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Advance Data

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National Hospital Ambulatory Medical Care Survey: 1997 Emergency Department Summary

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Abstract

Objectives— This report describes ambulatory care visits to hospital emergency departments in the United States. Statistics are presented on selected 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 survey of visits to hospital emergency and outpatient departments of non-Federal, short-stay, and general hospitals in the United States. Sample data were weighted to produce annual estimates.

Results—During 1997, an estimated 94.9 million visits were made to hospital emergency departments (ED's) in the United States, about 35.6 visits per 100 persons. Persons 75 years and over had the highest rate of ED visits. There were an estimated 35.1 million injury-related ED visits during 1997, or 13.2 visits per 100 persons. Seventy percent of injury-related ED visits were made by persons under 45 years of age. Injury visit rates were higher for males than females in each age group under 45 years. According to ICD–9–CM classification, about four-fifths of injury visits were unintentional. Almost 72 percent of the ED visits involved medication therapy, with pain relief drugs accounting for almost 30 percent of the medications mentioned. Acute upper respiratory infection was the leading illness-related diagnosis at ED visits.

Keywords: emergency 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 emergency departments (ED's) and outpatient departments (OPD's) to the population of the United States. The NHAMCS is part of the ambulatory component of the National Health Care Survey[a] 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 the 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 the NHAMCS provide an important tool for tracking ambulatory care utilization. A third survey, the National Survey of Ambulatory Surgery, was launched in 1994 to focus on the rapidly increasing use of ambulatory surgery centers that are not covered in the NAMCS or the NHAMCS.

[a]Additional information about the National Health Care Survey can be found at this NCHS Internet address: www.cdc.gov/nchswww/about/major/nhcs.htm

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

CENTERS FOR DISEASE CONTROL AND PREVENTION

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

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 the NHAMCS includes in-person visits made in the United States to emergency departments and outpatient departments (OPD's) of non-Federal, short-stay, and general hospitals. These are hospitals with an average 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 existent 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 the PSU's used in the 1985–94 National Health Interview Survey. The sample for 1997 consisted of 486 hospitals. Of this group, 434 hospitals had either an ED or OPD in 1997 and were in scope or eligible for the survey. During this period, 96 percent of the in-scope hospitals participated. There were 392 ED's that provided data for 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 ED's was 22,209.

Because the estimates presented in this report are based on a sample rather than on the entire universe of ED visits, they are subject to sampling variability. The Technical notes at the end of the report include an explanation of sampling errors with guidelines for judging the precision of the estimates.

Several medical classification systems were used to code data from the NHAMCS. The Patient Record form contains an item on the patient's expressed reason for the visit. In this item, 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 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 where hospital staff were asked 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. Up to three diagnoses were coded according to the ICD–9–CM (6).

The Patient Record form includes items on diagnostic and/or screening services and procedures. Physicians were asked to write in up to two services and up to two procedures in the open-ended ''other'' categories. These services and procedures were coded according to volume 3 of the ICD–9–CM (6).

In the medication item, hospital staff were instructed to record all continued or new medications ordered, supplied, or administered at the visit. This includes 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 the National Center for Health Statistics. 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: mode of arrival, pregnancy status of patient, HMO status of patient, immediacy of need for patient to be seen, level of pain, and time when patient was seen by physician.

Item nonresponse rates in the NHAMCS are generally low (5 percent or less). However, levels of nonresponse can vary considerably in the survey. Only one item (mode of arrival) had a nonresponse rate above 50 percent. 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. For 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, the percent distribution is not described in the text, but is presented in the tables. These data should be interpreted with caution. If nonresponse is random, the observed distribution for the reported item 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 items with nonresponse greater than 50 percent, 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 the survey's data collection. Data processing operations and medical coding were performed by Analytical Sciences Inc., Durham, North

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
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NATIONAL HOSPITAL AMBULATORY MEDICAL CARE SURVEY
1997–98 EMERGENCY DEPARTMENT RECORD

1. DATE OF VISIT
_____/_____/_____
Month Day Year

2. TIME OF VISIT
☐ Military
___ : ___ ☐ AM
☐ PM

3. DATE OF BIRTH
_____/_____/_____
Month Day Year

4. MODE OF ARRIVAL *Check one.*
1 ☐ Ambulance (air/ground)
2 ☐ Public service (nonambulance, e.g., police, social services)
3 ☐ Walk-in
4 ☐ Unknown

5. SEX
1 ☐ Female 2 ☐ Male
↓
Is patient pregnant?
1 ☐ Yes 2 ☐ No 3 ☐ Unknown

6. RACE
1 ☐ White
2 ☐ Black
3 ☐ Asian/Pacific Islander
4 ☐ American Indian/ Eskimo/Aleut

7. ETHNICITY
1 ☐ Hispanic origin
2 ☐ Not Hispanic

8. PRIMARY EXPECTED SOURCE OF PAYMENT FOR THIS VISIT *Check one.*
1 ☐ Private insurance
2 ☐ Medicare
3 ☐ Medicaid
4 ☐ Worker's Compensation
5 ☐ Self-pay
6 ☐ No charge
7 ☐ Other
8 ☐ Unknown

9. DOES PATIENT BELONG TO AN HMO?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown

10. IMMEDIACY WITH WHICH PATIENT SHOULD BE SEEN
1 ☐ Unknown/no triage
2 ☐ Less than 15 minutes
3 ☐ 15 – 60 minutes
4 ☐ > 1 hour – 2 hours
5 ☐ > 2 hours – 24 hours

11. PRESENTING LEVEL OF PAIN
1 ☐ Unknown
2 ☐ None
3 ☐ Mild
4 ☐ Moderate
5 ☐ Severe

12. TIME SEEN BY PHYSICIAN
☐ Military
___ : ___ ☐ AM
☐ PM
☐ Not seen by physician or unknown

13. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT *Use patient's own words*
1. Most important: _____
2. Other: _____
3. Other: _____

14. IS THIS VISIT RELATED TO INJURY OR POISONING? *Refers to all types of injury or poisoning, including adverse drug experiences, medical misadventures, etc.*
1 ☐ Yes *(Answer a, b, c, and d.)* 2 ☐ No *(Skip to item 15.)*

a. Place of occurrence *Check one*
1 ☐ Residence
2 ☐ Recreation/sports area
3 ☐ Street or highway
4 ☐ School
5 ☐ Other public building
6 ☐ Industrial places
7 ☐ Other
8 ☐ Unknown

b. Is this injury intentional?
1 ☐ Yes (self-inflicted)
2 ☐ Yes (assault)
3 ☐ No, unintentional
4 ☐ Unknown

c. Is this injury work related?
1 ☐ Yes 2 ☐ No 3 ☐ Unknown

d. Cause of injury *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.)*

15. PHYSICIAN'S DIAGNOSES FOR THIS VISIT *As specifically as possible, list diagnoses related to this visit including chronic conditions (e.g. depression, obesity, asthma, etc.)*
1. Primary diagnosis: _____
2. Other: _____
3. Other: _____

16. DIAGNOSTIC/SCREENING SERVICES *Check all **ordered** or **provided** at this visit.*
1 ☐ None
2 ☐ Mental status exam
3 ☐ Blood pressure
4 ☐ EKG
5 ☐ Cardiac monitor
6 ☐ Pulse oximetry
7 ☐ Urinalysis
8 ☐ Pregnancy test
9 ☐ HIV serology
10 ☐ Other STD test
11 ☐ Blood alcohol concentration
12 ☐ CBC
13 ☐ Other blood test
14 ☐ Other – *Specify* _____

IMAGING:
15 ☐ Chest X-Ray
16 ☐ Extremity X-Ray
17 ☐ Other X-Ray
18 ☐ MRI
19 ☐ Ultrasound
20 ☐ CAT scan
21 ☐ Other diagnostic imaging

17. PROCEDURES *Check all **provided** at this visit.*
1 ☐ None
2 ☐ Endotracheal intubation
3 ☐ CPR
4 ☐ IV fluids
5 ☐ NG tube/gastric lavage
6 ☐ Lumbar puncture
7 ☐ Bladder catheter
8 ☐ Wound care
9 ☐ Eye/ENT care
10 ☐ Orthopedic care
11 ☐ OB/GYN care
12 ☐ Other – *Specify* _____

18. MEDICATIONS/INJECTIONS *List names of up to 6 medications that were **ordered, supplied, administered** or **continued** during this visit. Include R_x and OTC medications, immunizations, allergy shots, and anesthetics.*
☐ None
1. _____ 4. _____
2. _____ 5. _____
3. _____ 6. _____

19. VISIT DISPOSITION *Check all that apply.*
1 ☐ No followup planned
2 ☐ Return to ED, P.R.N./appointment
3 ☐ Returned to referring physician
4 ☐ Referred out from triage without treatment
5 ☐ Referred to other physician/ clinic for followup
6 ☐ Left before being seen
7 ☐ Admitted to hospital
8 ☐ Admitted to ICU/CCU
9 ☐ Transferred to other facility
10 ☐ DOA/died in ED
11 ☐ Referred to social service
12 ☐ Other

20. PROVIDERS SEEN THIS VISIT *Check all that apply.*
1 ☐ Staff physician
2 ☐ Resident/intern
3 ☐ Other physician
4 ☐ Physician assistant
5 ☐ Nurse practitioner
6 ☐ R.N.
7 ☐ L.P.N.
8 ☐ Medical/nursing assistant
9 ☐ E.M.T.
10 ☐ Other

Figure 1. Patient Record form.

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 1.6 percent for various survey items.

Several of the tables in this report present data on rates of ED 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. The figures have been adjusted for net underenumeration (1).

Results

There were an estimated 94.9 million emergency department visits in 1997, about 35.6 visits per 100 persons. This visit rate is not significantly different from the 1996 rate (9). Patient and visit characteristics for these ED visits are described below.

Patient characteristics

ED visits by patient's age, sex, and race are displayed in table 1. Persons 75 years of age and over had a higher ED visit rate (61.5 visits per 100 persons) than persons in the other five age categories. Women in age groups 15–24 and 25–44 years had higher visit rates than men in the corresponding age categories (figure 2). Pregnancy complication and delivery, abdominal pain, and urinary tract infection (site not specified) are among the conditions contributing to the differences in visit rates observed between men and women in these age groups. The ED utilization rate for black persons was 83 percent higher than for white persons. Significant differences were observed in all age groups under 65 years, but there was no statistical difference in ED visit rates between the two races for ages 65 years and older (figure 3).

Is patient pregnant—This is a new item in the 1997 NHAMCS that is important for women of childbearing age (15–44 years). Unfortunately, at 46.0 percent of the visits for women 15–44 years old, the pregnancy status was unknown. At another 46.1 percent of visits, patients were not pregnant.

