

## National Hospital Ambulatory Medical Care Survey: 2002 Outpatient Department Summary

by Esther Hing, M.P.H., and Kimberly Middleton, B.S.N., M.P.H., Division of Health Care Statistics

### Abstract

**Objectives**—This report describes ambulatory care visits to hospital outpatient departments (OPDs) in the United States. Statistics are presented on selected hospital, clinic, patient, and visit characteristics, as well as selected trends in OPD visits since 1992.

**Methods**—The data presented in this report were collected from the 2002 National Hospital Ambulatory Medical Care Survey (NHAMCS). NHAMCS is part of the ambulatory care component of the National Health Care Survey that measures health care utilization across various types of providers. NHAMCS is a national probability sample survey of visits to emergency and outpatient departments of non-Federal, short-stay, and general hospitals in the United States. Sample data are weighted to produce annual national estimates.

**Results**—During 2002, an estimated 83.3 million visits were made to hospital OPDs in the United States, or about 29.4 visits per 100 persons. This 2002 rate represents a 31 percent increase since 1992, although rates have been stable since 1999. Females had higher OPD visit rates than males, and black or African American persons had higher OPD visit rates than white persons. The overwhelming majority of visits to hospital OPDs were made by established patients (82.8 percent); 23.8 percent of visits had six or more visits to the clinic within the past year. Private insurance was the most frequent expected payment source (37.3 percent), followed by Medicaid or State Children's Health Insurance Program (SCHIP) (27.3 percent). Since 1999, the percentage of children under 18 years of age relying on Medicaid/SCHIP increased by 23.4 percent. Preventive care visits comprised 18.0 percent of all OPD visits. Medicaid/SCHIP patients used OPDs for preventive care services more frequently than private pay patients. Diagnostic and screening services were ordered or provided at 88.3 percent of visits, therapeutic and preventive services were ordered or provided at 42.8 percent of visits, and medications were prescribed at 65.1 percent of visits. Most patients were given an appointment to return to the clinic (63.3 percent). The percentage of visits where any physician was seen decreased by 10.4 percent between 1992 and 2002, driven largely by a 50 percent decrease in visits to residents or interns. The percentage of visits in which either a physician assistant or nurse practitioner (midlevel providers) was seen increased by 47.0 percent between 1992 and 2002.

**Keywords:** NHAMCS • outpatient department visits • diagnoses • medications • ICD-9-CM

### Introduction

The National Hospital Ambulatory Medical Care Survey (NHAMCS) was inaugurated in 1992 to gather, analyze, and disseminate information about the health care provided by hospital outpatient departments (OPDs) and emergency departments (EDs). The NHAMCS is part of the ambulatory component of the National Health Care Survey that measures health care utilization across various types of providers. More information about the National Health Care Survey can be found at the National Center for Health Statistics (NCHS) Web site:

[www.cdc.gov/nchs/nhcs.htm](http://www.cdc.gov/nchs/nhcs.htm).

Ambulatory medical care is the predominant method of providing health care services in the United States and occurs in a wide range of settings. The largest proportion of ambulatory care services occurs in physicians' offices (1). Since 1973, the NCHS has collected data on patient visits to physicians' offices through the National Ambulatory Medical Care Survey (NAMCS). However, visits to hospital OPDs and EDs, which represent a significant segment of ambulatory care visits, are not included in the NAMCS. Furthermore, hospital ambulatory patients are known to differ from office



patients in certain demographic and medical characteristics (1). OPDs account for approximately 9 percent of all ambulatory medical care in the United States (1).

This report presents data from the 2002 NHAMCS, a nationally representative survey of hospital OPD utilization. Hospital, patient, clinic, and visit characteristics are described. In addition, data on selected OPD trends from 1992 through 2002 are presented. Other Advance Data reports highlight visits to EDs (2) and physician offices (3).

## Data Highlights

- In 2002, 83.3 million visits were made to hospital OPDs, about 29.4 visits per 100 persons.
- The visit rate in 2002 was 31 percent higher than the rate observed in 1992 (22.5 visits per 100 persons). Visit rate increases occurred among all age groups, for each sex, for white persons, and for black or African American persons. The overall rate, however, has leveled off since 1999.
- Private insurance was the most frequent source of payment, accounting for 37.3 percent of visits, followed by Medicaid and Medicare (27.3 percent and 14.4 percent, respectively). Since 1999, the percentage of OPD visits by children under 18 years of age with Medicaid or State Children's Health Insurance Program (CHIP) as their payment source increased from 37.5 percent to 46.3 percent in 2002.
- Approximately 59.0 percent of physician-supervised OPD visits were to general medical clinics, and 14.7 percent were to pediatric clinics.
- The overwhelming majority of visits to hospital OPDs was made by patients with previous visits to the clinic (82.8 percent); 67.0 percent had visited the clinic one or more times during the last 12 months. About one out of four visits (23.8 percent) were by established patients with six or more visits to the clinic within the past year.
- About 39.2 percent of all OPD visits were to the patient's primary care physician.
- In three out of 10 visits, other physicians also shared care for the patient's condition.
- Overall, 43.3 percent of visits were followup visits for a previously seen condition. This percentage varied by clinic type, with surgical and other clinics having a higher frequency of follow-up visits.
- Preventive care visits comprised 18.0 percent of all OPD visits; 71.5 percent of preventive care visits were made by females. Private pay patients did not use OPDs for preventive care services (2.2 per 100 persons) as frequently as Medicaid/CHIP patients (17.2 per 100 persons).
- About 139 million drugs were prescribed at approximately 65.1 percent of OPD visits. Since 1992, the rate of drug mentions at OPD visits has increased by 42 percent.
- A physician (i.e., staff physician, resident/intern, or other physician) was seen at approximately 80.4 percent of patient visits. The percentage of visits in which any physician was seen decreased by 10 percent between 1992 and 2002, driven largely by a 50 percent decrease in visits to resident/interns. Between 1992 and 2002, OPD visits involving midlevel providers (physician assistants or nurse practitioners) increased by 47 percent; the percentage of visits solely attended by midlevel providers increased from 5.5 percent in 1992 to 10.1 percent in 2002.

## Methods

The data presented in this report are from the 2002 NHAMCS, a national probability sample survey conducted by the Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Care Statistics. The survey was conducted from December 31, 2001, through December 29, 2002.

The target universe of the NHAMCS is in-person visits made in the United States to OPDs and EDs of non-Federal, short-stay hospitals (hospitals with an average length of stay

of less than 30 days) or those whose specialty is general (medical or surgical) or children's general. The hospital sampling frame consisted of hospitals listed in the 1991 SMG Hospital Database, which was updated using the 2000 SMG Hospital Database to allow the inclusion of hospitals that had opened or changed their eligibility status since the previous sample in 1991.

A four-stage probability sample design is used in the NHAMCS (4). The design involves samples of primary sampling units (PSUs), hospitals within PSUs, clinics within OPDs, and patient visits within clinics. The PSU sample consists of 112 PSUs that comprise a probability subsample of the PSUs used in the 1985–94 National Health Interview Survey. A sample of 481 hospitals was selected for the 2002 NHAMCS, 257 of which were in scope and operated OPDs. A total of 1,041 clinics from 224 OPDs participated in the study. The overall OPD visit sampling response rate was 74.8 percent, adjusted to exclude clinics and OPDs that participated at a minimal level (see "Technical Notes" for details).

A clinic was defined as an administrative unit of the OPD where ambulatory medical care is provided under the supervision of a physician and for which the hospital kept patient volume statistics. Clinics where only ancillary services such as radiology, laboratory services, physical rehabilitation, renal dialysis, and pharmacy were provided, or other settings in which physician services were not typically provided, were out of scope for the survey. If an OPD had five or fewer clinics, then all were included in the sample. When an OPD had more than five clinics, the clinics were assigned into one of six specialty groups (i.e., general medicine, surgery, pediatrics, obstetrics/gynecology, substance abuse, and other). Within these specialty groups, clinics were grouped into clinic sampling units (SUs) (1), and a sample of SUs proportional to the total expected number of visits to the clinic was selected. Starting in 2001, clinic sampling procedures were changed to limit the sample of clinic

SUs within each specialty group to two clinic SUs. The increased visit base led to increased precision for most estimates.

Hospital staff were asked to complete Patient Record Forms (PRFs) (see figure I in the “Technical Notes”) for a systematic random sample of patient visits occurring during a randomly assigned 4-week reporting period. The number of PRFs completed for OPDs was 35,586.

Because the estimates presented in this report are based on a sample rather than on the entire universe of OPD visits, they are subject to sampling variability. The “Technical Notes” at the end of this report include an explanation of sampling errors, with guidelines for judging the precision of the estimates. The standard errors reported here are calculated using Taylor approximations in SUDAAN, which take into account the complex sample design of the NHAMCS (5). Data on the OPD utilization trend from 1992 through 2002 and on trends by selected characteristics are also presented. A weighted least-squares regression analysis was used to determine the significance of trends at the 0.05 level.

The U.S. Census Bureau was responsible for data collection. Data processing operations and medical coding were performed by Constella Group Inc., Durham, North Carolina. As part of the quality assurance procedure, a 10 percent quality control sample of survey records was independently keyed and coded. Coding error rates ranged between 0.1 and 2.0 percent for various survey items.

Several tables in this report present rates of OPD visits per population. The population figures used in calculating these rates are based on Census Bureau monthly postcensal estimates of the civilian noninstitutional population of the United States as of July 1, 2002. These population estimates reflect Census 2000 data and are available from the Census Bureau. See “Technical Notes” for more details.

## Results

In 2002, there were an estimated 83.3 million visits to hospital OPDs,

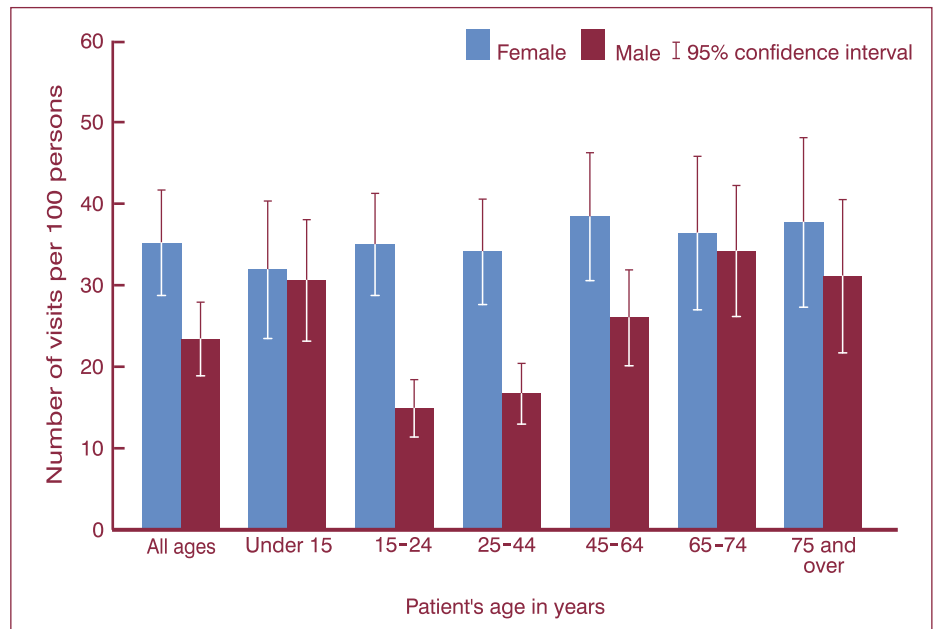


Figure 1. Annual rate of outpatient department visits by patient's age and sex: United States, 2002

about 29.4 visits per 100 persons. The visit rate represents a 31 percent increase since 1992, the first year for which data are available. However, the overall visit rate has leveled off since 1999, when it reached about 30 visits per 100 persons.

### Patient characteristics

OPD visits by patient's age, sex, and race are shown in table 1. There was a linear trend for age overall.

However, the visit rate for males under 15 years of age (30.6 visits per 100 persons) was higher than the rate for males 15–24 years of age (14.9 visits per 100 persons). The female visit rate was higher than the rate for males overall, driven by differences in the 15–44 year-old age groups. In figures 1 and 2, 95 percent confidence intervals are provided to show the stability of the individual point estimates and to permit the reader to assess general patterns in the data.

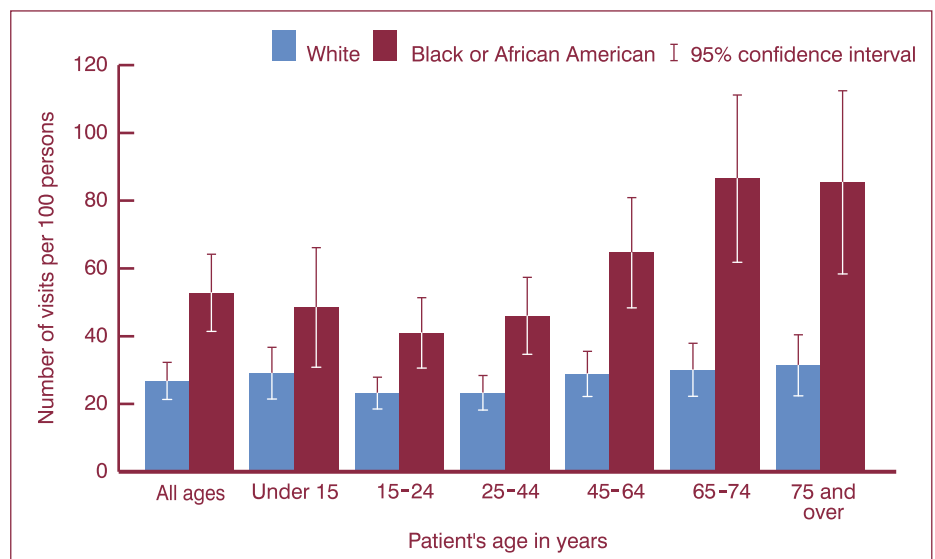
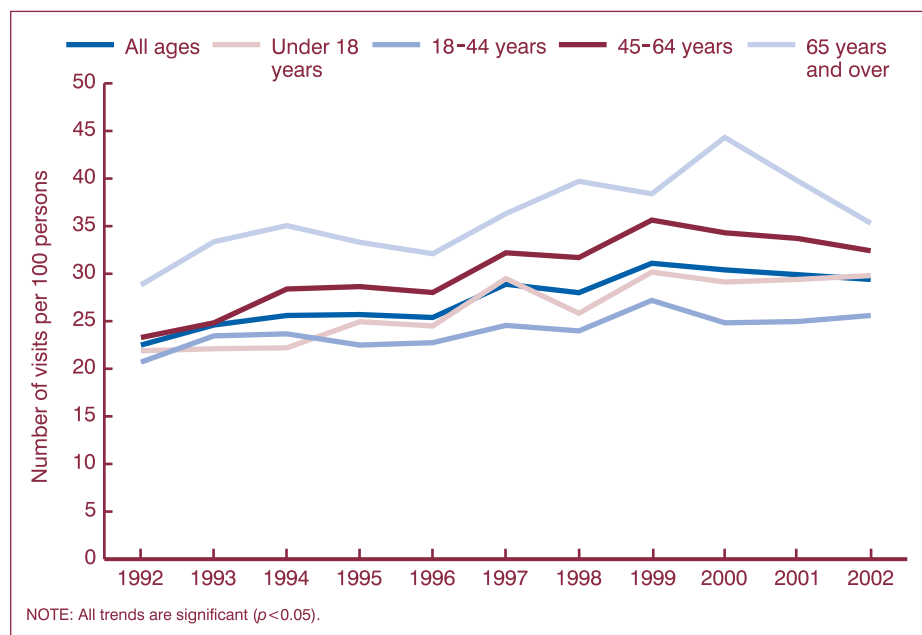


Figure 2. Annual rate of outpatient department visits by patient's age and race: United States, 2002



**Figure 3. Trend in outpatient department visit rates by patient age: United States, 1992–2002**

White persons made 73.6 percent of all OPD visits, and black or African American persons and Asians accounted for 22.4 percent and 2.7 percent, respectively. Between 2001 and 2002, however, there was no change in OPD visit rates for these population groups. The utilization rate for black or African American persons (52.8 per 100 persons) was 97 percent higher than for white persons (26.8 per 100 persons), and this difference persisted for age groups 15 years and over. There was a linear trend by age for black or African American persons (figure 2).

