.2 (0.68)	12.8 (0.13)	9.6 (0.28)
Gender					
Male	9.0 (0.29)	9.5 (0.35)	12.9 (1.03)	10.7 (0.19)	8.0 (0.37)
Female	12.4 (0.34)	12.5 (0.37)	15.4 (0.68)	14.7 (0.18)	11.1 (0.33)
Age Group					
18-25	13.9 (0.31)	13.6 (0.75)	21.3 (1.30)	16.9 (0.58)	11.2 (0.73)
26-44	10.9 (0.35)	10.6 (0.44)	13.9 (1.09)	12.2 (0.21)	8.7 (0.43)
45-64	10.0 (0.45)	10.5 (0.43)	12.7 (1.50)	12.6 (0.18)	9.5 (0.43)
65 or Older	9.1 (0.70)	10.6 (0.52)	11.4 (1.18)	10.9 (0.21)	10.3 (0.67)
Hispanic Origin and Race					
Non-Hispanic White	11.1 (0.27)	11.4 (0.33)	15.0 (0.73)	12.9 (0.15)	9.9 (0.33)
Non-Hispanic Black or African American	12.2 (0.72)	12.0 (0.67)	15.6 (1.34)	14.3 (0.43)	10.8 (0.79)
Non-Hispanic Other	10.0 (1.05)	10.8 (0.98)	13.5 (2.41)	15.2 (0.63)	8.6 (0.96)
Hispanic or Latino	7.6 (0.58)	8.2 (0.61)	8.1 (1.37)	9.7 (0.43)	7.6 (0.57)

¹ MEPS estimates are calculated using age as of December 31, 2006.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of asthma is not available from this survey.

SE = standard error.

Table A2. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Bronchitis, by Demographic Characteristic

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006 : Percent (SE)
Total	11.0 (0.24)	N/A	6.6 (0.44)	N/A	N/A
Gender					
Male	8.3 (0.30)	N/A	4.8 (0.53)	N/A	N/A
Female	13.4 (0.36)	N/A	8.2 (0.60)	N/A	N/A
Age Group					
18-25	9.2 (0.26)	N/A	3.0 (0.78)	N/A	N/A
26-44	10.4 (0.36)	N/A	5.3 (0.60)	N/A	N/A
45-64	12.4 (0.47)	N/A	7.7 (0.85)	N/A	N/A
65 or Older	10.8 (0.79)	N/A	9.5 (1.38)	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	13.1 (0.30)	N/A	7.3 (0.50)	N/A	N/A
Non-Hispanic Black or African American	7.4 (0.61)	N/A	5.6 (1.34)	N/A	N/A
Non-Hispanic Other	5.8 (0.75)	N/A	9.2 (1.56)	N/A	N/A
Hispanic or Latino	5.0 (0.49)	N/A	2.0 (0.59)	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of bronchitis is not available from this survey.

SE = standard error.

Table A3. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Diabetes, by Demographic Characteristic

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006 : Percent (SE)
Total	7.7 (0.26)	7.8 (0.22)	7.6 (0.48)	8.0 (0.09)	7.9 (0.23)
Gender					
Male	7.4 (0.35)	7.7 (0.32)	7.0 (0.64)	8.5 (0.15)	8.1 (0.32)
Female	7.9 (0.35)	7.8 (0.28)	8.1 (0.72)	7.6 (0.11)	7.8 (0.29)
Age Group					
18-25	1.2 (0.10)	1.0 (0.25)	0.3 (0.11)	0.8 (0.09)	0.5 (0.15)
26-44	3.2 (0.21)	3.3 (0.25)	3.8 (0.62)	2.9 (0.11)	2.9 (0.22)
45-64	10.0 (0.48)	10.5 (0.44)	10.3 (0.88)	11.4 (0.19)	11.2 (0.42)
65 or Older	18.4 (1.03)	18.1 (0.72)	17.3 (0.92)	18.7 (0.28)	18.8 (0.80)
Hispanic Origin and Race					
Non-Hispanic White	7.2 (0.27)	7.3 (0.28)	6.5 (0.59)	7.4 (0.09)	7.5 (0.28)
Non-Hispanic Black or African American	9.9 (0.96)	11.0 (0.62)	12.1 (0.99)	12.1 (0.35)	10.5 (0.59)
Non-Hispanic Other	9.2 (1.46)	7.5 (0.94)	8.5 (1.60)	8.6 (0.42)	7.8 (0.79)
Hispanic or Latino	7.5 (0.70)	7.5 (0.45)	9.4 (1.04)	7.9 (0.38)	8.2 (0.55)

¹ MEPS estimates are calculated using age as of December 31, 2006.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of diabetes is not available from this survey.

SE = standard error.

Table A4. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Heart Disease, by Demographic Characteristic

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006 ¹ : Percent (SE)
Total	5.9 (0.22)	11.0 (0.25)	8.8 (0.61)	6.8 (0.08)	3.2 (0.17)
Gender					
Male	6.9 (0.35)	11.4 (0.36)	9.3 (0.70)	8.0 (0.14)	4.1 (0.27)
Female	5.0 (0.25)	10.5 (0.35)	8.2 (0.85)	5.6 (0.10)	2.3 (0.18)
Age Group					
18-25	0.4 (0.05)	3.3 (0.44)	*	1.1 (0.17)	*
26-44	1.2 (0.12)	3.8 (0.25)	1.8 (0.45)	1.8 (0.10)	0.2 (0.06)
45-64	6.4 (0.38)	12.3 (0.47)	8.8 (0.89)	7.7 (0.15)	3.1 (0.25)
65 or Older	20.3 (0.96)	31.0 (0.85)	28.9 (1.31)	20.8 (0.27)	12.5 (0.77)
Hispanic Origin and Race					
Non-Hispanic White	7.1 (0.28)	12.7 (0.33)	9.6 (0.74)	7.2 (0.09)	3.8 (0.23)
Non-Hispanic Black or African American	3.9 (0.53)	9.0 (0.51)	9.6 (1.05)	5.9 (0.23)	1.9 (0.23)
Non-Hispanic Other	3.9 (0.85)	6.1 (0.74)	5.6 (1.68)	6.6 (0.37)	2.0 (0.53)
Hispanic or Latino	2.5 (0.42)	5.4 (0.36)	4.3 (0.62)	4.9 (0.31)	1.6 (0.24)

* Low precision; no estimate reported.

¹ MEPS estimates are calculated using age as of December 31, 2006.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Heart disease includes coronary heart disease, angina, heart attack, or other heart diseases. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Heart disease includes congestive heart failure, coronary heart disease, angina, and heart attack. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Heart disease includes coronary heart disease, angina, and heart attack. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Heart disease includes coronary heart disease, angina, heart attack, or other heart diseases. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of heart disease is not available from this survey.

SE = standard error.

Table A5. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had High Blood Pressure, by Demographic Characteristic

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	21.8 (0.37)	27.0 (0.39)	28.7 (1.03)	N/A	26.7 (0.45)
Gender					
Male	21.6 (0.51)	26.9 (0.56)	27.6 (1.16)	N/A	26.2 (0.56)
Female	22.1 (0.49)	27.1 (0.47)	29.7 (1.28)	N/A	27.1 (0.55)
Age Group					
18-25	3.7 (0.16)	4.7 (0.44)	5.8 (1.12)	N/A	2.8 (0.40)
26-44	11.0 (0.37)	13.1 (0.43)	15.5 (1.62)	N/A	11.0 (0.44)
45-64	29.2 (0.71)	36.3 (0.67)	38.1 (2.00)	N/A	35.2 (0.72)
65 or Older	46.9 (1.19)	58.2 (0.90)	58.8 (0.80)	N/A	64.2 (1.04)
Hispanic Origin and Race					
Non-Hispanic White	23.1 (0.43)	28.0 (0.48)	29.9 (1.29)	N/A	27.7 (0.55)
Non-Hispanic Black or African American	30.5 (1.23)	34.0 (1.00)	35.4 (1.30)	N/A	33.7 (1.04)
Non-Hispanic Other	17.0 (1.74)	20.5 (1.36)	25.3 (3.40)	N/A	21.6 (1.46)
Hispanic or Latino	9.5 (0.76)	17.8 (0.73)	15.7 (1.22)	N/A	17.8 (0.72)

¹ MEPS estimates are calculated using age as of December 31, 2006.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. High blood pressure question was not asked in 2006 BRFSS (included in 2005 and 2007). Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of high blood pressure is not available from this survey.

SE = standard error.