Table 1. Number, percent distribution, and annual rate of emergency department visits by selected patient and hospital characteristics: United States, 1997

Selected patient and hospital characteristics	Number of visits in thousands	Percent distribution	Number of visits per 100 persons per year[1,2]
All visits	94,936	100.0	35.6
Patient characteristics			
Age:			
Under 15 years	20,693	21.8	34.7
15–24 years	14,412	15.2	39.2
25–44 years	29,397	31.0	35.3
45–64 years	15,629	16.5	28.5
65–74 years	6,201	6.5	34.3
75 years and over	8,604	9.1	61.5
Sex and age:			
Female	50,286	53.0	36.8
Under 15 years	9,631	10.1	33.1
15–24 years	8,027	8.5	44.1
25–44 years	15,680	16.5	37.1
45–64 years	8,141	8.6	28.7
65–74 years	3,425	3.6	34.4
75 years and over	5,382	5.7	62.4
Male	44,649	47.0	34.3
Under 15 years	11,061	11.7	36.2
15–24 years	6,385	6.7	34.4
25–44 years	13,717	14.4	33.4
45–64 years	7,487	7.9	28.2
65–74 years	2,776	2.9	34.2
75 years and over	3,222	3.4	59.9
Race and age:			
White	72,165	76.0	32.8
Under 15 years	15,045	15.8	32.1
15–24 years	10,646	11.2	36.4
25–44 years	21,750	22.9	31.8
45–64 years	11,878	12.5	25.3
65–74 years	5,165	5.4	32.4
75 years and over	7,681	8.1	60.8
Black	20,570	21.7	60.1
Under 15 years	5,162	5.4	53.8
15–24 years	3,474	3.7	62.6
25–44 years	6,929	7.3	64.9
45–64 years	3,333	3.5	58.1
65–74 years	870	0.9	54.3
75 years and over	803	0.8	75.9
Asian/Pacific Islander	1,679	1.8	16.6
American Indian/Eskimo/Aleut	521	0.5	22.0
Hospital characteristics			
Ownership:			
Voluntary	60,941	64.2	22.8
Government	9,525	10.0	3.6
Proprietary	24,470	25.8	9.2
Geographic region:			
Northeast	19,157	20.2	36.5
Midwest	25,084	26.4	38.2
South	33,060	34.8	34.7
West	17,635	18.6	33.1
Metropolitan status:			
MSA[3]	73,440	77.4	34.6
Non-MSA[3]	21,496	22.6	39.7

[1]Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July 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.

[2]Regional and metropolitan area estimates have been provided by the Division of Health Interview Statistics (DHIS and are based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized population as of July 19, 1997. DHIS estimates are provisional at this time and differ slightly from monthly postcensal estimates because of differences in the adjustment process.

[3]MSA is metropolitan statistical area.

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

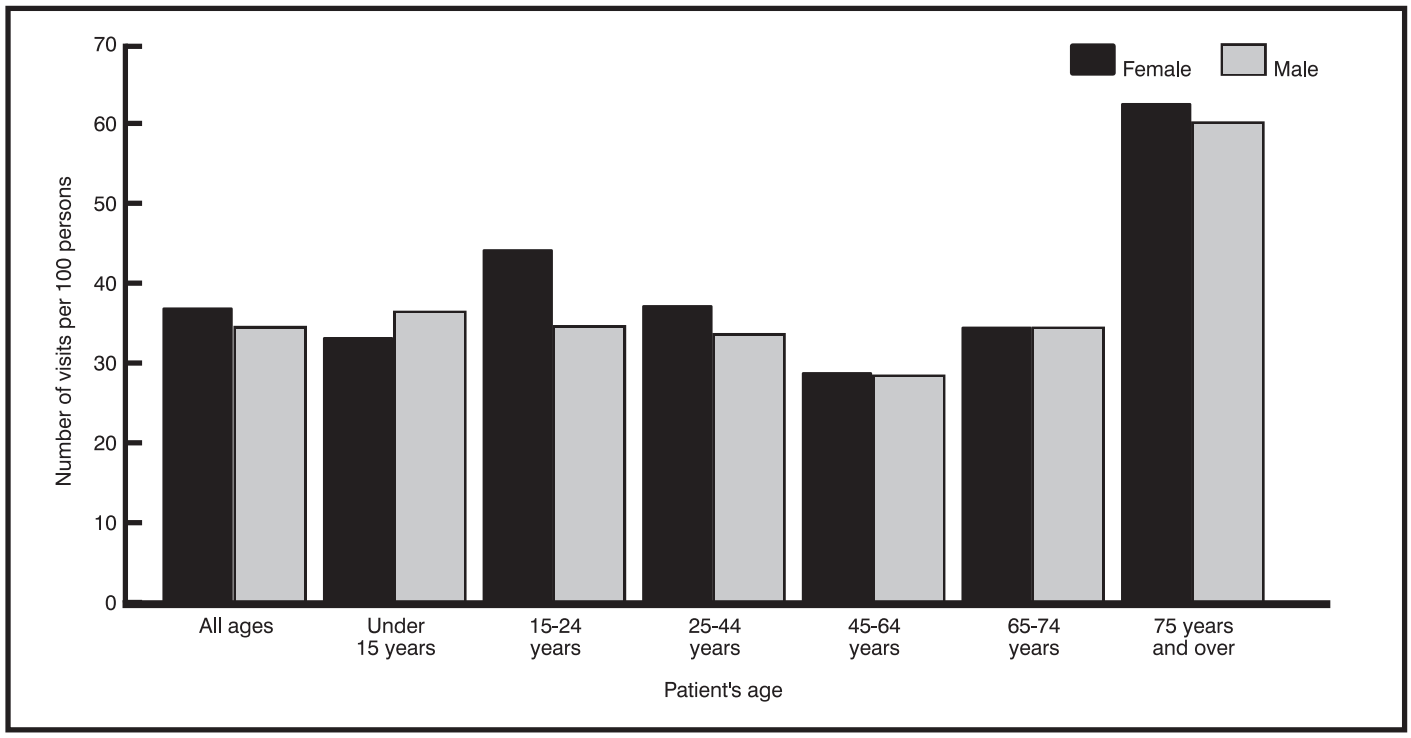


Figure 2. Annual rate of emergency department visits by patient's age and sex: United States, 1997

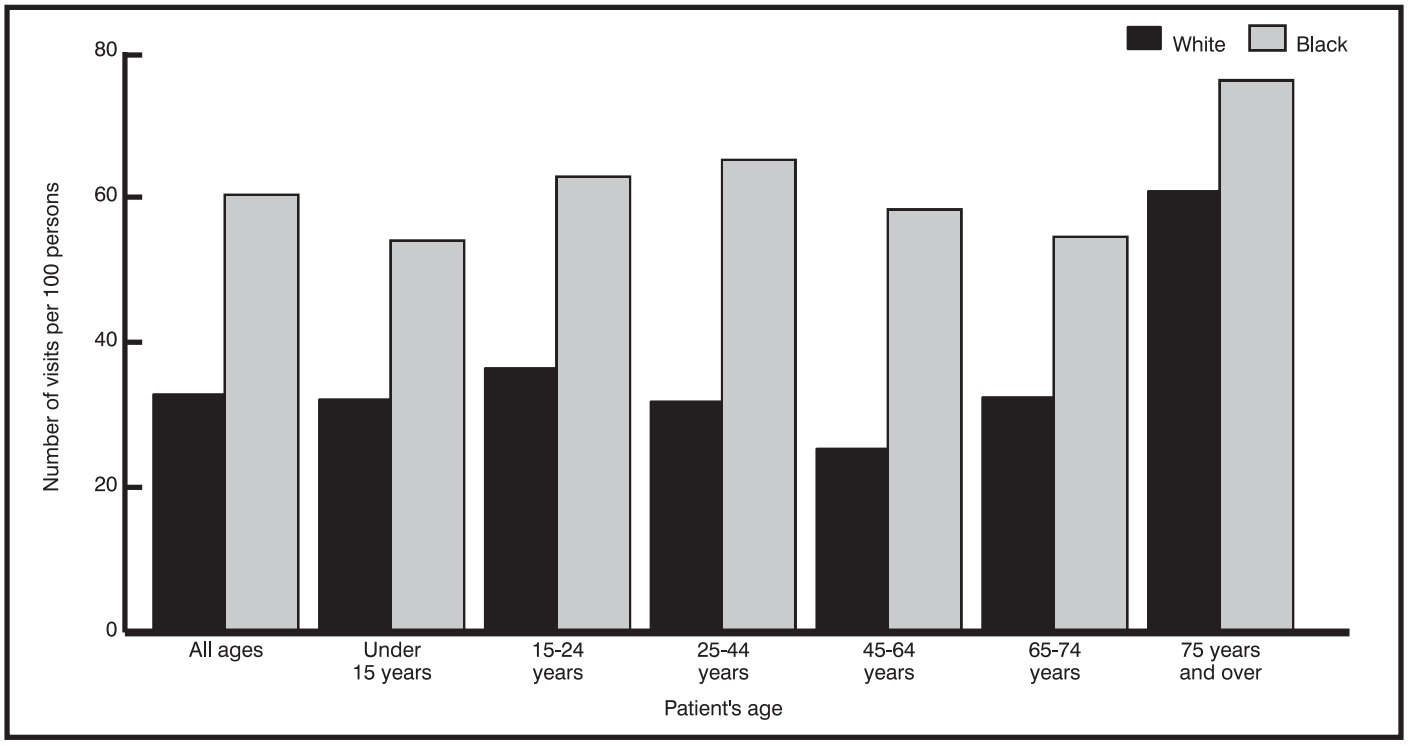


Figure 3. Annual rate of emergency department visits by patient's age and race: United States, 1997

The remainder, 7.9 percent of visits, was made by women who were pregnant.

Hospital characteristics

Ownership—About 64 percent of ED visits were made to voluntary nonprofit hospitals. The percent of visits made to non-Federal government and proprietary hospitals were 10.0 and 25.8 percent, respectively.

Geographic region—Visit rate ranges from 33.1 visits per 100 persons in the West to 38.2 visits per 100 persons in the Midwest. However, these differences are not significant. The proportion of ED visits in the South (34.8 percent) was higher than the proportions in the three other regions.

Visit characteristics

Primary expected source of payment—The expected source of payment item was revised for the 1997 NHAMCS to include only the primary expected source of payment. In previous years, respondents were asked to report all applicable sources of payment. At more than one-third (37.6 percent) of ED visits, private insurance was the primary expected source of payment (figure 4, table 2). Medicare (15.5 percent), self-payment (16.2 percent), and Medicaid (17.9 percent) were also prominent. (Self-payment does not include patient copayments and deductibles.) About 3.5 percent of ED visits cited Worker's Compensation as the primary expected source of payment.

Belong to HMO—The 1997 NHAMCS included a new item to indicate whether the patient belonged to a health maintenance organization (HMO). HMO is defined as a health care delivery system that offers comprehensive health services provided by an established panel or network of providers to a voluntary enrolled population for a prepaid fixed fee and whose members are required to utilize services within the panel of contracted providers. This item permits the estimation of the volume of visits by patients who are members of an HMO. This information was marked ''unknown'' for 33.5 percent and left blank for 1.1 percent of visits. Therefore a total of 34.6 percent of ED visits had missing status for HMO (table 2).