Although the population of the United States had increased by 13 percent since 1992, the number of visits to OPD clinics increased by 47 percent during this time period, from 56.6 million to 83.3 million visits annually in 2002 (6). In addition to the observed increase in the overall rate of visits, there were age-specific increases (figure 3). It should be noted that although the visit rate for persons 65 years of age and over appears to decline starting after 2000, the trend was not statistically significant. The visit rate also increased for each sex and for white persons and black or African American persons since 1992 (data not shown).

### Hospital characteristics

**Ownership**—About 72.1 percent of OPD visits were made to voluntary nonprofit hospitals, and 24.5 percent of visits occurred in non-Federal government (i.e., State, county, city) hospitals (table 1). Proprietary hospitals were less likely to have the kinds of clinics that are eligible for the NHAMCS, so OPD visits for this ownership category were too small to yield reliable estimates.

**Geographic region**—OPD visit rates ranged from 18.3 visits per 100 persons in the West to 40.5 visits per 100 persons in the Northeast (table 1). The distribution of OPD visits by region did not differ significantly from the distribution of hospitals with in-scope OPD clinics (administrative units of an OPD where ambulatory medical care is provided under the supervision of a physician) by region. The percentage of hospitals with in-scope OPDs ranged from 16.3 percent in the West to 34.0 percent in the Midwest (data not shown).

**Metropolitan status**—About 83.2 percent of OPD visits were in metropolitan statistical areas (MSAs) (table 1). There was no significant difference in the visit rates for MSAs and non-MSAs.

### Clinic characteristics

Visits to hospital OPDs were classified into the five types of clinics that were included in the sample (table 2). General medicine clinics included internal medicine and primary care clinics and represented 59.1 percent of all OPD visits. Pediatrics, surgery, and obstetrics and gynecology accounted for 14.7 percent, 12.3 percent, and 8.4 percent of visits, respectively. The “other” clinic category included drug, alcohol, and substance abuse clinics; psychiatric clinics; mental health clinics; and miscellaneous specialty clinics. They accounted for 5.6 percent of visits. The visit rate to general medicine clinics (17.4 per 100 persons) exceeded visit rates to all other types of clinics. Between 1992 and 2002, the percentage of visits to general medicine clinics increased by 18.4 percent (from 49.9 percent to 59.1 percent in 2002), and visits to substance abuse and other clinics decreased by 59.4 percent (from 13.8 percent to 5.6 percent in 2002) (6).

### Visit characteristics

**Continuity of care**—Continuity of care is a goal of health care achieved through an interdisciplinary process involving patients, families, health care professionals, and providers in the management of a coordinated plan of care. Based on changing needs and available resources, the process optimizes outcomes in the health status of patients. It may involve professionals from many different disciplines within multiple systems. The NHAMCS collects information on each patient encounter that may help understand where the encounter fits in the continuum of care for the patient. These questions include whether the OPD visit was an initial or a followup visit for a problem, the number of clinic visits by established patients during the past 12 months, and whether other physicians shared care for a patient’s problem.

**Primary care physician and referral status**—In 2002, 39.2 percent of OPD visits were to the patients’ primary care physician/provider (PCP) and 50.9 percent were to a physician/provider other than the patient’s PCP,

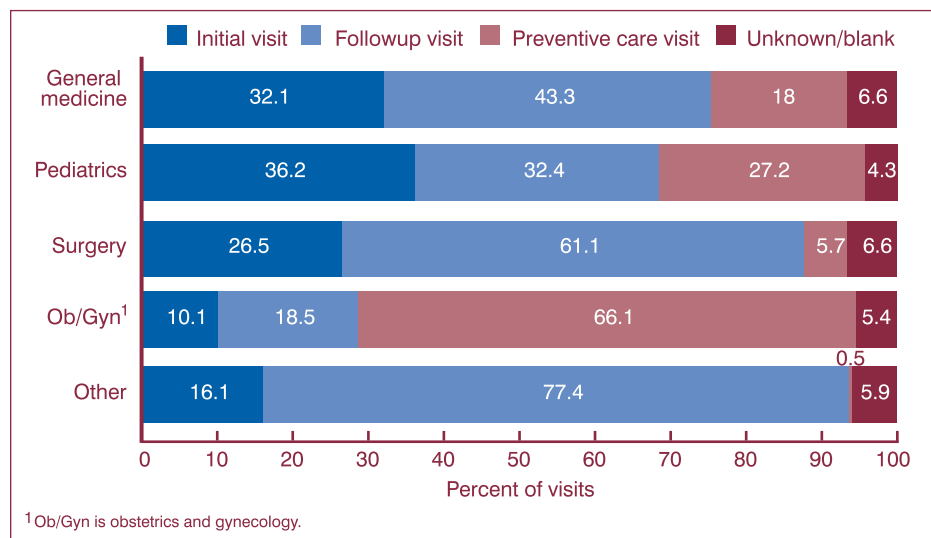
and this information was unknown for 9.8 percent of visits (table 3). Although 82.8 percent of OPD visits were made by established patients (those with previous visits to the clinic), only 44.9 percent of visits by these patients were to their PCP.

Of the 50.9 percent of visits to non-PCPs, 34.4 percent were referrals from another physician/provider, 44.3 percent were self-referrals, and for 21.3 percent, referral status was unknown. Referrals from another physician/provider were significantly more likely for new patients (41.1 percent) than for established patients (13.2 percent) (table 3).

The pattern of visits to PCPs and non-PCPs also varied by type of clinic visited. A larger proportion of visits to general medicine and pediatric clinics were to the patient's PCP (49.1 and 49.8 percent, respectively) than was the care for any other type of clinic (table 4). Referral visits to non-PCPs occurred more often in surgery clinics (41.0 percent) and substance abuse and other clinics (32.1 percent) than in general medicine (12.4 percent), pediatric (15.2 percent), or obstetrics and gynecology clinics (13.3 percent). Table 5 shows that 29.6 percent of OPD visits involved shared care with other physicians.

**Episode of care**—The term “episode of care” as defined by the NHAMCS is whether the sampled visit is an initial visit to this provider for a problem or a followup visit. The problem could have been an acute problem with an onset of less than 3 months, a chronic problem, or a pre- or postsurgery visit. In 2002, 32.1 percent of OPD visits were initial visits for a problem, 43.3 percent were followup visits for a problem, and information on the episode of care was unknown for 6.6 percent of visits (table 5).

Between 2001 and 2002, the proportion of initial visits to pediatric clinics increased by 33.6 percent (from 27.1 percent to 36.2 percent in 2002) (7). In 2002, initial visits to general medicine and pediatric clinics (32.1 and 36.2 percent, respectively) were more frequent than to obstetrics and gynecology or “other” clinics (10.1 and 16.1 percent, respectively) (figure 4).



**Figure 4. Percent distribution of outpatient department visits by episode of care and type of clinic: United States, 2002**

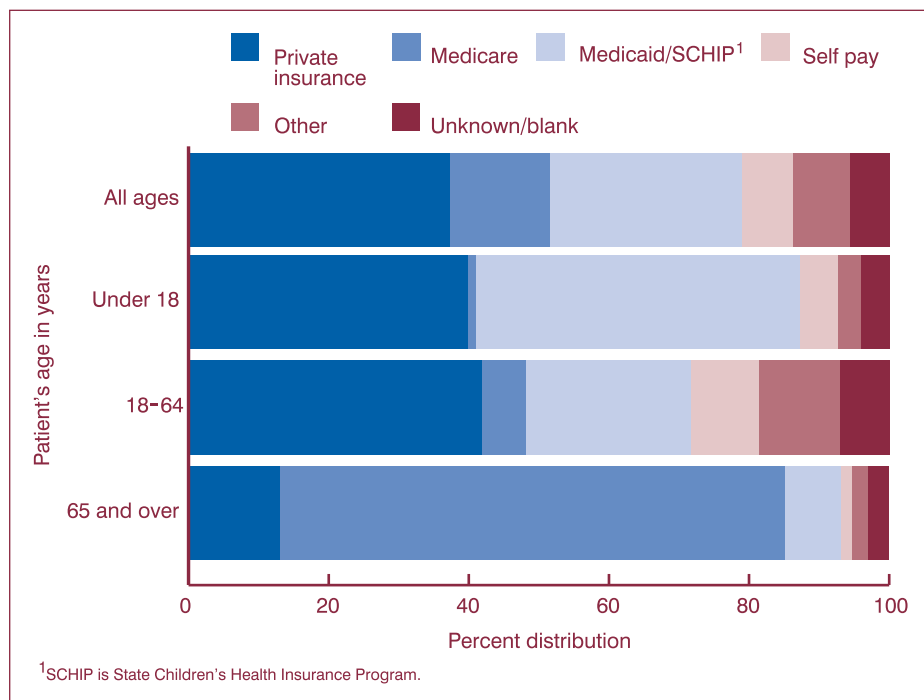
The proportion of followup visits for a problem occurred more frequently in “other” clinics (77.4 percent) because return visits are often part of the treatment protocols for patients seen in these clinics (e.g., alcohol or drug abuse, psychiatric, mental health, and pain management clinics) (8). Preventive care visits were more likely to occur in obstetrics and gynecology clinics (66.1 percent) compared with 0.5 to 27.2 percent among the remaining clinic types.

**Number of visits in the last 12 months for established patients**—Established patients previously seen in the clinic made up 82.8 percent of OPD visits in 2002 (calculated from table 3). Information on visits in the last 12 months was only asked of established patients. About 4.8 percent of visits were made by established patients with no visits during the last 12 months, and 67.0 percent reported one or more visits during the last 12 months. At one out of four visits (23.8 percent), the patient had six or more visits to the clinic within the past year. Overall, 20.4 percent of OPD visits were made by patients with no clinic visits during the past 12 months, either because the patient was new (15.6 percent) or because an established patient had no visits within the year (4.8 percent) (table 5). Since 1992, the proportion of OPD visits made by established patients increased by 6.2 percent (from 78 percent to 82.8 percent in 2002), and visits by new

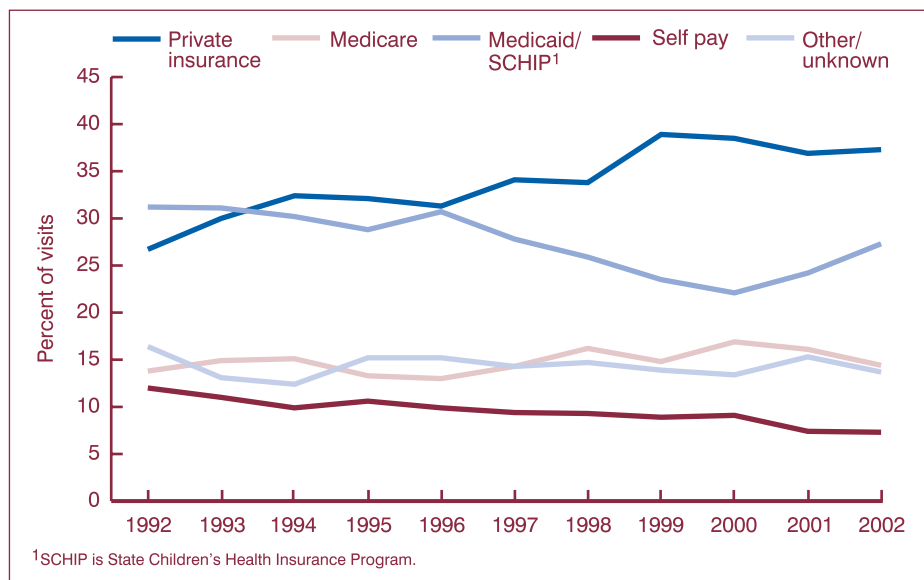
patients declined by 29.1 percent (from 22 percent to 15.6 percent in 2002) (6). Increasing use of OPDs by established patients may be related to the increasing proportion of OPD visits with an expected source of payment involving some type of health insurance coverage (see “Primary expected source of payment”).

**Primary expected source of payment**—Private insurance was listed as the dominant expected source of payment (occurring for 37.3 percent of OPD visits in 2002). Government sources combined (Medicare and Medicaid or State Children’s Health Insurance Program (SCHIP)) accounted for 41.7 percent of OPD visits, most of which were Medicaid or SCHIP (table 6). As expected, payment mechanism also varied by patient age, as shown in figure 5.

Since 1992, the primary expected payment source for OPD visits shifted (figure 6). For this analysis, an algorithm was used to analyze this variable because of questionnaire changes for this item through the years (see the “Technical Notes” for other details on the algorithm used). Between 1992 and 2002, use of private insurance, including health maintenance organizations (HMOs) and other types of prepaid plans, increased by 39.0 percent (from 26.7 percent to 37.3 percent in 2002), and the proportion of self-pay visits declined by 39.2 percent (12.0 percent to 7.3 percent



**Figure 5. Percent distribution of outpatient department visits by primary expected source of payment according to patient's age: United States, 2002**



**Figure 6. Trend in expected payment source for outpatient department visits: United States, 1992-2002**

in 2002). Use of Medicaid declined by 24.7 percent between 1992 and 1999, but increased by 25.5 percent between 2000 and 2002. Declines in use of Medicaid in OPDs between 1992 and 1999 mirrors slow growth in Medicaid enrollment attributed to a strong economy and other factors such as increased use of managed care during the same time period (9). However,

increased use of Medicaid or SCHIP between 2000 and 2002 may reflect the weak labor market and program expansions driven by a 5.6 percent increase in the number of children and adults eligible for Medicaid (9). There was no change in use of Medicare during this time period.

*Patient's principal reason for visit*—The principal reason for visit is

the main complaint, symptom, or reason the patient came to the OPD. Up to three reasons for visit were coded according to *Reason for Visit Classification for Ambulatory Care (RVC)* (10). The RVC is a classification scheme developed by NCHS that has been used for over 30 years to code patients' complaints or reasons for seeking care. It is divided into eight modules or groups of reasons, as shown in table 7, and includes all the reasons for which patients see their health care provider. This includes symptoms, followup for prior diagnoses, routine examinations and screening, treatment for conditions and operations, various therapies, and injuries. Also included are visits to receive test results and to fulfill third-party requirements for a physical examination, such as for employment or a driver's license. The symptoms module is further divided into symptoms that refer to specific body systems, such as digestive or respiratory. Each reason is assigned a three- or four-digit classification code (e.g., S845- "Symptoms of skin mole" is further detailed to S845.1- "Change in size and color" and S845.2 "Bleeding mole").

In 2002, principal reasons classified in the symptom module represented 43.3 percent of all OPD visits, with symptoms referable to the respiratory system accounting for the largest percentage of visits (9.2 percent). The diagnostic/screening and preventive module (20.5 percent) and the treatment module (15.8 percent) were also prominent (table 7). The 20 most frequently mentioned principal reasons for visit, representing 42.8 percent of all visits, are shown in table 8. General medical examination was the most frequently mentioned principal reason for visit (7.1 percent), followed by progress visit (7.0 percent) and routine prenatal examination (3.3 percent). The most frequently mentioned reasons related to a symptomatic problem were cough (2.7 percent) and throat symptoms (2.5 percent). Diabetes mellitus (1.8 percent) was the most frequent reason related to a disease. Between 2001 and 2002, the percentage of OPD visits with general medical examination as the principal reason increased from 4.9 percent to 7.1 percent 2002 (7). This

finding may be related to the recent increase in percentage of Medicaid visits (see “Primary expected source of payment”).

*Major reason for this visit*—The intent of this item was to provide a better picture of the general nature of the OPD visit—whether for an acute problem of less than 3 months onset, routine visit for a chronic problem, flare-up of a chronic problem, pre- or postsurgery visit, or for preventive care, including routine prenatal visits, general medical examinations, well-baby visits, screening, and examinations for insurance purposes. The “major reason for visit” item differs from the “principal reason for visit” item in that the former presents the physician’s rather than the patient’s perspective of the major reason that the patient sought care. As seen in [table 9](#), acute problems comprised 35.9 percent of visits overall, but 48.9 percent of visits by children under 15 years of age. About 30.4 percent of all visits were for a routine chronic problem, but for persons 65 years of age and over, chronic problems represented approximately 44.4 percent of all visits. White persons had a higher proportion of visits for acute problems compared with black or African American persons.

