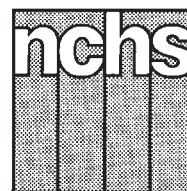


Advance Data



From Vital and Health Statistics of the CENTERS FOR DISEASE CONTROL AND PREVENTION/National Center for Health Statistics

National Hospital Ambulatory Medical Care Survey: 1997 Outpatient Department Summary

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Abstract

Objective—This report describes ambulatory care visits to hospital outpatient departments in the United States. Statistics are presented on selected hospital, clinic, patient, and visit characteristics.

Methods—The data presented in this report were collected from the 1997 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 hospital outpatient and emergency departments of non-Federal, short-stay, and general hospitals in the United States. Sample data are weighted to produce annual estimates.

Results—During 1997, an estimated 77.0 million visits were made to hospital outpatient departments in the United States, an overall rate of 28.9 per 100 persons. Visit rates did not vary by age. Black persons had higher rates of visits than white persons. Of all visits made to hospital outpatient departments in 1997, 34.1 percent and 27.8 percent, respectively, listed private insurance and Medicaid as the primary expected source of payment, and 20.1 percent were made by patients belonging to a health maintenance organization. There were an estimated 7.1 million injury-related outpatient department visits during 1997.

Keywords: outpatient department visits • diagnoses • injury • ICD-9-CM

Introduction

The National Hospital Ambulatory Medical Care Survey (NHAMCS) was inaugurated in 1992 to gather and disseminate information about the health care provided by hospital outpatient departments (OPD's) and emergency departments (ED's) to the population of

the United States. NHAMCS is part of the ambulatory component of the National Health Care Survey that measures health care utilization across various types of providers.

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 physician offices (1). Since 1973, the National Center for Health Statistics (NCHS) has collected data on patient visits to physicians' offices through the National Ambulatory Medical Care Survey (NAMCS). However, visits to hospital OPD's and ED's, which represent a significant segment of ambulatory care visits, are not included in NAMCS. Furthermore, hospital ambulatory patients are known to differ from office patients in their demographic characteristics and in medical aspects (1). Together, the NAMCS and NHAMCS data provide an important tool for tracking ambulatory care utilization. A third survey, the National Survey of Ambulatory Surgery, was conducted from 1994 through 1996 to provide data on the use of ambulatory surgery centers that are not covered in NAMCS or NHAMCS.

This report presents national annual estimates of hospital outpatient department visits for 1997. Hospital, clinic, patient, and visit characteristics are described. Other *Advance Data* reports highlight visits to emergency departments (2) and physician offices (3).



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics



Methods

The data presented in this report are from the 1997 NHAMCS, a national probability sample survey conducted by the Division of Health Care Statistics of the National Center for Health Statistics, Centers for Disease Control and Prevention. The survey was conducted from December 23, 1996, through December 21, 1997.

The target universe of NHAMCS is in-person visits made in the United States to OPD's and ED's 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 sampling frame consisted of hospitals listed in the April 1991 SMG Hospital Database. The data presented in this report are representative of 1997 utilization statistics for hospitals existing in 1991.

A four-stage probability sample design is used in NHAMCS (4). The design involves samples of primary sampling units (PSU's), hospitals within PSU's, ED's within hospitals and/or clinics within outpatient departments, and patient visits within ED's and/or clinics. The PSU sample consists of 112 PSU's that comprise a probability subsample of PSU's used in the 1985–94 National Health Interview Survey. The sample for 1997 consisted of 486 hospitals. Of this group, 269 had OPD's and 236 of these participated in the survey, resulting in a hospital outpatient department participation rate of 88 percent.

If an OPD had five or fewer clinics, then all were included in the sample. For OPD's with more than five clinics, a sample of clinics was included in the survey. A clinic was defined as an administrative unit of the outpatient department where ambulatory medical care is provided under the supervision of a physician. 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. A total of 918 clinics were selected from the 236

participating OPD's. Of this group of clinics, 873 provided data to the survey. Hospital staff were asked to complete Patient Record forms (figure 1) for a systematic random sample of patient visits occurring during a randomly assigned 4-week reporting period. The number of Patient Record forms completed for OPD's was 30,107.

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 and guidelines for judging the precision of the estimates.

Several medical classification systems were used to code data from NHAMCS. Each Patient Record form contains an item on the patient's expressed reason for the visit. In this item, the hospital staff were asked to record the patient's "complaint(s), symptom(s), or other reason(s) for this visit in the patient's (or patient surrogate's) own words." Up to three reasons for the visit were coded according to *A Reason for Visit Classification for Ambulatory Care (RVC)* (5).

The Patient Record form contains an item on the cause of injury for injury-related visits. Up to three external causes of injury were coded according to the "Supplementary Classification of External Causes of Injury and Poisoning" in the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)* (6). In addition, the form contains an item on diagnosis. The hospital staff were asked to record the principal diagnosis or problem associated with the patient's most important reason for the current visit as well as any other significant current diagnoses. Up to three diagnoses were coded according to the ICD-9-CM (6).

The Patient Record form includes items on ambulatory surgical procedures and diagnostic/screening services. Hospital staff were asked to record up to two surgical procedures that were performed at the visit and to record additional services in the open-ended "other" categories. These procedures

and services were coded according to the ICD-9-CM, volume 3 (6).

In the medication item, 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 (7). Therapeutic classification of the drugs mentioned on the Patient Record forms was determined using the *National Drug Code Directory*, 1995 edition (8).

The 1997 NHAMCS included several new items: pregnancy status of patient, authorization required for care, patient's primary care physician, health maintenance organization (HMO) status of patient, capitated visit, major reason for visit, and time spent with physician. Data for these items are provided throughout the report. The major reason for visit item differs from the principal reason for visit item in that the former item presents the physician's perspective of the major reason the patient sought medical care as categorized by acute, chronic, followup, or routine examination. The principal reason for visit, as classified by the *Reason for Visit Classification* (5), is from the patient's perspective and is expressed in the patient's or patient's surrogate's own words. It includes the patient's complaints for symptom-related visits. Each item provides unique dimensions into the nature of the medical encounter.

Item nonresponse rates in NHAMCS are generally low (5 percent or less). However, levels of nonresponse can vary considerably in the survey, with one item in 1997 (place of occurrence of injury) having a nonresponse rate above 50 percent. Most nonresponse occurs when the needed information is not available in the medical record. Nonresponse can also result when the information is available, but survey procedures are not followed and the item is left blank. In this report,