Immediacy with which patient should been seen—To better understand the continuum of care provided by hospital ED's, the 1997 NHAMCS included a new item on immediacy with which the patient should be seen. The level of immediacy is assigned upon arrival at the ED by triage staff. The NHAMCS item categorized immediacy into four groups: emergent (less than 15 minutes), urgent (15–60 minutes), semiurgent (between 1 and 2 hours), and nonurgent (between 2 and 24 hours). For 21.9 percent of ED visits, the hospital staff recorded this item as ''unknown or no triage.''

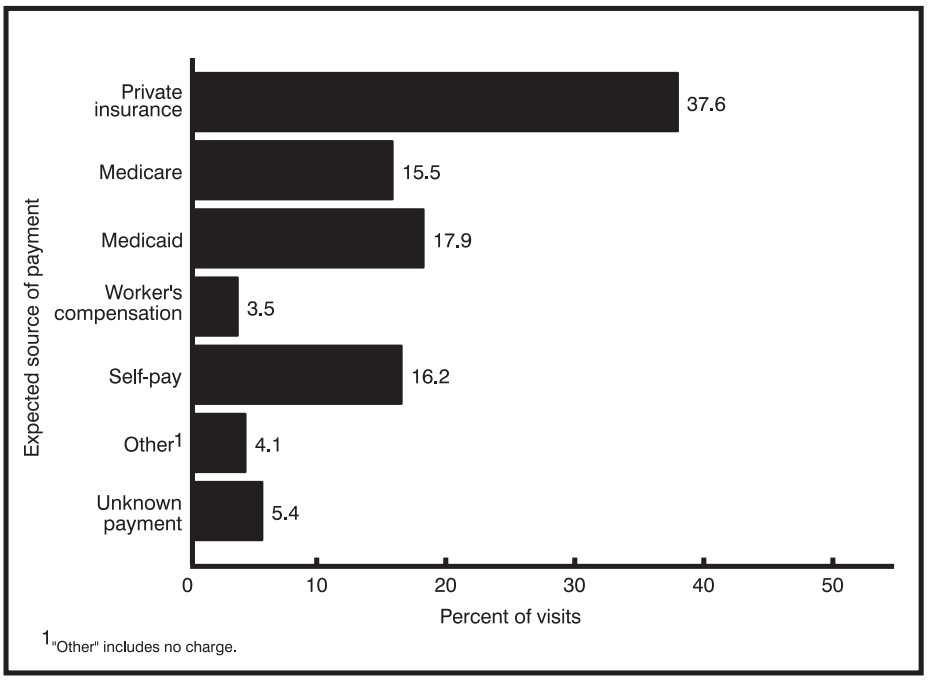


Figure 4. Percent of emergency department visits by expected source of payment: United States, 1997

Table 2. Number and percent of emergency department visits by primary expected source of payment and health maintenance organization status: United States, 1997

Source of payment and HMO status[1]	Number of visits in thousands	Percent distribution
All visits	94,936	100.0
Primary expected source of payment		
Private insurance	35,666	37.6
Medicare	14,684	15.5
Medicaid	17,010	17.9
Worker's compensation	3,293	3.5
Self-pay	15,336	16.2
No charge	1,041	1.1
Other	2,833	3.0
Unknown and/or blank	5,072	5.3
HMO status[1]		
Yes	15,779	16.6
No	46,351	48.8
Unknown and/or blank	32,806	34.6

[1]HMO is health maintenance organization.

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

As shown in figure 5, about one-fifth (21.0 percent) of ED visits were classified as emergent, about 32.0 percent were urgent, 15.4 percent were semiurgent, and only 1 in 10 (9.7 percent) were nonurgent. A further breakdown of these distributions by patient characteristics is presented in table 3.

Table 4 presents data on emergent and urgent visits by age, gender, and race. Together, emergent and urgent visits accounted for 53 percent of all ED visits. Persons 75 years of age and over had a higher emergent visit rate (22.1 visits per 100 persons) than persons in the other five age categories. There was no difference in emergent rates by gender. The utilization of ED's for emergent care by black persons was 38.3 percent higher than by white persons. However, significant differences

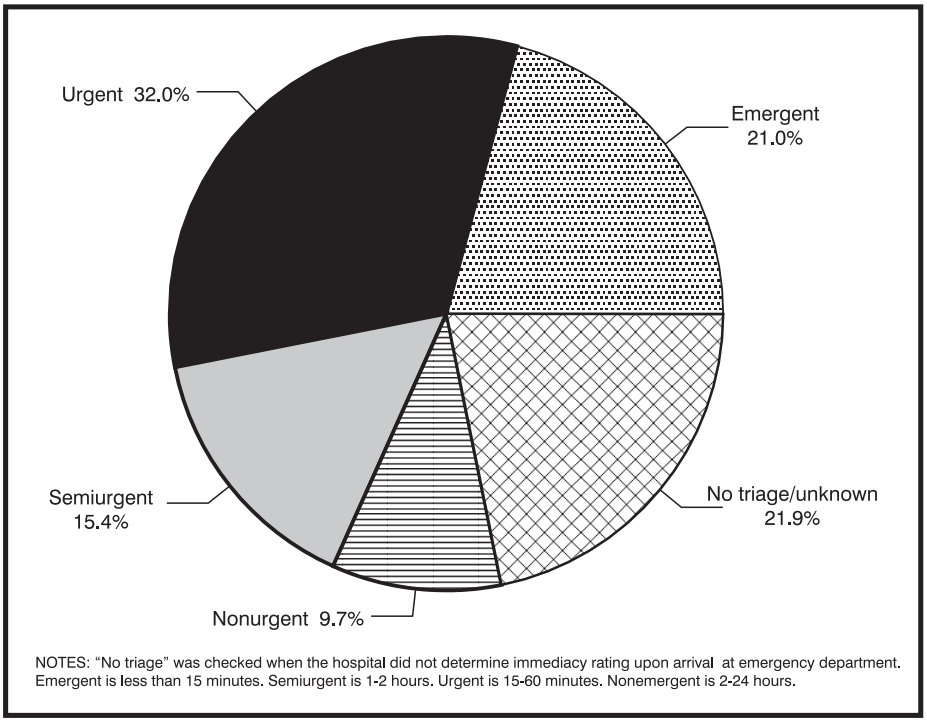


Figure 5. Percent distribution of emergency department visits by immediacy with which patient should be seen: United States, 1997

were observed only between the black and white population aged 25–44 years and 45–64 years. The rates for black persons 25–44 years and 45–64 years of age were 45.3 percent and 78.3 percent higher, respectively, than the corresponding rates for white persons.

The five most frequent diagnoses at emergent visits were heart disease (9.1 percent), chest pain (6.7 percent), open wound (4.0 percent), asthma (3.6 percent), and contusion (3.4 percent). Two-thirds of visits (66.4 percent) with a primary diagnosis of heart disease were considered emergent, as were almost half (47.4 percent) of the visits for chest pain and more than one-third (37.0 percent) of the visits for asthma. In contrast, less than one-sixth (17.0 percent) of visits for open wound or contusion were considered emergent (figure 6).

Presenting level of pain—This is a new item in the 1997 NHAMCS that indicates the level of the patient's pain at triage. The assessment of pain level is based on the Clinical Practice Guidelines published by the Agency for Health Care Policy and Research (10). This item had unknown information for 44.5 percent of visits (42.2 percent marked ''unknown'' and 2.3 percent left blank). The percent of visits with ''none'' (numerical pain intensity scale rating of 0) or ''mild'' (numerical rating of 1–3) pain were 13.1 percent and 21.9 percent, respectively. At 16.1 percent of visits, the patients had moderate pain (numerical rating of 4–6). Severe pain (numerical rating of 7–10) was indicated for 4.3 percent of visits.

Time of visit—Time of visit, which is the time the patient arrived at the ED, is displayed in figure 7. The distribution of visits was fairly constant between 8 a.m. and midnight, with a peak occurring during the late afternoon and early evening hours (4:00 p.m.–7:59 p.m.). Less than 10 percent of the visits took place in the early morning hours (4:00 a.m.–7:59 a.m.).

The busiest days of the week were Saturday through Monday (figure 8). Relative to other days of the week, the average volume of visits increased by more than 34,137 visits per day on Saturdays and Sundays and by about 21,673 visits on Mondays.

Waiting time—The 1997 NHAMCS included another new item concerning at what time the patient was seen by a physician. Data from this item were combined with data from the item on patient's arrival time in the ED to derive the amount of time spent waiting to see a physician. On average, patients waited about 38 minutes to see a physician. As one might expect, waiting time and immediacy with which the patient should be seen by a physician are related. Patients with emergent conditions waited about 21.5 ± 1.2 minutes before seeing a physician. The waiting time for semiurgent and nonurgent was 52.1 ± 3.1 and 51.0 ± 3.2 minutes, respectively. Waiting time was longer in metropolitan areas compared with nonmetropolitan areas. Furthermore, waiting time in metropolitan areas varied by hospital ownership, with longer waits in government (State and local) facilities compared with proprietary or voluntary, nonprofit hospitals. In nonmetropolitan areas, waiting times did not vary by hospital ownership (figure 9).

Patient's principal reason for visit—The principal reason is the problem, complaint, or reason listed in item 10a on the Patient Record form. As described earlier, up to three reasons for visit were coded according to *A Reason for Visit Classification for Ambulatory Care* (RVC) (5). The RVC is divided into eight modules or groups of reasons as shown in table 5. About 7 of 10 ED visits (69.9 percent) were made for reasons classified in the symptom module, with general symptoms accounting for 16.0 percent of the total. Musculoskeletal symptoms accounted for 13.0 percent of visits, while respiratory and digestive symptoms accounted for 11.6 and 11.9 percent of visits, respectively. About 21.7 percent of all ED visits had reasons listed in the injuries and adverse effects module.