In 2002, the major reason for one in five visits (18.0 percent) was preventive care. Females had significantly higher proportions of visits for preventive care than males ([table 10](#)). The female visit rate for preventive care was twice that for males (7.4 visits per 100 females compared with 3.1 per 100 males), largely driven by the high utilization rate for females aged 15–24 years. The visit rate for preventive care in OPDs by black or African American persons (12.4 per 100 persons) was more than twice that for persons of white or other race (4.3 and 4.1 per 100 persons, respectively). Private pay patients did not use OPDs for preventive care services (2.2 per 100 persons) as frequently as Medicaid/SCHIP patients (17.2 per 100 persons).

*Primary diagnosis*—Hospital staff were asked to record the primary diagnosis or problem associated with the patient’s most important reason for the current visit and any other significant

current diagnoses. Up to three diagnoses were coded according to the *International Classification of Diseases, 9th revision, Clinical Modification* (ICD-9-CM) (11). Displayed in [table 11](#) are OPD visits by primary diagnosis using the major disease categories specified by the ICD-9-CM. The most frequently listed disease category, accounting for 19.1 percent of visits, was supplementary classification, which is used for diagnoses not classifiable to injury or illness (e.g., general medical examination, routine prenatal examination, and health supervision of an infant or child). Diseases of the respiratory system (11.0 percent) were also prominent on the list. The 20 most frequently reported primary diagnoses, accounting for 42.0 percent of all the OPD visits in 2002, are shown in [table 12](#). The four most frequent diagnoses recorded were routine infant or child health check (4.3 percent); essential hypertension (4.1 percent); acute upper respiratory infection, excluding pharyngitis (4.0 percent); and diabetes mellitus (3.3 percent).

*Injury-related visits*—Although there is a separate item or checkbox on the Patient Record form to indicate whether the visit was for an injury, poisoning, or adverse medical treatment, sometimes an injury reason for visit is specified or an injury diagnosis is rendered without the injury item being checked. Therefore, the visit is counted as an injury visit and the injury checkbox is coded to “Yes” if any of the three reasons for visit were in the injury module or any of the three diagnoses were in the injury or poisoning chapter of the ICD-9-CM (11). This provides a better indicator that the visit involves an injury than using the reason-for-visit module, the ICD-9-CM injury diagnosis, or the unedited injury item alone. A more detailed discussion of this is documented elsewhere (12).

There were an estimated 10.9 million injury- or poisoning-related OPD visits in 2002, representing 13.0 percent of all OPD visits and yielding a rate of 3.8 visits per 100 persons ([table 13](#)). Injury rates were statistically similar regardless of age group or sex. Injury rates for black or African American

persons (6.5 visits per 100 persons per year) were highest among the three race groups shown, and the injury rate for “Other race” was lowest (2.2 visits per 100 persons per year).

[Table 14](#) shows OPD visits by the intent and mechanism of the first-listed external cause-of-injury codes (E-codes). Up to three external causes of injury were coded according to the “Supplementary Classification of External Causes of Injury and Poisoning” in the ICD-9-CM (11). It should be noted that there are high levels of missing data for the external cause of injury item (40.1 percent), so the results should be interpreted with caution. For a detailed description of the cause of injury codes, refer to [table II](#) in the “Technical Notes.”

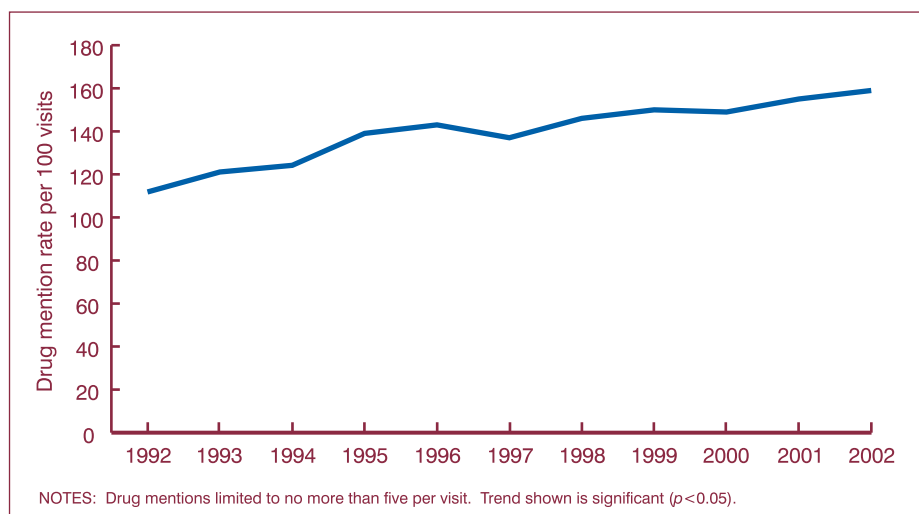
*Diagnostic and screening services*—Statistics on various diagnostic and screening services ordered or provided by hospital staff during an OPD visit are displayed in [table 15](#). At least one such service was provided at 88.3 percent of OPD visits in 2002. A general medical examination was performed at a majority of visits (58.4 percent), and other examinations were performed at 18.7 percent of visits. Blood pressure check (51.6 percent) was the leading diagnostic screening test performed. Blood tests ranged from complete blood count (CBC) (9.9 percent of visits) to prostate-specific antigen (PSA) tests (0.6 percent of visits). A culture (any type) was performed at 4.4 percent of visits. Imaging was ordered or provided at 12.5 percent of all visits and was most often in the form of an x ray (7.1 percent of the visits). About 10.7 percent of the visits had no diagnostic or screening services ordered or provided, and information was missing at 1.0 percent of visits.

*Counseling/education and therapeutic services*—One or more therapeutic or preventive services were ordered or provided at 42.8 percent of OPD visits during 2002. Counseling or education related to diet or nutrition (12.3 percent), exercise (5.9 percent), and growth or development (3.5 percent) were mentioned most frequently ([table 16](#)). Psychotherapy and mental

health (or stress management) accounted for 3.1 percent and 3.0 percent of visits, respectively.

**Medication therapy**—Hospital staff were instructed to record all new or continued medications ordered, supplied, or administered at the visit. This included prescription and nonprescription preparations, immunizations, desensitizing agents, and anesthetics. Up to six medications, referred to in this survey as drug mentions, were coded per visit according to a classification system developed at NCHS. A report describing the method and instruments used to collect and process drug information is available (13). As used in the NHAMCS, the term “drug” is interchangeable with the term “medication.” The term “prescribing” is used broadly to mean ordering or providing any medication, whether prescription or over-the-counter. Visits with one or more drug mentions are termed “drug visits” in the NHAMCS.

Medications were ordered or prescribed at 54.3 million visits or 65.1 percent of OPD visits in 2002 (table 17). There were a total of 139.0 million drug mentions for an average of 166.8 drug mentions per 100 visits (table 18). Of the visits with medications, 63.4 percent had multiple drugs prescribed or continued (calculated from table 17). On average, there were 2.6 drug mentions per drug visit. The drug mention rate increased with age (data not shown). Since 1992, both the number of drug mentions and the average per 100 visits increased. For this trend analysis, the number of drug mentions was limited to five because the maximum number of medications recorded on the PRF changed from five to six in 1995. The drug mention rate increased between 1992 and 2002 (figure 7), and the number of drugs prescribed more than doubled. This increase was driven by both a 40.5 percent increase in visits with multiple drugs prescribed (from 29.4 percent in 1992 to 41.3 percent in 2002) and a 22.1 percent increase in drug visits (visits with at least one drug prescribed), from 53.3 percent in 1992 to 65.1 percent in 2002 (data not shown).



**Figure 7. Trend in drug mention rates at outpatient department visits: United States, 1992–2002**

Drug mentions are shown by therapeutic subclasses of drug mentions in table 19. This classification is based on the four-digit therapeutic categories used in the *National Drug Code Directory* (NDC), 1995 edition (14). Drugs may have more than one therapeutic application, and in the NHAMCS, up to three therapeutic drug classes are recorded for each drug. Prior to 2002, a drug was classified under its primary therapeutic use, and data were presented for two-digit therapeutic classification codes. Beginning in 2002, drug data are being shown for up to three therapeutic subclassifications at the 4-digit level. In 2002, the leading drug subclasses were nonsteroidal anti-inflammatory drugs (NSAIDs) (5.8 per 100 drug mentions), followed by vaccines or antisera (4.9), nonnarcotic analgesics (4.2), narcotic analgesics (4.1), antidepressants (4.1), antiasthmatics or bronchodilators (4.0), and antihistamines (4.0). Of the therapeutic classes presented in table 19, only one class, antihistamines, increased between 1996 and 2002 (from 2.2 antihistamines per 100 drug mentions to 4.0 in 2002) (data not shown).

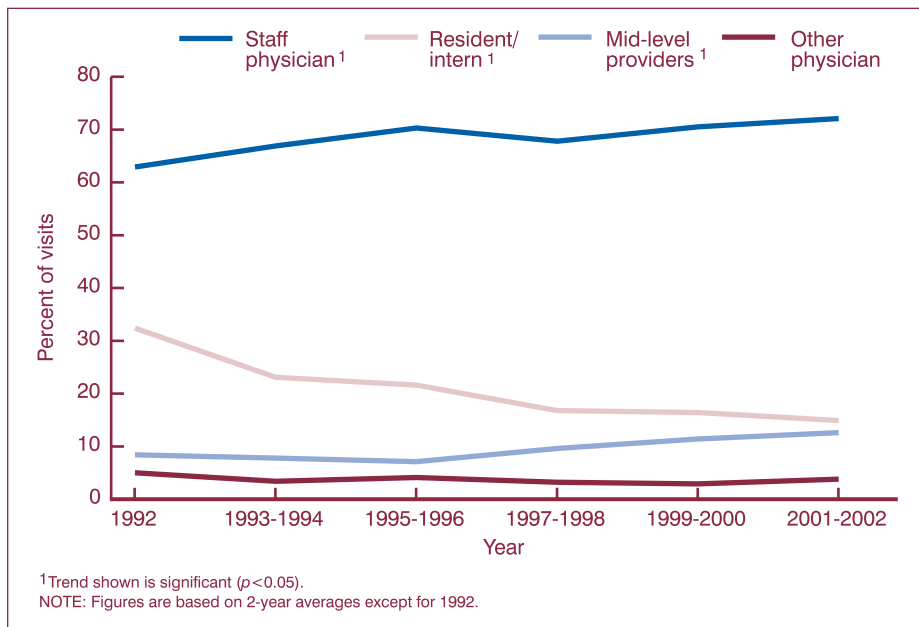
The 20 most frequently used generic substances for 2002 are shown in table 20. Drug products containing more than one ingredient (combination products) are included in the data for each ingredient. For example, acetaminophen with codeine is included in both the count for acetaminophen and

the count for codeine. The most frequently occurring generic substances in drugs mentioned at OPD visits were acetaminophen, ibuprofen, and amoxicillin.

The 20 most frequently mentioned medications are shown in table 21, according to the name written on the PRF by hospital staff. This could be a brand name, generic name, or therapeutic effect. Tylenol, which is classified as a nonnarcotic analgesic, was the drug most frequently mentioned, accounting for 2.1 percent of all OPD drug mentions. Albuterol, which is classified as an antiasthmatic/bronchodilator, was prescribed at 1.9 percent of mentions. Other frequent drug mentions were Motrin (1.3 percent) and amoxicillin (1.3 percent).

**Providers seen**—In this item, staff were asked to check all of the providers seen during the visit. A staff physician and resident or intern were seen at 72.2 percent and 16.2 percent of OPD visits, respectively (table 22). A registered nurse, medical/nursing assistant, and licensed practical nurse were seen at 39.1 percent, 18.4 percent, and 11.7 percent of visits, respectively. A physician was not seen at 16.3 million OPD visits (19.6 percent). For trend analysis, visits where any physician was seen (i.e., visits with staff physicians, residents or interns, or other physicians) were examined. The percentage of visits at which any physician was seen decreased by

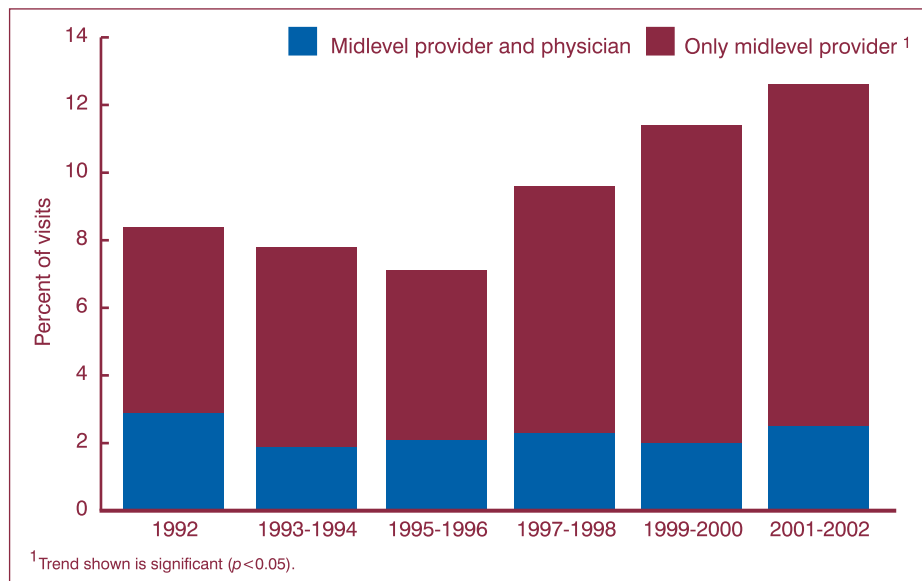




**Figure 8. Trend in percent of outpatient department visits by providers seen: United States, 1992–2002**

10.4 percent between 1992 and 2002, driven largely by a 50 percent decrease in visits to resident or interns (figure 8). In 2002, 12.2 percent of visits involved midlevel providers (physician assistant or nurse practitioner and/or midwife). Midlevel providers are seen more frequently in OPD clinics than in physician offices (3). OPD visits involving midlevel providers increased by 47.0 percent since 1992, from 8.3 percent of visits in 1992 to

12.2 percent of visits in 2002 (figure 8). Increasing use of midlevel providers may be related to the growth in supply of these providers, increased demand in hospitals due to substitution of midlevel providers in teaching hospitals, and the effects of the Balanced Budget Act of 1997, which standardized reimbursement of these providers (15, 16). In 2002, 2.5 percent of OPD visits involved midlevel providers with a physician present; this percentage has not changed



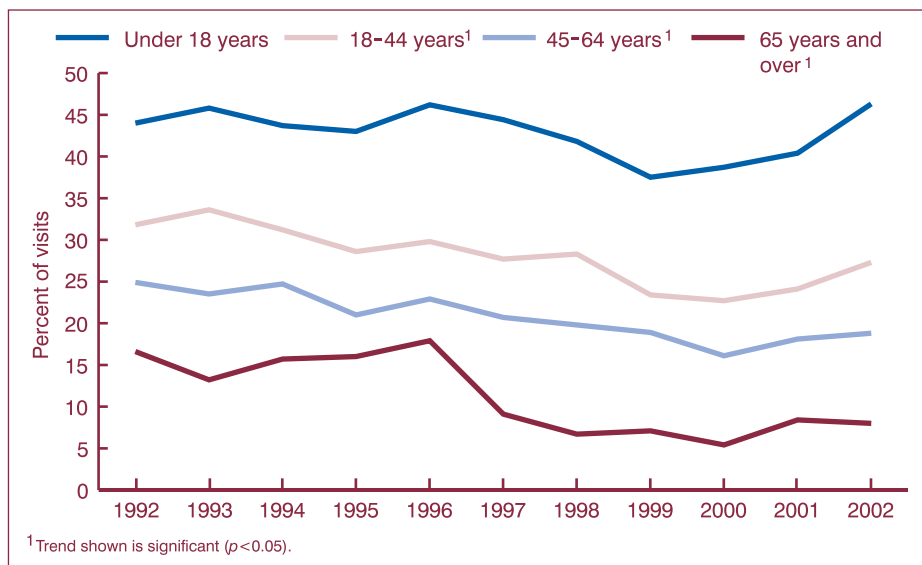
**Figure 9. Percent of outpatient department visits seen by a mid-level provider with or without a physician present: United States, 1992–2002**

since 1992. However, the proportion of visits involving only midlevel providers increased from 5.5 percent of visits in 1992 to 10.1 percent of visits in 2001–2002 (figure 9). Visits wherein a medical technician or technologist was seen accounted for 5.5 percent of visits. Medical technologists and technicians perform a full range of laboratory tests, then confirm and report their findings to pathologists and other physicians (17). The percentage seen by all other providers was 7.4 percent.