Table A6. Percent of Persons Aged 18 or Older with an Inpatient Overnight Hospitalization in the Past Year, by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006 ¹ : Percent (SE)	NHDS 2006 ² : Percent (SE)	NIS 2006 ³ : Percent (SE)
Total	11.1 (0.26)	8.8 (0.14)	10.4 (0.53)	8.2 (0.22)	10.8 (--)	11.1 (--)
Gender						
Male	9.4 (0.37)	6.8 (0.20)	8.0 (0.75)	5.9 (0.26)	8.7 (--)	9.0 (--)
Female	12.6 (0.36)	10.7 (0.21)	12.6 (0.79)	10.4 (0.34)	12.8 (--)	13.0 (--)
Age Group						
18-25	7.6 (0.23)	6.7 (0.30)	6.9 (0.88)	6.0 (0.58)	6.7 (--)	N/A
26-44	8.7 (0.32)	6.6 (0.21)	8.7 (0.82)	6.5 (0.32)	6.9 (--)	N/A
45-64	10.1 (0.45)	8.1 (0.22)	9.4 (1.24)	7.1 (0.32)	8.8 (--)	9.2 (--)
65 or Older	21.6 (0.99)	17.3 (0.46)	19.4 (1.50)	16.0 (0.71)	26.6 (--)	27.4 (--)
Hispanic Origin and Race						
Non-Hispanic White	11.3 (0.31)	9.4 (0.18)	10.4 (0.71)	8.4 (0.30)	N/A	N/A
Non-Hispanic Black or African American	14.1 (0.92)	9.8 (0.37)	13.2 (1.09)	9.1 (0.51)	N/A	N/A
Non-Hispanic Other	7.7 (0.93)	5.6 (0.41)	7.3 (2.18)	7.1 (0.81)	N/A	N/A
Hispanic or Latino	9.0 (0.62)	6.3 (0.25)	8.8 (0.63)	6.6 (0.42)	N/A	N/A
Health Status						
Excellent	6.1 (0.38)	4.5 (0.19)	4.8 (0.90)	4.6 (0.34)	N/A	N/A
Very Good	8.0 (0.35)	6.4 (0.20)	7.8 (1.02)	5.4 (0.31)	N/A	N/A
Good	11.5 (0.47)	9.5 (0.27)	10.4 (0.72)	8.8 (0.48)	N/A	N/A
Fair	24.0 (1.12)	19.8 (0.67)	18.8 (1.41)	16.5 (0.84)	N/A	N/A
Poor	39.4 (2.84)	37.0 (1.33)	33.4 (3.25)	32.2 (1.96)	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

² For NHDS and NIS, total hospital discharges were converted to estimated unduplicated persons (based on the distribution of annual hospital admissions in the MEPS) and divided by midyear census population estimates to derive prevalence. Standard errors cannot be calculated for these estimates.

³ Estimates are not available for the age groups of 18 to 25 or 26 to 44 for NIS. The estimate for the age group of 18 to 44 is 6.9 percent.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHDS = National Hospital Discharge Survey. Source: National Center for Health Statistics, CDC, 2006.

NIS = Nationwide Inpatient Sample.

-- = unable to be calculated.

N/A = not assessed.

SE = standard error.

Table A7. Estimated Number (in Thousands), Mean, and Standard Error of Number of Nights Stayed at the Hospital among Persons Aged 18 or Older, by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006		MEPS 2006 ¹		NHIS 2006		NHDS 2006		NIS 2006	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Total	154,484	6.4 (0.51)	121,521	6.7 (0.31)	137,201	7.3 (0.26)	152,645	4.8 (N/A)	157,201	4.8 (N/A)
Gender										
Male	59,814	6.1 (0.44)	49,972	7.9 (0.67)	59,371	8.4 (0.52)	65,057	5.2 (N/A)	67,739	5.2 (N/A)
Female	94,670	6.7 (0.82)	71,548	6.0 (0.34)	77,829	6.6 (0.28)	87,588	4.5 (N/A)	89,462	4.5 (N/A)
Age Group										
18-25	9,938	4.1 (0.22)	7,507	3.8 (0.37)	10,443	4.8 (0.57)	9,843	3.3 (N/A)	N/A	N/A
26-44	29,504	4.4 (0.26)	24,594	4.9 (0.60)	27,145	5.5 (0.51)	27,937	3.9 (N/A)	N/A	N/A
45-64	52,253	7.1 (0.85)	33,352	6.3 (0.41)	46,276	7.9 (0.48)	43,334	5.0 (N/A)	44,941	5.0 (N/A)
65 or Older	62,790	8.4 (1.38)	56,067	9.6 (0.62)	53,336	9.1 (0.53)	71,530	5.5 (N/A)	75,395	5.6 (N/A)
Hispanic Origin and Race										
Non-Hispanic White	111,097	6.6 (0.56)	101,875	6.5 (0.37)	102,296	7.3 (0.30)	N/A	N/A	N/A	N/A
Non-Hispanic Black or African American	30,230	8.6 (2.51)	25,231	9.1 (0.99)	20,783	8.6 (0.96)	N/A	N/A	N/A	N/A
Non-Hispanic Other	4,628	4.6 (0.65)	5,931	5.5 (1.02)	3,959	6.1 (0.91)	N/A	N/A	N/A	N/A
Hispanic or Latino	8,530	3.3 (0.24)	12,466	5.9 (0.55)	10,163	5.7 (0.44)	N/A	N/A	N/A	N/A
Health Status										
Excellent	10,316	3.3 (0.30)	8,359	3.3 (0.27)	9,857	3.5 (0.19)	N/A	N/A	N/A	N/A
Very Good	28,143	4.5 (0.77)	18,261	4.4 (0.28)	19,332	4.4 (0.31)	N/A	N/A	N/A	N/A
Good	40,731	5.9 (0.58)	35,108	6.3 (0.52)	38,679	7.0 (0.56)	N/A	N/A	N/A	N/A
Fair	49,988	9.0 (1.35)	26,046	7.7 (0.64)	39,774	10.2 (0.77)	N/A	N/A	N/A	N/A
Poor	25,302	11.5 (3.75)	29,906	12.9 (1.44)	28,868	13.2 (0.93)	N/A	N/A	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHDS = National Hospital Discharge Survey. Source: National Center for Health Statistics, CDC, 2006.

NIS = Nationwide Inpatient Sample.

N/A = not assessed.

SE = standard error.

Table A8. Percent of Persons Aged 18 or Older Treated in an Emergency Room in the Past Year by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	MEPS 2006 : Percent (SE)	NEDS 2006 ² : Percent (SE)	NHAMCS 2006 ³ : Percent (SE)
Total	28.8 (0.36)	20.4 (0.34)	14.0 (0.33)	30.6 (--)	30.0 (--)
Gender					
Male	27.5 (0.49)	18.7 (0.53)	12.3 (0.37)	27.5 (--)	27.0 (--)
Female	30.1 (0.50)	22.0 (0.44)	15.5 (0.48)	33.6 (--)	32.8 (--)
Age Group					
18-25	34.1 (0.43)	24.5 (0.97)	15.1 (0.87)	N/A	37.0 (--)
26-44	29.0 (0.53)	18.8 (0.54)	12.5 (0.51)	N/A	30.2 (--)
45-64	24.5 (0.65)	18.4 (0.54)	12.2 (0.41)	24.5 (--)	24.7 (--)
65 or Older	32.7 (1.18)	24.5 (0.79)	19.7 (0.73)	39.6 (--)	33.7 (--)
Hispanic Origin and Race					
Non-Hispanic White	27.6 (0.41)	20.7 (0.42)	14.1 (0.39)	N/A	26.7 (--)
Non-Hispanic Black or African American	40.0 (1.21)	25.7 (0.91)	17.8 (0.93)	N/A	59.3 (--)
Non-Hispanic Other	22.9 (1.58)	14.0 (1.12)	9.6 (0.88)	N/A	18.7 (--)
Hispanic or Latino	28.7 (0.97)	16.9 (0.74)	12.2 (0.65)	N/A	26.0 (--)
Health Status					
Excellent	21.8 (0.63)	14.3 (0.54)	8.5 (0.52)	N/A	N/A
Very Good	24.4 (0.52)	15.8 (0.50)	11.0 (0.45)	N/A	N/A
Good	32.1 (0.70)	23.5 (0.72)	15.1 (0.59)	N/A	N/A
Fair	44.4 (1.30)	35.7 (1.23)	24.8 (1.02)	N/A	N/A
Poor	55.5 (2.95)	54.3 (2.17)	43.3 (1.86)	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

² For NEDS and NHAMCS, exploratory estimates obtained by converting total emergency department discharges to estimated unduplicated persons (based on the distribution of annual emergency department visits in the MEPS) and divided by midyear census population estimates to derive prevalence. Standard errors cannot be calculated for these estimates.

