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Hospitalization in the United States, 2002

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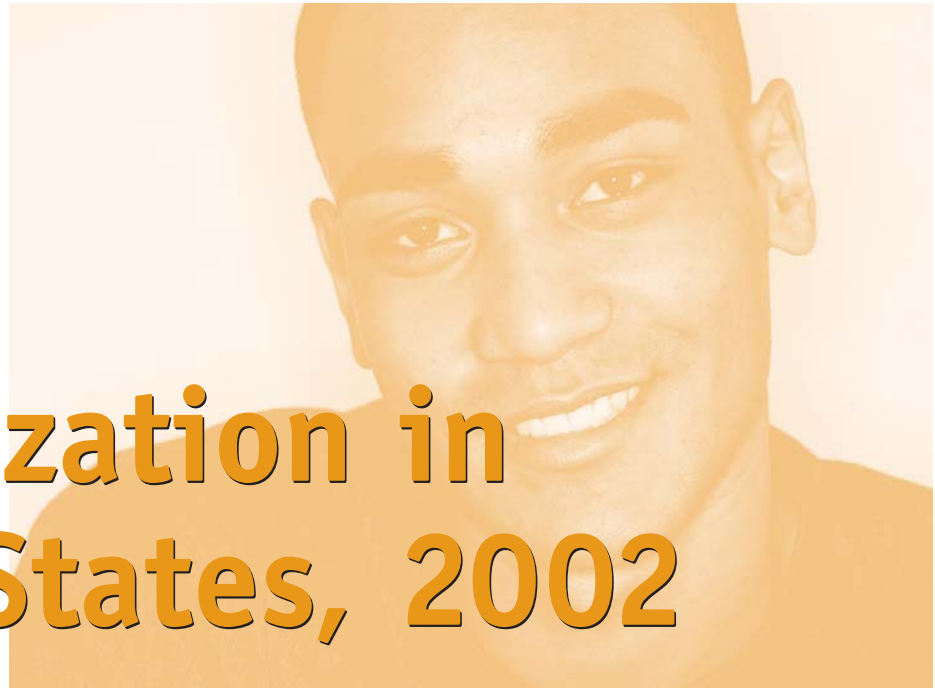
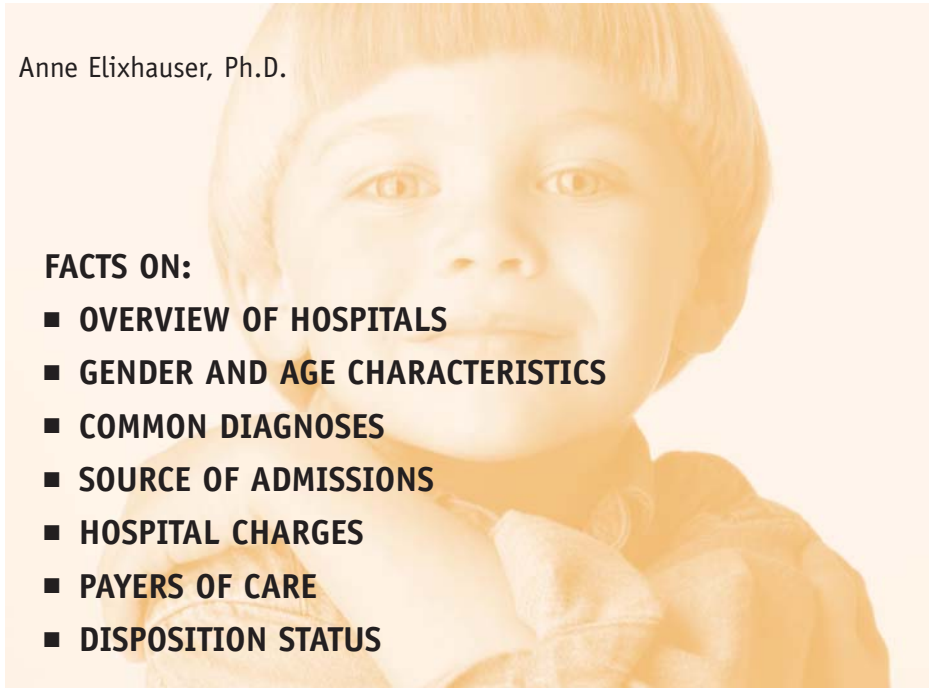


Hospitalization in the United States, 2002

Chaya T. Merrill, M.P.H. ■ Anne Elixhauser, Ph.D.



FACTS ON:

- **OVERVIEW OF HOSPITALS**
- **GENDER AND AGE CHARACTERISTICS**
- **COMMON DIAGNOSES**
- **SOURCE OF ADMISSIONS**
- **HOSPITAL CHARGES**
- **PAYERS OF CARE**
- **DISPOSITION STATUS**

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Executive Summary

The United States (U.S.) spends approximately one-third of its health care dollar on hospital care, making hospitalizations the single most expensive component of the health care system. Information about hospitalizations is therefore essential for decisionmakers seeking to understand how well the system is working and to improve its efficiency and quality. *Hospitalization in the United States, 2002* summarizes information from the Nationwide Inpatient Sample (NIS), an all-payer hospital database maintained by AHRQ. This report updates an earlier Fact Book that described hospital care in 1997. AHRQ has attempted to maintain the general content of the earlier document to allow for easy comparison between 1997 and 2002 hospital care information. A separate Fact Book (forthcoming) will compare use of procedures in U.S. hospitals between 1997 and 2002.

THIS FACT BOOK DESCRIBES:

Who is admitted to the hospital?
Why are patients admitted to the hospital?
How are patients admitted to the hospital?
How much do hospitals charge?
Who is billed for hospital care?
How are patients discharged from the hospital?

For the most part, the characteristics of hospitalizations remained consistent from 1997 to 2002. However, notable exceptions include significant increases in the percent of admissions that begin in the emergency department (ED), discharges with a comorbidity of hypertension, total charges for hospitalizations, and obesity-related procedures. These differences are highlighted and elaborated upon in this report.

In 2002, there were 37.8 million discharges from U.S. acute care hospitals, with aggregate charges of $650 billion. About 85 percent of discharges are from metropolitan hospitals and 45 percent are from teaching hospitals. Nearly three-quarters of discharges are from private not-for-profit hospitals, while 13 percent are from non-Federal government hospitals and 23 percent are from for-profit hospitals.

The elderly account for 12 percent of the population and 35 percent of all hospital stays.

■ ■ ■

Nearly a quarter of all hospital stays are related to pregnancy and childbirth.

WHO IS ADMITTED TO THE HOSPITAL?

Gender and age characteristics

Women are hospitalized more frequently than men. Of the 38 million hospital stays in the U.S., nearly 60 percent are for women. Women account for even more hospital care in the 18–44 age group, where nearly three times as many women than men are hospitalized. The primary reasons for the high rate of hospitalizations for women continue to be related to pregnancy and childbirth. These rates have remained essentially unchanged since 1997.

Rates of hospitalization also vary greatly by age group. The elderly account for a disproportionate share of hospitalizations. For example, while individuals age 65 and older comprise about 12 percent of the U.S. population,[1] they account for approximately 35 percent of all hospital stays. The rates of hospitalization by gender are largely influenced by age. While younger women ages 18–44 are hospitalized at higher rates than men, older women are hospitalized at lower rates than their male counterparts. These figures closely resemble those from 1997.

WHY ARE PATIENTS ADMITTED TO THE HOSPITAL?

Most frequent reasons for hospitalization (principal diagnoses[ii])

Pregnancies and childbirth-related conditions account for nearly a quarter of hospitalizations. Twelve percent of hospital stays are related to pregnancy and childbirth (the mother's stay) and 11 percent are related to newborn infant births.

[ii] See Appendix for the complete listing of all principal diagnoses.

Generally, the reasons for hospitalizations did not vary greatly from 1997 to 2002. However, hospitalizations associated with stroke have fallen 12 percent, causing this category to drop from the 7th most frequent reason for admission to the 15th.

Most common reasons for hospitalization by age groups

Reasons for hospitalization vary considerably by age group. The only top 10 condition that is common across each age group is an infection — pneumonia. For individuals 18–44, 9 of the top 10 reasons for hospitalization pertain to pregnancy and delivery. After these conditions are excluded, 3 of the top 10 conditions for this age group pertain to mental illness or substance abuse. However, alcohol-related conditions dropped 18 percent, from the 4th most common condition in 1997 among individuals 18–44 to the 11th in 2002. Depression is a top 10 condition for 3 different age groups: 1–17, 18–44, and 45–64.

Most common reasons for hospital stays by body system

In 2002, diseases of the circulatory system continue to comprise the most frequent reason for hospitalization. These diseases account for 17 percent of all hospital stays. Conditions include coronary atherosclerosis, congestive heart failure, heart attack, and cardiac dysrhythmia. The next most common reasons for hospitalization continue to include pregnancy and childbirth (diagnoses received by women), followed by birth and other perinatal conditions (diagnoses received by babies). The top 10 conditions by body system (Major Diagnostic Category) are nearly identical to those identified in 1997 with one exception — diseases of the endocrine system now appear in the top 10. This shift is attributable to a 370-percent increase in one Diagnosis Related Group: surgical treatments for obesity.

Hospitalizations for stroke have fallen 12 percent from 1997 to 2002.

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Three of the top 10 conditions for individuals 18–44 in the hospital (excluding pregnancy and delivery) are related to mental illness and substance abuse.

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About 60 percent of all hospital stays have at least one comorbidity — conditions that can increase costs and complications of the stay.

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Common comorbidities include hypertension (30 percent of all stays), depression (5 percent), and obesity (4 percent).

Comorbidities

The main reason for a hospitalization is recorded as the principal diagnosis on a patient's medical record. However, patients may also have secondary diagnoses, some of which are comorbidities — coexisting medical conditions that originated prior to the stay. Comorbidities can increase the costs and complications of hospital stays. Nearly 60 percent of all hospitalizations have at least one comorbidity and over a third of hospitalizations have two or more. This represents an increase from 1997, when 54 percent of all hospitalizations reported at least one comorbidity.

Most common comorbidities

Hypertension is the most common comorbidity, seen in about 30 percent of all records — an increase of 50 percent from 1997. Other common comorbidities include depression (seen in 5 percent of stays) and obesity (4 percent of stays), neither of which was among the top 10 comorbidities in 1997.

Variations in comorbidities by age group

Comorbidities vary by age group. Fluid and electrolyte disorders are the most common comorbidities for patients under age 18 and they are the second most common comorbidity for the very old (80+ years of age). However, hypertension is, by far, the most common comorbidity for all adults. Drug abuse continues to be a top 10 comorbidity for children and adolescents up to age 17 (seen in 2 percent of all stays) and adults up to age 44 (seen in 5 percent of all stays), while alcohol abuse is a top 10 comorbidity for adults ages 18–64 (seen in 4 to 5 percent of all stays).

HOW ARE PATIENTS ADMITTED TO THE HOSPITAL?

Admission status

Approximately half of hospitalizations continue to be routine — patients enter the hospital directly. The second most common source of admission is through the emergency department (ED), comprising 43 percent of all admissions. The remaining 7 percent of hospital admissions are from another hospital, another health care facility, or of unknown origin.

Admissions through the emergency department

Admissions through the ED tend to be more expensive and serious. Since 1997 admissions through the ED rose by 18 percent. The highest rate of admission through the ED is seen among the uninsured — 61 percent of uninsured hospitalizations begin in the ED. The mean charge for stays that originated in the ED is $19,000, which is 12 percent greater than the average charge for hospital stays overall.

The top 10 reasons for hospitalization (principal diagnosis) among patients admitted through the ED reveal serious, often life-threatening conditions. Six of the top 10 conditions for patients admitted through the ED relate to the circulatory system: congestive heart failure, chest pain, coronary atherosclerosis, heart attack, stroke, and irregular heartbeat. A new top 10 condition for patients admitted through the ED is affective disorders (primarily depression).

About 43 percent of all hospital admissions originate in the ED — an 18-percent increase since 1997. Fifty-five percent of patients 80+ were admitted through the ED in 1997, compared with 64 percent in 2002.

■ ■ ■

The average charge for a hospital stay rose 24 percent between 1997 and 2002, from $13,900 to $17,300 (2002 dollars).

Pneumonia is the only top 10 infection-related condition for admission through the ED — this finding differs from 1997, when both pneumonia and septicemia were primary reasons for hospital admission through the ED. Septicemia dropped from the 10th to the 16th most frequent condition for admission through the ED. Asthma is also no longer in the top 10 conditions admitted through the ED — in 1997, asthma ranked 9th and in 2002, 13th.

Variations in ED admissions by age group and gender

The percentage of people admitted to the hospital through the ED increased for all age groups, and the increases are largest for elderly patients. For patients ages 1–17 years, there was a 10-percent increase in admissions through the ED — 45 percent were admitted through the ED in 2002, as compared with 41 percent in 1997. For patients over age 45, the proportion admitted through the ED increased the most. For example, for patients 80+, 55 percent were admitted through the ED in 1997, as compared with 64 percent in 2002; this finding represents a 19-percent increase over the 5-year period.

HOW MUCH DO HOSPITALS CHARGE?

Hospital charges are defined as the amount the hospital bills for the entire stay (excluding most physician fees). Charges may not reflect the actual cost of hospital care or how much is reimbursed. The average charge for a hospital stay is more than $17,300 (2002 dollars). This amount represents a 24-percent increase from 1997, when the average charge for a hospital stay was about $13,900 (adjusted for inflation). Over the same time period, the average cost for a hospital stay remained essentially the same — $7,500.

Conditions with the highest charges and longest length of stay

The average length of a hospital stay is 5 days — a decrease of 6 percent since 1997. The most expensive condition is infant respiratory distress, for which the average charge is $90,000. Four of the top 10 most expensive conditions relate to the care of infants: respiratory distress, prematurity and low birthweight, heart defects, and intrauterine hypoxia/birth asphyxia (lack of oxygen during childbirth). Two of these conditions, respiratory distress and prematurity, also have the longest mean length of stay of all hospitalizations — 24 days.

The most expensive conditions and those with the longest length of stay are relatively uncommon. The 10 most expensive conditions combined represent less than 2 percent of all discharges; the 10 conditions with the longest stays represent slightly more than 2 percent of all discharges.

Four of the top 10 most expensive conditions are related to care of infants: respiratory distress, prematurity and low birthweight, congenital heart defects, and lack of oxygen during childbirth.

■ ■ ■

Although Medicaid is billed for 18 percent of aggregate national charges, 40 percent of all newborn stays and 50 percent of all normal pregnancy stays are billed to Medicaid.

WHO IS BILLED FOR HOSPITAL CARE?

Payers of hospital care

HCUP data capture information on patients regardless of who pays for their care. Government (Medicare and Medicaid) is billed for 56 percent of all hospital stays; private insurance is billed for 36 percent of stays; and 5 percent of stays are uninsured. Other payer sources[iii] are billed for approximately 3 percent of all hospital stays in U.S. community hospitals.

Hospital data provide information on charges — the amount billed — not on what was actually paid for care.[iv] Examining charges over time can provide insight into the relative growth in various areas.

Medicare

Medicare, the federally sponsored health care program for the elderly and disabled, serves approximately 39 million individuals, most of whom are 65 years of age and older.[2] Similar to 1997, Medicare continues to be billed for approximately 44 percent of the national hospital bill, while only 34 percent of hospital stays are for Medicare patients and only 12 percent of the U.S. population is 65 or older. The most common reason for hospitalizations among stays billed to Medicare is congestive heart failure, followed by pneumonia and coronary atherosclerosis.

Medicaid

Medicaid, the Federal- and State-government-sponsored health care program for low-income people, serves about 33 million individuals.[2] Approximately 12 percent of the U.S. population is covered by Medicaid, and this program is billed for 18 percent of the national hospital bill.

Women and children continue to comprise a large portion of Medicaid enrollment, which results in Medicaid being billed for a larger share of certain conditions. Nearly 40 percent of newborn stays, 40 percent of stays for fetal distress, and nearly 50 percent of all stays for normal pregnancies are billed to Medicaid. This government program is also billed for a large portion of mental health conditions, including over one-third of all stays for depression and over half of all stays for schizophrenia.

[iii] Other payer sources include Workers' Compensation, Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA), Title V, and other government programs.

[iv] For information on health expenditures, see http://www.cms.hhs.gov/statistics/nhe/.

Private insurers

More than 200 million individuals have private health insurance through commercial insurance plans.[2] These plans include employer-sponsored health plans and self-purchased plans. Commercial health plans are billed for approximately 31 percent of the national hospital bill. The most common conditions for hospitalizations under commercial plans are pregnancy and childbirth, but heart-related conditions, back problems, pneumonia, and affective disorders (primarily depression) are also frequent.

Uninsured

About 44 million individuals, more than 15 percent of the population, have no health insurance.[2] However, only 5 percent of hospitalized patients are uninsured at the time of discharge from the hospital, and uninsured stays comprise about 4 percent of the national hospital bill. Two of the top 10 conditions for hospitalization of the uninsured are for alcohol abuse disorders or mental health conditions.