*Visit disposition*—Staff were asked to record all visit dispositions and instructed that multiple responses could be coded for this item. For more than one-half of OPD visits (63.3 percent), patients were told to return to the clinic by appointment. Return if needed (PRN) and referred to another physician or clinic accounted for the disposition at 24.8 percent and 12.7 percent of visits, respectively (table 23).

*Trend comparisons with physician office visits*—A major difference between visits to hospital OPDs and physician offices is the characteristics of the patients. In 2002, 22 percent of OPD visits versus 10.1 percent of office visits were made by black patients (3). The OPD visit rate for black persons was nearly twice as high as the rate for white persons, but the office visit rate was 24.4 percent lower for black persons compared with white persons (3). Between 1992 and 2000, differentials in visit rates between the races in physician offices and OPDs remained stable, although visit rates for each race increased in OPDs (18).

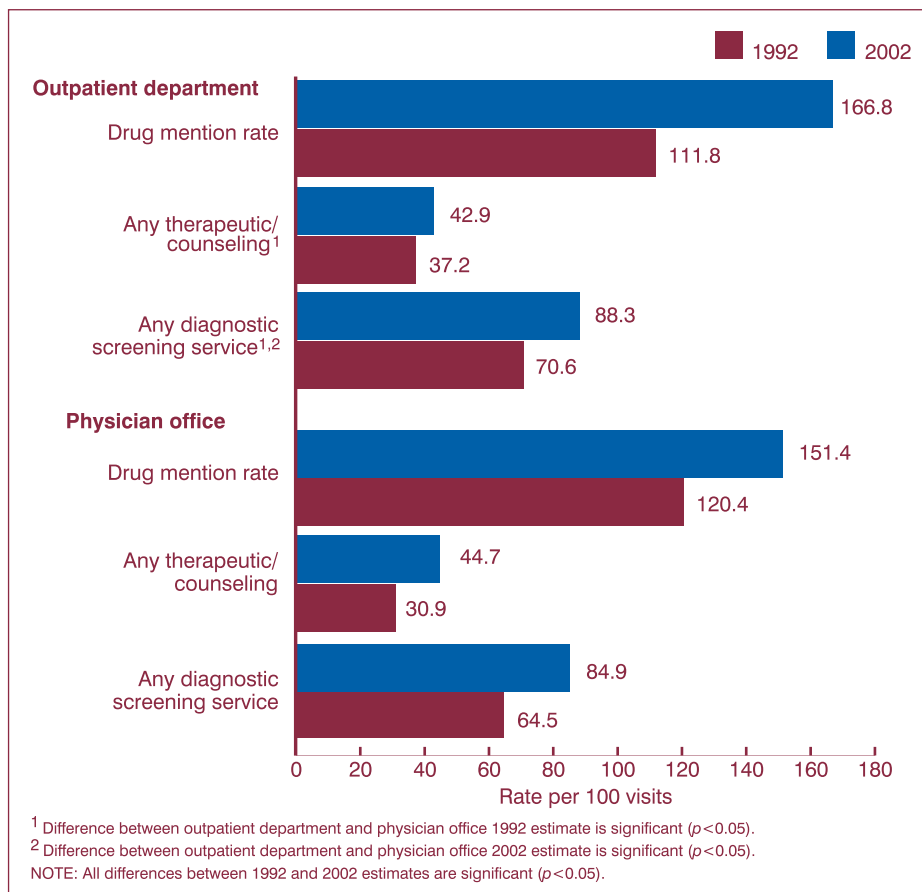
Medicaid or SCHIP patients comprise a larger proportion (27.3 percent) of OPD visits than in physician office practices (7.5 percent). OPDs are used as a safety-net delivery site for primary care by those lacking access to a usual source of care (19). Availability of medical care for Medicaid or SCHIP patients is more likely to be found in OPDs than in physician offices because 22 percent of physicians did not accept new Medicaid patients and about one-third did not accept new charity cases in 2002 (data not shown). Moreover, figure 10 shows that OPD use by children relying on Medicaid or SCHIP increased by



**Figure 10. Percent of outpatient department visits with Medicaid or State Children's Health Insurance Plan as primary expected source of payment by age: United States, 1992-2002**

23.5 percent after 1999, from 37.5 percent to 46.3 percent in 2002. (The overall trend for percentage of Medicaid children visiting OPDs

between 1992 and 2002 was not statistically significant.) In contrast, the percentage of visits with Medicaid as the expected source of payment by



**Figure 11. Services provided at outpatient department and office visits: United States, 1992 and 2002**

adults aged 18-44 years, 45-64 years, and 65 years and over has declined overall since 1992 (figure 10). The increased representation of Medicaid and/or SCHIP children in OPDs may be related to the inclusion of SCHIP in this category in 2001 and 2002. SCHIP, enacted as part of the Balanced Budget Act of 1997, gave States the opportunity to provide free or low-cost insurance coverage to low-income children not otherwise eligible to be covered by Medicaid. States began enrolling children in 1998 using Medicaid or State-specific programs separate from Medicaid, or both. By 2000, all States had implemented their programs. Between 2000 and 2002, the Centers for Medicare and Medicaid Services reported a doubling of SCHIP enrollment, from 2.1 to 4.2 million persons (20). The increased use of Medicaid and/or SCHIP in OPD clinics parallels a 33 percent increase found in data from the National Health Interview Survey; the percentage of noninstitutionalized children with public health insurance coverage increased from 20.4 percent in 1999 to 27.2 percent in 2002 (21).

Continuity of care is another characteristic differentiating patients in hospital OPDs and physician office practices (18). In 2002, patients visiting hospital OPDs were less likely to have seen their PCP (39.2 percent compared with 50.4 percent in physician offices), were more likely to be a new patient (15.6 percent compared with 12.1 percent in physician offices), and were more likely to have been referred by another physician (17.5 percent compared with 13.7 percent in physician offices).

The pattern of less continuity of care in hospital OPDs may be related to the mix of primary, ancillary, and specialty care provided in this setting. In 2002, referrals were frequent in surgical, substance abuse, and other clinics. In addition, diagnostic or screening services were ordered or provided more frequently in OPDs than physician offices (figure 11). Between 1992 and 2002, visits with any diagnostic or screening services and drugs ordered or prescribed increased in both physician offices and OPDs. During the same time

<sup>1</sup> Difference between outpatient department and physician office 1992 estimate is significant ( $p < 0.05$ ).

<sup>2</sup> Difference between outpatient department and physician office 2002 estimate is significant ( $p < 0.05$ ).

NOTE: All differences between 1992 and 2002 estimates are significant ( $p < 0.05$ ).

period, visits with any therapeutic or counseling services ordered or provided in physician offices increased by 44.7 percent; there was no change in OPDs (figure 11).

Additional information about OPD utilization is available from the NCHS Ambulatory Health Care Web site: <http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm>.

Individual-year reports and public-use data files are available for download from the Web site. Data from the 2002 NHAMCS will also be available on a public-use data tape and CD-ROM. These and other products can be obtained by contacting the NCHS Ambulatory Care Statistics Branch at (301) 458-4600. Queries regarding NHAMCS data may be sent to NCHS via [nchsquery@cdc.gov](mailto:nchsquery@cdc.gov).

## References

- Burt CW, Schappert SM. Ambulatory care visits to physician offices, hospital outpatient departments, and emergency departments: United States, 1999–2000. National Center for Health Statistics. *Vital Health Stat* 13(155). In preparation.
- McCaig LF, Burt CW. National Hospital Ambulatory Medical Care Survey: 2002 emergency department summary. Advance data from vital and health statistics; no 340. Hyattsville, Maryland: National Center for Health Statistics. 2004.
- Woodwell DA, Cherry D. National Ambulatory Medical Care Survey: 2002 summary. Advance data from vital and health statistics; no 346. Hyattsville, Maryland: National Center for Health Statistics. 2004.
- McCaig LF, McLemore T. Plan and operation of the National Hospital Ambulatory Medical Care Survey. National Center for Health Statistics. *Vital Health Stat* 1(34). 1994.
- Research Triangle Institute (2002). SUDAAN user's manual release, release 8.0. Research Triangle Park, NC: Research Triangle Institute.
- McCaig LF. National Hospital Ambulatory Medical Care Survey: 1992 outpatient department summary. Advance data from vital and health statistics; no 248. Hyattsville, Maryland: National Center for Health Statistics. 1994.
- Hing E, Middleton K. National Hospital Ambulatory Medical Care Survey: 2001 outpatient department summary. Advance data from vital and health statistics; no 338. Hyattsville, Maryland: National Center for Health Statistics. 2003.
- Olfson M, Goldman HH. Psychiatric outpatient practice: Patterns and policies. *Am J Psychiatry* 149(11):1492–98. 1992.
- Levit K, Smith C, Cowan C, et al. Health spending rebound continues in 2002. *Health Affairs*. 23(1):147–59. 2004.
- Schneider D, Appleton L, McLemore T. A reason for visit classification for ambulatory care. National Center for Health Statistics. *Vital Health Stat* 2(78). 1979.
- Public Health Service and Health Care Financing Administration. International Classification of Diseases, 9th Revision, Clinical Modification, 6th ed., Washington: Public Health Service. 1998.
- Burt CW, Fingerhut LA. Injury visits to hospital emergency departments: United States, 1992–1995. National Center for Health Statistics. *Vital Health Stat* 13(131). 1998. [http://www.cdc.gov/nchs/data/series/sr\\_13/sr13\\_131.pdf](http://www.cdc.gov/nchs/data/series/sr_13/sr13_131.pdf).
- Koch H, Campbell W. The collection and processing of drug information. National Ambulatory Medical Care Survey: United States, 1980. National Center for Health Statistics. *Vital Health Stat* 2(90). 1982.
- Food and Drug Administration. National Drug Code Directory, 1995 edition. Washington: Public Health Service, 1995.
- Lin SX, Hooker RS, Lenz ER, Hopkins SC. Nurse practitioners and physician assistants in hospital outpatient departments, 1997–1999. *Nurs Econ* 20(4):174–9. 2002.
- Riportella-Muller R, Libby D, Kindig D. The substitution of physician assistants and nurse practitioners for physician residents in teaching hospitals. *Health Affairs* 14:181–91. 1995.
- The Medical Technologist (MT) Careers in medical laboratory technology. Online article accessed at: <http://www.ascp.org/bor/medlab/careers/page2.asp>.
- Bernstein AB, Hing E, Moss AJ, et al. Health care in America: Trends on utilization. Hyattsville, Maryland: National Center for Health Statistics. 2003.
- Forrest CB, Whelan EM. Primary care safety-net delivery sites in the United States, a comparison of community health centers, hospital outpatient departments, and physician offices. *JAMA*. 284(16):2077–83. 2000.
- 2003 CMS Statistics. U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, Office of Research, Development, and Information. CMS Pub. No. 03445. June 2003.
- Cohen RA, Ni H, Hao C. Trends in health insurance coverage by poverty status among persons under 65 years of age: United States, 1997–2002. National Center for Health Statistics Health E Stats. Last accessed 2/17/2004 at: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/insurance.htm>.
- Sirken MG, Shimizu I, French DK, Brock DB. Manual on standards and procedures for reviewing statistical reports. Hyattsville, Maryland: National Center for Health Statistics. 1990.
- Office of Management and Budget (1997), Statistical Policy Directive No 15, Race and ethnic standards for Federal statistics and administrative reporting. Federal Register; Part II: 36873–946, July 7, 1997.

**Table 1. Number, percent distribution, and annual rate of outpatient department visits with corresponding standard errors by selected patient and hospital characteristics: United States, 2002**

Selected patient and hospital characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1,2</sup>	Standard error of rate
All visits . . . . .	83,339	7,761	100.0	...	29.4	2.7
Patient characteristics						
Age:						
Under 15 years . . . . .	18,947	2,408	22.7	2.0	31.3	4.0
15–24 years . . . . .	9,839	926	11.8	0.6	24.9	2.3
25–44 years . . . . .	21,137	2,089	25.4	0.9	25.5	2.5
45–64 years . . . . .	21,436	2,277	25.7	1.1	32.4	3.4
65–74 years . . . . .	6,386	749	7.7	0.5	35.4	4.2
75 years and over . . . . .	5,595	754	6.7	0.5	35.1	4.7
Sex and age:						
Female . . . . .	51,014	4,753	61.2	0.8	35.2	3.3
Under 15 years . . . . .	9,452	1,278	11.3	1.1	31.9	4.3
15–24 years . . . . .	6,874	629	8.2	0.4	35.0	3.2
25–44 years . . . . .	14,317	1,399	17.2	0.7	34.1	3.3
45–64 years . . . . .	13,100	1,374	15.7	0.7	38.4	4.0
65–74 years . . . . .	3,585	469	4.3	0.4	36.4	4.8
75 years and over . . . . .	3,687	523	4.4	0.4	37.7	5.3
Male . . . . .	32,325	3,121	38.8	0.8	23.4	2.3
Under 15 years . . . . .	9,495	1,172	11.4	1.0	30.6	3.8
15–24 years . . . . .	2,965	367	3.6	0.3	14.9	1.8
25–44 years . . . . .	6,820	777	8.2	0.5	16.7	1.9
45–64 years . . . . .	8,336	956	10.0	0.5	26.0	3.0
65–74 years . . . . .	2,801	334	3.4	0.3	34.2	4.1
75 years and over . . . . .	1,908	295	2.3	0.3	31.1	4.8
Race and age <sup>3</sup> :						
White . . . . .	61,315	6,377	73.6	2.0	26.8	2.8
Under 15 years . . . . .	13,471	1,786	16.2	1.5	29.1	3.9
15–24 years . . . . .	7,161	751	8.6	0.5	23.2	2.4
25–44 years . . . . .	15,474	1,703	18.6	0.9	23.3	2.6
45–64 years . . . . .	16,032	1,890	19.2	1.0	28.9	3.4
65–74 years . . . . .	4,702	626	5.6	0.5	30.1	4.0
75 years and over . . . . .	4,475	653	5.4	0.5	31.4	4.6
Black or African American . . . . .	18,664	2,068	22.4	1.9	52.8	5.8
Under 15 years . . . . .	4,602	856	5.5	0.9	48.5	9.0
15–24 years . . . . .	2,332	300	2.8	0.3	41.0	5.3
25–44 years . . . . .	4,764	598	5.7	0.6	46.0	5.8
45–64 years . . . . .	4,552	582	5.5	0.6	64.6	8.3
65–74 years . . . . .	1,409	205	1.7	0.2	86.5	12.6
75 years and over . . . . .	1,004	162	1.2	0.2	85.4	13.8
Asian . . . . .	2,334	373	2.8	0.4	20.3	3.2
Native Hawaiian/Pacific Islander . . . . .	436	113	0.5	0.1	91.8	23.7
American Indian/Alaska Native . . . . .	*383	142	*0.5	0.2	*14.2	5.3
Multiple Races . . . . .	207	49	0.2	0.1	5.0	1.2
Hospital characteristics						
Ownership:						
Voluntary . . . . .	60,099	6,971	72.1	4.3	21.2	2.5
Government . . . . .	20,431	3,303	24.5	3.9	7.2	1.2
Proprietary . . . . .	*2,809	2,098	*3.4	2.4	*1.0	0.7
Geographic region:						
Northeast . . . . .	21,490	2,900	25.8	3.4	40.2	5.4
Midwest . . . . .	23,312	4,098	28.0	4.2	36.4	6.4
South . . . . .	26,935	5,367	32.3	4.9	26.7	5.3
West . . . . .	11,601	2,511	13.9	2.9	18.0	3.9
Metropolitan status:						
MSA <sup>4</sup> . . . . .	69,367	6,527	83.2	4.5	30.6	2.9
Non-MSA <sup>4</sup> . . . . .	*13,972	4,278	16.8	4.5	24.8	7.6

... Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Visit rates for age, sex, race, and region are based on the July 1, 2002, set of estimates of the civilian noninstitutionalized population of the United States as developed by the Population Division, U.S. Census Bureau. See "Technical Notes" for more detail.

<sup>2</sup>2002 population estimates of metropolitan statistical area status are based on Census 2000 data and were obtained through the Office of Research and Methodology and Division of Health Interview Statistics, NCHS.

<sup>3</sup>The race groups, white, black or African American, Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaska Native, and multiple races, include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. However, the percent of visit records with multiple races indicated is small and lower than what is typically found for self-reported race. See "Technical Notes" for more details.

<sup>4</sup>MSA is metropolitan statistical area.