The 20 most frequently mentioned principal reasons for visit, representing almost half of all visits, are shown in table 6. Stomach and abdominal pain, cramps, and spasms were reported most frequently, accounting for 5.8 percent of all ED visits. Chest pain and fever accounted for 5.6 percent and 4.4 percent of visits, respectively. The percent of visits requiring emergent care for patients whose principal reasons for

Table 3. Percent distribution of emergency department visits by immediacy with which patient should be seen, according to patient's age, sex, and race: United States, 1997

Patient's age, sex, and race	Number of visits in thousands	Immediacy with which patient should be seen					
		Total	Emergent[1]	Urgent[2]	Semiurgent[3]	Nonurgent[4]	Unknown/ no triage[5]
		Percent distribution					
All visits	94,936	100.0	21.0	32.0	15.4	9.7	21.9
Age							
Under 15 years	20,693	100.0	15.6	33.2	18.3	11.2	21.6
15–24 years	14,412	100.0	18.0	33.2	15.8	10.2	22.7
25–44 years	29,397	100.0	18.7	31.7	16.0	10.8	22.9
45–64 years	15,629	100.0	22.4	31.5	14.9	9.8	21.4
65–74 years	6,201	100.0	32.7	31.4	10.4	5.7	19.8
75 years and over	8,604	100.0	35.9	29.7	10.4	4.3	19.8
Sex and age							
Female	50,286	100.0	20.9	32.3	15.5	9.6	21.7
Under 15 years	9,631	100.0	14.9	32.3	19.6	11.7	21.6
15–24 years	8,027	100.0	17.2	34.2	15.3	10.0	23.3
25–44 years	15,680	100.0	18.3	32.3	16.0	10.9	22.5
45–64 years	8,141	100.0	22.4	32.3	15.2	9.1	20.9
65–74 years	3,425	100.0	31.4	33.3	9.7	6.2	19.4
75 years and over	5,382	100.0	35.7	28.8	11.0	4.2	20.3
Male	44,649	100.0	21.1	31.7	15.4	9.8	22.0
Under 15 years	11,061	100.0	16.3	34.0	17.3	10.8	21.7
15–24 years	6,385	100.0	19.0	32.0	16.5	10.5	22.0
25–44 years	13,717	100.0	19.1	31.0	16.0	10.6	23.3
45–64 years	7,487	100.0	22.4	30.6	14.5	10.6	21.9
65–74 years	2,776	100.0	34.2	29.0	11.2	5.2	20.4
75 years and over	3,222	100.0	36.3	31.2	9.3	4.3	18.9
Race and age							
White	72,165	100.0	22.3	32.9	14.7	9.3	20.8
Under 15 years	15,045	100.0	15.7	34.5	18.1	11.2	20.5
15–24 years	10,646	100.0	18.9	34.2	15.7	9.8	21.4
25–44 years	21,750	100.0	20.2	32.7	15.5	10.3	21.3
45–64 years	11,878	100.0	23.7	32.5	13.2	9.5	21.1
65–74 years	5,165	100.0	33.6	31.2	10.4	5.4	19.5
75 years and over	7,681	100.0	36.3	29.8	10.0	4.3	19.7
Black	20,570	100.0	16.7	29.1	18.2	11.3	24.6
Under 15 years	5,162	100.0	16.5	28.8	19.5	11.5	23.6
15–24 years	3,474	100.0	14.1	30.2	17.2	11.2	27.3
25–44 years	6,929	100.0	14.4	28.5	18.0	12.8	26.4
45–64 years	3,333	100.0	18.4	28.5	21.0	10.9	21.1
65–74 years	870	100.0	27.0	33.2	*	*	22.8
75 years and over	803	100.0	31.5	29.2	*	*	20.3
Other	2,200	100.0	17.4	32.2	11.5	8.3	30.6

*Figure does not meet standard of reliability or precision.
[1]A visit in which the patient should be seen in less than 15 minutes.
[2]A visit in which the patient should be seen within 15–60 minutes.
[3]A visit in which the patient could be seen within 60–120 minutes.
[4]A visit in which the patient could be seen in up to 24 hours.
[5]A visit to an emergency department that normally does not determine the level of immediacy of need for care upon a patient's arrival.

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

visiting the ED were stomach and abdominal pain, chest pain, or fever was 21.2 percent, 50.0 percent, and 13.0 percent, respectively. Injury of the upper extremity was the most frequently mentioned reason for visit in the injury module (2.5 percent). It should be noted that estimates differing in ranked order may not be significantly different from each other.

Injury-related visits—An ED visit was considered to be related to injury or poisoning if ''yes'' was checked in response to question 14, ''Is this visit related to injury or poisoning?'' or if a cause of injury, a nature of injury diagnosis, or an injury-related reason for visit was reported. Using results from any one of these items alone would underestimate the number of injury- or poisoning-related visits. Each of these items measures a unique aspect of injury or poisoning. Using this definition, the number of injury visits was 8.9 percent greater compared with using the injury checkbox alone.

In 1997, injury- and poisoning-related visits represented 37 percent of all ED visits. Approximately 35.1 million ED visits were made for injury and poisoning, a rate of 13.2 visits per 100 persons (table 7). About three-quarters (74.0 percent) of all injury visits occurred among persons 44 years of age or younger. Persons 15–24 years of age had a higher injury-related visit rate (17.8 visits per 100 persons) than persons in the other age groups except for those 75 years and over. Males had a higher injury-related visit rate than females for all age groups below 45 years. The injury-related visit rate for black persons was higher than for white persons for all age groups except for persons 65 years and over.

Table 8 displays data on injury-related ED visits by place of occurrence, whether the injury was intentional, and whether it was work related. Place of occurrence and whether the injury was work related had high levels of missing data (40.1 percent and 29.6 percent, respectively). Seven percent of injuries were intentional. Of these, three-fourths were the result of an assault and one-fourth were self-inflicted. Almost 1 out of 6 injury-related ED visits by persons 18–64 years were related to work. A work-related injury is defined as an injury that happened while the person was engaged in work activities occurring on or off the employer's premises.

Table 9 shows ED 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. About 80 percent of injury-related visits were due to an unintentional injury. The reader should keep in mind that the results regarding intentionality of the injury in table 9 will vary from those in table 8. In table 8, intentionality

Table 4. Number, percent distribution, and annual rate of emergent and urgent emergency department visits by patient's age, sex, and race: United States, 1997

Patient's age, sex, and race	Emergent visits[1]			Urgent visits[2]		
	Number in thousand	Percent distribution	Number per 100 persons per year[3]	Number in thousands	Percent distribution	Number per 100 persons per year[3]
All visits	19,935	100.0	7.5	30,402	100.0	11.4
Age						
Under 15 years	3,238	16.2	5.4	6,869	22.6	11.5
15–24 years	2,595	13.0	7.1	4,790	15.8	13.0
25–44 years	5,487	27.5	6.6	9,319	30.7	11.2
45–64 years	3,499	17.6	6.4	4,923	16.2	9.0
65–74 years	2,025	10.2	11.2	1,947	6.4	10.8
75 years and older	3,091	15.5	22.1	2,555	8.4	18.2
Sex and age						
Female	10,510	52.7	7.7	16,245	53.4	11.9
Under 15 years	1,436	7.2	4.9	3,109	10.2	10.7
15–24 years	1,381	6.9	7.6	2,749	9.0	15.1
25–44 years	2,874	14.4	6.8	5,066	16.7	12.0
45–64 years	1,825	9.2	6.4	2,631	8.7	9.3
65–74 years	1,074	5.4	10.8	1,142	3.8	11.5
75 years and older	1,921	9.6	22.3	1,548	5.1	18.0
Male	9,425	47.3	7.2	14,157	46.6	10.9
Under 15 years	1,803	9.0	5.9	3,760	12.4	12.3
15–24 years	1,214	6.1	6.5	2,041	6.7	11.0
25–44 years	2,614	13.1	6.4	4,254	14.0	10.4
45–64 years	1,674	8.4	6.3	2,292	7.5	8.6
65–74 years	951	4.8	11.7	805	2.6	9.9
75 years and older	1,170	5.9	21.7	1,006	3.3	18.7
Race and age						
White	16,109	80.8	7.3	23,708	78.0	10.8
Under 15 years	2,361	11.8	5.0	5,188	17.1	11.1
15–24 years	2,011	10.1	6.9	3,644	12.0	12.5
25–44 years	4,400	22.1	6.4	7,121	23.4	10.4
45–64 years	2,818	14.1	6.0	3,856	12.7	8.2
65–74 years	1,734	8.7	10.9	1,610	5.3	10.1
75 years and older	2,786	14.0	22.1	2,289	7.5	18.1
Black	3,443	17.3	10.1	5,985	19.7	17.5
Under 15 years	853	4.3	8.9	1,489	4.9	15.5
15–24 years	490	2.5	8.8	1,051	3.5	18.9
25–44 years	997	5.0	9.3	1,972	6.5	18.5
45–64 years	615	3.1	10.7	950	3.1	16.6
65–74 years	235	1.2	14.7	289	0.9	18.0
75 years and older	253	1.3	23.9	234	0.8	22.1
Other	384	1.9	3.1	710	2.3	5.7

[1]An emergent visit is defined as one in which the patient should be seen in less than 15 minutes and is determined by the practitioner at triage.
[2]An urgent visit is defined as one in which the patient should be seen within 15–30 minutes and is determined by the practitioner at triage.
[3]Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July of 1997. Figures are consistent with an unpublished hard-copy national population release package PPL-91 (U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1990–1997).

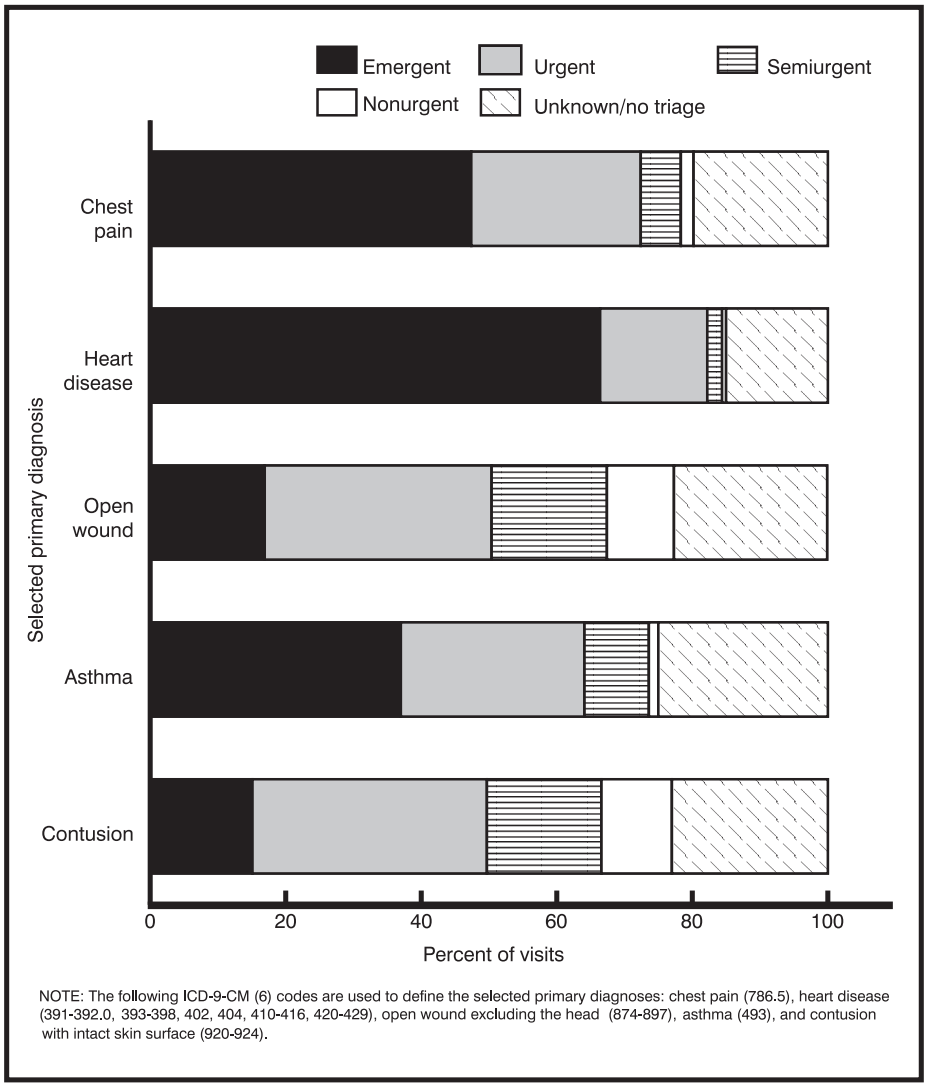
of the injury is based on responses to the checkbox item on the Patient Record form, rather than on the ICD–9–CM groupings used in table 9. Discrepancies may arise in respondent interpretation of intent. For example, in some cases, hospital staff checked the ''assault'' category for dog bite injuries. However, dog bites are an unintentional injury based on the ICD–9–CM E-codes.