Assurance of confidentiality – All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purpose of the survey and will not be disclosed or released to other persons or used for any other purpose without consent of the individual or the establishment in accordance with section 308(d) of the Public Health Service Act (42 USC 242m).				Department of Health and Human Services Public Health Service Centers for Disease Control and Prevention National Center for Health Statistics		OMB No. 0920-0278 Expires: 07/31/99 CDC 64.132		PATIENT'S RECORD NO.:											
NATIONAL HOSPITAL AMBULATORY MEDICAL CARE SURVEY 1997-98 OUTPATIENT DEPARTMENT RECORD						PATIENT'S NAME:													
1. DATE OF VISIT ____ / ____ / ____ Month Day Year		3. SEX <input type="checkbox"/> Female <input type="checkbox"/> Male ↓ Is patient pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		4. RACE <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> American Indian/Eskimo/Aleut		6. WAS PATIENT REFERRED BY ANOTHER PHYSICIAN OR BY A HEALTH PLAN FOR THIS VISIT? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		7. WAS AUTHORIZATION REQUIRED FOR CARE? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		8. ARE YOU THE PATIENT'S PRIMARY CARE PHYSICIAN? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		9. PRIMARY EXPECTED SOURCE OF PAYMENT FOR THIS VISIT <i>Check one.</i> <input type="checkbox"/> Private insurance <input type="checkbox"/> Medicare <input type="checkbox"/> Medicaid <input type="checkbox"/> Worker's Compensation <input type="checkbox"/> Self-pay <input type="checkbox"/> No charge <input type="checkbox"/> Other <input type="checkbox"/> Unknown		10. DOES PATIENT BELONG TO AN HMO? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		11. IS THIS A CAPITATED VISIT? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		12. HAS PATIENT BEEN SEEN IN THIS CLINIC BEFORE? <input type="checkbox"/> Yes, established patient <input type="checkbox"/> No, new patient	
2. DATE OF BIRTH ____ / ____ / ____ Month Day Year		5. ETHNICITY <input type="checkbox"/> Hispanic origin <input type="checkbox"/> Not Hispanic		13. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT <i>Use patient's own words</i> 1. Most important: _____ _____ 2. Other: _____ _____ 3. Other: _____ _____				14. MAJOR REASON FOR THIS VISIT <i>Check one</i> <input type="checkbox"/> Acute problem <input type="checkbox"/> Chronic problem, routine <input type="checkbox"/> Chronic problem, flareup <input type="checkbox"/> Pre- or post-surgery/injury followup <input type="checkbox"/> Non-illness care (e.g., routine prenatal, general exam., well baby)		15. IS THIS VISIT RELATED TO INJURY OR POISONING? <i>Refers to all types of injury or poisoning, including adverse drug experiences, medical misadventures, etc.</i> <input type="checkbox"/> Yes (Answer a, b, c, and d.) <input type="checkbox"/> No (Skip to item 16.) a. Place of occurrence <i>Check one</i> <input type="checkbox"/> Residence <input type="checkbox"/> Other public building <input type="checkbox"/> Recreation/sports area <input type="checkbox"/> Industrial places <input type="checkbox"/> Street or highway <input type="checkbox"/> Other <input type="checkbox"/> School <input type="checkbox"/> Unknown b. Is this injury intentional? <input type="checkbox"/> Yes (self-inflicted) <input type="checkbox"/> Yes (assault) <input type="checkbox"/> No, unintentional <input type="checkbox"/> Unknown c. Is this injury work related? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown d. Cause of injury <i>Describe events that preceded injury (e.g. reaction to penicillin, wasp sting, driver in motor vehicle traffic accident involving collision with parked vehicle, shot with a handgun during a brawl, etc.)</i> _____ _____				16. PHYSICIAN'S DIAGNOSES FOR THIS VISIT <i>As specifically as possible, list diagnoses related to this visit including chronic conditions (e.g. depression, obesity, asthma, etc.)</i> 1. Primary diagnosis: _____ _____ 2. Other: _____ _____ 3. Other: _____ _____					
17. DIAGNOSTIC/SCREENING SERVICES <i>Check all ordered or provided at this visit.</i> <input type="checkbox"/> None EXAMINATIONS: TESTS AND MEASUREMENTS: IMAGING: <input type="checkbox"/> Breast <input type="checkbox"/> Blood pressure <input type="checkbox"/> X-Ray <input type="checkbox"/> Pelvic <input type="checkbox"/> Strep test <input type="checkbox"/> CAT scan/MRI <input type="checkbox"/> Rectal <input type="checkbox"/> Pap test <input type="checkbox"/> Mammography <input type="checkbox"/> Skin <input type="checkbox"/> Urinalysis <input type="checkbox"/> Ultrasound <input type="checkbox"/> Visual acuity <input type="checkbox"/> Pregnancy test <input type="checkbox"/> Hematocrit/hemoglobin <input type="checkbox"/> Glaucoma <input type="checkbox"/> PSA <input type="checkbox"/> Other blood test <input type="checkbox"/> Hearing <input type="checkbox"/> Blood lead level <input type="checkbox"/> EKG ALL OTHER: Specify <input checked="" type="checkbox"/> _____ <input type="checkbox"/> _____										18. THERAPEUTIC AND PREVENTIVE SERVICES <i>Check all ordered or provided at this visit. Exclude medications.</i> <input type="checkbox"/> None COUNSELING/EDUCATION: OTHER THERAPY: <input type="checkbox"/> Diet/nutrition <input type="checkbox"/> Tobacco use/exposure <input type="checkbox"/> Psychotherapy <input type="checkbox"/> Exercise <input type="checkbox"/> Growth/development <input type="checkbox"/> Psycho-pharmacotherapy <input type="checkbox"/> HIV/STD transmission <input type="checkbox"/> Mental health <input type="checkbox"/> Physiotherapy <input type="checkbox"/> Family planning/contraception <input type="checkbox"/> Stress management ALL OTHER: Specify <input checked="" type="checkbox"/> _____ <input type="checkbox"/> Prenatal instructions <input type="checkbox"/> Skin cancer prevention <input type="checkbox"/> _____ <input type="checkbox"/> Breast self-exam <input type="checkbox"/> Injury prevention <input type="checkbox"/> _____									
19. AMBULATORY SURGICAL PROCEDURES <input type="checkbox"/> None <i>List up to 2 surgical procedures actually performed at this visit. Include biopsy.</i> 1. _____ 2. _____			20. MEDICATIONS/INJECTIONS <i>List names of up to 6 medications that were ordered, supplied, administered or continued during this visit. Include Rx and OTC medications, immunizations, allergy shots, and anesthetics.</i> <input type="checkbox"/> None 1. _____ 4. _____ 2. _____ 5. _____ 3. _____ 6. _____				21. PROVIDERS SEEN THIS VISIT <i>Check all that apply.</i> <input type="checkbox"/> Staff physician <input type="checkbox"/> R.N. <input type="checkbox"/> Resident/intern <input type="checkbox"/> L.P.N. <input type="checkbox"/> Other physician <input type="checkbox"/> Medical/nursing assistant <input type="checkbox"/> Physician assistant <input type="checkbox"/> Other <input type="checkbox"/> Nurse practitioner <input type="checkbox"/> Nurse midwife			22. TIME SPENT WITH PHYSICIAN <i>If not seen by physician, enter zero</i> _____ Minutes									

Figure 1. Patient Record Form.

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, the 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 items would be close to the true distribution. However, if nonresponse is not random, the observed distribution could vary significantly from the actual distribution. Researchers need to decide how best to treat items with high levels of missing responses. For the one item with nonresponse greater than 50 percent (place of occurrence of injury), the data are not presented. The [Technical notes](#) provide nonresponse rates for items with more than 5 percent missing data.

The U.S. Bureau of the Census, Housing Surveys Branch, was responsible for data collection. Data processing operations and medical coding were performed by Analytic Sciences, Inc., Durham, North Carolina. As part of the quality assurance procedure, a 10-percent quality control sample of survey records was independently processed. Coding error rates ranged between 0.0 and 1.3 percent for various survey items.

Several of the tables in this report present data on rates of outpatient department visits. The population figures used in calculating these rates are U.S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1997, and have been adjusted for net underenumeration. The population figures have been published (1).

Results

There were an estimated 77.0 million OPD visits in 1997, representing a rate of 28.9 visits per 100 persons. This rate did not differ significantly from the visit rate in 1996. Selected hospital, clinic, patient, and visit characteristics for these encounters are described in the following text.

Patient characteristics

OPD visits by patient's age, sex, and race are shown in [table 1](#) and

[figures 2](#) and [3](#). Overall, visit rates did not differ significantly by age or sex. Females made 59.9 percent of all OPD visits during 1997. Visit rates were higher for females than for males 15–44 years old. White persons made 72.9 percent of all OPD visits and black persons and Asians/Pacific Islanders accounted for 23.9 percent and 3.0 percent visits, respectively. American Indians, Eskimos, and Aleuts accounted for 0.2 percent of the visits. Visit rates for black persons were higher than for white persons overall and in all age categories except among children under 15 years of age.

“Is patient pregnant?” is a new item on the 1997–98 NHAMCS Patient Record form. Results are discussed in terms of women of childbearing age (15–44 years). For 27.2 percent of visits made by women 15–44 years of age, pregnancy status was unknown. This high level of missing data must be kept in mind when interpreting this item. At another 49.1 percent of visits, patients were not pregnant. The remainder, 23.7 percent of visits, were made by women who were pregnant.

Hospital characteristics

Ownership—About two-thirds of OPD visits occurred in hospitals where the ownership was voluntary nonprofit, while 18.3 percent and 17.3 percent of visits occurred in proprietary and non-Federal government hospitals, respectively.

Geographic region—The visit rates in the Northeast (45.2 visits per 100 persons) and Midwest (35.0 visits per 100 persons) were higher than in the West (16.0 visits per 100 persons). The proportions of OPD visits in the Northeast (30.8 percent), Midwest (29.8 percent), and South (28.3 percent) were higher than the proportion in the West (11.0 percent).

Metropolitan status—About 91 percent of OPD visits occurred in metropolitan statistical areas. The visit rate for these areas (33.0 visits per 100 persons) was not significantly different from the overall rate (28.9 visits per 100 persons).

Clinic characteristics

Clinic type—Visits to hospital OPD's were classified into five types of

clinics ([table 2](#)). General medicine clinics included internal medicine and primary care clinics and represented 54.8 percent of all OPD visits. Surgery, pediatric, and obstetrics and gynecology accounted for 14.2 percent, 14.1 percent, and 7.9 percent of visits, respectively. The “other” clinic category, which included such clinics as psychiatry and neurology, accounted for 9.0 percent of visits.

Visit characteristics

Referral status and prior visit status—[Table 3](#) shows data on OPD visits categorized by patient's referral status and prior-visit status. About 23 percent of OPD visits were referred by another physician. Eight out of ten OPD visits (81.2 percent) were made by patients who had been seen in the clinic on a previous occasion. Overall, 16.3 percent of visits were made by new patients. A significantly higher proportion of new patients were referred by another physician or health plan (41.3 percent) compared with old patients (19.3 percent).

Impact of managed care—In 1997, a series of new items was added to the Patient Record form to measure the impact of managed care on the health care delivery system. These items collected data on whether authorization was required for the visit, whether the visit was made to the patient's primary care physician, whether the patient belonged to an HMO, and whether the visit was capitated.

[Tables 4](#) and [5](#) show data for these new items. At 15.3 percent of visits, authorization was required for care. About one-third of the visits (35.1 percent) were to the patient's primary care physician. Only 11.0 percent of the visits were capitated. As shown in [table 5](#), 20.1 percent of all visits were made by persons who belonged to an HMO.

