Vital and Health Statistics

National Hospital Discharge Survey: Annual Summary, 1988

Series 13: Data From the National Health Survey No. 106

This report presents statistics on the utilization of non-Federal short-stay hospitals based on data collected through the National Hospital Discharge Survey from a national sample of the hospital records of discharged inpatients. Estimates are provided by the demographic characteristics of patients discharged, conditions diagnosed, and surgical and nonsurgical procedures performed, and by geographic region, bed size, and ownership of hospitals that provided inpatient care. Measurements of hospital utilization are given by frequency, rate, percent, and average length of stay.

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Cooperation of the U.S. Bureau of the Census

Under the legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies.

In accordance with specifications established by the National Center for Health Statistics, the U.S. Bureau of the Census, under a contractual arrangement, participated in planning the survey and collecting the data.

Contents

Symbols

- - -	Data not available
. . .	Category not applicable
-	Quantity zero
0.0	Quantity more than zero but less than 0.05
Z	Quantity more than zero but less than 500 where numbers are rounded to thousands
*	Figure does not meet standard of reliability or precision
#	Figure suppressed to comply with confidentiality requirements

National Hospital Discharge Survey

by Edmund J. Graves, Division of Health Care Statistics

Introduction

This report provides national estimates on the utilization of non-Federal short-stay hospitals during 1988. Data are summarized for selected demographic characteristics of patients discharged, geographic region of the hospitals where patients were treated, conditions diagnosed, and surgical and nonsurgical procedures performed. In addition, there are new text tables and analysis on the elderly and patients with human immunodeficiency virus (HIV) diagnoses.

The statistics in this report are based on data collected by means of the National Hospital Discharge Survey (NHDS), a continuous survey that has been conducted by the National Center for Health Statistics (NCHS) since 1965. The data for the survey come from a sample of inpatient records that are obtained from a national sample of short-stay non-Federal general and specialty hospitals located in the United States.

The original universe for the survey consisted of 6,965 short-stay hospitals contained in the 1963 National Master Facility Inventory of Hospitals (NMFI). The universe was updated periodically from lists of hospitals provided by the American Hospital Association. A description of the development and design of the original NHDS, which was in operation since 1965, has been published (1).

Beginning in 1988, the NHDS was redesigned in order to link it with other surveys conducted by the NCHS and to improve efficiency through use of information and technologies that were not available when the survey was first designed in 1964. Differences between NHDS statistics based on the 1965–1987 sample and statistics based on the 1988 sample may be due to sample design rather than to real changes in hospital utilization.

The redesigned survey is based on a new three-stage stratified sample that comes from hospitals contained in the April 1987 SMG Hospital Market Data Tape (2). Only hospitals accepting inpatients by August 1987 were included. The definition of hospitals in the NHDS was modified slightly in the redesign. Prior to 1988, hospitals with an average length of stay of 30 days or more were excluded. Beginning in 1988, general medical and surgical and children's general hospitals are included regardless of the overall average length of stay of the inpatient population. However, the term "short-stay" will continue to be used because 98 percent of hospitals in the NHDS universe fall into this category. A description of the new design, data collection procedures, estimation process, and definition of terms used in this report can be found in appendixes I and II. Approximately 250,000 medical records from 422 participating hospitals were included in the 1988 survey.

Types of measurements shown are frequencies, rates, percent distributions, days of care, and average length of stay of discharges. The estimates are presented by age, sex, and race of the patient discharged and by expected source of payment, and geographic region of the short-stay hospitals (tables 1–4). Statistics on women with deliveries (table 5), conditions diagnosed (tables 6–9), and procedures performed (tables 10–16) also are shown by patient and hospital characteristics. For 1988, a summary of hospital utilization data for hospitalized patients with an HIV diagnosis has been introduced. A brief section on deaths in hospitals is also included. Data for newborn infants are included only in the section "Newborn infant discharges." Because these newborn data are based on a sample, they may not agree with data on births published in *Vital Statistics of the United States.*

Coding of medical data for patients hospitalized is performed according to the *International Classification of Diseases, 9th Revision, Clinical Modification,* or ICD–9–CM (3). A maximum of seven diagnoses and four procedures may be coded for each medical record in the sample. Although diagnoses included in the ICD–9–CM section titled "Supplementary classification of external causes of injury and poisoning" (codes E800–E999) are collected by NHDS, they are excluded from this report. The conditions diagnosed and procedures performed are presented here by the major diagnostic chapters and procedure groups of the ICD–9–CM. Within these chapters and groups, some categories of diagnoses and procedures are also shown. These specific categories were selected primarily because of large frequencies or because they are of special interest. More detailed analysis of these data are presented in other reports in Series 13 of the *Vital and Health Statistics* reports.

Familiarity with the definitions used in NHDS is important for interpreting the data and for making comparisons with statistical data on short-stay hospital utilization that are available from other sources.

Definitions of terms used in this report are presented in appendix II.

Information on short-stay hospital utilization also is collected through another program of the National Center for Health Statistics, the National Health Interview Survey. Estimates from this survey generally are different from those of NHDS because of differences in collection procedures, population sampled, and definitions. Data from the National Health Interview Survey are published in Series 10 of the *Vital and Health Statistics* reports.

Highlights

- During 1988, an estimated 31.1 million patients, excluding newborn infants, were discharged from non-Federal short-stay hospitals. These patients used an estimated 203.7 million days of care.
- The average length of stay for patients discharged from non-Federal short-stay hospitals was 6.5 days in 1988.
- Approximately three-quarters of all patients discharged from short-stay hospitals expected private insurance or Medicare to pay for some or all of their hospital stay.
- Of the 31.1 million discharges during 1988, 3.8 million (or 12 percent) were for females with deliveries.
- Four procedures each were performed more than 1 million times during 1988: episiotomy (1.7 million); arteriography and angiocardiography (1.6 million); computerized axial tomography, or CAT scan (1.6 million); and diagnostic ultrasound (1.6 million).
- About 17 percent of all patients discharged from short-stay hospitals were 75 years of age or over.
- Heart disease was the leading diagnosis for patients 75 years of age or over, accounting for approximately 21 percent of the discharges.
- Of the 39.2 million procedures performed during 1988, 16 percent were performed on patients 75 years of age or over.
- Of the 31.1 million patients discharged from non-Federal short-stay hospitals during 1988, approximately 3 percent were discharged dead.
- The number of patients with an HIV diagnosis has increased each year since 1984. In 1984, there were approximately 10,000 patients with a diagnosis of HIV discharged from short-stay hospitals. By 1988, the number of patients with an HIV diagnosis discharged from short-stay hospitals increased to 95,000—an increase of over 800 percent.
- In 1988, a person diagnosed as having an HIV diagnosis had an average length of stay of 13.4 days, compared with an average length of stay of 6.5 days for all patients.

Utilization by patient characteristics

The number and rate of hospital discharges had risen steadily over a number of years until 1983. Since 1983, this trend has been reversed so that the rate per 1,000 population in 1988 was significantly lower than it was in 1983 (table A). As seen in this table, the number of discharges, days of care, and rate of days of care followed the same pattern as the discharge rate. On the other hand, average length of stay has shown an overall decline since 1965 from 7.8 days in 1965 to 6.5 days in 1988. A comparison for the most recent 3-year period of discharges, discharge rates, days of care, and days of care rate per 1,000 population by age are provided in table B. The number of discharges, discharge rates, days of care, rates of days of care, and average length of stay for 1988 are not significantly different from those from 1987.

Tables 1–3 provide a more extensive summary of patient characteristics. The number, percent distribution, and rate of patients discharged from short-stay hospitals and of days of care, together with average length of stay, by sex and age, are given in table 1. Table 2 provides the data by race. Estimates of expected source of payment by region and age are provided in table 3. This table shows that most patients expected private insurance, which is primarily for patients under 65 years of age, or Medicare, which is primarily for patients 65 years of age and over, to pay for their hospital stay. About 41 percent of all patients expected private insurance to pay for some or all of their hospital stay and 34 percent expected Medicare to pay.

Table A. Selected measures of short-stay hospital utilization: United States, selected years 1965–88

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Measure of utilization	*1965*	*1970*	*1975*	*1980*	*1983*	*1985*	*1988*
Number of patients discharged in thousands	28,792	29,127	34,043	37,832	38,783	35,056	31,146
Rate of patients discharged per 1,000 population	150.3	144.3	159.2	167.7	167.0	147.9	127.6
Number of days of care in thousands	225,011	226,445	262,389	274,508	268,337	226,217	203,678
Rate of days of care per 1,000 population	1,174.3	1,121.6	1,227.3	1,217.0	1,155.2	954.4	834.3
Average length of stay in days	7.8	7.8	7.7	7.3	6.9	6.5	6.5
Percent of patients with surgical and nonsurgical procedures	[1]38.2	[1]39.7	[1]41.7	52.2	54.7	58.9	64.0

[1]In comparing figures for 1965, 1970, and 1975 with those for later years, caution should be used because data for years prior to 1979 exclude nonsurgical procedures and the following obstetrical procedures: episiotomy, artificial rupture of membrane, internal version, and outlet and low forceps delivery.

Table B. Number and rate of patients discharged from short-stay hospitals and of days of care, and average length of stay, by age: United States, 1986, 1987, and 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Age	*1986*	*1987*	*1988*
	Number of patients discharged in thousands		
All ages	34,256	33,387	31,146
Under 15 years	2,783	2,688	2,610
15–44 years	13,458	13,142	11,934
45–64 years	7,300	7,099	6,456
65 years and over	10,716	10,459	10,146
65–74 years	5,141	4,963	4,703
75 years and over	5,574	5,496	5,443
	Rate of patients discharged per 1,000 population		
All ages	143.1	138.2	127.6
Under 15 years	53.5	51.3	49.2
15–44 years	118.9	115.1	104.0
45–64 years	162.2	156.9	140.5
65 years and over	367.3	350.5	334.1
65–74 years	296.8	280.9	262.8
75 years and over	470.5	451.6	436.5
	Number of days of care in thousands		
All ages	218,496	214,942	203,678
Under 15 years	12,718	12,609	13,028
15–44 years	65,174	63,576	56,558
45–64 years	49,563	48,360	43,901
65 years and over	91,041	90,397	90,191
65–74 years	40,952	40,534	39,638
75 years and over	50,088	49,862	50,553
	Rate of days of care per 1,000 population		
All ages	912.8	889.4	834.3
Under 15 years	244.7	240.6	245.3
15–44 years	575.7	556.9	493.1
45–64 years	1,101.4	1,068.6	955.3
65 years and over	3,120.7	3,029.9	2,970.0
65–74 years	2,363.8	2,294.4	2,214.8
75 years and over	4,227.9	4,097.8	4,054.3
	Average length of stay in days		
All ages	6.4	6.4	6.5
Under 15 years	4.6	4.7	5.0
15–44 years	4.8	4.8	4.7
45–64 years	6.8	6.8	6.8
65 years and over	8.5	8.6	8.9
65–74 years	8.0	8.2	8.4
75 years and over	9.0	9.1	9.3

Utilization by geographic region

Discharges, days of care, and rate per 1,000 population for patients discharged from short-stay hospitals in the four geographic regions of the country are provided in table 4. The largest number of discharges (11 million) were in the South, whereas the smallest number of discharges (5 million) were in the West. There were 8 million discharges in the Midwest and 7 million in the Northeast. The discharge rates per 1,000 population ranged from 140.2 in the Northeast to 107.6 in the West. The discharge rates per 1,000 population were 131.1 in the Midwest and 129.4 in the South. The number of days of care ranged from 68 million in the South to 31 million in the West. There were 55 million days of care in the Northeast and 50 million in the Midwest. The average length of stay was 7.7 days in the Northeast, 6.4 days in the Midwest, 6.2 days in the South, and 5.8 days in the West.

Utilization by diagnosis

First-listed diagnosis

Diseases of the circulatory system ranked first in 1988 among the ICD–9–CM diagnostic chapters as a principal, or first-listed, diagnosis of patients discharged from non-Federal short-stay hospitals (table 6). These conditions accounted for an estimated 5.3 million discharges. Other leading ICD–9–CM diagnostic chapters were Supplementary Classifications, which include females with deliveries (4.3 million discharges); diseases of the digestive system (3.3 million discharges); diseases of the respiratory system (2.9 million discharges); injuries and poisonings (2.8 million discharges); and diseases of the genitourinary system (2.2 million discharges). About two-thirds of the patients discharged from non-Federal short-stay hospitals had principal diagnoses in these six ICD–9–CM diagnostic chapters.

The diagnostic categories presented in this summary were selected either because they appear as principal, or first-listed, diagnoses with great frequency or because the conditions are of special interest. Although many of these categories (such as malignant neoplasms, heart disease, psychoses, and fractures) are combinations of more detailed diagnoses, they are presented as single categories without showing the specific diagnostic inclusions.

The number and rate of discharges, days of care, and average length of stay in 1988 are presented by selected first-listed diagnoses in table C. The diagnoses in table C accounted for 57 percent of all patients discharged during 1988 and include the most frequent first-listed diagnosis for each sex, age, and geographic region. The most common first-listed diagnosis for all patients combined was females with deliveries.

Some of the leading diagnoses for patients under 15 years of age were pneumonia; acute respiratory infections, except influenza; diseases of the ear and mastoid process; and chronic disease of tonsils and adenoids. Other diagnoses for these patients were asthma, fractures, and non-infectious enteritis and colitis (table 6).

After females with deliveries, the three most frequent first-listed diagnoses for patients 15–44 years of age were psychoses; fractures, all sites; and abortions and ectopic and molar pregnancies.

Two of the most common diagnoses for patients 45–64 years of age and 65 years of age and over were heart disease and malignant neoplasms (table 6). These two diagnostic categories accounted for 27 percent of the discharges for those 45–64 years of age and 31 percent of the discharges for those 65 years of age and over.

The rate of patients discharged from short-stay hospitals and average length of stay, by ICD–9–CM diagnostic chapters, are presented by age for 1988 in table 6. Although the estimated rate of discharge from short-stay hospitals increased from 491.5 per 10,000 population for those under 15 years of age to 3,341.2 per 10,000 population for those 65 years of age and over, some decreases by specific diagnoses were observed. A comparison of the rates for patients 15–44 years of age with those for patients under 15 years of age showed a decrease in rates for patients 15–44 years for infectious and parasitic diseases, diseases of the ear and mastoid process, and diseases of the respiratory system. Decreases were also noted for patients 45–64 years of age when compared with patients 15–44 years of age for appendicitis. There were decreases noted for patients 65 years of age and over when compared with those 45–64 for the categories of alcohol dependence syndrome, calculus of kidney and ureter, intervertebral disc disorders, and sprains and strains of the back (including neck).