Infections are also a concern for this population. For instance, uninsured hospitalizations for tuberculosis rose by 56 percent: 25 percent of hospital admissions for this infection are for the uninsured in 2002, compared to 16 percent in 1997. Approximately 20 percent of hospital stays for alcohol-related mental disorders and 8 percent of stays for depression are uninsured.

The largest increase in aggregate charges was seen for Medicaid (a 47-percent increase from 1997 to 2002) and for the uninsured (a 39-percent increase).

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Uninsured hospitalizations for tuberculosis rose by 56 percent from 1997 to 2002.

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About 11 percent of all patients leaving the hospital go to long-term care facilities. Among patients 65–84, 21 percent are discharged to long-term care. Among patients 85+, 41 percent are discharged to long-term care.

Aggregate charges by payer

The aggregate total billed to Medicare is $283 billion, which represents a 29-percent increase since 1997 (adjusted for inflation). The aggregate bill to Medicaid is $119 billion, a 47-percent increase. The aggregate bill to private insurers is $203 billion, a 31-percent increase. And the aggregate hospital bill for the uninsured is $25 billion, a 39-percent increase over 5 years. The largest increase in charges was seen for Medicaid and the uninsured.

HOW ARE PATIENTS DISCHARGED FROM THE HOSPITAL?

Discharges from the hospital

Over three-fourths of hospital discharges continue to be routine — patients are typically discharged to their home. About 11 percent of patients leaving the hospital are discharged to long-term care facilities, including skilled nursing facilities, intermediate care, or nursing homes. Another 2 percent are discharged to another hospital and 2 percent die during their hospital stay. Less than 1 percent of admissions result in patients leaving the hospital against medical advice. These figures have remained stable since 1997.

Discharges to other institutions

Hospitalizations that result in discharges to other institutions tend to be those in which the patient has lost functional status, often after stroke, hip fracture, or heart attack. Older patients are more often discharged to other institutions than are younger patients. While 3 to 8 percent of patients in the 18–44 and 45–64 age groups are discharged to long-term care and other institutions, 21 percent of patients 65–84 and 41 percent of patients 85+ are discharged to long-term care and other facilities.

Conditions with the highest in-hospital mortality

Some patients are admitted to the hospital for end-of-life care; therefore, mortality for some conditions is expected to be high. As noted above, approximately 2 percent of hospital stays end in death. Cancer-related conditions continue to be among the top conditions that account for in-hospital mortality, that is, the largest percentage of cases who die in the hospital. As in 1997, 4 of the 10 most frequent conditions with the highest rates of in-hospital death are cancer without specification of site, cancer of the liver and intrahepatic bile duct, leukemia, and cancer of bronchus or lung. The two conditions with the *largest numbers* of deaths are infection-related: pneumonia and septicemia. The two conditions with the *highest percentage* of in-hospital mortality are cardiac arrest and shock. More than 50 percent of all admissions for these conditions result in death at the hospital.

Brain injury is the most frequent cause of death in the hospital among children 1–17 and young adults 18–44.

■ ■ ■

Among infants, the largest number of in-hospital deaths is associated with prematurity and low birthweight.

Conditions with the highest in-hospital mortality by age group

For all age groups, cardiac arrest/ventricular fibrillation is the condition with the highest percentage of in-hospital deaths. In the youngest age category — less than 1 year — the largest number of in-hospital deaths is associated with prematurity and low birthweight. Among the elderly (65+), the largest numbers of in-hospital deaths are associated with pneumonia, heart attack, septicemia, stroke, and congestive heart failure, accounting for nearly a quarter million deaths in the hospital in 2002. Brain injury is the leading cause of death among hospitalized children (1–17 years) and young adults (18–44 years), in terms of the number of people affected.

Patients leaving against medical advice

As noted above, fewer than 1 percent of patients leave against medical advice. More than 17 percent of all discharges in which patients leave against medical advice are for substance abuse- or alcohol-related mental disorders. Other common conditions among patients leaving against medical advice include medical problems, such as pneumonia or diabetes, rather than surgical problems.

Table of Contents

Foreword

The mission of the Agency for Healthcare Research and Quality (AHRQ) is to improve the quality, safety, efficiency, and effectiveness of health care for all Americans. To help fulfill this mission, AHRQ develops a number of databases, including those of the powerful Healthcare Cost and Utilization Project (HCUP). HCUP is a Federal-State-Industry partnership designed to build a standardized, multi-State health data system; HCUP features databases, software tools, and statistical reports to inform policymakers, health system leaders, and researchers.

For data to be useful, they must be disseminated in a timely, accessible way. To meet this objective, AHRQ launched HCUPnet, an interactive, Internet-based tool for identifying, tracking, analyzing, and comparing statistics on hospital utilization, outcomes, and charges (**http://www.ahrq.gov/hcupnet**). Menu-driven HCUPnet guides users in tailoring specific queries about hospital care online; with a click of a button, users receive answers within seconds.

In addition, AHRQ produces the HCUP Fact Books to highlight statistics about hospital care in the U.S. in an easy-to-use, readily accessible format. Each Fact Book provides information about specific aspects of hospital care — the single largest component of our health care dollar. These national estimates are benchmarks against which States and others can compare their own data.

This Fact Book provides critical information about hospitalization facts and trends for policymakers and researchers interested in improving the quality and efficiency of the U.S. health care system. It is an update to the first HCUP Fact Book, which presented characteristics of hospital care in 1997. It provides insight for individuals interested in gaining a better understanding of trends in hospitalizations during 2002 and how these compare with data from 1997. Efforts have been made to maintain the general content of the initial *Hospitalization in the United States, 1997* Fact Book to allow for easy comparison of 1997 to 2002 data.

AHRQ welcomes questions and comments from readers of this report who are interested in obtaining more information about hospitalization in the U.S. We also invite you to tell us how you are using this Fact Book and other HCUP data and tools and to share suggestions on how HCUP products might be enhanced to further meet your needs. Please e-mail us at **hcup@ahrq.gov** or send a letter to the address below.

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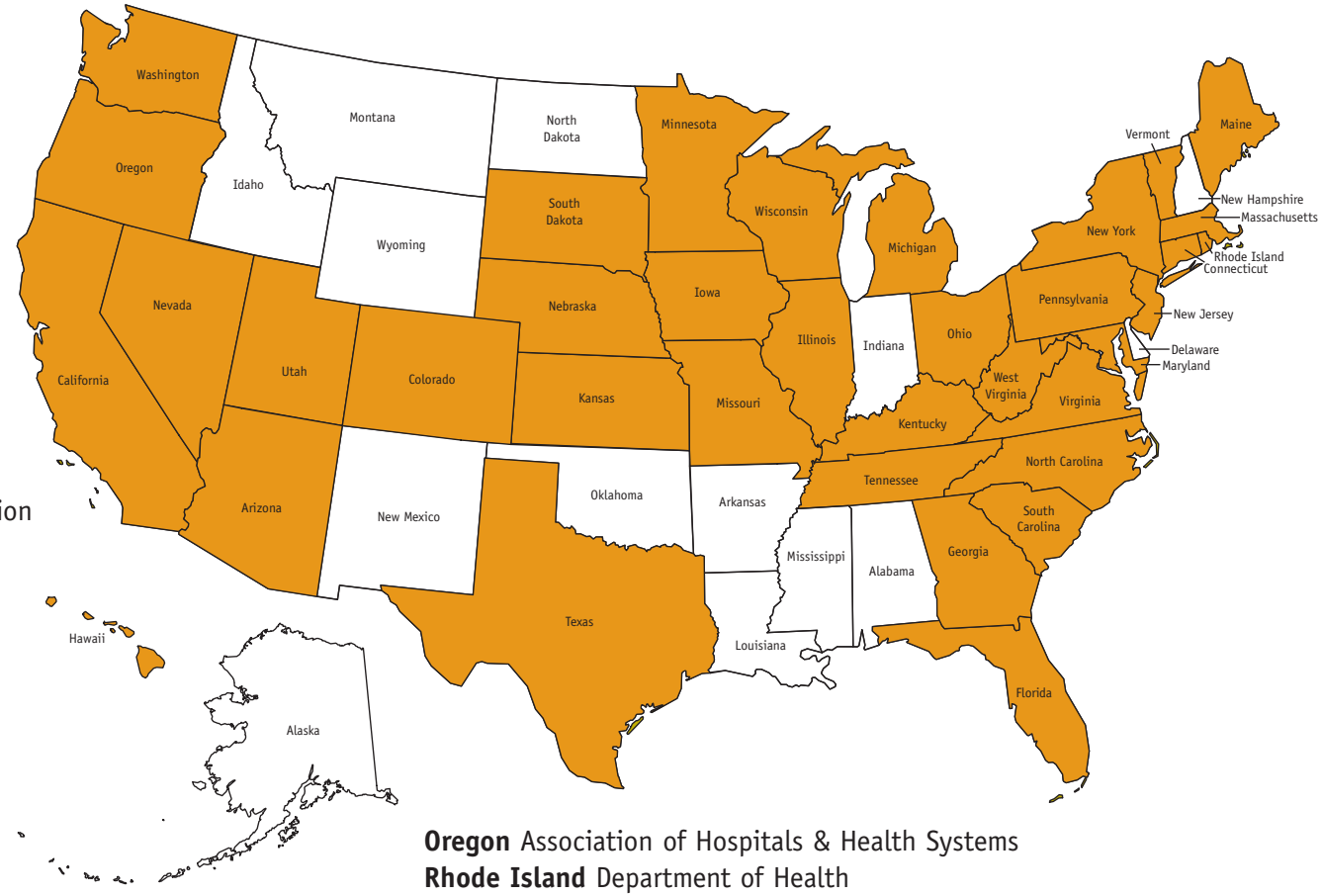
Contributors

Without the following State Partner organizations, the Healthcare Cost and Utilization Project (HCUP) and the 2002 Nationwide Inpatient Sample (NIS) would not be possible:



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Tennessee Hospital Association
Texas Department of State Health Services
Utah Department of Health
Vermont Association of Hospitals and Health Systems
Virginia Health Information
Washington State Department of Health
West Virginia Health Care Authority
Wisconsin Department of Health and Family Services

Introduction

In 1999, AHRQ launched an initiative to provide timely data regarding hospital care in the U.S. by producing a series of easily accessible Fact Books that summarize several aspects of hospitalizations. The first published Fact Book, *Hospitalization in the United States, 1997*, provided a general overview of hospitalizations, addressing such issues as: What types of conditions are treated? Who is admitted to the hospital conditions treated in the hospital? Who is billed for hospital care?

Hospitalization in the United States, 2002 updates the first Fact Book. Similar to the 1997 version, this report draws from the Nationwide Inpatient Sample (NIS), a database maintained by AHRQ, to provide comprehensive information about hospitalizations. This report answers the following questions:

- Who is admitted to the hospital?
- Why are patients admitted to the hospital?
- How are patients admitted to the hospital?
- How much do hospitals charge?
- Who is billed for hospital care?
- How are patients discharged from the hospital?

Findings from this report indicate that many aspects of hospitalizations have remained stable since 1997, but there are key exceptions.

The following pages provide a rich depiction of hospital care in 2002. Information on data sources and methods is available at the end of this document. An appendix provides descriptive information about hospital discharges for specific diagnoses by several characteristics: number of discharges, mean length of stay, mean charges, and number of admissions from the ED.

A complete medical dictionary with terms used in this Fact Book is available at **http://www.nlm.nih.gov/medlineplus/mplusdictionary.html**.

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kfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfac
ookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookf
ctbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbo
kfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfac
ookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookf
ctbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbo
kfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfac
ookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookf
ctbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbo
kfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfac
ookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookf
ctbookfactbookfactbookfactbookfactbookfactbookfactbookfactbookfactbo
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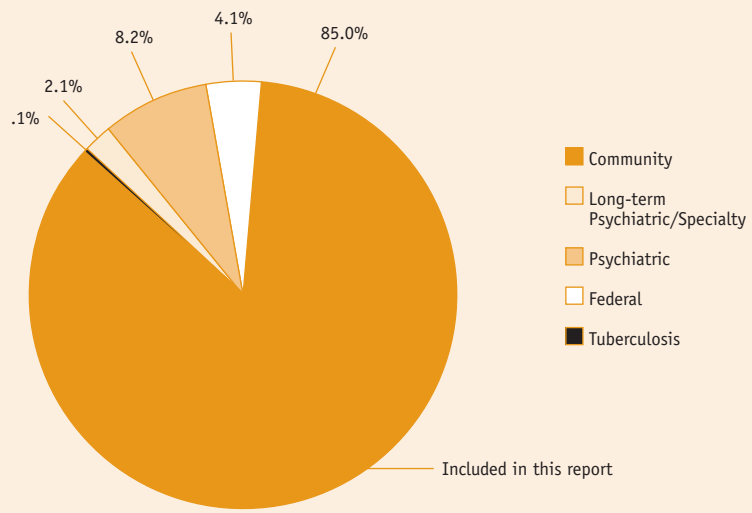
Overview of hospitals in the United States

The following tables and charts provide an overview of the types of U.S. hospitals in 1997 and 2002, as defined by the American Hospital Association (AHA).[3] This Fact Book presents information specifically pertaining to U.S. community hospitals. The AHA defines community hospitals as "all non-Federal, short-term (or acute care) general and specialty hospitals whose facilities and services are available to the public." [3] Children's hospitals and academic medical centers are also considered to be community hospitals.

Additionally, national estimates of general characteristics for community hospitals in the NIS for 1997 and 2002 follow.

AHA HOSPITAL CATEGORIES	1997	2002
Total number of all U.S. registered hospitals	6,097	5,794
Number of U.S. community hospitals	**5,057**	**4,927**
Number of nongovernment hospitals	3,000	3,025
Number of investor-owned (for-profit) community hospitals	797	766
Number of State and local government community hospitals	1,260	1,136

Types of U.S. Hospitals, 2002



CHARACTERISTICS OF U.S. COMMUNITY HOSPITALS	1997	2002
Total discharges	34,680,000	37,804,000
Discharges per 100,000 population[1,4]	12,720	13,128
Total (aggregate) charges[v]	$492 billion	$650 billion
Mean charges per stay	$13,900	$17,300
Percent of discharges from:		
Metropolitan hospitals	84.1	84.6
Teaching hospitals	46.6	45.3
Non-Federal government hospitals	13.8	13.6
Private not-for-profit hospitals	74.6	74.3
Private for-profit hospitals	11.5	12.1

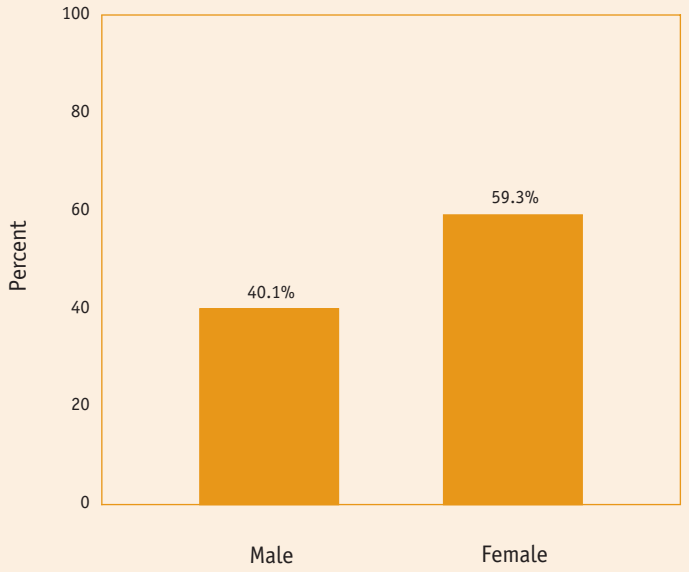
[v] **Information presented for 1997 charges has been adjusted for inflation and noted in 2002 dollars.**

Who is admitted to the hospital?

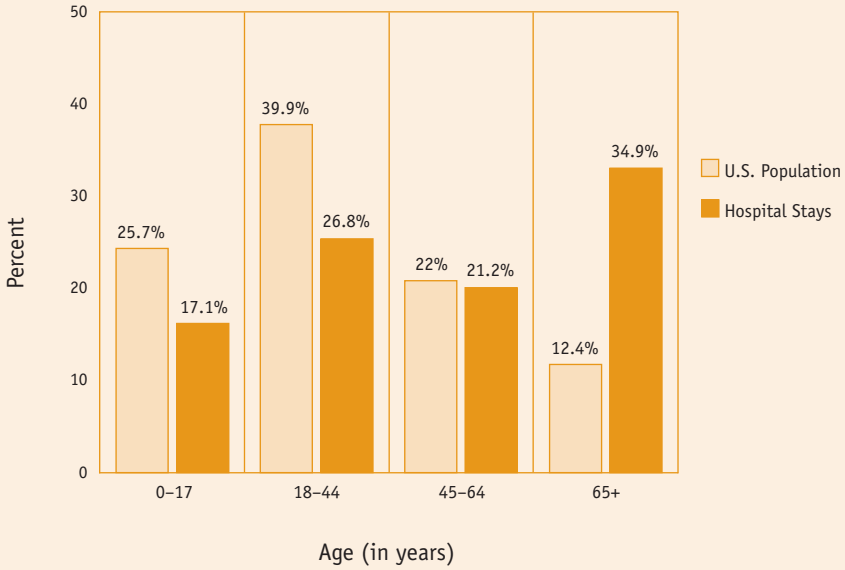
Gender Characteristics of Hospitalizations

- Nearly 60 percent of all hospitalizations are for women — just as in 1997.
- Among hospitalized patients 0–17 and 45–64, there are nearly equal numbers of males and females. However, for patients 18–44, 3 out of 4 hospitalized patients are women, many of whom are hospitalized for pregnancy-related conditions.

