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National Hospital Ambulatory Medical Care Survey: 2006 Emergency Department Summary

by Stephen R. Pitts, M.D., M.P.H., F.A.C.E.P.; Richard W. Niska, M.D., M.P.H., F.A.C.E.P.; Jianmin Xu, M.S.; and Catharine W. Burt, Ed.D., Division of Health Care Statistics

Abstract

Objective—This report presents the most current (2006) nationally representative data on visits to hospital emergency departments (ED) in the United States. Statistics are presented on selected hospital, patient, and visit characteristics.

Methods—Data are from the 2006 National Hospital Ambulatory Medical Care Survey (NHAMCS), the longest continuously running nationally representative survey of hospital ED utilization. The NHAMCS collects data on visits to emergency and outpatient departments of nonfederal, short-stay, and general hospitals in the United States. Sample data are weighted to produce annual national estimates.

Results—In 2006 there were 119.2 million visits to hospital EDs, or 40.5 visits per 100 persons, continuing a long-term rise in both indices. The rate of visits per 100 persons was 36.1 for white persons, 79.9 for black persons, and 35.3 for Hispanic persons. ED occupancy (the count of patients who had arrived, but not yet discharged, transferred, or admitted) varied from 19,000 patients at 6 a.m. to 58,000 at 7 p.m. on an average day nationally. Though overall ED visits increased, the number of visits considered emergent or urgent (15.9 million) did not change significantly from 2005, nor did the number of patients arriving by ambulance (18.4 million). At 3.6 percent of visits, the patient had been seen in the same ED within the previous 72 hours. Median time to see a clinician was 31 minutes. Of all ED visits, 35.6 percent were for an injury. Patients had computerized tomography or magnetic resonance imaging at 12.1 percent of visits, blood drawn at 38.8 percent, an intravenous line started at 24.0 percent, an x ray performed at 34.9 percent, and an electrocardiogram done at 17.1 percent. Patients were admitted to the hospital at 12.8 percent of ED visits in 2006. The ED was the portal of admission for 50.2 percent of all nonobstetric admissions in the United States in 2006, an increase from 36.0 percent in 1996. Patients were admitted to an intensive care unit at 1.9 percent of visits.

Keywords: emergency department visits • diagnosis • injury • medications

Introduction

The National Hospital Ambulatory Medical Care Survey (NHAMCS) was inaugurated in 1992 to gather, analyze, and disseminate information about the health care provided by hospital emergency departments (ED) and outpatient departments (OPD). NHAMCS is part of the ambulatory component of the National Health Care Surveys, a family of surveys that measures health care utilization across various types of providers. More information about the National Health Care Surveys can be found at the National Center for Health Statistics (NCHS) website: www.cdc.gov/nchs.

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. Approximately 11 percent of all ambulatory medical care visits in the United States occur in the ED (1), although emergency physicians represent just 3.3 percent of active physicians (2). EDs provide unscheduled care for a wide variety of persons for reasons that range from sudden cardiac arrest or severe injury to minor acute problems that occur after business hours, or for



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which the patient is unable to access a primary care provider in a timely fashion. In 2005, approximately one-fifth of the U.S. population had made one or more ED visits within the past 12 months (3) and some subgroups, such as infants, persons 75 years of age and older, Medicaid beneficiaries, and African Americans, had higher utilization rates than others (1).

In the last decade, the increasing frequency of ED visits has coincided with decreasing numbers of EDs and decreasing numbers of inpatient beds. Thus, EDs nationwide are under increasing pressure to provide care for more patients, resulting in crowding, hallway boarding of admitted patients, and ambulance diversion (4). ED crowding has had multiple other effects, including decreased physician productivity and increased waiting times for minor illness (5). However, delays are now also occurring for the treatment of serious problems, such as myocardial infarction (6). New evidence shows that crowding reduces the promptness and quality of pain management, a cardinal function of EDs (7). Information on ambulance transports and diversion (8) and ED staffing and capacity (9) has been published using NHAMCS data.

This report presents data on selected trends and data on ED visits in terms of hospital, patient, and visit characteristics. More detailed information on definition of terms may be found in the 2003 *ED Advance Data from Vital and Health Statistics* report (10). The 2006 survey duplicates the items on the 2005 survey, adding only one item, namely the actual level of oxygen saturation on pulse oximetry, rather than the fact of its performance (11).

Other reports highlight visits to OPDs (12) and physician offices (13). A detailed report on medication therapy in U.S. ambulatory medical care settings, including EDs, has been published recently (14). NHAMCS data have been used in articles examining important topics in public health; health services research; emergency response planning; training and drilling (6, 15–23); and for a variety of activities by governmental, scientific, academic, and commercial institutions.

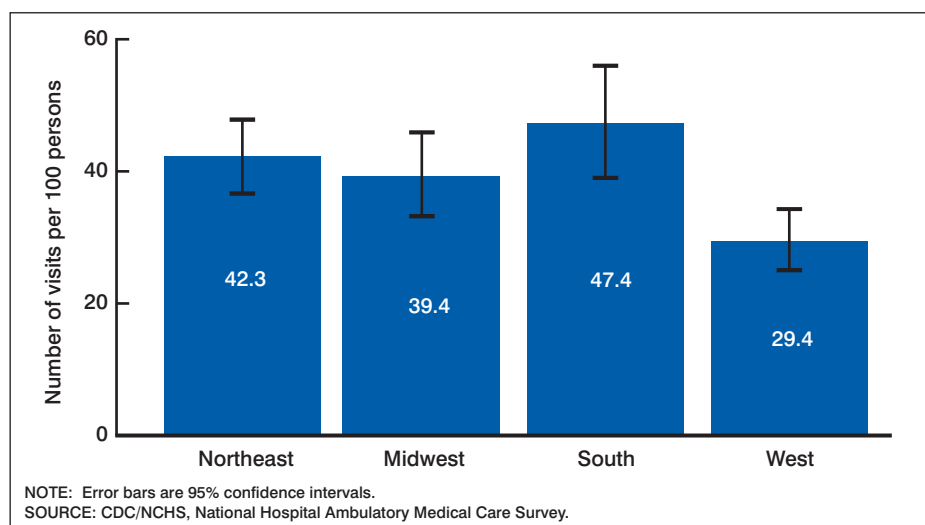


Figure 1. Annual rate of visits to emergency departments by geographic region: United States, 2006

Additional information about ED utilization is available from the NCHS Ambulatory Health Care website: www.cdc.gov/nchs/nhamcs.htm.

Individual-year reports and public-use data files are available for download from the website. Data from the 2006 NHAMCS will also be available on CD-ROM. These and other products can be obtained from the NCHS Office of Information Services, Information Dissemination Staff at 1-800-311-3435 or the Ambulatory and Hospital Care Statistics Branch at 301-458-4600 or by e-mail at CDCINFO@cdc.gov.

Highlights

ED Utilization

- From 1996 through 2006, the annual number of ED visits increased from 90.3 million (24) to 119.2 million visits (up by 32 percent). This represents an average increase of about 2.9 million visits (3.2 percent) per year. There were, on average, about 227 visits to U.S. EDs every minute during 2006.
- As the number of visits to the ED has increased, the number of hospital EDs has decreased from 4,019 to 3,833 (25), thus increasing the annual number of visits per ED.
- From 1996 through 2006, the overall population-based ED utilization rate increased by 18 percent, from

34.2 (24) to 40.5 visits per 100 persons (Table 1).

- Population-based utilization rates varied by geographic region, with the West having the lowest ED visit rate (Figure 1).
- About 35.0 percent of ED visits were made to hospitals designated as trauma centers (Table 1).

Patient characteristics

- The age group with the highest annual per capita ED visit rate was infants under 12 months of age, who made 84.5 visits per 100 infants. This represents about 3.5 million visits (Table 2). Three-quarters of these visits were to general EDs, 9.2 percent to pediatric EDs within general hospitals, and 14.3 percent to pediatric hospital EDs (Figure 2).
- Persons aged 75 years and older had the second highest per capita ED visit rate at 60.2 visits per 100 persons. This represents about 10.2 million visits (Table 2).
- The ED visit rate for black persons was about double the rate for white persons in all age groups, whereas Asian or Pacific Islander persons had about half the visit rate of white persons (Table 2).
- The ED visit rate varied little between persons of Hispanic and non-Hispanic ethnicity.
- Persons living in nursing homes made 139.5 ED visits per 100 residents.

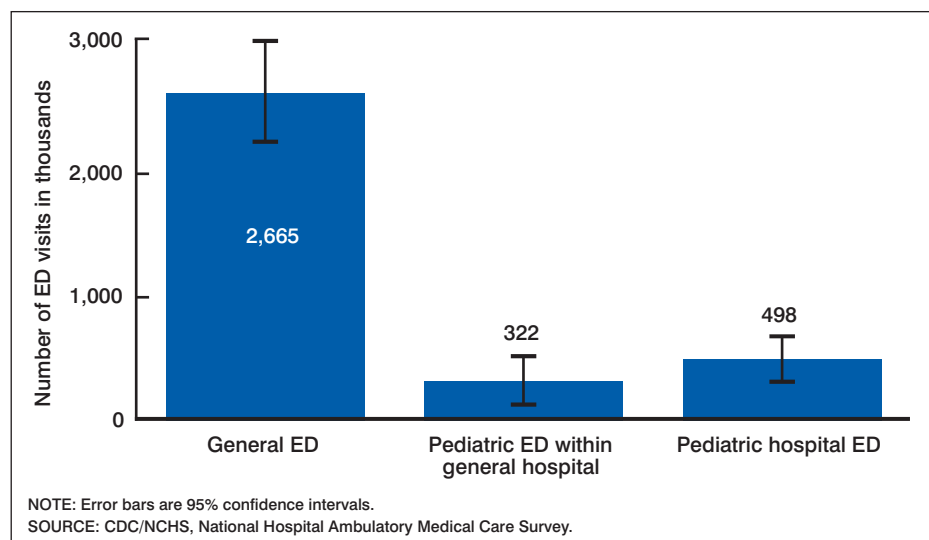


Figure 2. Number of visits to emergency departments (ED) by infants less than 1 year old, by pediatric ED type: United States, 2006

This represents about 2.1 million visits (1.7 percent) (Table 2).

- Homeless people made 83.6 ED visits per 100 homeless persons (26). This represents about 635,000 visits (0.5 percent) (Table 2).

Payment Source

- Private insurance was the most frequent expected source of payment, accounting for 39.7 percent of all ED visits (Table 3).
- Other sources included Medicaid or State Children's Health Insurance Program (SCHIP) (25.5 percent) and Medicare (17.3 percent) (Table 3).
- Uninsured patients (including self-pay, no charge, and charity, where no other payment source was reported) represented 17.4 percent of visits (Table 3).
- The visit rate for Medicaid patients (82 per 100 persons with Medicaid) was higher than the rate for those with Medicare (48 per 100 persons with Medicare), no insurance (48 per 100 persons with no insurance), and private insurance (21 per 100 persons with private insurance (Figure 3) (27).

Mode of arrival

- There were 18.4 million ambulance transports to the ED in 2006, representing 15.4 percent of ED visits (Table 4). This corresponds to a rate

of 6.2 transports per 100 persons, which has increased about 17 percent from 5.4 per 100 in 1997, the first year that this variable was collected in NHAMCS.

- Over one-third (36.1 percent) of patients 65 years of age and older arrived in the ED by ambulance (Table 4).

Patient acuity level

- Patients were triaged as needing to be seen immediately at 5.1 percent of ED visits, and within 1 to 14 minutes (emergent) at 10.8 percent of visits. Patients were triaged as needing to be

seen within 15 to 60 minutes (urgent) at 36.6 percent, 1 to 2 hours (semi-urgent) at 22.0 percent, and 2 to 24 hours (nonurgent) at 12.1 percent of visits. For the remaining 13.4 percent of visits, the triage status was not known or no triage system was used (Table 5). There was little change in these proportions compared with 2005.

- A higher proportion of visits (24.6 percent) by patients 65 years of age and older was triaged as immediate or emergent compared with other age groups (Table 5).
- Patients presented with severe pain at 20.4 percent of visits, and with moderate pain at 25.0 percent of visits (Table 6).
- About 3.6 percent of ED visits were made by patients who had been seen in the same ED within the last 72 hours. About 2.1 percent of ED visits were made by patients who had been discharged from the hospital within the last 7 days (Table 6).
- For adults 18 years of age and older, blood pressures (BP) were in the normal range at 14.6 percent of visits. BP was lower than normal at 6.0 percent, mildly high at 33.5 percent, moderately high at 25.8 percent, and severely high at 16.2 percent of ED visits (Table 7). At about 9.5 percent of all visits the BP was greater than 180 mm Hg

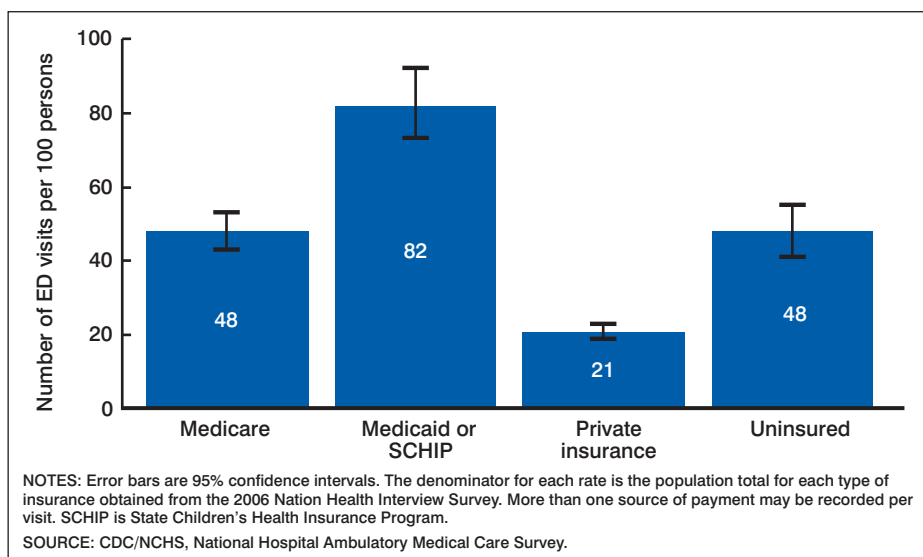


Figure 3. Number of emergency department (ED) visits per 100 persons, by expected source of payment: United States, 2006

systolic or 120 mm Hg diastolic (data not shown), a level considered to be an emergency when accompanied by evidence of progressive or impending target organ dysfunction (28).

Chief complaints

- The frequency of the 20 leading principal reasons for visit is shown in [Table 8](#), and grouped by age and sex in [Table 9](#).
- The most common reasons for visit among children (aged 15 years and under) were fever, cough, vomiting, earache, and unspecified injury to head, neck, or face.
- The most common specific principal reasons given by adult patients (aged 15 years and older) for visiting the ED were, in descending frequency: chest pain, abdominal pain, back pain, headache, and shortness of breath.

Primary diagnosis at visit

- The most frequent major disease categories assigned by ED physicians were injuries and poisonings (24.3 percent); symptoms, signs, and ill-defined conditions (20.1 percent); and diseases of the respiratory system (10.0 percent) ([Table 10](#)).
- The most common diagnoses at ED disposition varied considerably between adults and children, with otitis media, fever of unknown source, and pharyngitis only present in the children's top 10 diagnostic rankings, and chest pain and spinal disorders only ranking high among adults. The top 10 diagnostic groups for children (under age 15 years) and adults (aged 15 years and older), stratified by sex, are shown in [Table 11](#).

Injury, poisoning, and adverse effects of medical treatment

- Visits for injury, poisoning, or adverse effects of medical treatment accounted for 42.4 million visits (35.5 percent), or 14.4 visits per 100 persons. Injury visit rates were higher for males (15.5 per 100 persons) than

females (13.4 per 100 persons), and higher for black persons (22.7 per 100 persons) than white persons (13.8 per 100). The most affected age groups included young adults 15 to 24 years of age (19.2 per 100 persons), adults 75 years of age and older (18.8 per 100 persons), and children 1 to 4 years of age (16.1 per 100 persons) ([Table 12](#)).

- The most frequent injury mechanisms were unintentional falls (20.3 percent) and motor vehicle traffic accidents (9.5 percent), based on first-listed cause of injury ([Table 13](#)).
- Intentional injuries accounted for about 2.5 million (5.9 percent) of injury-related ED visits ([Table 13](#)).
- Adverse effects of medical treatment accounted for 1.9 million visits, including complications of medical and surgical procedures (2.5 percent of injury visits) and adverse effects of medication (1.8 percent of injury visits) ([Table 13](#)).
- About 1.2 million visits were for poisoning, either unintentional (1.9 percent of injury visits) or self-inflicted (0.9 percent of injury visits) ([Table 13](#)).
- The most commonly mentioned body sites for injuries were wrist, hand, and fingers (10.6 percent) followed by lower leg and ankle (4.3 percent). Cervical spine injuries were seen at 2.1 percent of injury-related ED visits ([Table 14](#)).