For patients 15 years of age and over, the average length of stay increased with increasing age for most chapters and categories of diagnoses. For example, for patients with diseases of the respiratory system, the average length of stay increased from 4.5 days for those 15–44 years of age to 9.4 days for those 65 years of age and over.

Overall, average length of stay tended to be highest for fracture of neck of femur, mental disorders (especially for psychosis and alcohol dependence syndrome), cerebrovascular disease, and malignant neoplasms. For patients 65 years of age and over, average lengths of stay of more than 10 days were found for infectious and parasitic diseases; malignant neoplasm of large intestine and rectum; mental disorders; diseases of the central nervous system; appendicitis; diseases of the skin and subcutaneous tissue; arthropathies and related disorders; and fractures, all sites. Relatively short average lengths of stay occurred for patients under 45 years with a first-listed diagnosis of diseases of the ear and mastoid process; chronic disease of tonsils and adenoids; and for patients admitted for inguinal hernia and for abortions, and ectopic and molar pregnancies.

Table C. Number and rate of patients discharged from short-stay hospitals and of days of care, and average length of stay, by selected first-listed diagnostic categories: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants. Diagnostic groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Diagnostic category and ICD–9–CM code	Discharged patients		Days of care		Average length of stay in days
	Number in thousands	Rate per 10,000 population	Number in thousands	Rate per 10,000 population	
All conditions[1]	31,146	1,275.8	203,678	8,343.2	6.5
Females with deliveries .V27	3,781	154.9	11,029	451.8	2.9
Normal deliveries[2]	927	38.0	1,961	80.3	2.1
Complicated deliveries[2]	2,854	116.9	9,067	371.4	3.2
Heart disease .391–392.0,393–398, 402, 404,410–416,420–429	3,641	149.2	25,883	1,060.2	7.1
Acute myocardial infarction .410	716	29.3	6,432	263.5	9.0
Congestive heart failure .428.0	634	26.0	5,560	227.8	8.8
Cardiac dysrhythmias .427	491	20.1	2,758	113.0	5.6
Arteriosclerotic heart disease .414.0	411	16.9	2,502	102.5	6.1
Other ischemic heart disease .411–413, 414.1–414.9	921	37.7	4,871	199.5	5.3
Malignant neoplasms .140–208, 230–234	1,670	68.4	15,676	642.1	9.4
Malignant neoplasm of trachea, bronchus, and lung .162, 197.0, 197.3	236	9.7	2,233	91.5	9.5
Malignant neoplasm of breast .174–175, 198.81	177	7.2	990	40.5	5.6
Fractures, all sites .800–829	1,014	41.5	8,558	350.6	8.4
Pneumonia, all forms .480–486	924	37.9	7,801	319.6	8.4
Cerebrovascular disease .430–438	784	32.1	7,611	311.8	9.7
Psychoses .290–299	781	32.0	11,812	483.9	15.1
Cholelithiasis .574	484	19.8	3,162	129.5	6.5
Asthma .493	479	19.6	2,279	93.4	4.8
Arthropathies and related disorders .710–719	459	18.8	3,416	139.9	7.4
Diabetes mellitus .250	454	18.6	3,734	153.0	8.2
Acute respiratory infections, except influenza .460–466	445	18.2	2,282	93.5	5.1
Benign neoplasms and neoplasms of uncertain behavior and unspecified nature .210–229, 235–239	428	17.5	2,117	86.7	4.9
Intervertebral disc disorders .722	417	17.1	2,466	101.0	5.9
Diseases of the central nervous system .320–336, 340–349	348	14.3	3,276	134.2	9.4
Noninfectious enteritis and colitis .555–556, 558	333	13.6	1,569	64.3	4.7
Calculus of kidney and ureter .592	287	11.8	884	36.2	3.1
Abortions and ectopic and molar pregnancies .630–639	266	10.9	609	25.0	2.3
Volume depletion .276.5	266	10.9	1,879	77.0	7.1
Inguinal hernia .550	257	10.5	636	26.0	2.5
Ulcers of stomach and small intestine .531–534	256	10.5	1,850	75.8	7.2
Hyperplasia of prostate .600	247	10.1	1,550	63.5	6.3
Appendicitis .540–543	242	9.9	1,254	51.4	5.2
Alcohol dependence syndrome .303	237	9.7	2,643	108.3	11.2

[1]Includes data for diagnostic conditions not shown in table.
[2]See appendix II for definition.

Because of the interest in health care for the elderly this report contains selected data on patients in the age groups 65 years and over, 65–74 years, and 75 years and over. The number and rate of discharges and average length of stay are presented in table D by first-listed diagnoses and selected diagnostic categories for these patients. Of the 10 million discharges for patients 65 years of age and over, 2.2 million (22 percent) were for heart disease and 0.9 million (9 percent) were for malignant neoplasms. The corresponding discharge rates per 10,000 population were 731.9 for heart disease and 289.7 for malignant neoplasms. Other diagnostic categories with more than 300,000 discharges for patients 65 years of age and over were cerebrovascular disease, with 578,000 discharges; pneumonia, with 490,000 discharges; and fractures, with 398,000 discharges.

More than 50 percent of all discharges for those 65 years of age and over were for patients 75 years of age and over. Their rate of discharge per 10,000 population was 66 percent greater than the rate of discharge for those 65–74 years of age (4,365.3 versus 2,627.9 per 10,000 population). There were 1.2 million patients 75 years of age and over with heart disease and 0.4 million with malignant neoplasms. The corresponding rates per 10,000 population were 937.3 for heart disease and 331.5 for malignant neoplasms.

The average length of stay for patients 65 years of age and over was 8.9 days. For patients 65–74 years of age it was 8.4 days, whereas for patients 75 years of age and over it was 9.3 days. One of the longer lengths of stay for patients in all three age groups was for psychosis. It was 15.5 days for those 65 years of age and over, 17.6 days for those 65–74 years of age, and 14.0 days for those 75 years of age and over. Patients 65 years of age and over had relatively short lengths of stay of 6.0 days for hyperplasia of prostate and 6.3 days for patients with cardiac dysrythmias, and 5.9 days for other ischemic heart disease. For patients 65–74 years of age, there were short lengths of stay for hyperplasia of prostate (5.7 days), other ischemic heart disease (5.7 days), and cardiac dysrhythmias (6.0 days). Patients 75 years of age and over with cardiac dysrhythmias and hyperplasia of prostate (6.5 days)

Table D. Number and rate of patients discharged from short-stay hospitals, and average length of stay for patients 65 years of age and over, 65–74 years of age, and 75 years of age and over, by selected first-listed diagnostic categories: United States, 1988

[Discharges from non-Federal short-stay hospitals. Diagnostic groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Age, diagnostic category, and ICD–9–CM code	*Number of discharges in thousands*	*Rate per 10,000 population*	*Average length of stay in days*
65 years of age and over			
All conditions[1]	10,146	3,341.2	8.9
Heart disease .391–392,393–398,402, 404,410–416,420–429	2,223	731.9	7.8
Congestive heart failure .428.0	510	168.1	8.7
Acute myocardial infarction .410	430	141.6	9.7
Cardiac dysrhythmias .427	320	165.4	6.3
Atherosclerotic heart disease .414.0	197	64.8	7.1
Other ischemic heart disease .411–413,414.4–414.9	502	101.0	5.9
Malignant neoplasms .140–208,230–234	880	289.7	10.2
Cerebrovascular disease .430–438	578	190.4	10.1
Pneumonia, all forms .480–486	490	161.3	10.2
Fractures, all sites .800–829	398	131.1	11.6
Disorders of fluid, electrolyte, and acid-base balance .276	222	73.0	8.8
Arthropathies and related disorders .710–719	196	64.4	10.4
Hyperplasia of prostate .600	191	62.8	6.0
Urinary tract infection, site unspecified .599.0	184	60.7	9.0
Psychosis .290–299	174	57.5	15.5
65–74 years of age			
All conditions[1]	4,703	2,627.9	8.4
Heart disease .391–392,393–398,402, 404,410–416,420–429	1,054	588.8	7.5
Acute myocardial infarction .410	220	122.6	9.5
Atherosclerotic heart disease .414.0	128	71.4	7.1
Cardiac dysrhythmias .427	137	76.4	6.0
Congestive heart failure .428.0	187	104.5	8.8
Other ischemic heart disease .411–413,414.4–414.9	263	147.1	5.7
Malignant neoplasms .140–208,230–234	466	260.6	9.6
Cerebrovascular disease .430–438	208	116.4	9.8
Pneumonia, all forms .480–486	170	94.9	9.5
Fractures, all sites .800–829	120	67.1	10.4
Arthropathies and related disorders .710–719	111	62.0	9.8
Hyperplasia of prostate .600	108	60.2	5.7
Disorders of fluid, electrolyte, and acid-base balance .276	77	43.1	8.0
Psychosis .290–299	75	41.7	17.6
Urinary tract infection, site unspecified .599.0	58	32.5	8.6
75 years of age and over			
All conditions[1]	5,443	4,365.3	9.3
Heart disease .391–392,393–398,402, 404,410–416,420–429	1,169	937.3	8.0
Acute myocardial infarction .410	211	168.9	9.9
Atherosclerotic heart disease .414.0	69	55.2	7.3
Cardiac dysrhythmias .427	183	147.1	6.5
Congestive heart failure .428.0	323	259.3	8.6
Other ischemic heart disease .411–413,414.4–414.9	239	191.7	5.7
Malignant neoplasms .140–208,230–234	413	331.5	10.9
Cerebrovascular disease .430–438	370	296.7	10.3
Pneumonia, all forms .480–486	320	256.5	10.5
Fractures, all sites .800–829	278	222.9	12.1
Disorders of fluid, electrolyte, and acid-base balance .276	145	115.9	9.2
Urinary tract infection, site unspecified .599.0	126	101.1	9.3
Psychosis .290–299	100	80.1	14.0
Arthropathies and related disorders .710–719	85	67.8	11.1
Hyperplasia of prostate .600	83	66.5	6.5

[1]Includes data for diagnostic conditions not shown in table.

and other ischemic heart disease (5.7 days) had relatively short stays.

Data on discharges, rates of discharges, and average length of stay for patients discharged from short-stay hospitals are presented by diagnostic chapters and selected categories of first-listed diagnosis, sex, and race in table 7. The overall rate of discharge per 10,000 population was higher for females than for males. However, most of the difference was due to the large number of women in their childbearing years who were hospitalized for deliveries and other obstetrical conditions.

Males had higher rates than females for malignant neoplasm of trachea, bronchus, and lung; alcohol dependence syndrome; acute myocardial infarction; atherosclerotic heart disease; other ischemic heart disease; inguinal hernia; calculus of kidney and ureter; intervertebral disc

disorders; intracranial injuries (excluding those with skull fracture); and lacerations and open wounds. Females had higher rates than males for benign neoplasms and neoplasms of uncertain behavior and unspecified nature, psychosis, noninfectious enteritis and colitis, cholelithiasis, arthropathies and related disorders, and fracture of neck of femur.

Information on patients discharged from short-stay hospitals is shown by geographic region in table 8. The number of discharges and rates per 10,000 population were generally lower in the West Region for most diagnostic categories. One major exception to this is psychosis, where the number of discharges was 220,000 in the West and only 203,000 in the South. The rate per 10,000 for the same diagnostic category was 43.9 in the West and only 24.3 in the South.

The average length of stay was also generally lower in the West Region. One major exception to this was alcohol dependence syndrome, where the average length of stay was 14.2 days in the West Region and 11.9 and 10.8 days, respectively, in the Midwest and South Regions.

All-listed diagnoses

An estimated 101 million diagnoses (table 9) were recorded for the 31.1 million inpatients in non-Federal short-stay hospitals in 1988, for an average of 3.2 diagnoses per discharged patient. The average number of diagnoses per discharge increased beginning in 1979 because of changes in the way data were collected and tabulated. Starting in 1979, up to seven diagnoses per discharge were coded and tabulated on the NHDS data file; prior to that, up to five diagnoses were coded. In addition, the ICD–9–CM, which is the classification scheme used for coding medical data since 1979, has inherent in it a certain amount of "double coding," whereas the classification used prior to 1979 does not. For example, females with deliveries all receive one additional code that indicates the outcome of their delivery (single liveborn; twins, both liveborn, and so forth); however, this was not the case prior to 1979.

The average number of diagnoses per discharge varied only slightly by sex and race of the patient and by region. For each of these, the average was 3.1–3.4 diagnoses per patient. However, some variation occurred by age. The average number of diagnoses per discharge for the age groups under 15 years, 15–44 years, 45–64 years, and 65 years of age and over were 2.2, 2.6, 3.3, and 4.3, respectively.

Diseases of the circulatory system ranked first among the ICD–9–CM diagnostic chapters for all-listed diagnoses, with 20.3 million diagnoses. Other leading diagnostic chapters were diseases of the respiratory system (7.8 million), supplementary classifications including women with deliveries (7.8 million), and diseases of the digestive system (7.5 million). These four ICD–9–CM chapters accounted for 43 percent of all-listed diagnoses in 1988.

Utilization by procedures

One or more procedures were performed for an estimated 19.9 million of the 31.1 million inpatients discharged from short-stay hospitals during 1988 (table E). Of the 19.9 million patients who had at least one procedure performed, 15.3 million had a surgical procedure performed and 4.7 million had only nonsurgical procedures performed. The 15.3 million patients who had at least one surgical procedure performed represented about one-half of all patients discharged. Because of procedures relating to childbirth, patients 15–44 years of age had a higher proportion of discharges with procedures compared with other age groups (71 percent) and women had more procedures than men (66 percent compared with 61 percent).

Approximately 44 percent of the patients with procedures had only one operation or nonsurgical procedure during their hospitalization (table F). About 27 percent of the patients had two procedures, about 16 percent had three, and about 13 percent had four or more. Patients under 15 years of age with a procedure had the lowest proportion of multiple procedures (42 percent) and those 45–64 and 65 years of age and over had the largest proportions (60 percent).

Procedures are grouped in the detailed tables of this report by the 16 major ICD–9–CM groups. Selected procedures within these groups are presented as categories in the detailed tables as well as in the text tables. Some of these categories (such as repair of inguinal hernia, prostatectomy, and hysterectomy) are presented as single categories in this report, although they may be divided into more precise subgroups.