³ Estimates are not available for the age groups of 18 to 25 or 26 to 44 for NEDS. The estimate for the age group of 18 to 44 is 31.7 percent.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey Source: National Center for Health Statistics, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NEDS = National Emergency Department Sample.

NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006.

-- = unable to be calculated.

N/A = not assessed.

SE = standard error.

Table A9. Estimated Number (in Thousands), Mean, and Standard Error of Number of Times Treated in an Emergency Room among Persons Aged 18 or Older, by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006		MEPS 2006 ¹		NHIS 2006		NEDS 2006		NHAMCS 2006	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Total	126,918	2.0 (0.05)	42,977	1.4 (0.02)	87,782	2.0 (0.04)	94,902	N/A	92,882	N/A
Gender										
Male	57,706	2.0 (0.10)	17,629	1.3 (0.02)	36,069	1.8 (0.05)	41,419	N/A	40,709	N/A
Female	69,212	2.0 (0.05)	25,349	1.4 (0.03)	51,712	2.1 (0.05)	53,473	N/A	52,172	N/A
Age Group										
18-25	21,411	2.0 (0.04)	6,455	1.3 (0.04)	15,599	1.9 (0.07)	N/A	N/A	17,275	N/A
26-44	43,742	2.0 (0.05)	13,630	1.4 (0.04)	27,775	1.9 (0.07)	N/A	N/A	32,863	N/A
45-64	34,583	1.9 (0.14)	12,945	1.4 (0.03)	26,957	2.0 (0.07)	25,217	N/A	25,461	N/A
65 or Older	27,182	2.4 (0.15)	9,946	1.4 (0.04)	17,451	2.0 (0.10)	20,352	N/A	17,283	N/A
Hispanic Origin and Race										
Non-Hispanic White	81,862	2.0 (0.05)	29,627	1.4 (0.02)	61,231	1.9 (0.05)	N/A	N/A	57,898	N/A
Non-Hispanic Black or African American	22,763	2.3 (0.11)	6,688	1.5 (0.04)	14,874	2.3 (0.08)	N/A	N/A	21,537	N/A
Non-Hispanic Other	5,558	1.9 (0.09)	1,703	1.2 (0.06)	2,842	1.8 (0.10)	N/A	N/A	3,148	N/A
Hispanic or Latino	16,735	2.1 (0.30)	4,959	1.4 (0.04)	8,835	1.9 (0.07)	N/A	N/A	10,299	N/A
Health Status										
Excellent	18,372	1.7 (0.07)	5,854	1.3 (0.06)	14,101	1.6 (N/A)	N/A	N/A	N/A	N/A
Very Good	32,470	1.7 (0.05)	10,330	1.2 (0.02)	18,134	1.6 (N/A)	N/A	N/A	N/A	N/A
Good	37,512	1.9 (0.05)	12,729	1.3 (0.03)	26,820	2.0 (N/A)	N/A	N/A	N/A	N/A
Fair	27,655	2.7 (0.26)	7,853	1.5 (0.05)	17,553	2.4 (N/A)	N/A	N/A	N/A	N/A
Poor	10,906	3.5 (0.27)	5,798	1.9 (0.09)	11,096	3.2 (N/A)	N/A	N/A	N/A	N/A

¹ MEPS estimates are calculated using age as of December 31, 2006.

NOTE: Respondents with unknown health care utilization data were excluded.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NEDS = Nationwide Emergency Department Sample. Source: AHRQ, 2006.

NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006.

N/A = not assessed.

SE = standard error.

Table A10. Percent of Persons Aged 12 to 17 Who Were Hospitalized Overnight as an Inpatient in the Past Year, by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006 : Percent (SE)	NHDS 2006 : Percent (SE)
Total	4.9 (0.20)	2.3 (0.22)	3.1 (0.48)	2.2 (0.34)	2.7 (--)
Gender					
Male	5.0 (0.29)	1.8 (0.26)	2.6 (0.59)	1.8 (0.40)	2.2 (--)
Female	4.8 (0.27)	2.8 (0.36)	3.6 (0.75)	2.5 (0.57)	3.3 (--)
Hispanic Origin and Race					
Non-Hispanic White	4.4 (0.20)	2.5 (0.33)	2.8 (0.60)	2.0 (0.43)	N/A
Non-Hispanic Black or African American	6.3 (0.59)	1.4 (0.33)	4.3 (0.72)	2.3 (0.67)	N/A
Non-Hispanic Other	5.0 (1.27)	*	*	*	N/A
Hispanic or Latino	5.4 (0.54)	2.7 (0.42)	3.2 (0.92)	*	N/A
Health Status					
Excellent	3.9 (0.33)	1.3 (0.22)	*	*	N/A
Very Good	4.5 (0.31)	2.4 (0.40)	3.2 (0.84)	1.7 (0.48)	N/A
Good	6.9 (0.49)	4.1 (0.68)	3.9 (1.13)	*	N/A
Fair	6.9 (1.06)	8.3 (*)	*	*	N/A
Poor	*	*	*	*	N/A

* Low precision; no estimate reported. Standard NSDUH suppression rule was used for NSDUH estimates; for other surveys, estimates were suppressed if relative standard error of prevalence estimate > 30%.

¹ MEPS estimates are calculated using age as of December 31, 2006.

² For NHDS, exploratory estimates obtained by converting total hospital discharges to estimated unduplicated persons (based on the distribution of annual hospital admissions in the MEPS) and divided by midyear census population estimates to derive prevalence. Standard errors cannot be calculated for these estimates.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHDS = National Hospital Discharge Survey. Source: National Center for Health Statistics, CDC, 2006.

-- = unable to be calculated.

N/A = not assessed.

SE = standard error.

Table A11. Estimated Number (in Thousands), Mean, and Standard Error of Number of Nights Stayed at the Hospital among Persons Aged 12 to 17, by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006		MEPS 2006 ¹		NHIS 2006		NHDS 2006	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Total	4,781	4.0 (0.31)	2,849	5.2 (1.00)	3,266	5.7 (0.92)	4,317	4.7 (N/A)
Gender								
Male	2,571	4.1 (0.52)	715	3.1 (0.42)	1,573	6.8 (1.98)	1,959	5.1 (N/A)
Female	2,210	3.8 (0.34)	2,135	6.7 (1.58)	1,693	5.0 (0.74)	2,358	4.4 (N/A)
Hispanic Origin and Race								
Non-Hispanic White	2,562	4.0 (0.29)	1,381	4.5 (0.95)	1,912	4.9 (0.72)	N/A	N/A
Non-Hispanic Black or African American	770	3.2 (0.38)	396	4.5 (0.87)	847	*	N/A	N/A
Non-Hispanic Other	328	4.1 (1.32)	153	4.3 (0.28)	46	*	N/A	N/A
Hispanic or Latino	1,120	4.7 (1.25)	920	7.8 (3.75)	460	3.9 (0.62)	N/A	N/A
Health Status								
Excellent	1,031	3.3 (0.40)	1,050	4.8 (1.29)	567	3.4 (0.60)	N/A	N/A
Very Good	1,866	4.0 (0.65)	538	4.1 (0.63)	637	3.8 (0.65)	N/A	N/A
Good	1,321	3.7 (0.35)	418	3.4 (0.37)	1,214	6.3 (1.14)	N/A	N/A
Fair	491	9.0 (2.23)	*	*	*	*	N/A	N/A
Poor	72	9.0 (2.88)	*	*	*	*	N/A	N/A

* Low precision; no estimate reported.

¹ MEPS estimates are calculated using age as of December 31, 2006.

NOTE: Respondents with unknown health care utilization data were excluded.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHDS = National Hospital Discharge Survey. Source: National Center for Health Statistics, CDC, 2006.

N/A = not assessed.

SE = standard error.

Table A12. Percent of Persons Aged 12 to 17 Who Were Treated in an Emergency Room in the Past Year, by Demographic/ Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	MEPS 2006 : Percent (SE)	NHAMCS : Percent (SE)
Total	31.9 (0.43)	17.8 (0.87)	9.7 (0.61)	24.3 (N/A)
Gender				
Male	32.6 (0.58)	18.0 (1.21)	11.9 (1.02)	22.9 (N/A)
Female	31.2 (0.60)	17.7 (1.19)	7.4 (0.92)	25.7 (N/A)
Hispanic Origin and Race				
Non-Hispanic White	31.8 (0.50)	19.6 (1.29)	10.1 (0.87)	25.4 (N/A)
Non-Hispanic Black or African American	38.8 (1.19)	18.4 (1.64)	9.9 (1.28)	33.4 (N/A)
Non-Hispanic Other	27.5 (1.98)	7.6 (2.00)	8.2 (2.41)	12.5 (N/A)
Hispanic or Latino	28.0 (1.11)	14.2 (1.43)	8.9 (1.11)	15.8 (N/A)
Health Status				
Excellent	29.0 (0.71)	16.8 (1.28)	7.0 (0.86)	N/A
Very Good	31.6 (0.63)	18.9 (1.64)	10.2 (1.16)	N/A
Good	35.7 (0.91)	18.7 (1.81)	14.4 (1.80)	N/A
Fair	40.1 (2.49)	22.4 (5.66)	21.2 (5.46)	N/A
Poor	*	*	*	N/A

* Low precision; no estimate reported. Standard NSDUH suppression rule was used for NSDUH estimates; for other surveys, estimates were suppressed if relative standard error of prevalence estimate > 30%.