Services provided

- Diagnostic services, exclusive of medical screening and mental status exams, were provided at 77.4 percent of visits ([Table 15](#)).
- Blood tests were ordered at 38.8 percent of visits. Complete blood counts were the most frequent (34.9 percent), followed by blood urea nitrogen or creatinine (21.2 percent), glucose (19.8 percent), electrolytes (18.5 percent), cardiac enzymes (11.6 percent), liver function tests (6.3 percent), and arterial blood gases (2.3 percent) ([Table 15](#)).
- Imaging was ordered at 44.2 percent of visits. Conventional x rays were done at 34.9 percent, computed

tomography (CT) scans at 11.6 percent, ultrasound at 3.1 percent, and magnetic resonance imaging (MRI) scans at 0.5 percent of ED visits ([Table 15](#)).

- Other tests frequently recorded include pulse oximetry (41.2 percent), urinalysis (21.8 percent), and ECG (17.1 percent) ([Table 15](#)).
- Pulse oximetry values were collected for the first time in the 2006 survey. The median oxygen saturation was 98 percent, with fewer than 5 percent of visits having a level less than 93 percent ([Table 15](#)).
- Procedures were performed at 47.6 percent of ED visits. The most frequently mentioned procedures were the administration of intravenous fluids (24.0 percent), wound care (10.0 percent), orthopedic care (5.9 percent), nebulizer therapy (3.1 percent), and bladder catheterization (2.8 percent) ([Table 16](#)).

Clinicians providing services

- Patients saw physicians at 90.2 percent of ED visits, physician assistants at 8.7 percent, and nurse practitioners at 4.1 percent of visits ([Table 17](#)).
- Patients saw an ED attending physician alone at 80.3 percent of visits, an ED resident or intern alone at 1.6 percent of visits, and an on-call attending physician or fellow alone at 0.8 percent of visits. At 7.4 percent of visits, patients were seen by both a resident and an ED attending physician.
- Registered nurses (RNs) or licensed practical nurses (LPNs) were involved in patient care during 88.9 percent of ED visits, and emergency medical technicians during 9.3 percent of ED visits ([Table 17](#)).

Medications

- Medications were either given in the ED or prescribed at discharge at 76.6 percent of visits. This represents about 212 million drug mentions, or 1.8 drug mentions per visit ([Table 18](#)).

- The 2006 survey year is the first year that drug data were processed according to the Multum Lexicon database (for additional information see the website: www.multum.com/Lexicon.htm). Based on Multum terminology, the leading therapeutic drug classes mentioned during ED visits were analgesics, including narcotic and nonnarcotic pain medications and nonsteroidal anti-inflammatory drugs (36.8 percent); antimicrobials, including cephalosporins, penicillins, quinolones, macrolides, sulfonamides, and miscellaneous (15.9 percent); and antiemetic or antivertigo agents (8.9 percent) (Table 19). It should be noted that MULTUM therapeutic categories are not comparable with the therapeutic classification used prior to 2006 (see Methods).
- Specifically, acetaminophen (alone or in combination with hydrocodone or oxycodone) (6.1 percent of drug mentions), promethazine (3.4 percent), ketorolac (3.3 percent), and ibuprofen (3.2 percent), were the most frequent drugs given in the ED. Acetaminophen (alone or in combination with hydrocodone or oxycodone) (8.7 percent of drug mentions) and ibuprofen (4.9 percent) were the most frequently prescribed drugs at discharge. Cephalosporins, including ceftriaxone and cephalexin (1.9 percent), were the most common antimicrobials given in the ED, and amoxicillin (1.4 percent) was the most common antimicrobial prescribed at discharge (Table 20).

Disposition

- Patients were referred to an outside physician or clinic for follow-up at 64.2 percent of ED visits, and advised to return to the ED as needed at 36.2 percent of visits (Table 21). At only 5.6 percent of visits was no follow-up planned.
- Of 119.2 million ED visits, 12.8 percent (15.3 million visits and 5.2 visits per 100 population) resulted in admission to the hospital, and 1.9 percent resulted in transfer to other hospitals (Table 21).

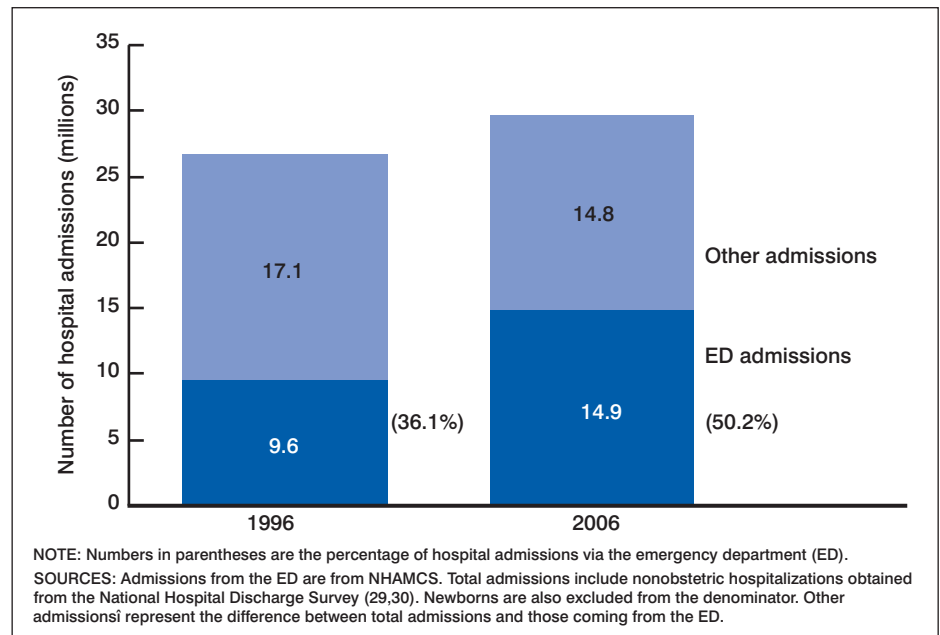


Figure 4. Number of hospital admissions by route of admission and year: United States, 1996 and 2006

- In 2006, there were 29.7 million nonobstetric hospital admissions in the United States, of which 50.2 percent came through the ED (29). This is a significant increase from 1996, when 36.0 percent of the 26.7 million total nonobstetric admissions came through the ED (Figure 4) (30).
- Among visits resulting in admission to the same hospital, 40.0 percent were by patients 65 years of age and older, 40.3 percent began with arrival by ambulance, 34.3 percent were triaged as immediate or emergent, and 14.8 percent were admitted to a critical care unit. The average length of stay for patients admitted from the ED was 5.3 days (Table 22), and the median was 3 to 4 days.
- For patients who were admitted to the hospital, adults who came to the ED with chest pain were discharged earlier than others (Table 23). Hospital length of stay was greater for patients with Medicare and Medicaid source of payment than uninsured and private insurance patients (Table 23).
- Among those admitted from the ED, the leading principal hospital discharge diagnoses were nonischemic heart disease (6.7 percent of admissions), chest

pain (5.4 percent), ischemic heart disease (4.4 percent), and pneumonia (4.3 percent) (Table 24).

- The percentage of ED visits resulting in hospital admission varied by season of the year and geographic region. Although the South had the highest population-based visit rate, it had the lowest proportion of visits resulting in admission. (Figure 5).

ED patient flow indicators

- At 61.8 percent of visits, the patient waited less than 1 hour to see a physician. The mean waiting time to see a physician was 55.8 minutes. However, given its markedly skewed distribution, waiting time is better represented by the median, which was 31 minutes (Figure 6). Waiting time was briefer and patient care time was longer for more urgent triage categories, but for ED patients admitted to the hospital, patient care time was constant across triage categories (Figure 7).
- Nearly 7 out of 10 visits spent fewer than 4 hours in the ED. The median patient care time was 2.6 hours, including hospitalized patients and not including waiting time (Table 25).
- At 2.0 percent of visits, patients left without being seen by a health care

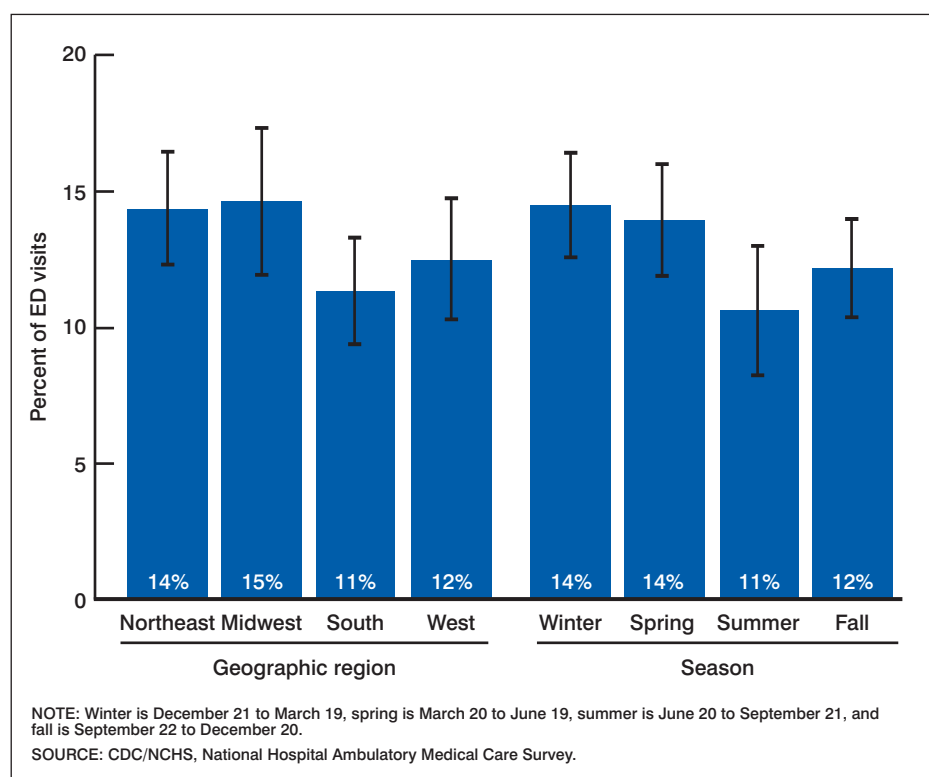


Figure 5. Percentage of emergency department visits resulting in an admission by season and geographic region: United States, 2006

provider and an additional 1.3 percent, patients left against medical advice ([Table 21](#)).

- At 62.9 percent of adult ED visits, the patient arrived after business hours, which are defined as 8 a.m. to 5 p.m., Monday–Friday (i.e., excluding evenings, nights, and weekends). Children under age 15 years arrived after business hours at 72.5 percent of ED visits (calculated from [Table 6](#)).
- On an average day in 2006, the frequency of new patient arrivals varied markedly by time of day, from a low of 4,000 between 4 a.m. and 5 a.m. to a high of 20,000 between 6 p.m. and 7 p.m. Total ED occupancy reached a peak at 7 p.m., when 19 percent of the day’s arrivals were present in the ED ([Figure 8](#)).
- ED visit volume was higher in the winter (32.5 million) and summer (31.4 million) compared with spring (28.1 million) and fall (27.2 million) ([Figure 9](#)).

Methods

Data source

The data in this report are from the 2006 NHAMCS, a national probability sample survey of nonfederal, general, and short-stay hospitals conducted by the Centers for Disease Control and Prevention’s National Center for Health Statistics, Division of Health Care Statistics. The survey was conducted from January 2, 2006, through December 31, 2006. The NHAMCS data collection is authorized under Section 306 of the Public Health Service Act (Title 42 U.S. Code, 242k). Participation is voluntary. In 2006, a sample of 486 general and short-stay hospitals was selected from a sampling frame constructed from products of Verispan, L.L.C., specifically their “Healthcare Market Index, Updated May 15, 2003” and their “Hospital Market Profiling Solution, Second Quarter, 2003.” These products were formerly known as the SMG Hospital Database. Using the 2003 data to update the sample allowed the inclusion of hospitals that had opened or

changed their eligibility status since the previous sample was updated for 2001.

Data collected in the NHAMCS are consistent with the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA). No personally identifying information, such as patient’s name, address, or Social Security number, is collected in the NHAMCS. All information collected is held in the strictest confidence according to law and the Confidential Information Protection and Statistical Efficiency Act (Title 5 of PL 107–347). Approval for the NHAMCS protocol was renewed by the NCHS Research Ethics Review Board in February 2006. Waivers of the requirements to obtain informed consent of patients and patient authorization for release of patient medical record data by health care providers were granted.

The target universe of the NHAMCS is in-person visits made in the United States to EDs and OPDs of nonfederal, short-stay hospitals (hospitals with an average stay of less than 30 days) and those whose specialty is general (medical or surgical) or children’s general. EDs that operate 24 hours a day are considered within the scope of the ED component; EDs that operate fewer than 24 hours a day are included in the OPD component of the NHAMCS (31).

In 2006, the four-stage probability sample of all hospitals was combined with a supplemental three-stage probability sample of children’s general hospitals. The four-stage design involves sampling geographic primary sampling units (PSUs), hospitals and emergency departments within PSUs, emergency service areas (ESAs) within emergency departments, and then patient visits within ESAs. The sample consisted of 112 PSUs that comprised a probability subsample of the PSUs used in the 1985–1994 National Health Interview Survey. In 2006, with funding from the Health Resources and Services Administration, a supplemental list sample of 26 children’s hospitals, regardless of PSU, was added. The design of the sample within hospitals was identical to that of the four-stage design. Hospital staff were asked to

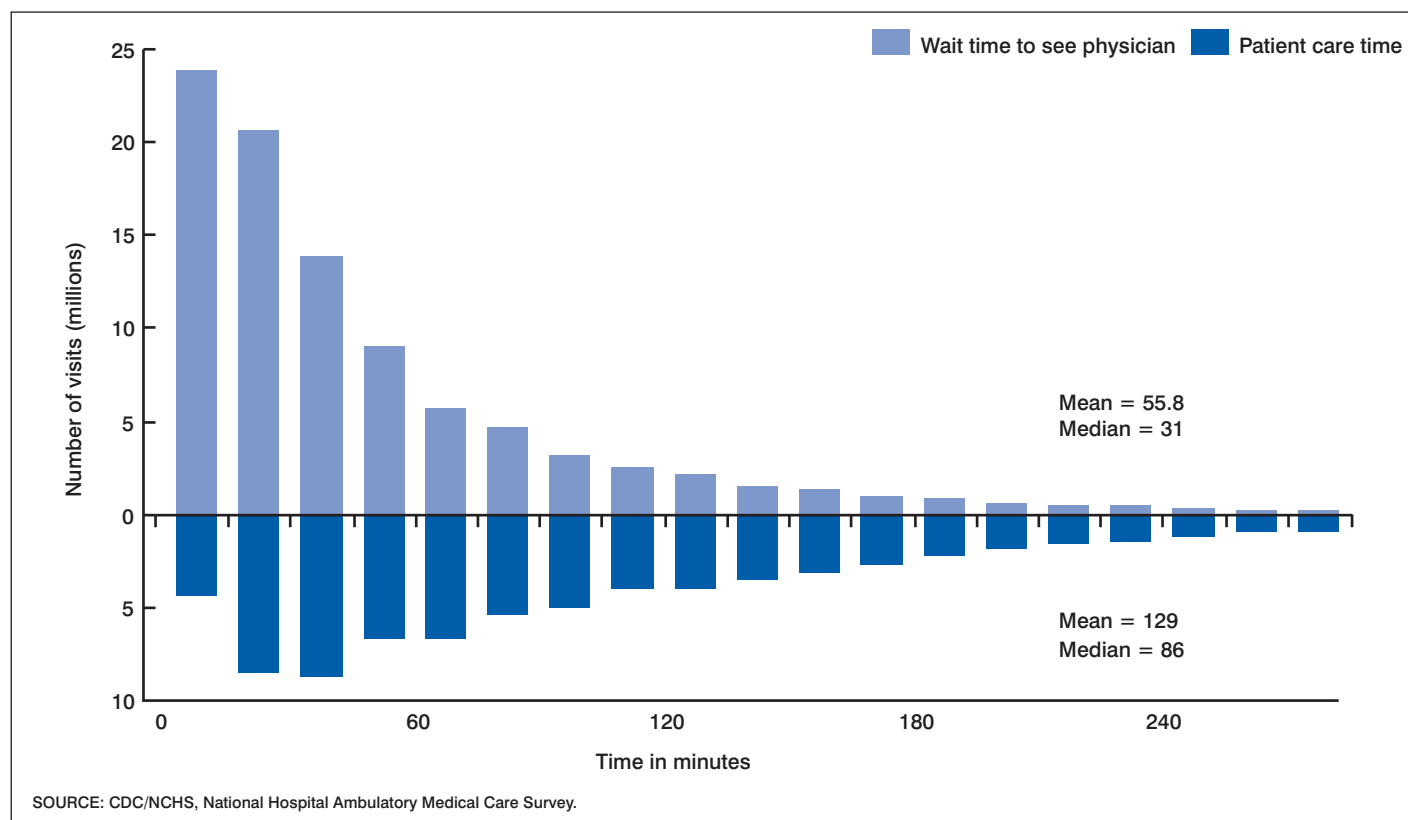


Figure 6. Number of visits by wait time and patient care time: Patient care time bars exclude hospital admission, United States 2006

complete a Patient Record form (PRF) for a sample of visits during a 4-week reporting period (see Figure 10). All together, a sample of 486 hospitals was selected for the 2006 NHAMCS, 414 of which were in scope and had eligible EDs. Of the in-scope EDs, 362 participated, yielding an unweighted ED response rate of 87.4 percent. A sample of 492 ESAs was selected from the EDs, and 469 of the 492 ESAs provided 35,849 PRFs. Of the 469 ESAs providing PRFs, 464 of them responded fully or adequately. The resulting unweighted ESA sample response was 94.3 percent, and the overall unweighted sample response rate was 82.5 percent.