The unintentional injuries due to falls (18.2 percent), striking against or struck accidentally by objects or persons (13.7 percent), and motor vehicle traffic-related injuries (12.2 percent) accounted for the largest proportion of injury-related ED visits. About 4.8 percent of injury-related ED visits were due to assaults. An unarmed fight or brawl was the leading reason for assault-related injuries (2.7 percent). Self-inflicted injuries resulted in 401,000 ED visits (1.1 percent) with poisoning being the most frequent cause (0.7 percent). Adverse effects of medical treatment represented 3.4 percent of injury-related ED visits. An external cause was not provided for 9.8 percent of the injury visits.

Primary diagnosis—Displayed in table 10 are ED visits by primary diagnosis using the major disease categories specified by the ICD–9–CM (6). Injury and poisoning diagnoses accounted for about 29.6 percent of all visits; symptoms, signs, and ill-defined conditions and diseases of the respiratory system accounted for 14.2 percent and 12.6 percent, respectively. Some of the most frequently reported primary diagnoses for 1997 are shown in table 11. These categories are based on the ICD–9–CM. Contusions and open wounds lead the list (5.0 percent and 4.7 percent, respectively), followed by acute upper respiratory infections (3.9 percent) and chest pain (2.9 percent). As noted previously, nearly half of the visits with a diagnosis of chest pain were considered emergent. For the other frequent diagnoses (contusion, open wounds, and acute upper respiratory infections), fewer than one-fifth of the total were reported to be emergent by hospital staff (data not shown).

Diagnostic and screening services—Statistics on various diagnostic and screening services ordered or provided by hospital staff during an ED visit are displayed in table 12. About 13.3 percent of ED visits had no diagnostic or screening services. About 50 percent of these visits were for children less than 15 years of age, and 23.6 percent of these visits were for persons age 15–44 years.

As in previous years, the most frequently mentioned diagnostic service was blood pressure check, recorded at 72.4 percent of visits. Other frequently mentioned services included complete blood counts (CBC) (25.8 percent) and ''other blood test'' (24.3 percent). Note that for items related to diagnostic and



NOTE: The following ICD-9-CM (6) codes are used to define the selected primary diagnoses: chest pain (786.5), heart disease (391-392.0, 393-398, 402, 404, 410-416, 420-429), open wound excluding the head (874-897), asthma (493), and contusion with intact skin surface (920-924).

Figure 6. Percent distribution of visits at emergency department for selected primary diagnoses by immediacy of visit: United States, 1997

screening services, procedures, providers seen, and disposition, hospital staff were asked to check all of the applicable categories for each item. Therefore multiple responses could be coded for each visit.

Immediacy of care was positively related to the number of diagnostic and/or screening services ordered or provided. Patients received four or more services at 28.6 percent of emergent visits compared with 6.0 percent of nonurgent visits.

Procedures—Procedures were provided at 41.5 percent of ED visits (table 13). For visits with procedures, about one procedure was performed per visit. The most frequently mentioned procedures were the administration of intravenous fluids (16.8 percent), wound care (12.1 percent), and orthopedic care (7.6 percent). Immediacy of care was positively related to the percent of visits with procedures. More than half (53 percent) of emergent visits included at least one procedure compared with 42.0 percent of nonurgent visits.

Medication therapy—Hospital staff were instructed to record all new or continued medications ordered, administered, or provided at the visit, including prescription and nonprescription preparations, immunizations, and desensitizing agents. As used in NHAMCS, the term ''drug'' is interchangeable with the term ''medication.'' Visits with one or more drug mentions are termed ''drug visits'' in NHAMCS.

Medications were used at 71.5 percent of all ED visits (table 14). Although the percent of visits with at least one medication did not differ significantly by age, the number of medications did. About 19.9 percent (one-fifth) of the visits by patients 65 years and over cited four or more medications compared with less than 4 percent of the visits by those under age 15 years. Drug utilization was also positively associated with immediacy of care (data not shown). About 15.0 percent of emergent visits mentioned four or more drugs compared with 6.1 percent of nonurgent visits.

Drug mentions are shown by therapeutic class in figure 10. This classification is based on the therapeutic categories used in the *National Drug Code Directory*, 1995 edition (NDC) (8). 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.

Drugs used for pain relief were listed most frequently, accounting for one-third of all drug mentions. Within this therapeutic class, analgesics (both narcotic and nonnarcotic) and nonsteroidal anti-inflammatory drugs (NSAID's) were cited most often (98.1 percent of pain relief mentions). More than half (52.0 percent) of the pain relief drugs required a prescription, while 35 percent were available over the counter. The second and third most frequent drug classes were antimicrobial agents (16.6 percent) and respiratory tract drugs (9.4 percent) (figure 10).

The 20 most frequently used generic substances for 1997 are shown in table 15. 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 substance in drug mentions at ED visits for 1997 was acetaminophen, occurring in 14.0 percent of the drug mentions. Ibuprofen occurred in 7.1 percent of the drug mentions. Other frequent

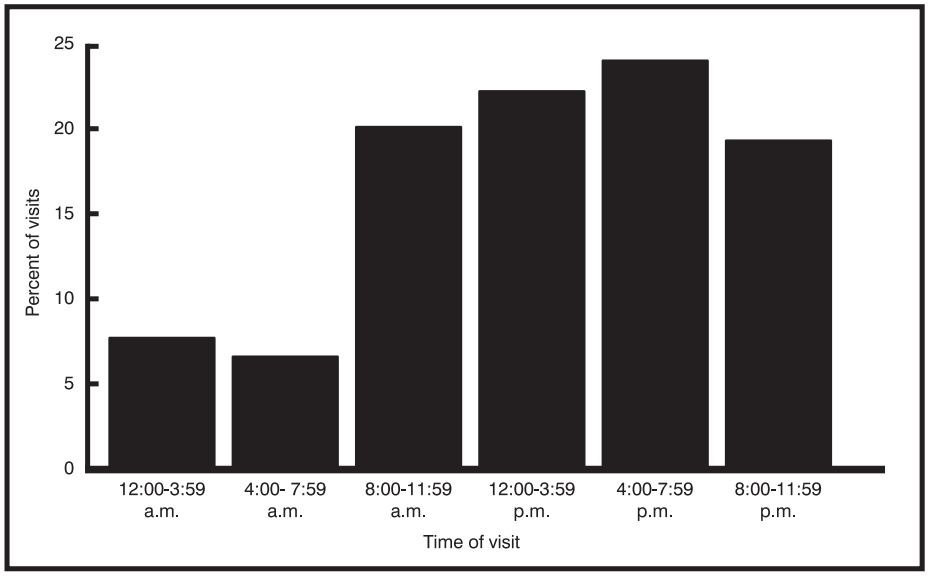


Figure 7. Percent distribution of emergency department visits by time of visit: United States, 1997

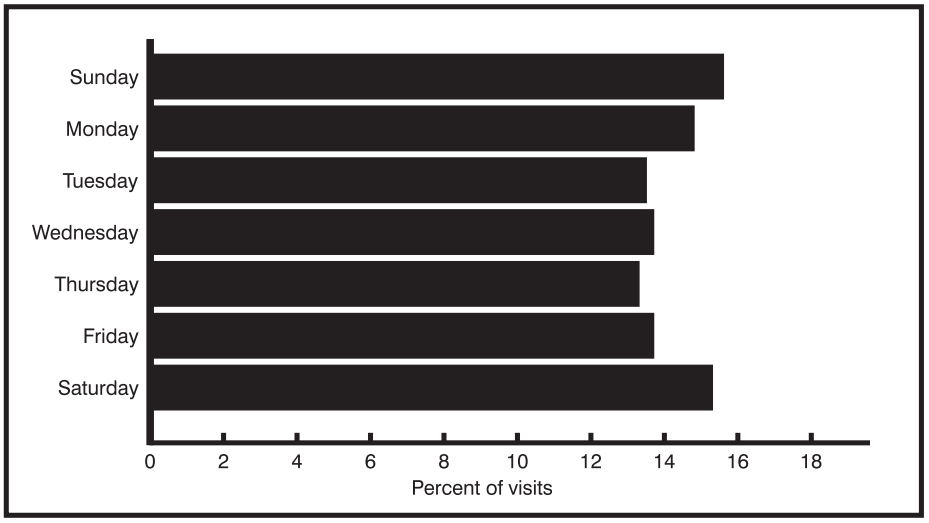


Figure 8. Percent distribution of emergency department visits by day of week: United States, 1997

generic substances were hydrocodone (3.5 percent), amoxicillin (3.3 percent), and albuterol (3.0 percent).

The 20 most frequently mentioned medications are shown in table 16 according to the name written on the ED Patient Record form by hospital staff. This could be a brand name, generic name, or therapeutic effect. Tylenol, which is classified as a general analgesic, was the drug most frequently mentioned. It accounted for 6.5 percent of all ED drug visits. Motrin, which is classified as an antiarthritic, was ordered or prescribed at 4.1 percent of ED drug visits. Other most frequent drug mentions were Phenergan (2.7 percent), Toradol (2.5 percent), and Vicodin (2.3 percent).

Providers seen—In this item, staff were asked to check all of the providers seen by the patient, and multiple responses could be coded per visit. A registered nurse and staff physician attended the patients at 87.2 percent and 85.9 percent of ED visits, respectively (table 17). A resident or intern was seen at 10.7 percent of ED visits. For 8.4 percent of ED visits, a physician other than a staff or a resident and/or intern was seen. For 1.4 percent of visits, the provider item was not checked.

At 4.1 million ED visits, a physician was not seen, and patients received care from other health care providers. At 33.2 percent of such visits, care was received by physician assistants, while 8.7 percent cited a nurse practitioner. In general, of the total number of ED visits at which care was provided by a physician assistant, 36 percent did not include a physician. Of all visits at which a nurse practitioner was listed, 24 percent were not attended by a physician (data not shown).

Visit disposition—Staff were asked to record all applicable dispositions, and instructed that multiple responses could be coded for this item. About 4 of 9 ED visits (43.7 percent) resulted in a referral to another physician or clinic (table 18). At 26.2 percent of visits, patients were told to return to the ED as needed or by appointment. Patients were told to return to the referring physician at 17.3 percent of visits.