Primary expected source of payment—The expected source of payment item was revised for the 1997–98 NHAMCS Patient Record form. The new item is concerned only with the primary expected source of payment for the visit. In previous years, hospital staff were asked to report all

Table 1. Number, percent distribution, and annual rate of outpatient department visits with corresponding standard errors by selected patient and hospital characteristics: United States, 1997

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 ^{1,2}	Standard error of rate
All visits	76,993	7,157	100.0	. . .	28.9	2.7
Patient characteristics						
Age:						
Under 15 years	18,240	2,499	23.7	2.3	30.6	4.2
15–24 years	8,753	790	11.4	0.6	23.8	2.2
25–44 years	20,677	2,056	26.9	1.3	24.8	2.5
45–64 years	17,682	1,955	23.0	1.2	32.2	3.6
65–74 years	6,677	863	8.7	0.7	37.0	4.8
75 years and over	4,963	738	6.4	0.7	35.5	5.3
Sex and age:						
Female	46,112	4,180	59.9	0.9	33.8	3.1
Under 15 years	8,681	1,174	11.3	1.1	29.8	4.0
15–24 years	6,142	541	8.0	0.6	33.8	3.0
25–44 years	13,545	1,319	17.6	0.8	32.0	3.1
45–64 years	10,457	1,190	13.6	0.8	36.9	4.2
65–74 years	3,982	493	5.2	0.4	40.0	5.0
75 years and over	3,305	529	4.3	0.5	38.4	6.1
Male	30,880	3,097	40.1	0.9	23.7	2.4
Under 15 years	9,559	1,366	12.4	1.3	31.3	4.5
15–24 years	2,611	337	3.4	0.3	14.1	1.8
25–44 years	7,133	826	9.3	0.6	17.4	2.0
45–64 years	7,225	812	9.4	0.6	27.2	3.1
65–74 years	2,695	413	3.5	0.4	33.2	5.1
75 years and over	1,657	241	2.2	0.2	30.8	4.5
Race and age:						
White	56,138	5,949	72.9	2.1	25.5	2.7
Under 15 years	12,593	1,816	16.4	1.6	26.9	3.9
15–24 years	6,239	659	8.1	0.5	21.3	2.3
25–44 years	15,371	1,772	20.0	1.2	22.5	2.6
45–64 years	12,704	1,487	16.5	0.8	27.1	3.2
65–74 years	5,259	747	6.8	0.6	33.0	4.7
75 years and over	3,973	624	5.2	0.6	31.5	4.9
Black	18,432	1,944	23.9	2.0	53.9	5.7
Under 15 years	5,033	949	6.5	1.1	52.5	9.9
15–24 years	2,233	257	2.9	0.3	40.3	4.6
25–44 years	4,734	538	6.1	0.6	44.3	5.0
45–64 years	4,380	781	5.7	0.9	76.3	13.6
65–74 years	1,195	173	1.6	0.2	74.6	10.8
75 years and over	857	183	1.1	0.2	80.9	17.3
Asian/Pacific Islander	2,277	327	3.0	0.4	22.4	3.2
American Indian/Eskimo/Aleuts	*146	51	*0.2	0.1	*6.2	2.2
Hospital characteristics						
Ownership:						
Voluntary	49,597	6,541	64.4	4.7	18.6	2.5
Government	13,341	2,915	17.3	3.7	5.0	1.1
Proprietary	14,054	2,648	18.3	3.4	5.3	1.0
Geographic region:						
Northeast	23,719	4,453	30.8	4.6	45.2	8.5
Midwest	22,976	3,816	29.8	4.2	35.0	5.8
South	21,793	3,887	28.3	4.2	22.9	4.1
West	8,505	1,332	11.0	1.8	16.0	2.5
Metropolitan status:						
MSA ³	70,214	6,672	91.2	3.3	33.0	3.1
Non-MSA ³	*6,778	2,685	*8.8	3.3	*12.5	5.0

. . . Category not applicable.

* Figure does not meet standard of reliability or precision.

¹Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July 1, 1997. Figures are consistent with an unpublished hard-copy national population estimates release package PPL-91 (U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1990–1997) and have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix.

²Regional and metropolitan area estimates have been provided by the Division of Health Interview Statistics (DHIS), NCHS, and are based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized population as of July 1, 1997. DHIS estimates may differ slightly from monthly postcensal estimates because of differences in the adjustment process.

³MSA is metropolitan statistical area.

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

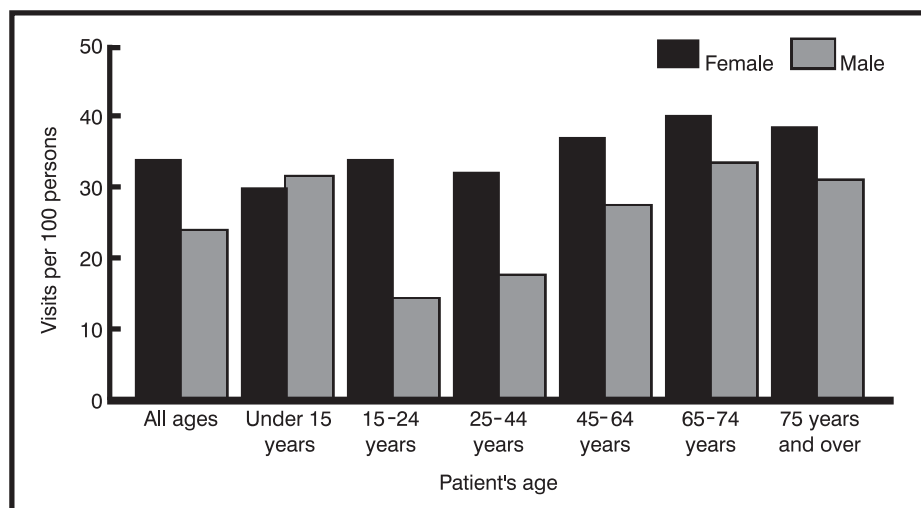


Figure 2. Annual rate of outpatient department visits by patient's age and sex: United States, 1997

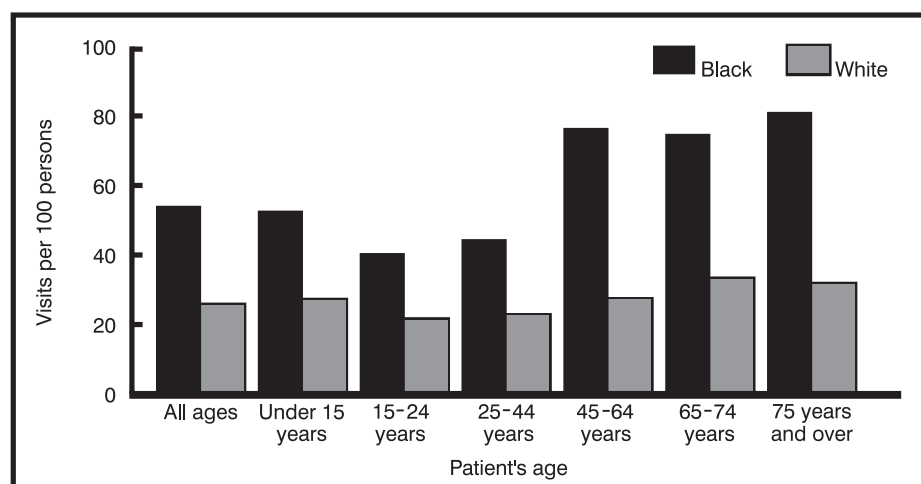


Figure 3. Annual rate of outpatient department visits by patient's age and race: United States, 1997

applicable sources. Data for this item are shown in [figure 4](#) and [table 5](#). Private insurance was cited most frequently (34.1 percent) followed by

Medicaid (27.8 percent) and Medicare (14.3 percent) ([figure 4](#)). The distribution of expected payment sources in 1997

Table 2. Number and percent distribution of outpatient department visits with corresponding standard errors by clinic type: United States, 1997

Clinic type ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
General medicine	42,168	4,876	54.8	3.1
Surgery	10,961	1,822	14.2	1.8
Pediatrics	10,865	1,575	14.1	1.7
Obstetrics and gynecology	6,086	942	7.9	1.2
Other	6,914	1,578	9.0	1.9

... Category not applicable.

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

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

did not differ significantly from corresponding 1996 figures.

Patient's principal reason for visit—As described earlier, up to three reasons for visit were coded and classified according to *A Reason for Visit Classification for Ambulatory Care (RVC)* (5). The principal reason for visit is the problem, complaint, or reason listed in item 13. The RVC is divided into eight modules or groups of reasons. These modules are displayed in [table 6](#). Reasons classified in the symptom module represented 41.2 percent of all OPD visits with symptoms referable to the respiratory system accounting for 8.3 percent. The diagnostic/screening and preventive module (19.5 percent) and the treatment module (19.4 percent) were also prominent.

The 20 most frequently mentioned principal reasons for visit, representing 43.6 percent of all visits, are shown in [table 7](#). Progress visit, classified in the treatment module and generally denoting routine followup of an unspecified problem, was the most frequently mentioned principal reason for visit (10.4 percent). This was followed by general medical examination (6.4 percent) and routine prenatal examination (4.1 percent). The most frequently mentioned reasons related to a symptomatic problem were cough (2.1 percent), throat symptoms (2.1 percent), and abdominal pain (1.5 percent). Fifteen of the top 20 reasons for OPD visits in 1997 were also listed among the most frequently mentioned reasons in 1996, albeit in a different order. It should be noted that estimates differing in ranked order may not be significantly different from each other.

Major reason for this visit—The intent of this new item on the 1997–98 NHAMCS Patient Record form was to provide a better picture of the general nature of the OPD visit—whether for an acute problem; routine chronic problem; flareup of a chronic problem; pre- or post-surgery visit or injury followup; or for nonillness care, including routine medical examinations. 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

Table 3. Number and percent distribution of outpatient department visits with corresponding standard errors by patient's referral status, according to prior-visit status: United States, 1997

Referral status	Total				Prior-visit status			
	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	New patient			
					Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...	12,529	1,152	100.0	...
Not referred by another physician or health plan for this visit	48,863	5,238	63.5	2.8	5,486	649	43.8	3.1
Referred by another physician or health plan for this visit	17,491	2,431	22.7	2.2	5,177	623	41.3	3.3
Unknown/blank	10,638	1,629	13.8	2.0	1,866	308	14.9	2.1
					Prior-visit status			
	Old patient				Blank			
	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	62,530	6,134	100.0	...	*1,934	593	100.0	...
Not referred by another physician or health plan for this visit	42,482	4,702	67.9	3.0	*895	493	*46.3	15.5
Referred by another physician or health plan for this visit	12,059	1,915	19.3	2.3	*256	79	*13.2	4.9
Unknown/blank	7,989	1,433	12.8	2.2	*783	291	*40.5	13.4

... Category not applicable.
 *Figure does not meet standard of reliability or precision.
 NOTE: Numbers may not add to totals because of rounding.

patient's perspective of the major reason that the patient sought care. Results from this item are displayed in [table 8](#). Acute problems were seen at 30.9 percent of visits. Among visits by children under age 15 years of age, 40.1 percent were for acute problems. About 33 percent of all visits were for a routine chronic problem. This percent rose to 51.3 percent for persons 75 years of age and over. Approximately 20 percent of visits were for nonillness care. Females and black persons had a significantly higher proportion of visits for nonillness care compared with males and white persons, respectively. The difference observed by sex reflects the fact that nonillness care includes prenatal examinations.