The U.S. Census Bureau was responsible for data collection. Data processing and medical coding were performed by Constella Group, Inc., Durham, North Carolina. As part of the quality assurance procedure, a 10 percent quality control sample of ED survey records was independently keyed and coded. Coding error rates ranged between 0.3 and 0.9 percent for various survey items.

Medical data collected in the survey were coded as follows:

- *Patient's reason for visit*—The patient's main complaint, symptom, or reason for visiting the ED was coded according to *A Reason for Visit Classification for Ambulatory Care* (RVC) (32). Up to three reasons could be coded per visit.
- *Blood pressure (BP)*—Recorded values were coded into six bands (low, normal, mildly high, moderately high, severely high, and missing). Normal BP was defined as having both a systolic BP between 100 and 119 mm Hg and a diastolic BP between 60 and 79 mm Hg. Low BP was defined as either measurement being below normal (33). Mildly high BP was defined as either systolic BP between 120 and 139 mm Hg or diastolic BP between 80 and 89 mm Hg, corresponding to the Seventh Joint National Committee (JNC-7) prehypertension category. Moderately high BP was defined as either systolic BP between 140 and 159 mm Hg or diastolic BP between 90 and 99 mm

Hg, corresponding to the JNC-7 stage 1 hypertension category. Severely high BP was defined as either systolic BP 160 mm Hg or greater or diastolic BP 100 mm Hg or greater, corresponding to the JNC-7 stage 2 hypertension category (29). Patients were classified hierarchically according to the more severely elevated measurement starting with severely high, followed by moderately high, mildly high, low, and normal, respectively. Although the diagnosis of hypertension is not made with isolated elevated BP readings, these results are reported in terms of high BP rather than hypertension, and classified as detailed above, rather than using the JNC-7 stage nomenclature for diagnosed hypertension.

- *Diagnosis*—Respondents were asked to record the primary diagnosis associated with the patient's most important reason for the current visit and any other significant current diagnoses. Up to three ED diagnoses and the principal hospital discharge diagnosis were coded according to

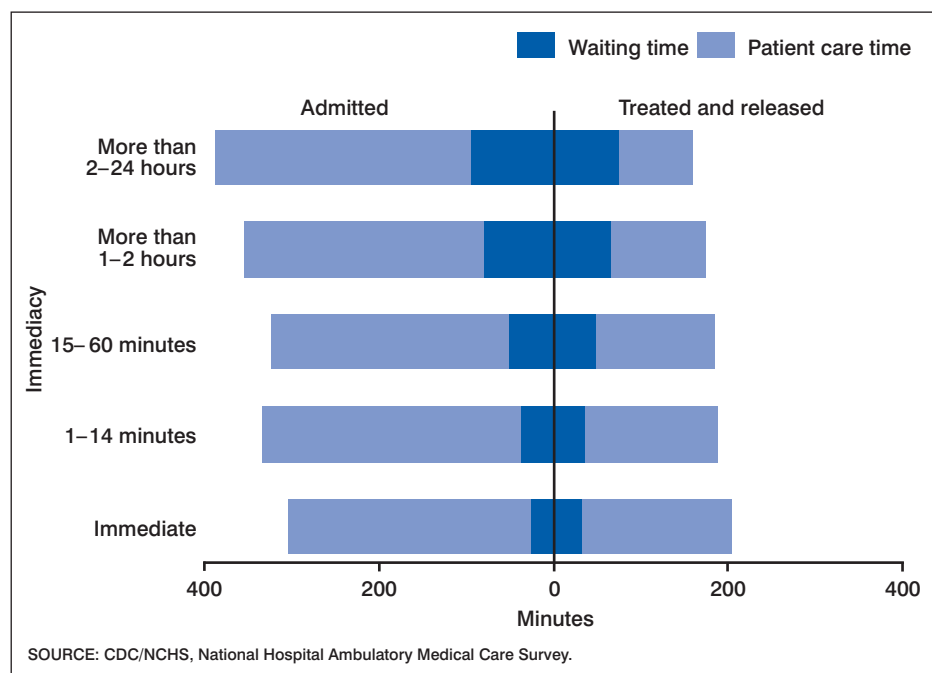


Figure 7. Duration of emergency department stay in minutes, by immediacy with which the patient should be seen and disposition: United States, 2006

the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) (34).

- **Causes 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* (ICD-9-CM) (34). The *Barell Injury Diagnosis Matrix: Classification of Region of Body and Nature of the Injury* was used to determine the distribution of injury-related visits by body site of primary diagnosis (35).
- **Injury, poisoning, or adverse effect of medical treatment**—Although there was a separate item on the PRF to indicate whether the visit was for an injury, poisoning, or adverse effect of medical treatment, sometimes an injury reason for visit was specified or an injury diagnosis recorded without the injury item being checked. Therefore, the visit was counted as an injury visit and the checkbox was coded to “yes” if any of the three reasons for visit were in the injury module or any of the three diagnoses were in the injury or poisoning chapter of the ICD-9-CM or any external cause of injury was recorded.

- **Medications**—Abstracters were instructed to record up to eight medications given at this visit or prescribed at ED discharge. This included prescription and nonprescription preparations, immunizations, desensitizing agents, and anesthetics. In this survey, recorded medications are referred to as drug mentions, and are coded according to a classification system developed at NCHS (36). As used in the NHAMCS, the term “drug” is interchangeable with the term “medication.” The term “prescribing” is used broadly to mean ordering or providing any medication, whether prescription or over the counter. Visits with one or more drug mentions are termed “drug visits” in the NHAMCS. Starting in 2006, the therapeutic classification of drugs is based on the Multum Lexicon’s second-level therapeutic categories (www.multum.com/Lexicon.htm). Drugs may have more than one therapeutic application. Although Multum allows up to five therapeutic categories per drug, in this report a maximum of four therapeutic categories for each drug was examined because the number of

drugs with five therapeutic categories was small. Generic ingredients of drug mentions were coded according to the drug_id nomenclature included in Multum. In addition, for each drug listed, respondents were asked to indicate whether the drug was administered in the emergency department, at discharge, or both. Multum’s therapeutic categories are not necessarily comparable with those used previously in the NHAMCS. The NCHS ambulatory care website contains computer code to link the new Multum drug characteristics, including drug class, to previous years of the NHAMCS microdata where the *National Drug Code Directory* was used.

Estimation

Using the complex multistage design of the NHAMCS, NCHS computed a weight for each visit that took all sampling stages into account. This weight was used to inflate the data to produce unbiased national annual estimates, and included four basic components: inflation by reciprocals of selection probabilities, adjustment for nonresponse, population ratio adjustments, and weight smoothing. Starting in 2004, changes were made to the nonresponse adjustment factor to account for the seasonality of the reporting period. Extra weights for nonresponding hospitals were shifted to responding hospitals in reporting periods within the same quarter of the year. The shift in nonresponse adjustment did not significantly affect any of the overall annual estimates. Detailed information on NHAMCS estimation procedures can be found elsewhere (37).

Standard errors

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample is surveyed, rather than an entire universe. Estimates of the sampling variability for this report were calculated using Taylor approximations in SUDAAN, which take into account the complex sample design of NHAMCS. A

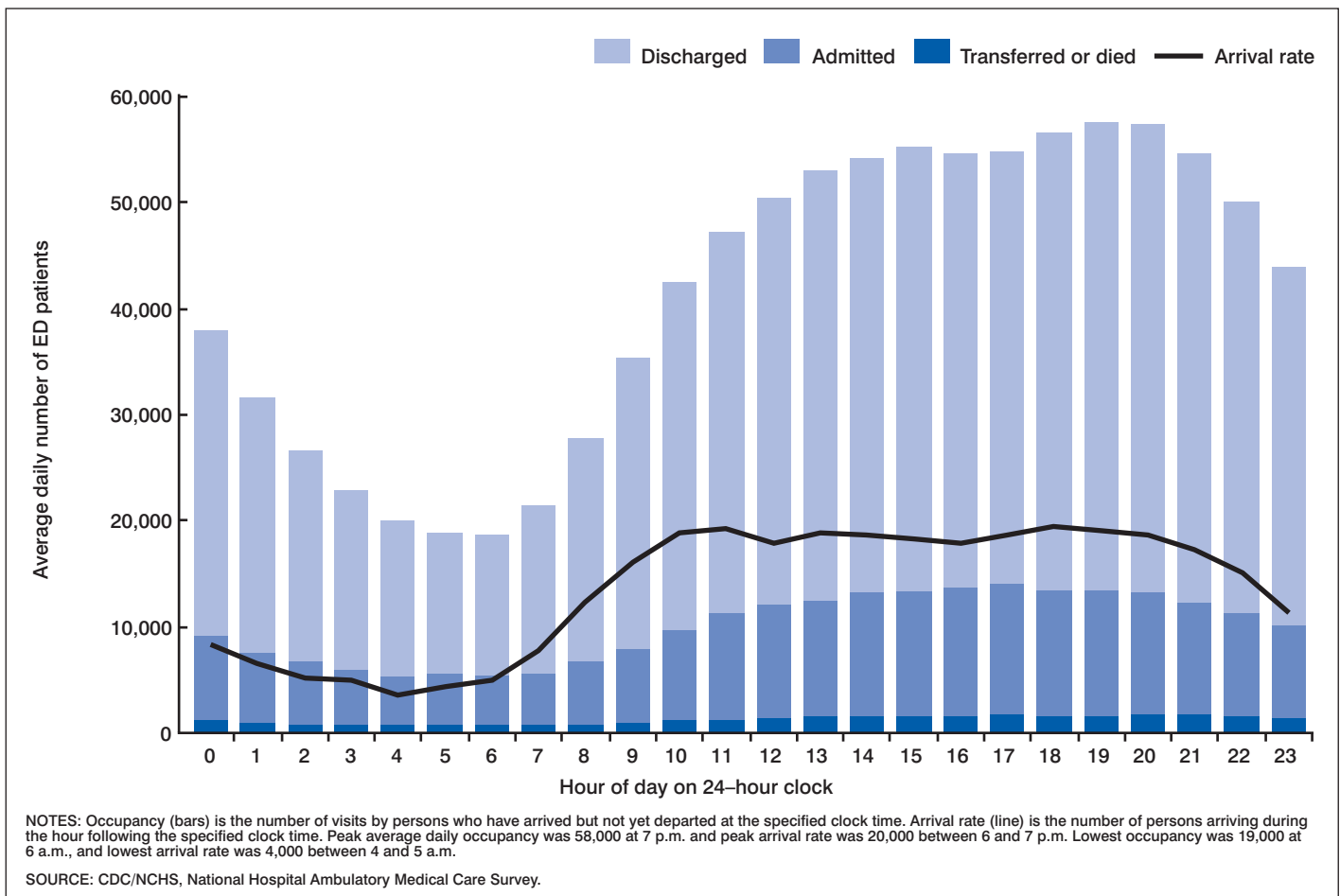


Figure 8. Number of patients arriving and occupancy of emergency departments (ED) by hour of day and admission status: United States, 2006

description of the software and its approach has been published (38). The standard errors of statistics presented in this report are included in each of the tables.

Tests of significance and rounding

In this report, the determination of statistical inference was 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. A weighted least-squares regression analysis was used to determine the significance of trends at the 0.05 level.

Nonsampling errors

Item nonresponse rates in the NHAMCS are generally low (5 percent or fewer). However, levels of nonresponse can vary considerably in the survey. Most nonresponse occurs when the needed information is not available in the medical record or is unknown to the person filling out the survey instrument. Nonresponse can also result when the information is available, but survey procedures are not followed and the item is left blank. In this report, the tables include a combined entry of “unknown or blank” to display missing data. For items for which combined nonresponse is 30 to 50 percent, percent distributions are not discussed in the text. However, the information is shown in the tables. These data should be interpreted with caution. If nonresponse is random, the observed distribution for the reported item (excluding cases for

which the information is unknown) would be close to the true distribution. However, if nonresponse is not random, the observed distribution could vary significantly from the actual distribution. Researchers 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.

Weighted item nonresponse rates (i.e., if the item was left blank or the unknown box was marked) were 5.0 percent or less for data items with the following exceptions: systolic blood pressure (13.8 percent); diastolic blood pressure (14.5 percent); orientation to time, place, and person (17.9 percent); presenting level of pain (22.4 percent); work-related (7.2 percent); seen in ED within last 72 hours (11.0 percent); discharged within the last 7 days (25.4 percent); cause of injury (18.3 percent of injury visits); type of unit to

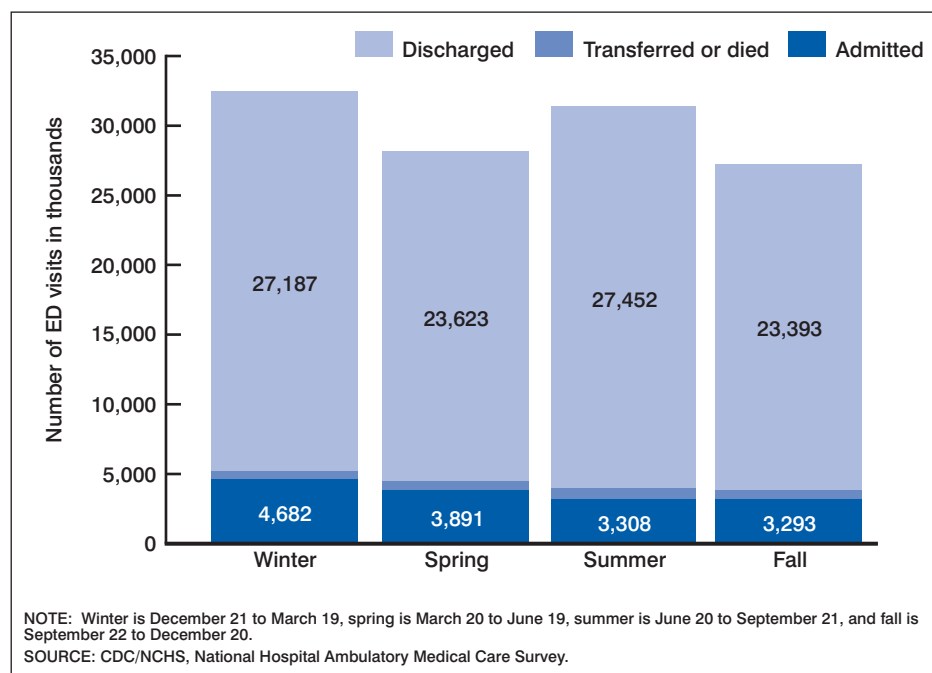


Figure 9. Number of visits to emergency departments (ED) by season and admission status: United States, 2006

which admitted (12.9 percent of hospital admission visits); hospital discharge status (14.4 percent of admission visits); length of inpatient stay (12.3 percent of admissions); time waiting to see a physician (13.5 percent); and time spent in the ED (5.2 percent).