NOTE: Numbers may not add to totals because of rounding.

**Table 2. Number, percent distribution, and annual rate of outpatient department visits with corresponding standard errors, by type of clinic: United States, 2002**

Type of clinic <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1,2</sup>	Standard error of rate
All visits . . . . .	83,339	7,761	100.0	...	29.4	2.7
General medicine . . . . .	49,227	5,999	59.1	3.0	17.4	2.1
Pediatrics . . . . .	12,182	2,060	14.6	2.2	4.3	0.7
Surgery . . . . .	10,262	1,302	12.3	1.4	3.6	0.5
Obstetrics and gynecology . . . . .	7,039	757	8.4	0.9	2.5	0.3
Substance abuse/other . . . . .	4,629	696	5.6	0.8	1.6	0.2

... Category not applicable.

<sup>1</sup>Only clinics under the supervision of a physician were included. Clinics specializing in radiology, laboratory services, physical rehabilitation, or other ancillary services were excluded.

<sup>2</sup>Visit rates are based on the July 1, 2002, set of estimates of the civilian noninstitutionalized population of the United States as developed by the Population Division, U.S. Census Bureau. See "Technical Notes" for more details.

NOTE: Numbers may not add to totals because of rounding.

**Table 3. Number and percent distribution of outpatient department visits with corresponding standard errors by selected visit characteristics according to prior-visit status: United States, 2002**

Primary care physician and referral status	All visits	Established patient	New patient	Unknown/blank
Number visits in thousands				
All visits . . . . .	83,339	68,965	13,002	1,372
Visit to PCP <sup>1</sup> . . . . .	32,683	30,959	1,646	*78
Visit to non-PCP <sup>1</sup> . . . . .	42,450	31,690	10,230	*530
Referred by other physician . . . . .	14,612	9,107	5,339	166
Not referred by other physician . . . . .	18,799	16,208	2,479	*113
Unknown if referred . . . . .	9,039	6,376	2,412	*251
Unknown if PCP <sup>1</sup> visit . . . . .	8,205	6,315	1,127	*764
Standard error in thousands				
All visits . . . . .	7,761	6,551	1,440	383
Visit to PCP <sup>1</sup> . . . . .	4,963	4,751	283	24
Visit to non-PCP <sup>1</sup> . . . . .	3,927	2,910	1,226	164
Referred by other physician . . . . .	1,588	1,019	691	46
Not referred by other physician . . . . .	2,233	1,930	485	53
Unknown if referred . . . . .	1,582	1,113	552	131
Unknown if PCP <sup>1</sup> visit . . . . .	1,311	1,114	239	322
Percent distribution				
All visits . . . . .	100.0	100.0	100.0	100.0
Visit to PCP <sup>1</sup> . . . . .	39.2	44.9	12.7	*5.7
Visit to non-PCP <sup>1</sup> . . . . .	50.9	46.0	78.7	38.7
Referred by other physician . . . . .	17.5	13.2	41.1	*12.1
Not referred by other physician . . . . .	22.6	23.5	19.1	*8.2
Unknown if referred . . . . .	10.8	9.2	18.6	*18.3
Unknown if PCP <sup>1</sup> visit . . . . .	9.8	9.2	8.7	55.7
Standard error of percent				
All visits . . . . .	...	...	...	...
Visit to PCP <sup>1</sup> . . . . .	3.6	3.9	1.9	2.2
Visit to non-PCP <sup>1</sup> . . . . .	3.3	3.4	2.5	10.9
Referred by other physician . . . . .	1.7	1.4	3.7	4.3
Not referred by other physician . . . . .	2.1	2.4	2.8	4.0
Unknown if referred . . . . .	1.7	1.5	3.3	8.2
Unknown if PCP <sup>1</sup> visit . . . . .	1.4	1.5	1.6	11.7

\*Figure does not meet standard of reliability or precision.

... Category not applicable.

<sup>1</sup>PCP is patient's primary care physician provider.

NOTE: Numbers may not add to totals because of rounding.

**Table 4. Percent distribution of outpatient department visits with corresponding standard errors by type of clinic, according to primary care physician status and referral status: United States, 2002**

Type of clinic <sup>1</sup>	Total	Visit to PCP <sup>2</sup>	Visit to non-PCP <sup>2,3</sup>			
			Referred by other physician	Not referred by other physician	Unknown if referred	Unknown if PCP <sup>2</sup> visit
Percent distribution						
All visits . . . . .	100.0	39.2	17.5	22.6	10.8	9.8
General medicine . . . . .	100.0	49.1	12.4	18.6	10.0	9.8
Surgery . . . . .	100.0	6.5	41.0	27.3	15.7	*9.5
Pediatrics . . . . .	100.0	49.8	15.2	17.7	7.9	9.5
Obstetrics and gynecology . . . . .	100.0	21.9	13.3	37.1	11.7	16.0
Other . . . . .	100.0	*5.5	32.1	44.4	15.6	2.4
Standard error of percent						
All visits . . . . .	...	3.6	1.7	2.1	1.7	1.4
General medicine . . . . .	...	4.4	1.7	2.6	2.4	1.7
Surgery . . . . .	...	1.7	4.4	3.5	4.3	3.0
Pediatrics . . . . .	...	6.9	3.9	3.9	2.3	2.2
Obstetrics and gynecology . . . . .	...	4.2	2.1	4.0	2.0	2.9
Other . . . . .	...	2.8	4.3	4.7	3.1	0.7

\*Figure does not meet standard of reliability or precision.

... Category not applicable.

<sup>1</sup>Only clinics under the supervision of a physician were included. Clinics specializing in radiology, laboratory services, physical rehabilitation, or other ancillary services were excluded.<sup>2</sup>PCP is patient's primary care physician or provider.<sup>3</sup>Referral status only asked for visits to nonprimary physicians or providers.**Table 5. Number and percent distribution of outpatient department visits with corresponding standard errors by selected continuity of care visit characteristics: United States, 2002**

Continuity of care visit characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	...
Prior-visit status and number of visits last 12 months				
Established patient . . . . .	68,965	6,551	82.8	1.1
None . . . . .	3,985	703	4.8	0.8
1-2 visits . . . . .	18,784	1,860	22.5	1.1
3-5 visits . . . . .	17,265	1,971	20.7	1.3
6+ visits . . . . .	19,806	2,502	23.8	1.8
Unknown . . . . .	9,125	1,831	10.9	1.9
New patient . . . . .	13,002	1,440	15.6	1.0
Unknown if patient previously seen . . . . .	1,372	383	1.6	0.4
Do other physicians share care for this problem?				
Yes . . . . .	24,682	2,729	29.6	2.5
No . . . . .	39,238	5,000	47.1	3.0
Unknown/blank . . . . .	19,419	2,532	23.3	2.4
Episode of care				
Initial visit for problem . . . . .	26,732	3,293	32.1	2.0
Follow-up visits for problem . . . . .	36,117	3,456	43.3	1.9
Unknown/blank . . . . .	5,465	915	6.6	0.9
Not applicable (preventive care visit) <sup>1</sup> . . . . .	15,025	1,677	18.0	1.3

... Category not applicable.

<sup>1</sup>Preventive care includes routine prenatal, general medical, well-baby, screening, or insurance examinations.

NOTE: Numbers may not add to totals because of rounding.

**Table 6. Number and percent distribution of outpatient department visits with corresponding standard errors by primary expected source of payment: United States, 2002**

Primary expected source of payment	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	...
Private insurance . . . . .	31,063	3,768	37.3	2.1
Medicaid/SCHIP <sup>1</sup> . . . . .	22,749	2,319	27.3	1.7
Medicare . . . . .	11,992	1,515	14.4	1.0
Self-pay . . . . .	6,125	765	7.3	0.6
No charge . . . . .	*2,689	870	*3.2	1.0
Worker's compensation . . . . .	1,012	249	1.2	0.3
Other . . . . .	3,037	589	3.6	0.7
Unknown/blank . . . . .	4,672	759	5.6	0.8

... Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>SCHIP is State Children's Health Insurance Program.

NOTE: Numbers may not add to totals because of rounding.

**Table 7. Number and percent distribution of outpatient department visits with corresponding standard errors by patient's principal reason for visit, United States, 2002**

Principal reason for visit and RVC code <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	...
Symptom module . . . . . S001–S999	36,115	4,021	43.3	1.6
General symptoms . . . . . S001–S099	4,951	553	5.9	0.3
Symptoms referable to psychological/mental disorders . . . . . S100–S199	2,324	314	2.8	0.3
Symptoms referable to the nervous system (excluding sense programs) . . . . . S200–S259	2,224	283	2.7	0.2
Symptoms referable to the cardiovascular/lymphatic system . . . . . S260–S299	339	68	0.4	0.1
Symptoms referable to the eyes and ears . . . . . S300–S399	2,994	397	3.6	0.3
Symptoms referable to the respiratory system . . . . . S400–S499	7,681	1,294	9.2	1.0
Symptoms referable to the digestive system . . . . . S500–S639	3,275	401	3.9	0.3
Symptoms referable to the genitourinary system . . . . . S640–S829	2,614	303	3.1	0.2
Symptoms referable to the skin, hair, and nails . . . . . S830–S899	2,760	402	3.3	0.4
Symptoms referable to the musculoskeletal system . . . . . S900–S999	6,954	880	8.3	0.6
Disease module . . . . . D001–D999	10,607	1,258	12.7	1.0
Diagnostic/screening and preventive module . . . . . X100–X599	17,082	1,657	20.5	1.1
Treatment module . . . . . T100–T899	13,201	1,333	15.8	1.1
Injuries and adverse effects module . . . . . J001–J999	3,141	443	3.8	0.4
Test results module . . . . . R100–R700	1,278	168	1.5	0.1
Administrative module . . . . . A100–A140	502	136	0.6	0.2
Other <sup>2</sup> . . . . . U990–U999	1,414	312	1.7	0.4

... Category not applicable.

<sup>1</sup>Based on *A Reason for Classification for Ambulatory Care (RVC) (10)*.

<sup>2</sup>Includes problems and complaints not elsewhere classified, entries of "none," blanks, and illegible entries.

NOTE: Numbers may not add to totals because of rounding.

**Table 8. Number and percent distribution of outpatient department visits with corresponding standard errors by the 20 principal reasons for visit most frequently mentioned by patient: United States, 2002**

Principal reason for visit and RVC code <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	...
General medical examination . . . . . X100	5,926	753	7.1	0.6
Progress visit, not otherwise specified . . . . . T800	5,842	846	7.0	0.9
Prenatal examination, routine . . . . . X205	2,772	350	3.3	0.4
Cough . . . . . S440	2,241	357	2.7	0.3
Symptoms referable to throat . . . . . S455	2,119	445	2.5	0.4
Diabetes mellitus . . . . . D205	1,476	329	1.8	0.3
Well-baby examination . . . . . X105	1,367	223	1.6	0.2
Stomach pain, cramps, and spasms . . . . . S545	1,320	184	1.6	0.1
Medication, other and unspecified kinds . . . . . T115	1,298	248	1.6	0.2
Postoperative visit . . . . . T205	1,216	157	1.5	0.2
Hypertension . . . . . D510	1,166	260	1.4	0.2
Fever . . . . . S010	1,149	178	1.4	0.2
Back symptoms. . . . . S905	1,100	289	1.3	0.3
Headache, pain in head . . . . . S210	1,080	164	1.3	0.1
Earache, or ear infection . . . . . S355	1,039	201	1.2	0.2
Counseling, not otherwise specified . . . . . T605	1,020	174	1.2	0.2
Skin rash. . . . . S860	969	158	1.2	0.1
Low back symptoms. . . . . S910	939	200	1.1	0.2
Depression . . . . . S110	884	161	1.1	0.2
Knee symptoms . . . . . S925	765	115	0.9	0.1
All other reasons . . . . .	47,652	4,541	57.2	1.3

... Category not applicable.

<sup>1</sup>Based on *A Reason for Visit Classification for Ambulatory Care (RVC)* (10).

NOTE: Numbers may not add to totals because of rounding.



**Table 9. Number and percent distribution of outpatient department visits with corresponding standard errors, by major reason for visit, according to patient's age, sex, and race: United States, 2002**

Patient's age, sex, and race	Total	Acute problem	Chronic problem routine	Chronic problem flare-up	Pre- or post-surgery/injury followup	Preventive care <sup>1</sup>	Unknown/blank
Number visits in thousands							
All visits . . . . .	83,339	29,903	25,339	4,968	3,376	15,025	4,728
Age							
Under 15 years . . . . .	18,947	9,270	3,535	670	278	4,449	744
15–24 years . . . . .	9,839	3,656	1,879	409	347	3,091	457
25–44 years . . . . .	21,137	7,423	5,848	1,430	894	4,304	1,239
45–64 years . . . . .	21,436	6,364	8,752	1,603	1,154	2,111	1,452
65–74 years . . . . .	6,386	1,527	2,920	483	427	544	*484
75 years and over . . . . .	5,595	1,664	2,405	373	276	524	352
Sex							
Female . . . . .	51,014	17,414	15,127	3,015	1,803	10,745	2,910
Male . . . . .	32,325	12,489	10,212	1,953	1,573	4,280	1,818
Race <sup>2</sup>							
White . . . . .	61,315	23,434	18,367	3,646	2,409	9,888	3,571
Black or African American . . . . .	18,664	5,384	6,086	1,183	798	4,376	836
Other . . . . .	3,361	1,086	886	138	*168	761	*322
Standard error in thousands							
All visits . . . . .	7,761	3,640	2,651	561	545	1,677	1,029
Age							
Under 15 years . . . . .	2,408	1,345	643	148	73	627	214
15–24 years . . . . .	926	533	257	64	61	341	108
25–44 years . . . . .	2,089	962	724	201	173	527	294
45–64 years . . . . .	2,277	869	1,001	232	241	405	324
65–74 years . . . . .	749	210	394	81	81	105	170
75 years and over . . . . .	754	259	366	76	65	145	89
Sex							
Female . . . . .	4,753	2,142	1,610	357	296	1,136	628
Male . . . . .	3,121	1,527	1,113	242	264	666	422
Race <sup>2</sup>							
White . . . . .	6,377	3,210	2,149	484	367	1,268	860
Black or African American . . . . .	2,068	686	842	152	176	594	208
Other . . . . .	497	209	157	30	54	125	97
Percent distribution							
All visits . . . . .	100.0	35.9	30.4	6.0	4.1	18.0	5.7
Age							
Under 15 years . . . . .	100.0	48.9	18.7	3.5	1.5	23.5	3.9
15–24 years . . . . .	100.0	37.2	19.1	4.2	3.5	31.4	4.6
25–44 years . . . . .	100.0	35.1	27.7	6.8	4.2	20.4	5.9
45–64 years . . . . .	100.0	29.7	40.8	7.5	5.4	9.8	6.8
65–74 years . . . . .	100.0	23.9	45.7	7.6	6.7	8.5	7.6
75 years and over . . . . .	100.0	29.7	43.0	6.7	4.9	9.4	6.3
Sex							
Female . . . . .	100.0	34.1	29.7	5.9	3.5	21.1	5.7
Male . . . . .	100.0	38.6	31.6	6.0	4.9	13.2	5.6
Race <sup>2</sup>							
White . . . . .	100.0	38.2	30.0	5.9	3.9	16.1	5.8
Black or African American . . . . .	100.0	28.8	32.6	6.3	4.3	23.4	4.5
Other . . . . .	100.0	32.3	26.4	4.1	5.0	22.6	9.6

See footnotes at end of table.