Gender of Patients in the Hospital (All Ages)



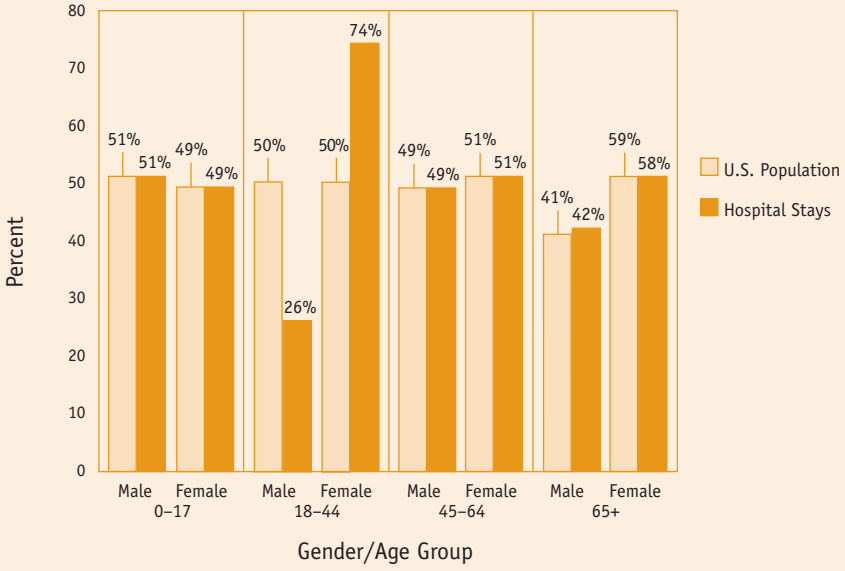
Percent of Hospital Stays by Age Group

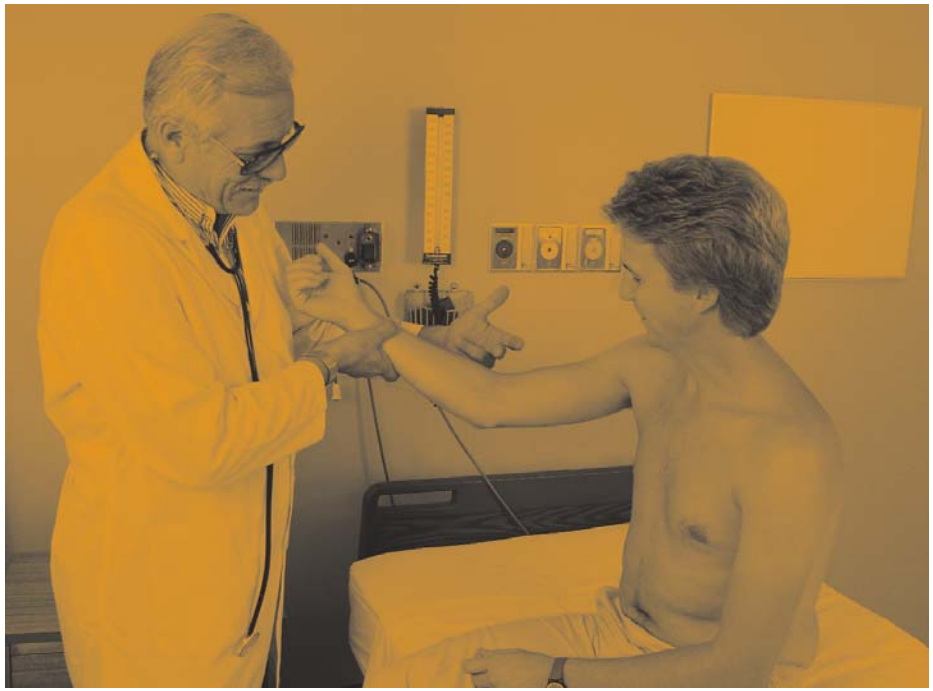


Age Characteristics of Hospitalizations

- The mean age for hospitalized patients is about 48 years, which is similar to 1997, when the mean age was 47 years.
- People age 65 and older continue to account for more hospital stays than any other age group. This group is followed closely by individuals ages 18–44.
- While people 65 and older comprise about 12 percent[4] of the U.S. population, they account for about 35 percent of all hospital stays. In contrast, people 18–44 comprise roughly 40 percent of the U.S. population but account for only 27 percent of all hospital stays.

Percent of Population vs. Percent of Hospital Stays





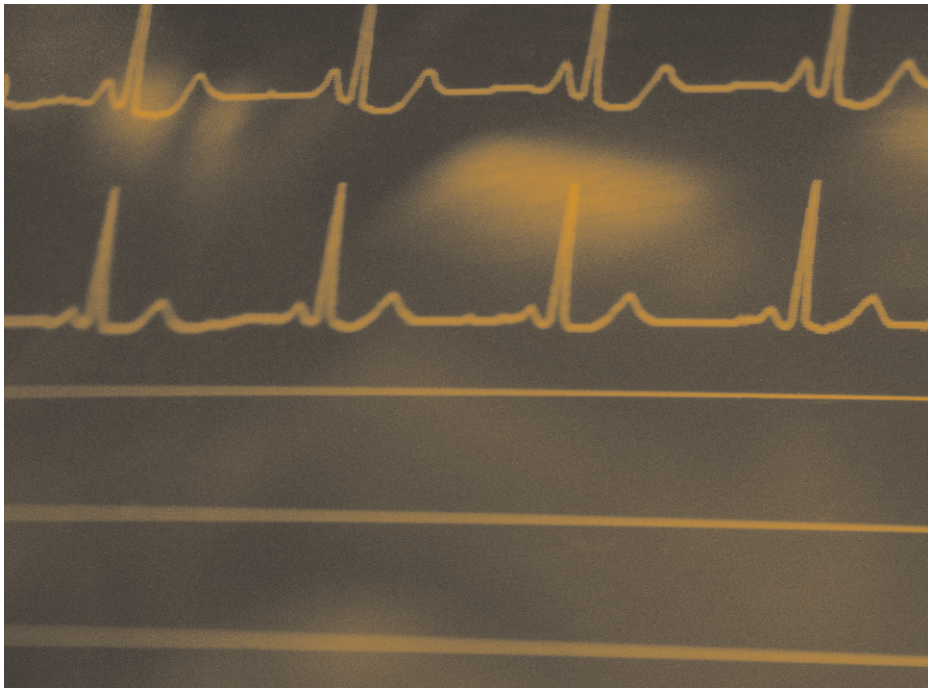
Why are patients admitted to the hospital?

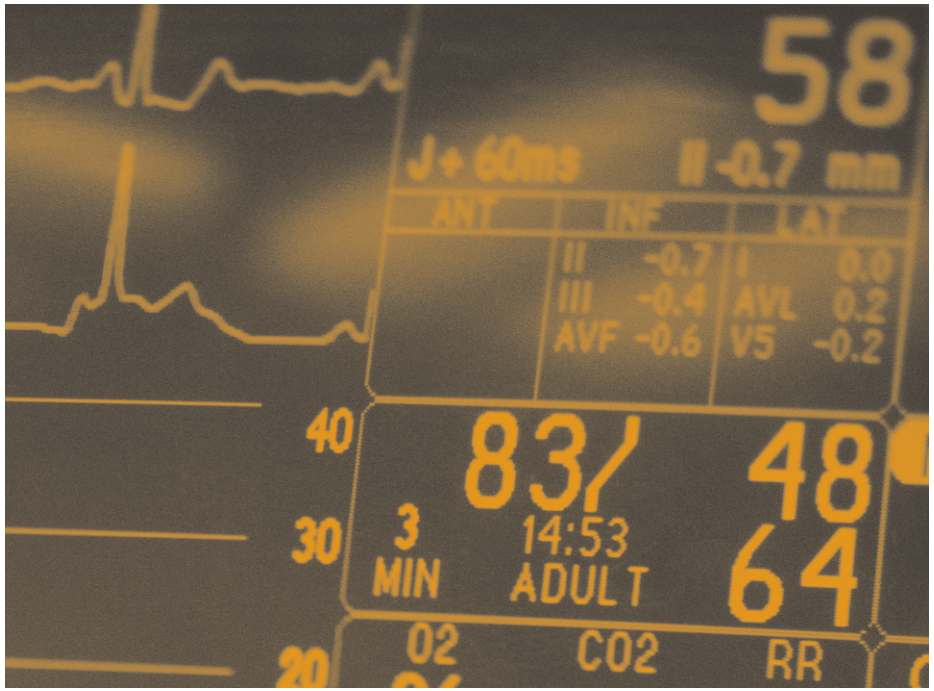
Most Frequent Reasons for Hospitalizations[vi]

- The most common reason for hospitalization continues to be infant birth (newborns), which accounts for 11 percent of all hospital discharges.
- Cardiovascular diseases continue to be a common reason for hospitalization. Five of the top 10 conditions for hospitalization relate to cardiovascular disease: coronary atherosclerosis (hardening of the heart arteries and other heart disease), congestive heart failure, chest pain, heart attack, and irregular heart beat.
- Chest pain — a nonspecific diagnosis — replaced stroke as 1 of the top 10 reasons for hospitalization. From 1997 to 2002, admission from stroke decreased by 12 percent (638,431 admissions to 564,129 admissions). Hospitalizations resulting from stroke have fallen from the 7th most frequent reason for admission to the 15th.
- Similar to 1997, one of the most frequent reasons for hospitalization in 2002 is a mental health diagnosis — affective disorders (primarily depression). Affective disorders continue to account for nearly 2 percent of all discharges from the hospital.

[vi] See Appendix for the complete listing of all principal diagnoses.

TOP 10 PRINCIPAL DIAGNOSES IN U.S. HOSPITALS	TOTAL NUMBER OF DISCHARGES (in thousands)	PERCENT OF ALL DISCHARGES
1. Newborn infant	4,155	11.0
2. Hardening of the heart arteries (coronary atherosclerosis)	1,293	3.4
3. Pneumonia	1,275	3.4
4. Congestive heart failure	1,058	2.8
5. Chest pain	885	2.3
6. Trauma to vulva (external female genitals) and perineum (area between anus and vagina) due to childbirth	804	2.1
7. Heart attack (acute myocardial infarction)	764	2.0
8. Cardiac dysrhythmias (irregular heart beat)	713	1.9
9. Other maternal complications of birth and puerperium (period after childbirth)	694	1.8
10. Affective or mood disorders (depression and bipolar disorder)	655	1.7





Most Common Reasons for Hospitalization by Age Groups

- Pneumonia is the only diagnosis in the top 10 conditions for each age group.
- For patients 18–44, 9 of the top 10 reasons for hospitalization pertain to pregnancy and delivery. When pregnancy and childbirth are excluded, 3 of the top 10 conditions relate to mental illness or substance abuse. Alcohol-related conditions dropped from the 4th most common condition in 1997 to the 11th in 2002, representing a drop of 18 percent.
- Depression is 1 of the top 10 conditions for patients in 3 different age groups: 1–17, 18–44, and 45–64.
- For all age groups 45 and older, hardening of the arteries, heart attack, and congestive heart failure are among the top 10 reasons for hospitalization.
- Some conditions are in the top 10 only within particular age groups:
  - Hip fracture — patients 80 and older.
  - Cardiac dysrhythmia — patients 65 and older.
  - Urinary tract infection — patients less than 1 year of age, as well as patients 80 and older.
  - Asthma — patients 1–17.

TOP 10 PRINCIPAL DIAGNOSES* BY AGE GROUP	AGE GROUP					
	< 1 YEAR	1–17 YEARS	18–44 YEARS	45–64 YEARS	65–79 YEARS	80+ YEARS
Total number of discharges (in thousands)	4,751	1,711	10,123	8,023	7,912	5,280
	NUMBER OF DISCHARGES FOR THIS CONDITION (in thousands)					
Newborn infant	4,154					
Acute bronchitis	113	36				
Other conditions occurring around the time of birth	55					
Pneumonia	46	120	118	240	370	380
Hemolytic jaundice and perinatal jaundice (infant jaundice following birth)	39					
Fluid and electrolyte disorders (primarily dehydration and fluid overload)	25	75				178
Premature birth and low birthweight	22					
Urinary infections	19					148
Viral infection (not pneumonia, gastroenteritis, or HIV)	18					

TOP 10 PRINCIPAL DIAGNOSES* BY AGE GROUP	AGE GROUP					
	< 1 YEAR	1–17 YEARS	18–44 YEARS	45–64 YEARS	65–79 YEARS	80+ YEARS
Fever of unknown origin	17					
Asthma		128				
Appendicitis		74	140			
Affective or mood disorders (depression and bipolar disorder)		60	347	175		
Epilepsy, convulsions		49				
Chemotherapy and radiation therapy		34				
Skin and subcutaneous tissue infections		32				
Other infections of upper respiratory tract (nose, throat, trachea)		30				
Spondylosis, intervertebral disc disorders (back problems, disorders of intervertebral discs and bones in spinal column)			192	248		
Chest pain			171	402	219	
Schizophrenia			164			
Gallbladder disease			151			
Benign tumor of uterus			138			
Drug abuse disorders			128			
Diabetes mellitus with complications			123			
Hardening of the heart arteries and other heart disease				518	530	179
Heart attack (acute myocardial infarction)				258	274	188
Congestive heart failure				214	410	395
Complication of medical device, implant, or graft				201		
Osteoarthritis (degenerative joint disease)				186	276	
Chronic obstructive lung disease				178	285	
Cardiac dysrhythmias (irregular heart beat)					293	203
Acute cerebrovascular disease (stroke)					212	194
Rehabilitation care, fitting of prostheses, and adjustment of devices					207	141
Hip fracture						185

***Excludes pregnancy-related conditions.**

Most Common Reasons for Hospital Stays by Body System

Major Diagnostic Categories (MDCs) are used to define "body systems." MDCs are broad categories of Diagnosis Related Groups (DRGs) that relate to an organ or a system (the digestive system, for example).

- Diseases of the circulatory system remain the most frequent reason for hospitalization, accounting for 17 percent of all hospital stays. These include conditions such as coronary atherosclerosis (hardening of the heart arteries), congestive heart failure, heart attack, and irregular heart beat.
- The next most common reasons for hospitalization by body system continue to be pregnancy and childbirth (diagnoses received by women), followed by newborns and other perinatal conditions (diagnoses received by babies).
- Hospitalizations for all mental disorders combined account for approximately 4 percent of all hospital stays in short-term community hospitals and rank as the 8th most common reason for hospitalization by body system, just as in 1997.
- The top 10 common reasons for hospital stays by body system (based on Major Diagnostic Categories) are nearly identical to those in 1997 with one exception — diseases of the endocrine system now appear in the top 10, replacing diseases of the female reproductive system. This change is attributable to a single Diagnosis Related Group, obesity-related operating room (OR) procedures, which increased by more than 370 percent (from 16,429 discharges in 1997 to 77,335 discharges in 2002).

TOP 10 REASONS FOR HOSPITAL STAY, BY BODY SYSTEM	TOTAL NUMBER OF DISCHARGES (in thousands)	PERCENT OF ALL DISCHARGES
1. Diseases of the circulatory system	6,462	17.1
2. Pregnancy and childbirth	4,639	12.3
3. Newborns and perinatal conditions	4,279	11.3
4. Diseases of the respiratory system	3,659	9.7
5. Diseases of the digestive system	3,253	8.6
6. Diseases of the musculoskeletal system	2,916	7.7
7. Diseases of the nervous system	2,077	5.5
8. Mental disorders	1,314	3.5
9. Diseases of the kidney and urinary tract	1,248	3.3
10. Diseases of the endocrine system	1,229	3.3

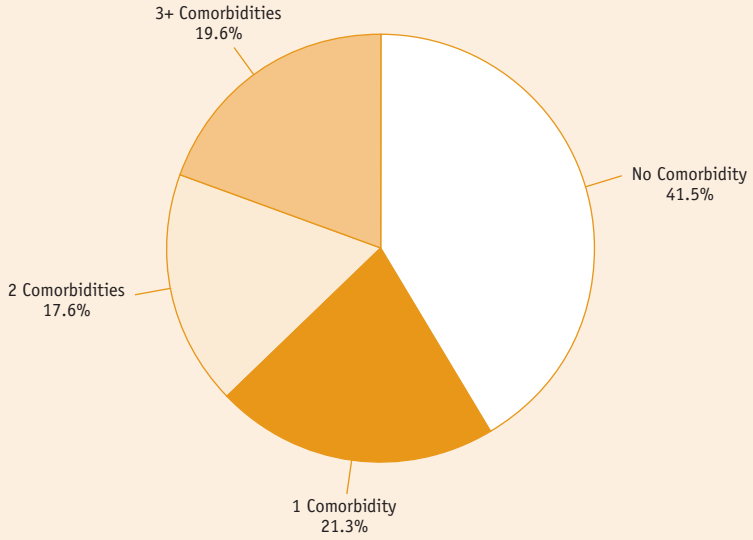
Comorbidities

Comorbidities are defined as coexisting medical problems listed as secondary diagnoses on a patient's hospital record; they are not the principal diagnosis or the main reason for admission, and they are distinguished from complications that arise during the hospital stay.[5]

Comorbidities can make a hospital stay more expensive and complicated. Conditions are designated as comorbidities if they are not directly related to the principal diagnosis and are likely to have originated prior to the hospital stay.