For some items, missing values were imputed by randomly assigning a value from PRFs with similar characteristics. Imputations were performed for the following variables: birth year (0.8 percent), sex (1.5 percent), race (9.8 percent), ethnicity (17.4 percent), and immediacy (2.9 percent). Imputation for birth year and sex was based on ED volume, geographic region, immediacy with which patient should be seen, and three-digit ICD-9-CM code for primary diagnosis. Imputation for immediacy was based on ED volume, region, and primary diagnosis. In contrast to this imputation method used to impute race and ethnicity in previous years, a hierarchical procedure was used in 2006. Cases missing race or ethnicity were initially assigned a donor's value after matching donor and recipient by three-digit ICD-9-CM codes for primary diagnosis and ZIP Codes of the patient making the sampled visit. If no

donor was found, additional rounds of matching with ever-increasing geographic area were used. After several matching rounds, traditional imputation procedures were applied. If both race and ethnicity were missing, both were imputed from the same donor. An evaluation study found that this approach more correctly identified patients' race and ethnicity.

Use of tables

The tables present only the first-listed reasons for visit, diagnoses, and causes of injury. It should be noted that estimates differing in ranked order may not be significantly different from each other. For items related to expected source of payment, diagnostic and screening services, procedures, providers seen, and disposition, abstracters asked to check all of the applicable categories for each item. Therefore, multiple responses could be coded for each visit.

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 (RSE) of the estimate exceeds 30 percent. The RSE of an

estimate is obtained by dividing the standard error by the estimate itself.

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

Several of the tables in this report present rates of ED visits per population. The population figures used in calculating these rates are special tabulations produced by the Population Division, U.S. Census Bureau, from the July 1, 2006, set of state population estimates by age, sex, race, and Hispanic origin. Denominators used in computing estimates of visit rates for nursing home residents are based on the 2004 National Nursing Home Survey (39). Visit rates for the homeless are based on a report by the National Alliance to End Homelessness (26). Estimates presented in the tables and figures for specific race categories reflect visits where only a single race was reported. Denominators used in computing estimates of visit rates by expected source of payment were obtained from the 2006 NHIS. Individuals reporting multiple insurance categories in the NHIS were counted in each category they reported, except for Medicaid and SCHIP, which were combined into a single category.

References

- Schappert SM, Rechtsteiner EA. Ambulatory medical care utilization estimates for 2006. National health statistics reports; no 8. Hyattsville, MD: National Center for Health Statistics. 2008. Available from: www.cdc.gov/nchs/data/nhsr/nhsr008.pdf.
- Smart DR, Sellers J. Physician characteristics and distribution in the U.S., 2008 edition. American Medical Association. 2008.
- National Center for Health Statistics. Health, United States, 2007, with chart book on trends in the health of Americans. Hyattsville, MD. 2007.
- Committee on the Future of Emergency Care in the United States

- Health System. Hospital-based emergency care: at the breaking point. National Academies Press. Washington, DC. 2007.
5. Derlet RW, Richards JR. Overcrowding in the nation's emergency departments: complex causes and disturbing effects. *Ann Emerg Med*. 35:63–8. 2000.
 6. Wilper AP, Woolhandler S, Lasser KE, et al. Waits to see an emergency department physician: U.S. trends and predictors, 1997–2004. *Health Aff*. January 15, 2008.
 7. Pines JM, Hollander JE. Emergency department crowding is associated with poor care for patients with severe pain. *Ann Emerg Med*; 51:1–5. 2008.
 8. Burt CW, McCaig LF. Analysis of ambulance transports and diversions among U.S. emergency departments. *Ann Emerg Med*; 47:317–26. 2006.
 9. Burt CW, McCaig LF. Staffing, capacity, and ambulance diversion in emergency departments: United States, 2003–04. *Advance data from vital and health statistics*; no 376. Hyattsville, MD: National Center for Health Statistics. 2006.
 10. McCaig LF, Burt CW. National Hospital Ambulatory Medical Care Survey: 2003 emergency department summary. *Advance data from vital and health statistics*; no 358. Hyattsville, MD: National Center for Health Statistics. 2005.
 11. Nawar E, Niska R, Xu J. National Hospital Ambulatory Medical Care Survey: 2005 emergency department summary. *Advance data from vital and health statistics*; no 386. Hyattsville, MD: National Center for Health Statistics. 2007.
 12. Hing E, Hall MJ, Xu J. National hospital ambulatory medical care survey: 2006 outpatient department summary. *National health statistics reports*; no 4. Hyattsville, MD: National Center for Health Statistics. 2008. Available from: www.cdc.gov/nchs/data/nhsr/nhsr004.pdf.
 13. Cherry DK, Woodwell DA, Hing E, Rechtsteiner EA. National ambulatory medical care survey: 2006 summary. *National health statistics reports*; no 3. Hyattsville, MD: National Center for Health Statistics. 2008. Available from: www.cdc.gov/nchs/data/nhsr/nhsr003.pdf.
 14. Raofi S, Schappert S. Medication therapy in ambulatory medical care: United States, 2003–04. *National Center for Health Statistics. Vital Health Stat* 13(163). 2006.
 15. Niska RW, Burt CW. Training for terrorism-related conditions in hospitals: United States, 2003–04. *Advance data from vital and health statistics*; no 380. Hyattsville, MD: National Center for Health Statistics. 2006.
 16. Niska RW, Burt CW. Emergency response planning in hospitals, United States: 2003–2004. *Advance data from vital and health statistics*; no 391. Hyattsville, MD: National Center for Health Statistics. 2007.
 17. Niska RW. Hospital collaboration with public safety organizations on bioterrorism response. *Prehosp Emerg Care*; 12:12–7. 2008.
 18. Murman DH, McDonald AJ, Pelletier AJ, et al. U.S. emergency department visits for supraventricular tachycardia, 1993–2003. *Acad Emerg Med*; 14(6):578–81. June 2007.
 19. Gardner RL, Sarkar U, Maselli JH, et al. Factors associated with longer ED lengths of stay. *Am J Emerg Med*; 25(6):643–50. July 2007.
 20. Fischer T, Singer AJ, Lee C, Thode HC. National trends in emergency department antibiotic prescribing for children with acute otitis media, 1996 to 2005. *Acad Emerg Med*; 14:1172–5. 2007.
 21. McDonald AJ, Pelletier AJ, Ellinor PT, et al. Increasing U.S. emergency department visit rates and subsequent hospital admissions for atrial fibrillation from 1993 to 2004. *Ann Emerg Med*; 51(1):58–65. Jan 2008.
 22. Pletcher MJ, Kertesz SG, Kohn MA, Gonzales R. Trends in opioid prescribing by race/ethnicity for patients seeking care in U.S. emergency departments. *JAMA*; 299:70–8. 2008.
 23. Pallin DJ, Egan DJ, Pelletier AJ, et al. Increased U.S. emergency department visits for skin and soft tissue infections, and changes in antibiotic choices, during the emergence of community-associated methicillin-resistant staphylococcus aureus. *Ann Emerg Med*; 51:291–8. 2008.
 24. McCaig LF, Sussman BJ. National Hospital Ambulatory Medical Care Survey: 1996 emergency department summary. *Advance data from vital and health statistics*; no 293. Hyattsville, MD: National Center for Health Statistics. 1997. Available from: www.cdc.gov/nchs/data/ad/ad293.pdf.
 25. American Hospital Association. Trend watch chart book 2006. Available from: www.aha.org/aha/trendwatch/chartbook/07chart3-7.pdf. Accessed March 2008.
 26. Office of Community Planning and Development, U.S. Department of Housing and Urban Development. Second annual homelessness assessment report to Congress. Washington, DC. March 2008. Available from: www.hudhre.info/documents/2ndHomelessAssessmentReport.pdf.
 27. Adams PF, Lucas JW, Barnes PM. Summary health statistics for the U.S. population: National Health Interview Survey, 2006. *National Center for Health Statistics. Vital Health Stat* 10(236). 2008. Available from: www.cdc.gov/nchs/data/series/sr_10/sr10_236.pdf.
 28. Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 42:1206–52. 2003.
 29. DeFrances CJ, Owings MF. 2006 National Hospital Discharge Survey. *National health statistics reports*; no 5. Hyattsville, MD: National Center for Health Statistics. 2008. Available from: www.cdc.gov/nchs/data/nhsr/nhsr005.pdf.
 30. Graves EJ, Owings MF. 1996 Summary: National Hospital Discharge Survey. *Advance data from vital and health statistics*; no 301. Hyattsville, MD: National Center for Health Statistics. 1998.
 31. 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.
 32. Schneider D, Appleton L, McLemore T. A reason for visit classification for ambulatory care. *National Center for Health Statistics. Vital Health Stat* 2(78). 1979.
 33. McCaig LF, Burt CW. National hospital ambulatory medical care survey: 2001 emergency department summary. *Advance Data from Vital and Health Statistics*; no 335.

- Hyattsville, MD: National Center for Health Statistics. 2003.
34. Public Health Service and Health Care Financing Administration. International classification of diseases, ninth revision, clinical modification, 6th ed., Washington: Public Health Service. 2004.
 35. The Barell Injury Diagnosis Matrix, classification by body region and nature of the injury. www.cdc.gov/nchs/about/otheract/ice/barellmatrix.htm. Accessed March 2008.
 36. 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.
 37. National Center for Health Statistics. Public-use data file documentation, 2006. National Hospital Ambulatory Medical Care Survey. Hyattsville, MD. 2008. Available from: www.cdc.gov/nchs/nhamcs.htm.
 38. Research Triangle Institute (2005). SUDAAN (release 9.0.1) [Computer Software]. Research Triangle Park, NC: Research Triangle Institute.
 39. National Center for Health Statistics. Data highlights, 2004 National Nursing Home Survey. Hyattsville, MD. 2007. Available from: www.cdc.gov/nchs/nnhs.htm.

Table 1. Number, percent distribution, and annual rate of emergency department visits with corresponding standard errors, by selected hospital characteristics: United States, 2006

Selected 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	119,191	5,276	100.0	...	40.5	1.8
Ownership						
Voluntary	86,731	4,796	72.8	2.9	29.5	1.6
Government	20,882	3,448	17.5	2.7	7.1	1.2
Proprietary	11,578	2,470	9.7	2.0	3.9	0.8
Geographic region						
Northeast	22,669	1,482	19.0	1.3	42.0	2.7
Midwest	25,735	2,058	21.6	1.6	39.5	3.2
South	50,642	4,507	42.5	2.5	47.4	4.2
West	20,145	1,548	16.9	1.3	29.5	2.3
Metropolitan status						
MSA ³	100,727	5,296	84.5	2.7	41.2	2.2
Non-MSA	18,464	3,389	15.5	2.7	37.4	6.9
Medical school affiliation						
Yes	56,315	4,026	47.2	3.2	19.1	1.4
No or blank ⁴	62,877	5,196	52.8	3.2	21.4	1.8
Trauma center						
Yes	41,771	3,984	35.0	3.1	14.2	1.4
No or blank	77,421	5,323	65.0	3.1	26.3	1.8

... Category not applicable.

¹Visit rates for region are based on the July 1, 2006, set of the estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau. See "Methods" for more details.²Population estimates of metropolitan statistical area status are based on data from the 2006 National Health Interview Survey, National Center for Health Statistics, adjusted to the U.S. Census Bureau definition of core-based statistical areas as of November 2006. See www.census.gov/population/www/estimates/metrodef.html for more about metropolitan statistical area definitions.³MSA is metropolitan statistical area.⁴In 2006, hospitals not affiliated with medical schools include hospitals with unknown or blank medical school affiliation status because this information could not be identified separately. In prior years, the percentage of unknowns or blanks was small.

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

Table 2. Number, percent distribution, and annual rate of emergency department visits with corresponding standard errors, by patient characteristics: United States, 2006

Selected patient characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year	Standard error of rate
All visits ¹	119,191	5,276	100.0	...	40.5	1.8
Age						
Under 15 years	21,876	1,155	18.4	0.6	36.0	1.9
Under 1 year	3,487	221	2.9	0.2	84.5	5.4
1–4 years	8,338	475	7.0	0.3	51.2	2.9
5–14 years	10,052	576	8.4	0.3	24.9	1.4
15–24 years	19,525	1,017	16.4	0.3	47.1	2.5
25–44 years	35,034	1,722	29.4	0.5	42.7	2.1
45–64 years	25,466	1,153	21.4	0.4	34.3	1.6
65 years and over	17,290	778	14.5	0.3	48.5	2.2
65–74 years	7,095	368	6.0	0.2	38.0	2.0
75 years and over	10,195	493	8.6	0.3	60.2	2.9
Sex and age						
Female	64,962	2,996	54.5	0.4	43.3	2.0
Under 15 years	10,328	581	8.7	0.3	34.8	2.0
15–24 years	11,398	634	9.6	0.2	55.7	3.1
25–44 years	19,790	1,010	16.6	0.3	47.8	2.4
45–64 years	13,195	633	11.1	0.2	34.5	1.7
65–74 years	3,887	241	3.3	0.1	38.4	2.4
75 years and over	6,363	326	5.3	0.2	61.8	3.2
Male	54,230	2,364	45.5	0.4	37.7	1.6
Under 15 years	11,548	623	9.7	0.3	37.2	2.0
15–24 years	8,127	428	6.8	0.2	38.8	2.0
25–44 years	15,244	775	12.8	0.3	37.5	1.9
45–64 years	12,271	567	10.3	0.2	34.0	1.6
65–74 years	3,208	194	2.7	0.1	37.5	2.3
75 years and over	3,832	228	3.2	0.2	57.6	3.4
Race and age ²						
White	85,273	4,076	71.5	1.5	36.1	1.7
Under 15 years	14,823	865	12.4	0.5	32.0	1.9
15–24 years	13,839	789	11.6	0.4	43.1	2.5
25–44 years	24,532	1,326	20.6	0.6	37.8	2.0
45–64 years	17,929	837	15.0	0.4	29.0	1.4
65–74 years	5,561	330	4.7	0.2	34.8	2.1
75 years and over	8,588	449	7.2	0.3	57.3	3.0
Black or African American	29,558	2,179	24.8	1.4	79.9	5.9
Under 15 years	5,962	529	5.0	0.4	64.3	5.7
15–24 years	5,096	432	4.3	0.3	83.1	7.0
25–44 years	9,381	701	7.9	0.4	90.0	6.7
45–64 years	6,653	576	5.6	0.4	81.7	7.1
65–74 years	1,263	126	1.1	0.1	72.6	7.2
75 years and over	1,202	111	1.0	0.1	94.3	8.7
Asian	2,386	490	2.0	0.4	18.2	3.7
Native Hawaiian or other Pacific Islander	*449	244	*0.4	0.2	*86.3	46.9
American Indian or Alaska Native	*1,132	398	*0.9	0.3	*39.7	14.0
Multiple races	394	113	0.3	0.1	8.4	2.4
Ethnicity						
Hispanic or Latino	15,472	1,391	13.0	1.1	35.3	3.2
Not Hispanic or Latino	103,719	4,951	87.0	1.1	41.4	2.0

See footnotes at end of table.

Table 2. Number, percent distribution, and annual rate of emergency department visits with corresponding standard errors, by patient characteristics: United States, 2006—Con.

Selected patient characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year	Standard error of rate
Patient residence						
Private residence	109,327	5,056	91.7	0.7	37.2	1.7
Nursing home	2,082	146	1.7	0.1	139.5	9.8
Other institution	1,339	198	1.1	0.2	52.6	7.8
Other residence	791	130	0.7	0.1	0.3	0.0
Homeless	635	98	0.5	0.1	83.6	12.9
Unknown or blank	5,016	718	4.2	0.6	...	...

... Category not applicable.

* Figure does not meet standards of reliability or precision.

¹Visit rates for age, sex, race and ethnicity, private residence, and other residence are based on the July 1, 2006, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau. Visit rates for nursing home residents are based on the 2004 CDC/NCHS National Nursing Home Survey. Visit rate for the homeless are based on The Second Annual Homeless Assessment Report to Congress by the U.S. Department of Housing and Urban Development. See "Methods" for more details.

²The race groups, White, Black or African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races, include persons of Hispanic and not Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percentage of visit records with multiple races indicated is small and lower than what is typically found for self-reported race in household surveys.

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

Table 3. Number and percent distribution of emergency department visits with corresponding standard errors, by expected source of payment: United States, 2006

Expected source of payment	Number of visits in thousands ¹	Standard error in thousands	Percent distribution	Standard error of percent
All visits	119,191	5,276	100.0	...
Private insurance	47,284	2,391	39.7	1.1
Medicaid or SCHIP ²	30,351	1,674	25.5	0.9
Medicare	20,672	1,041	17.3	0.4
Medicare and Medicaid	3,893	361	3.3	0.3
No insurance ³	20,777	1,501	17.4	0.9
Self-pay	19,041	1,310	16.0	0.7
No charge or charity	2,232	578	1.9	0.5
Worker's compensation	2,097	168	1.8	0.1
Other	4,211	734	3.5	0.6
Unknown or blank	5,651	723	4.7	0.6

... Category not applicable.