Multiple procedures performed on a patient are often from different surgical or procedural categories. However, direct heart revascularization (ICD–9–CM code 36.1), also known as coronary artery bypass graft (CABG), is an exception. A physician may perform more than one CABG procedure on the same discharge. In 1988, a total of 353,000 CABG procedures were performed on 254,000

Table E. Number of patients discharged from short-stay hospitals with and without procedures and percent with procedures, by selected characteristics: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Characteristic	All discharged patients	Patients without procedures	Patients with procedures			
			All patients with procedures	Patients with surgical procedures	All patients with procedures	Patients with surgical procedures
	Number in thousands				Percent	
All patients	31,146	11,216	19,930	15,269	64.0	49.0
Age						
Under 15 years	2,610	1,407	1,204	846	46.1	32.4
15–44 years	11,934	3,524	8,410	7,259	70.5	60.8
45–64 years	6,456	2,154	4,302	3,101	66.6	48.0
65 years and over	10,146	4,131	6,015	4,062	59.3	40.0
Sex						
Male	12,642	4,890	7,752	5,611	61.3	44.4
Female	18,504	6,326	12,178	9,659	65.8	52.2
Race						
White	23,322	8,399	14,922	11,428	64.0	49.0
Black	3,829	1,461	2,368	1,710	61.8	44.7
All other	1,179	374	805	636	68.3	53.9
Not stated	2,817	982	1,835	1,495	65.1	53.1
Region						
Northeast	7,078	2,080	4,999	3,687	70.6	52.1
Midwest	7,832	3,176	4,656	3,621	59.4	46.2
South	10,845	4,213	6,632	5,185	61.2	47.8
West	5,391	1,747	3,644	2,776	67.6	51.5

Table F. Percent distribution of patients discharged from short-stay hospitals with procedures by number of procedures, according to selected characteristics: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Characteristic	Total with procedures	Number of procedures			
		1	2	3	4 or more
	Percent distribution				
All patients	100.0	44.4	27.1	16.1	12.5
Age					
Under 15 years	100.0	57.8	23.0	10.3	9.0
15–44 years	100.0	47.7	28.5	15.2	8.6
45–64 years	100.0	40.2	27.0	17.7	15.1
65 years and over	100.0	39.9	26.1	17.3	16.7
Sex					
Male	100.0	43.2	25.5	16.5	14.8
Female	100.0	45.1	28.1	15.8	11.0
Race					
White	100.0	43.8	27.1	16.3	12.8
Black	100.0	46.5	26.1	15.1	12.3
All other	100.0	47.0	27.2	14.3	11.5
Not stated	100.0	44.9	28.9	16.2	10.1
Region					
Northeast	100.0	43.4	26.7	15.9	13.9
Midwest	100.0	44.2	26.1	17.8	12.0
South	100.0	45.6	27.3	15.1	12.0
West	100.0	43.5	28.7	15.8	12.0

Note: A maximum of 4 procedures were coded for each patient discharged.

discharges. Data users should not equate the number of CABGs with the number of discharges having the procedure.

In 1988, there were 39.2 million procedures performed. This was an average of 2.0 procedures per patient who underwent at least one procedure. Of these 39.2 million procedures, approximately three-quarters were contained in five chapters of the ICD–9–CM. These were miscellaneous diagnostic and therapeutic procedures (10.9 million), obstetrical procedures (6.0 million), operations on the digestive system (5.3 million), operations on the cardiovascular system (3.6 million), and operations on the musculoskeletal system (3.1 million).

The number and rate of all-listed surgical procedures in 1988 are shown for selected ICD–9–CM categories in table G. Some of the most frequently performed surgeries, of which 500,000 or more were performed in 1988, were episiotomy; cesarean section; cardiac catheterization; repair of current obstetric laceration; artificial rupture of membrane; hysterectomy; excision or destruction of lesion or tissue of skin or subcutaneous tissue; and arthroplasty and repair of joints.

The number and rate of all-listed nonsurgical procedures are shown in table H. The categories presented in this table include the procedures performed most frequently during the year. These include arteriography and angiocardiography using contrast material, computerized axial tomography (CAT scan), and diagnostic ultrasound. During 1988 more than 1 million of each of these procedures were performed on inpatients.

The estimated 39.2 million procedures performed in 1988 are presented for the ICD–9–CM major groups and selected categories by age, sex, race, and region in tables 10, 12, 14, and 15. The corresponding rates by age, sex, and region are shown in tables 11, 13, and 16.

During 1988, 40 percent of all procedures were performed on patients 15–44 years of age, and only 5 percent were performed on patients under 15 years of age (table 10). The most common procedure performed on patients under 15 years of age was spinal tap, and for those 15–44 years of age it was episiotomy with or without forceps or vacuum extraction. The most common procedure for the age group 45–64 years was arteriography and angiography using contrast material. For those 65 years of age and over, the most common procedures were computerized axial tomography (CAT scan), arteriography and angiocardiography using contrast material, and diagnostic ultrasound.

The rate of procedures per 1,000 population increased with advancing age from a rate of 39 for patients under 15 years to 418 for patients 65 years of age and over (table J). Except for females 15–44 years of age, the rates for both sexes also increased as age increased. The rates for females 15–44 years and 45–64 years were about the same because of the large number of females 15–44 years of age having obstetrical and gynecological procedures.

The number and rate of all-listed procedures in 1988 for patients 65 years of age and over, 65–74 years, and 75 years of age and over, by selected ICD–9–CM categories are shown in table K. The 23 categories presented in

Table G. Number and rate of all-listed surgical procedures for patients discharged from short-stay hospitals, by selected surgical categories: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants. Procedure groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Surgical category and ICD–9–CM code	*Number in thousands*	*Rate per 100,000 population*
Surgical procedures[1]	25,625	10,497
Episiotomy with or without forceps or vacuum extraction .72.1,72.21,72.31,72.71, 73.6	1,680	688
Cesarean section .74.0–74.2,74.4,74.99	933	382
Cardiac catheterization .37.21–37.23	930	381
Repair of current obstetric laceration .75.5–75.6	690	283
Artificial rupture of membranes .73.0	586	240
Hysterectomy .68.3–68.7	578	237
Excision or destruction of lesion or tissue of skin or subcutaneous tissue .86.2–86.4	531	218
Arthroplasty and repair of joints .81.3–81.8	523	214
Cholecystectomy .51.2	497	204
Puncture of vessel .38.9	478	196
Open reduction of fracture .76.79,79.2–79.3,79.5–79.6	456	187
Oophorectomy and salpingo-oophorectomy .65.3–65.6	451	185
Bilateral destruction or occlusion of fallopian tubes .66.2–66.3	406	166
Prostatectomy .60.2–60.6	358	147
Direct heart revascularization .36.1	353	145
Excision or destruction of intervertebral disc and spinal fusion .80.5,81.0	340	139
Operations on muscles, tendons, and bursa .82–83.1,83.3–83.9	305	125
Division of peritoneal adhesions .54.5	296	121
Partial gastrectomy and resection of intestine .43.5–43.8,45.6–45.8	292	120
Pacemaker insertion, replacement, removal, and repair .37.7–37.8	291	119
Repair of inguinal hernia .53.0–53.1	290	119
Dilation or curettage of uterus .69.0	279	114
Appendectomy, excluding incidental .47.0	273	112
Removal of coronary artery obstruction .36.0	227	93
Operations on spinal cord and spinal canal structures (except biopsies) .03–03.29,03.4–03.9	221	91
Tonsillectomy with or without adenoidectomy .28.2–28.3	213	87

[1]Includes data for surgical conditions not shown in table.

Table H. Number and rate of all-listed nonsurgical procedures for patients discharged from short-stay hospitals, by selected nonsurgical categories: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants. Procedure groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Nonsurgical category and ICD–9–CM code	*Number in thousands*	*Rate per 100,000 population*
Nonsurgical procedures[1]	13,567	5,558
Arteriography and angiocardiography using contrast material .88.4, 88.5	1,624	665
Computerized axial tomography (CAT scan) .87.03, 87.41, 87.71, 88.01, 88.38	1,613	661
Diagnostic ultrasound .88.7	1,562	640
Circulatory monitoring .89.6	846	346
Radioisotope scan .92.0–92.1	704	289
Electrographic monitoring .89.54	652	267
Cystoscopy of bladder .57.31–57.32	542	222
Endoscopy of small intestine (excludes that with biopsy) .45.11–45.13	510	209
Injection or infusion of cancer chemotherapeutic substance .99.25	466	191
Colonoscopy and sigmoidoscopy .45.23–45.24	405	166
Spinal tap .03.31	353	145
Pyelogram .87.73–87.75	325	133
Biliary tract X-ray .87.5	317	130
Contrast myelogram .87.21	290	119
Electroencephalogram .89.14	270	111
Insertion of endotracheal tube .96.04	259	106

[1]Includes data for procedures not shown in table.

this table include procedures that were performed frequently on patients in the oldest age groups. Fifty-three percent of all procedures performed on patients 65 years of age and over were in these categories. These 23 categories comprised 69 percent of the procedures for those 65–74 years of age and 69 percent for those 75 years of age and over.

Four of the most frequently performed procedures on patients 65 years of age and over were computerized axial tomography (CAT scan), arteriography and

Table J. Number and rate of all-listed procedures for patients discharged from short-stay hospitals, by sex and age of patient: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Age	Both sexes	Male	Female
	Number of procedures in thousands		
All ages	39,192	15,735	23,457
Under 15 years	2,050	1,175	875
15–44 years	15,520	3,871	11,650
45–64 years	8,939	4,606	4,333
65 years and over	12,682	6,083	6,599
	Rate of procedures per 1,000 population		
All ages	160.5	133.1	186.3
Under 15 years	38.6	43.2	33.8
15–44 years	135.3	68.3	200.8
45–64 years	194.5	209.3	180.9
65 years and over	417.6	492.4	366.3

angiocardiography using contrast material, diagnostic ultrasound, and circulatory monitoring. These four procedures were also among those most frequently performed on patients 65–74 years of age and 75 years of age and over.

As expected, the rate of procedures per 1,000 population was higher for those 75 years of age and over than it was for those 65–74 years of age. The rate per 1,000 for those 75 years of age and over was 490, whereas for those 65–74 years of age it was 367. This was about 33 percent higher for those 75 years of age and over than it was for those 65–74 years of age.

Of the 39.2 million procedures performed during 1988, about 15.7 million were for males and 23.5 million were for females. The corresponding rates per 1,000 population were 161 for both sexes, 133 for males, and 186 for females. Of the procedures shown in table 12, the most common for males were arteriography and angiocardiography using contrast material, CAT scans, cardiac catheterization, and diagnostic ultrasound. For females, the most frequently performed procedures were episiotomy with or without forceps or vacuum extraction, diagnostic ultrasound, and cesarean section.

The number of all-listed procedures by race is shown in table 14. Of all procedures performed, 29,572 (75 percent) were on white patients, 6,106 (16 percent) were on patients of all other races, and 3,514 (9 percent) were on patients whose race was not stated.

The number of procedures for patients discharged from short-stay hospitals is presented by procedure category and geographic region in table 15, and the corresponding rates are shown in table 16. The rate of procedures per 1,000 population was 198 in the Northeast, 154 in the Midwest, 153 in the South, and 143 in the West.

Table K. Number and rate of all-listed procedures by selected surgical and nonsurgical categories for patients 65 years of age and over, 65–74 years of age, and 75 years of age and over: United States, 1988

[Discharges from non-Federal short-stay hospitals. Procedure groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Age, surgical and nonsurgical category, and ICD–9–CM code	Number in thousands	Rate per 100,000 population
65 years of age and over		
All procedures[1]	12,682	41,762
Computerized axial tomography (CAT scan) .87.03, 87.41, 87.71, 88.01, 88.38	771	2,539
Arteriography and angiocardiography using contrast material .88.4–88.5	680	2,239
Diagnostic ultrasound .88.7	641	2,110
Circulatory monitoring .89.6	469	1,546
Electrographic monitoring .89.54	399	1,315
Cardiac catheterization .37.21–37.23	385	1,266
Radioisotope scan .92.0–92.1	348	1,145
Cystoscopy .57.31–57.32	327	1,076
Prostatectomy .60.2–60.6	290	954
Endoscopy of small intestine (excludes that with biopsy) .45.11–45.13	263	866
Colonoscopy and sigmoidoscopy .45.23–45.24	246	810
Pacemaker insertion, replacement, removal, and repair .37.7–37.8	223	733
Puncture of vessel .38.9	189	622
Excision or destruction of lesion or tissue of skin or subcutaneous tissue .86.2–86.4	177	582
Direct heart revascularization .36.1	170	559
Injection or infusion of cancer chemotherapeutic substance .99.25	158	521
Arthroplasty and replacement of hip .81.5–81.6	158	519
Open reduction of fracture, except jaw .76.79, 79.2–79.3, 79.5–79.6	157	519
Cholecystectomy .51.2	155	509
Resection of intestine .45.6–45.8	151	498
Extracorporeal circulation and procedures auxiliary to open heart surgery .39.6	139	459
Electroencephalogram .89.14	121	398
Biopsy of bronchus or lung .33.24–33.28	111	367

See footnote at end of table.

Table K. Number and of all-listed procedures, by selected surgical and nonsurgical categories for patients 65 years of age and over, 65–74 years of age, and 75 years of age and over: United States, 1988—Con.