**Table 10. Number, percent distribution, and annual rate of preventive care outpatient department visits with corresponding standard errors, by selected patient and visit characteristics: United States, 2002**

Patient and visit characteristic	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1</sup>	Standard error of rate
All preventive care visits <sup>2</sup> . . . . .	15,025	1,677	100.0	...	5.3	0.6
Age						
Under 15 years . . . . .	4,449	627	29.6	2.4	7.3	1.0
15–24 years . . . . .	3,091	341	20.6	1.2	7.8	0.9
25–44 years . . . . .	4,304	527	28.6	2.2	5.2	0.6
45–64 years . . . . .	2,111	405	14.1	1.8	3.2	0.6
65 years and over . . . . .	1,069	220	7.1	1.1	5.9	1.2
Sex and age						
Female . . . . .	10,745	1,136	71.5	2.2	7.4	0.8
Under 15 years . . . . .	2,254	333	15.0	1.3	7.6	1.1
15–24 years . . . . .	2,717	285	18.1	1.2	13.8	1.5
25–44 years . . . . .	3,666	430	24.4	2.0	8.7	1.0
45–64 years . . . . .	1,358	254	9.0	1.3	4.0	0.7
65 years and over . . . . .	750	168	5.0	0.9	3.8	0.9
Male . . . . .	4,280	666	28.5	2.2	3.1	0.5
Under 15 years . . . . .	2,196	317	14.6	1.3	7.1	1.0
15–24 years . . . . .	*374	127	2.5	0.7	1.9	0.6
25–44 years . . . . .	*639	211	4.3	1.3	1.6	0.5
45–64 years . . . . .	753	202	5.0	1.1	2.3	0.6
65 years and over . . . . .	319	75	2.1	0.4	2.2	0.5
Race <sup>3</sup>						
White . . . . .	9,888	1,268	65.8	2.9	4.3	0.6
Black or African American . . . . .	4,376	594	29.1	2.8	12.4	1.7
Other . . . . .	761	125	5.1	0.8	4.1	0.7
Primary expected source of payment						
Medicaid/SCHIP <sup>4</sup> . . . . .	5,725	640	38.1	2.6	17.2	1.9
Private insurance . . . . .	4,328	718	28.8	2.8	2.2	0.4
Self-pay/charity or no charge . . . . .	1,916	367	12.7	2.0	4.4	0.8
Medicare . . . . .	1,066	193	7.1	0.9	2.8	0.5
Other <sup>5</sup> . . . . .	1,990	378	13.2	2.1	...	...

... Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Visit rates for age, sex, race, and region are based on the July 1, 2002, set of estimates of the civilian noninstitutionalized population of the United States as developed by the Population Division, U.S. Census Bureau. See "Technical Notes" for more detail. Visit rates by expected source of payment are based on Current Population Survey estimates on health insurance coverage. (Mills, B. and Bhandari, S. Health Insurance Coverage: 2002 Current Population Reports. P60–223 September 2003.)

<sup>2</sup>Preventive care includes routine prenatal, general medical, well-baby, screening, or insurance examinations.

<sup>3</sup>Other race includes visits by Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaskan Native, and multiple races. All race categories include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. However, the percent of visit records with multiple races indicated is smaller and lower than what is typically found for self-reported race. See "Technical Notes" for more details.

<sup>4</sup>SCHIP is State Children's Health Insurance Program.

<sup>5</sup>Other includes worker's compensation, unknown/blank, and payments not classified elsewhere.

NOTE: Numbers may not add to totals because of rounding.

**Table 11. Number and percent distribution of outpatient department visits with corresponding standard errors by primary diagnosis: United States, 2002**

Major disease category and ICD-9-CM code range <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	. . .
Infectious and parasitic diseases . . . . . 001–139	2,996	391	3.6	0.3
Neoplasms. . . . . 140–239	2,644	427	3.2	0.5
Endocrine, nutritional, metabolic diseases, immunity disorders . . . . . 240–279	5,034	695	6.0	0.6
Mental disorders . . . . . 290–319	4,966	650	6.0	0.7
Diseases of the nervous system and sense organs. . . . . 320–389	5,651	680	6.8	0.5
Diseases of the circulatory system . . . . . 390–459	6,024	780	7.2	0.6
Diseases of the respiratory system . . . . . 460–519	9,193	1,503	11.0	1.2
Diseases of the digestive system . . . . . 520–579	2,293	254	2.8	0.2
Diseases of the genitourinary system . . . . . 580–629	3,348	385	4.0	0.3
Diseases of the skin and subcutaneous tissue . . . . . 680–709	2,941	419	3.5	0.4
Diseases of the musculoskeletal and connective tissue . . . . . 710–739	6,093	920	7.3	0.7
Symptoms, signs, and ill-defined conditions . . . . . 780–799	5,960	716	7.2	0.4
Injury and poisoning . . . . . 800–999	5,341	729	6.4	0.6
Supplementary classification. . . . . V01–V82	15,884	1,580	19.1	1.3
All other diagnoses <sup>2</sup> . . . . .	3,399	464	4.1	0.5
Unknown <sup>3</sup> . . . . .	1,572	358	1.9	0.4

. . . Category not applicable.

<sup>1</sup>Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (11).

<sup>2</sup>Includes diseases of the blood and blood-forming organs (280–289); complications of pregnancy, childbirth, and the puerperium (630–677); congenital anomalies (740–759); and certain conditions originating in perinatal period (760–779).

<sup>3</sup>Includes blanks, uncodable diagnoses, and illegible diagnoses.

NOTE: Numbers may not add to totals because of rounding.

**Table 12. Number and percent distribution of outpatient department visits with corresponding standard errors by primary diagnosis groups: United States, 2002**

Primary diagnosis group and ICD-9-CM code(s) <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	. . .
Routine infant or child health check . . . . . V20.2	3,575	595	4.3	0.6
Essential hypertension . . . . . 401	3,401	565	4.1	0.5
Acute upper respiratory infection, excluding pharyngitis . . . . . 460–461, 463–466	3,362	602	4.0	0.5
Diabetes mellitus. . . . . 250	2,780	433	3.3	0.4
Arthropathies and related disorders . . . . . 710–719	2,424	548	2.9	0.5
Normal pregnancy . . . . . V22	2,239	269	2.7	0.3
Malignant neoplasms . . . . . 140–208, 230–234	2,111	389	2.5	0.5
Spinal disorders . . . . . 720–724	2,002	386	2.4	0.4
General medical examination . . . . . V70	1,592	316	1.9	0.3
Otitis media and eustachian tube disorders. . . . . 381–382	1,398	241	1.7	0.2
Asthma. . . . . 493	1,225	183	1.5	0.2
Rheumatisms, excluding back . . . . . 725–729	1,129	140	1.4	0.1
Chronic sinusitis . . . . . 473	1,123	280	1.3	0.3
Acute pharyngitis. . . . . 462	1,080	243	1.3	0.2
Heart disease, excluding ischemic . . . . . 391–392.0, 393–398, 402, 404, 415–416, 420–429	1,075	208	1.3	0.2
Congenital anomalies . . . . . 740–759	*963	320	*1.2	0.4
Potential health hazards relating to personal and family history . . . . . V10–V19	953	178	1.1	0.2
Complications of pregnancy, childbirth, and the puerperium. . . . . 630–677	902	142	1.1	0.2
Abdominal pain . . . . . 789.0	872	144	1.0	0.1
Psychoses, excluding major depressive order . . . . . 290–295, 296.0–296.1, 296.4–299	828	133	1.0	0.2
All other diagnoses . . . . .	48,304	4,492	58.0	1.2

. . . Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Based on the *International Classification of Diseases, 9th revision, Clinical Modification* (ICD-9-CM) (11). However, certain codes have been combined in this table to describe the utilization of ambulatory care services.

NOTE: Numbers may not add to totals because of rounding.

**Table 13. Number, percent distribution, and annual rate of injury-related outpatient department visits with corresponding standard errors, by patient's age sex and race: United States, 2002**

Patient's age, sex, and race	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1</sup>	Standard error of rate
All injury-related visits . . . . .	10,859	1,258	100.0	. . .	3.8	0.4
Age						
Under 15 years . . . . .	2,330	344	21.5	2.3	3.8	0.6
15–24 years . . . . .	1,737	250	16.0	1.3	4.4	0.6
25–44 years . . . . .	3,327	436	30.6	1.6	4.0	0.5
45–64 years . . . . .	2,558	340	23.6	1.4	3.9	0.5
65–74 years . . . . .	451	87	4.1	0.6	2.5	0.5
75 years and over . . . . .	457	89	4.2	0.6	2.9	0.6
Sex and age						
Female . . . . .	5,227	648	48.1	1.3	3.6	0.4
Under 15 years . . . . .	1,078	176	20.6	2.3	3.6	0.6
15–24 years . . . . .	729	106	13.9	1.3	3.7	0.5
25–44 years . . . . .	1,495	226	28.6	2.3	3.6	0.5
45–64 years . . . . .	1,350	192	25.8	1.9	4.0	0.6
65–74 years . . . . .	267	59	5.1	0.9	2.7	0.6
75 years and over . . . . .	308	75	5.9	1.1	3.1	0.8
Male . . . . .	5,632	642	51.9	1.3	4.1	0.5
Under 15 years . . . . .	1,253	187	22.2	2.7	4.0	0.6
15–24 years . . . . .	1,008	169	17.9	1.9	5.1	0.8
25–44 years . . . . .	1,832	241	32.5	2.0	4.5	0.6
45–64 years . . . . .	1,208	169	21.4	1.5	3.8	0.5
65–74 years . . . . .	183	46	3.3	0.7	2.2	0.6
75 years and over . . . . .	149	35	2.6	0.6	2.4	0.6
Race <sup>2</sup>						
White . . . . .	8,145	1,060	75.0	2.5	3.6	0.5
Black or African American . . . . .	2,301	317	21.2	2.4	6.5	0.9
Other . . . . .	413	99	3.8	0.9	2.2	0.5

. . . Category not applicable.

<sup>1</sup>Visit rates for age, sex, race, and region are based on the July 1, 2002, set of estimates of the civilian noninstitutionalized population of the United States as developed by the Population Division, U.S. Census Bureau. See "Technical Notes" for more detail.<sup>2</sup>Other race includes visits by Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaskan Native, and multiple races. All race categories include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. However, the percent of visit records with multiple races indicated is smaller and lower than what is typically found for self-reported race. See "Technical Notes" for more details.

NOTE: Numbers may not add to totals because of rounding.

**Table 14. Number and percent distribution of injury-related outpatient department visits with corresponding standard errors by intent and mechanism of external cause: United States, 2002**

Intent and mechanism <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All injury related visits . . . . .	10,859	1,258	100.0	. . .
Unintentional injuries . . . . .	5,697	754	52.5	2.4
Falls . . . . .	1,222	186	11.3	1.2
Striking against or struck accidentally by objects or persons . . . . .	805	159	7.4	1.1
Natural and environmental factors . . . . .	*548	167	5.0	1.2
Over exertion and strenuous movements . . . . .	540	114	5.0	0.8
Motor vehicle traffic . . . . .	537	106	4.9	0.9
Cutting or piercing instruments or objects . . . . .	372	82	3.4	0.6
Other and not elsewhere classified <sup>2</sup> . . . . .	999	137	9.2	0.9
Mechanism unspecified . . . . .	674	116	6.2	0.9
Intentional injuries <sup>3</sup> . . . . .	180	29	1.7	0.3
Injuries of undetermined intent . . . . .	*	. . .	*	. . .
Adverse effects of medical treatment . . . . .	610	102	5.6	0.8
Blank cause <sup>4</sup> . . . . .	4,358	540	40.1	2.3

. . . Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Based on the "Supplementary Classification of External Cause of Injury and Poisoning," *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) (11)*. A detailed description of the ICD-9-CM E-codes used to create the groupings in this table is provided in the "Technical Notes."

<sup>2</sup>Includes suffocation, poisoning, machinery, firearm, fire and flames, drowning/submersion, nontraffic motor vehicle, pedal cycle, and other transportation.

<sup>3</sup>Includes assault, self-inflicted, and other causes of violence.

<sup>4</sup>Includes illegible entries and blanks.

NOTE: Numbers may not add to totals because of rounding.

**Table 15. Number and percent of outpatient department visits with corresponding standard errors, by diagnostic and screening services ordered or provided and patient's sex: United States, 2002**

Diagnostic and screening services ordered or provided	Number of visits in thousands <sup>1</sup>	Standard error in thousands	Percent of visits	Standard error of percent
All visits . . . . .	83,339	7,761	...	...
None . . . . .	8,926	1,267	10.7	1.3
Examinations				
General medical examination . . . . .	48,684	5,609	58.4	2.6
Other examination . . . . .	15,612	1,835	18.7	1.6
Diagnostic tests				
Blood pressure . . . . .	43,021	4,466	51.6	2.3
EKG <sup>2</sup> . . . . .	3,012	498	3.6	0.6
Any scope procedure . . . . .	1,388	192	1.7	0.2
Sigmoidoscopy/colonoscopy . . . . .	754	126	0.9	0.1
Endoscopy . . . . .	581	103	0.7	0.1
Cystoscopy . . . . .	*126	38	0.2	0.0
Tuberculin skin test . . . . .	588	147	0.7	0.2
Audiometry . . . . .	*307	97	*0.4	0.1
Fetal monitoring . . . . .	297	68	0.4	0.1
Cardiac stress test . . . . .	293	69	0.4	0.1
EEG <sup>3</sup> . . . . .	*144	58	*0.2	0.1
Laboratory tests				
CBC <sup>4</sup> . . . . .	8,288	828	9.9	0.7
Urinalysis . . . . .	7,277	849	8.7	0.7
Pap test . . . . .	2,948	390	3.5	0.4
Cholesterol . . . . .	2,446	391	2.9	0.4
Hematocrit/hemoglobin . . . . .	2,170	338	2.6	0.3
PSA <sup>5</sup> . . . . .	470	93	0.6	0.1
Cultures				
Any culture . . . . .	3,667	477	4.4	0.4
Throat/rapid strep test . . . . .	1,619	355	1.9	0.4
Urine . . . . .	773	121	0.9	0.1
Cervical/urethral . . . . .	751	123	0.9	0.1
Stool . . . . .	200	46	0.2	0.0
Imaging				
Any imaging . . . . .	10,384	1,039	12.5	0.6
X ray . . . . .	5,886	655	7.1	0.5
Mammography . . . . .	1,490	240	1.8	0.3
Ultrasound . . . . .	1,243	310	1.5	0.4
Other imaging . . . . .	3,771	452	4.5	0.3
Blank . . . . .	852	165	1.0	0.2

. . . Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Total exceeds "All visits" because more than one service may be reported per visit.<sup>2</sup>EKG is electrocardiogram.<sup>3</sup>EEG is electroencephalogram.<sup>4</sup>CBC is complete blood count.<sup>5</sup>PSA is prostate-specific antigen.

**Table 16. Number and percent of outpatient department visits with corresponding standard errors, by therapeutic and preventive services ordered or provided: United States, 2002**

Counseling, education, or therapeutic services ordered or provided	Number of visits in thousands <sup>1</sup>	Standard error in thousands	Percent of visits	Standard error of percent
All visits . . . . .	83,339	7,761	...	...
None . . . . .	45,823	5,410	55.0	2.9
Diet/nutrition . . . . .	10,290	1,260	12.3	1.2
Exercise . . . . .	4,958	746	5.9	0.7
Growth/development . . . . .	2,944	517	3.5	0.6
Psychotherapy . . . . .	2,545	459	3.1	0.6
Mental health/stress management . . . . .	2,473	386	3.0	0.4
Tobacco use/exposure . . . . .	2,413	440	2.9	0.4
Asthma education . . . . .	1,221	181	1.5	0.2
Weight reduction . . . . .	1,124	194	1.3	0.2
Physiotherapy . . . . .	1,119	227	1.3	0.3
Other . . . . .	21,414	2,591	25.7	2.5
Blank . . . . .	1,799	417	2.2	0.5

... Category not applicable.

<sup>1</sup>Total exceeds "All visits" because more than one service may be reported per visit.

**Table 17. Number and percent distribution of outpatient department visits with corresponding standard errors by medication therapy and number of medications provided or prescribed: United States, 2002**

Medication therapy <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits . . . . .	83,339	7,761	100.0	...
Drug visits <sup>2</sup> . . . . .	54,260	5,748	65.1	1.7
Visits without mention of medication . . . . .	29,079	2,554	34.9	1.7
Number of medications provided or prescribed				
All visits . . . . .	83,339	7,761	100.0	...
0 . . . . .	29,079	2,554	34.9	1.7
1 . . . . .	19,829	1,961	23.8	0.8
2 . . . . .	12,931	1,468	15.5	0.7
3 . . . . .	7,877	1,052	9.5	0.6
4 . . . . .	4,562	570	5.5	0.3
5 . . . . .	2,903	385	3.5	0.3
6 . . . . .	6,158	1,021	7.4	1.0

... Category not applicable.

<sup>1</sup>Includes prescription drugs, over-the-counter preparations, immunizations, and desensitizing agents.

<sup>2</sup>Visits at which one or more drugs were provided or prescribed.

NOTE: Numbers may not add to totals because of rounding.