- Nearly 60 percent of hospitalized patients have at least one comorbidity — an increase from 54 percent in 1997. Thirty-seven percent of hospital stays had two or more comorbidities, compared with 33 percent of hospital stays in 1997 — a 12-percent increase.

Comorbidities Among Hospitalized Patients



Most Common Comorbidities

- Hypertension is the most common comorbidity. About 30 percent of patients with comorbidities have hypertension in addition to their principal diagnosis — up from 20 percent in 1997. It is not clear to what extent this increase is due to more careful coding of underlying conditions, better detection of disease, or increased prevalence.
- Depression and obesity are among the 10 most frequent comorbidities, appearing as secondary diagnoses for about 5 percent and 4 percent of all hospital stays, respectively. These conditions were not among the top 10 comorbidities in 1997.
- The 4th most common comorbidity — fluid and electrolyte disorders — is associated with many conditions and may be a marker for the severity of the principal diagnosis or may actually be a condition that arises in the hospital.

Variations in Comorbidities by Age Group

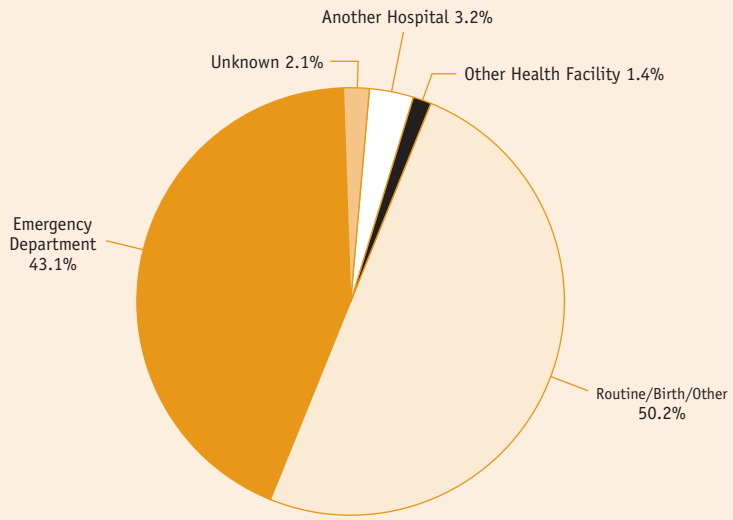
- The most common comorbidity for patients under 18 is fluid and electrolyte disorders.
- For adults (18 years and older), hypertension is, by far, the most common comorbidity. For adults younger than 80, the second most common comorbidity is diabetes, while the second most common for those 80 and older is fluid and electrolyte disorders.
- Depression and obesity are among the top 10 comorbidities for adolescents and adults up to age 64.
- Alcohol and drug abuse continue to be common comorbidities. Drug abuse is a top 10 comorbidity for children and adolescents 1–17 and for adults 18–44. Alcohol abuse is a top 10 comorbidity for adults in both the 18–44 and 45–64 age groups.

TOP 10 COMORBIDITIES FOR HOSPITAL STAYS	TOTAL NUMBER OF CASES WITH EACH COMORBIDITY (in thousands)	PERCENT OF ALL DISCHARGES
1. Hypertension (high blood pressure)	11,104	29.4
2. Chronic obstructive lung disease	4,579	12.1
3. Diabetes mellitus	4,446	11.8
4. Fluid and electrolyte disorders (primarily dehydration and fluid overload)	4,404	11.7
5. Iron deficiency and other anemia	2,997	7.9
6. Congestive heart failure	2,162	5.7
7. Hypothyroidism	2,120	5.6
8. Affective or mood disorders (depression and bipolar disorder)	1,757	4.7
9. Other neurological disorders	1,583	4.2
10. Obesity	1,346	3.6

TOP 10 COMORBIDITIES BY AGE GROUP	AGE GROUP					
	< 1 YEAR	1–17 YEARS	18–44 YEARS	45–64 YEARS	65–79 YEARS	80+ YEARS
Total number of discharges (in thousands)	4,751	1,711	10,123	8,023	7,912	5,280
	NUMBER OF DISCHARGES FOR THIS CONDITION (in thousands)					
Fluid and electrolyte disorders (primarily dehydration and fluid overload)	80	181	601	1,010	1,312	1,219
Iron deficiency and other anemia	17	47	519	665	921	827
Chronic obstructive lung disease	14	121	509	1,176	1,727	1,032
Other neurological disorders	9	51			435	522
Coagulation and bleeding disorders	8	18				
Weight loss	5					
Valvular disease	4					328
Hypertension (high blood pressure)	2		835	3,253	4,220	2,777
Hypothyroidism	2			486	752	671
Congestive heart failure	2			354	819	924
Paralysis		43				
Affective or mood disorders (depression and bipolar disorder)		33	406	563		
Drug abuse disorders		27	484			
Psychoses		24				
Obesity		19	339	603		
Alcohol abuse disorders			404	431		
Diabetes mellitus			368	1,424	1,772	873
Chronic blood loss anemia			320			
Peripheral vascular disease					554	356
Renal failure					459	

How are patients admitted to the hospital?

Nature of Admissions



Admission Status

Admission status refers to how a patient presents to the hospital: routine, from the emergency department, from another hospital, or from a long-term facility. Each of these categories is described below.

Routine admission — Patient was *not* admitted from the emergency department or any other health care facility. This admission source includes admission from home, via physician or clinic referral, or birth.

Emergency department (ED) admission — Patient was admitted to the hospital through the ED.

Admission from another hospital — Patient was admitted to this hospital from another short-term, acute care hospital. This usually signifies that the patient required the transfer in order to obtain more specialized services that the originating hospital could not provide.

Admission from long-term care facility — Patient was admitted from a long-term facility, such as a nursing home.

The 2002 hospital data indicate:

- Approximately 50 percent of admissions are routine in nature.
- About 43 percent of all hospital admissions originate in the ED.
- The remaining 7 percent of hospital admissions are from another short-term hospital, a long-term hospital, or of unknown origin.

Admissions Through the Emergency Department

Admissions through the ED tend to more expensive and serious than routine admissions.

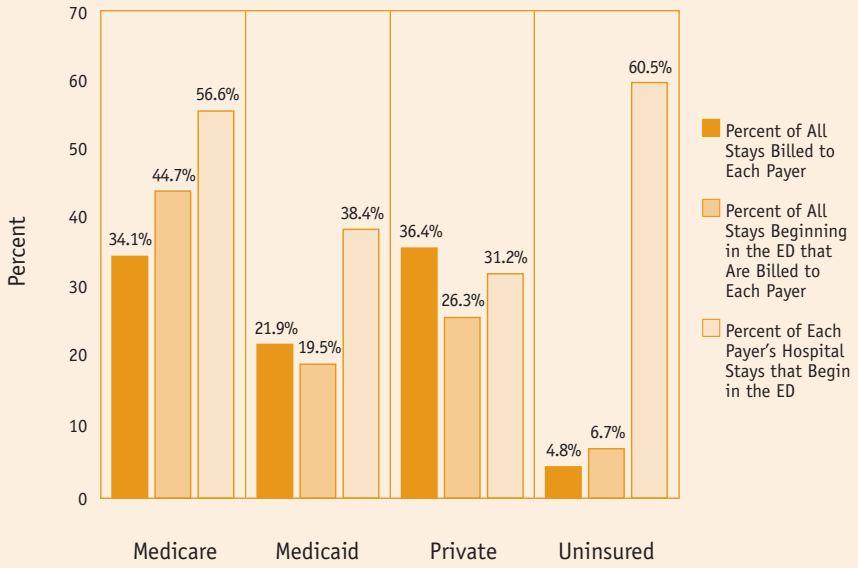
- In 2002, about 43 percent of all hospital admissions originated in the ED. This finding is a nearly 18 percent increase above 1997, when 37 percent of admissions were initiated through the ED.
- Six of the top 10 conditions for which patients are admitted through the ED continue to be related to the circulatory system: congestive heart failure, chest pain, coronary atherosclerosis (hardening of the heart arteries), heart attack, irregular heart beat, and stroke.
- Two of the top 10 conditions for ED admissions relate to respiratory problems — pneumonia (6 percent of admissions through the ED) and chronic obstructive lung disease (3 percent). Asthma is no longer among the top 10 conditions admitted through the ED. In 1997, asthma ranked 9th and in 2002, 13th.
- In 1997, 2 infections, pneumonia and septicemia, were among the 10 most frequent conditions admitted through the ED. However, in 2002, pneumonia remains the only infection in this category. Septicemia dropped from the 10th to the 16th most frequent condition for admission through the ED.
- Among the 10 most frequent reasons for admission through the ED, 2 new conditions emerged in 2002: fluid and electrolyte disorders and affective disorders. These conditions were ranked 11th and 13th, respectively, in 1997.

TOP 10 PRINCIPAL DIAGNOSES FOR HOSPITAL DISCHARGES ADMITTED THROUGH THE ED	TOTAL NUMBER OF DISCHARGES (in thousands)	PERCENT OF ALL HOSPITAL DISCHARGES ADMITTED THROUGH THE ED
1. Pneumonia	892	5.5
2. Congestive heart failure	768	4.7
3. Chest pain	722	4.4
4. Hardening of the heart arteries and other heart disease	566	3.5
5. Heart attack (acute myocardial infarction)	500	3.1
6. Acute cerebrovascular disease (stroke)	445	2.7
7. Chronic obstructive lung disease	445	2.7
8. Cardiac dysrhythmias (irregular heart beat)	433	2.7
9. Fluid and electrolyte disorders (primarily dehydration and fluid overload)	393	2.4
10. Affective or mood disorders (depression and bipolar disorder)	336	2.1

Admissions Through the ED by Payer

- Medicare cases represent 45 percent of all hospitalizations beginning in the ED, followed by private hospitalizations (26 percent), Medicaid hospitalizations (20 percent), and uninsured hospitalizations (7 percent).
- The percent of hospitalizations that begin in the ED varies by payer type: 61 percent of uninsured hospitalizations, 57 percent of Medicare hospitalizations, 39 percent of Medicaid hospitalizations, and 31 percent of privately insured hospitalizations.

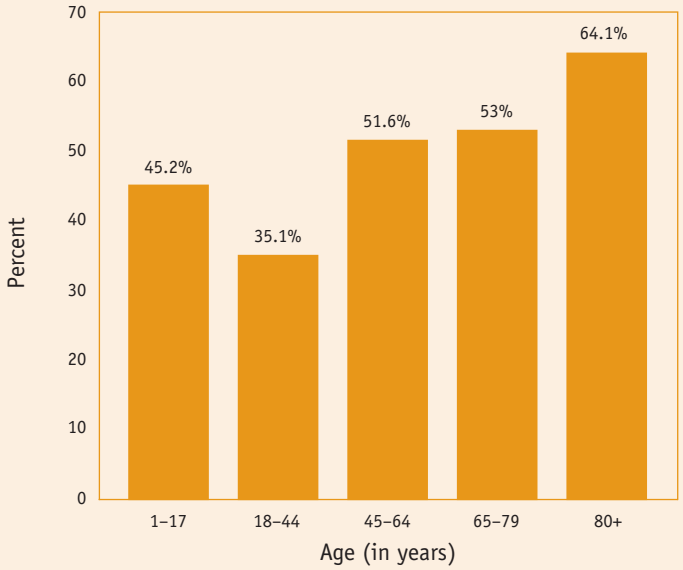
Percent of Hospital Stays Attributed to Each Payer



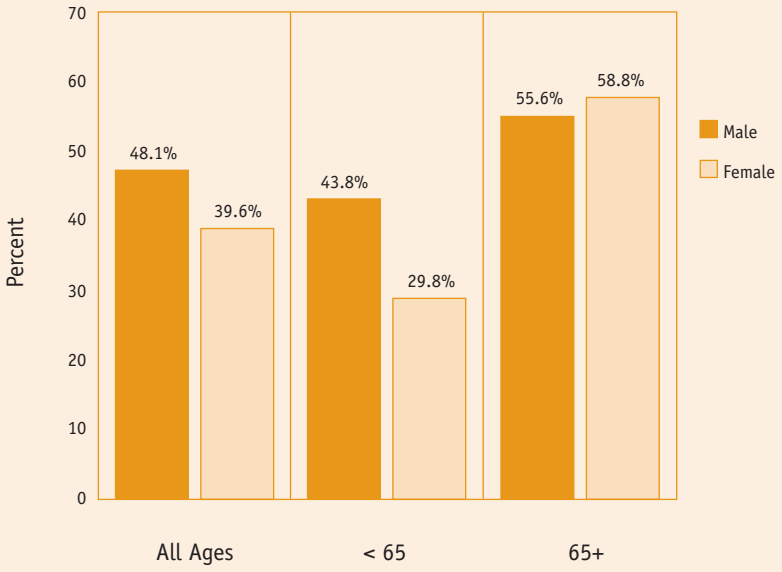
Variations in ED Admissions by Age Group and Gender

- The percentage of people admitted to the hospital through the ED increased for all age groups, with the largest increase seen for elderly patients.
- For patients 1–17 years of age, a 10-percent increase occurred in the percent of patients admitted through the ED. In 2002, 45 percent of admissions occurred through the ED, compared with 41 percent in 1997.
- For patients ages 45 and older, the proportion admitted through the ED increased the most. For patients 80+, 55 percent were admitted through the ED in 1997, as compared with 64 percent in 2002 — a 19-percent increase.
- Individuals 18–44 years of age have the lowest percentage of admissions that begin in the ED — 35 percent — relative to any other age group.
- Overall, a greater proportion of hospitalizations for males — 48 percent — originate in the ED, as compared with 40 percent for females. In younger age groups, a substantially greater proportion of hospitalizations for males begin in the ED, as compared with females; however, for adults 65 years and above, slightly more hospitalizations for females originate in the ED.

Admissions Initiated Through the ED



Percent of Hospitalizations Beginning in the ED by Gender



How much do hospitals charge?

Hospital charges are the amount the hospital bills for the entire inpatient stay and do not include most professional (physician) fees. Costs tend to reflect the actual costs of producing a service, while charges represent what the hospital billed for the case (but not what was actually reimbursed).

- After adjusting for inflation,[6] the average hospital charge increased by 24 percent from $13,900 in 1997 to $17,300 in 2002.
- Over this same time period, the average cost[vii] for a hospital stay remained essentially the same — $7,500.

Conditions With the Highest Charges

- The most expensive conditions have average charges more than five times higher than the overall average hospital charge.
- The most expensive condition is infant respiratory distress syndrome; the average charge for this condition is more than $90,000.
- Many of these expensive conditions involve invasive or high-technology procedures. For example, infant respiratory distress syndrome can involve lengthy stays in intensive care. In fact, 4 of the top 10 most expensive conditions in the hospital are related to care of infants with complications: respiratory distress, prematurity, heart defects, and intrauterine hypoxia/birth asphyxia.
- Three of the top 10 most expensive conditions relate to the circulatory system: heart valve disorders, heart defects, and aneurysms.

[vii] This cost represents the resource costs to produce services plus an additional allowance for bad debt (approximately 5 percent) and ordinary net income (approximately 3 percent), based on the long-run average for the industry.

- The conditions with the highest charges continue to be relatively uncommon. The 10 most expensive conditions combined represent less than 1.5 percent of all discharges.
- Even though long lengths of stay can result in high expense, 4 of the 10 most expensive reasons for hospital stays are NOT among those with the longest stays: cardiac congenital anomalies; heart valve disorders; aneurysms; and adult respiratory failure, insufficiency, and/or arrest.

PRINCIPAL DIAGNOSES WITH THE HIGHEST MEAN CHARGES	MEAN CHARGES*	MEAN LENGTH OF STAY (in days)
1. Infant respiratory distress syndrome	$91,400	24.2
2. Premature birth and low birthweight	$79,300	24.2
3. Spinal cord injury	$76,800	12.8
4. Leukemia (cancer of blood)	$74,500	14.1
5. Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	$72,800	15.6
6. Cardiac and circulatory birth defects	$71,400	8.9
7. Heart valve disorders	$70,900	8.8
8. Polio and other brain or spinal infections	$63,200	13.0
9. Aneurysm (ballooning or rupture of an artery)	$55,300	7.7
10. Adult respiratory failure or arrest	$48,500	10.0

*Charges shown reflect figures for acute hospital care only and do not include professional fees, rehabilitation, follow-up care, or home care costs.