Injury-related visits—Data on injury-related visits are presented in [tables 9, 10, and 11](#). Visits were considered to be injury related if “yes” was checked in response to item 15 on the Patient Record form, if an injury reason for visit or injury diagnosis was recorded, or if a cause of injury was specified. Using the results from any one of those items alone would underestimate the number of injury-

related visits. Each of these items measures a unique aspect of injury. Using this definition, the number of injury-related visits was 25.0 percent greater compared with using the injury check box alone.

There were an estimated 7.1 million injury-related OPD visits in 1997, representing 9.2 percent of all OPD visits and yielding a rate of 2.6 visits per 100 persons. About half of the injury visits (53.4 percent) were made by males, and 33.5 percent were made by persons 25–44 years old. The injury visit rate for females (2.4 per 100 persons) was not significantly different from the rate for males (2.9 per 100 persons), and there were no differences noted between males and females by age. Males in the age groups 15–24 years and 25–44 years had an injury visit rate significantly higher than the rate for males 75 years of age and over. Among females, injury visit rates were not significantly different for any of the age groups. The injury visit rate for black persons (4.2 per 100 persons) was significantly higher than the rate for white persons (2.5 per 100 persons).

Item 15 on the Patient Record form was expanded in 1997–98 to capture data on the intentionality of the injury, in addition to preexisting subitems on place of occurrence and whether the injury was work related. About 71 percent of injury-related visits were unintentional ([table 10](#)). The work-related injury item had a nonresponse rate of 45.4 percent. Place of occurrence also had a high level of missing data (55.1 percent). Therefore, further statistics are not shown for this item. In 1997, the “other” and “unknown” categories for the place of occurrence item were combined due to a processing error. However, the summed percent of these responses was similar to the percent unknown in 1996 (57.1 percent).

[Table 11](#) shows OPD visits by the intent and mechanism of the first-listed external cause of injury codes (E-codes) as categorized by the ICD–9–CM groupings detailed in the [Technical notes](#). For example, the mechanism that caused the injury (i.e., contusion) may have been a baseball bat (struck by object), but the intent would be classified separately (e.g., intentional, unintentional, or undetermined intent)

depending on the motivation. About 70 percent of the injury-related visits were due to unintentional injuries. The reader should keep in mind that the results regarding intentionality of the injury, shown in table 11, will vary from those in table 10. In table 10, intentionality of the injury is based on responses to the checkbox item on the Patient Record form rather than on the ICD-9-CM groupings used in table 11. Discrepancies may arise in respondent interpretation of intent. For example, in some cases, hospital staff checked the "assault" category for dog-bite injuries. However, dog bites are classified as an unintentional injury in ICD-9-CM. Falls were cited most often as the cause of injury, accounting for 14.1 percent of all injury visits. Cause was not recorded for 21.5 percent of the injury visits.

Primary diagnosis—Item 16 of the Patient Record form asks the hospital staff to record the primary diagnosis or problem associated with the patient's most important reason for the current visit as well as any other significant current diagnoses. Displayed in table 12 are OPD visits by primary diagnosis using the major disease categories specified by the ICD-9-CM (6). The supplementary classification, used for diagnoses not classifiable to injury or illness (for example, general medical examination, routine prenatal examination, and health supervision of an infant or child) accounted for 20.0 percent of all OPD visits. Diseases of the respiratory system (10.3 percent) and mental disorders (8.5 percent) were prominent on the list.

A selection of the most frequently reported primary diagnoses for 1997 are featured in table 13. The categories shown in this table are based on the ICD-9-CM. The diagnosis groupings in table 13 accounted for 43.0 percent of all the OPD visits during the year. The four most frequent illness diagnoses were essential hypertension; diabetes mellitus; acute upper respiratory infections, excluding pharyngitis; and malignant neoplasms.

Diagnostic and screening services—For the 1997-98 NHAMCS Patient Record form, item 17 was expanded to include additional check boxes for examinations, tests and

Table 4. Number and percent distribution of outpatient department visits with corresponding standard errors by authorization required, primary care physician, and capitated visit: United States, 1997

Visit characteristic	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
Was authorization required for care?				
Yes	11,786	1,870	15.3	1.9
No	49,567	5,497	64.4	2.9
Unknown/blank	15,639	2,164	20.3	2.6
Are you the patient's primary care physician?				
Yes	27,037	3,880	35.1	3.4
No	42,108	4,731	54.7	3.5
Unknown/blank	7,848	1,236	10.2	1.6
Is this a capitated visit?				
Yes	8,474	1,770	11.0	1.9
No	40,250	4,774	52.3	3.2
Unknown/blank	28,268	3,181	36.7	3.4

... Category not applicable.

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

Table 5. Number and percent distribution of outpatient department visits with corresponding standard errors by primary expected source of payment and patient's health maintenance organization status: United States, 1997

Visit characteristic	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
Primary expected source of payment				
Private insurance	26,289	3,831	34.1	2.6
Medicaid	21,439	2,030	27.8	2.3
Medicare	11,026	1,379	14.3	1.1
Self-pay	7,245	797	9.4	1.0
No charge	*2,432	1,199	*3.2	1.5
Worker's compensation	945	226	1.2	0.3
Other	4,329	641	5.6	0.7
Unknown/blank	3,288	546	4.3	0.7
HMO status ¹				
Yes	15,492	2,221	20.1	1.9
No	43,963	4,583	57.1	2.3
Unknown/blank	17,537	2,305	22.8	2.6

... Category not applicable.

*Figure does not meet standard of reliability or precision.

¹HMO is health maintenance organization.

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

measurements, and imagings. More complete reporting was observed with this format compared with the open-ended response format used in previous years. For example, the estimate for Pap tests increased by 88 percent between 1996 (open response) and 1997 (check box).

The most frequently cited examinations at OPD visits were skin (5.9 percent), pelvic (5.1 percent), and

breast examinations (4.0 percent), respectively. Blood pressure (49.9 percent) and other blood tests (18.1 percent) were the leading tests. Imaging was most often in the form of an x ray and was mentioned at 7.5 percent of the visits. About one-quarter of the visits had no diagnostic or screening services ordered or provided (table 14).

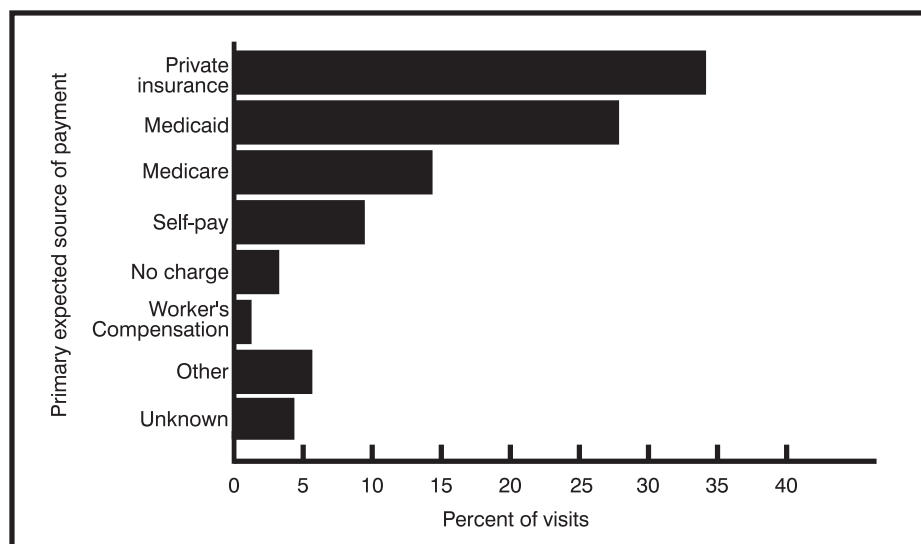


Figure 4. Percent of outpatient department visits by primary expected source of payment: United States, 1997

Therapeutic and preventive services—Data on therapeutic and preventive services ordered or provided at OPD visits (except for medication therapy, which was reported separately) were collected in item 18 of the Patient Record form. As shown in table 15, one or more of these services was recorded at 41.7 percent of all OPD visits during 1997. Counseling or education related to

diet (14.1 percent) and exercise (7.5 percent) were mentioned most frequently. Physiotherapy, psychotherapy, and psycho-pharmacotherapy accounted for 5.6 percent, 2.5 percent, and 1.6 percent of visits, respectively.

Procedures—In item 19, hospital staff were instructed to record up to two ambulatory surgical procedures performed at the visit. Item 17,

“Diagnostic and screening services” and item 18 “Therapeutic and preventive services,” both included two open-ended “other” categories in addition to the check-box categories. Analysis of the data from these categories and from the ambulatory surgery data reported in item 19 showed that the same procedure was often recorded in different places by different hospital staff. The data from question 19 and the open-ended responses to questions 17 and 18 were coded to volume 3 of the ICD-9-CM (6). Due to small sample sizes, only 3 of the 10 most frequently reported write-in procedures had estimates considered to be reliable. “Other nonoperative measurements and examinations,” “fetal monitoring, not otherwise specified,” and “other microscopic examination of specimen from lower gastrointestinal tract and of stool” were recorded for 2.9 million visits (3.7 percent), 387,000 visits (0.5 percent), and 245,000 visits (0.3 percent), respectively.