**Table 18. Number and percent distribution of drug visits, drug mentions, and drug mention rates per 100 visits with corresponding standard errors by clinic type: United States, 2002**

Clinic type	Drug visits				Drug mention				Percent of drug visits		Drug mention rates	
	Number visits in thousands <sup>1</sup>	Standard error in thousands	Percent distribution	Standard error of percent	Number of mentions in thousands <sup>2</sup>	Standard error in thousands	Percent distribution	Standard error of percent	Percent <sup>3</sup>	Standard error of percent	Number of drug mentions per 100 visits <sup>4</sup>	Standard error of rate
All visits . . . . .	54,260	5,748	100.0	. . .	139,034	15,966	100.0	. . .	65.1	1.7	166.8	7.5
General medicine . . . . .	36,364	4,701	67.0	2.8	97,533	12,867	70.2	2.6	73.9	1.9	198.1	9.1
Pediatrics . . . . .	7,349	1,223	13.5	2.0	15,916	2,684	11.4	1.8	60.3	3.7	130.7	7.6
Surgery . . . . .	4,615	660	8.5	1.2	12,264	2,044	8.8	1.3	45.0	2.9	119.5	12.1
Obstetrics and gynecology . . . . .	3,204	400	5.9	0.7	5,532	914	4.0	0.6	45.5	3.2	78.6	9.3
Other . . . . .	2,729	527	5.0	0.9	7,789	1,941	5.6	1.2	59.0	5.2	168.3	26.5

. . . Category not applicable.

<sup>1</sup>Visits at which one or more drugs were provided or prescribed by the physician.

<sup>2</sup>Number of drugs mentioned at visits (up to six per visits).

<sup>3</sup>Percent of visits to clinic that included one or more drug mentions (number of drug visits divided by number of clinic visits multiplied by 100).

<sup>4</sup>Average number of drugs that were mentioned per 100 visits to each clinic (number of drug mentions divided by total number of visits multiplied by 100).

NOTE: Numbers may not add to totals because of rounding.

**Table 19. Number and percent of drug mentions for the 20 most frequently occurring therapeutic drug classes at outpatient department visits with corresponding standard errors: United States, 2002**

Therapeutic class	Number of occurrences in thousands <sup>1</sup>	Standard error in thousands	Percent of drug mentions <sup>2</sup>	Standard error of percent
NSAIDs <sup>3</sup>	8,109	1,110	5.8	0.7
Vaccines/antiseria	6,760	991	4.9	0.9
Nonnarcotic analgesics	5,901	792	4.2	0.6
Narcotic analgesics	5,702	1,101	4.1	1.1
Antidepressants	5,681	767	4.1	0.6
Antiasthmatics/bronchodilators	5,605	833	4.0	0.7
Antihistamines	5,577	1,055	4.0	0.9
Antipyretics	5,368	695	3.9	0.6
Blood glucose regulators	4,871	714	3.5	0.6
Acid/peptic disorders	4,187	593	3.0	0.5
Penicillins	3,987	706	2.9	0.6
ACE <sup>4</sup> inhibitors	3,974	565	2.9	0.5
Diuretics	3,762	626	2.7	0.5
Vitamins/minerals	3,369	528	2.4	0.5
Anticonvulsants	3,341	535	2.4	0.5
Hyperlipidemia	3,323	486	2.4	0.4
Beta blockers	3,267	487	2.3	0.4
Antiarthritics	2,784	452	2.0	0.4
Adrenal corticosteroids	2,756	462	2.0	0.4
Antihypertensive agents	2,741	447	2.0	0.4

<sup>1</sup>Based on the standard four-digit drug classification used in the *National Drug Code Directory*, 1995 edition (14).

<sup>2</sup>Based on an estimated 139,034,000 drug mentions at outpatient department visits in 2002. Total of all therapeutic classes will exceed total drug mentions because up to three classes may be coded for each drug.

<sup>3</sup>NSAIDs are nonsteroidal anti-inflammatory drugs.

<sup>4</sup>ACE is angiotensin-converting enzyme.

**Table 20. Number and rate of generic substances for the 20 most frequently occurring generic substances in drug mentions at outpatient department visits with corresponding standards: United States, 2002**

Generic substance	Number of occurrences in thousands <sup>1</sup>	Standard error in thousands	Number of substances per 100 mentions <sup>2</sup>	Standard error of rate
Acetaminophen	7,339	1,184	5.3	0.9
Ibuprofen	3,932	595	2.8	0.5
Amoxicillin	3,597	673	2.6	0.6
Albuterol	3,265	478	2.3	0.4
Hydrochlorothiazide	2,502	373	1.8	0.3
Hydrocodone	*2,338	774	1.7	0.8
Aspirin	2,269	353	1.6	0.3
Fluticasone propionate	1,875	353	1.3	0.3
Guaifenesin	1,812	489	1.3	0.5
Atenolol	1,706	321	1.2	0.3
Pseudoephedrine	1,650	361	1.2	0.3
Atorvastatin calcium	1,620	261	1.2	0.2
Azithromycin	1,443	296	1.0	0.3
Metformin	1,425	211	1.0	0.2
Levothyroxine	1,409	211	1.0	0.2
Furosemide	1,382	225	1.0	0.2
Lisinopril	1,347	235	1.0	0.2
Amlodipine	1,335	217	1.0	0.2
Insulin	1,305	254	0.9	0.3
Diphtheria toxoid	1,281	216	0.9	0.2

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Frequency of mention combines single-ingredient agents with mentions of the agent as an ingredient in a combination drug.

<sup>2</sup>Based on an estimated 139,034,000 drug mentions at outpatient department visits in 2002.

**Table 21. Number, percent distribution, and therapeutic classification for the 20 drugs most frequently provided or prescribed at outpatient department visits with corresponding standard errors, by entry name of drug: United States, 2002**

Entry name of drug <sup>1</sup>	Number of drug mentions in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Therapeutic classification <sup>2</sup>
All drug mentions . . . . .	139,034	15,966	100.0	. . .	. . .
Tylenol . . . . .	2,942	440	2.1	0.2	Nonnarcotic analgesics; antipyretics
Albuterol . . . . .	2,683	399	1.9	0.2	Antiasthmatics/bronchodilators
Motrin . . . . .	1,839	310	1.3	0.2	NSAIDs <sup>3</sup>
Amoxicillin . . . . .	1,813	356	1.3	0.2	Penicillins
Atenolol . . . . .	1,564	313	1.1	0.2	Beta blockers
Lipitor . . . . .	1,545	238	1.1	0.1	Hyperlipidemia
Ibuprofen . . . . .	1,497	295	1.1	0.2	NSAIDs <sup>3</sup>
Hydrochlorothiazide . . . . .	1,421	235	1.0	0.1	Diuretics
Lasix . . . . .	1,289	218	0.9	0.1	Diuretics
Aspirin . . . . .	1,246	211	0.9	0.1	Nonnarcotic analgesics; antiarthritics; antipyretics
Zyrtec . . . . .	1,222	340	0.9	0.2	Antihistamines
Prednisone . . . . .	1,206	230	0.9	0.1	Adrenal corticosteroids
Norvasc . . . . .	1,205	205	0.9	0.1	Calcium channel blockers
Augmentin . . . . .	1,201	294	0.9	0.2	Penicillins
Paxil . . . . .	1,129	199	0.8	0.1	Antidepressants
Celebrex . . . . .	1,079	216	0.8	0.1	NSAIDs <sup>3</sup>
Influenza virus vaccine . . . . .	*1,021	309	*0.7	0.2	Vaccines/antisera
Glucophage . . . . .	1,014	171	0.7	0.1	Blood glucose regulators
Zoloft . . . . .	997	136	0.7	0.1	Antidepressants
Synthroid . . . . .	958	152	0.7	0.1	Thyroid/antithyroid
All other mentions . . . . .	110,164	12,531	79.2	0.8	. . .

. . . Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>The entry made by the hospital staff on the prescription or other medical records. This may be a trade name, generic name, or desired therapeutic effect.<sup>2</sup>Therapeutic classification is based on the *National Drug Code Directory*, 1995 edition (14).<sup>3</sup>NSAIDs are nonsteroidal anti-inflammatory drugs.

NOTE: Numbers may not add to totals because of rounding.

**Table 22. Number and percent of outpatient department visits with corresponding errors by providers seen: United States, 2002**

Type of provider	Number of visits in thousands <sup>1</sup>	Standard error in thousands	Percent of visits	Standard error of percent
All visits . . . . .	83,339	7,761	. . .	. . .
Any physician . . . . .	66,976	6,422	80.4	2.3
Staff physician . . . . .	60,159	6,147	72.2	2.4
Resident/intern . . . . .	13,490	1,821	16.2	2.0
Other physician . . . . .	2,991	505	3.6	0.6
R.N. <sup>2</sup> . . . . .	32,580	3,422	39.1	3.3
Medical/nursing assistant . . . . .	15,360	2,793	18.4	2.7
L.P.N. <sup>3</sup> . . . . .	9,761	1,906	11.7	2.0
Nurse/practitioner/midwife . . . . .	6,553	1,468	7.9	1.6
Medical technician/technologist . . . . .	4,602	771	5.5	0.9
Physician assistant . . . . .	*3,664	1,177	4.4	1.3
Other provider . . . . .	6,144	769	7.4	0.9

. . . Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Total exceeds "All visits" because more than one provider may be reported per visit.<sup>2</sup>R.N. is registered nurse.<sup>3</sup>L.P.N. is licensed practical nurse.

Table 23. Number and percent of outpatient department visits with corresponding errors by visit disposition: United States, 2002

Disposition	Number of visits in thousands <sup>1</sup>	Standard error in thousands	Percent of visits	Standard error of percent
All visits . . . . .	83,339	7,761	...	...
Return at specified time . . . . .	52,771	4,698	63.3	2.2
Return if needed, P.R.N. <sup>2</sup> . . . . .	20,634	2,752	24.8	1.9
Referred to other physician . . . . .	10,591	1,585	12.7	1.5
No followup planned . . . . .	6,473	1,080	7.8	0.9
Telephone followup planned . . . . .	*2,425	910	*2.9	1.1
Admitted to hospital . . . . .	510	97	0.6	0.1
Other disposition . . . . .	1,094	166	1.3	0.2
Blank . . . . .	1,228	220	1.5	0.2

... Category not applicable.

\*Figure does not meet standard of reliability or precision.

<sup>1</sup>Total exceeds "All visits" because more than one provider may be reported per visit.

<sup>2</sup>P.R.N. is as needed.

## Technical Notes

### Data collection

The NHAMCS data collection is authorized under Section 308d of the Public Health Service Act (42 United States Code Section 306 [242k]). Participation is voluntary. In 2002, a sample of 481 was selected for the 2002 NHAMCS, 257 of which were in scope and operated OPDs. A total of 224 OPDs participated in the study, one of them at a minimal level, for an unweighted OPD response rate of 86.8 percent. A sample of 1,178 clinics was selected from the in-scope OPDs. Of these, 1,041 participated, 26 of them minimally, for a clinic response rate of 86.2 percent. The overall OPD visit sampling response rate was 74.8 percent, and 35,586 Patient Record forms were submitted. Response rates have been adjusted to exclude minimal participants.

The U.S. Census Bureau, acting as the data collection agent for the survey, provided training to field representatives (FRs) throughout the nation who, in turn, oversaw data collection at the hospital and clinic level. FRs contacted the sampled hospitals for induction into the survey after an advance letter was mailed by NCHS notifying the hospitals of their selection for the survey. Hospital staff were asked to complete the information requested on the PRFs (figure I). However, in 43.4 percent of the hospital OPDs, FRs abstracted the data from medical records or computer printouts. No personally identifying information, such as patient name or address, is collected. Confidentiality of the data collected in the survey is protected under the Privacy Act, Public Health Service Act, Title 42 of the United States Code, Section 242m(d), and Title V of the E-Government Act of 2002.

### Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance when only a sample, rather than an entire universe, is surveyed. The standard error does not measure any systematic biases in the data.

The standard errors presented in the tables and used in tests of significance for this report were approximated using SUDAAN software. SUDAAN computes standard errors by using a first-order Taylor approximation of the deviation of estimates from their expected values. A description of the software and the approach it uses has been published (5). The relative standard error (RSE) of an estimate is obtained by dividing the standard error by the estimate itself. The result is then expressed as a percentage of the estimate. When it is not feasible to use statistical software, such as SUDAAN, for analyzing complex survey data, one may calculate approximate RSEs for aggregate estimates using the following general linear formula, where  $x$  is the aggregate of interest in thousands, and  $A$  and  $B$  are the appropriate coefficients from table I.

$$RSE(x) = 100 * \sqrt{A+B/x}$$

Similarly, RSEs for an estimate of a percentage may be calculated using the following general formula, where  $p$  is the percentage of interest, expressed as a proportion, and  $x$  is the denominator of the percentage in thousands, using the appropriate coefficients from table I.

$$RSE(x) = 100 * \sqrt{[B*(1-p)]/p*x}$$

The standard error for a rate may be obtained by multiplying the RSE of the total estimate by the rate.

### Published and flagged estimates

Estimates are not presented unless a reasonable assumption regarding their probability distributions is possible on the basis of the Central Limit Theorem. This theorem states that given a sufficiently large sample size, the sample estimate approximates the population estimate and, upon repeated

sampling, its distribution would be approximately normal.

In this report, estimates are not presented if they are based on fewer than 30 cases in the sample data; only an asterisk (\*) appears in the tables. Estimates based on 30 or more cases include an asterisk only if the RSE of the estimate exceeds 30 percent.

### Estimation

Statistics from the NHAMCS are derived by a multistage estimation procedure that produces essentially unbiased estimates. The estimation procedure has three basic components:

- inflation by reciprocals of the sampling selection probabilities
- adjustment for nonresponse
- a population weighting ratio adjustment

NHAMCS data were adjusted to account for two types of nonresponse. The first type occurred when a sample hospital refused to provide information about its OPD that was publicly known to exist. In this case, the weights of visits to hospitals similar to the nonrespondent hospitals were inflated to account for visits represented by the nonrespondent hospitals. Hospitals were judged to be similar and grouped together for nonresponse purposes if they had the same ownership control group (voluntary, nonprofit vs. other) and region. Beginning with 1998 data, hospitals were judged to be similar if they were in the same region (except in the West) and if they had the same MSA status (in an MSA vs. not in an MSA). This adjustment was made separately by department type. This was done because the sample size was too small to use the finer breakdowns in the regions affected.

Beginning with 1997, the population weighting ratio adjustment

**Table I. Coefficients appropriate for determining approximate relative standard errors, by type of estimate: National Hospital Ambulatory Medical Care Survey, 2002: Outpatient departments**

Type of estimate	Coefficient for use with estimates in thousands		Lowest reliable estimate in thousands
	A	B	
Visits . . . . .	0.0145500	6.391	85
Drug mentions . . . . .	0.0228270	12.115	180

for OPD estimates was replaced by an adjustment that controls for effects of rotating hospital sample panels into and out of the sample each year. (The full NHAMCS hospital sample is partitioned into 16 panels, which are rotated into the sample over 16 periods of 4 weeks each so that only 13 panels are used in any 1 year.) Also, beginning with 1997 data, the sampling weights of some OPDs were permanently trimmed. Modifications were made if the population-based PSU selection probability was significantly smaller than the selection probability based on visits to the OPDs, the ideal measure of size, and whether the OPD would otherwise have accounted for more than 15 percent of the estimated number of OPD visits in its region.

The second type of nonresponse occurred when a sample OPD clinic within a responding hospital failed to provide completed PRFs for a sample of patient visits. The weights of visits from responding OPD clinics were inflated to account for visits to similar nonresponding OPD clinics, where OPD clinics were judged to be similar if they were in the same region, clinic type, and ownership control group (voluntary, nonprofit vs. other). There were six OPD clinic groups: (a) general medicine, (b) pediatrics, (c) surgery, (d) obstetrics and gynecology, (e) alcohol and/or substance abuse, and (f) other OPD clinic. Beginning with the 1998 data, formation of groups of similar clinics also considered the MSA status of the clinic (in an MSA vs. not in an MSA) with the following two exceptions: in the West, MSA status was not considered, and in non-MSA clinics in the three other regions, ownership control group (voluntary nonprofit vs. other) was not considered.

Starting in 2001, clinics that responded minimally (i.e., provided substantially fewer PRFs than expected) were considered nonrespondents for response rate calculations, but their records were included in the final data set. However, their visit weights were set not to exceed 50 percent of the clinic's count of visits. The remaining weight for these minimally responding clinics was accounted for by in-scope,

responding clinics of similar hospitals that were in the same PSU.