Conditions With the Longest Lengths of Stay

- The average length of stay is 5 days — 6 percent shorter than in 1997.
- The two conditions with the longest hospital stays continue to be related to infants: respiratory distress and prematurity. Each condition has a mean length of stay of 24 days.
- Conditions with lengthy hospital stays continue to be relatively uncommon. Collectively, the 10 conditions with the longest stays represent only 2 percent of all discharges.
- Even though long lengths of stay can be costly, 4 of the 10 conditions with the longest lengths of stay are NOT among the most expensive conditions: tuberculosis, schizophrenia and related disorders, preadult mental disorders, and rehabilitation care — all non-surgical, non-intensive care conditions.

PRINCIPAL DIAGNOSES WITH THE LONGEST MEAN LENGTH OF STAY	MEAN LENGTH OF STAY (in days)	MEAN CHARGES*
1. Infant respiratory distress syndrome	24.2	$91,400
2. Premature birth and low birthweight	24.2	$79,300
3. Tuberculosis (TB)	16.8	$46,700
4. Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	15.6	$72,800
5. Leukemia (cancer of blood)	14.1	$74,500
6. Polio and other brain or spinal infections	13.0	$63,200
7. Schizophrenia	13.0	$18,300
8. Spinal cord injury	12.8	$76,800
9. Preadult mental disorders	12.5	$23,000
10. Rehabilitation care, fitting of prostheses, and adjustment of devices	12.3	$21,200

*Charges shown reflect figures for acute hospital care only and do not include professional fees, rehabilitation, follow-up care, or home care costs.

Who is billed for hospital care?

Aggregate charges, or the "national bill," is the sum of all charges for all hospital stays in U.S. non-Federal community hospitals. The aggregate charges for 2002 are $650 billion — an increase of 32 percent from 1997, when the aggregate charges were $492 billion (adjusted for inflation).

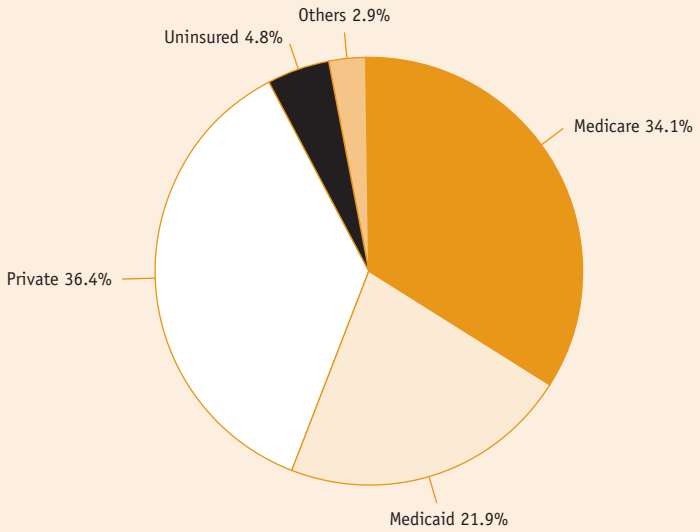
Payer information is presented in five general payer categories as follows:

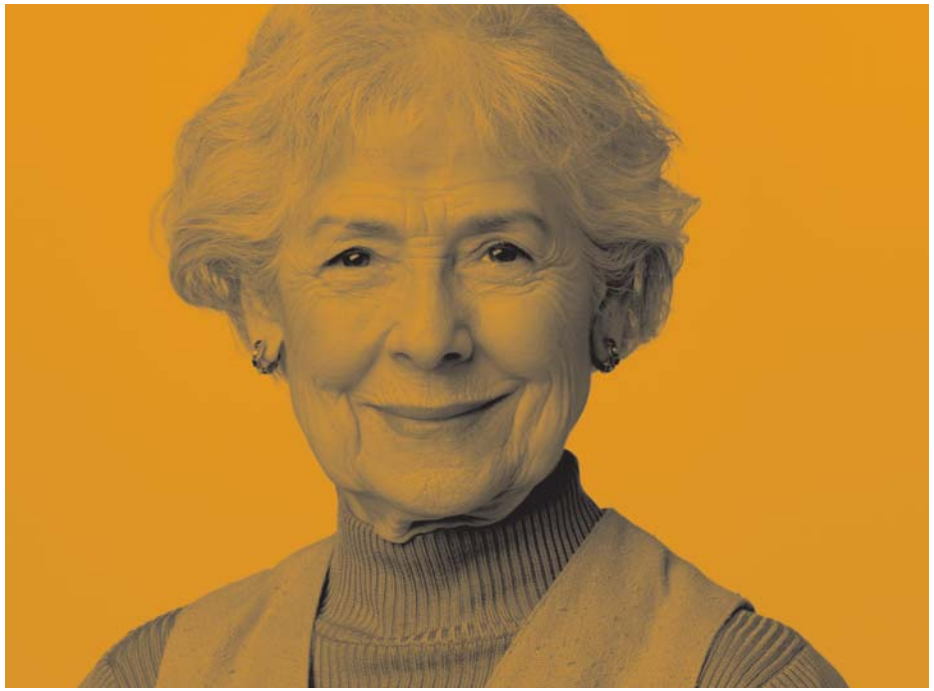
- Medicare — fee-for-service and managed care Medicare patients.
- Medicaid — fee-for-service and managed care Medicaid patients.
- Private insurance — Blue Cross, commercial carriers, private health maintenance organizations (HMOs), and preferred provider organizations (PPOs).
- Uninsured — an insurance status of "self-pay" and "no charge."
- Other — Workers' Compensation, Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA), Title V, and other government programs.

Payers of Hospital Care

- Medicare and Medicaid are billed for more than half (56 percent) of all hospitalizations. Medicare is billed for 34 percent and Medicaid is billed for 22 percent. This pattern has remained relatively stable since 1997, when the percentages were 35 percent and 20 percent, respectively.
- Private insurance is billed for 36 percent of all hospitalizations, which is comparable to the 1997 figure — 37 percent.
- Uninsured hospitalizations continue to account for approximately 5 percent of all hospitalizations.
- The remaining 3 percent of hospitalizations is billed to other insurers or cannot be determined.

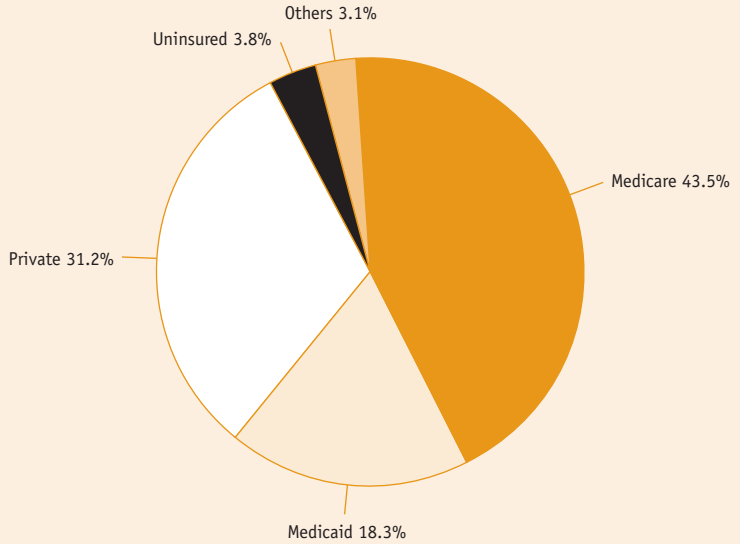
Percent of Hospital Stays Billed to Each Payer





Percent of National Bill by Payer

(NATIONAL BILL = $650 BILLION)



Medicare

- About 39 million individuals — 13 percent of the U.S. population — are covered by Medicare.[2]
- Medicare continues to be billed for approximately 44 percent of the national hospital bill.
- The most common reason for hospitalization for Medicare beneficiaries is congestive heart failure, followed by pneumonia and coronary atherosclerosis.
- The aggregate total billed to Medicare is $283 billion — an increase of 29 percent from 1997, after adjusting for inflation.

TOP 10 PRINCIPAL DIAGNOSES FOR MEDICARE	NUMBER OF DISCHARGES (in thousands)	MEDICARE'S SHARE OF ALL HOSPITAL STAYS (percent)
All Medicare Discharges	12,876	34.1
		MEDICARE'S SHARE OF ALL HOSPITAL STAYS FOR THIS CONDITION (percent)
1. Congestive heart failure	745	70.4
2. Pneumonia	690	54.1
3. Hardening of the heart arteries (coronary atherosclerosis)	687	53.2
4. Cardiac dysrhythmias (irregular heart beat)	460	64.5
5. Heart attack (acute myocardial infarction)	430	56.2
6. Chronic obstructive lung disease	395	63.8
7. Acute cerebrovascular disease (stroke)	367	65.0
8. Osteoarthritis (degenerative joint disease)	330	60.0
9. Rehabilitation care, fitting of prostheses, and adjustment of devices	328	68.2
10. Chest pain	317	35.8

Medicaid

- About 33 million individuals, 12 percent of the U.S. population, are covered by Medicaid.[2]
- Medicaid continues to be billed for approximately 18 percent of the national hospital bill.
- Six of the top 10 most frequent reasons for hospitalization billed to Medicaid continue to be related to infancy and childbirth. These 6 conditions comprise 1 out of every 3 Medicaid hospitalizations.
- Medicaid is billed for nearly 40 percent of stays associated with infants born in the hospital (up from 34 percent in 1997) and 47 percent of all normal pregnancy and delivery stays (up from 40 percent in 1997).
- Previous C-section appears as a top 10 condition for Medicaid patients, rising from 15th in 1997 to 10th in 2002. Medicaid is billed for 38 percent of all previous C-sections.
- Medicaid is billed for 54 percent of all hospital stays for schizophrenia (up from 51 percent in 1997) and 33 percent of all stays for depression (up from 28 percent in 1997).
- Medicaid is billed for about 35 percent of all hospital stays for asthma, essentially unchanged since 1997.
- The aggregate total billed to Medicaid is $119 billion — an increase of 47 percent from 1997, after adjusting for inflation.

TOP 10 PRINCIPAL DIAGNOSES FOR MEDICAID	NUMBER OF DISCHARGES (in thousands)	MEDICAID'S SHARE OF ALL HOSPITAL STAYS (percent)
All Medicaid Discharges	8,264	21.9
		MEDICAID'S SHARE OF ALL HOSPITAL STAYS FOR THIS CONDITION (percent)
1. Newborn infants	1,579	38.0
2. Trauma to vulva (external female genitals) and perineum (area between anus and vagina) due to childbirth	276	34.4
3. Pneumonia	259	20.3
4. Other maternal complications of birth and puerperium (period after childbirth)	259	37.3
5. Affective or mood disorders (depression and bipolar disorder)	213	32.6
6. Other complications of pregnancy	204	45.4
7. Normal pregnancy and/or delivery	188	46.8
8. Schizophrenia	153	54.2
9. Congestive heart failure	151	14.3
10. Previous cesarean section (C-section)	151	38.3

Private Insurers

- About 200 million individuals, 70 percent of the U.S. population, are covered by private insurers.[2]
- Private insurers continue to be billed for about 31 percent of the national hospital bill.
- Private insurers are billed for 54 percent of all stays for infants born in the hospital, 59 percent of all stays for trauma to vulva and perineum due to childbirth, and 46 percent of all normal pregnancy stays.
- Four of the top 10 conditions billed to private insurers are related to infancy and childbirth. These conditions comprise about 1 of every 4 private payer discharges — just as in 1997.
- Three of the top 10 conditions billed to private insurers are related to the cardiovascular system, as was the case in 1997.
- Unlike 1997, affective disorders (primarily depression) and previous C-section are in the top 10 conditions for privately insured patients in 2002.
- The aggregate total billed to private insurers is $203 billion — an increase of 31 percent from 1997, after adjusting for inflation.

TOP 10 PRINCIPAL DIAGNOSES FOR PRIVATE INSURERS	NUMBER OF DISCHARGES (in thousands)	PRIVATE INSURERS' SHARE OF ALL HOSPITAL STAYS (percent)
All Discharges for Private Insurers	13,735	36.3
		PRIVATE INSURERS' SHARE OF ALL HOSPITAL STAYS FOR THIS CONDITION (percent)
1. Newborn infant	2,254	54.3
2. Trauma to vulva (external female genitals) and perineum (area between anus and vagina) due to childbirth	475	59.0
3. Hardening of the heart arteries and other heart disease	411	31.8
4. Other maternal complications of birth and puerperium (period after childbirth)	393	56.7
5. Chest pain	352	39.8
6. Spondylosis, intervertebral disc disorders (back problems, disorders of intervertebral discs and bones in spinal column)	303	47.7
7. Pneumonia	258	20.3
8. Affective or mood disorders (depression and bipolar disorder)	227	34.6
9. Previous cesarean section (C-section)	219	55.6
10. Heart attack (acute myocardial infarction)	218	28.6

Uninsured

- About 44 million individuals, 15 percent of the U.S. population, are uninsured.[2]
- Only 5 percent of hospitalized patients are uninsured at the time of discharge from the hospital, a figure unchanged since 1997. These individuals are billed for 4 percent of the national hospital bill.
- Hospitalizations for tuberculosis among the uninsured rose by 56 percent. Twenty-five percent of hospital discharges for this infection are for the uninsured, compared to 16 percent in 1997.
- Five percent of stays for infants born in the hospital are uninsured, just as in 1997, despite increases in coverage by the State Children's Health Insurance Program (SCHIP).[viii]

[viii] To evaluate the impact of SCHIP, individual States that record SCHIP as a specific pay source may be used for further study.

- Among uninsured patients, 2 of the top 10 conditions are related to mental health or alcohol-related mental disorders. About 20 percent of hospital stays for alcohol abuse disorders and 8 percent of stays for depression are uninsured. It is not possible to determine if this finding is because insurance does not cover these conditions or because these conditions occur more frequently among uninsured patients. Substance-related mental disorders was a top 10 condition for the uninsured in 1997, but in 2002, it fell to 14th.
- Diabetes is an ambulatory care sensitive condition — a condition for which appropriate outpatient care should prevent the need for hospitalization in many cases. More than 8 percent of all diabetes admissions occur in patients who are uninsured.
- The aggregate bill for the uninsured is $25 billion — an increase of 39 percent from 1997, after adjusting for inflation.

TOP 10 PRINCIPAL DIAGNOSES FOR THE UNINSURED	NUMBER OF DISCHARGES (in thousands)	ALL HOSPITAL STAYS THAT ARE UNINSURED (percent)
All Discharges for the Uninsured	1,815	4.8
		ALL HOSPITAL STAYS FOR THIS CONDITION THAT ARE UNINSURED (percent)
1. Newborn infant	208	5.0
2. Chest pain	65	7.3
3. Affective or mood disorders (depression and bipolar disorder)	52	7.9
4. Alcohol abuse disorders	46	20.1
5. Pneumonia	43	3.4
6. Skin and subcutaneous tissue infections	42	9.7
7. Hardening of the heart arteries and other heart disease	41	3.1
8. Diabetes mellitus with complications	38	8.2
9. Heart attack (acute myocardial infarction)	32	4.2
10. Appendicitis	32	11.3

Aggregate Charges

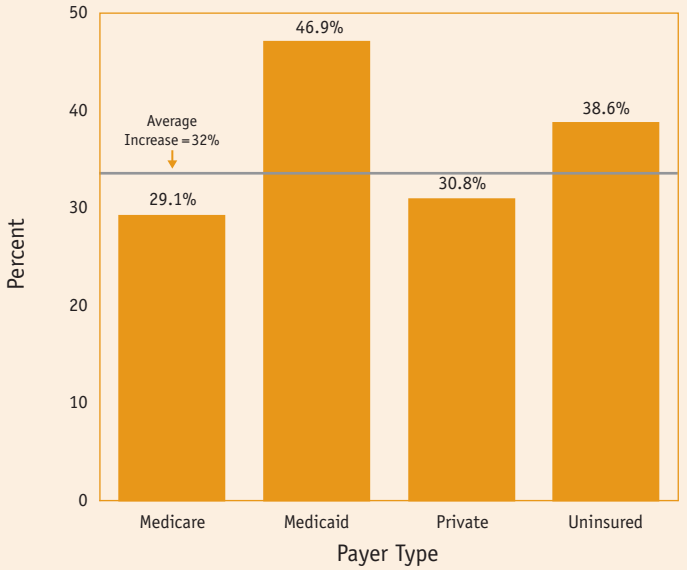
The aggregate total billed for hospital care has increased significantly from 1997 to 2002 for each of the four major payer categories, with the largest increases in charges seen for Medicaid and the uninsured.