Medication therapy—Data on medication therapy are shown in tables 16–19. Medication therapy was the most commonly mentioned therapeutic service in 1997, reported at

Table 6. Number and percent distribution of outpatient department visits with corresponding standard errors by patient's principal reason for visit: United States, 1997

Principal reason for visit and RVC code ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
Symptom module S001–S999	31,735	3,359	41.2	1.6
General symptoms S001–S099	3,674	461	4.8	0.3
Symptoms referable to psychological/ mental disorders S100–S199	3,596	1,054	4.7	1.3
Symptoms referable to the nervous system (excluding sense organs) S200–S259	1,691	222	2.2	0.2
Symptoms referable to the cardiovascular/lymphatic system S260–S299	275	63	0.4	0.1
Symptoms referable to the eyes and ears S300–S399	2,667	395	3.5	0.4
Symptoms referable to the respiratory system S400–S499	6,418	864	8.3	0.8
Symptoms referable to the digestive system S500–S639	3,091	480	4.0	0.5
Symptoms referable to the genitourinary system S640–S829	2,635	384	3.4	0.4
Symptoms referable to the skin, hair, and nails S830–S899	2,146	282	2.8	0.2
Symptoms referable to the musculoskeletal system S900–S999	5,542	656	7.2	0.5
Disease module D001–D999	8,127	1,084	10.6	0.9
Diagnostic/screening and preventive module X100–X599	15,043	1,550	19.5	1.2
Treatment module T100–T899	14,951	1,834	19.4	1.6
Injuries and adverse effects module J001–J999	2,622	411	3.4	0.4
Test results module R100–R700	1,313	221	1.7	0.2
Administrative module A100–A140	634	123	0.8	0.1
Other ² U990–U999	*2,568	789	*3.3	1.0

... Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Based on *A Reason for Visit Classification for Ambulatory Care (RVC)* (5).

²Includes problems and complaints not elsewhere classified, entries of “none,” blanks, and illegible entries.

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 the 20 principal reasons for visit most frequently mentioned by patient: United States, 1997

Principal reason for visit and RVC code ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
Progress visit T800	7,976	1,346	10.4	1.6
General medical examination X100	4,934	682	6.4	0.6
Routine prenatal examination X205	3,119	500	4.1	0.6
Cough S440	1,648	221	2.1	0.2
Throat symptoms S455	1,630	258	2.1	0.3
Well-baby examination X105	1,620	259	2.1	0.3
Postoperative visit T205	1,353	245	1.8	0.2
Stomach and abdominal pain, cramps, and spasms S545	1,179	150	1.5	0.1
Diabetes mellitus D205	*1,103	351	*1.4	0.4
Earache or ear infection S355	1,092	197	1.4	0.2
Fever S010	994	191	1.3	0.2
Depression S110	*980	352	*1.3	0.4
Counseling, not otherwise stated T605	919	144	1.2	0.2
Skin rash S860	905	150	1.2	0.2
Medication, other and unspecified T115	904	138	1.2	0.1
Prophylactic inoculations X400	813	192	1.1	0.2
Hypertension D510	808	203	1.0	0.2
Headache D210	627	83	0.8	0.1
Eye examination X230	*497	203	*0.6	0.3
Asthma D625	443	88	0.6	0.1
All other reasons	43,449	4,437	56.4	1.6

... Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Based on *A Reason for Visit Classification for Ambulatory Care (RVC) (5)*.

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

46.8 million OPD visits or 60.8 percent of the total (table 16). Visits with one or more drugs listed on the Patient Record form are termed “drug visits” in NHAMCS. Up to six medications, called drug mentions, were coded per drug visit. As used in NHAMCS, the term “drug” is interchangeable with the term “medication;” the term “prescribing” is used both broadly to mean ordering and providing any medication, whether prescription or over the counter.

Drug mentions are displayed by therapeutic class in table 17. This classification is based on the therapeutic categories used in the *National Drug Code Directory*, 1995 edition (NDC) (7). It should be noted that some drugs have more than one therapeutic application. In these cases, the drug was classified under its primary therapeutic use. There were 109.1 million drugs mentioned at OPD visits during 1997. This yields an average of 1.4 drug mentions per OPD visit or 2.3 drug mentions per drug visit. Cardiovascular-renal drugs (12.8 percent), drugs used for relief of pain (12.5 percent), and antimicrobial

agents (11.8 percent) were listed most frequently.

The 20 most frequently used generic substances for 1997 are shown in table 18. 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. Acetaminophen and amoxicillin were the two generic substances most frequently used in drugs ordered or provided by hospital staff at OPD visits in 1997, occurring at 4.1 percent and 2.8 percent of drug mentions, respectively.

Table 19 presents the 20 medications most frequently mentioned by hospital staff in NHAMCS according to the entry name of drug. Entry name refers to the actual designation used by the hospital staff on the Patient Record form and may be a trade name, generic name, or simply a desired therapeutic effect. Tylenol accounted for 2.3 million mentions (2.1 percent of the total) and was followed by amoxicillin, Lasix, Motrin, and prenatal vitamins. The top

10 drug entry names mentioned in 1997 were the same as those reported in 1996 with the exception of prenatal vitamins and albuterol sulfate.

Providers seen—A staff physician and resident/intern were seen at 66.6 percent and 19.5 percent of OPD visits, respectively (table 20). A registered nurse, medical assistant, and licensed practical nurse were seen at 40.7 percent, 17.3 percent, and 10.9 percent of visits, respectively. At 14.2 million OPD visits (18.4 percent), a physician was not seen and patients received care from other health care providers.

Time spent with physician—This new item on the 1997–98 NHAMCS OPD Patient Record form refers to the amount of time spent in face-to-face contact between the physician and patient. This time is estimated and recorded by the hospital staff and does not include time spent waiting to see the physician, time spent receiving care from someone other than the physician without the presence of the physician, or time spent by the physician in reviewing patient records and/or test results. In

Table 8. Number and percent distribution of outpatient department visits by major reason for visit with corresponding standard errors according to patient's age, sex, and race: United States, 1997

Patient characteristic	Total	Major reason for this visit					
		Acute problem	Chronic problem, routine	Chronic problem, flareup	Pre- or post-surgery/injury followup	Nonillness care	Blank/unknown
Number visits in thousands							
All visits	76,993	23,785	25,541	5,096	5,170	15,496	1,905
Age							
Under 15 years	18,240	7,314	3,973	702	1,153	4,751	348
15–24 years	8,753	2,936	1,439	340	556	3,303	179
25–44 years	20,677	6,583	6,539	1,486	1,378	4,161	530
45–64 years	17,682	4,353	7,790	1,671	1,361	2,028	*479
65–74 years	6,677	1,418	3,255	516	441	863	*184
75 years and over	4,963	1,180	2,545	382	280	390	*186
Sex							
Female	46,112	13,784	14,639	2,795	2,613	11,184	1,098
Male	30,880	10,001	10,903	2,301	2,558	4,312	806
Race							
White	56,138	19,070	18,121	3,799	3,897	9,832	1,419
Black	18,432	4,069	6,656	1,147	1,154	4,991	416
Other	2,423	646	764	150	120	674	*70
Standard error in thousands							
All visits	7,157	2,712	2,950	634	728	1,496	420
Age							
Under 15 years	2,499	1,106	935	119	291	659	76
15–24 years	790	447	201	63	128	368	44
25–44 years	2,056	849	811	221	241	513	132
45–64 years	1,955	470	1,195	240	225	286	145
65–74 years	863	193	499	92	94	203	63
75 years and over	738	171	485	81	56	82	75
Sex							
Female	4,180	1,533	1,771	357	385	1,124	222
Male	3,097	1,227	1,263	304	393	497	228
Race							
White	5,949	2,418	2,280	543	636	1,113	362
Black	1,944	555	1,122	182	148	569	85
Other	337	126	130	44	28	108	23
Percent distribution							
All visits	100	30.9	33.2	6.6	6.7	20.1	2.5
Age							
Under 15 years	100	40.1	21.8	3.8	6.3	26.0	1.9
15–24 years	100	33.5	16.4	3.9	6.4	37.7	2.0
25–44 years	100	31.8	31.6	7.2	6.7	20.1	2.6
45–64 years	100	24.6	44.1	9.4	7.7	11.5	*2.7
65–74 years	100	21.2	48.7	7.7	6.6	12.9	*2.8
75 years and over	100	23.8	51.3	7.7	5.6	7.9	*3.7
Sex							
Female	100	29.9	31.7	6.1	5.7	24.3	2.4
Male	100	32.4	35.3	7.5	8.3	14.0	2.6
Race							
White	100	34.0	32.3	6.8	6.9	17.5	2.5
Black	100	22.1	36.1	6.2	6.3	27.1	2.3
Other	100	26.7	31.5	6.2	5.0	27.8	*2.9

See footnotes at end of table.

Table 8. Number and percent distribution of outpatient department visits by major reason for visit with corresponding standard errors according to patient's age, sex, and race: United States, 1997—Con.