### Nonsampling errors

As in any survey, results are subject to both sampling and nonsampling errors. Nonsampling errors include reporting and processing errors, as well as biases due to nonresponse and incomplete response. The magnitude of the nonsampling errors cannot be computed. However, these errors were kept to a minimum by procedures built into the operation of the survey. To eliminate ambiguities and encourage uniform reporting, attention was given to the phrasing of questions, terms, and definitions. Also, pretesting of most data items and survey procedures was performed. Quality control procedures and consistency and edit checks reduced errors in data coding and processing. Coding errors ranged from 0.1 to 2.0 percent for various data items.

Item nonresponse rates in the NHAMCS are generally low (5 percent or less). However, levels of nonresponse can vary within the survey. Most nonresponse occurs when the needed information is not available in the medical record and/or is unknown to the person filling out the survey instrument. Nonresponse can also result when the information is available, but survey procedures are not followed and the item is left blank. In this report, the tables include a combined entry of unknown/blank to display missing data. For items where combined item nonresponse is between 30 and 50 percent, percent distributions are not discussed in the text. However, the information is shown in the tables. These data should be interpreted with caution. If nonresponse is random, the observed distribution for the reported item (i.e., excluding cases for which the information is unknown) would be close to the true distribution. However, if nonresponse is not random, the observed distribution could vary significantly from the actual distribution. Researchers must decide how best to treat items with high levels of missing responses. For items with nonresponse greater than 50 percent, data are not presented.

Weighted item nonresponse rates (i.e., if the item was left blank or the unknown box was marked) were 5.0 percent or less for all data items with the following exceptions: ethnicity (14.0 percent), use of tobacco (45.2 percent), primary expected source of payment (5.6 percent), primary care physician (9.9 percent), referral status (18.3 percent), past visits (10.9 percent), episode of care (6.6 percent), physicians sharing patient care (23.3 percent), and cause of injury (40.1 percent).

For some items, missing values were imputed by randomly assigning a value from PRFs with similar characteristics. Imputations were based on geographic region, OPD volume by clinic type, and three-digit ICD-9-CM codes for primary diagnosis. Imputations were performed for the following variables—birth year (0.7 percent), sex (3.1 percent), and race (12.4 percent). This represents a change from previous survey years when imputations were also performed for the following variables—ethnicity, disposition, and providers seen. Beginning in 1997, these latter items were no longer imputed. Blank or otherwise missing responses are so noted in the data.

### Tests of significance and rounding

Some figures in this report present 95 percent confidence intervals to indicate the stability of the point estimates relative to their individual stabilities. This permits the reader to assess substantive patterns in the data. However, it should be noted that examination of the amount of overlap between intervals is not equivalent to standard significance testing for differences.

In this report, the determination of statistical inference is based on the two-tailed *t*-test. The Bonferroni inequality was used to establish the critical value for statistically significant differences (0.05 level of significance) based on the number of possible comparisons within a particular variable (or combination of variables) of interest. Terms relating to differences such as “greater than” or “less than” indicate

**Table II. Reclassification of external cause-of-injury codes for use with National Hospital Ambulatory Medical Care Survey data**

Intent and mechanism of injury	Cause of injury code <sup>1</sup>
Unintentional injuries . . . . .	E800–E869,E880–E929
Falls . . . . .	E880.0–E886.9,E888
Motor vehicle traffic . . . . .	E810–E819
Struck against or struck accidentally by objects or persons . . . . .	E916–E917
Natural and environmental factors . . . . .	E900–E909,E928.0–E928.2
Cutting or piercing instruments or objects . . . . .	E920
Overexertion and strenuous movements . . . . .	E927
Fire and flames, hot substance or object, caustic or corrosive material and steam . . . . .	E890–E899,E924
Other and not elsewhere classified . . . . .	E830,E832,E846–E848,E890–E899,E910–E915,E918,E921,E923,E925–E926,E929.0–E929.5
Mechanism unspecified . . . . .	E887,E928.3,E928.9,E929.8,E929.9
Intentional injuries . . . . .	E950–E959,E960–E969,E970–E978,E990–E999
Injuries of undetermined intent . . . . .	E980–E989
Adverse effects and medical treatment . . . . .	E870–E879,E930–E949

<sup>1</sup>Based on the “Supplementary Classification of External Causes of Injury and Poisoning,” *International Classification of Diseases, 9th revision, Clinical Modification (ICD-9-CM) (11)*.

that the difference is statistically significant. A lack of comment regarding the difference between any two estimates does not mean that the difference was tested and found to be not significant.

A weighted least-squares regression analysis was used to determine the significance of 1992–2002 trends. For the weighted least-squares test, the null hypothesis is that the slope,  $\beta$ , of the regression line between the two variables of interest does not significantly differ from zero, and the alternative hypothesis is that it does differ from zero (i.e.,  $H_0 : \beta=0$ , and  $H_A : \beta \neq 0$ ). In this modified least-square regression, each estimate is weighted by the inverse of the standard error (22).

In the tables, estimates of OPD visits have been rounded to the nearest thousand. Consequently, estimates will not always add to totals. Rates and percents were calculated from original unrounded figures and do not necessarily agree with figures calculated from rounded data.

**Race**

The instructions for the race item on the PRF was changed in 1999 to be consistent with standards issued by the Office of Management and Budget to promote comparability of data among Federal data sources and so that more than one race could be recorded per person (23). The new race item includes the following groups: white, black or African American, Asian, Native Hawaiian or other Pacific Islander, and

American Indian or Alaska Native. Respondents could check multiple categories for each patient. Prior to 1999, only a single race category could be checked per person. Because of the difference between single and multiple race reporting, race-specific estimates prior to 1999 are not strictly comparable with those from 1999 and subsequent years. From 1999 to present, only a small proportion of records had multiple races indicated. Where reliable multiple-race estimates can be obtained, they are presented in one category. Estimates for specific race categories reflect visits where only a single race was reported. See “Population figures and rate calculation” in the “Technical Notes” for more information.

According to the same standards, data on race and Hispanic origin were collected separately. Consequently, all race categories include visits by persons of Hispanic and not-Hispanic origin. Persons of Hispanic origin may be of any race.

**Injury groupings**

Table 14 presents data on the intent and mechanism producing the injuries that resulted in visits to OPDs. Cause of injury is collected for each sampled injury visit in the NHAMCS and is coded according to the ICD-9-CM’s “Supplementary Classification of External Causes of Injury and Poisoning.” However, for table 14, the first-listed cause-of-injury data were grouped to highlight the interaction between intentionality of the injury and

the mechanism that produced the injury. Table II shows the E-code groupings used to produce this table.

**Population figures and rate calculation**

The 2002 visit rates for age, sex, race, and geographic region use Census 2000-based postcensal estimates of the civilian noninstitutional population of the United States as of July 1, 2002, as prepared by the U.S. Census Bureau. Between 1992 and 2000, NAMCS and NHAMCS visit rates used 1990 census-based population estimates. The change in visit rates due to switching from the 1990 census-based population estimates to Census 2000-based population estimates presented in this report for age, sex, and race is minimal. For evaluating the effect of the change in base year, the 2000 NAMCS and NHAMCS visit rates were calculated using both the 1990-based population estimates and the 2000-based population estimates. In no case were differences in the two rates statistically significant. It is, therefore, reasonable to conclude that the effect of the change in base year has little impact on observed trends that cross these survey years. For more information on rate comparisons, see <http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm>.

Population estimates for race groups in the 2002 NAMCS and NHAMCS are based on Census 2000, where respondents were able to indicate more than one race category (as requested by the 1997 Standards for Federal Data on

Race and Ethnicity) (23). The multiple-race indication was adopted by the 1999 NAMCS and NHAMCS, but the denominators available for calculating rates in 1999 and 2000 were based on estimates from the 1990 census, which indicated single-response race categories. Population estimates based on the 2000 census were not used as denominators for 2000 NAMCS and NHAMCS visit rates because these estimates were not available. In addition, NAMCS and NHAMCS had very few records for multiple-race persons, so rates for single-race groups were calculated by dividing estimates by denominators that included some unidentifiable multiple race persons. Starting with 2001, the denominators used for calculating race-specific visit rates reflect the transition to multiple race reporting. Specific race denominators reflect persons with a single race identification, and a separate denominator is available for persons of multiple races. In this report, a visit rate for white persons, for example, uses a denominator that reflects the “white only” population, and the numerator is the number of visits where white and no other race category was reported as the patient’s race by the health care provider.

Data indicate that multiple races are recorded less frequently in medical records than occur in the general population. The 2002 population estimates indicate that multiple-race persons account for 1.5 percent of the total population, whereas multiple-race patients (as indicated by the provider) account for 0.2 percent of OPD visits. This difference exists because hospital staff are less likely to know and record the multiple-race preference of the patient and not because, after age-adjusting, persons with multiple races make fewer doctor visits. This implies that the race population rates calculated in 2002 are probably slight “overestimates” for the single-race categories and “underestimates” for the multiple-race category.

The 2002 MSA population estimates based on Census 2000 were not available from the U.S. Census Bureau. They were calculated from data provided by the Office of Research

Methods and Division of Health Interview Statistics, National Center for Health Statistics, and are based on estimates of the civilian noninstitutionalized population of the United States as of July 1, 2002, using Census 2000 data.

### Definition of terms

**Clinic**—A clinic is an administrative unit of the outpatient department where ambulatory medical care is provided under the supervision of a physician. The following are examples of the types of clinics included in the NHAMCS: general medicine, surgery, pediatrics, obstetrics and gynecology, substance abuse (excluding methadone maintenance), and others (e.g., psychiatry and neurology). Clinics excluded from the NHAMCS include ambulatory surgery centers, chemotherapy, employee health service, renal dialysis, methadone maintenance, and radiology.

**Continuity of care**—Continuity of care is a goal of health care achieved through an interdisciplinary process involving patients, families, health care professionals, and providers in the management of a coordinated plan of care. Based on changing needs and available resources, the process optimizes quality outcomes in the health status of clients. It may involve professionals from many different disciplines within multiple systems.

**Drug mention**—A drug mention is the health care provider’s entry on the PRF of a pharmaceutical agent—by any route of administration—for prevention, diagnosis, or treatment. Generic as well as brand-name drugs are included, as are nonprescription and prescription drugs. Along with all new drugs, the physician also records continued medications if the patient was specifically instructed during the visit to continue the medication. Health care providers may report up to six medications per visit.

**Drug visit**—A drug visit is a visit at which medication was prescribed or provided by the physician.

**Emergency department**—An emergency department (ED) is a hospital facility for the provision of unscheduled outpatient services to

patients whose conditions require immediate care and that is staffed 24 hours a day.

**Episode of care**—This term attempts to measure the nature of the care provided at the visit, an initial visit versus a followup visit. An episode of care begins with the initial visit for care for a particular problem and ends when the patient is no longer continuing treatment. A problem may recur later, but that is considered a new episode of care. An initial visit may be diagnostic in nature, whereas a followup visit may be to check progress or continue therapy.

**Followup visit**—Care was previously provided for this problem. This is the second or subsequent visit for this problem or complaint.

**Hospital**—To be in-scope for the NHAMCS, a hospital must have an average length of stay for all patients of less than 30 days (short-stay) or be a hospital whose specialty is general (medical or surgical) or children’s general, except Federal hospitals, hospital units of institutions, and hospitals with fewer than six beds staffed for patient use.

**Illness-related visit**—A visit is considered illness related if it was not an injury visit as defined below.

**Initial visit**—This is the first visit by this patient for care of this particular problem or complaint.

**Injury-related visit**—A visit is injury related if “Yes” was checked in response to item 4a, “Is this visit related to injury or poisoning?” or if a cause of injury or a nature of injury diagnosis was provided, or if an injury-related reason for visit was reported.

**Outpatient department**—An outpatient department is a hospital facility where nonurgent ambulatory medical care is provided under the supervision of a physician.

**Ownership**—Hospitals are designated according to the primary owner of the hospital based on the SMG Hospital database.

**Voluntary nonprofit**—Hospitals that are church-related or are a nonprofit corporation or have other nonprofit ownership.



*Government, non-*

*Federal*—Hospitals that are operated by State, county, city, city-county, or hospital district or authority.

*Proprietary*—Hospitals that are individually owned or are partnerships or corporations.

*Patient*—A patient is an individual seeking personal health services who is not currently admitted to any health care institution on the premises.

*Primary care physician/provider*—The primary care physician/provider (PCP) plans and provides the comprehensive health care of the patient. A visit to the patient's PCP is one in which health care is provided by the patient's PCP or by a provider substituting for the patient's PCP.

*Primary expected source of payment*—The primary expected source of payment is the source that to the best of the hospital staff's knowledge describes how charges incurred for the visit will be paid:

- *Self pay*—Charges billed directly to the patient that will not be reimbursed by a third party. It does not include prepaid plans for which copayment is charged.
- *Medicare*—Charges paid in part or in full by a Medicare plan, including payments made directly to the hospital as well as payments to the patient.
- *Medicaid/SCHIP*—Charges paid in part or in full by a Medicaid or State Children's Health Insurance Program (SCHIP), including payments made directly to the hospital as well as payments to the patient. SCHIP, enacted as part of the Balanced Budget Act of 1997, gave States the opportunity to provide free or low-cost insurance coverage to low-income children not otherwise eligible to be covered by Medicaid. States began enrolling children in 1998 using Medicaid or State-specific programs separate from

Medicaid or both. By 2000, all States had implemented their SCHIP programs.

- *Private insurance*—Charges paid in part or in full by a private insurance company, health maintenance organization (HMO) plan, or other prepayment plan, including independent practice associations (IPAs) and preferred provider organizations (PPOs).
- *No charge/charity*—Visits for which no fee is charged (not including visits paid for as part of a total care package such as postoperative visits included in a surgical fee, pregnancy visits for which a flat fee was charged, and HMO and prepaid systems).
- *Other sources*—All other sources of payment not in the preceding categories. Charges paid under any other local, State, or Federal health care program such as worker's compensation programs and any type of military health plan.
- *Unknown*—Cases where none of the previous sources of payment categories was checked.

The expected source of payment item varied between 1992 and 2002. From 1992 through 1994, the item was a multiple-selection item allowing the respondent to check all sources that apply. In 1995 and 1996, the item was split into two sections allowing multiple selection for type of insurance (e.g., Medicaid, Medicare, private, workers' compensation), but single selection for type of plan (e.g., fee-for-service insurance, HMO, self pay, charity). From 1997 through 2000, the items were again rewritten to make two items, a single selection for source of payment and a separate item for HMO status of the patient (e.g., "Is patient a member of an HMO?"). In 2001 and 2002, only one primary payment source was selected. Because the payment item varied over the years from multiple to

single selection, an algorithm was used to arrive at a primary payer whereby Medicaid and Medicare (regardless of HMO status) were assigned a higher priority than private insurance (including HMOs and other prepaid plans) or self pay when more than one category was indicated.

*Visit*—A visit is a direct, personal exchange between an ambulatory patient seeking care and a physician or a hospital staff member working under the physician's supervision for the purpose of rendering personal health services. Excluded from the NHAMCS are visits where medical care was not provided, such as visits made to drop off specimens, pay bills, and make appointments.



---

**Trade name disclaimer**

The use of trade names is for identification only and does not imply endorsement by the Centers for Disease Control and Prevention, U.S. Department of Health and Human Services.

---

**Suggested citation**

Hing E, Middleton K. National Hospital Ambulatory Medical Care Survey: 2002 outpatient department summary. Advance data from vital and health statistics; no 345. Hyattsville, Maryland: National Center for Health Statistics. 2004.

---

**Copyright information**

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

---

**National Center for Health Statistics**

Director  
Edward J. Sondik, Ph.D.

Deputy Director  
Jack R. Anderson

---

**U.S. DEPARTMENT OF  
HEALTH & HUMAN SERVICES**

Centers for Disease Control and Prevention  
National Center for Health Statistics  
3311 Toledo Road  
Hyattsville, Maryland 20782

MEDIA MAIL POSTAGE & FEES PAID CDC/NCHS PERMIT NO. G-284
---

---

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

---

To receive this publication regularly, contact the National Center for Health Statistics by calling 301-458-4636  
E-mail: [nchsquery@cdc.gov](mailto:nchsquery@cdc.gov)  
Internet: [www.cdc.gov/nchs](http://www.cdc.gov/nchs)

---

DHHS Publication No. (PHS) 2004-1250  
04-0361 (06/04)