¹ MEPS estimates are calculated using age as of December 31, 2006.

² For NHAMCS, exploratory estimates obtained by converting total ER visits to estimated unduplicated persons (based on the distribution of annual ER visits per person in the MEPS) and divided by midyear census population estimates to derive prevalence. Standard errors cannot be calculated for these estimates.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006.

SE = standard error.

Table A13. Estimated Number (in Thousands), Mean, and Standard Error of Number of Times Treated in an Emergency Room among Persons Aged 12 to 17, by Demographic/Other Characteristic

Demographic/ Other Characteristic	NSDUH 2006		MEPS 2006 ¹		NHIS 2006		NHDS 2006	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Total	15,145	1.9 (0.03)	3,001	1.2 (0.03)	7,452	1.7 (0.07)	7,426	N/A
Gender								
Male	7,972	2.0 (0.05)	1,880	1.2 (0.04)	3,723	1.6 (0.09)	3,595	N/A
Female	7,173	1.9 (0.04)	1,120	1.2 (0.05)	3,729	1.7 (0.09)	3,832	N/A
Hispanic Origin and Race								
Non-Hispanic White	8,765	1.9 (0.04)	1,872	1.2 (0.05)	4,769	1.6 (0.07)	4,733	N/A
Non-Hispanic Black or African American	2,897	2.0 (0.07)	419	1.1 (0.04)	1,420	1.9 (0.20)	1,627	N/A
Non-Hispanic Other	917	2.1 (0.21)	224	1.4 (0.12)	193	*	202	N/A
Hispanic or Latino	2,566	2.1 (0.11)	486	1.2 (0.07)	1,070	1.7 (0.12)	864	N/A
Health Status								
Excellent	4,425	1.9 (0.06)	1,031	1.2 (0.05)	3,499	1.6 (0.08)	N/A	N/A
Very Good	5,998	1.8 (0.04)	917	1.2 (0.05)	2,020	1.5 (0.08)	N/A	N/A
Good	3,912	2.1 (0.07)	864	1.2 (0.07)	1,548	1.9 (0.17)	N/A	N/A
Fair	709	2.2 (0.16)	149	1.4 (0.16)	316	*	N/A	N/A
Poor	99	4.7 (1.70)	38	1.8 (0.14)	70	*	N/A	N/A

* Low precision; no estimate reported.

¹ MEPS estimates are calculated using age as of December 31, 2006.

NOTE: Respondents with unknown health care utilization data were excluded.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

NHAMCS = National Hospital and Ambulatory Medical Care Survey. Source: National Center for Health Statistics, CDC, 2006.

N/A = not assessed.

SE = standard error.

Supplemental Tables

The following tables were created during the production of this report, and although they are not specifically mentioned, they are included here as supplemental information.

Table S1. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Hepatitis, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	1.7 (0.12)	2.9 (0.13)	N/A	N/A	N/A
Gender					
Male	1.9 (0.19)	3.0 (0.18)	N/A	N/A	N/A
Female	1.4 (0.15)	2.8 (0.17)	N/A	N/A	N/A
Age Group					
18-25	0.3 (0.05)	0.8 (0.17)	N/A	N/A	N/A
26-44	1.3 (0.16)	2.0 (0.18)	N/A	N/A	N/A
45-64	2.6 (0.25)	4.4 (0.28)	N/A	N/A	N/A
65 or Older	1.9 (0.40)	3.5 (0.32)	N/A	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	1.6 (0.13)	2.9 (0.17)	N/A	N/A	N/A
Non-Hispanic Black or African American	0.9 (0.22)	2.4 (0.29)	N/A	N/A	N/A
Non-Hispanic Other	3.1 (0.86)	3.7 (0.58)	N/A	N/A	N/A
Hispanic or Latino	1.8 (0.41)	2.7 (0.28)	N/A	N/A	N/A

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of hepatitis is not available from this survey.

Table S2. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had Lung Cancer, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	0.2 (0.03)	0.2 (0.03)	*	N/A	N/A
Gender					
Male	0.2 (0.06)	0.2 (0.05)	*	N/A	N/A
Female	0.1 (0.03)	0.3 (0.05)	*	N/A	N/A
Age Group					
18-25	0.0 (0.01)	*	*	N/A	N/A
26-44	0.1 (0.03)	*	*	N/A	N/A
45-64	0.2 (0.07)	0.2 (0.05)	*	N/A	N/A
65 or Older	0.4 (0.13)	1.1 (0.18)	*	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	0.2 (0.04)	0.3 (0.05)	*	N/A	N/A
Non-Hispanic Black or African American	0.1 (0.08)	*	*	N/A	N/A
Non-Hispanic Other	0.0 (0.02)	*	*	N/A	N/A
Hispanic or Latino	0.1 (0.05)	*	*	N/A	N/A

* Low precision; no estimate reported. Standard NSDUH suppression rule used for NSDUH estimates, for other surveys estimates suppressed if relative standard error of prevalence estimate > 30%.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of lung cancer is not available from this survey.

Table S3. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had a Stroke, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	1.2 (0.10)	2.6 (0.12)	2.9 (0.36)	2.7 (0.05)	2.4 (0.12)
Gender					
Male	1.2 (0.15)	2.7 (0.18)	2.4 (0.39)	2.7 (0.08)	2.1 (0.15)
Female	1.3 (0.15)	2.5 (0.15)	3.4 (0.48)	2.8 (0.06)	2.6 (0.17)
Age Group					
18-25	0.1 (0.03)	0.2 (0.09)	0.3 (0.31)	0.4 (0.08)	0.1 (0.06)
26-44	0.3 (0.06)	0.6 (0.10)	0.5 (0.24)	0.8 (0.07)	0.3 (0.07)
45-64	1.4 (0.20)	2.4 (0.22)	2.9 (0.47)	2.9 (0.09)	2.3 (0.20)
65 or Older	3.6 (0.46)	9.3 (0.49)	9.8 (0.98)	8.4 (0.18)	9.0 (0.60)
Hispanic Origin and Race					
Non-Hispanic White	1.3 (0.11)	2.7 (0.15)	3.1 (0.43)	2.7 (0.05)	2.6 (0.17)
Non-Hispanic Black or African American	1.3 (0.33)	3.9 (0.35)	3.3 (0.52)	3.4 (0.18)	3.0 (0.29)
Non-Hispanic Other	1.9 (0.76)	1.6 (0.39)	2.4 (1.25)	2.9 (0.26)	1.2 (0.28)
Hispanic or Latino	0.3 (0.18)	1.2 (0.17)	1.5 (0.45)	1.9 (0.20)	1.2 (0.19)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of stroke is not available from this survey.

Table S4. Percent of Persons Aged 18 or Older Who Had Been Told in Their Lifetime They Had an Ulcer, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	4.0 (0.16)	6.6 (0.21)	N/A	N/A	N/A
Gender					
Male	3.7 (0.21)	6.6 (0.29)	N/A	N/A	N/A
Female	4.2 (0.24)	6.6 (0.26)	N/A	N/A	N/A
Age Group					
18-25	1.8 (0.11)	2.7 (0.31)	N/A	N/A	N/A
26-44	3.5 (0.21)	4.7 (0.30)	N/A	N/A	N/A
45-64	4.7 (0.32)	8.3 (0.35)	N/A	N/A	N/A
65 or Older	5.6 (0.51)	10.7 (0.54)	N/A	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	4.4 (0.19)	7.4 (0.27)	N/A	N/A	N/A
Non-Hispanic Black or African American	3.8 (0.46)	5.5 (0.49)	N/A	N/A	N/A
Non-Hispanic Other	3.2 (0.78)	3.9 (0.64)	N/A	N/A	N/A
Hispanic or Latino	2.2 (0.32)	4.2 (0.38)	N/A	N/A	N/A

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of ulcers is not available from this survey.