About 13.5 percent of ED visits resulted in hospital admission. Of these, about 12 percent of the visits, patients were admitted to the hospital via ICU (intensive care unit) and/or CCU (critical care or coronary care unit) system. As expected, in visits resulting in hospitalization, patients had higher numbers of diagnostic and/or screening services and procedures compared with patients in all other visits. The average age of patients whose visits resulted in hospitalization was 55 years compared with 33 years for patients who were not admitted to the hospital. Heart disease, chest pain, and pneumonia were the primary diagnoses rendered most frequently at visits resulting in hospitalization. Together they accounted for about one-fourth of such visits. Hospital admission varied by diagnosis; for example, about two-thirds of heart disease visits resulted in hospital admission as did one-third of the visits for chest pain and half the visits for pneumonia.

As might be expected, immediacy is related to hospital admission. In 28.3 percent of emergent visits, patients were admitted to the hospital, whereas

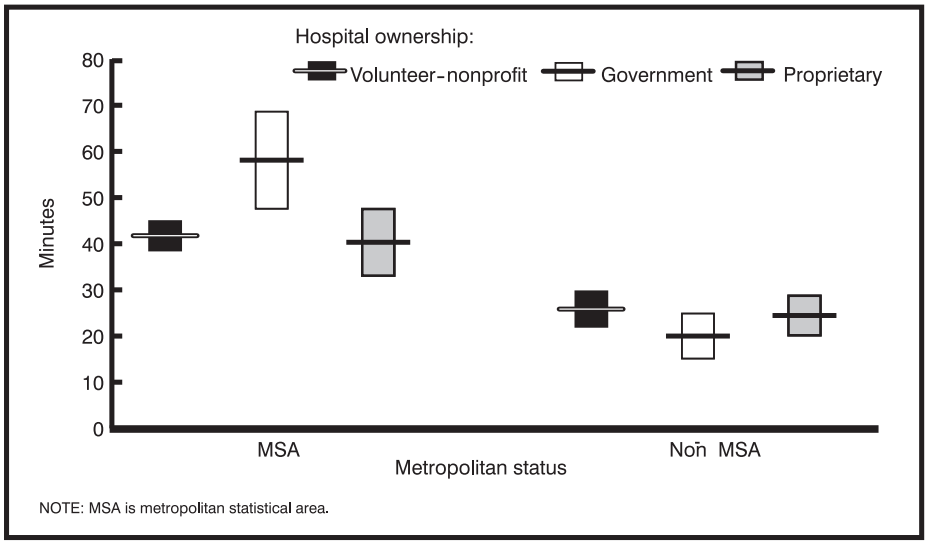


Figure 9. Average waiting time and its 95 percent confidence interval at emergency department by type of hospital ownership and location of hospital: United States, 1997

in only 4.6 percent of nonurgent visits, patients were admitted to the hospital.

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 NHAMCS may be directed to the Ambulatory Care Statistics Branch at (301) 436–7132.

Table 5. Number and percent distribution of emergency department visits by patient's principal reason for visit: United States, 1997

Principal reason for visit and RVC code[1]		Number of visits in thousands	Percent distribution
All Visits		94,936	100.0
Symptom module	S001–S999	66,347	69.9
General symptoms	S001–S099	15,177	16.0
Symptoms referable to psychological/ mental disorders	S100–S199	1,766	1.9
Symptoms referable to the nervous system (excluding sense organs)	S200–S259	5,467	5.8
Symptoms referable to the cardiovascular/ lymphatic system	S260–S299	658	0.7
Symptoms referable to the eyes and ears	S300–S399	3,491	3.7
Symptoms referable to the respiratory system	S400–S499	10,998	11.6
Symptoms referable to the digestive system	S500–S639	11,339	11.9
Symptoms referable to the genitourinary system	S640–S829	2,909	3.1
Symptoms referable to the skin, hair, and nails	S830–S899	2,153	2.3
Symptoms referable to the musculoskeletal system	S900–S999	12,389	13.0
Disease module	D001–D999	3,243	3.4
Diagnostic/screening and preventive module	X100–X599	659	0.7
Treatment module	T100–T899	2,405	2.5
Injuries and adverse effects module	J001–J999	20,625	21.7
Test results module	R100–R700	186	0.2
Administrative module	A100–A140	126	0.1
Other[2]	U990–U999	1,345	1.4

[1]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (5).
[2]Includes problems and complaints not elsewhere classified, entries of "none," blanks, and illegible entries.

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

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Table 6. Number and percent distribution of emergency department visits by the 20 principal reasons for visit most frequently mentioned by patients: United States, 1997

Principal reason for visit and RVC code[1]	Number of visits in thousands	Percent distribution
All visits	94,936	100.0
Stomach and abdominal pain, cramps, and spasms S545	5,527	5.8
Chest pain and related symptoms S050	5,315	5.6
Fever S010	4,212	4.4
Headache, pain in head S210	2,518	2.7
Injury—upper extremity J225	2,383	2.5
Shortness of breath S415	2,242	2.4
Cough S440	2,220	2.3
Back symptoms S905	2,073	2.2
Pain, site not referable to a specific body system S055	2,040	2.1
Symptoms referable to throat S455	1,953	2.1
Vomiting S530	1,813	1.9
Laceration and cuts—facial area J210	1,764	1.9
Earache or ear infection S355	1,683	1.8
Labored or difficult breathing (dyspnea) S420	1,603	1.7
Motor vehicle accident, type of injury unspecified J805	1,470	1.5
Injury, other and unspecified type—head, neck, and face J505	1,383	1.5
Vertigo—dizziness S225	1,289	1.4
Accident, NOS J810	1,286	1.4
Neck symptoms S900	1,259	1.3
Hand and finger injury J570	1,240	1.3
Other	49,664	52.3

[1]Based on a *Reason for Visit Classification for Ambulatory Care* (RVC) (5).

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

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Table 7. Number, percent distribution, and annual rate of injury-related emergency department visits by patient's age, sex, and race: United States, 1997

Patient's age, sex, and race	Number of visits in thousands	Percent distribution	Number of visits per 100 persons per year[1]
All injury-related visits	35,111	100.0	13.2
Age			
Under 15 years	7,862	22.4	13.2
15–24 years	6,547	18.6	17.8
25–44 years	11,662	33.2	14.0
45–64 years	5,365	15.3	9.8
65–74 years	1,484	4.2	8.2
75 years and over	2,190	6.2	15.6
Female	15,888	45.3	11.6
Under 15 years	3,191	9.1	11.0
15–24 years	2,760	7.9	15.2
25–44 years	5,071	14.4	12.0
45–64 years	2,694	7.7	9.5
65–74 years	795	2.3	8.0
75 years and over	1,378	3.9	16.0
Male	19,222	54.7	14.8
Under 15 years	4,671	13.3	15.3
15–24 years	3,788	10.8	20.4
25–44 years	6,591	18.8	16.1
45–64 years	2,671	7.6	10.1
65–74 years	689	2.0	8.5
75 years and over	812	2.3	15.1
Race and age			
White	27,906	79.5	12.7
Under 15 years	6,281	17.9	13.4
15–24 years	5,142	14.6	17.6
25–44 years	9,003	25.6	13.2
45–64 years	4,158	11.8	8.9
65–74 years	1,319	3.8	8.3
75 years and over	2,001	5.7	15.8
Black	6,326	18.0	18.5
Under 15 years	1,397	4.0	14.6
15–24 years	1,311	3.7	23.6
25–44 years	2,329	6.6	21.8
45–64 years	1,004	2.9	17.5
65–74 years	127	0.4	7.9
75 years and over	159	0.5	15.0
Other	879	2.5	7.0

[1]Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July 1997. Figures are consistent with an unpublished hard-copy national population 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 8. Number and percent distribution of emergency department visits by selected characteristics of the injury, according to patient's age: United States, 1997

Selected characteristic of the injury	All ages		Under 18		18–64 years		65 years and over	
	Number of visits in thousands	Percent distribution	Number of visits in thousands	Percent distribution	Number of visits in thousands	Percent distribution	Number of visits in thousands	Percent distribution
All injury-related visits	35,111	100.0	9,854	100.0	21,582	100.0	3,674	100.0
Place of occurrence								
Residence	9,980	28.4	3,525	35.8	4,833	22.4	1,623	44.2
Recreation/sport area	2,209	6.3	1,113	11.3	1,053	4.9	*	*
Street or highway	5,180	14.8	1,095	11.1	3,751	17.4	334	9.1
School	689	2.0	545	5.5	144	0.7	*	*
Other public building	995	2.8	176	1.8	708	3.3	111	3.0
Industrial places	1,991	5.7	*	*	1,861	8.6	*	*
Unknown/other[1]	14,067	40.1	3,310	33.6	9,233	42.8	1,524	41.5
Intentionality								
Yes (self-inflicted)	610	1.7	107	1.1	491	2.3	*	*
Yes (assault)	1,846	5.3	386	3.9	1,427	6.6	*	*
No, unintentional	28,224	80.4	8,490	86.2	16,696	77.4	3,037	82.7
Unknown/blank	4,431	12.6	871	8.8	2,968	13.8	592	16.1
Work related								
Yes	4,034	11.5	162	1.6	3,792	17.6	80	2.2
No	20,696	58.9	7,458	75.7	10,930	50.6	2,309	62.8
Unknown/blank	10,381	29.6	2,235	22.7	6,860	31.8	1,285	35.0

* Figure does not meet standard of reliability or precision.
[1]The categories of ''unknown'' and ''other'' are combined due to processing error.

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

Table 9. Number and percent distribution of injury-related emergency department visits by intent and mechanism of external cause: United States, 1997

Intent and mechanism[1]	Number of visits in thousands	Percent distribution
All injury-related visits	35,111	100.0
Unintentional injuries	27,953	79.6
Falls	6,383	18.2
Struck against or struck accidentally by objects or persons	4,806	13.7
Motor vehicle traffic	4,277	12.2
Cutting or piercing instruments or objects	2,786	7.9
Overexertion and strenuous movements	1,406	4.0
Natural and environmental factors	1,201	3.4
Fire and flames, hot substances or object, caustic or corrosive material, and steam	695	2.0
Poisoning by drugs, medical substances, biological, other solid and liquid substances, gases, and vapors	522	1.5
Pedal cycle, machinery	500	1.4
Machinery	471	1.3
Motor vehicle, nontraffic	297	0.8
Other transportation	152	0.4
Other mechanism[2]	2,054	5.9
Mechanism unspecified	2,403	6.8
Intentional injuries	2,157	6.1
Assault	1,686	4.8
Unarmed fight or brawl, striking by blunt or thrown object	945	2.7
Cutting or piercing instrument	129	0.4
Other and unspecified mechanism[3]	611	1.7
Self-inflicted	401	1.1
Poisoning by solid or liquid substances, gases, and vapors	252	0.7
Other and unspecified mechanism[4]	149	0.4
Other causes of violence	70	0.2
Injuries of undetermined intent	361	1.0
Adverse effects of medical treatment	1,186	3.4
Blank cause[5]	3,454	9.8

* Figure does not meet standard of reliability or precision.