¹Total exceeds "All visits" because more than one source of payment may be reported per visit.

²SCHIP is State Children's Health Insurance Program.

³"No insurance" is defined as having only self-pay, no charge, or charity as payment sources.

Table 4. Percent distribution of emergency department visits with corresponding standard errors, by patient mode of arrival according to patient's age: United States, 2006

Patient age	Number of visits in thousands	Patient's mode of arrival				
		Total	Walk-in ¹	Ambulance	Public service ²	Unknown or blank
Percent distribution						
All visits	119,191	100.0	79.6	15.4	1.2	3.7
Age						
Under 15 years	21,876	100.0	90.1	5.6	*0.6	3.7
Under 1 year	3,487	100.0	89.9	5.0	*	4.1
1–4 years	8,338	100.0	90.5	4.8	*	4.0
5–14 years	10,052	100.0	89.8	6.5	*	3.3
15–24 years	19,525	100.0	85.4	9.9	1.4	3.3
25–44 years	35,034	100.0	82.6	12.2	1.6	3.6
45–64 years	25,466	100.0	76.0	18.5	1.3	4.1
65 years and over	17,290	100.0	59.0	36.1	*1.0	3.9
65–74 years	7,095	100.0	67.2	28.3	*	3.1
75 years and over	10,195	100.0	53.2	41.4	0.8	4.5
Standard error of percent						
All visits . . . . .	...	...	0.8	0.7	0.3	0.3
Age						
Under 15 years . . . . .	...	...	1.0	0.7	0.4	0.5
Under 1 year . . . . .	...	...	1.4	1.1	...	0.8
1–4 years . . . . .	...	...	1.1	0.6	...	0.6
5–14 years . . . . .	...	...	1.1	0.9	...	0.5
15–24 years . . . . .	...	...	1.0	0.7	0.2	0.4
25–44 years . . . . .	...	...	0.9	0.7	0.3	0.3
45–64 years . . . . .	...	...	1.1	0.9	0.3	0.5
65 years and over . . . . .	...	...	1.3	1.2	0.3	0.6
65–74 years . . . . .	...	...	1.5	1.5	...	0.6
75 years and over . . . . .	...	...	1.7	1.5	0.2	0.7

* Figure does not meet standards of reliability or precision.

... Category not applicable.

¹Includes patients arriving by car, taxi, bus, or foot.²Includes patients arriving in a police car, social service vehicle, beach patrol, etc., or escorted or carried by a public service official.

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

Table 5. Percent distribution of emergency department visits with corresponding standard errors, by immediacy with which patient should be seen, according to selected patient and visit characteristics: United States, 2006

Patient and visit characteristics	Number of visits in thousands	Total	Percent distribution						Standard error of percent					
			Immediate ¹	Emergent ²	Urgent ³	Semiurgent ⁴	Nonurgent ⁵	Unknown or no triage ⁶	Immediate ¹	Emergent ²	Urgent ³	Semiurgent ⁴	Nonurgent ⁵	Unknown or no triage ⁶
All visits	119,191	100.0	5.1	10.8	36.6	22.0	12.1	13.4	0.7	0.9	1.7	1.5	1.2	1.6
Age														
Under 15 years	21,876	100.0	3.1	7.8	35.0	25.6	14.6	13.9	0.6	0.8	2.1	1.9	1.5	1.7
Under 1 year	3,487	100.0	2.8	7.9	38.0	24.7	11.4	15.2	0.6	1.2	2.6	2.5	1.5	1.9
1–4 years	8,338	100.0	3.5	8.3	35.9	25.0	13.5	13.8	0.7	1.0	2.2	2.0	1.6	1.9
5–14 years	10,052	100.0	2.8	7.4	33.1	26.4	16.5	13.6	0.6	0.9	2.6	2.2	1.8	1.8
15–24 years	19,525	100.0	4.1	8.4	34.3	24.7	14.3	14.1	0.9	0.9	2.0	1.8	1.6	1.9
25–44 years	35,034	100.0	4.3	10.1	36.4	22.7	12.9	13.6	0.7	1.0	1.9	1.6	1.3	1.7
45–64 years	25,466	100.0	5.9	12.8	37.1	20.0	11.1	13.2	0.8	1.1	1.8	1.4	1.3	1.7
65 years and over	17,290	100.0	9.2	15.4	41.3	15.5	6.7	11.9	1.2	1.3	1.8	1.2	0.9	1.7
65–74 years	7,095	100.0	9.1	14.2	39.7	17.2	7.5	12.4	1.4	1.2	2.3	1.7	1.1	1.8
75 years and over	10,195	100.0	9.3	16.2	42.3	14.4	6.1	11.6	1.2	1.5	2.0	1.2	1.0	1.7
Sex														
Female	64,962	100.0	4.6	10.4	37.2	22.2	12.0	13.5	0.7	0.9	1.8	1.6	1.3	1.7
Male	54,230	100.0	5.7	11.1	36.0	21.7	12.3	13.3	0.7	0.9	1.6	1.4	1.2	1.6
Race⁷														
White	85,273	100.0	5.2	10.9	36.6	21.8	11.7	13.8	0.8	0.9	1.7	1.6	1.2	1.8
Black or African American	29,558	100.0	4.9	10.4	35.6	22.6	14.2	12.3	0.9	1.1	2.7	2.0	2.0	2.0
Other	4,361	100.0	4.0	10.5	44.3	20.3	7.3	13.6	0.7	1.8	3.3	2.9	1.6	2.5
Ethnicity														
Hispanic or Latino	15,472	100.0	3.8	9.6	33.3	22.0	13.7	17.5	0.6	1.1	2.1	1.6	1.7	2.4
Not Hispanic or Latino	103,719	100.0	5.3	10.9	37.1	22.0	11.9	12.8	0.8	0.9	1.8	1.6	1.3	1.7
Expected source of payment														
Private insurance	47,284	100.0	4.7	11.5	36.8	22.3	11.0	13.7	0.6	1.0	1.8	1.5	1.3	1.8
Medicaid or SCHIP ⁸	30,351	100.0	4.1	9.7	37.2	22.8	13.9	12.4	0.6	0.9	1.9	1.7	1.5	1.5
Medicare	20,672	100.0	7.7	14.8	40.7	16.5	7.8	12.5	0.8	1.3	2.0	1.2	1.0	1.8
Medicare and Medicaid	3,893	100.0	7.5	14.3	41.1	17.7	9.3	10.1	1.4	2.2	2.3	2.2	1.6	1.8
No insurance ⁹	20,777	100.0	4.8	8.4	33.7	25.5	15.0	12.6	1.2	1.0	1.8	2.1	1.6	2.1
Worker's compensation	2,097	100.0	*	12.4	32.7	23.5	17.2	10.0	...	2.3	3.3	3.1	2.9	2.5
Other	4,211	100.0	7.0	*14.6	44.6	17.5	6.8	9.6	1.5	4.4	5.4	2.8	1.5	2.6
Unknown or blank	5,651	100.0	9.7	12.4	33.1	15.0	9.6	20.2	2.3	2.7	3.2	2.2	1.7	3.2

* Figure does not meet standard of reliability or precision.

... Category not applicable.

¹A visit in which the patient should be seen immediately.²A visit in which the patient should be seen within 1–14 minutes.³A visit in which the patient should be seen within 15–60 minutes.⁴A visit in which the patient should be seen within 61–120 minutes.⁵A visit in which the patient should be seen within 121 minutes–24 hours.⁶A visit in which there is no mention of an immediacy rating or triage level in the medical record, the hospital did not perform triage, or the patient was dead on arrival.⁷Other race includes Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and persons of multiple races. All race categories include visits by persons of Hispanic origin and not Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percent of visit records with multiple races indicated is small and lower than what is typically found for self-reported race.⁸SCHIP is State Children's Health Insurance Program.⁹"No insurance" is defined as having only self-pay, no charge, or charity as payment sources.

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

Table 6. Number and percentage of emergency department visits with corresponding standard errors, by selected visit characteristics: United States, 2006

Visit characteristic	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	119,191	5,276	100.0	...
Oriented to time, place, and person				
Yes	95,076	4,701	79.8	1.4
No	2,739	182	2.3	0.1
Unknown or blank	21,376	1,809	17.9	1.4
Presenting level of pain				
None	22,535	1,217	18.9	0.8
Mild	15,916	864	13.4	0.6
Moderate	29,791	1,905	25.0	0.9
Severe	24,269	1,369	20.4	0.6
Unknown or blank	26,681	1,762	22.4	1.1
Work related ¹				
Yes	3,376	204	2.8	0.1
No	107,286	4,856	90.0	0.6
Unknown or blank	8,529	758	7.2	0.6
Patient seen in this ED ² within the last 72 hours				
Yes	4,348	291	3.6	0.2
No	101,733	4,867	85.4	1.3
Unknown or blank	13,110	1,642	11.0	1.3
Patient discharged from any hospital within the last 7 days				
Yes	2,524	246	2.1	0.2
No	86,334	4,801	72.4	2.3
Unknown or blank	30,333	3,047	25.4	2.3
Patient arrived in ED after business hours ³				
Age under 15 years				
Yes	15,854	873	13.3	0.4
No	5,744	338	4.8	0.2
Unknown or blank	*278	102	*0.2	0.1
Age 15 years and over				
Yes	61,200	2,780	51.3	0.4
No	35,237	1,636	29.6	0.4
Unknown or blank	878	215	0.7	0.2

... Category not applicable.

* Figure does not meet standards of reliability or precision.

¹4.2 percent (standard error = 0.2) of visits made by persons 18–64 years of age were work related.²ED is emergency department.³Business hours defined as Monday through Friday, 8 a.m. to 5 p.m.

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

Table 7. Percent distribution of initial blood pressure measurements at emergency department visits by adults, with corresponding standard errors, according to selected patient and visit characteristics: United States, 2006

Patient and visit characteristics	Number of visits in thousands	Initial blood pressure ¹												
		Total	Percent distribution						Percent distribution					
			Low	Normal	Mildly high	Moderately high	Severely high	Blank	Low	Normal	Mildly high	Moderately high	Severely high	Blank
All visits 18 years and over ²	92,895	100.0	6.0	14.6	33.5	25.8	16.2	3.9	0.2	0.4	0.5	0.5	0.4	0.5
Age														
18–24 years	15,105	100.0	6.5	22.8	43.2	19.7	4.3	3.6	0.7	1.0	1.2	1.1	0.5	0.6
25–44 years	35,034	100.0	4.5	17.3	37.5	25.3	11.5	3.9	0.3	0.6	0.7	0.7	0.5	0.5
45–64 years	25,466	100.0	5.6	10.4	29.3	28.6	21.9	4.2	0.4	0.4	0.8	0.7	0.7	0.6
65–74 years	7,095	100.0	7.7	9.3	23.2	28.8	27.7	3.3	1.1	1.0	1.3	1.3	1.4	0.7
75 years and over	10,195	100.0	10.4	6.9	23.0	27.8	27.3	4.5	0.7	0.5	1.0	1.3	1.1	0.8
Sex														
Female	52,179	100.0	6.9	16.7	33.5	23.0	16.1	3.8	0.3	0.5	0.6	0.5	0.5	0.5
Male	40,717	100.0	4.8	11.8	33.5	29.4	16.3	4.1	0.3	0.5	0.7	0.7	0.5	0.6
Race ³														
White	67,183	100.0	6.2	14.1	34.2	26.1	15.6	3.7	0.3	0.4	0.5	0.5	0.5	0.5
Black	22,558	100.0	5.2	15.8	31.6	24.9	17.9	4.6	0.5	0.9	1.0	0.9	0.8	1.1
Asian	1,800	100.0	8.5	14.7	31.6	23.6	18.4	3.2	1.1	2.1	2.1	1.9	2.1	0.7
Other	1,354	100.0	6.7	14.8	33.3	30.0	12.5	*	1.8	3.0	2.1	3.7	2.0	...
Ethnicity														
Hispanic or Latino	10,696	100.0	5.9	18.0	34.4	24.4	12.6	4.7	0.5	0.8	1.2	0.9	0.9	0.7
Not Hispanic or Latino	82,199	100.0	6.0	14.1	33.4	26.0	16.6	3.8	0.3	0.4	0.5	0.5	0.5	0.5

* Figure does not meet standards of reliability or precision.

... Category not applicable.

¹Blood pressure (BP) levels were categorized using the following hierarchical definitions. Severely high BP is defined as 160 mm Hg systolic or above, or 100 mm Hg diastolic or above. Moderately high BP is defined as 140–159 mm Hg systolic or 90–99 mm Hg diastolic. Mildly high BP is defined as 120–139 mm Hg systolic or 80–89 mm Hg diastolic. Low BP is defined as less than 100 mm Hg systolic or less than 60 mm Hg diastolic. Normal BP is defined as 100–119 mm Hg systolic and 60–79 mm Hg diastolic. BP classification was based on the “Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure” (JNC-7). “Mildly high” BP corresponds to the JNC-7 prehypertensive range. “Moderately high” BP corresponds to the JNC-7 stage 1 hypertensive range. “Severely high” BP corresponds to the JNC-7 stage 2 hypertensive range (28).

²Visits where BP was taken represent 96.1 percent (SE = 0.5) of all emergency department visits made by adults (18 years and over). In 57.6 percent (SE = 1.8) of visits by children (0–17 years of age) a BP was recorded.

³Other race includes Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and persons of multiple races. All race categories may include visits by persons of Hispanic and not Hispanic origin. Starting with data year 1999, race- and ethnicity-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percentage of visit records with multiple races indicated is small and lower than what is typically found for self-reported race in household surveys.

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

Table 8. Number and percent distribution of emergency department visits with corresponding standard errors, by the 20 leading principal reason for visit: United States, 2006

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	119,191	5,276	100.0	...
Stomach and abdominal pain, cramps and spasms S545	8,057	442	6.8	0.2
Chest pain and related symptoms S050	6,392	401	5.4	0.2
Fever S010	4,485	277	3.8	0.2
Headache, pain in head S210	3,354	233	2.8	0.1
Back symptoms S905	3,304	272	2.8	0.2
Shortness of breath S415	3,007	200	2.5	0.1
Cough S440	2,956	188	2.5	0.1
Vomiting S530	2,635	192	2.2	0.1
Pain, site not referable to a specific body system S055	2,512	168	2.1	0.1
Symptoms referable to throat S455	2,278	197	1.9	0.1
Lacerations and cuts—upper extremity J225	1,870	130	1.6	0.1
Nausea S525	1,804	141	1.5	0.1
Accident, not otherwise specified J810	1,737	171	1.5	0.1
Motor vehicle accident, type of injury unspecified J805	1,714	149	1.4	0.1
Earache or ear infection S355	1,677	136	1.4	0.1
Vertigo—dizziness S225	1,657	122	1.4	0.1
Leg symptoms S920	1,645	111	1.4	0.1
Skin rash S860	1,613	118	1.4	0.1
Injury, other and unspecified type—head, neck, and face J505	1,586	164	1.3	0.1
Low back symptoms S910	1,511	125	1.3	0.1
All other reasons	63,399	2,746	53.2	0.5

... Category not applicable.

¹Based on *A Reason for Visit Classification for Ambulatory Care (RVC)* (32).