Table S5. Percent of Persons Aged 18 or Older Who Had Been Told in the Past 12 Months They Had Asthma, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	5.8 (0.18)	7.3 (0.23)	8.2 (0.54)	8.2 (0.11)	2.9 (0.15)
Gender					
Male	4.3 (0.22)	5.6 (0.28)	6.3 (0.69)	6.0 (0.14)	2.0 (0.20)
Female	7.2 (0.28)	8.9 (0.32)	9.9 (0.69)	10.3 (0.16)	3.7 (0.20)
Age Group					
18-25	6.6 (0.22)	7.7 (0.62)	8.8 (1.01)	9.2 (0.44)	2.9 (0.39)
26-44	5.7 (0.26)	7.0 (0.37)	8.1 (1.03)	7.7 (0.16)	2.6 (0.24)
45-64	5.8 (0.37)	7.5 (0.37)	8.4 (1.18)	8.6 (0.15)	3.2 (0.23)
65 or Older	5.5 (0.57)	7.0 (0.41)	7.4 (1.08)	7.6 (0.18)	2.9 (0.39)
Hispanic Origin and Race					
Non-Hispanic White	5.7 (0.21)	7.7 (0.29)	8.7 (0.53)	8.4 (0.12)	3.0 (0.19)
Non-Hispanic Black or African American	7.5 (0.62)	7.7 (0.50)	9.2 (0.81)	9.8 (0.37)	3.1 (0.35)
Non-Hispanic Other	5.5 (0.81)	7.2 (0.84)	7.4 (2.03)	9.0 (0.46)	2.6 (0.45)
Hispanic or Latino	4.8 (0.48)	5.1 (0.49)	4.6 (1.05)	5.7 (0.29)	2.2 (0.29)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Past 12 month estimate of asthma is not available from this survey.

Table S6. Percent of Persons Aged 18 or Older Who Had Been Told in the Past 12 Months They Had Bronchitis, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	3.9 (0.14)	4.3 (0.17)	3.3 (0.32)	N/A	N/A
Gender					
Male	2.4 (0.16)	2.7 (0.17)	2.4 (0.48)	N/A	N/A
Female	5.2 (0.24)	5.8 (0.26)	4.0 (0.52)	N/A	N/A
Age Group					
18-25	3.3 (0.16)	2.6 (0.35)	1.8 (0.72)	N/A	N/A
26-44	3.6 (0.20)	3.0 (0.21)	2.5 (0.40)	N/A	N/A
45-64	4.1 (0.28)	5.5 (0.32)	4.1 (0.61)	N/A	N/A
65 or Older	4.7 (0.48)	6.1 (0.40)	4.3 (0.72)	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	4.4 (0.18)	4.8 (0.21)	3.6 (0.34)	N/A	N/A
Non-Hispanic Black or African American	3.7 (0.42)	4.3 (0.35)	2.7 (0.83)	N/A	N/A
Non-Hispanic Other	2.1 (0.40)	3.3 (0.62)	4.9 (1.41)	N/A	N/A
Hispanic or Latino	1.8 (0.24)	2.3 (0.29)	*	N/A	N/A

* Low precision; no estimate reported. Standard NSDUH suppression rule used for NSDUH estimates, for other surveys estimates suppressed if relative standard error of prevalence estimate > 30%.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Lifetime estimate of bronchitis is not available from this survey.

Table S7. Percent of Persons Aged 18 or Older Who Had Been Told in the Past 12 Months They Had Sinusitis, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	5.6 (0.19)	14.0 (0.31)	N/A	N/A	N/A
Gender					
Male	3.3 (0.24)	10.1 (0.39)	N/A	N/A	N/A
Female	7.7 (0.30)	17.5 (0.44)	N/A	N/A	N/A
Age Group					
18-25	2.4 (0.13)	8.1 (0.67)	N/A	N/A	N/A
26-44	5.7 (0.26)	13.7 (0.45)	N/A	N/A	N/A
45-64	7.0 (0.40)	16.9 (0.55)	N/A	N/A	N/A
65 or Older	5.2 (0.54)	13.9 (0.60)	N/A	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	6.6 (0.25)	15.4 (0.40)	N/A	N/A	N/A
Non-Hispanic Black or African American	4.4 (0.55)	14.6 (0.76)	N/A	N/A	N/A
Non-Hispanic Other	3.2 (0.70)	8.3 (0.87)	N/A	N/A	N/A
Hispanic or Latino	2.3 (0.30)	8.1 (0.59)	N/A	N/A	N/A

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Past 12 month estimate of sinusitis is not available from this survey.

Table S8. Percent of Persons Aged 18 or Older Who Had Been Told in the Past 12 Months They Had An Ulcer, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	1.2 (0.09)	1.6 (0.10)	N/A	N/A	N/A
Gender					
Male	1.1 (0.11)	1.3 (0.15)	N/A	N/A	N/A
Female	1.2 (0.13)	1.9 (0.13)	N/A	N/A	N/A
Age Group					
18-25	1.0 (0.09)	1.1 (0.20)	N/A	N/A	N/A
26-44	0.9 (0.10)	1.4 (0.15)	N/A	N/A	N/A
45-64	1.4 (0.19)	2.1 (0.19)	N/A	N/A	N/A
65 or Older	1.5 (0.27)	1.5 (0.19)	N/A	N/A	N/A
Hispanic Origin and Race					
Non-Hispanic White	1.1 (0.10)	1.7 (0.13)	N/A	N/A	N/A
Non-Hispanic Black or African American	1.5 (0.27)	1.5 (0.23)	N/A	N/A	N/A
Non-Hispanic Other	1.1 (0.60)	1.3 (0.35)	N/A	N/A	N/A
Hispanic or Latino	1.1 (0.23)	1.6 (0.22)	N/A	N/A	N/A

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

N/A = Past 12 month estimate of ulcers is not available from this survey.

Table S9. Estimated Number (in Thousands), Percentages, and Standard Errors of Overnight Stays at the Hospital among Persons Aged 18 or Older, by Demographic Characteristics: NSDUH 2008

Demographic Characteristic	Any Overnight Stay in the Hospital		Overnight Stay in the Hospital for Mental Health Problem		Overnight Stay in the Hospital for Alcohol or Drug Use	
	Number	Percent (SE)	Number	Percent (SE)	Number	Percent (SE)
Total	25,145	11.2 (0.28)	1,963	0.9 (0.10)	622	0.3 (0.04)
Gender						
Male	9,545	8.8 (0.36)	776	0.7 (0.09)	409	0.4 (0.06)
Female	15,600	13.4 (0.40)	1,187	1.0 (0.17)	213	0.2 (0.04)
Age Group						
18-25	2,744	8.3 (0.25)	358	1.1 (0.10)	138	0.4 (0.05)
26-44	6,898	8.9 (0.32)	591	0.8 (0.10)	279	0.4 (0.07)
45-64	8,156	10.5 (0.46)	590	0.8 (0.15)	183	0.2 (0.07)
65 or Older	7,348	19.7 (1.02)	424	1.1 (0.46)	22	0.1 (0.06)
Hispanic Origin and Race						
Non-Hispanic White	18,047	11.7 (0.33)	1,179	0.8 (0.12)	424	0.3 (0.04)
Non-Hispanic Black	3,244	12.6 (0.83)	407	1.6 (0.32)	117	0.5 (0.17)
Non-Hispanic American Indian or Alaskan	180	19.1 (3.59)	6	0.6 (0.27)	2	0.2 (0.19)
Non-Hispanic Asian	524	5.4 (0.90)	30	0.3 (0.15)	16	0.2 (0.14)
Non-Hispanic Native Hawaiian or Other Pacific Islander	*	*	*	*	*	*
Non-Hispanic Two or More Races	391	15.6 (2.80)	10	0.4 (0.18)	7	0.3 (0.22)
Hispanic	2,657	8.8 (0.61)	302	1.0 (0.28)	57	0.2 (0.06)

* Low precision; no estimate reported.

¹ Respondents with legitimate skips or never used alcohol or drugs are classified as "No."

NOTE: Respondents with unknown health care utilization data were excluded.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2008.