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

[2]Includes drowning, suffocation, firearm, and other mechanism.

[3]Includes assault by firearms and explosives, and other mechanism.

[4]Includes injury by cutting and piercing instrument, and other and unspecified mechanism.

[5]Includes illegible entries and blanks.

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

Table 10. Number and percent distribution of emergency department visits by primary diagnosis: United States, 1997

Major disease category and ICD–9–CM code range[1]		Number of visits in thousands	Percent distribution
All visits		94,936	100.0
Infectious and parasitic diseases	001–139	2,864	3.0
Neoplasms	140–239	313	0.3
Endocrine, nutritional and metabolic diseases, and immunity disorders	240–279	1,189	1.3
Mental disorders	290–319	3,139	3.3
Diseases of the nervous system and sense organs	320–389	5,365	5.7
Diseases of the circulatory system	390–459	4,481	4.7
Diseases of the respiratory system	460–519	11,949	12.6
Diseases of the digestive system	520–579	5,704	6.0
Diseases of the genitourinary system	580–629	3,882	4.1
Diseases of the skin and subcutaneous tissue	680–709	2,422	2.6
Diseases of the musculoskeletal system and connective tissue	710–739	4,927	5.2
Symptoms, signs, and ill-defined conditions	780–799	13,456	14.2
Injury and poisoning	800–999	28,121	29.6
Fracture	800–829	3,503	3.7
Sprains	840–848	5,710	6.0
Intracranial	850–854	865	0.9
Open wounds	870–897	7,352	7.7
Superficial	910–919	1,561	1.6
Contusion	920–924	4,477	4.7
Foreign bodies	930–939	657	0.7
Burns	940–949	696	0.7
Complications	958–959	1,011	1.1
Poisoning and toxic effects	960–989	730	0.8
Other injury		1,809	1.9
Supplementary classification	V01–V82	4,154	4.4
All other diagnoses[2]		1,557	1.6
Unknown[3]		1,161	1.2

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

[2]Includes 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 disorders originating in the perinatal period (760–779).

[3]Includes blank diagnoses, uncodable diagnoses, and illegible diagnoses.

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

Table 11. Number and percent distribution of emergency department visits by selected primary diagnosis: United States, 1997

Primary diagnosis and ICD–9–CM code[1]	Number of visits in thousands	Percent distribution
All visits	94,936	100.0
Open wound, excluding head . . . 874–897	4,765	5.0
Contusion with intact skin surface . . . 920–924	4,477	4.7
Acute upper respiratory infection, excluding pharyngitis . . . 460–461,463–466	3,789	3.9
Chest pain . . . 786.5	2,814	2.9
Abdominal pain . . . 789	2,761	2.9
Otitis media and eustachian tube disorders . . . 381–382	2,661	2.8
Open wound of head . . . 870–873	2,587	2.7
Sprains and strains, excluding ankle and back . . . 840–844,845.1,848	2,405	2.5
Sprains and strains of back . . . 846–847	2,277	2.3
Fractures, excluding lower limb . . . 800–819	2,245	2.3
Dorsopathies . . . 720–724	2,027	2.1
Asthma . . . 493	1,917	2.0
Chronic and unspecified bronchitis . . . 490–491	1,703	1.7
Heart disease, excluding ischemic . . . 391–392.0,393–398,402,404,415–416,420–429	1,605	1.6
Rheumatism, excluding back . . . 725–729	1,595	1.6
Superficial injury . . . 910–919	1,561	1.6
Noninfectious enteritis and colitis . . . 555–558	1,385	1.4
Acute pharyngitis . . . 462	1,358	1.4
Pneumonia . . . 480–486	1,266	1.3
Fracture of lower limb . . . 820–829	1,258	1.3
All other	48,480	51.1

[1]Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM) (6). However, certain codes have been combined in this table to form larger categories that better describe the utilization of ambulatory care services.

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

Table 12. Number and percent of emergency department visits by diagnostic and screening services: United States, 1997

Diagnostic and screening services ordered or provided[1]	Number of visits in thousands	Percent of visits
All visits	94,936	. . .
Blood pressure	68,706	72.4
CBC[2]	24,480	25.8
Other blood test	23,039	24.3
Pulse oximetry	17,726	18.7
Chest x ray	15,863	16.7
Urinalysis	14,945	15.7
EKG[3]	14,100	14.9
Mental status exam	12,757	13.4
Extremity x ray	10,609	11.2
Other x ray	10,186	10.7
Cardiac monitor	8,318	8.8
CAT scan[4]	3,340	3.5
Pregnancy test	2,674	2.8
Ultrasound	1,623	1.7
Blood alcohol concentration	1,404	1.5
Other diagnostic image	1,074	1.1
Other STD test[5]	687	0.7
MRI imaging[6]	210	0.2
HIV serology[7]	189	0.2
Other test	6,246	6.6
None	12,660	13.3

. . . Category not applicable.
[1]Total exceeds total number of visits because more than one service may be reported per visit.
[2]CBC is complete blood count.
[3]EKG is electrocardiogram.
[4]CAT is computerized axial tomography.
[5]STD is sexually transmitted diseases.
[6]MRI is magnetic resonance imaging.
[7]HIV is human immunodeficiency virus.

Table 13. Number and percent of emergency department visits by selected procedures: United States, 1997

Procedures provided by hospital staff[1]	Number of visits in thousands	Percent of visits
All visits	94,936	. . .
IV fluids[2]	15,944	16.8
Wound care	11,481	12.1
Orthopedic care	7,235	7.6
Eye/ENT care[3]	2,456	2.6
Bladder catheter	2,254	2.4
OB/GYN care[4]	1,720	1.8
NG tube/gastric lavage[5]	628	0.7
Endotracheal intubation	370	0.4
Lumbar puncture	293	0.3
CPR[6]	254	0.3
Others	2,739	2.9
None	55,578	58.5

. . . Category not applicable
[1]Total exceeds total number of visits because more than one procedure may be reported per visit.
[2]IV is intravenous fluids.
[3]ENT is ear, nose, throat.
[4]OB/GYN is obstetrics/gynecology.
[5]NG is nasogastric.
[6]CPR is cardiopulmonary resuscitation.

Table 14. Number and percent distribution of emergency department visits by number of medications provided or prescribed: United States, 1997

Medication therapy[1]	Number of visits in thousands	Percent distribution
All visits	94,936	100.0
Drug visits[2]	67,835	71.5
Visits without mention of medication	27,101	28.5
Number of medications provided or prescribed		
All visits	94,936	100.0
0	27,101	28.5
1	28,438	30.0
2	20,002	21.1
3	9,850	10.4
4	4,594	4.8
5	2,278	2.4
6	2,672	2.8

[1]Includes prescription drugs, over-the-counter preparations, immunizing agents, and desensitizing agents.
[2]Visits at which one or more drugs were provided or prescrbed.

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

Table 15. Number of generic substances and percent of all drug mentions for the 20 most frequently occurring generic substances in drug mentions at emergency department visits: United States, 1997

Generic substance	Number of occurrences in thousands[1]	Percent of all drug mentions[2]
All generic substances	168,846	. . .
Acetaminophen	20,193	14.0
Ibuprofen	10,244	7.1
Hydrocodone	5,065	3.5
Amoxicillin	4,674	3.3
Albuterol	4,257	3.0
Promethazine	4,238	2.9
Ketorolac tromethamine	3,652	2.5
Meperidine	3,531	2.5
Codeine	2,807	2.0
Nitroglycerin	2,554	1.8
Cephalexin	2,474	1.7
Lidocaine	2,078	1.4
Tetanus Toxoid	2,063	1.4
Ceftriaxone	2,019	1.4
Furosemide	1,902	1.3
Aspirin	1,890	1.3
Trimethoprim	1,855	1.3
Sulfamethoxazole	1,822	1.3
Sodium Chloride	1,815	1.3
Diphenhydramine	1,735	1.2

. . . Category not applicable.
[1]Frequency of mention combines single-ingredient agents with mentions of the agent as an ingredient in a combination drug.
[2]Based on an estimated 143,792,000 drug mentions at emergency department visits in 1997.

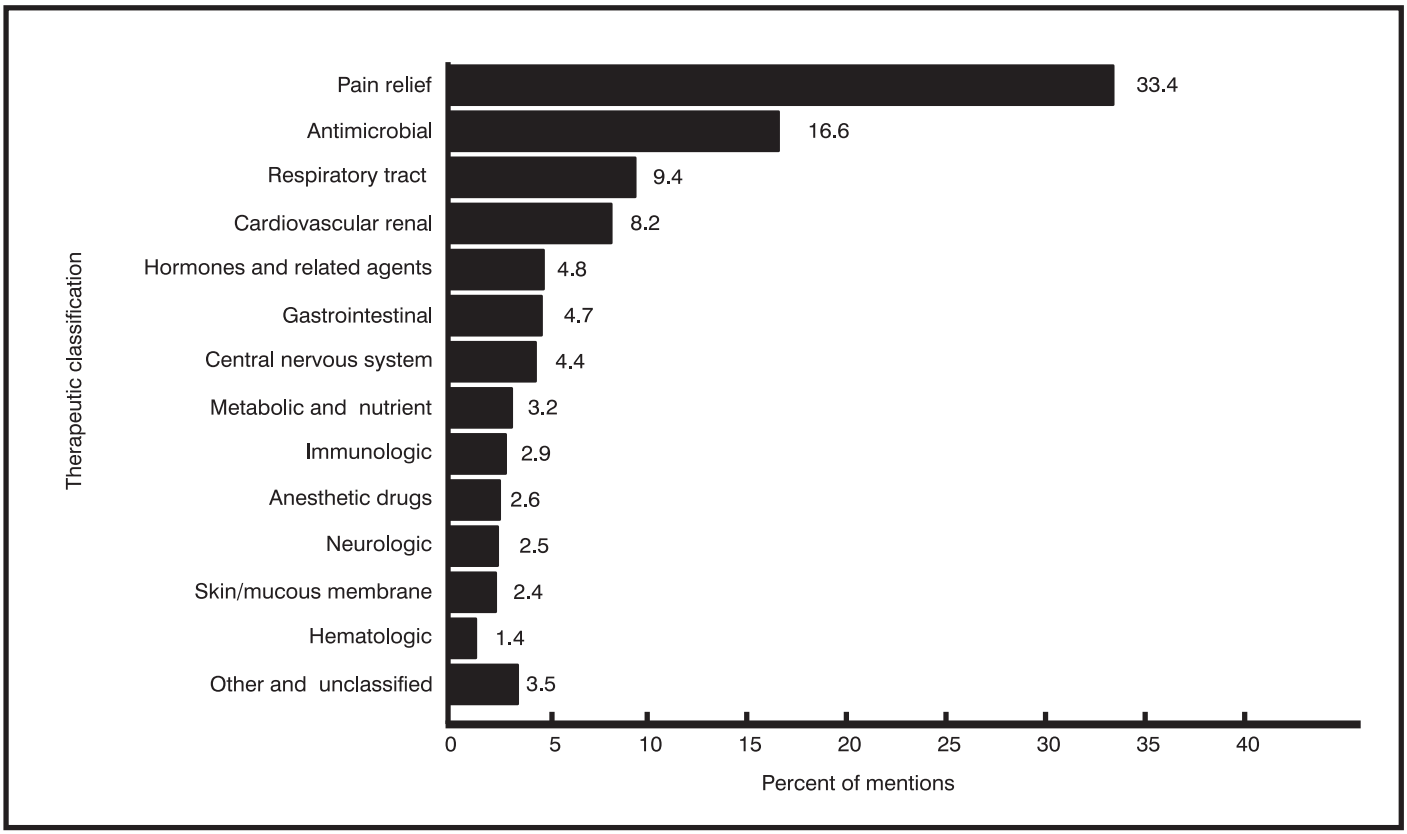

Figure 10. Percent distribution of drug mentions at emergency department by therapeutic classification: United States, 1997