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

Table 9. Number and percent distribution of emergency department visits with corresponding standard errors, by the 10 leading principal reason for visit, according to patient age and sex: United States, 2006

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	119,191	5,276	100.0	...
All visits, under age 15 years	21,876	1,155	100.0	...
Female	10,328	581	47.2	0.8
Fever S010	1,644	141	7.5	0.5
Cough S440	605	65	2.8	0.3
Vomiting S530	601	76	2.7	0.3
Earache or ear infection S355	423	47	1.9	0.2
Symptoms referable to throat S455	366	62	1.7	0.2
Stomach and abdominal pain, cramps and spasms S545	360	47	1.6	0.2
Skin rash S860	359	46	1.6	0.2
Injury, other and unspecified type—head, neck, and face J505	273	57	1.2	0.2
Facial area J210	205	41	0.9	0.2
Headache, pain in head S210	181	40	0.8	0.2
All other reasons	5,312	299	24.3	0.7
Male	11,548	623	52.8	0.8
Fever S010	1,659	122	7.6	0.4
Cough S440	828	79	3.8	0.3
Vomiting S530	611	76	2.8	0.3
Injury, other and unspecified type—head, neck, and face J505	368	56	1.7	0.2
Facial area J210	352	55	1.6	0.2
Earache or ear infection S355	347	42	1.6	0.2
Skin rash S860	321	43	1.5	0.2
Stomach and abdominal pain, cramps and spasms S545	277	35	1.3	0.2
Symptoms referable to throat S455	239	42	1.1	0.2
Labored or difficult breathing (dyspnea) S420	203	31	0.9	0.1
All other reasons	6,343	357	29.0	0.7
All visits, age 15 years and over	97,315	4,392	100.0	...
Female	54,633	2,560	56.1	0.4
Stomach and abdominal pain, cramps and spasms S545	5,062	310	5.2	0.2
Chest pain and related symptoms S050	3,212	230	3.3	0.2
Headache, pain in head S210	1,923	144	2.0	0.1
Back symptoms S905	1,692	165	1.7	0.1
Shortness of breath S415	1,583	131	1.6	0.1
Pain, site not referable to a specific body system S055	1,303	104	1.3	0.1
Symptoms referable to throat S455	1,148	107	1.2	0.1
Nausea S525	1,065	103	1.1	0.1
Cough S440	966	92	1.0	0.1
Vertigo—dizziness S225	952	84	1.0	0.1
All other reasons	35,728	1,669	36.7	0.4
Male	42,682	1,917	43.9	0.4
Chest pain and related symptoms S050	3,023	215	3.1	0.1
Stomach and abdominal pain, cramps and spasms S545	2,358	168	2.4	0.1
Back symptoms S905	1,517	137	1.6	0.1
Shortness of breath S415	1,256	118	1.3	0.1
Lacerations and cuts—upper extremity J225	1,169	94	1.2	0.1
Pain, site not referable to a specific body system S055	1,077	88	1.1	0.1
Headache, pain in head S210	1,063	109	1.1	0.1
Leg symptoms S920	778	80	0.8	0.1
Vertigo—dizziness S225	677	70	0.7	0.1
Motor vehicle accident, type of injury unspecified J805	645	78	0.7	0.1
All other reasons	29,119	1,271	29.9	0.4

... Category not applicable.

¹Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (32).

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

Table 10. Number and percent distribution of emergency department visits with corresponding standard errors, by primary diagnosis classified by major disease category: United States, 2006

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	119,191	5,276	100.0	. . .
Infectious and parasitic diseases 001–139	3,331	184	2.8	0.1
Neoplasms 140–239	204	34	0.2	0.0
Endocrine, nutritional, metabolic diseases, and immunity disorders 240–279	1,936	144	1.6	0.1
Mental disorders 290–319	4,279	293	3.6	0.2
Diseases of the nervous system and sense organs 320–389	5,718	321	4.8	0.2
Diseases of the circulatory system 390–459	4,378	262	3.7	0.2
Diseases of the respiratory system 460–519	11,943	617	10.0	0.3
Diseases of digestive system 520–579	7,239	324	6.1	0.2
Diseases of the genitourinary system 580–629	5,775	292	4.8	0.1
Diseases of the skin and subcutaneous tissue 680–709	4,450	275	3.7	0.1
Diseases of the musculoskeletal system and connective tissue 710–739	7,402	443	6.2	0.2
Symptoms, signs, and ill-defined conditions 780–799	23,966	1,348	20.1	0.4
Injury and poisoning 800–999	28,996	1,318	24.3	0.4
Fractures 800–829	3,851	222	3.2	0.1
Sprains and strains 840–848	5,813	361	4.9	0.2
Intracranial injury 850–854	294	43	0.2	0.0
Open wounds 870–897	6,153	317	5.2	0.2
Superficial injury 910–919	1,454	102	1.2	0.1
Contusion with intact skin surface 920–924	5,302	346	4.4	0.2
Foreign bodies 930–939	651	69	0.5	0.1
Burns 940–949	517	59	0.4	0.0
Trauma complications and unspecified injuries 958–959	1,911	161	1.6	0.1
Poisoning and toxic effects 960–989	920	83	0.8	0.1
Surgical and medical complications 996–999	428	62	0.4	0.0
Other injuries	1,701	125	1.4	0.1
Supplementary classification V01–V85	3,545	244	3.0	0.1
All other diagnoses ²	2,839	172	2.4	0.1
Unknown ³	3,191	300	2.7	0.2

. . . Category not applicable.

0.0 Quantity more than zero but less than 0.05.

¹Based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (34).²Includes diseases of the blood and blood-forming organs (280–289); complications of pregnancy, childbirth, and the puerperium (630–677); certain conditions originating in perinatal period (760–779); diagnoses that could not be coded or were illegible, patient left before being seen, patient was transferred to another facility, health maintenance organization did not authorize treatment, and entries of, "none," "no diagnosis," "no disease," or "healthy."³Includes blank diagnoses.

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

Table 11. Number and percent distribution of emergency department visits with corresponding standard errors, by the 10 leading primary diagnosis groups for visit, according to patient age and sex: United States, 2006

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	119,191	5,276	100.0	...
All visits, age under 15 years	21,876	1,155	100.0	...
Female				
All visits	10,328	581	47.2	0.8
Acute upper respiratory infections, excluding pharyngitis 460-461,463-466	874	78	4.0	0.3
Otitis media and eustachian tube disorders 381-382	671	69	3.1	0.3
Pyrexia of unknown origin 780.6	651	84	3.0	0.3
Contusion with intact skin surface 920-924	509	69	2.3	0.3
Acute pharyngitis 462	387	61	1.8	0.2
Unspecified viral and chlamydial infection 079.9	368	47	1.7	0.2
Open wound of head 870-873	335	53	1.5	0.2
Abdominal pain 789.0	289	46	1.3	0.2
Fractures, excluding lower limb 800-819	256	43	1.2	0.2
Open wound, excluding head 874-897	256	38	1.2	0.2
All other diagnoses	5,731	329	26.2	0.8
Male				
All visits	11,548	623	52.8	0.8
Acute upper respiratory infections, excluding pharyngitis 460-461,463-466	1,146	100	5.2	0.4
Otitis media and eustachian tube disorders 381-382	761	73	3.5	0.3
Contusion with intact skin surface 920-924	673	90	3.1	0.3
Pyrexia of unknown origin 780.6	616	78	2.8	0.3
Open wound of head 870-873	512	55	2.3	0.2
Fractures, excluding lower limb 800-819	477	55	2.2	0.2
Open wound, excluding head 874-897	419	55	1.9	0.2
Unspecified viral and chlamydial infection 079.9	368	44	1.7	0.2
Asthma 493	285	42	1.3	0.2
Acute pharyngitis 462	282	50	1.3	0.2
All other diagnoses	6,010	341	27.5	0.8
All visits, age 15 years and over	97,315	4,392	100.0	...
Female				
All visits	54,633	2,560	56.1	0.4
Abdominal pain 789.0	3,083	236	3.2	0.2
Chest pain 786.5	2,204	163	2.3	0.1
Contusion with intact skin surface 920-924	2,195	173	2.3	0.1
Spinal disorders 720-724	1,823	132	1.9	0.1
Urinary tract infection, site not specified 599.0	1,482	101	1.5	0.1
Complications of pregnancy, childbirth, and the puerperium 630-677	1,413	124	1.5	0.1
Sprains and strains, excluding ankle and back 840-844,845.1,848	1,293	129	1.3	0.1
Open wound, excluding head 874-897	1,285	108	1.3	0.1
Headache 784.0	1,093	100	1.1	0.1
Acute upper respiratory infections, excluding pharyngitis 460-461,463-466	1,061	96	1.1	0.1
All other diagnoses	37,702	1,764	38.7	0.5
Male				
All visits	42,682	1,917	43.9	0.4
Open wound, excluding head 874-897	2,187	133	2.2	0.1
Chest pain 786.5	1,960	158	2.0	0.1
Contusion with intact skin surface 920-924	1,926	154	2.0	0.1
Spinal disorders 720-724	1,638	137	1.7	0.1
Abdominal pain 789.0	1,417	105	1.5	0.1
Cellulitis and abscess 681-682	1,326	127	1.4	0.1
Fractures, excluding lower limb 800-819	1,043	88	1.1	0.1
Sprains and strains, excluding ankle and back 840-844,845.1,848	1,039	86	1.1	0.1
Sprains and strains of neck and back 846,847	803	74	0.8	0.1
Rheumatism, excluding back 725-729	793	94	0.8	0.1
All other diagnoses	28,549	1,289	29.3	0.4

... Category not applicable.

¹Based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) (34). However, certain codes have been combined in this table to better describe the use of ambulatory care services.

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

Table 12. Number, percent distribution, and annual rate of emergency department visits related to injury, poisoning, or adverse effects of medical treatment with corresponding standard errors, by selected patient and hospital characteristics: United States, 2006

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	Standard error of rate
All injury-related visits ²	42,386	1,872	100.0	...	14.4	0.6
Patient characteristics						
Age						
Under 15 years	7,782	482	18.4	0.7	12.8	0.8
Under 1 year	449	56	1.1	0.1	10.9	1.4
1–4 years	2,625	186	6.2	0.3	16.1	1.1
5–14 years	4,709	318	11.1	0.5	11.7	0.8
15–24 years	7,942	408	18.7	0.4	19.2	1.0
25–44 years	12,745	645	30.1	0.7	15.5	0.8
45–64 years	8,673	382	20.5	0.4	11.7	0.5
65 years and over	5,243	294	12.4	0.5	14.7	0.8
65–74 years	2,065	147	4.9	0.3	11.1	0.8
75 years and over	3,179	199	7.5	0.4	18.8	1.2
Sex and age						
Female	20,075	995	47.4	0.6	13.4	0.7
Under 15 years	3,304	222	7.8	0.4	11.1	0.8
15–24 years	3,494	213	8.2	0.3	17.1	1.0
25–44 years	5,816	353	13.7	0.4	14.0	0.9
45–64 years	4,191	223	9.9	0.3	11.0	0.6
65–74 years	1,169	122	2.8	0.2	11.6	1.2
75 years and over	2,102	145	5.0	0.3	20.4	1.4
Male	22,310	950	52.6	0.6	15.5	0.7
Under 15 years	4,478	303	10.6	0.5	14.4	1.0
15–24 years	4,448	251	10.5	0.4	21.2	1.2
25–44 years	6,930	350	16.3	0.5	17.0	0.9
45–64 years	4,482	212	10.6	0.3	12.4	0.6
65–74 years	896	70	2.1	0.2	10.5	0.8
75 years and over	1,077	92	2.5	0.2	16.2	1.4
Race and age ³						
White	32,565	1,574	76.8	1.2	13.8	0.7
Under 15 years	5,646	391	13.3	0.7	12.2	0.8
15–24 years	6,086	352	14.4	0.5	18.9	1.1
25–44 years	9,617	539	22.7	0.7	14.8	0.8
45–64 years	6,742	331	15.9	0.4	10.9	0.5
65–74 years	1,687	136	4.0	0.3	10.6	0.9
75 years and over	2,788	189	6.6	0.3	18.6	1.3
Black or African American	8,387	579	19.8	1.1	22.7	1.6
Under 15 years	1,749	179	4.1	0.4	18.9	1.9
15–24 years	1,624	127	3.8	0.3	26.5	2.1
25–44 years	2,770	228	6.5	0.5	26.6	2.2
45–64 years	1,645	147	3.9	0.3	20.2	1.8
65–74 years	297	41	0.7	0.1	17.1	2.3
75 years and over	302	43	0.7	0.1	23.7	3.4
Other	1,433	268	3.4	0.6	6.8	1.3
Ethnicity						
Hispanic or Latino	5,113	476	12.1	1.1	11.7	1.1
Not Hispanic or Latino	37,273	1,774	87.9	1.1	14.9	0.7

See footnotes at end of table.

Table 12. Number, percent distribution, and annual rate of emergency department visits related to injury, poisoning, or adverse effects of medical treatment with corresponding standard errors, by selected patient and hospital characteristics: United States, 2006—Con.

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	Standard error of rate
Hospital characteristics						
Ownership						
Voluntary	30,766	1,708	72.6	3.0	10.5	0.6
Government	7,574	1,296	17.9	2.8	2.6	0.4
Proprietary	4,046	851	9.5	2.0	1.4	0.3
Geographic region						
Northeast	8,589	605	20.3	1.5	15.9	1.1
Midwest	9,000	693	21.2	1.6	13.8	1.1
South	17,285	1,577	40.8	2.5	16.2	1.5
West	7,511	558	17.7	1.3	11.0	0.8
Metropolitan status ⁴						
MSA ⁵	36,021	1,929	85.0	2.6	14.7	0.8
Non-MSA ⁵	6,365	1,148	15.0	2.6	12.9	2.3

. . . Category not applicable.

¹Visit rates for age, sex, race and ethnicity, and region are based on the July 1, 2006, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau. See "[Methods](#)" for more details.

²35.6 percent (standard error = 0.5) of all visits were injury related.

³"Other" race includes Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races. All race categories include persons of Hispanic and not Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percentage of visit records with multiple races indicated is smaller and lower than what is typically found for self-reported race.

⁴Population estimates of metropolitan statistical area status are based on data from the 2006 National Health Interview Survey, National Center for Health Statistics, adjusted to the U.S. Census Bureau definition of core-based statistical areas as of December 2005. See www.census.gov/population/www/estimates/metrodef.html for more about metropolitan statistical area definitions.

⁵MSA is metropolitan statistical area.

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

Table 13. Number and percent distribution of emergency department visits related to injury, poisoning, or adverse effects of medical treatment with corresponding standard errors, by intent and mechanism of external cause: United States, 2006

Intent and mechanism ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All injury-related visits	42,386	1,872	100.0	...
Unintentional injuries	27,653	1,350	65.2	1.1
Falls	8,614	427	20.3	0.6
Motor vehicle traffic	4,043	297	9.5	0.5
Struck against or struck accidentally by objects or persons	2,921	187	6.9	0.3
Cutting or piercing instruments or objects	2,323	164	5.5	0.3
Natural and environmental factors	2,036	166	4.8	0.3
Overexertion and strenuous movements	1,969	171	4.6	0.3
Foreign body	930	104	2.2	0.2
Poisoning	794	75	1.9	0.1
Caught accidentally in or between objects	511	54	1.2	0.1
Fire and flames, hot substances or object, caustic or corrosive material and steam	501	57	1.2	0.1
Pedal cycle, nontraffic	394	44	0.9	0.1
Machinery	315	48	0.7	0.1
Motor vehicle, nontraffic and other	286	51	0.7	0.1
Other transportation	152	34	0.4	0.1
Suffocation	108	23	0.3	0.1
Other mechanism ²	1,693	148	4.0	0.3
Mechanism unspecified	*	...	*	...
Intentional injuries	2,485	165	5.9	0.3
Assault	1,821	122	4.3	0.3
Unarmed fight or brawl, striking by blunt or thrown object	974	80	2.3	0.2
Cutting or piercing instrument	129	28	0.3	0.1
Other and unspecified mechanism ³	718	72	1.7	0.2
Self-inflicted	594	71	1.4	0.1
Poisoning by solid or liquid substances, gases, and vapors	401	57	0.9	0.1
Other and unspecified mechanism ⁴	193	33	0.5	0.1
Other causes of violence	*	...	*	...
Injuries of undetermined intent	497	64	1.2	0.1
Adverse effects of medical treatment	1,860	148	4.4	0.3
Medical and surgical complications	1,076	107	2.5	0.2
Adverse drug effects	783	81	1.8	0.2
Alcohol or drug use ⁵	2,166	157	5.1	0.3
Blank cause ⁶	7,725	507	18.2	0.9

... Category not applicable.

* Figure does not meet standards of reliability or precision.

¹Based on the "Supplementary Classification of External Cause of Injury and Poisoning," *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) (34). A detailed description of the ICD-9-CM E-codes used to create the grouping in this table can be found in the 2003 Advance Data report (10).²Includes drowning, firearms, and other mechanism.³Includes assaults by firearms and explosive, and other mechanism.⁴Includes injury by cutting and piercing instrument, and other and unspecified mechanism.⁵Alcohol and drug abuse are not contained in the "Supplementary Classification of External Causes of Injury and Poisoning," but are frequently recorded as a cause of injury or poisoning.⁶Includes illegible entries and blanks.