[Discharges from non-Federal short-stay hospitals. Procedure groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Age, surgical and nonsurgical category and ICD–9–CM code	*Number in thousands*	*Rate per 100,000 population*
65–74 years of age		
All procedures[1]	6,568	36,701
Arteriography and angiocardiography using contrast material .88.4–88.5	482	2,694
Computerized axial tomography (CAT scan) .87.03, 87.41, 87.71, 88.01, 88.38	324	1,810
Cardiac catheterization .37.21–37.23	286	1,595
Diagnostic ultrasound .88.7	282	1,575
Circulatory monitoring .89.6	207	1,159
Radioisotope scan .92.0–92.1	166	929
Electrographic monitoring .89.54	164	919
Cystoscopy .57.31–57.32	160	896
Prostatectomy .60.2–60.6	146	815
Direct heart revascularization .36.1	136	762
Endoscopy of small intestine (excludes that with biopsy) .45.11–45.13	122	682
Injection or infusion of cancer chemotherapeutic substance .99.25	118	660
Extracorporeal circulation and procedures auxiliary to open heart surgery .39.6	108	604
Colonoscopy and sigmoidoscopy .45.23–45.24	102	569
Puncture of vessel .38.9	99	553
Cholecystectomy .51.2	82	461
Excision or destruction of lesion or tissue of skin or subcutaneous tissue .86.2–86.4	82	459
Pacemaker insertion, replacement, removal, and repair .37.7–37.8	74	413
Resection of intestine .45.6–45.8	64	356
Biopsy of bronchus or lung .33.24–33.28	64	356
Arthroplasty and replacement of hip .81.5–81.6	59	329
Open reduction of fracture, except jaw .76.79, 79.2–79.3, 79.5–79.6	47	265
Electroencephalogram .89.14	47	264
75 years of age and over		
All procedures[1]	6,113	49,029
Computerized axial tomography (CAT scan) .87.03, 87.41, 87.71, 88.01, 88.38	447	3,585
Diagnostic ultrasound .88.7	359	2,879
Circulatory monitoring .89.6	262	2,101
Electrographic monitoring .89.54	235	1,885
Arteriography and angiocardiography using contrast material .88.4–88.5	198	1,585
Radioisotope scan .92.0–92.1	181	1,454
Cystoscopy .57.31–57.32	166	1,335
Pacemaker insertion, replacement, removal, and repair .37.7–37.8	149	1,192
Colonoscopy and sigmoidoscopy .45.23–45.24	144	1,155
Prostatectomy .60.2–60.6	144	1,153
Endoscopy of small intestine (excludes that with biopsy) .45.11–45.13	141	1,130
Open reduction of fracture, except jaw .76.79, 79.2–79.3, 79.5–79.6	110	883
Cardiac catheterization .37.21–37.23	99	794
Arthroplasty and replacement of hip .81.5–81.6	99	793
Excision or destruction of lesion or tissue of skin or subcutaneous tissue .86.2–86.4	95	759
Puncture of vessel .38.9	90	722
Resection of intestine .45.6–45.8	87	701
Electroencephalogram .89.14	74	590
Cholecystectomy .51.2	72	579
Biopsy of bronchus or lung .33.24–33.28	48	383
Injection or infusion of cancer chemotherapeutic substance .99.25	40	321
Direct heart revascularization .36.1	33	266
Extracorporeal circulation and procedures auxiliary to open heart surgery .39.6	31	251

[1]Includes data for procedures not shown in table.

Patients with HIV infection

The number of discharges with a diagnosis of HIV infection has increased each year since 1984 (table L). The ICD–9–CM code used for HIV infection was 279.19 for the period 1984–86. During 1986, new ICD–9–CM codes (042–044 and 795.8) were added for HIV infection to provide additional detail. In 1984, there were approximately 10,000 inpatients with a diagnosis of HIV infection. By 1988, this increased to 95,000. The discharge rate for patients with HIV infection increased from 0.4 per 10,000 population in 1984 to 3.9 per 10,000 population in 1988. The number of days of care for patients with HIV infection increased from 123,000 days to 1,277,000 days, and the rate of days of care increased from 5.3 per 10,000 to 52.3 per 10,000—an increase in both cases of over 800 percent. The average length of stay for HIV infection patients was lowest in 1984 at 12.1 days and highest in 1985 at 17.1 days. In 1988, it was 13.4 days.

The number and percent distribution of discharges and of days of care and average length of stay of patients with an HIV infection for the 1984–88 period are provided in table M. Of the estimated 238,000 discharges, 88.1 percent were males and 77.5 percent were 25–44 years of age. Of the HIV inpatients, 18 percent were 25–29 years of age, 23 percent were 30–34 years of age, 22 percent were 35–39 years of age, and 16 percent were 40–44 years of age. Most of the remaining 54,000 patients were 45 years of age and over. Of the 3,437,000 days of inpatient care for HIV patients during these 5 years, 3,013,000 (88 percent) were used by males. Approximately 77 percent of all days of care used were for patients 25–44 years of age. The average length of stay was higher for females than for males (15.0 days for females and 14.3 days for males). The longest length of stay was for patients 35–39 years (16.0 days).

Table L. Selected measures of hospital utilization for patients discharged from short-stay hospitals with an HIV infection diagnosis: United States, 1984–88

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Measure of utilization	*1984*	*1985*	*1986*	*1987*	*1988*
Number of patients discharged in thousands	10	23	44	67	95
Rate of patient discharges per 10,000 population	0.4	1.0	1.8	2.8	3.9
Number of days of care in thousands	123	387	714	936	1,277
Rate of days of care per 10,000 population	5.3	16.3	29.8	38.7	52.3
Average length of stay in days	12.1	17.1	16.4	14.1	13.4

NOTE: HIV is defined as a discharge with at least one ICD–9–CM code: 279.19, 042–044, or 795.8.

Table M. Number and percent distribution of discharges, days of care, and average length of stay for patients with an HIV infection diagnosis discharged from short-stay hospitals, by sex and selected age groups: United States, 1984–88

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Sex and age	*Discharges*		*Days of care*		
	Number in thousands	*Percent distribution*	*Number in thousands*	*Percent distribution*	*Average length of stay in days*
Total	238	100.0	3,437	100.0	14.4
Sex					
Male	210	88.1	3,013	87.7	14.3
Female	28	11.9	424	12.3	15.0
Age					
Under 25 years	16	6.8	203	5.9	12.5
25–29 years	42	17.5	535	15.6	12.8
30–34 years	54	22.6	747	21.7	13.9
35–39 years	52	21.6	871	25.3	16.9
40–44 years	38	15.8	505	14.7	13.4
45 years and over	37	15.6	576	16.8	15.4

NOTE: HIV is defined as a discharge with at least one ICD–9–CM code: 279 19, 042–044, or 795.8.

Deaths in short-stay hospitals

In 1988, 96.2 percent of patients (excluding newborn infants) discharged from short-stay hospitals were discharged alive, 3.0 percent were discharged dead, and for 0.7 percent a discharge status was not ascribed. Of the estimated 947,000 patients who died, 50.8 percent were male and 49.2 percent were female (table N). As expected, patients 65 years of age and over accounted for the majority of hospital deaths—73.4 percent. The 947,000 persons who died while hospitalized represented about 44 percent of all deaths during 1988 (4).

The hospital fatality rate is the number of deaths for any category divided by the total number of discharges for that category multiplied by 100. This is a conservative rate because the formula assumes that all those patients whose discharge status was not stated were discharged alive.

An overall fatality rate of 3.0 has been computed for patients in 1988. The rate for males (3.8) was higher than that for females (2.5). Patients under 65 years of age had a fatality rate of 1.2, and those in the age group 65 years and over had a hospital fatality rate of 6.9.

The estimated number of hospital deaths and hospital fatality rates for patients under 65 years of age and for those 65 years of age and over are shown for selected conditions in table O. These data are not synonymous with data for underlying cause of death as reported in *Vital Statistics of the United States*. Of the estimated 947,000 deaths in short-stay hospitals, 68 percent are accounted for by the diagnostic groupings shown in table O. Of these, heart disease and malignant neoplasms accounted for about 41 percent (392,000) of all deaths in short-stay hospitals.

For the specific diagnoses shown in table O, the highest fatality rates were for septicemia, with a rate of 18.4 per 100 discharges; malignant neoplasm of trachea, bronchus, and lung, with a rate of 16.5 per 100 discharges; acute myocardial infarction and nephritis, nephritic syndrome, and nephrosis, both with a rate of 13.8 per 100 discharges.

The average length of stay for patients discharged from short-stay hospitals by discharge status, age, and sex is shown in table P. Patients discharged alive had an average stay of 6.3 days and patients who were discharged dead had an average length of stay of 12.6 days.

Patients under 65 years of age discharged alive stayed an average of 5.3 days; however, those who died had an average stay of 12.9 days. The hospital stay for patients 15–44 years of age who died was 2.8 times as long as for those who were discharged alive (13.3 and 4.7). The difference in length of stay was much smaller for patients 65 years of age and over—8.6 days for those discharged alive and 12.5 days for those who died.

Table N. Number of deaths and fatality rate of patients discharged from short-stay hospitals, by sex and age of patient: United States, 1988

[Deaths in non-Federal short-stay hospitals. Excludes newborn infants]

Age	Both sexes	Male	Female	Both sexes	Male	Female
	Number in thousands			Rate per 100 discharges		
All ages	947	481	466	3.0	3.8	2.5
Under 65 years	252	143	108	1.2	1.7	0.8
Under 15 years	21	12	*9	0.8	0.8	*0.8
15–44 years	56	37	19	0.5	1.0	0.2
45–64 years	175	95	81	2.7	2.9	2.5
65 years and over	695	338	358	6.9	7.6	6.3

Table O. Number of deaths and fatality rate of patients discharged from short-stay hospitals, by age and selected categories of first-listed diagnosis: United States, 1988

[Deaths in non-Federal short-stay hospitals. Excludes newborn infants. Diagnostic groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–M)]

Category of first-listed diagnosis and ICD–9–CM code	*All ages*	*Under 65 years*	*65 years and over*	*All ages*	*Under 65 years*	*65 years and over*
	Number in thousands			Rate per 100 discharges		
All deaths	947	252	695	3.0	1.2	6.9
Septicemia .038	36	9	27	18.4	10.9	23.6
Malignant neoplasms .140–208,230–234	170	64	106	10.0	8.0	11.8
Malignant neoplasms of trachea, bronchus, and lung .162,197.0,197.3	39	15	23	16.5	14.0	18.7
Heart disease .391–392.0,393–398, 402,404,410–416,420–429	222	42	180	6.1	3.0	8.1
Acute myocardial infarction .410	99	21	77	13.8	7.4	18.0
Chronic ischemic heart disease .411–414	14	*	12	1.1	*	1.7
Cardiac dysrhythmias .427	27	*7	20	5.5	*4.1	6.3
Congestive heart failure .428.0	54	*7	47	8.5	*5.4	9.3
Cerebrovascular disease .430–438	77	12	64	9.8	5.9	11.1
Pneumonia, all forms .480–486	77	13	64	8.3	3.1	13.0
Nephritis, nephrotic syndrome, and nephrosis .580–589	15	*	12	13.8	*	24.2
Injury and poisoning .800–999	45	19	26	1.6	0.9	3.4

Table P. Average length of stay of patients discharged from short-stay hospitals, by discharge status, sex, and age: United States, 1988

[Deaths in non-Federal short-stay hospitals. Excludes newborn infants]

Age	*Discharge status*					
	Alive			*Dead*		
	Both sexes	*Male*	*Female*	*Both sexes*	*Male*	*Female*
	Average length of stay in days					
All ages	6.3	6.9	6.0	12.6	12.3	13.0
Under 65 years	5.3	6.1	4.8	12.9	13.1	12.7
Under 15 years	4.9	5.0	4.9	11.0	12.5	*9.0
15–44 years	4.7	6.2	4.1	13.3	13.5	12.9
45–64 years	6.6	6.6	6.7	13.0	13.0	13.0
65 years and over	8.6	8.3	8.9	12.5	12.0	13.0

Newborn infant discharges

The number, percent distribution, and average length of stay of newborn infants discharged from short-stay hospitals are shown in table Q by sex and geographic region. Because these data are based on a sample, they may not agree with data on births published in *Vital Statistics of the United States.*

The estimated 3.7 million newborn infants were equally divided between the sexes. About 33 percent (1.2 million) of newborn infant discharges were in the South, 24 percent (0.9 million) were in the Midwest, 24 percent (0.9 million) were in the West, and 20 percent (0.7 million) were in the Northeast. The average length of stay ranged from a high of 4.3 days in the Northeast to a low of 2.6 days in the West. The average length of stay was 3.7 days in the South and 3.4 days in the Midwest. About 60 percent of the 3.7 million newborn infants discharged from short-stay hospitals were classified as "well" newborn infants (table R). A well infant is defined as one who does not have an illness or risk-related diagnosis.

The estimated 1.5 million sick infants (40 percent of all newborns) had at least one diagnosis in addition to the newborn diagnosis. Some of these additional diagnoses are shown in table S. About 0.6 million (24 percent) of the diagnoses were for jaundice. The next three leading diagnoses were respiratory conditions, congenital anomalies, and prematurity. These four diagnoses accounted for about 53 percent of all sick newborn infant diagnoses. Males accounted for 57 percent of the congenital conditions, 53 percent of the respiratory diagnoses, 51 percent of the jaundice diagnoses, and 51 percent of the prematurity diagnoses. Of the 1.5 million sick newborn infants, there were 12 percent more males than females. Males also had 16 percent more diagnoses than females did.

Well newborn infants had an average hospital stay of 2.5 days. There was no difference in the length of stay by sex (table R). Sick newborn infants stayed twice as long as well infants (4.9 versus 2.5 days). Sick newborn infants accounted for 57 percent of the newborn infant patient days although they constituted only 40 percent of newborn infants.

Table Q. Number, percent distribution, and average length of stay for newborn infants discharged from short-stay hospitals, by sex and geographic region: United States, 1988

[Discharges from non-Federal short-stay hospitals]

Sex and region	*Number of discharges*	*Percent distribution*	*Average length of stay in days*
All newborn infants	3,733	100.0	3.5
Sex			
Male	1,882	50.4	3.5
Female	1,851	49.6	3.4
Region			
Northeast	737	19.7	4.3
Midwest	887	23.8	3.4
South	1,227	32.9	3.7
West	882	23.6	2.6

Table R. Number and average length of stay of newborn infants discharged from short-stay hospitals, by sex and health status: United States, 1988

[Discharges from non-Federal short-stay hospitals]

Health status	*Both sexes*	*Male*	*Female*
	Number in thousands		
Total	3,733	1,882	1,851
Well	2,221	1,083	1,138
Sick	1,511	799	713
	Average length of stay in days		
Total	3.5	3.5	3.4
Well	2.5	2.5	2.4
Sick	4.9	4.8	4.9

Table S. Number of all-listed diagnoses for sick newborn infants discharged from short-stay hospitals, by sex and selected diagnostic categories: United States, 1988

[Discharges from non-Federal short-stay hospitals. Diagnostic groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Diagnostic category and ICD–9–CM code	*Both sexes*	*Male*	*Female*
Sick newborn infant diagnoses[1]	2,505	1,343	1,162
Congenital anomalies .740–759	223	126	97
Disorders relating to short gestation and unspecified low birthweight (prematurity) .765	221	113	107
Respiratory distress syndrome and other respiratory conditions of fetus and newborn .769–770	290	155	134
Hemolytic disease of fetus or newborn, due to isoimmunization and other perinatal jaundice .773–774	597	303	293

[1]Includes data for diagnostic conditions not shown in the table.