Table S10. Estimated Number (in Thousands), Mean, and Standard Errors of Number of Nights Stayed at the Hospital among Persons Aged 18 or Older, by Demographic Characteristics: NSDUH 2008

Demographic Characteristic	Number of Nights Stayed in the Hospital		Number of Nights Stayed in the Hospital for Mental Health Treatment ¹		Number of Nights Stayed in a Private or Public Psychiatric Hospital	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Total	134,915	5.4 (0.28)	16,254	10.5 (2.71)	9,604	15.1 (5.91)
Gender						
Male	55,554	5.9 (0.45)	8,666	16.4 (7.08)	*	*
Female	79,361	5.1 (0.38)	7,589	7.4 (1.45)	4,158	10.1 (2.07)
Age Group						
18-25	12,012	4.4 (0.25)	2,419	8.5 (1.42)	938	8.5 (1.69)
26-44	26,703	3.9 (0.19)	*	*	*	*
45-64	46,445	5.7 (0.63)	5,266	12.1 (2.24)	2,991	13.5 (3.27)
65 or Older	49,755	6.9 (0.64)	*	*	*	*
Hispanic Origin and Race						
Non-Hispanic White	101,191	5.7 (0.36)	11,800	11.9 (4.13)	7,531	19.8 (9.64)
Non-Hispanic Black	19,302	6.0 (0.79)	1,677	5.5 (1.26)	1,158	6.7 (2.15)
Non-Hispanic American Indian or Alaskan	604	3.6 (0.60)	*	*	*	*
Non-Hispanic Asian	1,714	3.3 (0.52)	*	*	*	*
Non-Hispanic Native Hawaiian or Other Pacific Islander	266	2.6 (0.77)	*	*	*	*
Non-Hispanic Two or More Races	1,670	4.6 (0.69)	50	5.5 (1.29)	*	*
Hispanic	10,167	3.9 (0.60)	2,585	12.1 (4.76)	823	11.6 (4.90)

(continued)

Table S10. Estimated Number (in Thousands), Mean, and Standard Errors of Number of Nights Stayed at the Hospital among Persons Aged 18 or Older, by Demographic Characteristics: NSDUH 2008 *(continued)*

Demographic Characteristic	Number of Nights Stayed in Psychiatric unit of a General Hospital		Number of Nights Stayed in a Medical Unit of a General Hospital for Mental Health Care		Number of Nights Stayed in Some Other Type of Hospital for Mental Health Care	
	Number	Mean (SE)	Number	Mean (SE)	Number	Mean (SE)
Total	5,010	10.4 (2.43)	2,152	4.8 (1.89)	319	4.2 (1.28)
Gender						
Male	2,516	15.6 (5.61)	765	6.6 (1.51)	*	*
Female	2,495	7.8 (1.80)	*	*	193	4.7 (2.00)
Age Group						
18-25	1,273	9.9 (2.79)	199	3.6 (0.63)	82	6.4 (1.77)
26-44	632	4.4 (0.91)	392	4.5 (1.27)	*	*
45-64	1,675	12.4 (3.34)	1,234	13.2 (4.58)	*	*
65 or Older	*	*	*	*	*	*
Hispanic Origin and Race						
Non-Hispanic White	2,706	9.3 (2.04)	*	*	209	5.4 (2.04)
Non-Hispanic Black	800	8.9 (2.84)	156	2.4 (0.57)	*	*
Non-Hispanic American Indian or Alaskan	*	*	*	*	*	*
Non-Hispanic Asian	*	*	*	*	*	*
Non-Hispanic Native Hawaiian or Other Pacific Islander	*	*	*	*	*	*
Non-Hispanic Two or More Races	*	*	*	*	*	*
Hispanic	*	*	290	6.4 (1.95)	*	*

* Low precision; no estimate reported.

¹ The Number of Nights stayed in a Hospital for Mental Health Treatment was created by combining Number of Nights stayed in a Private or Public Psychiatric Hospital, Number of Nights Stayed in Psychiatric unit of a General Hospital, Number of Nights Stayed in a Medical Unit of a General Hospital for Mental Health Care, and Number of Nights Stayed in Some Other Type of Hospital for Mental Health Care and taking the maximum.

NOTE: Respondents with unknown health care utilization data were excluded.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2008.

Table S11. Estimated Number (in Thousands), Percentages, and Standard Errors of Overnight Stays at the Hospital and Number of Nights Stayed in the Hospital among Persons Aged 18 or Older Who Reported at Least One Overnight Stay for a Mental Health Problem, by Demographic Characteristics: NSDUH 2004-2008

Demographic Characteristic	Any Overnight Stay in the Hospital		Total Number of Nights Stayed in the Hospital		Number of Nights Stayed in the Hospital for Mental Health Treatment ¹	
	Number	Percent (SE)	Number	Percent (SE)	Number	Percent (SE)
Total	1,350	69.8 (1.94)	13,791	10.4 (0.98)	17,270	11.6 (1.40)
Gender						
Male	610	68.3 (2.45)	5,084	8.5 (0.71)	8,530	13.0 (2.28)
Female	739	71.0 (3.03)	8,707	12.0 (1.68)	8,740	10.5 (1.70)
Age Group						
18-25	236	66.3 (1.76)	2,057	8.9 (0.71)	2,413	8.7 (0.65)
26-44	468	69.4 (2.54)	3,914	8.5 (1.21)	6,093	11.6 (2.18)
45-64	439	70.1 (3.86)	5,726	13.2 (2.35)	6,177	12.8 (2.44)
65 or Older	*	*	2,094	10.3 (2.75)	2,587	12.6 (6.07)
Hispanic Origin and Race						
Non-Hispanic White	798	69.2 (2.68)	9,269	11.9 (1.47)	12,627	13.7 (2.04)
Non-Hispanic Black	264	72.1 (3.58)	2,444	9.3 (1.96)	1,861	6.8 (0.80)
Non-Hispanic American Indian or Alaskan	*	*	49	6.8 (1.86)	58	9.8 (3.23)
Non-Hispanic Asian	*	*	170	3.5 (0.64)	192	3.9 (0.79)
Non-Hispanic Native Hawaiian or Other Pacific Islander	*	*	42	4.3 (1.19)	*	*
Non-Hispanic Two or More Races	*	*	217	11.2 (3.51)	169	8.4 (3.79)
Hispanic	204	64.9 (5.30)	1,599	8.0 (1.54)	2,328	10.5 (3.61)

* Low precision; no estimate reported.

¹ The Number of Nights stayed in a Hospital for Mental Health Treatment was created by summing the Number of Nights stayed in a Private or Public Psychiatric Hospital, Number of Nights Stayed in Psychiatric unit of a General Hospital, Number of Nights Stayed in a Medical Unit of a General Hospital for Mental Health Care, and Number of Nights Stayed in Some Other Type of Hospital for Mental Health Care.

NOTE: Respondents with unknown health care utilization data were excluded.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2008.

Table S12. Estimated Number (in Thousands), Percentages, and Standard Errors of Overnight Stays at the Hospital among Persons Aged 12 to 17, by Demographic Characteristics: NSDUH 2008

Demographic Characteristic	Any Overnight Stay in the Hospital		Overnight Stay in the Hospital for Mental Health Problem		Overnight Stay in the Hospital for Alcohol or Drug Use	
	Number	Percent (SE)	Number	Percent (SE)	Number	Percent (SE)
Total	1,265	5.1 (0.20)	462	1.9 (0.11)	53	0.2 (0.04)
Gender						
Male	618	4.9 (0.27)	222	1.8 (0.15)	30	0.2 (0.05)
Female	647	5.3 (0.29)	240	2.0 (0.18)	23	0.2 (0.05)
Hispanic Origin and Race						
Non-Hispanic White	670	4.6 (0.23)	247	1.7 (0.13)	38	0.3 (0.05)
Non-Hispanic Black	243	6.5 (0.60)	83	2.2 (0.31)	3	0.1 (0.04)
Non-Hispanic American Indian or Alaskan	18	13.3 (3.79)	5	3.4 (1.54)	*	*
Non-Hispanic Asian	17	1.8 (0.56)	9	1.0 (0.36)	1	0.2 (0.11)
Non-Hispanic Native Hawaiian or Other Pacific Islander	*	*	*	*	*	*
Non-Hispanic Two or More Races	31	6.3 (1.44)	9	1.9 (0.71)	0	0.0 (0.05)
Hispanic	279	6.0 (0.53)	106	2.3 (0.34)	7	0.1 (0.09)

* Low precision; no estimate reported.

† Respondents with legitimate skips or never used alcohol or drugs are classified as "No."

NOTE: Respondents with unknown health care utilization data were excluded.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2008.