Patient characteristic	Total	Major reason for this visit					
		Acute problem	Chronic problem, routine	Chronic problem, flareup	Pre- or post-surgery/injury followup	Nonillness care	Blank/unknown
		Standard error of percent					
All visits	1.9	1.8	0.5	0.7	1.4	0.5
Age							
Under 15 years	3.5	3.3	0.4	1.0	2.6	0.4
15–24 years	3.4	1.9	0.6	1.3	3.2	0.5
25–44 years	2.5	2.1	0.7	1.0	1.7	0.6
45–64 years	2.0	3.2	1.0	1.0	1.3	0.8
65–74 years	2.1	2.7	1.0	1.0	2.5	0.9
75 years and over	2.6	3.4	1.4	1.0	1.3	1.4
Sex							
Female	2.0	1.9	0.5	0.6	1.7	0.5
Male	2.1	2.0	0.6	0.9	1.1	0.7
Race							
White	2.3	1.8	0.6	0.8	1.3	0.6
Black	2.2	3.3	0.9	0.7	2.5	0.4
Other	3.0	2.9	1.4	1.2	2.8	0.9

... Category not applicable.
 *Figure does not meet standard of reliability or precision.
 NOTE: Number may not add to totals because of rounding.

cases where the patient received care from a nonphysician member of the hospital staff but did not actually see the physician during the visit, duration was to be recorded as “0” minutes.

About 41 percent of OPD visits had durations of 15 minutes or less in 1997, while 39.3 percent lasted over 15 minutes (table 21). In the remaining 20 percent of visits, there was no face-to-face contact between patient and physician. The mean duration was 21.7 minutes. Missing data for this item were imputed. For 27.7 percent of visits, duration was unknown.

Additional reports that utilize 1997 NHAMCS data are in the *Advance Data* from Vital and Health Statistics series. Data from the 1997 NHAMCS will be available in a variety of formats including public use data tape, CD-ROM, and as downloadable data files accessed through the new Ambulatory Health Care home page on the Internet (www.cdc.gov/nchswww/about/major/ahcd/ahcd1.htm). The data are currently available. For the first time, verbatim text that describes the cause of injury may be analyzed. Questions regarding this report, future reports, or the NHAMCS may be directed to the

Ambulatory Care Statistics Branch at (301) 436–7132.

References

- Schappert SM. Ambulatory care visits to physician offices, hospital outpatient departments, and emergency departments: United States, 1997. National Center for Health Statistics. Vital Health Stat 13. To be published.
- Nourjah P. National Hospital Ambulatory Medical Care Survey: 1997 emergency department summary. Advance data from vital and health statistics; no. 304. Hyattsville, Maryland: National Center for Health Statistics. 1999.
- Woodwell DA. National Ambulatory Medical Care Survey: 1997 summary. Advance data from vital and health statistics; no. 305. Hyattsville, Maryland: National Center for Health Statistics. 1999.
- 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.
- Schneider D, Appleton L, McLemore T. A reason for visit classification for ambulatory care. National Center for Health Statistics. Vital and Health Stat 2(78). 1979.
- Public Health Service and Health Care Financing Administration. International Classification of Diseases, 9th Revision, Clinical Modification, 4th ed. Washington: Public Health Service. 1991.
- 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.
- Shah BV, Barnwell BG, Hunt PN, La Vange LM. SUDAAN user's manual release 5.50. Research Triangle Park, North Carolina: Research Triangle Institute. 1991.

Table 9. Number, percent distribution, and annual rate of injury-related outpatient department visits with corresponding standard errors by patient's age and sex: United States, 1997

Patient's age and sex	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year ¹	Standard error of rate
All injury-related visits	7,054	820	100.0	...	2.6	0.3
Age						
Under 15 years	1,548	246	21.9	2.4	2.6	0.4
15-24 years	1,105	176	15.7	1.3	3.0	0.5
25-44 years	2,365	318	33.5	1.8	2.8	0.4
45-64 years	1,430	191	20.3	1.6	2.6	0.4
65-74 years	344	59	4.9	0.8	1.9	0.3
75 years and over	262	44	3.7	0.6	1.9	0.3
Sex and age						
Female	3,284	372	46.6	1.6	2.4	0.3
Under 15 years	729	128	22.2	2.7	2.5	0.4
15-24 years	448	78	13.7	1.6	2.5	0.4
25-44 years	1,025	149	31.2	2.5	2.4	0.4
45-64 years	691	94	21.0	1.9	2.4	0.3
65-74 years	192	35	5.8	1.1	1.9	0.4
75 years and over	199	39	6.1	1.1	2.3	0.5
Male	3,771	478	53.4	1.6	2.9	0.4
Under 15 years	819	134	21.7	2.7	2.7	0.4
15-24 years	656	129	17.4	2.0	3.5	0.7
25-44 years	1,340	183	35.5	1.9	3.3	0.5
45-64 years	740	117	19.6	2.0	2.8	0.4
65-74 years	152	45	4.0	1.1	1.9	0.6
75 years and over	64	19	1.7	0.5	1.2	0.4
Race						
White	5,437	714	77.1	2.4	2.5	0.3
Black	1,448	192	20.5	2.3	4.2	0.6
Other	169	37	2.4	0.5	1.4	0.3

... Category not applicable.

¹Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July 1, 1997. Figures are consistent with an unpublished hard-copy national population estimates release package PPL-91 (U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1990-1997) and have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix.

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

Table 10. Number and percent distribution of injury-related outpatient department visits with corresponding standard errors by selected characteristics of the injury: United States, 1997

Selected characteristics of the injury	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All injury-related visits	7,054	820	100.0	...
Intentionality				
Yes (self-inflicted)	*	...	*	...
Yes (assault)	189	43	2.7	0.6
No, unintentional	5,039	626	71.4	2.2
Unknown/blank	1,808	247	25.6	2.0
Work-related				
Yes	1,003	186	14.2	1.9
No	2,855	405	40.5	2.2
Unknown/blank	3,197	369	45.3	2.8

... Category not applicable.

*Figure does not meet standard of reliability or precision.

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

Table 11. Number and percent distribution of injury-related outpatient department visits with corresponding standard errors by intent and mechanism of external cause: United States, 1997

Intent and mechanism ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All injury-related visits	7,054	820	100.0	. . .
Unintentional injuries	4,952	611	70.3	2.3
Falls	991	136	14.1	1.3
Striking against or struck accidentally by objects or persons	627	135	8.9	1.8
Overexertion and strenuous movements	496	99	7.0	1.5
Motor vehicle traffic	450	76	6.4	0.8
Cutting or piercing instruments or objects	332	74	4.7	0.8
Natural and environmental factors	205	46	2.9	0.6
Other and not elsewhere classified	824	117	11.7	1.0
Mechanism unspecified	1,027	161	14.6	1.9
Intentional injuries	186	43	2.6	0.6
Injuries of undetermined intent	*42	14	*0.6	0.2
Adverse effects of medical treatment	359	62	5.1	0.8
Blank cause ²	1,515	231	21.5	2.0

. . . Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*, Supplementary Classification of External Causes of Injury and Poisoning (6). A detailed description of the E-codes from the ICD-9-CM that were used to create the groupings in this table is provided in the [Technical notes](#).

²Includes illegible entries and blanks.

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: United States, 1997

Major disease category and ICD-9-CM code range ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	. . .
Infectious and parasitic diseases 001-139	3,050	481	4.0	0.5
Neoplasms 140-239	2,947	750	3.8	0.9
Endocrine, nutritional and metabolic diseases, and immunity disorders 240-279	4,536	779	5.9	0.8
Mental disorders 290-319	6,533	1,500	8.5	1.8
Diseases of the nervous system and sense organs 320-389	4,842	667	6.3	0.6
Diseases of the circulatory system 390-459	5,058	905	6.6	0.9
Diseases of the respiratory system 460-519	7,896	1,009	10.3	0.9
Diseases of the digestive system 520-579	3,045	605	4.0	0.6
Diseases of the genitourinary system 580-629	3,469	509	4.5	0.5
Diseases of the skin and subcutaneous tissue 680-709	2,515	507	3.3	0.6
Diseases of the musculoskeletal system and connective tissue 710-739	4,952	716	6.4	0.7
Symptoms, signs, and ill-defined conditions 780-799	4,465	522	5.8	0.4
Injury and poisoning 800-999	4,526	581	5.9	0.6
Supplementary classification V01-V82	15,408	1,386	20.0	1.1
All other diagnoses ²	2,952	365	3.8	0.4
Unknown/ ³	797	97	1.0	0.1

. . . Category not applicable.

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)* (6).

²Includes diseases of the blood and blood-forming organs (280-289); complications of pregnancy, childbirth, and the puerperium (630-676); congenital anomalies (740-759); and certain conditions originating in the perinatal period (760-779).

³Includes blanks, uncodable diagnoses, and illegible diagnoses.