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List of detailed tables

TABLE 1. NUMBER, PERCENT DISTRIBUTION, AND RATE OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS AND OF DAYS OF CARE, WITH AVERAGE LENGTHS OF STAY, BY SEX AND AGE: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS]

SEX AND AGE	DISCHARGED PATIENTS			DAYS OF CARE			AVERAGE LENGTH OF STAY IN DAYS
	NUMBER IN THOUSANDS	PERCENT DISTRIBUTION	RATE PER 1,000 POPULATION	NUMBER IN THOUSANDS	PERCENT DISTRIBUTION	RATE PER 1,000 POPULATION	
BOTH SEXES							
ALL AGES	31,146	100.0	127.6	203,678	100.0	834.3	6.5
UNDER 15 YEARS	2,610	8.4	49.2	13,028	6.4	245.3	5.0
UNDER 1 YEAR	774	2.5	200.6	5,150	2.5	1,334.5	6.7
1-4 YEARS	778	2.5	53.3	2,800	1.4	191.8	3.6
5-14 YEARS	1,058	3.4	30.5	5,079	2.5	146.5	4.8
15-44 YEARS	11,934	38.3	104.0	56,558	27.8	493.1	4.7
15-19 YEARS	1,485	4.8	82.2	7,400	3.6	409.6	5.0
20-24 YEARS	2,246	7.2	120.6	8,638	4.2	463.8	3.8
25-34 YEARS	5,019	16.1	116.6	22,534	11.1	523.7	4.5
35-44 YEARS	3,184	10.2	91.0	17,986	8.8	514.2	5.6
45-64 YEARS	6,456	20.7	140.5	43,901	21.6	955.3	6.8
45-54 YEARS	2,797	9.0	115.9	17,249	8.5	715.0	6.2
55-64 YEARS	3,659	11.7	167.6	26,651	13.1	1,221.0	7.3
65 YEARS AND OVER	10,146	32.6	334.1	90,191	44.3	2,970.0	8.9
65-74 YEARS	4,703	15.1	262.8	39,638	19.5	2,214.8	8.4
75-84 YEARS	3,891	12.5	408.6	35,691	17.5	3,748.6	9.2
85 YEARS AND OVER	1,553	5.0	526.6	14,863	7.3	5,041.6	9.6
UNDER 17 YEARS	3,042	9.8	47.6	15,770	7.7	247.0	5.2
17-69 YEARS	20,315	65.2	124.1	117,035	57.5	714.7	5.8
70 YEARS AND OVER	7,790	25.0	382.3	70,873	34.8	3,478.4	9.1
MALE							
ALL AGES	12,642	100.0	106.9	89,435	100.0	756.5	7.1
UNDER 15 YEARS	1,486	11.8	54.6	7,493	8.4	275.5	5.0
UNDER 1 YEAR	442	3.5	223.7	2,975	3.3	1,505.3	6.7
1-4 YEARS	455	3.6	60.8	1,628	1.8	218.0	3.6
5-14 YEARS	589	4.7	33.2	2,890	3.2	162.8	4.9
15-44 YEARS	3,485	27.6	61.5	21,996	24.6	388.2	6.3
15-19 YEARS	454	3.6	49.6	3,200	3.6	349.5	7.1
20-24 YEARS	485	3.8	53.2	2,746	3.1	301.5	5.7
25-34 YEARS	1,208	9.6	56.7	7,700	8.6	361.7	6.4
35-44 YEARS	1,339	10.6	76.0	8,351	9.3	473.7	6.2
45-64 YEARS	3,221	25.5	146.4	21,855	24.4	993.2	6.8
45-54 YEARS	1,341	10.6	114.4	8,356	9.3	713.4	6.2
55-64 YEARS	1,880	14.9	182.7	13,499	15.1	1,311.8	7.2
65 YEARS AND OVER	4,450	35.2	360.3	38,091	42.6	3,083.5	8.6
65-74 YEARS	2,306	18.2	290.3	18,885	21.1	2,377.3	8.2
75-84 YEARS	1,626	12.9	453.5	14,412	16.1	4,021.1	8.9
85 YEARS AND OVER	518	4.1	628.3	4,794	5.4	5,811.1	9.2
UNDER 17 YEARS	1,658	13.1	50.7	8,846	9.9	270.6	5.3
17-69 YEARS	7,730	61.1	97.0	52,054	58.2	653.2	6.7
70 YEARS AND OVER	3,254	25.7	416.8	28,534	31.9	3,654.0	8.8
FEMALE							
ALL AGES	18,504	100.0	147.0	114,242	100.0	907.4	6.2
UNDER 15 YEARS	1,125	6.1	43.4	5,536	4.8	213.6	4.9
UNDER 1 YEAR	332	1.8	176.2	2,175	1.9	1,155.2	6.6
1-4 YEARS	324	1.7	45.4	1,172	1.0	164.4	3.6
5-14 YEARS	469	2.5	27.8	2,189	1.9	129.5	4.7
15-44 YEARS	8,448	45.7	145.6	34,562	30.3	595.6	4.1
15-19 YEARS	1,032	5.6	115.8	4,200	3.7	471.4	4.1
20-24 YEARS	1,761	9.5	185.0	5,893	5.2	619.1	3.3
25-34 YEARS	3,811	20.6	175.2	14,834	13.0	682.1	3.9
35-44 YEARS	1,845	10.0	103.3	9,635	8.4	539.7	5.2
45-64 YEARS	3,235	17.5	135.1	22,045	19.3	920.5	6.8
45-54 YEARS	1,457	7.9	117.4	8,893	7.8	716.6	6.1
55-64 YEARS	1,779	9.6	154.2	13,152	11.5	1,139.9	7.4
65 YEARS AND OVER	5,696	30.8	316.2	52,100	45.6	2,892.3	9.1
65-74 YEARS	2,397	13.0	240.8	20,752	18.2	2,085.0	8.7
75-84 YEARS	2,265	12.2	381.5	21,279	18.6	3,584.1	9.4
85 YEARS AND OVER	1,034	5.6	486.9	10,068	8.8	4,740.3	9.7
UNDER 17 YEARS	1,384	7.5	44.4	6,923	6.1	222.3	5.0
17-69 YEARS	12,586	68.0	149.7	64,980	56.9	773.0	5.2
70 YEARS AND OVER	4,535	24.5	360.9	42,339	37.1	3,369.3	9.3

TABLE 2. NUMBER, PERCENT DISTRIBUTION, AND RATE OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS AND OF DAYS OF CARE, WITH AVERAGE LENGTHS OF STAY, BY SEX, RACE, AND AGE: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS]

SEX, RACE, AND AGE	DISCHARGED PATIENTS			DAYS OF CARE			AVERAGE LENGTH OF STAY IN DAYS
	NUMBER IN THOUSANDS	PERCENT DISTRIBUTION	RATE PER 1,000 POPULATION	NUMBER IN THOUSANDS	PERCENT DISTRIBUTION	RATE PER 1,000 POPULATION	
BOTH SEXES							
ALL RACES, ALL AGES	31,146	100.0	127.6	203,678	100.0	834.3	6.5
UNDER 15 YEARS	2,610	8.4	49.2	13,028	6.4	245.3	5.0
15-44 YEARS	11,934	38.3	104.0	56,558	27.8	493.1	4.7
45-64 YEARS	6,456	20.7	140.5	43,901	21.6	955.3	6.8
65 YEARS AND OVER	10,146	32.6	334.1	90,191	44.3	2,970.0	8.9
WHITE, ALL AGES	23,322	74.9	113.2	154,711	76.0	750.7	6.6
UNDER 15 YEARS	1,723	5.5	40.3	8,187	4.0	191.6	4.8
15-44 YEARS	8,260	26.5	86.0	39,033	19.2	406.2	4.7
45-64 YEARS	4,977	16.0	124.6	33,293	16.3	833.2	6.7
65 YEARS AND OVER	8,362	26.8	306.3	74,198	36.4	2,717.7	8.9
ALL OTHER, ALL AGES	5,008	16.1	131.6	33,590	16.5	883.0	6.7
UNDER 15 YEARS	612	2.0	58.9	3,445	1.7	331.8	5.6
15-44 YEARS	2,480	8.0	133.3	12,613	6.2	678.2	5.1
45-64 YEARS	928	3.0	154.9	7,429	3.6	1,239.2	8.0
65 YEARS AND OVER	988	3.2	322.0	10,103	5.0	3,294.2	10.2
RACE NOT STATED, ALL AGES	2,817	9.0	...	15,376	7.5	...	5.5
UNDER 15 YEARS	276	0.9	...	1,396	0.7	...	5.1
15-44 YEARS	1,194	3.8	...	4,912	2.4	...	4.1
45-64 YEARS	551	1.8	...	3,178	1.6	...	5.8
65 YEARS AND OVER	797	2.6	...	5,890	2.9	...	7.4
MALE							
ALL RACES, ALL AGES	12,642	100.0	106.9	89,435	100.0	756.5	7.1
UNDER 15 YEARS	1,486	11.8	54.6	7,493	8.4	275.5	5.0
15-44 YEARS	3,485	27.6	61.5	21,996	24.6	388.2	6.3
45-64 YEARS	3,221	25.5	146.4	21,855	24.4	993.2	6.8
65 YEARS AND OVER	4,450	35.2	360.3	38,091	42.6	3,083.5	8.6
WHITE, ALL AGES	9,627	76.1	96.1	67,567	75.5	674.3	7.0
UNDER 15 YEARS	980	7.8	44.7	4,571	5.1	208.5	4.7
15-44 YEARS	2,474	19.6	51.7	15,235	17.0	318.2	6.2
45-64 YEARS	2,512	19.9	130.2	16,612	18.6	861.0	6.6
65 YEARS AND OVER	3,660	29.0	329.7	31,148	34.8	2,805.4	8.5
ALL OTHER, ALL AGES	1,911	15.1	106.1	14,997	16.8	832.4	7.8
UNDER 15 YEARS	350	2.8	66.4	2,089	2.3	396.3	6.0
15-44 YEARS	701	5.5	79.8	4,951	5.5	563.5	7.1
45-64 YEARS	437	3.5	161.3	3,635	4.1	1,341.3	8.3
65 YEARS AND OVER	423	3.3	338.4	4,323	4.8	3,458.4	10.2
RACE NOT STATED, ALL AGES	1,104	8.7	...	6,871	7.7	...	6.2
UNDER 15 YEARS	155	1.2	...	833	0.9	...	5.4
15-44 YEARS	310	2.5	...	1,810	2.0	...	5.8
45-64 YEARS	272	2.2	...	1,608	1.8	...	5.9
65 YEARS AND OVER	367	2.9	...	2,620	2.9	...	7.1
FEMALE							
ALL RACES, ALL AGES	18,504	100.0	147.0	114,242	100.0	907.4	6.2
UNDER 15 YEARS	1,125	6.1	43.4	5,536	4.8	213.6	4.9
15-44 YEARS	8,448	45.7	145.6	34,562	30.3	595.6	4.1
45-64 YEARS	3,235	17.5	135.1	22,045	19.3	920.5	6.8
65 YEARS AND OVER	5,696	30.8	316.2	52,100	45.6	2,892.3	9.1
WHITE, ALL AGES	13,695	74.0	129.4	87,144	76.3	823.1	6.4
UNDER 15 YEARS	743	4.0	35.7	3,616	3.2	173.8	4.9
15-44 YEARS	5,786	31.3	120.0	23,797	20.8	493.6	4.1
45-64 YEARS	2,465	13.3	119.3	16,681	14.6	807.3	6.8
65 YEARS AND OVER	4,702	25.4	290.3	43,050	37.7	2,658.0	9.2
ALL OTHER, ALL AGES	3,097	16.7	154.6	18,593	16.3	928.4	6.0
UNDER 15 YEARS	262	1.4	51.2	1,356	1.2	265.3	5.2
15-44 YEARS	1,779	9.6	181.3	7,663	6.7	780.9	4.3
45-64 YEARS	491	2.7	149.6	3,794	3.3	1,155.0	7.7
65 YEARS AND OVER	565	3.1	311.1	5,780	5.1	3,184.7	10.2
RACE NOT STATED, ALL AGES	1,712	9.3	...	8,505	7.4	...	5.0
UNDER 15 YEARS	120	0.7	...	563	0.5	...	4.7
15-44 YEARS	883	4.8	...	3,102	2.7	...	3.5
45-64 YEARS	279	1.5	...	1,570	1.4	...	5.6
65 YEARS AND OVER	430	2.3	...	3,270	2.9	...	7.6

TABLE 3. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, DAYS OF CARE, AND AVERAGE LENGTHS OF STAY, BY PRINCIPAL EXPECTED SOURCE OF PAYMENT, GEOGRAPHIC REGION, AND AGE: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS]