Table 16. Number and percent distribution, and therapeutic classification of the 20 drugs most frequently prescribed at emergency department visits, by entry name of drug: United States, 1997

Entry name of drug[1]	Number of mentions in thousands	Percent distribution	Therapeutic classification[2]
All drug mentions	143,792	100.0	. . .
Tylenol	9,403	6.5	Analgesics, nonnarcotic
Mortin	5,895	4.1	Antiarthritics
Phenergan	3,880	2.7	Antihistamines
Toradol	3,615	2.5	Analgesics, nonnarcotic
Vicodin	3,353	2.3	Analgesics, nonnarcotic
Demerol	2,803	1.9	Analgesics, nonnarcotic
Amoxicillin	2,670	1.9	Penicillin
Ibuprofen	2,166	1.5	Antiarthritics
Keflex	2,150	1.5	Cephalosporins
Albuterol Sulfate	2,014	1.4	Bronchodialtors, antiasthmatics
Lasix	1,869	1.3	Diuretics
Rocephin	1,797	1.2	Cephalosporins
Tylenol no. 3	1,773	1.2	Analgesic, nonnarcotic
Benadryl	1,697	1.2	Antiarthritics
Advil	1,687	1.2	Antiarthritics
Prednisone	1,564	1.1	Adrenal Cortiosteroid
Darvocet-N	1,542	1.1	Analgesic, nonnarcotic
Bactrim	1,428	1.0	Sulfonamides and trimethoprim
Compazine	1,425	1.0	Antiemetics
Proventil	1,329	0.9	Bronchodilators, antiasthmatics
All other mentions	89,732	62.4	. . .

. . . Category not applicable.
[1]The entry made by hospital staff on the prescription or other medical records. This may be a trade name, generic name, or desired therapeutic effect.
[2]Therapeutic 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.

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

Table 17. Number and percent of emergency department visits by provider seen: United States, 1997

Type of provider[1]	Number of visits in thousands	Percent of visits
All visits	94,936	. . .
R.N.[2]	82,747	87.2
Staff physician	81,559	85.9
Resident/intern	10,131	10.7
Other physician	7,956	8.4
Medical/nursing assistant	7,232	7.6
E.M.T.[3]	6,949	7.3
L.P.N.[4]	5,873	6.2
Physician assistant	3,730	3.9
Nurse practitioner	1,482	1.6
Other	6,955	7.3

. . . Category not applicable.
[1]Total exceeds total number of visits because more than one disposition may be reported per visit.
[2]R.N. is registered nurse.
[3]E.M.T. is emergency medical technician.
[4]L.P.N. is licensed practical nurse.

Table 18. Number and percent of emergency department visits by disposition of visit: United States, 1997

Disposition[1]	Number of visits in thousands	Percent of visits
All visits	94,936	. . .
Referred to other physician/clinic	41,465	43.7
Return to ED, PRN/appointment[2]	24,910	26.2
Returned to referring physician	16,450	17.3
Admitted to hospital[3]	12,847	13.5
No followup planned	8,258	8.7
Transferred to other facility	1,700	1.8
Admitted to ICU/CCU[4]	1,597	1.7
Left before being seen	998	1.1
Referred to social service	326	0.3
DOA/died in ED[5,6]	322	0.3
Referred out from triage without treatment	260	0.3
Other[7]	3,204	3.4

. . . Category not applicable.
[1]Total exceeds total number of visits because more than one disposition may be reported per visit.
[2]PRN is as needed.
[3]Includes those admitted to ICU/CCU.
[4]ICU/CCU is intensive care unit/critical care unit or coronary care unit.
[5]DOA is dead on arrival.
[6]ED is emergency room.
[7]Includes unknown.

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 used in tests of significance for this report were estimated 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 (11). 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 estimate. When it is not feasible to use statistical software, such as SUDAAN, for analyzing complex survey data, one may calculate approximate relative standard errors for aggregate estimates. The approximate relative standard error can be computed by the following general formula, where x is the aggregate of interest in thousands, and A and B are the appropriate coefficients from table I.

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

Similarly, relative standard errors for an estimate of a percent 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 coefficients from table I.

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

The standard error for a rate may be obtained by multiplying the relative 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 repeating sampling, its distribution would be approximately normal.

In this report, estimates are not represented if they are based on fewer than 30 cases in the sample data. In such cases, 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.

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 error rates ranged from 0.0 to 1.6 for various data items.

Adjustments for survey nonresponse—Estimates from NHAMCS data were adjusted to account for sample hospitals that were in scope but did not participate in the study. This adjustment was calculated to minimize the impact of nonresponse on final estimates by imputing to nonresponding hospitals data from visits to similar hospitals. For this purpose, hospitals were judged similar if they were in the same region, ownership control group, and metropolitan statistical area control group.

Estimates from NHAMCS data were adjusted to account for ED's and sample clinics that were in scope but did not participate in the study. This adjustment was calculated to minimize the impact of nonresponse on final estimates by imputing to nonresponding ED's or clinics' data from visits to similar ED's or clinics. For this purpose, ED's or clinics were judged similar if they were in the same ED or clinic group.

Adjustments for item nonresponse—Weighted item nonresponse rates were 5.0 percent or less for data items with the following exceptions: mode of arrival (81.6 percent), is patient pregnant? (46.0 percent of visits for women 15–44 years of age), ethnicity (26.0 percent), race (11.4 percent), primary expected source of payment for this visit (5.4 percent), does patient belong to an HMO? (34.6 percent), presenting level of pain (44.5 percent), place of occurrence of injury (40.1 percent of injury visits), is this injury intentional? (12.6 percent of injury visits), is this injury work related? (29.6 percent of injury visits), and cause of injury (9.8 percent of injury visits).

For some items, missing values were imputed by randomly assigning a value from Patient Record forms with similar characteristics. For the variable

Table I. Coefficients appropriate for determining approximate relative standard errors: National Hospital Ambulatory Medical Care Survey, 1997: Emergency departments

Type of estimate	Coefficient for use with estimates in thousands		Lowest reliable estimate in thousands
	A	*B*	
Visits	0.002228	6.8656	78
Drug mentions	0.003027	18.455	213

''immediacy with which patient should be seen'' (1.4 percent with missing values, i.e., none of the categories were checked), the grouping was based on ED size, geographic region, and 3-digit ICD–9–CM code for primary diagnosis. The other imputed items were: visit time (1.4 percent), birth year (3.5 percent), sex (1.4 percent), and race (11.4 percent). Imputation for them was based on hospital size, geographic region, immediacy with which patient should be seen, and 3-digit ICD–9–CM code for primary diagnosis. There are fewer imputed items than previous survey years where imputations were also performed for the following variables: ethnicity, disposition, and provider seen. 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 ''higher 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 ED 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 9 presents data on the intent and mechanism producing the injuries that resulted in visits to hospital emergency departments. Cause of injury is collected for each sampled injury visit in NHAMCS and is coded according to the ICD–9–CM's ''Supplementary Classification of External Causes of Injury and Poisoning.'' For table 9, however, cause-of-injury data were regrouped to highlight the interaction between intentionality of the injury and the mechanism that produced the injury. Table II displays the groupings used in table 9.

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 estimate 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 are provisional at this time and 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 admitted to any health care institution on the premises.

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 that 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.

Emergent visit— A visit at which the triage practitioner determines that the patient should receive care immediately to combat danger to life or limb, and where any delay would likely result in deterioration. If the visit was determined to be emergent, ''less than 15 minutes'' was to be checked in item 10, ''Immediacy with which patient should be seen'' on the Patient Record form.

Hospital—To be in scope for 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 related to an illness condition if it was not an injury visit as defined below.

Injury-related visit—A visit is related to an injury if ''yes'' was checked in response to question 14, ''Is 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.

Nonurgent visit—A visit at which the triage practitioner determines that a delay of up to 24 hours would make no appreciable difference to the clinical condition of the patient and where subsequent referral may be made to the appropriate alternative specialty.

Table II. Reclassification of 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–E869, 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
Poisoning by drugs, medicinal substances, biologicals, other solid and liquid substances, gases, and vapors	E850–E869
Fire and flames, hot substance or object, caustic or corrosive material, and steam	E890–E899, E924
Machinery	E919
Pedal cycle, nontraffic and other	E800–E807(.3), E820–E825(.6), E826.1, E826.9
Motor vehicle, nontraffic	E820–E825(.0–.5,.7–.9)
Other transportation	E800–E807(.0–.2,.8–.9), E826(.0,.2–.8), E827–E829, E831, E833–E845
Suffocation	E911–E913
Firearm missile	E922
Drowning/submersion	E830, E832, E910
Other and not elsewhere classified	E846–E848, E914–E915, E918, E921, E923, E925–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
Assault	E960–E969
Unarmed fight or brawl, striking by blunt or thrown object	E960.0, E968.2
Cutting or piercing instrument	E966
Firearms	E965.0–E965.4
Other and unspecified mechanism	E960.1, E962–E964, E965.5–E965.9, E967–E968.1, E968.3–E969
Self-inflicted	E950–E959
Poisoning by solid or liquid substances, gases, and vapors	E950–E952
Cutting and piercing instrument	E956
Suffocation	E953
Other and unspecified mechanism	E954–E955, E957–E959
Other causes of violence	E970–E978, E990–E999
Injuries of undetermined intent	E980–E989
Adverse effects of medical treatment	E870–E879, E930–E949

[1]Based on the "Supplementary Classification of External Causes of Injury and Poisoning," *International Classification of Diseases, 9th Revision, Clinical Modificaton* (ICD–9–CM) (6).

No triage—A visit to an emergency department that normally does not determine the level of immediacy of need for care upon the patient's arrival.

Outpatient department—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 other nonprofit organization.

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

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

Semiurgent visit—A visit at which the triage practitioner determines that the patient requires treatment within 1–2 hours.

Urgent visit—A visit at which the triage practitioner determines that the patient should receive care as soon as possible. The patient is not in severe pain and poses no threat to self or others. Urgent visits were categorized as requiring attention with 15–60 minutes in item 10 on the Patient Record form.

Visit—A direct, personal exchange between a patient and a physician or other health care provider working under the physician's supervision for the purpose of seeking care and receiving personal health services.

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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