Table S13. Estimated Number (in Thousands), Mean, and Standard Errors of Number of Nights Stayed at the Hospital among Persons Aged 12 to 17, by Demographic Characteristics: NSDUH 2008

Demographic Characteristic	Number of Nights Stayed in the Hospital		Number of Nights Stayed in the Hospital to Receive Treatment or Counseling for Emotional or Behavioral Problems Not Caused by Alcohol or Drugs	
	Number	Mean (SE)	Number	Mean (SE)
Total	4,521	3.7 (0.26)	2,574	6.2 (0.81)
Gender				
Male	2,325	3.9 (0.44)	1,532	7.4 (1.45)
Female	2,196	3.6 (0.28)	1,042	4.9 (0.70)
Hispanic Origin and Race				
Non-Hispanic White	2,700	4.2 (0.43)	1,490	6.7 (1.14)
Non-Hispanic Black	673	2.9 (0.29)	509	7.0 (2.06)
Non-Hispanic American Indian or Alaskan	42	2.5 (0.51)	*	*
Non-Hispanic Asian	44	2.6 (0.70)	*	*
Non-Hispanic Native Hawaiian or Other Pacific Islander	*	*	*	*
Non-Hispanic Two or More Races	*	*	*	*
Hispanic	856	3.2 (0.29)	342	3.6 (0.80)

* Low precision; no estimate reported.

NOTE: Respondents with unknown health care utilization data were excluded.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2008.

Table S14. Estimated Number (in Thousands), Percentages, and Standard Errors of Visiting the Emergency Room among Persons Aged 12 or Older, by Demographic Characteristics: NSDUH 2008

Demographic Characteristic	Received Treatment in an Emergency Room		Received Treatment in an Emergency Room for Alcohol, Drugs or Both ¹		Received Treatment in an Emergency Room for Cocaine, Heroin, Marijuana, PCP, LSD, or Methamphetamine	
	Number	Percent (SE)	Number	Percent (SE)	Number	Percent (SE)
Total	70,687	28.8 (0.33)	374	0.2 (0.02)	105	0.0 (0.01)
Gender						
Male	32,032	26.9 (0.48)	230	0.2 (0.04)	58	0.0 (0.02)
Female	38,654	30.5 (0.47)	144	0.1 (0.02)	47	0.0 (0.01)
Age Group						
12-17	7,419	31.2 (0.41)	33	0.1 (0.03)	12	0.0 (0.02)
18-25	10,893	33.6 (0.44)	88	0.3 (0.04)	36	0.1 (0.03)
26-44	21,286	27.9 (0.52)	144	0.2 (0.05)	42	0.1 (0.02)
45-64	19,313	25.2 (0.66)	109	0.1 (0.04)	16	0.0 (0.02)
65 or Older	11,776	32.1 (1.29)	*	*	*	*
Hispanic Origin and Race						
Non-Hispanic White	46,613	27.8 (0.40)	258	0.2 (0.03)	77	0.0 (0.01)
Non-Hispanic Black	11,103	38.7 (1.15)	74	0.3 (0.10)	18	0.1 (0.05)
Non-Hispanic American Indian or Alaskan	335	32.2 (3.91)	4	0.4 (0.27)	*	*
Non-Hispanic Asian	1,934	18.4 (1.74)	14	0.1 (0.13)	*	*
Non-Hispanic Native Hawaiian or Other Pacific Islander	*	*	0	0.0 (0.02)	0	0.0 (0.02)
Non-Hispanic Two or More Races	963	33.1 (3.02)	7	0.2 (0.18)	0	0.0 (0.00)
Hispanic	9,419	27.6 (0.89)	18	0.1 (0.02)	11	0.0 (0.02)

* Low precision; no estimate reported.

¹ Respondents with legitimate skips or never used alcohol or drugs are classified as "No."

NOTE: Respondents with unknown health care utilization data were excluded.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2008.

Table S15. Percent of Persons Aged 18 or Older Reporting Excellent Overall Health, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	23.1 (0.33)	29.1 (0.35)	17.7 (0.76)	20.9 (0.16)	24.7 (0.47)
Gender					
Male	23.2 (0.46)	30.6 (0.40)	18.8 (1.45)	21.7 (0.27)	26.3 (0.56)
Female	23.0 (0.43)	27.7 (0.39)	16.7 (0.88)	20.1 (0.19)	23.1 (0.57)
Age Group					
18-25	29.3 (0.44)	42.9 (0.78)	20.8 (1.67)	24.7 (0.65)	37.0 (1.22)
26-44	27.1 (0.55)	35.7 (0.57)	19.5 (1.35)	24.8 (0.28)	27.9 (0.79)
45-64	20.9 (0.60)	23.7 (0.49)	17.1 (1.41)	19.5 (0.22)	20.4 (0.64)
65 or Older	13.0 (0.83)	13.4 (0.44)	12.4 (1.34)	11.8 (0.22)	15.5 (0.80)
Hispanic Origin and Race					
Non-Hispanic White	23.6 (0.37)	29.8 (0.42)	18.8 (0.90)	22.1 (0.17)	25.4 (0.61)
Non-Hispanic Black or African American	20.1 (0.96)	25.1 (0.65)	16.5 (1.16)	17.3 (0.50)	22.0 (0.95)
Non-Hispanic Other	26.6 (1.78)	33.4 (1.31)	14.2 (2.10)	21.9 (0.78)	26.3 (1.45)
Hispanic or Latino	21.1 (0.85)	27.5 (0.76)	13.7 (1.93)	16.7 (0.59)	22.3 (0.96)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S16. Percent of Persons Aged 18 or Older Reporting Very Good Overall Health, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	35.8 (0.38)	31.8 (0.30)	32.1 (1.30)	32.7 (0.18)	34.3 (0.45)
Gender					
Male	36.1 (0.55)	31.6 (0.37)	32.1 (1.77)	32.6 (0.29)	34.0 (0.56)
Female	35.6 (0.50)	31.9 (0.35)	32.0 (1.30)	32.8 (0.22)	34.6 (0.54)
Age Group					
18-25	40.5 (0.45)	32.7 (0.75)	34.9 (1.77)	35.0 (0.71)	35.6 (1.09)
26-44	38.5 (0.58)	34.3 (0.51)	34.6 (1.82)	35.7 (0.31)	37.0 (0.72)
45-64	34.6 (0.73)	31.7 (0.46)	30.0 (2.26)	31.9 (0.25)	33.3 (0.71)
65 or Older	28.2 (1.19)	25.6 (0.59)	28.2 (1.35)	25.8 (0.28)	29.4 (1.01)
Hispanic Origin and Race					
Non-Hispanic White	38.0 (0.45)	33.3 (0.39)	35.8 (1.16)	36.0 (0.19)	35.8 (0.54)
Non-Hispanic Black or African American	34.2 (1.12)	27.1 (0.67)	24.2 (1.48)	27.9 (0.56)	29.3 (0.95)
Non-Hispanic Other	34.0 (1.72)	30.7 (0.99)	29.9 (4.08)	31.1 (0.89)	33.1 (1.73)
Hispanic or Latino	26.5 (0.98)	28.0 (0.59)	17.9 (1.34)	20.1 (0.61)	31.1 (1.10)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S17. Percent of Persons Aged 18 or Older Reporting Good Overall Health, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	27.7 (0.35)	27.1 (0.29)	34.1 (0.60)	30.2 (0.18)	28.4 (0.43)
Gender					
Male	27.8 (0.50)	26.6 (0.35)	33.9 (1.06)	30.3 (0.28)	28.2 (0.54)
Female	27.7 (0.47)	27.6 (0.31)	34.3 (1.27)	30.1 (0.23)	28.6 (0.53)
Age Group					
18-25	24.3 (0.41)	20.6 (0.61)	34.3 (2.30)	30.8 (0.70)	22.8 (1.01)
26-44	25.8 (0.52)	23.6 (0.44)	33.6 (1.47)	28.7 (0.31)	26.8 (0.70)
45-64	29.0 (0.68)	29.2 (0.45)	33.9 (1.00)	29.8 (0.26)	30.5 (0.62)
65 or Older	32.5 (1.11)	36.2 (0.63)	35.3 (1.79)	33.6 (0.31)	32.7 (0.92)
Hispanic Origin and Race					
Non-Hispanic White	26.3 (0.39)	25.6 (0.34)	32.4 (0.67)	28.2 (0.18)	27.1 (0.52)
Non-Hispanic Black or African American	30.2 (1.07)	31.0 (0.75)	37.3 (1.28)	34.6 (0.58)	31.1 (1.01)
Non-Hispanic Other	26.7 (1.65)	27.2 (1.15)	38.0 (4.07)	30.3 (0.80)	29.7 (1.40)
Hispanic or Latino	33.4 (1.02)	31.5 (0.75)	39.5 (1.99)	37.2 (0.76)	32.4 (1.10)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S18. Percent of Persons Aged 18 or Older Reporting Fair Overall Health, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	10.7 (0.28)	9.2 (0.19)	12.9 (0.75)	12.0 (0.13)	9.3 (0.27)
Gender					
Male	10.5 (0.40)	8.5 (0.21)	12.0 (0.92)	11.5 (0.21)	8.5 (0.33)
Female	10.9 (0.37)	9.8 (0.23)	13.8 (1.00)	12.4 (0.16)	10.1 (0.34)
Age Group					
18-25	5.6 (0.24)	3.4 (0.24)	8.7 (1.16)	8.5 (0.42)	3.8 (0.40)
26-44	7.6 (0.33)	5.2 (0.22)	10.2 (0.79)	8.9 (0.22)	6.7 (0.34)
45-64	11.6 (0.49)	11.3 (0.29)	15.4 (1.32)	12.9 (0.20)	11.3 (0.44)
65 or Older	20.6 (1.06)	18.7 (0.54)	17.8 (1.69)	19.7 (0.27)	15.9 (0.71)
Hispanic Origin and Race					
Non-Hispanic White	9.2 (0.30)	8.5 (0.22)	9.9 (0.74)	9.7 (0.11)	8.4 (0.33)
Non-Hispanic Black or African American	12.4 (0.88)	12.9 (0.46)	18.5 (1.86)	14.9 (0.41)	13.3 (0.65)
Non-Hispanic Other	11.2 (1.44)	6.5 (0.56)	14.1 (2.14)	11.7 (0.54)	8.6 (0.88)
Hispanic or Latino	17.0 (0.94)	10.4 (0.38)	25.3 (1.67)	21.3 (0.64)	10.9 (0.64)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S19. Percent of Persons Aged 18 or Older Reporting Poor Overall Health, by Demographics: NSDUH, NHIS, NHANES, BRFSS, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	BRFSS 2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	2.6 (0.15)	2.9 (0.09)	3.2 (0.28)	4.3 (0.07)	3.3 (0.14)
Gender					
Male	2.5 (0.22)	2.7 (0.11)	3.2 (0.28)	3.9 (0.11)	2.9 (0.18)
Female	2.7 (0.20)	3.0 (0.12)	3.2 (0.58)	4.6 (0.10)	3.5 (0.19)
Age Group					
18-25	0.3 (0.05)	0.4 (0.08)	1.3 (0.50)	1.0 (0.18)	0.8 (0.17)
26-44	0.9 (0.10)	1.2 (0.09)	2.1 (0.40)	1.9 (0.08)	1.6 (0.18)
45-64	3.9 (0.31)	4.1 (0.17)	3.6 (0.50)	5.9 (0.14)	4.5 (0.27)
65 or Older	5.8 (0.58)	6.0 (0.33)	6.3 (0.79)	9.1 (0.23)	6.5 (0.45)
Hispanic Origin and Race					
Non-Hispanic White	2.8 (0.18)	2.8 (0.12)	3.0 (0.35)	3.9 (0.06)	3.2 (0.17)
Non-Hispanic Black or African American	3.1 (0.50)	4.0 (0.24)	3.5 (0.56)	5.3 (0.22)	4.2 (0.42)
Non-Hispanic Other	1.5 (0.35)	2.1 (0.26)	3.8 (1.38)	5.0 (0.34)	2.2 (0.38)
Hispanic or Latino	1.9 (0.39)	2.6 (0.17)	3.5 (0.60)	4.7 (0.36)	3.2 (0.39)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