REGION AND AGE	ALL PRINCIPAL EXPECTED SOURCES OF PAYMENT	PRIVATE INSURANCE	MEDICARE	MEDICAID	WORKER'S COMPEN-SATION	OTHER GOVERNMENT PAYMENTS	SELF-PAY	OTHER PAYMENTS AND NO CHARGE
UNITED STATES			NUMBER OF PATIENTS DISCHARGED IN THOUSANDS					
ALL AGES	31,146	12,785	10,723	2,957	481	610	1,950	1,052
UNDER 15 YEARS	2,610	1,429	102	603	–	82	212	117
15-44 YEARS	11,934	6,854	399	1,775	319	326	1,295	603
45-64 YEARS	6,456	4,096	870	487	137	162	355	243
65 YEARS AND OVER	10,146	405	9,353	92	25	40	87	90
NORTHEAST								
ALL AGES	7,078	2,906	2,484	768	129	45	441	246
UNDER 15 YEARS	634	372	*	165	–	*6	55	25
15-44 YEARS	2,503	1,439	60	445	84	22	291	138
45-64 YEARS	1,514	997	171	132	36	15	78	69
65 YEARS AND OVER	2,428	98	2,250	27	*9	*	17	15
MIDWEST								
ALL AGES	7,832	3,336	2,776	774	96	135	414	218
UNDER 15 YEARS	654	382	*	180	–	10	44	29
15-44 YEARS	2,868	1,754	84	472	62	91	252	102
45-64 YEARS	1,607	1,109	198	111	28	32	76	39
65 YEARS AND OVER	2,703	90	2,491	11	*7	*	43	48
SOUTH								
ALL AGES	10,845	4,393	3,771	952	187	221	792	234
UNDER 15 YEARS	704	383	*6	163	–	25	71	21
15-44 YEARS	4,340	2,494	136	570	130	120	552	150
45-64 YEARS	2,293	1,375	369	178	50	68	151	51
65 YEARS AND OVER	3,508	141	3,261	41	*7	*8	18	12
WEST								
ALL AGES	5,391	2,150	1,692	463	69	209	302	354
UNDER 15 YEARS	618	292	90	95	–	41	43	43
15-44 YEARS	2,224	1,166	120	289	44	93	200	212
45-64 YEARS	1,042	615	131	66	23	47	50	84
65 YEARS AND OVER	1,507	76	1,351	13	*	28	9	15
UNITED STATES			NUMBER OF DAYS OF CARE IN THOUSANDS					
ALL AGES	203,678	65,363	95,338	17,474	2,547	3,826	9,958	5,493
UNDER 15 YEARS	13,028	6,316	725	3,356	–	658	1,055	531
15-44 YEARS	56,558	30,657	3,384	9,073	1,548	1,723	5,620	2,663
45-64 YEARS	43,901	25,291	7,745	4,140	759	1,194	2,340	1,573
65 YEARS AND OVER	90,191	3,097	83,484	904	239	252	943	726
NORTHEAST								
ALL AGES	54,554	16,057	27,012	5,816	701	332	2,692	1,397
UNDER 15 YEARS	3,193	1,549	*	1,059	–	*47	328	135
15-44 YEARS	13,126	6,492	662	3,089	392	139	1,511	694
45-64 YEARS	11,809	7,126	1,817	1,322	211	124	579	436
65 YEARS AND OVER	26,426	890	24,505	345	*97	*	275	132
MIDWEST								
ALL AGES	50,118	16,720	23,620	4,122	504	995	2,337	1,278
UNDER 15 YEARS	2,887	1,539	*	903	–	96	173	119
15-44 YEARS	13,526	7,729	769	2,221	283	574	1,142	494
45-64 YEARS	10,706	6,773	1,688	874	167	316	529	265
65 YEARS AND OVER	22,999	679	21,135	124	*55	*	492	401
SOUTH								
ALL AGES	67,658	21,581	32,194	5,130	961	1,270	3,736	1,166
UNDER 15 YEARS	3,139	1,505	*44	828	–	169	360	87
15-44 YEARS	19,690	11,109	1,012	2,511	651	566	2,330	636
45-64 YEARS	15,139	7,999	3,299	1,479	232	453	908	363
65 YEARS AND OVER	29,690	968	27,839	312	*78	*83	139	81
WEST								
ALL AGES	31,347	11,005	12,511	2,407	381	1,230	1,193	1,651
UNDER 15 YEARS	3,810	1,724	626	566	–	346	194	190
15-44 YEARS	10,216	5,328	941	1,252	222	444	638	839
45-64 YEARS	6,246	3,394	941	465	149	302	324	509
65 YEARS AND OVER	11,075	560	10,004	123	*	138	37	113

TABLE 3. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, DAYS OF CARE, AND AVERAGE LENGTHS OF STAY, BY PRINCIPAL EXPECTED SOURCE OF PAYMENT, GEOGRAPHIC REGION, AND AGE: UNITED STATES, 1988—CON.

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS]

REGION AND AGE	ALL PRINCIPAL EXPECTED SOURCES OF PAYMENT	PRIVATE INSURANCE	MEDICARE	MEDICAID	WORKER'S COMPEN-SATION	OTHER GOVERNMENT PAYMENTS	SELF-PAY	OTHER PAYMENTS AND NO CHARGE
				AVERAGE LENGTH OF STAY IN DAYS				
UNITED STATES								
ALL AGES	6.5	5.1	8.9	5.9	5.3	6.3	5.1	5.2
UNDER 15 YEARS	5.0	4.4	7.1	5.6	–	8.0	5.0	4.5
15-44 YEARS	4.7	4.5	8.5	5.1	4.8	5.3	4.3	4.4
45-64 YEARS	6.8	6.2	8.9	8.5	5.5	7.4	6.6	6.5
65 YEARS AND OVER	8.9	7.6	8.9	9.8	9.8	6.3	10.8	8.1
NORTHEAST								
ALL AGES	7.7	5.5	10.9	7.6	5.5	7.4	6.1	5.7
UNDER 15 YEARS	5.0	4.2	*	6.4	–	*7.4	5.9	5.5
15-44 YEARS	5.2	4.5	11.1	6.9	4.7	6.4	5.2	5.0
45-64 YEARS	7.8	7.1	10.6	10.0	5.9	8.3	7.4	6.3
65 YEARS AND OVER	10.9	9.1	10.9	12.9	*11.2	*	16.5	8.8
MIDWEST								
ALL AGES	6.4	5.0	8.5	5.3	5.2	7.4	5.6	5.9
UNDER 15 YEARS	4.4	4.0	*	5.0	–	9.4	4.0	4.1
15-44 YEARS	4.7	4.4	9.2	4.7	4.6	6.3	4.5	4.8
45-64 YEARS	6.7	6.1	8.5	7.9	6.0	9.8	7.0	6.9
65 YEARS AND OVER	8.5	7.6	8.5	11.2	*8.1	*	11.5	8.4
SOUTH								
ALL AGES	6.2	4.9	8.5	5.4	5.1	5.7	4.7	5.0
UNDER 15 YEARS	4.5	3.9	*7.2	5.1	–	6.8	5.1	4.2
15-44 YEARS	4.5	4.5	7.5	4.4	5.0	4.7	4.2	4.2
45-64 YEARS	6.6	5.8	8.9	8.3	4.7	6.7	6.0	7.1
65 YEARS AND OVER	8.5	6.9	8.5	7.5	*10.9	*10.5	7.5	6.7
WEST								
ALL AGES	5.8	5.1	7.4	5.2	5.5	5.9	3.9	4.7
UNDER 15 YEARS	6.2	5.9	7.0	6.0	–	8.5	4.5	4.4
15-44 YEARS	4.6	4.6	7.9	4.3	5.1	4.8	3.2	4.0
45-64 YEARS	6.0	5.5	7.2	7.0	6.4	6.4	6.4	6.1
65 YEARS AND OVER	7.3	7.3	7.4	9.7	*	4.9	3.9	7.5

NOTE: ALL PRINCIPAL EXPECTED SOURCES OF PAYMENTS INCLUDE DISCHARGES FOR WHOM NO EXPECTED SOURCE OF PAYMENT WAS PROVIDED.

Table 4. Number and rate of patients discharged from short-stay hospitals and of days of care, with average lengths of stay, by sex, age, and geographic region: United States, 1988

[Discharges from non-Federal hospitals. Excludes newborn infants]

Sex, age, and region	Discharged patients		Days of care		Average length of stay in days
	Number in thousands	Rate per 1,000 population	Number in thousands	Rate per 1,000 population	
Both sexes					
All ages					
United States	31,146	127.6	203,678	834.3	6.5
Northeast	7,078	140.2	54,554	1,080.8	7.7
Midwest	7,832	131.1	50,118	838.9	6.4
South	10,845	129.4	67,658	807.5	6.2
West	5,391	107.6	31,347	625.5	5.8
Under 15 years					
United States	2,610	49.2	13,028	245.3	5.0
Northeast	634	63.8	3,193	321.0	5.0
Midwest	654	50.6	2,887	223.0	4.4
South	704	37.7	3,139	168.3	4.5
West	618	53.4	3,810	329.2	6.2
15–44 years					
United States	11,934	104.0	56,558	493.1	4.7
Northeast	2,503	107.1	13,126	561.5	5.2
Midwest	2,868	102.5	13,526	483.6	4.7
South	4,340	110.9	19,690	503.1	4.5
West	2,224	91.8	10,216	422.0	4.6
45–64 years					
United States	6,456	140.5	43,901	955.3	6.8
Northeast	1,514	147.1	11,809	1,147.6	7.8
Midwest	1,607	143.3	10,706	954.9	6.7
South	2,293	146.7	15,139	968.7	6.6
West	1,042	118.1	6,246	708.0	6.0
65 years and over					
United States	10,146	334.1	90,191	2,970.0	8.9
Northeast	2,428	353.5	26,426	3,848.3	10.9
Midwest	2,703	355.1	22,999	3,021.4	8.5
South	3,508	338.2	29,690	2,861.7	8.5
West	1,507	273.4	11,075	2,009.3	7.3
Male					
All ages					
United States	12,642	106.9	89,435	756.5	7.1
Northeast	2,975	123.3	23,988	994.0	8.1
Midwest	3,268	112.6	21,926	755.5	6.7
South	4,244	105.1	28,871	715.0	6.8
West	2,155	87.3	14,650	593.4	6.8
Under 15 years					
United States	1,486	54.6	7,493	275.5	5.0
Northeast	363	71.3	1,803	354.0	5.0
Midwest	371	55.9	1,680	253.2	4.5
South	392	41.1	1,692	177.3	4.3
West	360	60.7	2,318	391.2	6.4
15–44 years					
United States	3,485	61.5	21,996	388.2	6.3
Northeast	787	68.7	5,232	456.9	6.6
Midwest	861	61.9	5,230	375.9	6.1
South	1,235	64.3	7,259	378.2	5.9
West	602	49.7	4,275	353.0	7.1
45–64 years					
United States	3,221	146.4	21,855	993.2	6.8
Northeast	775	158.9	6,085	1,247.7	7.9
Midwest	837	154.5	5,307	980.5	6.3
South	1,099	148.3	7,302	985.7	6.6
West	510	118.5	3,161	733.9	6.2
65 years and over					
United States	4,450	360.3	38,091	3,083.5	8.6
Northeast	1,050	387.2	10,868	4,007.3	10.3
Midwest	1,200	391.6	9,708	3,169.5	8.1
South	1,518	358.8	12,618	2,983.0	8.3
West	683	290.7	4,897	2,085.6	7.2

Table 4. Number and rate of patients discharged from short-stay hospitals and of days of care, with average lengths of stay, by sex, age, and geographic region: United States, 1988—Con.

[Discharges from non-Federal hospitals. Excludes newborn infants]

Sex, age, and region	Discharged patients		Days of care		Average length of stay in days
	Number in thousands	Rate per 1,000 population	Number in thousands	Rate per 1,000 population	
Female					
All ages					
United States	18,504	147.0	114,242	907.4	6.2
Northeast	4,104	155.8	30,566	1,160.2	7.4
Midwest	4,564	148.6	28,192	917.8	6.2
South	6,601	152.1	38,788	893.5	5.9
West	3,236	127.3	16,697	656.6	5.2
Under 15 years					
United States	1,125	43.4	5,536	213.6	4.9
Northeast	271	55.9	1,390	286.5	5.1
Midwest	284	45.0	1,207	191.4	4.3
South	311	34.2	1,447	158.9	4.6
West	258	45.7	1,492	264.1	5.8
15–44 years					
United Statess	8,448	145.6	34,562	595.6	4.1
Northeast	1,716	143.9	7,893	661.9	4.6
Midwest	2,007	142.7	8,296	590.1	4.1
South	3,104	155.7	12,431	623.3	4.0
West	1,622	134.0	5,941	491.0	3.7
45–64 years					
United Statess	3,235	135.1	22,045	920.5	6.8
Northeast	739	136.6	5,724	1,057.4	7.7
Midwest	770	132.7	5,399	930.8	7.0
South	1,195	145.3	7,837	953.6	6.6
West	531	117.7	3,085	683.2	5.8
65 years and over					
United Statess	5,696	316.2	52,100	2,892.3	9.1
Northeast	1,378	331.5	15,559	3,744.5	11.3
Midwest	1,504	330.5	13,291	2,921.7	8.8
South	1,991	324.0	17,072	2,778.7	8.6
West	824	260.5	6,178	1,952.1	7.5

TABLE 5. NUMBER, PERCENT DISTRIBUTION, AND RATE OF WOMEN WITH DELIVERIES DISCHARGED FROM SHORT-STAY HOSPITALS AND OF DAYS OF CARE, WITH AVERAGE LENGTHS OF STAY, BY AGE, RACE, AND GEOGRAPHIC REGION: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS]

AGE, RACE, AND REGION	DISCHARGED PATIENTS			DAYS OF CARE			AVERAGE LENGTH OF STAY IN DAYS
	NUMBER IN THOUSANDS	PERCENT DISTRIBUTION	RATE PER 1,000 POPULATION	NUMBER IN THOUSANDS	PERCENT DISTRIBUTION	RATE PER 1,000 POPULATION	
10-54 YEARS	3,781	100.0	48.1	11,029	100.0	140.4	2.9
AGE							
10-14 YEARS	10	0.3	1.3	32	0.3	3.9	3.0
15-44 YEARS	3,768	99.7	64.9	10,992	99.7	189.4	2.9
15-19 YEARS	471	12.4	52.8	1,339	12.1	150.2	2.8
20-24 YEARS	1,025	27.1	107.7	2,795	25.3	293.6	2.7
25-29 YEARS	1,206	31.9	110.8	3,504	31.8	322.1	2.9
30-34 YEARS	777	20.5	71.5	2,399	21.8	220.8	3.1
35-44 YEARS	291	7.7	16.3	955	8.7	53.5	3.3
45-54 YEARS	*	*	*	*	*	*	*
10-17 YEARS	180	4.8	13.5	553	5.0	41.4	3.1
18-54 YEARS	3,601	95.2	55.2	10,476	95.0	160.7	2.9
RACE							
WHITE	2,464	65.2	37.7	7,188	65.2	110.1	2.9
ALL OTHER	842	22.3	63.6	2,610	23.7	197.2	3.1
RACE NOT STATED	474	12.5	...	1,231	11.2	...	2.6
REGION							
NORTHEAST	698	18.5	43.2	2,368	21.5	146.6	3.4
MIDWEST	878	23.2	46.0	2,646	24.0	138.8	3.0
SOUTH	1,371	36.3	50.6	4,033	36.6	148.9	2.9
WEST	834	22.1	51.4	1,982	18.0	122.0	2.4

TABLE 6. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, RATE OF DISCHARGES, AND AVERAGE LENGTHS OF STAY, BY AGE AND CATEGORY OF FIRST-LISTED DIAGNOSIS: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