In the 5-year period from 1997 to 2002, aggregate billing —

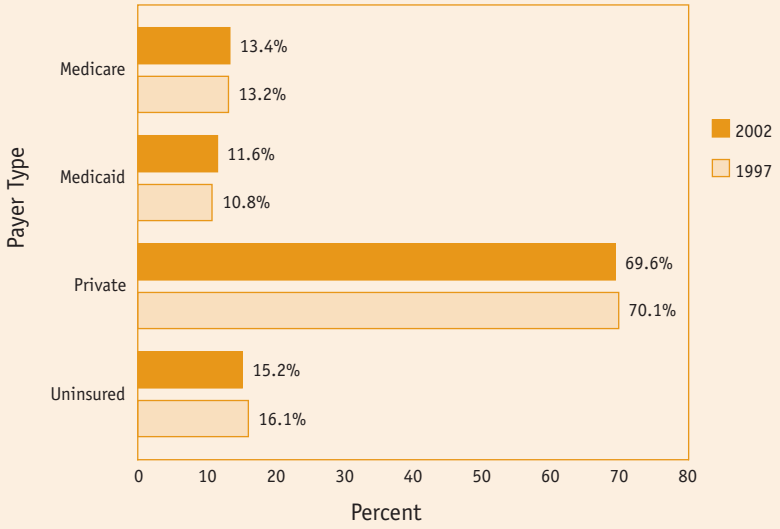
- Increased 29 percent for Medicare.
- Increased 47 percent for Medicaid.
- Increased 31 percent for private insurers.
- Increased 39 percent for the uninsured.

The percent of the population covered by each of these payer types has remained relatively stable from 1997 to 2002.[2,7]

Percent Increase in Aggregate Billing from 1997–2002



Percent of Population Covered by Each Payer Type, 1997 and 2002



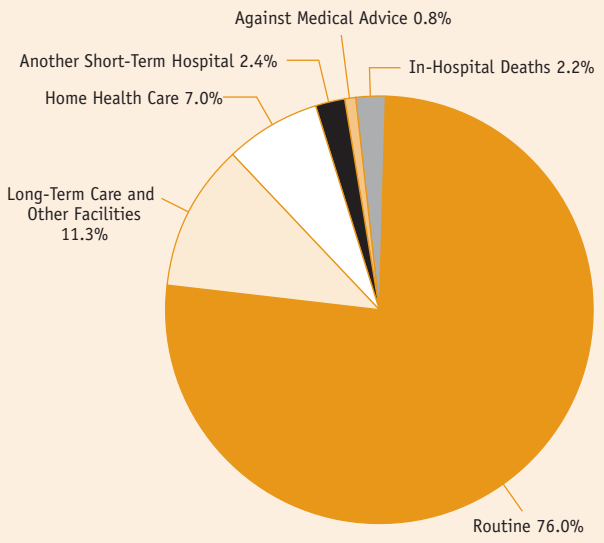
How are patients discharged from the hospital?

Discharge status indicates the disposition of the patient at discharge from the hospital. Categories include: routine (to home), to another short-term hospital, to a nursing home, to home health care, or against medical advice.

Discharge Status

- More than 75 percent of discharges are routine in nature — patients return home following completion of hospital treatment.
- Another 11 percent of discharges go to long-term care/other facilities, while 2 percent go to other short-term hospitals.
- Approximately 2 percent of all hospitalizations end in death, a figure slightly lower than in 1997.
- Less than 1 percent of patients leave against medical advice, as was the case in 1997.

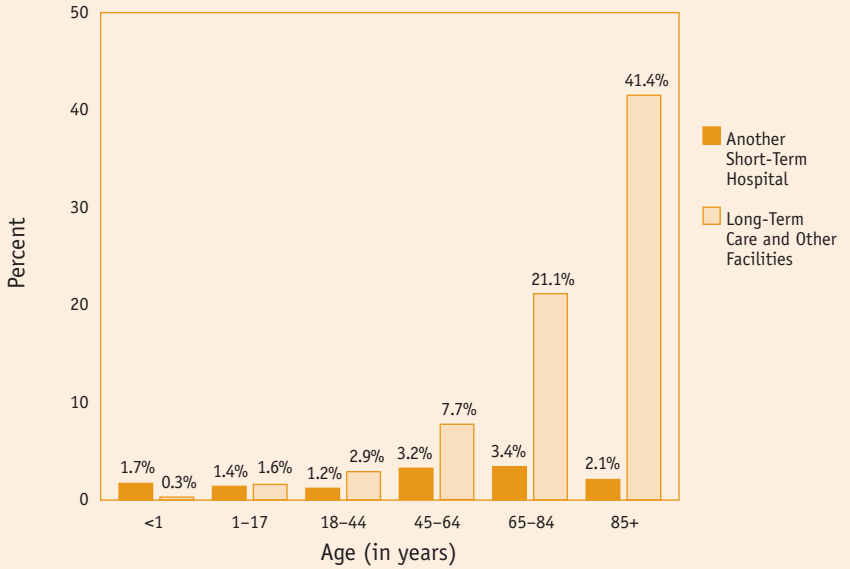
Discharge Status



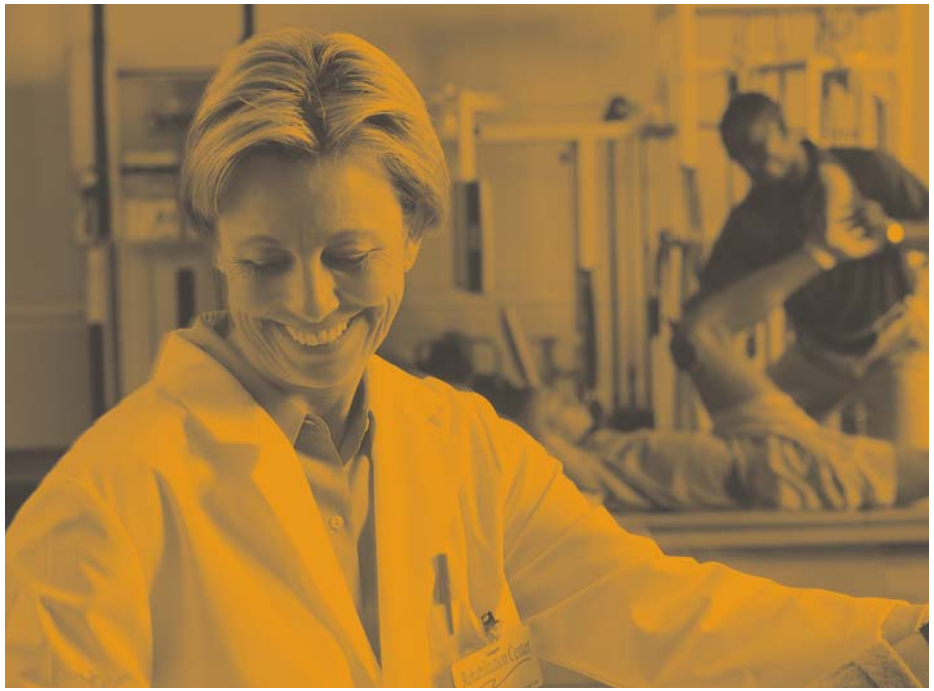
Discharges to Other Institutions

- Hospitalizations that result in discharges to other institutions tend to be those in which a patient's functional status has been compromised, such as stroke or hip fracture.
- Older patients are more often discharged from the hospital to other institutions than are younger patients. About 21 percent of patients ages 65–84 and 41 percent of patients ages 85 and older are discharged to long-term care and other similar facilities, including skilled nursing facilities, intermediate care facilities, and nursing homes.
- Only about 3 percent and 8 percent of patients ages 18–44 and 45–64, respectively, are discharged to long-term care.

Percent of Discharges to Another Institution



TOP 10 PRINCIPAL DIAGNOSES FOR DISCHARGES TO OTHER INSTITUTIONS	TOTAL NUMBER OF DISCHARGES (in thousands)	PERCENT OF ALL DISCHARGES TO OTHER INSTITUTIONS
1. Pneumonia	282	5.5
2. Osteoarthritis (degenerative joint disease)	257	5.0
3. Acute cerebrovascular disease (stroke)	253	4.9
4. Hip fracture	240	4.6
5. Congestive heart failure	221	4.3
6. Heart attack (acute myocardial infarction)	219	4.2
7. Hardening of the heart arteries and other heart disease	181	3.5
8. Fluid and electrolyte disorders (primarily dehydration and fluid overload)	132	2.6
9. Urinary infections	125	2.4
10. Septicemia (blood infection)	120	2.3



Conditions With Highest In-Hospital Mortality

In-hospital mortality refers to hospitalizations in which the patient died during his or her hospital stay. Patients may be admitted to the hospital for end-of-life care; therefore, mortality for some conditions is expected to be high. Some of the conditions listed are not necessarily the underlying cause of death. For example, shock and cardiac arrest are immediate reasons for death, but other diagnoses, such as trauma, may be the underlying reasons.

- The two conditions with the *greatest percentage* of admissions resulting in in-hospital mortality[ix] continue to be cardiac arrest/ventricular fibrillation (54 percent) and shock (52 percent).

- The two illnesses with the *greatest numbers* of in-hospital deaths are infection-related: pneumonia (70,890 deaths, not shown) and septicemia (61,439 deaths). However, the percentage of admissions for these conditions resulting in in-hospital death is much smaller than for many other conditions: 6 percent and 18 percent, respectively.

- Septicemia replaced coma as 1 of the top 10 conditions with the highest percent of in-hospital mortality. In 1997, septicemia was the 11th most common condition that resulted in in-hospital death; in 2002, it was the 7th, with nearly 18 percent of admissions resulting in death.

[ix] In-hospital mortality is a form of case-fatality ratio — the percentage of patients with this principal diagnosis who died while in the hospital.

- Four of the top 10 conditions with the highest percent of in-hospital mortality are related to cancer, a fact unchanged since 1997. These diagnoses include malignant neoplasm without specification of site, cancer of the liver and intrahepatic bile duct, leukemia, and cancer of bronchus or lung.

PRINCIPAL DIAGNOSES WITH THE HIGHEST PERCENT OF INPATIENT MORTALITY	NUMBER OF DISCHARGES	IN-HOSPITAL MORTALITY (percent)
1. Cardiac arrest and ventricular fibrillation (uncoordinated contraction of heart)	9,082	53.6
2. Shock	2,373	51.5
3. Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	113	27.6
4. Cancer without specification of site	1,436	24.2
5. Adult respiratory failure or arrest	47,407	22.5
6. Aspiration pneumonitis (aspiration of stomach contents into lung)	34,562	18.3
7. Septicemia (blood infection)	61,439	17.6
8. Cancer of liver and bile duct in liver	2,552	16.3
9. Leukemia (cancer of blood)	6,804	16.1
10. Cancer of bronchial tubes and lung	22,015	14.6

Conditions With Highest In-Hospital Mortality by Age Group

- Among all age groups, the condition with the largest number of admissions resulting in in-hospital deaths is cardiac arrest and ventricular fibrillation. For infants younger than 1 year, 84 percent admitted for cardiac arrest and ventricular fibrillation die at the hospital, while 46 percent of cardiac arrest admissions for patients 18–44 result in death in the hospital.
- In the youngest age category, the greatest number of in-hospital deaths is attributable to prematurity and low birthweight — nearly 13,000 deaths.
- For children ages 1–17, hospitalizations for brain injury result in the greatest number of in-hospital deaths (1,151 deaths).
- For the 18–44 age group, brain injuries (4,369 deaths) and HIV/AIDS (3,693 deaths) account for the highest number of in-hospital deaths.
- For individuals ages 45–64, the largest numbers of hospitalizations ending in death are for stroke (11,163 deaths), septicemia (10,418 deaths), and cancer metastasis (10,264 deaths).
- For age groups 65 years and older, pneumonia results in the most in-hospital deaths (59,934 deaths).

TOP 10 CONDITIONS WITH THE HIGHEST NUMBER OF IN-HOSPITAL DEATHS BY AGE GROUP	AGE GROUP					
	< 1 YEAR	1–17 YEARS	18–44 YEARS	45–64 YEARS	65–84 YEARS	85+ YEARS
Total Number of Discharges	4,751,226	1,710,673	10,122,694	8,022,877	10,489,917	2,702,131
	NUMBER OF DEATHS FOR THIS CONDITION					
Premature birth and low birthweight	12,977*					
Other conditions occurring around the time of birth	929					
Cardiac and circulatory birth defects	868					
Infant respiratory distress syndrome	319					
Other birth defects	267					
Adult respiratory failure or arrest	185	309	1,987	9,117	26,802	8,992
Septicemia (blood infection)	140	263	2,441	10,418	31,074	17,103

* Includes 11,634 cases with principal diagnosis of newborn infant and secondary diagnosis of premature birth and low birthweight.

TOP 10 CONDITIONS WITH THE HIGHEST NUMBER OF IN-HOSPITAL DEATHS BY AGE GROUP	AGE GROUP					
	< 1 YEAR	1–17 YEARS	18–44 YEARS	45–64 YEARS	65–84 YEARS	85+ YEARS
Other injuries	121	271				
Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	113					
Cardiac arrest and ventricular fibrillation (uncoordinated contraction of heart)		150				
Pneumonia		345	2,014	8,507	36,280	23,654
Brain injury		1,151	4,369			
AIDS/HIV infection			3,693			
Complication of medical device, implant or graft		208				
Crushing injury or internal injury		197	1,811			
Leukemia (cancer of blood)		193				
Brain cancer and other nervous system cancer		147				
Acute cerebrovascular disease (stroke)			2,650	11,163	31,173	14,926
Metastasis (spread of cancer or secondary cancer)			2,410	10,264	14,163	
Alcohol-related liver disease			1,427	4,131		
Congestive heart failure				4,686	25,309	15,695
Cancer of bronchial tubes and lung				6,860	13,305	
Other liver disease			1,133	4,264		
Heart attack (acute myocardial infarction)				8,360	33,621	17,122
Aspiration pneumonitis (aspiration of stomach contents into lung)					16,703	
Fluid and electrolyte disorders (primarily dehydration and fluid overload)					8,706	5,588
Hip fracture						5,009
Gastrointestinal bleeding						4,367
Intestinal obstruction without hernia						3,329

Patients Leaving Against Medical Advice

- The most common conditions among patients who leave against medical advice involve medical problems, such as pneumonia or diabetes, rather than surgical problems. Chest pain, coronary atherosclerosis, pneumonia, congestive heart failure, and diabetes remain top 10 reasons for discharge against medical advice.
- Pancreatic disorders other than diabetes and skin/subcutaneous infections rank among the top 10 diagnoses in 2002 for patients who leave against medical advice, replacing asthma and schizophrenia, which were in the top 10 in 1997.
- Among the top 10 diagnoses for patients who leave the hospital against medical advice, three are mental health-related illnesses, unchanged since 1997. Among these top ten conditions, 17 percent of all discharges in which patients leave the hospital against medical advice are for substance- or alcohol-related mental disorders.

TOP 10 PRINCIPAL DIAGNOSES FOR WHICH PATIENTS LEFT AGAINST MEDICAL ADVICE	TOTAL NUMBER OF DISCHARGES IN WHICH PATIENTS LEFT AGAINST MEDICAL ADVICE (in thousands)	PERCENT OF ALL DISCHARGES IN WHICH PATIENTS LEFT AGAINST MEDICAL ADVICE
1. Drug abuse disorders	29	9.6
2. Alcohol abuse disorders	23	7.4
3. Chest pain	19	6.3
4. Affective or mood disorders (depression and bipolar disorder)	14	4.8
5. Hardening of the heart arteries (coronary atherosclerosis)	10	3.2
6. Pneumonia	9	2.9
7. Congestive heart failure	8	2.7
8. Diabetes mellitus with complications	8	2.6
9. Pancreatic disorders other than diabetes	7	2.5
10. Skin and subcutaneous tissue infections	7	2.2

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Source of Data for This Report

The results presented in this report are drawn from the Healthcare Cost and Utilization Project (HCUP), a Federal-State-Industry partnership to build a multi-State health care data system. This partnership is sponsored by the Agency for Healthcare Research and Quality (AHRQ) and is managed by staff in AHRQ's Center for Delivery, Organization, and Markets (CDOM). HCUP is based on data collected by individual State Partner organizations (including State departments of health, hospital associations, and private agencies), which provide the data to AHRQ. HCUP would not be possible without statewide data collection projects and their partnership with AHRQ.

For the year 2002, 36 State Partner organizations contributed their data to AHRQ, where all files were validated and converted into a uniform format. The uniform HCUP databases enable comparative studies of health care services and the use and cost of hospital care, including:

- Effects of market forces on hospitals and the care they provide
- Variations in medical practice
- Effectiveness of medical technology and treatments
- Use of services by special populations.

HCUP includes short-term, non-Federal, community hospitals as defined by the American Hospital Association (AHA). This definition includes general hospitals and specialty facilities, such as pediatric, obstetrics-gynecology, short-term rehabilitation, and oncology hospitals. Long-term care and psychiatric hospitals are excluded, as are substance abuse treatment facilities.