Table 14. Number and percent distribution of emergency department visits related to injury, poisoning, or adverse effects of medical treatment with corresponding standard errors, by body site of primary diagnosis: United States, 2006

Body site of primary diagnosis ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All injury visits	42,386	1,872	100.0	...
Head and neck	5,436	328	12.8	0.5
Traumatic brain injury	328	45	0.8	0.1
Other head	1,313	92	3.1	0.2
Face	1,690	143	4.0	0.3
Eye	574	59	1.4	0.1
Head, face, and neck unspecified.	1,530	151	3.6	0.3
Spinal cord	*	...	*	...
Vertebral column	1,683	163	4.0	0.3
Cervical	880	80	2.1	0.2
Thoracic and dorsal	163	40	0.4	0.1
Lumbar	632	99	1.5	0.2
Other vertebral column	*	...	*	...
Torso	1,973	133	4.7	0.3
Chest	796	64	1.9	0.1
Abdomen.	178	37	0.4	0.1
Pelvis and urogenital	313	44	0.7	0.1
Trunk	165	27	0.4	0.1
Back and buttocks	521	70	1.2	0.2
Upper extremity	7,462	354	17.6	0.5
Shoulder and upper arm	1,435	114	3.4	0.2
Forearm and elbow	1,170	101	2.8	0.2
Wrist, hand, and fingers.	4,486	232	10.6	0.4
Other and unspecified upper extremity	371	46	0.9	0.1
Lower extremity	6,133	315	14.5	0.4
Hip	457	65	1.1	0.1
Upper leg and thigh	160	37	0.4	0.1
Knee	543	59	1.3	0.1
Lower leg and ankle.	1,804	126	4.3	0.2
Foot and toes	1,608	138	3.8	0.3
Other and unspecified lower extremity.	1,561	121	3.7	0.3
Systemwide	1,718	127	4.1	0.2
Other and unspecified body site injuries	3,152	262	7.4	0.5
Adverse effects and medical complications	1,347	116	3.2	0.2
All other diagnoses ²	12,646	643	29.8	0.7
Unknown ³	813	87	1.9	0.2

... Category not applicable.

* Figure does not meet standards of reliability or precision.

¹Based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) (34). A detailed description of the Barelly Injury Diagnosis Matrix: Classification by Region of Body and Nature of the Injury can be found in the 2003 Advance Data report (6). Three additional categories were added that were not in the *Barelly Injury Diagnosis Matrix* to account for all injury-related visits: illness diagnoses, supplementary classification, and other adverse effects and medical complications.

²All other diagnoses" include musculoskeletal system (710-739), symptoms and ill-defined conditions (780-799), skin and subcutaneous tissue (680-709), mental disorders (290-319), nervous system and sense organs (320-389), other illnesses (001-289, 390-677, 740-779), and supplementary classification (V01-V82).

³Includes blank, uncodable, and illegible diagnoses.

Table 15. Number and percentage of emergency department visits with corresponding standard errors, by diagnostic and screening services ordered or provided: United States, 2006

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	119,191	5,276	...	...
One or more diagnostic or screening service listed ²	92,304	4,417	77.4	1.2
None	24,990	1,703	21.0	1.2
Blank	1,897	311	1.6	0.3
Blood tests				
Complete blood count	41,639	2,011	34.9	0.7
Blood urea nitrogen or creatinine	25,213	1,928	21.2	1.3
Glucose	23,614	1,707	19.8	1.1
Electrolytes	22,091	1,668	18.5	1.2
Cardiac enzymes	13,865	957	11.6	0.7
Liver function tests	7,464	668	6.3	0.5
Arterial blood gases	2,799	377	2.3	0.3
Blood alcohol concentration	1,932	189	1.6	0.1
HIV serology ³	249	53	0.2	0.0
Other blood test	22,956	1,418	19.3	0.9
Any blood test listed	46,232	2,184	38.8	0.7
Imaging				
X ray	41,589	1,891	34.9	0.6
CT scan ⁴	13,770	775	11.6	0.5
Ultrasound	3,675	245	3.1	0.2
MRI scan ⁵	621	74	0.5	0.1
Other imaging	1,581	175	1.3	0.2
Any imaging	52,690	2,332	44.2	0.7
Examinations and tests				
Pulse oximetry ⁶	49,058	3,956	41.2	2.6
Urinalysis	25,994	1,381	21.8	0.5
EKG or ECG ⁷	20,385	988	17.1	0.5
Cardiac monitor	9,477	766	8.0	0.5
Pregnancy test	5,512	454	4.6	0.3
Other test or service	13,521	1,782	11.3	1.3

... Category not applicable.

¹Total exceeds "All visits" because more than one service may be reported per visit.²Does not include medical screening and mental status exams, which were removed from the 2005 and 2006 surveys.³HIV is human immunodeficiency virus.⁴CT is computed tomography.⁵MRI is magnetic resonance imaging.⁶Median oxygen saturation was 98% and the 5th percentile was 93%.⁷EKG or ECG is electrocardiogram.

Table 16. Number and percentage of emergency department visits with corresponding standard errors, by selected procedures: United States, 2006

Procedures performed	Number of visits in thousands ¹	Standard error in thousands	Percent of visits	Standard error of percent
All visits	119,191	5,276	...	...
One or more procedures listed	56,721	3,201	47.6	1.4
None	56,579	2,982	47.5	1.5
Blank	5,891	639	4.9	0.5
IV fluids ²	28,550	1,494	24.0	0.8
Wound care	11,934	755	10.0	0.4
Orthopedic care	7,074	555	5.9	0.4
Nebulizer therapy	3,698	346	3.1	0.2
Bladder catheter	3,324	277	2.8	0.2
OB/GYN care ³	2,001	208	1.7	0.1
Nasogastric tube or gastric lavage	348	47	0.3	0.0
Endotracheal intubation	299	43	0.3	0.0
Thrombolytic therapy	*261	131	*0.2	0.1
CPR ⁴	166	38	0.1	0.0
Other	10,594	2,372	8.9	1.9

... Category not applicable.

* Figure does not meet standards of reliability or precision.

0.0 Quantity more than zero but less than 0.05.

¹Total exceeds "all visits" because more than one service may be reported per visit.²IV is intravenous.³OB/GYN is obstetrics and gynecology.⁴CPR is cardiopulmonary resuscitation.**Table 17. Number and percentage of emergency department visits with corresponding standard errors, by providers seen: United States, 2006**

Type of provider	Number of visits in thousands ¹	Standard error in thousands	Percent of visits	Standard error of percent
All visits	119,191	5,276	...	...
Any physician	107,453	4,833	90.2	1.0
ED attending physician	104,531	4,801	87.7	1.1
ED resident or intern	10,745	1,292	9.0	1.1
On call attending physician or fellow	6,044	730	5.1	0.6
RN or LPN ²	105,992	4,942	88.9	1.2
EMT ³	11,075	1,381	9.3	1.1
Physician assistant	10,408	1,450	8.7	1.1
Nurse practitioner	4,893	698	4.1	0.5
Other	26,531	2,481	22.3	1.9
Blank	1,558	283	1.3	0.2

... Category not applicable.

¹Total exceeds "all visits" because more than one provider may be reported per visit.²RN is registered nurse. LPN is licensed practical nurse.³EMT is emergency medical technician.

NOTE: At 7.4 percent of visits, patients were seen by both an ED attending physician and a resident or intern.

Table 18. Number and percent distribution of emergency department visits with corresponding standard errors, by medication therapy and number of medications provided or prescribed: United States, 2006

Medication therapy ¹	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	119,191	5,276	100.0	...
Visits with mention of medication ²	91,317	4,295	76.6	0.7
Visits without mention of medication	27,874	1,289	23.4	0.7
Number of medications provided or prescribed ³				
All visits	119,191	5,276	100.0	...
0	27,874	1,289	23.4	0.7
1	32,048	1,371	26.9	0.5
2	27,432	1,364	23.0	0.4
3	15,875	857	13.3	0.3
4	8,513	552	7.1	0.3
5	3,890	331	3.3	0.2
6	1,713	178	1.4	0.1
7	944	111	0.8	0.1
8	901	138	0.8	0.1

... Category not applicable.

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

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

³There were 212,140,000 drug mentions at emergency department visits in 2006. The average drug mention rate was 1.8 drug mentions per ED visit (standard error = 0.04). For visits with at least one drug mention, the average drug visit rate was 2.3 drugs per visit (standard error = 0.03).

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

Table 19. Number and percentage of drug mentions for the 20 most frequently occurring drug categories at emergency department visits with corresponding standard errors: United States, 2006

Drug category ¹	Number of occurrences in thousands	Standard error in thousands	Percent of drug mentions ²	Standard error of percent
Analgesics ³	77,992	3,974	36.8	1.2
Antiemetic or antivertigo agents	18,943	1,036	8.9	0.5
Antihistamines	13,027	806	6.1	0.4
Anxiolytics, sedatives, and hypnotics	9,569	699	4.5	0.4
Cephalosporins	8,170	548	3.9	0.3
Penicillins	7,146	428	3.4	0.2
Minerals and electrolytes	7,051	619	3.3	0.4
Bronchodilators	6,998	503	3.3	0.3
Adrenal cortical steroids	6,242	505	2.9	0.3
Miscellaneous antibiotics	5,756	411	2.7	0.2
Anticonvulsants	5,600	429	2.6	0.3
Quinolones	5,077	305	2.4	0.2
Macrolide derivatives	4,598	332	2.2	0.2
Miscellaneous respiratory agents	4,155	519	2.0	0.4
Muscle relaxants	4,039	355	1.9	0.2
Dermatological agents	3,861	339	1.8	0.2
Toxoids	3,385	224	1.6	0.2
Antiplatelet agents	3,304	203	1.6	0.1
Antiparkinson agents	3,053	198	1.4	0.1
Sulfonamides	2,768	280	1.3	0.2

¹Based on Multum Lexicon second-level therapeutic drug category (see www.multum.com/Lexicon.htm).

²Based on an estimated 212,140,000 drug mentions at emergency department visits in 2006.

³Includes narcotic and nonnarcotic analgesics and nonsteroidal anti-inflammatory drugs.

Table 20. Number, percent distribution, and therapeutic drug category for the 20 drug names most frequently prescribed at emergency department visits with corresponding standard errors, by whether the drug was given in the emergency department or prescribed at discharge: United States, 2006

Drug name ¹	Number of drug mentions in thousands	Standard error in thousands	Percent distribution of mentions	Standard error of percent	Given in ED ²		RX ³ at discharge		Unknown		Therapeutic drug category ⁴
					Percent of mentions	Standard error of percent	Percent of mentions	Standard error of percent	Percent of mentions	Standard error of percent	
All drug mentions.	212,140	11,368	100.0	...	62.0	0.9	45.1	0.9	2.7	0.2	...
Ibuprofen.	15,635	868	7.4	0.2	3.2	0.2	4.9	0.2	0.3	0.0	Analgesics
Acetaminophen-hydrocodone	13,317	975	6.3	0.3	2.2	0.1	5.0	0.2	0.1	0.0	Analgesics
Acetaminophen	10,344	574	4.9	0.2	2.9	0.1	2.3	0.2	0.2	0.0	Analgesics
Promethazine	8,585	631	4.0	0.2	3.4	0.2	1.1	0.1	0.1	0.0	Antiemetic or antivertigo agents or antihistamines
Ketorolac.	7,500	500	3.5	0.1	3.3	0.1	0.3	0.0	0.1	0.0	Analgesics
Morphine.	6,127	415	2.9	0.2	2.8	0.2	0.1	0.0	0.1	0.0	Analgesics
Acetaminophen-oxycodone.	4,436	457	2.1	0.2	1.0	0.1	1.4	0.1	0.1	0.0	Analgesics
Albuterol	4,312	342	2.0	0.1	1.3	0.1	1.0	0.1	0.1	0.0	Bronchodilators
Sodium chloride	4,064	518	1.9	0.2	1.8	0.2	0.0	0.0	0.1	0.0	Minerals and electrolytes or miscellaneous respiratory agents
Azithromycin.	3,911	275	1.8	0.1	0.8	0.1	1.2	0.1	0.0	0.0	Macrolide derivatives
Hydromorphone	3,862	382	1.8	0.2	1.7	0.2	0.1	0.0	0.1	0.0	Analgesics
Amoxicillin	3,458	296	1.6	0.1	0.4	0.0	1.4	0.1	0.0	0.0	Penicillins
Ceftriaxone	3,316	347	1.6	0.1	1.5	0.1	0.1	0.0	0.0	0.0	Cephalosporins
Cephalexin.	3,209	245	1.5	0.1	0.4	0.0	1.3	0.1	0.0	0.0	Cephalosporins
Ondansetron	3,074	302	1.4	0.1	1.3	0.1	0.1	0.0	0.0	0.0	Antiemetic or antivertigo agents
Aspirin	2,945	191	1.4	0.1	1.2	0.1	0.2	0.0	0.0	0.0	Analgesics or antiplatelet agents
Diphenhydramine.	2,923	191	1.4	0.1	1.0	0.1	0.6	0.0	0.0	0.0	Antiemetic or antivertigo agents or antihistamines or antiparkinson agents or anxiolytics, sedatives, and hypnotics
Lorazepam.	2,861	232	1.3	0.1	1.2	0.1	0.2	0.0	0.0	0.0	Anticonvulsants or anxiolytics, sedatives, and hypnotics
Sulfamethoxazole-trimethoprim	2,743	280	1.3	0.1	0.4	0.0	1.1	0.1	0.0	0.0	Miscellaneous antibiotics or sulfonamides
Levofloxacin	2,733	224	1.3	0.1	1.0	0.1	0.4	0.0	0.0	0.0	Quinolones
All other	102,784	5,899	48.5	0.5	29.1	0.5	22.0	0.7	1.5	0.1	...

... Category not applicable.

0.0 Quantity zero.

¹Based on Multum Lexicon terminology, drug name reflects the active ingredient(s) of a drug mention.²ED is emergency department.³Rx is prescription.⁴Based on Multum Lexicon second-level therapeutic drug category (see www.multum.com/lexicon.htm).

Table 21. Number and percentage of emergency department visits with corresponding standard errors, by visit disposition: United States, 2006

Disposition	Number of visits in thousands ¹	Standard error in thousands	Percent of visits	Standard error of percent
All visits	119,191	5,276	100.0	...
Admitted, transfer, or died				
Admit to hospital	15,263	896	12.8	0.6
Transfer to different hospital	2,209	181	1.9	0.1
Admit to observation unit	1,265	142	1.1	0.1
Dead on arrival or died in emergency department	249	48	0.2	0.0
Return or refer for other treatment				
Return or refer to physician or clinic for follow-up	76,522	3,830	64.2	1.2
Refer to social services	852	94	0.7	0.1
Left or referred out from triage				
Left without being seen	2,415	189	2.0	0.1
Left against medical advice	1,523	149	1.3	0.1
Other				
Return if needed, PRN or appointment	43,147	3,283	36.2	2.1
No follow-up planned	6,688	834	5.6	0.7
Other	*499	190	*0.4	0.2
Blank	1,211	142	1.0	0.1

... Category not applicable.

0.0 Quantity more than zero, but less than 0.05.

* Figure does not meet standards of reliability or precision.

¹Total exceeds "all visits" because more than one disposition may be reported per visit.

Table 22. Number and percent distribution of emergency department visits resulting in hospital admission, with corresponding standard errors, by selected characteristics: United States, 2006

Selected characteristic	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All admissions	15,263	896	...	...
Age				
Under 15 years	947	99	6.2	0.5
15–24 years	828	73	5.4	0.4
25–44 years	2,698	222	17.7	0.8
45–64 years	4,683	314	30.7	0.9
65–74 years	2,223	191	14.6	0.7
75 years and over	3,884	234	25.4	1.1
Unit to which admitted				
Other bed or unit	10,566	742	69.2	2.2
Critical care unit	2,255	227	14.8	1.3
Operating room or catheterization lab.	479	71	3.1	0.5
Unknown	1,964	323	12.9	2.0
Hospital discharge status				
Alive	12,745	777	83.5	2.2
Died	312	40	2.0	0.3
Unknown	2,205	389	14.4	2.3
Length of stay ¹				
1–2 days	3,236	262	21.2	1.2
3–4 days	4,627	309	30.3	1.2
5–6 days	2,483	180	16.3	0.9
7–8 days	1,247	117	8.2	0.6
9–10 days	652	77	4.3	0.4
More than 10 days	1,139	105	7.5	0.5
Unknown	1,878	381	12.3	2.3
Mode of arrival				
Ambulance	6,155	447	40.3	1.2
Other	9,108	515	59.7	1.2
Immediacy with which patient should be seen				
Immediate or emergent ²	5,238	473	34.3	2.3
Other	10,025	667	65.7	2.3
Patient seen in this ED within the last 72 hours ³				
Yes	545	68	3.6	0.4
No	14,718	865	96.4	0.4
Patient discharged from any hospital within the last 7 days				
Yes	738	106	4.8	0.6
No or unknown	14,525	844	95.2	0.6

... Category not applicable.