	CATEGORY OF FIRST-LISTED DIAGNOSIS AND ICD-9-CM CODE	ALL AGES	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
		NUMBER OF PATIENTS DISCHARGED IN THOUSANDS				
01	ALL CONDITIONS	31,146	2,610	11,934	6,456	10,146
02	INFECTIOUS AND PARASITIC DISEASES 001-139	693	191	211	104	187
03	NEOPLASMS 140-239	2,098	53	378	708	958
04	MALIGNANT NEOPLASMS 140-208,230-234	1,670	37	187	566	880
05	MALIGNANT NEOPLASM OF LARGE INTESTINE AND RECTUM 153-154,197.5	165	*	*5	41	118
06	MALIGNANT NEOPLASM OF TRACHEA, BRONCHUS, AND LUNG 162,197.0,197.3	236	*	*8	102	125
07	MALIGNANT NEOPLASM OF BREAST 174-175,198.81	177	-	20	81	76
08	BENIGN NEOPLASMS AND NEOPLASMS OF UNCERTAIN BEHAVIOR AND UNSPECIFIED NATURE 210-229,235-239	428	16	191	142	79
09	ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS 240-279	1,038	102	229	250	456
10	DIABETES MELLITUS 250	454	28	125	134	166
11	DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS 280-289	295	47	86	52	110
12	MENTAL DISORDERS 290-319	1,559	58	962	288	251
13	PSYCHOSES 290-299	781	21	429	157	174
14	ALCOHOL DEPENDENCE SYNDROME 303	237	*	158	63	14
15	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS 320-389	922	194	222	190	317
16	DISEASES OF THE CENTRAL NERVOUS SYSTEM 320-336,340-349	348	57	119	69	103
17	CATARACT 366	92	*	*	17	72
18	DISEASES OF THE EAR AND MASTOID PROCESS 380-389	200	106	37	26	32
19	DISEASES OF THE CIRCULATORY SYSTEM 390-459	5,296	25	419	1,628	3,224
20	HEART DISEASE 391-392.0,393-398,402,404,410-416,420-429	3,641	14	243	1,162	2,223
21	ACUTE MYOCARDIAL INFARCTION 410	716	*	45	241	430
22	ATHEROSCLEROTIC HEART DISEASE 414.0	411	*	24	191	197
23	OTHER ISCHEMIC HEART DISEASE 411-413,414.1-414.9	921	*	53	366	502
24	CARDIAC DYSRHYTHMIAS 427	491	*5	36	131	320
25	CONGESTIVE HEART FAILURE 428.0	634	*	14	107	510
26	CEREBROVASCULAR DISEASE 430-438	784	*	32	171	578
27	DISEASES OF THE RESPIRATORY SYSTEM 460-519	2,937	699	540	525	1,172
28	ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA 460-466	445	168	60	70	148
29	CHRONIC DISEASE OF TONSILS AND ADENOIDS 474	197	125	70	*	*
30	PNEUMONIA, ALL FORMS 480-486	924	184	111	139	490
31	ASTHMA 493	479	164	110	93	112
32	DISEASES OF THE DIGESTIVE SYSTEM 520-579	3,268	274	992	831	1,171
33	ULCERS OF THE STOMACH AND SMALL INTESTINE 531-534	256	*	52	66	136
34	GASTRITIS AND DUODENITIS 535	146	*6	45	41	54
35	APPENDICITIS 540-543	242	52	145	24	20
36	INGUINAL HERNIA 550	257	30	65	78	84
37	NONINFECTIOUS ENTERITIS AND COLITIS 555-556,558	333	96	115	52	70
38	CHOLELITHIASIS 574	484	*	183	146	154
39	DISEASES OF THE GENITOURINARY SYSTEM 580-629	2,204	71	922	512	700
40	CALCULUS OF KIDNEY AND URETER 592	287	*	137	106	41
41	HYPERPLASIA OF PROSTATE 600	247	-	*	56	191
42	COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM 1/ 630-676	837	*	833	*	***
43	ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES 630-639	266	*	264	*	***
44	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE 680-709	460	46	154	108	152
45	DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE 710-739	1,647	54	621	495	477
46	ARTHROPATHIES AND RELATED DISORDERS 710-719	459	18	129	116	196
47	INTERVERTEBRAL DISC DISORDERS 722	417	*	223	142	51
48	CONGENITAL ANOMALIES 740-759	227	150	45	24	*8
49	CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD 760-779	158	158	*	*	*
50	SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS 780-799	398	50	175	105	69
51	INJURY AND POISONING 800-999	2,817	348	1,216	498	755
52	FRACTURES, ALL SITES 800-829	1,014	107	356	154	398
53	FRACTURE OF NECK OF FEMUR 820	254	*	10	24	217
54	SPRAINS AND STRAINS OF BACK (INCLUDING NECK) 846-847	97	*	61	22	12
55	INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE) 850-854	201	46	103	26	26
56	LACERATIONS AND OPEN WOUNDS 870-904	232	34	155	27	17
57	SUPPLEMENTARY CLASSIFICATIONS V01-V82	4,295	88	3,929	138	139
58	FEMALES WITH DELIVERIES V27	3,781	10	3,768	*	***

1/ FIRST-LISTED DIAGNOSIS FOR FEMALES WITH DELIVERIES IS CODED V27, SHOWN UNDER "SUPPLEMENTARY CLASSIFICATIONS."

TABLE 6. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, RATE OF DISCHARGES, AND AVERAGE LENGTHS OF STAY, BY AGE AND CATEGORY OF FIRST-LISTED DIAGNOSIS: UNITED STATES, 1988--CON.

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

ALL AGES	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER	ALL AGES	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER	
RATE OF PATIENTS DISCHARGED PER 10,000 POPULATION					AVERAGE LENGTH OF STAY IN DAYS					
1,275.8	491.5	1,040.5	1,404.9	3,341.2	6.5	5.0	4.7	6.8	8.9	01
28.4	35.9	18.4	22.6	61.6	8.1	4.1	7.5	10.9	11.3	02
85.9	10.0	33.0	154.1	315.6	8.5	6.5	5.8	8.1	9.9	03
68.4	6.9	16.3	123.3	289.7	9.4	7.9	7.3	8.9	10.2	04
6.7	*	*0.5	8.9	39.0	13.1	*	*12.4	11.5	13.6	05
9.7	*	*0.7	22.2	41.2	9.5	*	*11.3	9.4	9.5	06
7.2	-	1.7	17.6	25.0	5.6	-	5.0	5.3	6.0	07
17.5	3.0	16.7	30.8	25.9	4.9	3.1	4.3	5.0	6.6	08
42.5	19.2	20.0	54.4	150.3	7.5	4.6	5.4	7.2	9.4	09
18.6	5.2	10.9	29.3	54.8	8.2	5.2	5.7	8.3	10.5	10
12.1	8.9	7.5	11.3	36.2	6.2	4.2	5.5	6.5	7.4	11
63.8	10.9	83.9	62.7	82.5	13.0	25.0	12.6	11.9	13.3	12
32.0	4.0	37.4	34.1	57.5	15.1	28.0	14.7	14.1	15.5	13
9.7	*	13.8	13.8	4.8	11.2	*	11.9	8.9	8.5	14
37.8	36.5	19.3	41.3	104.3	5.4	3.7	5.4	5.5	6.4	15
14.3	10.8	10.4	14.9	33.8	9.4	6.5	7.2	10.5	12.9	16
3.8	*	*	3.8	23.8	1.4	*	*	1.3	1.4	17
8.2	20.0	3.2	5.6	10.5	2.5	2.1	2.2	2.5	4.0	18
216.9	4.7	36.5	354.4	1,061.6	7.5	6.8	5.7	6.4	8.4	19
149.2	2.6	21.2	252.8	731.9	7.1	6.6	5.7	6.2	7.8	20
29.3	*	3.9	52.4	141.6	9.0	*	6.8	8.1	9.7	21
16.9	*	2.0	41.5	64.8	6.1	*	5.0	5.1	7.1	22
37.7	*	4.6	79.7	165.4	5.3	*	3.8	4.6	5.9	23
20.1	*1.0	3.1	28.4	105.4	5.6	*4.6	3.2	4.7	6.3	24
26.0	*	1.3	23.2	168.1	8.8	*	6.8	9.3	8.7	25
32.1	*	2.8	37.2	190.4	9.7	*	7.9	8.7	10.1	26
120.3	131.7	47.1	114.2	386.0	6.6	3.2	4.5	7.1	9.4	27
18.2	31.6	5.2	15.2	48.7	5.1	3.3	3.9	5.7	7.5	28
8.0	23.5	6.1	*	*	1.2	1.2	1.2	*	*	29
37.9	34.7	9.7	30.3	161.3	8.4	4.6	7.3	8.4	10.2	30
19.6	31.0	9.6	20.3	36.8	4.8	2.8	4.0	5.7	7.6	31
133.9	51.5	86.5	180.8	385.7	6.2	3.6	4.6	6.3	8.0	32
10.5	*	4.6	14.3	44.9	7.2	*	5.5	6.7	8.2	33
6.0	*1.1	3.9	9.0	17.7	4.4	*2.8	3.6	4.5	5.3	34
9.9	9.9	12.7	5.2	6.7	5.2	4.9	3.9	7.1	12.8	35
10.5	5.6	5.7	17.0	27.6	2.5	1.6	2.0	2.3	3.3	36
13.6	18.1	10.0	11.4	23.0	4.7	2.9	4.5	5.8	6.7	37
19.8	*	16.0	31.7	50.8	6.5	*	5.1	6.2	8.6	38
90.3	13.3	80.3	111.4	230.5	5.3	3.9	4.0	5.1	7.2	39
11.8	*	11.9	23.0	13.6	3.1	*	2.5	3.2	4.6	40
10.1	-	*	12.1	62.8	6.3	-	*	7.2	6.0	41
34.3	*	72.6	*	***	2.7	*	2.7	*	***	42
10.9	*	23.0	*	***	2.3	*	2.3	*	***	43
18.8	8.6	13.5	23.4	50.1	8.1	4.0	5.6	8.2	11.8	44
67.4	10.1	54.1	107.8	156.9	6.3	4.8	4.6	5.9	9.2	45
18.8	3.4	11.3	25.2	64.4	7.4	3.8	4.1	6.8	10.4	46
17.1	*	19.5	30.9	16.7	5.9	*	5.4	6.0	8.3	47
9.3	28.2	3.9	5.2	*2.5	5.9	5.9	4.5	8.6	*7.2	48
6.5	29.8	*	*	*	12.4	12.4	*	*	*	49
16.3	9.3	15.2	22.8	22.7	3.3	2.7	2.9	3.5	4.7	50
115.4	65.6	106.0	108.3	248.6	6.8	4.1	5.3	7.1	10.2	51
41.5	20.1	31.0	33.4	131.1	8.4	5.0	6.0	8.2	11.6	52
10.4	*	0.9	5.2	71.4	13.4	*	14.2	12.5	13.5	53
4.0	*	5.3	4.8	3.9	4.8	*	4.6	4.6	6.6	54
8.2	8.7	9.0	5.7	8.4	5.5	2.5	5.9	6.9	8.0	55
9.5	6.3	13.5	5.9	5.7	4.1	3.0	4.0	4.5	6.8	56
175.9	16.6	342.5	30.1	45.9	3.3	6.1	2.9	4.7	9.5	57
154.9	2.0	328.6	*	***	2.9	3.0	2.9	*	***	58

TABLE 7. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, RATE OF DISCHARGES, AND AVERAGE LENGTHS OF STAY, BY SEX, RACE, AND CATEGORY OF FIRST-LISTED DIAGNOSIS: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

	CATEGORY OF FIRST-LISTED DIAGNOSIS AND ICD-9-CM CODE	SEX					
		BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE
		NUMBER OF PATIENTS DISCHARGED IN THOUSANDS			RATE OF PATIENTS DISCHARGED PER 10,000 POPULATION		
01	ALL CONDITIONS	31,146	12,642	18,504	1,275.8	1,069.3	1,469.7
02	INFECTIOUS AND PARASITIC DISEASES.....001-139	693	333	359	28.4	28.2	28.6
03	NEOPLASMS.....140-239	2,098	851	1,247	85.9	72.0	99.1
04	MALIGNANT NEOPLASMS.....140-208,230-234	1,670	772	898	68.4	65.3	71.3
05	MALIGNANT NEOPLASM OF LARGE INTESTINE AND RECTUM.....153-154,197.5	165	77	87	6.7	6.6	6.9
06	MALIGNANT NEOPLASM OF TRACHEA, BRONCHUS, AND LUNG.....162,197.0,197.3	236	136	100	9.7	11.5	7.9
07	MALIGNANT NEOPLASM OF BREAST.....174-175,198.81	177	*	176	7.2	*	14.0
08	BENIGN NEOPLASMS AND NEOPLASMS OF UNCERTAIN BEHAVIOR AND UNSPECIFIED NATURE.....210-229,235-239	428	78	350	17.5	6.6	27.8
09	ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS.....240-279	1,038	414	623	42.5	35.0	49.5
10	DIABETES MELLITUS.....250	454	209	245	18.6	17.7	19.5
11	DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.....280-289	295	140	155	12.1	11.8	12.3
12	MENTAL DISORDERS.....290-319	1,559	765	793	63.8	64.7	63.0
13	PSYCHOSES.....290-299	781	341	440	32.0	28.8	35.0
14	ALCOHOL DEPENDENCE SYNDROME.....303	237	179	58	9.7	15.1	4.6
15	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....320-389	922	430	492	37.8	36.4	39.1
16	DISEASES OF THE CENTRAL NERVOUS SYSTEM.....320-336,340-349	348	169	179	14.3	14.3	14.2
17	CATARACT.....366	92	33	59	3.8	2.8	4.7
18	DISEASES OF THE EAR AND MASTOID PROCESS.....380-389	200	99	102	8.2	8.3	8.1
19	DISEASES OF THE CIRCULATORY SYSTEM.....390-459	5,296	2,722	2,574	216.9	230.2	204.5
20	HEART DISEASE.....391-392.0,393-398,402,404,410-416,420-429	3,641	1,955	1,686	149.2	165.4	133.9
21	ACUTE MYOCARDIAL INFARCTION.....410	716	451	265	29.3	38.1	21.1
22	ATHEROSCLEROTIC HEART DISEASE.....414.0	411	278	134	16.9	23.5	10.6
23	OTHER ISCHEMIC HEART DISEASE.....411-413,414.1-414.9	921	491	431	37.7	41.5	34.2
24	CARDIAC DYSRHYTHMIAS.....427	491	228	263	20.1	19.3	20.9
25	CONGESTIVE HEART FAILURE.....428.0	634	277	357	26.0	23.5	28.3
26	CEREBROVASCULAR DISEASE.....430-438	784	336	448	32.1	28.4	35.6
27	DISEASES OF THE RESPIRATORY SYSTEM.....460-519	2,937	1,464	1,473	120.3	123.8	117.0
28	ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA.....460-466	445	224	221	18.2	18.9	17.6
29	CHRONIC DISEASE OF TONSILS AND ADENOIDS.....474	197	87	110	8.0	7.4	8.7
30	PNEUMONIA, ALL FORMS.....480-486	924	472	452	37.9	40.0	35.9
31	ASTHMA.....493	479	210	270	19.6	17.7	21.4
32	DISEASES OF THE DIGESTIVE SYSTEM.....520-579	3,268	1,515	1,753	133.9	128.1	139.3
33	ULCERS OF THE STOMACH AND SMALL INTESTINE.....531-534	256	137	118	10.5	11.6	9.4
34	GASTRITIS AND DUODENITIS.....535	146	57	88	6.0	4.8	7.0
35	APPENDICITIS.....540-543	242	141	101	9.9	11.9	8.0
36	INGUINAL HERNIA.....550	257	232	25	10.5	19.6	2.0
37	NONINFECTIOUS ENTERITIS AND COLITIS.....555-556,558	333	122	211	13.6	10.3	16.7
38	CHOLELITHIASIS.....574	484	132	352	19.8	11.2	28.0
39	DISEASES OF THE GENITOURINARY SYSTEM.....580-629	2,204	828	1,376	90.3	70.1	109.3
40	CALCULUS OF KIDNEY AND URETER.....592	287	183	104	11.8	15.5	8.3
41	HYPERPLASIA OF PROSTATE.....600	247	247	---	10.1	20.9	---
42	COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM 1/..... 630-676	837	---	837	34.3	---	66.5
43	ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES.....630-639	266	---	266	10.9	---	21.1
44	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE.....680-709	460	234	226	18.8	19.8	17.9
45	DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE.....710-739	1,647	774	872	67.4	65.5	69.3
46	ARTHROPATHIES AND RELATED DISORDERS.....710-719	459	191	267	18.8	16.2	21.2
47	INTERVERTEBRAL DISC DISORDERS.....722	417	247	170	17.1	20.9	13.5
48	CONGENITAL ANOMALIES.....740-759	227	128	98	9.3	10.9	7.8
49	CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....760-779	158	92	66	6.5	7.8	5.3
50	SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS.....780-799	398	200	198	16.3	16.9	15.7
51	INJURY AND POISONING.....800-999	2,817	1,535	1,281	115.4	129.9	101.8
52	FRACTURES, ALL SITES.....800-829	1,014	506	508	41.5	42.8	40.4
53	FRACTURE OF NECK OF FEMUR.....820	254	68	186	10.4	5.7	14.8
54	SPRAINS AND STRAINS OF BACK (INCLUDING NECK).....846-847	97	48	49	4.0	4.1	3.9
55	INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE).....850-854	201	124	78	8.2	10.4	6.2
56	LACERATIONS AND OPEN WOUNDS.....870-904	232	176	56	9.5	14.9	4.5
57	SUPPLEMENTARY CLASSIFICATIONS.....V01-V82	4,295	217	4,078	175.9	18.3	323.9
58	FEMALES WITH DELIVERIES.....V27	3,781	---	3,781	154.9	---	300.3