HCUP includes several sets of inpatient databases for health services research. This report is based on the 2002 Nationwide Inpatient Sample (NIS) data. The NIS is the largest all-payer inpatient care database that is publicly available in the U.S. The database contains data for more than 7 million hospital stays from roughly 1,000 hospitals sampled to approximate a 20-percent stratified sample of U.S. community hospitals. The data are weighted to obtain estimates representing the total number of inpatient hospital discharges in the U.S.; in the year 2002, this figure was approximately 37.8 million.

Methods

This report is based on data within the Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample (NIS) database. The NIS data are weighted to obtain estimates representing the total number of inpatient hospital discharges in the U.S.; in 2002, this figure totaled 37,804,021 and in 1997, there were 34,680,628 estimated discharges. The 2002 NIS was based on a sampling frame of 35 states, compared with 22 states in the 1997 NIS. A brief discussion of selected methodological issues pertaining to this Fact Book follows.

Diagnoses and Clinical Classification Software (CCS)

Clinical diagnoses are recorded within the NIS using the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM). While ICD-9-CM codes may be used to provide descriptive statistics, the granular nature of ICD-9-CM reporting is difficult to summarize. Thus, for this report, the AHRQ-developed Clinical Classifications Software (CCS) is applied to hospital records to aggregate ICD-9-CM diagnosis and procedure codes into a limited number of clinically-meaningful categories for most tables. Major Diagnostic Categories and Diagnosis Related Groups are also used for some analyses. More detailed information on CCS can be downloaded from the HCUP User Support Web site at: **http://www.hcup-us.ahrq.gov/home.jsp**.

Unit of Analysis

For this report, the unit of analysis is the inpatient stay rather than the patient. For example, a patient admitted four times to the hospital is included four times in the NIS data. Thus, the same individual can account for more than one hospital stay. Frequencies and rankings of diagnoses are based on principal, or first-listed, diagnosis, which is defined as the main reason for the hospital stay after evaluation.

Payer

Payer is the expected payer for the hospital stay. To make coding uniform across all HCUP data sources, "Payer" combines detailed categories into more general groups:

- Medicare includes fee-for-service and managed care Medicare patients.
- Medicaid includes fee-for-service and managed care Medicaid patients.
- Private insurance includes Blue Cross, commercial carriers, and private HMOs and PPOs.
- Uninsured includes an insurance status of "self-pay" and "no charge."
- Other includes Workers' Compensation, CHAMPUS, CHAMPVA, Title V, and other government programs.

Up to two payers can be coded for a hospital stay in HCUP data. When this occurs, the following hierarchy was used:

- If either payer is listed as Medicaid — payer is "Medicaid."
- For non-Medicaid stays, if either payer is listed as Medicare — payer is "Medicare."
- For stays that are neither Medicaid nor Medicare, if either payer is listed as private insurance — payer is "private insurance."
- For stays that are not Medicaid, Medicare or private insurance, if either payer is some other third party payer — payer is "other."
- For stays that have no third party payer and the payer is listed as "self-pay" or "no charge" — payer is "uninsured."
- If no insurance information is available — payer is missing.

Charges and Costs

Data indicating "total hospital charges" are the amount the hospital billed for the entire hospital stay. These charges do not necessarily reflect reimbursements or costs and do not include most professional (physician) fees. Typically, charges are higher than actual costs. Costs are calculated from charges using cost-to-charge ratios based on data from Medicare Cost Reports. Costs represent the resource costs to produce services plus an additional allowance for bad debt (approximately 5 percent) and ordinary net income (approximately 3 percent), based on the long-run average for the industry.

Aggregate Charges

Aggregate charges, or the "national bill," is the sum of all charges for all hospital stays in the U.S. When a case is missing information on charges, a value is imputed by taking the mean charges for all discharges of the same DRG with non-missing charges. Fewer than 7.5 percent of cases are missing charge data in HCUP data. Because of the way in which missing charges are imputed, simple calculation of the number of discharges multiplied by the mean charge will not always equal aggregate charges.

Comparisons of 1997 and 2002 Hospital Data

Because this Fact Book updates an earlier report that depicted hospital care in 1997, this document provides many comparative statistics that reflect how hospital care has evolved from 1997 to 2002. Only statistically significant differences (p-value <= .05) are presented.

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For More Information

More information regarding HCUP data is available at **www.ahrq.gov/data/hcup**, as well as on the HCUP User Support Web site at **www.hcup-us.ahrq.gov**.

Additional descriptive statistics can be viewed through HCUPnet (**www.ahrq.gov/hcupnet**), a Web-based tool providing easy access to information on hospital stays.

NIS data are available for the following data years:

2003 data (available June 2005)

2002 data

2001 data

2000 data

1999 data (PB 2002-500020)

1998 data (PB 2001-500092)

1997 data, Release 6 (PB 2000-500006)

1996 data, Release 5 (PB 99-500480)

1995 data, Release 4 (PB 98-500440)

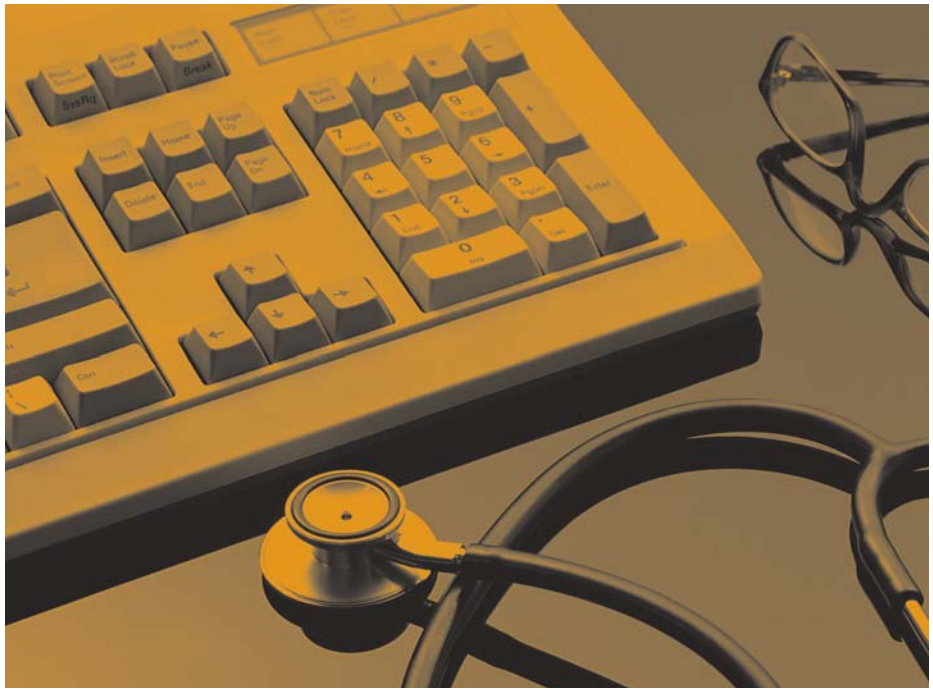
1994 data, Release 3 (PB 97-500433)

1993 data, Release 2 (PB 96-501325)

1988–1992 data, Release 1 (PB 95-503710)

NIS data can be purchased for research through the HCUP Central Distributor sponsored by AHRQ: Social and Scientific Systems, Inc., telephone: 866-556-4287 (toll-free), fax: 301-628-3201, or e-mail: **hcup@s-3.com**.

Price of the data is $322 for Release 1; $160 per year for 1993 to 1999; and $200 per year for 2000 to 2003. All prices may be higher for customers outside the U.S., Canada, and Mexico.



AHRQ is always looking for ways in which AHRQ-funded research, products, and tools have influenced clinical practice, improved policies, affected patient outcomes, and changed people's lives. Impact case studies describe AHRQ research findings in action. These case studies have been used in testimony, budget documents, and speeches. If you are aware of any impact your research has had on health care policy, clinical practice, or patient outcomes, please let us know by using the contact information below.

Healthcare Cost and Utilization Project (HCUP)
Center for Delivery, Organization, and Markets
Agency for Healthcare Research and Quality
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Appendix: 2002 Statistics on Stays in U.S. Hospitals, Principal Diagnosis

Number of Discharges, Mean Length of Stay, Mean Charges, Percent Admitted from the ED, and Percent Died in the Hospital[x]

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
Infectious and parasitic diseases						
1	Tuberculosis (TB)	10,118	16.8	$46,700	61.8%	5.1%
2	Septicemia (blood infection)	349,544	8.5	$32,300	74.3%	17.6%
3	Bacterial infection	8,711	7.4	$26,200	53.3%	3.5%
4	Mycoses (fungal and yeast infection)	18,968	9.7	$39,400	57.9%	8.8%
5	AIDS/HIV infection	72,968	9.2	$34,800	75.0%	8.4%
6	Hepatitis	24,502	5.3	$20,600	67.2%	3.8%
7	Viral infection	89,941	3.4	$10,500	60.2%	0.6%
8	Other infections	17,367	5.4	$19,300	58.9%	1.9%
9	Sexually transmitted disease (venereal disease)	4,906	5.5	$16,800	59.3%	*
10	Immunizations and screening for infections	1,249	5.7	$12,300	40.0%	*
Neoplasms (cancer, carcinoma-in-situ, benign tumors)						
11	Cancer of head and neck	30,337	7.6	$33,300	19.9%	4.8%
12	Cancer of esophagus	12,490	10.1	$42,500	35.4%	11.7%
13	Cancer of stomach	24,113	10.7	$45,700	36.8%	10.0%
14	Cancer of colon	117,056	9.2	$35,900	26.2%	5.0%
15	Cancer of rectum and anus	47,175	8.7	$34,800	17.8%	3.7%
16	Cancer of liver and bile duct in liver	15,654	7.2	$32,200	45.2%	16.3%
17	Cancer of pancreas	32,201	9.3	$34,900	40.3%	13.2%
18	Cancer of other gastrointestinal organs and peritoneum (lining of abdominal cavity)	19,132	10.1	$43,400	33.3%	7.3%
19	Cancer of bronchial tubes and lung	150,632	7.8	$31,500	40.5%	14.6%
20	Other respiratory and intrathoracic (chest) cancers	2,601	8.3	$37,200	30.5%	7.4%
21	Cancer of bone and connective tissue (ligaments and tendons)	13,865	7.1	$33,400	14.5%	3.1%
22	Melanoma of skin (highly malignant skin cancer)	5,238	3.2	$16,000	7.3%	2.6%
23	Skin cancer other than melanoma	6,632	4.6	$19,600	10.6%	1.6%

[x] Weighted national estimates from HCUP Nationwide Inpatient Sample (NIS), 2002, Agency for Healthcare Research and Quality (AHRQ), based on data collected by individual States and provided to AHRQ by the States. Total number of weighted discharges in the U.S. based on HCUP NIS = 37,804,021. Statistics based on estimates with a relative standard error (standard error / weighted estimate) greater than 0.30 or with standard error = 0 are not reliable. These statistics are suppressed and are designated with an asterisk (*).

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
24	Breast cancer	109,309	2.5	$15,100	5.3%	1.6%
25	Cancer of uterus	39,676	4.3	$19,600	6.0%	1.4%
26	Cancer of cervix	29,564	3.6	$16,600	10.3%	1.4%
27	Cancer of ovary	25,721	7.2	$32,600	19.7%	5.9%
28	Other female genital cancer	7,861	4.7	$20,600	10.4%	1.2%
29	Prostate cancer	98,794	3.4	$17,900	7.1%	1.3%
30	Cancer of testicles	1,882	5.6	$27,800	25.9%	*
31	Other male genital cancer	889	4.5	$20,400	15.6%	*
32	Bladder cancer	43,616	5.6	$24,500	17.6%	2.9%
33	Kidney cancer	39,450	6.1	$28,100	13.0%	2.8%
34	Other urinary cancer	3,033	6.6	$29,400	12.0%	*
35	Brain cancer and other nervous system cancer	34,048	7.3	$37,700	35.4%	4.9%
36	Thyroid cancer	25,530	2.2	$13,000	2.2%	0.6%
37	Hodgkin's disease	5,575	9.4	$45,100	33.1%	6.8%
38	Non-Hodgkin's lymphoma	45,828	10.0	$45,000	38.4%	11.5%
39	Leukemia (cancer of blood)	42,170	14.1	$74,600	37.5%	16.1%
40	Multiple myeloma (cancer of bone marrow)	17,126	10.1	$40,400	38.7%	11.8%
41	Other and unspecified cancer	9,488	7.3	$35,800	23.4%	5.8%
42	Metastasis (spread of cancer or secondary cancer)	256,872	7.4	$27,900	44.8%	11.2%
43	Cancer without specification of site	5,940	7.6	$25,200	48.7%	24.2%
44	Tumors of unspecified nature or uncertain behavior	47,289	5.9	$25,400	34.9%	3.1%
45	Chemotherapy and radiation therapy	166,320	5.0	$24,100	*	1.1%
46	Benign tumor of the uterus	263,852	2.6	$13,000	*	0.0%
47	Other and unspecified benign tumor	174,274	4.4	$21,900	14.5%	0.5%
Endocrine, nutritional, and metabolic diseases and immunity disorders						
48	Thyroid disorders	42,724	3.0	$13,400	26.0%	0.4%
49	Diabetes mellitus without complication	22,744	3.7	$7,500	55.6%	*
50	Diabetes mellitus with complications	467,550	5.5	$18,000	65.4%	1.3%
51	Other endocrine (hormone) disorders	44,229	4.9	$16,700	55.9%	1.8%
52	Nutritional deficiencies	13,647	8.4	$21,800	39.4%	6.3%
53	Disorders of lipid metabolism (primarily high cholesterol)	974	4.1	$12,500	55.1%	*
54	Gout	14,350	4.3	$11,300	72.7%	*
55	Fluid and electrolyte disorders (primarily dehydration and fluid overload)	592,033	4.1	$11,300	66.3%	2.9%
56	Cystic fibrosis	6,945	9.7	$38,400	20.7%	2.0%
57	Immunity disorders	1,427	8.7	$34,300	28.5%	*
58	Other nutritional, endocrine, and metabolic disorders	127,842	4.5	$24,800	18.4%	1.5%

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
Diseases of the blood and blood-forming organs						
59	Iron deficiency and other anemia	173,130	4.1	$14,800	52.1%	1.6%
60	Posthemorrhagic anemia (acute anemia from bleeding)	10,775	3.8	$12,000	58.7%	2.5%
61	Sickle cell anemia	74,537	5.8	$15,800	72.6%	0.5%
62	Coagulation and bleeding disorders	49,033	4.8	$22,200	55.7%	3.6%
63	Diseases of white blood cells	50,667	5.3	$19,400	49.5%	2.0%
64	Other hematologic (blood) conditions	8,054	6.6	$28,100	54.2%	4.3%
Mental disorders						
65	Mental retardation	459	9.7	$19,600	65.0%	*
66	Alcohol abuse disorders	229,631	4.3	$8,400	61.4%	0.1%
67	Drug abuse disorders	188,455	5.1	$9,300	44.3%	0.1%
68	Senility and organic mental disorders (decrease in mental function due to physical disorder)	137,023	8.7	$14,700	59.4%	1.7%
69	Affective or mood disorders (depression and bipolar disorder)	654,648	7.9	$11,500	51.4%	0.0%
70	Schizophrenia	282,884	13.0	$18,300	55.5%	*
71	Psychotic disorders other than schizophrenia	73,482	8.9	$14,300	58.8%	0.2%
72	Anxiety and personality disorders	65,302	5.9	$10,300	61.9%	*
73	Preadult mental disorders	14,293	12.5	$23,000	45.9%	*
74	Other mental conditions	140,778	4.9	$7,900	58.8%	*
75	History of mental disorder, observation for possible mental disorder	237	2.8	$4,200	60.6%	*
Diseases of the nervous system and sense organs						
76	Meningitis	50,359	4.9	$18,200	75.6%	1.9%
77	Encephalitis	9,533	9.7	$39,300	61.7%	5.0%
78	Polio and other brain or spinal infections	7,421	13.0	$63,200	55.5%	5.5%
79	Parkinson's disease	20,694	6.0	$17,000	58.7%	2.4%
80	Multiple sclerosis	20,905	5.1	$14,100	49.9%	0.4%
81	Other hereditary and degenerative nervous system conditions	37,375	6.0	$22,500	45.7%	2.6%
82	Paralysis	8,872	6.6	$21,700	43.9%	0.7%
83	Epilepsy, convulsions	246,859	3.8	$14,400	71.1%	0.9%
84	Headache, including migraine	73,828	2.8	$8,900	65.0%	*
85	Coma, stupor, and brain damage	24,966	6.2	$22,100	75.1%	12.0%
86	Cataract	1,302	*	$8,900	5.2%	*
87	Retinal detachments, defects, vascular occlusion, and retinopathy (diseases of retina — back of eye)	*	2.3	$13,500	14.8%	*
88	Glaucoma	*	*	$11,600	28.4%	*
89	Blindness and vision problems	3,681	2.8	$9,900	71.4%	*
90	Infections or inflammation of eye	16,941	4.0	$11,500	47.1%	*
91	Other eye disorders	9,519	2.9	$11,800	37.7%	*