BRFSS = Behavioral Risk Factor Surveillance System. Source: National Center for Chronic Disease Prevention and Health Promotion, CDC, 2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S20. Percent of Persons Aged 12 to 17 Reporting Excellent Overall Health, by Demographics: NSDUH, NHIS, NHANES, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	33.2 (0.42)	50.5 (0.91)	42.6 (2.30)	48.0 (1.36)
Gender				
Male	32.5 (0.58)	50.3 (1.18)	48.2 (2.78)	51.2 (1.62)
Female	33.8 (0.61)	50.7 (1.12)	36.9 (2.44)	44.7 (1.88)
Hispanic Origin and Race				
Non-Hispanic White	33.2 (0.50)	56.2 (1.20)	46.8 (3.49)	50.6 (1.94)
Non-Hispanic Black or African American	34.2 (1.03)	40.0 (1.98)	36.5 (2.24)	47.9 (2.64)
Non-Hispanic Other	33.4 (2.07)	49.6 (3.17)	43.9 (6.84)	50.0 (5.35)
Hispanic or Latino	31.9 (1.14)	40.4 (1.61)	31.2 (3.35)	38.3 (2.23)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S21. Percent of Persons Aged 12 to 17 Reporting Very Good Overall Health, by Demographics: NSDUH, NHIS, NHANES, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	42.0 (0.42)	28.2 (0.74)	29.6 (2.18)	30.6 (1.20)
Gender				
Male	42.4 (0.59)	27.8 (0.95)	28.0 (2.96)	28.7 (1.43)
Female	41.7 (0.60)	28.7 (0.97)	31.2 (2.40)	32.4 (1.84)
Hispanic Origin and Race				
Non-Hispanic White	44.9 (0.51)	27.5 (1.00)	33.5 (3.42)	30.3 (1.69)
Non-Hispanic Black or African American	37.6 (1.08)	29.9 (1.80)	25.9 (1.96)	27.1 (2.01)
Non-Hispanic Other	39.7 (2.03)	28.4 (2.76)	24.8 (4.41)	31.4 (4.14)
Hispanic or Latino	37.1 (1.13)	29.2 (1.37)	20.1 (2.29)	34.1 (2.25)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S22. Percent of Persons Aged 12 to 17 Reporting Good Overall Health, by Demographics: NSDUH, NHIS, NHANES, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	21.4 (0.37)	19.3 (0.67)	22.5 (0.97)	19.1 (1.01)
Gender				
Male	21.8 (0.52)	19.7 (0.89)	19.8 (1.57)	18.6 (1.28)
Female	21.0 (0.54)	18.9 (0.80)	25.2 (1.67)	19.5 (1.21)
Hispanic Origin and Race				
Non-Hispanic White	18.9 (0.42)	15.0 (0.85)	16.1 (1.79)	17.0 (1.26)
Non-Hispanic Black or African American	23.8 (1.00)	27.0 (1.59)	30.3 (2.64)	21.7 (2.38)
Non-Hispanic Other	23.3 (1.55)	20.1 (2.48)	28.9 (6.80)	16.9 (3.54)
Hispanic or Latino	27.0 (1.22)	27.0 (1.45)	37.3 (2.77)	24.6 (1.75)

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S23. Percent of Persons Aged 12 to 17 Reporting Fair Overall Health, by Demographics: NSDUH, NHIS, NHANES, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	3.3 (0.15)	1.8 (0.17)	4.7 (0.62)	2.0 (0.28)
Gender				
Male	3.1 (0.21)	2.0 (0.23)	3.9 (0.68)	1.2 (0.26)
Female	3.4 (0.22)	1.6 (0.22)	5.5 (0.91)	2.7 (0.48)
Hispanic Origin and Race				
Non-Hispanic White	2.8 (0.17)	1.1 (0.20)	3.2 (0.64)	1.7 (0.37)
Non-Hispanic Black or African American	4.2 (0.41)	3.0 (0.53)	6.6 (1.43)	*
Non-Hispanic Other	3.5 (0.94)	*	2.4 (2.17)	*
Hispanic or Latino	3.9 (0.41)	3.1 (0.44)	9.7 (2.27)	2.8 (0.65)

* Low precision; no estimate reported. Standard NSDUH suppression rule used for NSDUH estimates, for other surveys estimates suppressed if relative standard error of prevalence estimate > 30%.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.

Table S24. Percent of Persons Aged 12 to 17 Reporting Poor Overall Health, by Demographics: NSDUH, NHIS, NHANES, and MEPS

Demographic Characteristic	NSDUH 2006: Percent (SE)	NHIS 2006: Percent (SE)	NHANES 2005-2006: Percent (SE)	MEPS 2006: Percent (SE)
Total	0.1 (0.03)	0.2 (0.05)	*	*
Gender				
Male	0.1 (0.04)	*	*	*
Female	0.1 (0.04)	*	*	*
Hispanic Origin and Race				
Non-Hispanic White	0.1 (0.03)	*	*	*
Non-Hispanic Black or African American	0.2 (0.10)	*	*	*
Non-Hispanic Other	0.1 (0.12)	*	*	*
Hispanic or Latino	0.2 (0.05)	*	*	*

* Low precision; no estimate reported. Standard NSDUH suppression rule used for NSDUH estimates, for other surveys estimates suppressed if relative standard error of prevalence estimate > 30%.

NSDUH = National Survey on Drug Use and Health. Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006.

NHIS = National Health Interview Survey. Source: National Center for Health Statistics, CDC, 2006.

NHANES = National Health and Nutrition Examination Survey. Source: National Center for Health Statistics, CDC, 2005-2006.

MEPS = Medical Expenditure Panel Survey. Source: AHRQ, Department of Health and Human Services, 2006.