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

Table 13. Number and percent distribution of outpatient department visits with corresponding standard errors by selected primary diagnosis groups: United States, 1997

Primary diagnosis group and ICD-9-CM code(s) ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	. . .
Routine infant or child health check V20.2	3,303	505	4.3	0.6
Normal pregnancy V22	3,153	475	4.1	0.6
Essential hypertension 401	3,071	669	4.0	0.7
Diabetes mellitus 250	2,799	565	3.6	0.6
Acute upper respiratory infections, excluding pharyngitis 460-461,463-466	2,447	380	3.2	0.4
Malignant neoplasms 140-208,230-234	2,244	673	2.9	0.8
Arthropathies and related disorders 710-719	2,007	347	2.6	0.4
Otitis media and eustachian tube disorders 381-382	1,802	308	2.3	0.3
Dorsopathies 720-724	1,250	239	1.6	0.3
Drug dependence and nondependent abuse of drugs 304-305	*1,227	538	*1.6	0.7
General medical examination V70	1,162	189	1.5	0.2
Asthma 493	1,097	163	1.4	0.2
Potential health hazards related to personal and family history V10-V19	1,063	158	1.4	0.2
Chronic sinusitis 473	1,013	191	1.3	0.2
Acute pharyngitis 462	971	179	1.3	0.2
Complications of pregnancy, childbirth, and the puerperium 630-677	951	161	1.2	0.2
Rheumatism, excluding back 725-729	906	104	1.2	0.1
Psychoses, excluding major depressive disorder 290-296.1,296.4-299	901	227	1.2	0.3
Major depressive disorder 296.2-296.3	*866	273	*1.1	0.4
Artificial opening and other post-surgical states V44-V45	*856	288	*1.1	0.3
All other diagnoses	43,906	4,291	57.0	1.4

. . . Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (6). 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 14. Number and percent of outpatient department visits with corresponding standard errors by diagnostic and screening services most frequently ordered or provided: United States, 1997

Diagnostic and screening services ordered or provided	Number of visits in thousands ¹	Standard error in thousands	Percent of visits	Standard error of percent
All visits	76,993	7,157	...	...
None	22,016	2,620	28.6	1.9
Examinations				
Skin	4,577	687	5.9	0.7
Pelvic	3,896	543	5.1	0.6
Breast	3,052	404	4.0	0.5
Visual	2,844	483	3.7	0.6
Rectal	1,581	219	2.1	0.3
Hearing	1,035	166	1.3	0.2
Glaucoma	*791	307	*1.0	0.4
Tests				
Blood pressure	38,413	3,822	49.9	2.2
Urinalysis	7,136	800	9.3	0.7
Hematocrit/hemoglobin	4,365	807	5.7	0.8
Pap test	2,271	297	2.9	0.3
Cholesterol	1,998	399	2.6	0.4
EKG ²	1,889	327	2.5	0.4
Strep test	1,117	188	1.5	0.2
HIV serology ³	*773	287	*1.0	0.4
Pregnancy test	644	97	0.8	0.1
Blood lead level	590	99	0.8	0.1
PSA ⁴	299	77	0.4	0.1
Other STD test ⁵	686	118	0.9	0.2
Other blood test	13,974	1,755	18.1	1.4
Imaging				
X ray	5,807	754	7.5	0.7
Ultrasound	1,894	253	2.5	0.2
CAT scan/MRI ^{6,7}	1,309	275	1.7	0.3
Mammography	1,298	274	1.7	0.3
Other	8,545	1,113	11.1	1.1

... Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Total exceeds total number of visits because more than one service may be reported per visit.

²EKG is electrocardiogram.

³HIV is human immunodeficiency virus.

⁴PSA is prostate-specific antigen.

⁵STD is sexually transmitted diseases.

⁶CAT is computerized axial tomography.

⁷MRI is magnetic resonance imaging.

Table 15. Number and percent of outpatient department visits with corresponding standard errors by therapeutic and preventive services ordered or provided: United States, 1997

Therapeutic and preventive services ordered or provided	Number of visits in thousands ¹	Standard error in thousands	Percent of visits	Standard error of percent
All visits	76,993	7,157	...	...
None	44,891	4,708	58.3	2.0
Counseling/education				
Diet/nutrition	10,886	1,340	14.1	1.3
Exercise	5,774	830	7.5	0.9
Growth/development	2,522	402	3.3	0.5
Mental health	2,343	327	3.0	0.4
Prenatal instructions	2,342	382	3.0	0.5
Injury prevention	2,231	528	2.9	0.7
Tobacco use/exposure	1,911	277	2.5	0.3
Stress management	1,867	361	2.4	0.5
Family planning/contraception	1,538	276	2.0	0.4
HIV/STD transmission ^{2,3}	1,252	218	1.6	0.3
Breast self-exam	1,085	226	1.4	0.3
Skin cancer prevention	251	70	0.3	0.1
Other therapy				
Physiotherapy	4,342	1,187	5.6	1.4
Psychotherapy	1,929	399	2.5	0.4
Psychopharmacotherapy	*1,228	436	1.6	0.6
Other	8,935	1,125	11.6	1.1

... Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Total exceeds total number of visits because more than one service may be reported per visit.

²HIV is human immunodeficiency virus.

³STD is sexually transmitted diseases.

Table 16. Number and percent distribution of outpatient department visits with corresponding standard errors by medication therapy and number of medications provided or prescribed: United States, 1997

Medication therapy ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
Drug visits ²	46,786	4,759	60.8	2.2
Visits without mention of medication	30,206	3,184	39.2	2.2
Number of medications provided or prescribed				
All visits	76,993	7,157	100.0	...
0	30,206	3,184	39.2	2.2
1	19,219	1,862	25.0	1.0
2	11,471	1,182	14.9	0.7
3	6,786	781	8.8	0.5
4	3,593	456	4.7	0.4
5	2,087	314	2.7	0.3
6	3,629	630	4.7	0.6

... Category not applicable.

¹Includes prescription drugs, over-the-counter preparations, immunizing agents, and desensitizing agents.

²Visits at which one or more drugs were provided or prescribed.

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

Table 17. Number, percent distribution, and annual rate of drug mentions at outpatient department visits with corresponding standard errors by therapeutic classification: United States, 1997

Therapeutic classification ¹	Number of drugs mentions in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of drug mentions per 100 visits ²	Standard error of rate
All drug mentions	109,105	12,362	100.0	. . .	141.7	16.1
Cardiovascular-renal drugs	13,960	2,685	12.8	1.5	18.1	3.5
Drugs used for relief of pain	13,607	1,713	12.5	0.7	17.7	2.2
Antimicrobial agents	12,826	1,721	11.8	1.1	16.7	2.2
Respiratory tract drugs	10,996	1,544	10.1	0.9	14.3	2.0
Hormones and agents affecting hormonal mechanisms	10,694	1,680	9.8	0.7	13.9	2.2
Central nervous system	9,353	1,242	8.6	0.8	12.2	1.6
Metabolic and nutrient agents	7,448	1,280	6.8	0.8	9.7	1.7
Immunologic agents	6,964	903	6.4	0.6	9.0	1.2
Gastrointestinal agents	4,902	754	4.5	0.4	6.4	1.0
Skin/mucous membranes	4,436	506	4.1	0.3	5.8	0.7
Neurologic drugs	2,947	341	2.7	0.2	3.8	0.4
Hematologic agents	2,257	341	2.1	0.2	2.9	0.4
Ophthalmic drugs	1,987	512	1.8	0.5	2.6	0.7
Oncolytic agents	*1,229	380	*1.1	0.3	*1.6	0.5
Other and unclassified ³	5,501	669	5.0	0.5	7.1	0.9

. . . Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Based on the standard drug classification used in the *National Drug Code Directory*, 1995 edition (NDC) (13).

²Number of drug mentions divided by total number of visits multiplied by 100.

³Includes anesthetics, antidotes, contrast media/radiopharmaceuticals, otologics, antiparasitics, unclassified/miscellaneous drugs, and homeopathic products.

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

Table 18. Number of generic substances and percent of all drug mentions for the 20 most frequently occurring generic substances in drug mentions at outpatient department visits with corresponding standard errors: United States, 1997

Generic substance	Number of occurrences in thousands ¹	Standard error in thousands	Percent of drug mentions ²	Standard error of percent
All generic substances	139,879	15,135	. . .	. . .
Acetaminophen	4,478	525	4.1	0.3
Amoxicillin	3,038	473	2.8	0.3
Ibuprofen	2,539	407	2.3	0.2
Albuterol	2,370	288	2.2	0.2
Insulin	1,953	471	1.8	0.4
Aspirin	1,898	413	1.7	0.3
Vitamin A	1,665	313	1.5	0.3
Pyridoxine	1,660	298	1.5	0.3
Hydrochlorothiazide	1,638	370	1.5	0.2
Ergocalciferol	1,616	301	1.5	0.3
Riboflavin	1,580	291	1.4	0.3
Thiamine	1,572	287	1.4	0.3
Guafenesin	1,494	320	1.4	0.3
Furosemide	1,477	319	1.4	0.2
Estrogens	1,462	341	1.3	0.2
Trimethoprim	1,450	262	1.3	0.2
Sulfamethoxazole	1,403	248	1.3	0.2
Influenza virus vaccine	1,287	285	1.2	0.3
Prednisone	1,265	216	1.2	0.1
Multivitamins, general	1,231	270	1.1	0.2

. . . Category not applicable.

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

²Based on an estimated 109,105,000 drug mentions at outpatient department visits in 1997.

Table 19. 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, 1997

Entry name of drug ¹	Number of drug mentions in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Therapeutic classification ²
All drug mentions	109,105	12,362	100.0	. . .	. . .
Tylenol	2,308	330	2.1	0.2	Analgesics, nonnarcotic
Amoxicillin	1,650	273	1.5	0.2	Penicillins
Lasix	1,356	308	1.2	0.2	Diuretics
Motrin	1,285	249	1.2	0.2	Nonsteroidal anti-inflammatory drugs (NSAID)
Prenatal vitamins	1,282	265	1.2	0.3	Vitamins, minerals
Prednisone	1,237	213	1.1	0.1	Adrenal corticosteroids
Albuterol sulfate	1,160	157	1.1	0.1	Antiasthmatics/bronchodilators
Hepatitis B vaccine	1,121	161	1.0	0.1	Vaccines and antisera
Insulin	1,070	316	1.0	0.2	Blood glucose regulators
Synthroid	1,060	240	1.0	0.1	Agents used to treat thyroid disease
Bactrim	*1,043	197	*1.0	0.2	Sulfamethoxazole and trimethoprim
ASA ³	1,031	336	0.9	0.3	Analgesics, nonnarcotic
Premarin	1,026	252	0.9	0.2	Estrogens and progestins
Amoxil	906	203	0.8	0.1	Penicillins
Poliomyelitis vaccine	895	152	0.8	0.1	Vaccines and antisera
HCTZ ⁴	*875	309	*0.8	0.2	Diuretics
Zantac	824	142	0.8	0.1	Acid/peptic disorders
Claritin	820	200	0.8	0.2	Antihistamines
Versed	*818	317	*0.7	0.3	Sedatives and hypnotics
Influenza vaccine	*768	259	*0.7	0.2	Vaccines and antisera
All other mentions	86,568	9,652	79.3	0.8	. . .