¹The mean length of stay was 5.3 days (standard error = 0.1).²Emergent is 1 to 14 minutes.³ED is emergency department.

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

Table 23. Number and percentage of emergency department visits resulting in hospital admission, and length of stay for admitted patients with corresponding standard errors, by selected characteristics: United States, 2006

Selected characteristics	Number of admissions in thousands	Standard error in thousands	Admissions as percent of visits	Standard error of percent	Mean length of stay in days	Standard error in days
Patient age						
Under 15 years	946	100	4.3	0.4	3.8	0.3
15–64 years	8,211	544	10.3	0.5	4.9	0.2
65 years and over	6,118	383	35.3	1.4	6.1	0.2
Nursing home resident	900	98	43.2	3.1	7.4	0.8
Ambulance arrival	6,154	454	33.4	1.5	5.8	0.2
Expected source of payment						
Private insurance	6,590	546	13.9	0.8	5.6	0.2
No insurance ¹	1,600	175	7.6	0.7	4.6	0.3
Medicare	6,417	406	31.0	1.2	6.1	0.2
Medicaid or SCHIP ²	3,055	230	10.1	0.6	5.7	0.3
Selected reasons for visit, under age 15 years						
Dyspnea	110	23	14.0	2.6	3.3	0.3
Fever	156	32	4.8	0.9	3.7	0.3
Nausea or vomiting	89	22	6.7	1.5	4.2	0.9
Injury	209	44	2.7	0.6	3.3	0.6
Other	303	43	4.6	0.6	4.6	0.4
Selected reasons for visit, age 15 years and over						
Chest pain	1,976	184	35.0	2.1	3.7	0.2
Abdominal pain	1,203	98	17.0	1.4	5.3	0.3
Dyspnea	1,402	122	37.3	2.5	5.9	0.3
Fever	293	44	26.8	3.4	6.8	0.8
Cough	161	30	10.9	1.7	5.6	0.6
Nausea or vomiting	549	67	19.6	2.0	6.3	0.7
Injury	3,291	293	9.5	0.7	5.5	0.2
Other	5,452	356	13.3	0.6	5.8	0.2

* Figure does not meet standards of reliability or precision.

¹“No insurance” is defined as having only self-pay, no charge, or charity as payment sources.

²SCHIP is State Children's Health Insurance Program.

Table 24. Number and percent distribution of emergency department visits admitted to the hospital, with corresponding standard errors, by the 20 leading principal hospital discharge diagnosis groups: United States, 2006

Principal 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	15,212	896	100.0	...
Heart disease, excluding ischemic 391–392.0,393–398, 402,404,415–416,420–429	1,013	111	6.7	0.6
Chest pain 786.5	817	99	5.4	0.5
Ischemic heart disease 410–414.9	662	84	4.4	0.5
Pneumonia 480–486	657	63	4.3	0.5
Cerebrovascular disease 430–438	430	53	2.8	0.3
Fracture of the lower limb 820–829	356	59	2.3	0.3
Syncope and collapse 780.2	288	51	1.9	0.3
Abdominal pain 789.0	282	49	1.9	0.3
Psychoses, excluding major depressive disorder 290–295, 296.0–296.1,296.4–299	275	41	1.8	0.3
Cellulitis and abscess 681–682	272	45	1.8	0.3
Urinary tract infection, site not specified 599.0	249	42	1.6	0.3
Fractures, excluding lower limb 800–819	233	45	1.5	0.3
Diabetes mellitus 250	221	45	1.5	0.3
Asthma 493	217	36	1.4	0.2
Chronic and unspecified bronchitis 490–491	214	41	1.4	0.2
Anemia 280–285	204	43	1.3	0.3
Poisonings 960–989	193	45	1.3	0.3
Malignant neoplasms 140–208,230–234	187	41	1.2	0.3
Noninfectious enteritis and colitis 555–558	176	34	1.2	0.2
Gastrointestinal hemorrhage 578	175	26	1.1	0.2
All other diagnoses	8,090	541	53.2	1.6

... Category not applicable.

¹Based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (34). However, certain codes have been combined in this table to better describe the use of ambulatory care services.

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

Table 25. Number and percentage of emergency department visits with corresponding standard errors, by time spent waiting to see a physician and time spent in the emergency department: United States, 2006

Visit characteristic	Number of visits in thousands ¹	Standard error in thousands	Percent distribution	Standard error of percent
All visits	109,010	4,859	100.0	...
Time spent waiting to see a physician ²				
Fewer than 15 minutes	23,819	1,885	21.9	1.5
15–59 minutes	43,497	2,291	39.9	1.2
1 hour, but fewer than 2 hours	16,164	1,062	14.8	0.7
2 hours, but fewer than 3 hours	6,008	529	5.5	0.4
3 hours, but fewer than 4 hours	2,362	246	2.2	0.2
4 hours, but fewer than 6 hours	1,500	174	1.4	0.2
6 hours or more	954	154	0.9	0.1
Blank	14,706	1,837	13.5	1.6
Time spent in the emergency department ³				
Less than 1 hour	13,478	1,018	12.4	0.8
1 hour, but fewer than 2 hours	25,946	1,399	23.8	0.6
2 hours, but fewer than 4 hours	36,285	1,840	33.3	0.7
4 hours, but fewer than 6 hours	15,566	841	14.3	0.5
6 hours, but fewer than 10 hours	8,356	517	7.7	0.4
10 hours, but fewer than 14 hours	1,928	159	1.8	0.1
14 hours, but fewer than 23 hours	1,126	117	1.0	0.1
23 hours, but fewer than 24 hours	*	...	*	...
24 hours or more	567	170	0.5	0.2
Blank	5,723	728	5.2	0.6

... Category not applicable.

* Figure does not meet standards of reliability or precision.

¹Visits where a physician was not seen were excluded.²The median waiting time to see a physician was 31 minutes.³The median duration of visit was 2.6 hours. The median patient care time (i.e., length of visit minus waiting time) was 1.7 hours, including hospitalized patients.

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

Form Approved OMB No. 0920-0278 Exp. Date 05/31/2007 CDC 64.136

FORM NHAMCS-100(ED) (8-1-2005)		<small>U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. CENSUS BUREAU ACTING AS DATA COLLECTION AGENT FOR THE U.S. Department of Health and Human Services Centers for Disease Control and Prevention National Center for Health Statistics</small>	
NATIONAL HOSPITAL AMBULATORY MEDICAL CARE SURVEY 2006 EMERGENCY DEPARTMENT PATIENT RECORD			
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).			

NHAMCS-100(ED) (8-1-2005)

1. PATIENT INFORMATION																														
a. Date of visit Month: <input type="text"/> Day: <input type="text"/> Year: <input type="text"/> 2 0 0 6		b. ZIP code <input type="text"/>																												
c. Date of birth Month: <input type="text"/> Day: <input type="text"/> Year: <input type="text"/>		d. Time of day <input type="checkbox"/> AM <input type="checkbox"/> Military <input type="checkbox"/> PM																												
e. Patient residence 1 <input type="checkbox"/> Private residence 2 <input type="checkbox"/> Nursing home 3 <input type="checkbox"/> Other institution 4 <input type="checkbox"/> Other residence 5 <input type="checkbox"/> Homeless 6 <input type="checkbox"/> Unknown		f. Mode of arrival - Mark (X) one. 1 <input type="checkbox"/> Ambulance (air/ground) 2 <input type="checkbox"/> Walk-in 3 <input type="checkbox"/> Public service (nonambulance, e.g., police, social services) 4 <input type="checkbox"/> Unknown																												
g. Sex 1 <input type="checkbox"/> Female 2 <input type="checkbox"/> Male		(1) Arrival <input type="text"/> : <input type="text"/> : <input type="text"/> (2) Time seen by physician <input type="text"/> : <input type="text"/> : <input type="text"/> <input type="checkbox"/> Not seen by physician (3) ED discharge <input type="text"/> : <input type="text"/> : <input type="text"/> Mark (X) if ED discharge is more than 24 hours from arrival. <input type="checkbox"/>																												
h. Ethnicity 1 <input type="checkbox"/> Hispanic or Latino 2 <input type="checkbox"/> Not Hispanic or Latino		i. Race - Mark (X) one or more. 1 <input type="checkbox"/> White 2 <input type="checkbox"/> Black/ African American 3 <input type="checkbox"/> Asian 4 <input type="checkbox"/> Native Hawaiian/ Other Pacific Islander 5 <input type="checkbox"/> American Indian/ Alaska Native																												
j. Expected source(s) of payment for this visit - Mark (X) all that apply. 1 <input type="checkbox"/> Private insurance 2 <input type="checkbox"/> Medicare 3 <input type="checkbox"/> Medicaid/SCHIP 4 <input type="checkbox"/> Worker's compensation 5 <input type="checkbox"/> Self-pay 6 <input type="checkbox"/> No charge/Charity 7 <input type="checkbox"/> Other 8 <input type="checkbox"/> Unknown																														
2. TRIAGE																														
a. Initial vital signs (1) Temperature <input type="text"/> °C <input type="text"/> °F (2) Pulse <input type="text"/> beats per minute		(3) Blood pressure <input type="text"/> / <input type="text"/> (4) Oriented X 3 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Unknown																												
b. Immediacy with which patient should be seen 1 <input type="checkbox"/> Immediate 2 <input type="checkbox"/> 1-14 minutes 3 <input type="checkbox"/> 15-60 minutes 4 <input type="checkbox"/> >1 hour-2 hours 5 <input type="checkbox"/> >2 hours-24 hours 6 <input type="checkbox"/> No triage 7 <input type="checkbox"/> Unknown		c. Presenting level of pain 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Mild 3 <input type="checkbox"/> Moderate 4 <input type="checkbox"/> Severe 5 <input type="checkbox"/> Unknown																												
3. PREVIOUS CARE																														
a. Seen in this ED within the last 72 hours? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Unknown		b. Discharged from any hospital within the last 7 days? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Unknown																												
4. REASON FOR VISIT																														
a. 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: _____		b. Is this visit work related? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Unknown																												
5. INJURY/POISONING/ADVERSE EFFECT																														
a. Is this visit related to an injury, poisoning, or adverse effect of medical treatment? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - SKIP to item 6.		b. Is this injury/poisoning intentional? 1 <input type="checkbox"/> Yes, self inflicted 2 <input type="checkbox"/> Yes, assault 3 <input type="checkbox"/> No, unintentional 4 <input type="checkbox"/> Unknown																												
c. Cause of injury, poisoning, or adverse effect - Describe the place and events that preceded the injury, poisoning, or adverse effect (e.g., allergy to penicillin, bee sting, pedestrian hit by car driven by drunk driver, spouse beaten with fists by spouse, heroin overdose, infected shunt, etc.). _____ _____ _____																														
6. PHYSICIAN'S DIAGNOSIS FOR THIS VISIT																														
As specifically as possible, list diagnoses related to this visit including chronic conditions.		(1) Primary diagnosis: _____ (2) Other: _____ (3) Other: _____																												
7. DIAGNOSTIC/SCREENING SERVICES																														
Mark (X) all ordered or provided at this visit. 1 <input type="checkbox"/> NONE Blood tests: 2 <input type="checkbox"/> CBC (complete blood count) 3 <input type="checkbox"/> BUN/Creatinine % 4 <input type="checkbox"/> Cardiac enzymes 5 <input type="checkbox"/> Electrolytes 6 <input type="checkbox"/> Glucose 7 <input type="checkbox"/> Liver function tests 8 <input type="checkbox"/> Arterial blood gases 9 <input type="checkbox"/> BAC (blood alcohol) 10 <input type="checkbox"/> HIV serology 11 <input type="checkbox"/> Other blood test Other tests: 12 <input type="checkbox"/> EKG/ECG 13 <input type="checkbox"/> Cardiac monitor 14 <input type="checkbox"/> Pulse oximetry 15 <input type="checkbox"/> Pregnancy test 16 <input type="checkbox"/> Urinalysis (UA) 17 <input type="checkbox"/> Other test/service Imaging: 18 <input type="checkbox"/> X-ray 19 <input type="checkbox"/> Ultrasound 20 <input type="checkbox"/> MRI 21 <input type="checkbox"/> CT scan 22 <input type="checkbox"/> Other imaging																														
8. PROCEDURES																														
Mark (X) all provided at this visit. Exclude medications. 1 <input type="checkbox"/> NONE 2 <input type="checkbox"/> Bladder catheter 3 <input type="checkbox"/> CPR 4 <input type="checkbox"/> Endotracheal intubation 5 <input type="checkbox"/> IV fluids 6 <input type="checkbox"/> Nebulizer therapy 7 <input type="checkbox"/> NG tube/gastric suction 8 <input type="checkbox"/> OB/GYN care 9 <input type="checkbox"/> Orthopedic care 10 <input type="checkbox"/> Thrombolytic therapy 11 <input type="checkbox"/> Wound care 12 <input type="checkbox"/> Other																														
9. MEDICATIONS & IMMUNIZATIONS																														
List up to 8 drugs given at this visit or prescribed at ED discharge. Include Rx and OTC drugs, immunizations, and anesthetics. <input type="checkbox"/> NONE <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th></th><th style="width: 15%;">Given in ED</th><th style="width: 15%;">Rx at discharge</th></tr></thead><tbody><tr><td>(1) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(2) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(3) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(4) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(5) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(6) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(7) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>(8) _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></tbody></table>					Given in ED	Rx at discharge	(1) _____	<input type="checkbox"/>	<input type="checkbox"/>	(2) _____	<input type="checkbox"/>	<input type="checkbox"/>	(3) _____	<input type="checkbox"/>	<input type="checkbox"/>	(4) _____	<input type="checkbox"/>	<input type="checkbox"/>	(5) _____	<input type="checkbox"/>	<input type="checkbox"/>	(6) _____	<input type="checkbox"/>	<input type="checkbox"/>	(7) _____	<input type="checkbox"/>	<input type="checkbox"/>	(8) _____	<input type="checkbox"/>	<input type="checkbox"/>
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(7) _____	<input type="checkbox"/>	<input type="checkbox"/>																												
(8) _____	<input type="checkbox"/>	<input type="checkbox"/>																												
10. PROVIDERS																														
Mark (X) all providers seen at this visit. 1 <input type="checkbox"/> ED attending physician 2 <input type="checkbox"/> ED resident/intern 3 <input type="checkbox"/> On call attending physician/fellow 4 <input type="checkbox"/> RN/LPN 5 <input type="checkbox"/> Nurse practitioner 6 <input type="checkbox"/> Physician assistant 7 <input type="checkbox"/> EMT 8 <input type="checkbox"/> Other																														
11. VISIT DISPOSITION																														
Mark (X) all that apply. 1 <input type="checkbox"/> No follow-up planned 2 <input type="checkbox"/> Return if needed, PRN/appointment 3 <input type="checkbox"/> Return/Refer to physician/clinic for FU 4 <input type="checkbox"/> Refer to social services 5 <input type="checkbox"/> Left AMA 6 <input type="checkbox"/> Left without being seen 7 <input type="checkbox"/> DOA/died in ED 8 <input type="checkbox"/> Transfer to different hospital - Reason _____ 9 <input type="checkbox"/> Admit to observation unit 10 <input type="checkbox"/> Admit to hospital 11 <input type="checkbox"/> Other If "Admit to hospital" was marked, then please continue with Item 12 - HOSPITAL ADMISSION on the reverse side.																														

Figure 10. 2006 Emergency Department Patient Record

12. HOSPITAL ADMISSION								
Complete if the patient was admitted to the hospital at this visit.								
a. Admitted to: 1 <input type="checkbox"/> Critical care unit 2 <input type="checkbox"/> OR/Cath lab 3 <input type="checkbox"/> Other bed/unit 4 <input type="checkbox"/> Unknown	b. Hospital admission time ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> Military <input type="checkbox"/> PM	c. Hospital discharge date <table border="1"><thead><tr><th>Month</th><th>Day</th><th>Year</th></tr></thead><tbody><tr><td> </td><td> </td><td>2 0 0 </td></tr></tbody></table>	Month	Day	Year			2 0 0
Month	Day	Year						
		2 0 0						
d. Principal hospital discharge diagnosis _____		e. Hospital discharge status 1 <input type="checkbox"/> Alive 2 <input type="checkbox"/> Dead 3 <input type="checkbox"/> Unknown						
If this information is not available at time of abstraction, then complete the Hospital Admission Log.								

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Figure 10. 2006 Emergency Department Patient Record—Continued

Suggested citation

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Edward J. Sondik, Ph.D.

Acting Co-Deputy Directors

Jennifer H. Madans, Ph.D.

Michael H. Sadagursky

**U.S. DEPARTMENT OF
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3311 Toledo Road
Hyattsville, MD 20782

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