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
92	Otitis media (middle ear infection) and related conditions	15,432	2.8	$9,400	39.4%	*
93	Dizziness or vertigo (spinning sensation)	77,737	2.5	$9,000	79.4%	*
94	Other ear and sense organ disorders	9,594	3.1	$17,800	41.1%	*
95	Other nervous system disorders	127,385	5.0	$19,800	55.8%	1.3%
Diseases of the circulatory system						
96	Heart valve disorders	92,334	8.8	$70,900	21.3%	3.9%
97	Pericarditis, endocarditis, myocarditis, cardiomyopathy (disorders of heart muscle and surrounding tissue)	75,795	7.1	$34,100	59.4%	5.4%
98	Hypertension (high blood pressure)	69,577	3.0	$10,100	71.7%	*
99	High blood pressure with complications	237,380	5.5	$22,400	66.3%	2.7%
100	Heart attack (acute myocardial infarction)	764,133	5.4	$36,700	65.4%	7.8%
101	Hardening of the heart arteries (coronary atherosclerosis)	1,292,533	3.6	$29,800	43.8%	0.7%
102	Chest pain	884,996	1.9	$9,400	81.6%	0.1%
103	Pulmonary heart disease (heart disease due to lung disorders)	117,301	6.7	$23,400	68.9%	5.2%
104	Other and ill-defined heart disease	4,881	4.4	$27,600	52.2%	3.6%
105	Disturbance of electrical activity of heart (conduction disorders)	74,152	3.3	$31,500	44.0%	1.4%
106	Cardiac dysrhythmias (irregular heart beat)	712,821	3.6	$20,200	60.8%	1.2%
107	Cardiac arrest and ventricular fibrillation (uncoordinated contraction of heart)	16,950	4.8	$41,100	71.4%	53.6%
108	Congestive heart failure	1,057,673	5.6	$20,600	72.7%	4.4%
109	Acute cerebrovascular disease (stroke)	564,129	6.4	$24,600	79.0%	10.6%
110	Stenosis of precerebral arteries (blockage of arteries leading to brain)	158,704	2.7	$18,000	12.5%	0.4%
111	Other cerebrovascular disease (other blockage of blood supply to brain)	22,268	4.9	$23,400	54.6%	1.4%
112	Transient cerebral ischemia (a temporary interruption of blood supply to the brain, mini-stroke)	211,092	3.2	$11,800	82.0%	0.2%
113	Late effects of stroke	20,630	9.8	$19,500	49.2%	5.0%
114	Peripheral and visceral atherosclerosis (hardening of arteries outside heart)	168,971	6.0	$29,700	32.8%	5.4%
115	Aneurysm (ballooning or rupture of an artery)	78,627	7.6	$55,300	26.9%	10.9%
116	Arterial embolism or thrombosis (blood clots)	37,693	6.9	$35,400	38.3%	5.6%
117	Other circulatory (blood vessel) disease	119,874	4.4	$17,100	61.3%	2.4%
118	Phlebitis, thrombophlebitis and thromboembolism (inflammation and blood clots in the veins)	166,603	5.3	$14,300	48.6%	1.1%
119	Varicose veins in lower extremity (leg)	5,973	5.9	$15,100	34.0%	*
120	Hemorrhoids	31,678	3.1	$10,900	59.2%	0.4%
121	Other diseases of veins and lymph system	22,755	6.3	$19,200	43.9%	1.6%
Diseases of the respiratory system						
122	Pneumonia	1,275,079	5.8	$18,400	69.9%	5.6%
123	Influenza	22,508	3.9	$10,300	59.6%	1.3%
124	Tonsillitis	32,128	2.0	$7,300	41.1%	*
125	Acute bronchitis	207,971	3.2	$8,800	53.0%	0.2%

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126	Other infections of upper respiratory tract (nose, throat, trachea)	82,254	2.7	$8,600	58.6%	0.1%
127	Chronic obstructive lung disease	619,309	5.1	$15,400	71.8%	2.6%
128	Asthma	404,483	3.3	$10,400	69.5%	0.3%
129	Aspiration pneumonitis (aspiration of stomach contents into lung)	188,555	8.7	$30,400	76.0%	18.3%
130	Pleurisy, pneumothorax, collapsed lung	108,422	6.9	$24,400	63.0%	4.2%
131	Adult respiratory failure or arrest	210,358	10.5	$48,500	75.3%	22.5%
132	Lung disease due to external agents	7,679	6.1	$23,000	63.6%	6.7%
133	Other lung disease	147,628	4.3	$16,900	62.0%	3.7%
134	Other upper respiratory disease (nose, throat, trachea)	46,932	3.7	$15,200	54.2%	0.6%
Diseases of the digestive system						
135	Intestinal infection	152,088	4.1	$11,900	68.4%	1.4%
136	Disorders of teeth and jaw	26,683	2.5	$14,600	28.9%	*
137	Diseases of mouth, excluding dental	19,121	4.3	$14,200	48.9%	0.9%
138	Disorders of esophagus (passage leading to stomach)	176,370	3.4	$13,800	61.0%	0.6%
139	Gastroduodenal (stomach or peptic) ulcer, without bleeding	46,046	6.1	$25,600	71.6%	3.8%
140	Inflammation of stomach or duodenum (first part of small intestine)	140,957	3.7	$12,900	71.4%	0.8%
141	Other disorders of stomach and duodenum (first part of small intestine)	55,351	5.1	$17,100	62.5%	1.4%
142	Appendicitis	285,996	3.2	$16,300	78.8%	0.2%
143	Abdominal hernia	175,629	4.4	$20,200	34.0%	1.3%
144	Regional enteritis and ulcerative colitis	81,789	6.1	$20,300	56.0%	0.7%
145	Intestinal obstruction without hernia	299,610	6.4	$21,100	74.8%	3.2%
146	Diverticulosis and diverticulitis	295,735	5.4	$19,100	65.8%	1.2%
147	Anal and rectal conditions	48,392	4.4	$15,300	52.0%	0.7%
148	Intestinal abscess and peritonitis (inflammation of abdominal cavity lining)	21,606	8.6	$33,000	60.7%	6.5%
149	Gallbladder disease	471,442	4.2	$20,300	57.4%	0.9%
150	Alcohol-related liver disease	67,547	6.7	$27,100	75.3%	10.0%
151	Other liver disease	105,105	6.3	$25,100	66.5%	8.7%
152	Pancreatic disorders other than diabetes	277,512	6.0	$21,200	78.0%	1.5%
153	Gastrointestinal bleeding	340,480	4.6	$17,000	74.5%	3.8%
154	Inflammation of stomach and intestines (noninfectious gastroenteritis)	157,364	2.8	$8,100	68.7%	0.3%
155	Other disorders of stomach or intestines	197,022	5.7	$20,600	47.7%	2.2%
Diseases of the genitourinary system						
156	Kidney disease other than kidney failure	12,242	5.4	$19,800	38.7%	1.0%
157	Acute kidney failure	154,575	7.5	$25,600	67.2%	10.1%
158	Chronic kidney failure	21,073	5.5	$25,800	38.3%	5.9%
159	Urinary infections	455,624	4.6	$12,800	73.5%	1.6%
160	Kidney stones	191,055	2.3	$11,300	63.5%	0.1%
161	Other diseases of kidney and ureters (passage to bladder from kidney)	48,291	4.5	$17,400	36.8%	1.1%

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
162	Other diseases of bladder and urethra (passage from bladder)	29,696	4.1	$16,400	27.3%	1.0%
163	Ill-defined symptoms of urinary disease	36,828	3.5	$12,500	52.3%	1.0%
164	Hyperplasia (enlargement of prostate)	92,997	2.7	$11,200	8.3%	0.2%
165	Inflammation of male genitals	23,262	4.0	$11,400	61.3%	*
166	Other male genital disorders	13,791	3.2	$16,200	42.4%	0.9%
167	Non-cancerous breast conditions	26,353	2.3	$13,000	19.8%	*
168	Inflammatory diseases of female pelvic organs	66,934	3.4	$13,300	41.2%	0.1%
169	Endometriosis	87,464	2.6	$12,600	5.0%	*
170	Prolapse of female genital organs	151,177	2.3	$12,400	*	0.0%
171	Menstrual disorders	113,015	2.3	$10,900	8.2%	*
172	Ovarian cyst	64,958	2.5	$12,300	32.3%	*
173	Menopausal disorders	12,410	2.8	$12,200	15.0%	*
174	Female infertility	549	2.0	$10,200	*	*
175	Other female genital disorders	105,320	2.6	$12,600	11.9%	0.2%
Complications of pregnancy, childbirth, and the puerperium						
176	Contraceptive or procreative management (birth control or helping with conception)	2,245	1.6	$11,000	*	*
177	Spontaneous abortion	22,621	1.4	$7,600	71.1%	*
178	Induced abortion	8,191	1.8	$8,400	41.1%	*
179	Complications following abortion	2,914	2.5	$9,900	73.7%	*
180	Ectopic (abdominal or tubal) pregnancy	32,504	2.1	$12,200	72.7%	*
181	Other complications of pregnancy	450,486	2.5	$6,900	19.3%	0.0%
182	Hemorrhage during pregnancy, abruptio placenta, placenta previa (bleeding and placenta disorders during pregnancy)	56,748	4.3	$11,100	11.1%	*
183	Hypertension (high blood pressure) during pregnancy	213,735	3.5	$9,800	7.8%	0.0%
184	Early or threatened labor	241,708	3.3	$8,300	8.4%	*
185	Prolonged pregnancy	225,298	2.3	$6,800	*	*
186	Diabetes or high blood glucose during pregnancy	91,227	2.6	$7,200	7.9%	*
187	Malposition, malpresentation (breech birth and other disorders of baby's position during birth)	174,666	3.3	$9,800	4.6%	*
188	Obstructed labor or fetopelvic disproportion	111,380	3.1	$9,600	3.3%	*
189	Previous cesarean section (C-section)	393,615	2.9	$9,000	3.9%	*
190	Fetal distress and abnormal forces of labor	236,234	2.9	$9,100	5.4%	*
191	Polyhydramnios (excess amniotic fluid) and other problems of amniotic cavity	194,968	3.4	$8,700	6.9%	*
192	Umbilical cord complication	231,926	2.0	$5,700	5.2%	*
193	Trauma to vulva (external female genitals) and perineum (area between anus and vagina) due to childbirth	804,199	2.0	$5,700	*	*
194	Forceps delivery	52,400	2.1	$6,300	4.7%	*
195	Other maternal complications of birth and puerperium (period after childbirth)	693,752	2.6	$7,800	8.4%	0.0%
196	Normal pregnancy and/or delivery	402,114	2.0	$5,600	7.5%	*

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
Diseases of the skin and subcutaneous tissue						
197	Skin and subcutaneous tissue infections	427,234	4.9	$12,700	61.0%	0.5%
198	Other inflammations of skin	10,254	5.8	$18,400	54.3%	2.7%
199	Chronic ulcer of skin	67,345	10.6	$27,500	38.7%	3.0%
200	Other skin disorders	17,062	3.6	$14,600	20.5%	*
Diseases of the musculoskeletal system and connective tissue						
201	Infective arthritis and osteomyelitis (bone infection)	78,787	9.2	$29,400	39.8%	1.2%
202	Rheumatoid arthritis	22,220	4.3	$20,600	29.3%	0.8%
203	Osteoarthritis (degenerative joint disease)	553,022	4.1	$27,300	2.4%	0.1%
204	Other non-traumatic joint disorders	48,572	3.3	$13,700	41.3%	0.3%
205	Spondylosis, intervertebral disc disorders (back problems, disorders of intervertebral discs and bones in spinal column)	633,717	3.1	$21,100	18.4%	0.2%
206	Osteoporosis (loss of bone due to insufficient calcium)	1,046	5.4	$13,200	41.7%	*
207	Pathological fracture (fracture of bone weakened by disease)	73,351	6.2	$21,000	55.9%	2.1%
208	Acquired foot deformities	7,450	2.2	$13,700	2.2%	*
209	Other acquired deformities	38,481	4.5	$37,700	4.5%	0.3%
210	Systemic lupus erythematosus (a form of chronic rheumatic disease) and connective tissue disorders	22,232	7.0	$27,700	50.8%	2.6%
211	Other connective tissue disease	127,240	4.1	$15,300	47.0%	0.8%
212	Other bone disease and musculoskeletal deformities	96,247	3.6	$24,700	22.3%	0.2%
Congenital anomalies						
213	Cardiac and circulatory birth defects	39,618	8.9	$71,400	11.4%	2.9%
214	Digestive birth defects	21,026	6.6	$28,200	31.4%	0.7%
215	Genitourinary birth defects	12,691	4.0	$20,400	15.0%	*
216	Nervous system birth defects	6,181	6.9	$35,300	14.5%	1.3%
217	Other birth defects	49,512	4.8	$30,600	5.5%	0.6%
Certain conditions originating in the perinatal period (around the time of birth)						
218	Newborn infant	4,154,780	3.1	$5,200	0.1%	0.3%
219	Premature birth and low birthweight	21,898	24.2	$79,300	*	6.1%
220	Intrauterine hypoxia and birth asphyxia (lack of oxygen to baby in uterus or during birth)	409	15.6	$72,800	*	27.5%
221	Infant respiratory distress syndrome	8,144	24.2	$91,400	*	3.9%
222	Hemolytic jaundice and perinatal jaundice (infant jaundice following birth)	38,729	2.1	$4,200	13.0%	*
223	Birth trauma	*	4.9	$24,900	*	*
224	Other conditions occurring around the time of birth	55,102	7.3	$27,500	28.7%	1.7%
Injury and poisoning						
225	Joint disorders and dislocations due to trauma	40,540	2.8	$18,000	29.8%	0.2%
226	Hip fracture	306,228	6.5	$26,400	80.0%	3.2%

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) DIAGNOSIS CATEGORY AND NUMBER		NUMBER OF DISCHARGES	MEAN LENGTH OF STAY	MEAN CHARGES	PERCENT ADMITTED FROM THE ED	PERCENT DIED IN THE HOSPITAL
227	Spinal cord injury	12,010	12.8	$76,800	77.4%	6.0%
228	Skull and face fractures	50,483	3.6	$20,800	75.5%	0.6%
229	Fracture of arm	151,123	3.2	$16,400	71.6%	0.4%
230	Fracture of leg	263,058	4.6	$22,000	73.5%	0.5%
231	Other fractures	167,690	5.5	$20,900	76.6%	1.5%
232	Sprains and strains	55,439	2.4	$10,800	40.1%	*
233	Brain injury	152,384	6.7	$38,100	83.1%	10.0%
234	Crushing injury or internal injury	100,873	6.9	$37,900	85.5%	4.3%
235	Open wounds of head, neck, and trunk	45,831	2.8	$15,500	84.9%	0.7%
236	Open wounds of arms and legs	52,218	3.5	$16,000	75.9%	0.2%
237	Complication of medical device, implant or graft	589,077	5.7	$31,200	33.1%	1.9%
238	Complications of surgical procedures or medical care	435,557	6.2	$21,800	46.0%	1.6%
239	Superficial injury, bruise	54,961	3.2	$10,400	78.9%	0.5%
240	Burns	28,867	8.5	$39,200	47.0%	3.0%
241	Poisoning by psychiatric drugs	69,784	2.4	$10,200	87.2%	0.8%
242	Poisoning by other medications and drugs	136,215	2.8	$11,500	85.8%	1.3%
243	Poisoning by substances other than medicine	23,863	2.9	$13,200	78.0%	1.6%
244	Other injuries	97,523	3.2	$13,800	74.5%	2.3%
Symptoms, signs, and ill-defined conditions and factors influencing health status						
245	Syncope (fainting)	262,885	2.9	$11,800	82.4%	0.3%
246	Fever of unknown origin	73,525	3.6	$10,900	61.1%	0.5%
247	Lymphadenitis (inflamed lymph nodes)	17,670	3.2	$11,500	48.1%	*
248	Gangrene	48,089	10.8	$40,000	30.0%	5.8%
249	Shock	4,607	5.5	$25,600	73.7%	51.5%
250	Nausea and vomiting	48,178	3.2	$9,100	60.9%	0.7%
251	Abdominal pain	206,810	2.8	$9,600	69.6%	0.4%
252	Malaise (physical discomfort) and fatigue	22,741	4.1	$9,400	67.1%	0.9%
253	Allergic reactions	21,986	2.9	$9,000	69.0%	0.4%
254	Rehabilitation care, fitting of prostheses, and adjustment of devices	480,478	12.3	$21,200	1.4%	0.6%
255	Administrative/social admission	*	*	$7,700	*	*
256	Medical examination/evaluation	10,405	2.5	$3,900	6.7%	*
257	Other aftercare	48,314	8.0	$16,500	2.6%	4.3%
258	Other screening	2,964	1.8	$6,400	42.8%	*
259	Residual codes, unclassified	78,340	3.6	$13,300	43.6%	1.9%

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