. . . Category not applicable.

*Figure does not meet standard of reliability or precision.

¹The 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.

²Therapeutic classification is based on the *National Drug Code Directory*, 1995 Edition (8). In cases where a drug had more than one therapeutic use, it was classified under its primary therapeutic use.

³ASA is acetylsalicylic acid.

⁴HCTZ is hydrochlorothiazide.

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

Table 20. Number and percent of outpatient department visits with corresponding standard errors by providers seen: United States, 1997

Type of provider	Number of visits in thousands ¹	Standard error in thousands	Percent of visits	Standard error of percent
All visits	76,993	7,157	. . .	. . .
Staff physician	51,300	5,284	66.6	2.6
R.N. ²	31,303	3,163	40.7	3.3
Resident/intern	14,982	2,422	19.5	2.6
Medical/nursing assistant	13,351	3,033	17.3	3.0
L.P.N. ³	8,391	1,675	10.9	1.9
Nurse practitioner	3,475	692	4.5	0.9
Other physician	3,005	595	3.9	0.7
Physician assistant	1,629	296	2.1	0.4
Nurse midwife	*553	200	*0.7	0.2
Other	12,366	2,150	16.1	2.4

. . . Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Total exceeds total number of visits because more than one provider may be reported per visit.

²R.N. is registered nurse.

³L.P.N. is licensed practical nurse.

Table 21. Number and percent distribution of outpatient department visits with corresponding standard errors by time spent with physician: United States, 1997

Time spent with physician	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	76,993	7,157	100.0	...
0 minutes ¹	15,281	2,097	19.8	2.0
1–5 minutes	*2,389	734	*3.1	0.9
6–10 minutes	7,289	943	9.5	0.9
11–15 minutes	21,750	2,263	28.2	1.4
16–30 minutes	23,316	2,596	30.3	1.7
31–60 minutes	6,098	726	7.9	0.7
61 minutes and over	869	193	1.1	0.2

... Category not applicable.

*Figure does not meet standard of reliability or precision.

¹Visits in which there was no face-to-face contact between patient and physician.

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

Technical notes

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 also reflects part of the measurement error, but does not measure any systematic biases in the data. The chances are 95 out of 100 that an estimate from the sample differs from the value that would be obtained from a complete census by less than twice the standard error.

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 (9). Generalized linear models for predicting the relative standard error were not used for OPD data because of lack of fit of the linear models. 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 percent of the estimate.

The reader is cautioned about using generalized linear models for predicting the relative standard error. However, approximate relative standard errors for aggregate estimates may be calculated using the following general formula, where x is the aggregate of interest in thousands, and A and B are the appropriate coefficients from table I.

$$RSE(x) = \sqrt{\frac{B}{A+x}} \cdot 100$$

Similarly, relative standard errors for percents may be calculated using the following general formula, where p is the percent of interest, expressed as a proportion, and x is the denominator of the percent in thousands, using the appropriate coefficient from table I.

$$RSE(x) = \sqrt{\frac{B \cdot (1-p)}{p \cdot x}} \cdot 100$$

The standard error for a rate may be obtained by multiplying the relative

Table I. Coefficients appropriate for determining approximate relative standard errors by type of estimate: National Hospital Ambulatory Medical Care Survey, 1997: Outpatient Departments

Type of estimate	Coefficient for use with estimates in thousands		Lowest reliable estimate in thousands
	A	B	
Visits	0.015899	6.595	89
Drug mentions	0.018038	18.332	255

NOTE: Estimates based on less than 30 cases are unreliable regardless of the relative standard error.

standard error 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. The Central Limit 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 if the relative standard error of the estimate exceeds 30 percent.

Estimation

Statistics from NHAMCS are derived by a multistage estimation procedure that produces essentially unbiased estimates. The estimation procedure has three basic components: (a) inflation by reciprocals of the sampling selection probabilities, (b) adjustment for nonresponse, and (c) a population weighting ratio adjustment. Beginning with 1997, the population weighting ratio adjustment 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 that are rotated into the sample over 16 periods of 4 weeks each so that only 13 panels are used in any one year.) Also, beginning with 1997 data, the sampling weights of some

OPD's were permanently trimmed to prevent single OPD's from contributing more than 15 percent of their region's total to OPD visit estimates.

NHAMCS data were adjusted to account for nonresponse at the hospital level and at the ED and clinic level. The weights of visits from hospitals similar to the nonrespondent hospitals were inflated to account for visits represented by nonrespondents. Hospitals were judged to be similar if they were in the same region and ownership control group, and had the same metropolitan statistical area status (in a metropolitan statistical area versus not in a metropolitan statistical area). The weights of visits from responding ED's and OPD clinics were inflated to account for visits to similar nonrespondent ED's/clinics where ED's/clinics were judged to be similar if they were in the same region and ED/clinic group. For this purpose, there were six OPD clinic groups: (a) general medicine, (b) pediatrics, (c) surgery, (d) OB/GYN, (e) alcohol and/or substance abuse, and (f) other OPD clinic.

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 0.0 to 1.3 percent for various data items.

Adjustments for item nonresponse—Weighted item nonresponse rates were 5.0 percent or less for all data items with the following exceptions: pregnancy status of patient (27.2 percent), race (12.0 percent), ethnicity (22.8 percent), referral status (13.8 percent), authorization required for care (20.3 percent), patient’s primary care physician (10.2 percent), HMO status of patient (22.8 percent), capitated visit (36.7 percent), place of occurrence of injury (55.1 percent), intentionality of injury (25.6 percent), work-related status of injury (45.3 percent), and time spent with physician (27.7 percent). Some missing data items were imputed by randomly assigning a value from a Patient Record form with similar characteristics. Imputations were based on geographic region, OPD size by clinic type, and primary diagnosis using 3-digit ICD-9-CM codes. Imputations were performed for the following variables—visit date, birth year, sex, race, and time spent with physician. This represents a change from previous survey years when imputations were also performed for the following variables—ethnicity, providers seen, patient seen before, patient seen before for current principal diagnosis, referral status, and disposition. Beginning in 1997, these latter items are no longer imputed. Blank or otherwise missing responses are so noted in the data.

Tests of significance and rounding

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 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.

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.

Injury groupings

Table 10 presents data on the intent and mechanism producing the injuries that resulted in visits to OPD’s. Cause of injury is collected for each sampled visit in the NHAMCS and is coded according to the ICD-9-CM’s “Supplementary Classification of External Causes of Injury and Poisoning.” For table 10, however, the

first-listed cause-of-injury data were regrouped to highlight the interaction between intentionality of the injury and the mechanism that produced the injury. Table II shows the groupings used to produce this table.

Population figures and rate calculation

The figures represent U.S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1997. Figures are based on monthly postcensal estimates of this population. Figures are consistent with an unpublished hard copy national population estimates release package PPL-91 (U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1990–1997) and have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix (1). Regional estimates have been provided by the Division of Health Interview Statistics (DHIS), NCHS, and are based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized population as of July 1, 1997. DHIS estimates may differ slightly from monthly postcensal estimates because of differences in the adjustment process.

Definition of terms

Ambulatory patient—An ambulatory patient is an individual seeking personal health services who is not currently

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 ¹
Unintentional injuries	E800–869,E880–E929
Falls	E880.0–E886.9,E888
Motor vehicle traffic	E810–E819
Striking against or struck accidentally by objects or persons	E916–E917
Overexertion and strenuous movements	E927
Cutting or piercing instruments or objects	E920
Natural and environmental factors	E900–E909,E928.0–E928.2
Other and not elsewhere classified	E830,E832,E846–E848,E890–E899,E910,E911–E915, E918,E921,E923–E926,E929.0–E929.5,E928.8
Mechanism unspecified	E887,E928.9,E929.8,E929.9
Intentional injuries	E950–E959,E960–E969,E970–E978,E990–E999
Injuries of undetermined intent	E980–E989
Adverse effects of medical treatment	E870–E879,E930–E949

¹Based on the “Supplementary Classification of External Causes of Injury and Poisoning,” *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (6).

admitted to any health care institution on the premises.

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 excluded from the NHAMCS: ambulatory surgery centers, chemotherapy, employee health service, renal dialysis, methadone maintenance, and radiology.

Drug mention—A drug mention is the health care provider's entry on the Patient Record form 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 is a hospital facility for the provision of unscheduled outpatient services to patients whose conditions require immediate care and is staffed 24 hours a day. If an ED provided emergency services in different areas of the hospital, then all of these areas were selected with certainty into the sample. Off-site emergency departments that are open less than 24 hours are included if staffed by the hospital's emergency department.

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 hospital whose specialty is general (medical or surgical) or children's general, except Federal hospitals, hospital units of institutions, and hospitals with less 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.

Injury-related visit—A visit is injury-related if “yes” was checked in response to item 15, “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 operated by a church or another nonprofit organization.

Government, non-Federal—Hospitals operated by State or local governments.

Proprietary—Hospitals operated by individuals, partnerships, or corporations for profit.

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 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.

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