1/ FIRST-LISTED DIAGNOSIS FOR FEMALES WITH DELIVERIES IS CODED V27, SHOWN UNDER "SUPPLEMENTARY CLASSIFICATIONS."

TABLE 7. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, RATE OF DISCHARGES, AND AVERAGE LENGTHS OF STAY, BY SEX, RACE, AND CATEGORY OF FIRST-LISTED DIAGNOSIS: UNITED STATES, 1988—CON.

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

SEX—CON.			RACE												
BOTH SEXES	MALE	FEMALE	ALL RACES	WHITE	ALL OTHER	NOT STATED	ALL RACES	WHITE	ALL OTHER	NOT STATED	ALL RACES	WHITE	ALL OTHER	NOT STATED	
AVERAGE LENGTH OF STAY IN DAYS			NUMBER OF PATIENTS DISCHARGED IN THOUSANDS				RATE OF PATIENTS DISCHARGED PER 10,000 POPULATION				AVERAGE LENGTH OF STAY IN DAYS				
6.5	7.1	6.2	31,146	23,322	5,008	2,817	1,275.8	1,131.7	1,316.4	...	6.5	6.6	6.7	5.5	01
8.1	8.2	8.0	693	504	121	67	28.4	24.5	31.8	...	8.1	7.7	10.0	7.8	02
8.5	9.0	8.1	2,098	1,612	307	178	85.9	78.2	80.8	...	8.5	8.4	9.3	7.8	03
9.4	9.4	9.4	1,670	1,290	234	147	68.4	62.6	61.4	...	9.4	9.3	10.4	8.5	04
13.1	12.6	13.4	165	133	18	14	6.7	6.4	4.7	...	13.1	13.5	13.2	8.7	05
9.5	9.1	10.0	236	193	26	17	9.7	9.3	6.8	...	9.5	9.6	10.2	7.0	06
5.6	*	5.6	177	130	31	16	7.2	6.3	8.2	...	5.6	5.7	5.4	4.8	07
4.9	5.0	4.9	428	322	74	32	17.5	15.6	19.4	...	4.9	4.8	5.7	4.5	08
7.5	7.5	7.5	1,038	744	214	80	42.5	36.1	56.2	...	7.5	7.4	8.4	6.0	09
8.2	7.8	8.6	454	308	108	38	18.6	15.0	28.3	...	8.2	8.3	8.7	6.7	10
6.2	6.2	6.2	295	186	87	22	12.1	9.0	22.9	...	6.2	6.4	5.9	5.9	11
13.0	12.4	13.7	1,559	1,182	245	132	63.8	57.3	64.4	...	13.0	13.4	12.4	10.7	12
15.1	14.3	15.8	781	606	120	56	32.0	29.4	31.5	...	15.1	15.4	15.0	12.2	13
11.2	11.1	11.4	237	175	36	25	9.7	8.5	9.5	...	11.2	11.3	9.3	12.7	14
5.4	6.0	4.9	922	713	126	84	37.8	34.6	33.1	...	5.4	5.2	7.2	4.6	15
9.4	10.5	8.4	348	264	54	30	14.3	12.8	14.3	...	9.4	9.1	11.9	8.1	16
1.4	1.5	1.3	92	70	11	10	3.8	3.4	3.0	...	1.4	1.3	1.8	1.3	17
2.5	2.3	2.7	200	156	24	20	8.2	7.6	6.3	...	2.5	2.4	3.1	2.3	18
7.5	7.4	7.7	5,296	4,203	662	431	216.9	204.0	174.1	...	7.5	7.6	8.2	6.3	19
7.1	6.9	7.4	3,641	2,933	418	291	149.2	142.3	109.8	...	7.1	7.2	7.6	6.0	20
9.0	8.8	9.3	716	600	62	54	29.3	29.1	16.3	...	9.0	9.1	9.1	7.9	21
6.1	5.7	6.9	411	350	24	37	16.9	17.0	6.4	...	6.1	6.1	6.8	5.2	22
5.3	5.1	5.5	921	738	96	87	37.7	35.8	25.3	...	5.3	5.2	5.9	5.0	23
5.6	5.6	5.7	491	393	61	38	20.1	19.1	15.9	...	5.6	5.7	5.8	4.5	24
8.8	8.6	8.9	634	495	98	41	26.0	24.0	25.8	...	8.8	9.0	8.1	6.9	25
9.7	9.8	9.6	784	614	98	71	32.1	29.8	25.8	...	9.7	9.5	11.9	8.3	26
6.6	6.6	6.7	2,937	2,217	487	233	120.3	107.6	127.9	...	6.6	6.8	6.3	5.4	27
5.1	4.8	5.4	445	350	57	38	18.2	17.0	15.0	...	5.1	5.2	5.2	4.1	28
1.2	1.4	1.1	197	164	16	16	8.0	7.9	4.3	...	1.2	1.2	1.6	1.2	29
8.4	8.3	8.6	924	713	144	67	37.9	34.6	37.7	...	8.4	8.7	7.9	6.8	30
4.8	4.4	5.0	479	295	147	37	19.6	14.3	38.7	...	4.8	5.1	4.2	4.1	31
6.2	5.8	6.5	3,268	2,558	424	285	133.9	124.1	111.6	...	6.2	6.3	6.4	5.2	32
7.2	6.8	7.7	256	201	37	17	10.5	9.8	9.8	...	7.2	7.4	7.3	5.4	33
4.4	4.1	4.6	146	116	20	*9	6.0	5.6	5.4	...	4.4	4.4	5.3	*3.1	34
5.2	5.4	4.9	242	182	32	28	9.9	8.8	8.3	...	5.2	5.3	5.3	4.3	35
2.5	2.5	2.3	257	209	29	18	10.5	10.1	7.7	...	2.5	2.5	2.8	2.1	36
4.7	4.6	4.8	333	263	42	27	13.6	12.8	11.1	...	4.7	4.7	4.6	5.3	37
6.5	7.4	6.2	484	384	47	53	19.8	18.6	12.4	...	6.5	6.6	6.9	6.0	38
5.3	5.5	5.1	2,204	1,702	331	171	90.3	82.6	87.1	...	5.3	5.1	6.2	4.9	39
3.1	2.8	3.6	287	244	22	21	11.8	11.9	5.8	...	3.1	3.0	4.1	2.8	40
6.3	6.3	...	247	202	23	21	10.1	9.8	6.2	...	6.3	5.6	7.3	11.5	41
2.7	...	2.7	837	520	229	87	34.3	25.2	60.3	...	2.7	2.7	3.0	2.4	42
2.3	...	2.3	266	162	75	29	10.9	7.8	19.8	...	2.3	2.2	2.6	2.1	43
8.1	7.9	8.3	460	331	89	40	18.8	16.1	23.4	...	8.1	8.1	8.6	6.6	44
6.3	5.8	6.8	1,647	1,327	163	157	67.4	64.4	42.8	...	6.3	6.4	6.7	5.7	45
7.4	6.1	8.4	459	363	45	50	18.8	17.6	11.9	...	7.4	7.5	8.3	6.2	46
5.9	5.5	6.5	417	350	35	32	17.1	17.0	9.3	...	5.9	5.9	6.3	5.9	47
5.9	5.8	6.2	227	161	44	22	9.3	7.8	11.6	...	5.9	5.6	7.1	6.5	48
12.4	12.1	13.0	158	87	44	27	6.5	4.2	11.5	...	12.4	11.6	14.8	11.4	49
3.3	2.8	3.8	398	291	55	52	16.3	14.1	14.4	...	3.3	3.3	2.9	4.1	50
6.8	6.4	7.3	2,817	2,126	459	232	115.4	103.1	120.6	...	6.8	6.9	7.0	5.7	51
8.4	7.2	9.7	1,014	795	130	89	41.5	38.6	34.3	...	8.4	8.6	8.3	7.0	52
13.4	13.0	13.6	254	218	16	20	10.4	10.6	4.1	...	13.4	13.4	15.8	11.6	53
4.8	4.6	5.0	97	77	11	10	4.0	3.7	2.8	...	4.8	5.1	4.3	3.6	54
5.5	6.4	4.1	201	159	32	11	8.2	7.7	8.4	...	5.5	5.4	6.6	4.0	55
4.1	4.3	3.7	232	146	70	16	9.5	7.1	18.5	...	4.1	4.2	4.3	2.6	56
3.3	6.6	3.1	4,295	2,857	921	517	175.9	138.6	242.0	...	3.3	3.3	3.4	2.7	57
2.9	...	2.9	3,781	2,464	842	474	154.9	119.6	221.3	...	2.9	2.9	3.1	2.6	58

TABLE 8. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, RATE OF DISCHARGES, AND AVERAGE LENGTHS OF STAY, BY GEOGRAPHIC REGION AND CATEGORY OF FIRST-LISTED DIAGNOSIS: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

	CATEGORY OF FIRST-LISTED DIAGNOSIS AND ICD-9-CM CODE	UNITED STATES	NORTH-EAST	MIDWEST	SOUTH	WEST
		NUMBER OF PATIENTS DISCHARGED IN THOUSANDS				
01	ALL CONDITIONS	31,146	7,078	7,832	10,845	5,391
02	INFECTIOUS AND PARASITIC DISEASES 001-139	693	156	171	234	131
03	NEOPLASMS 140-239	2,098	546	457	767	329
04	MALIGNANT NEOPLASMS 140-208,230-234	1,670	424	363	622	261
05	MALIGNANT NEOPLASM OF LARGE INTESTINE AND RECTUM 153-154,197.5	165	46	46	58	14
06	MALIGNANT NEOPLASM OF TRACHEA, BRONCHUS, AND LUNG 162,197.0,197.3	236	57	45	104	30
07	MALIGNANT NEOPLASM OF BREAST 174-175,198.81	177	46	30	69	31
08	BENIGN NEOPLASMS AND NEOPLASMS OF UNCERTAIN BEHAVIOR AND UNSPECIFIED NATURE 210-229,235-239	428	122	93	145	68
09	ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS 240-279	1,038	231	285	370	151
10	DIABETES MELLITUS 250	454	96	120	172	66
11	DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS 280-289	295	69	71	101	53
12	MENTAL DISORDERS 290-319	1,559	332	404	440	382
13	PSYCHOSES 290-299	781	178	179	203	220
14	ALCOHOL DEPENDENCE SYNDROME 303	237	53	69	72	43
15	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS 320-389	922	278	210	291	144
16	DISEASES OF THE CENTRAL NERVOUS SYSTEM 320-336,340-349	348	82	95	113	58
17	CATARACT 366	92	55	*5	19	13
18	DISEASES OF THE EAR AND MASTOID PROCESS 380-389	200	64	42	64	31
19	DISEASES OF THE CIRCULATORY SYSTEM 390-459	5,296	1,240	1,413	1,837	806
20	HEART DISEASE 391-392.0,393-398,402,404,410-416,420-429	3,641	870	948	1,255	569
21	ACUTE MYOCARDIAL INFARCTION 410	716	185	176	240	115
22	ATHEROSCLEROTIC HEART DISEASE 414.0	411	93	129	124	65
23	OTHER ISCHEMIC HEART DISEASE 411-413,414.1-414.9	921	221	216	333	151
24	CARDIAC DYSRHYTHMIAS 427	491	109	126	177	80
25	CONGESTIVE HEART FAILURE 428.0	634	154	175	222	83
26	CEREBROVASCULAR DISEASE 430-438	784	174	224	278	108
27	DISEASES OF THE RESPIRATORY SYSTEM 460-519	2,937	641	800	1,017	478
28	ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA 460-466	445	92	125	153	75
29	CHRONIC DISEASE OF TONSILS AND ADENOIDS 474	197	70	56	48	23
30	PNEUMONIA, ALL FORMS 480-486	924	182	253	337	153
31	ASTHMA 493	479	112	139	142	86
32	DISEASES OF THE DIGESTIVE SYSTEM 520-579	3,268	740	828	1,179	521
33	ULCERS OF THE STOMACH AND SMALL INTESTINE 531-534	256	49	70	95	41
34	GASTRITIS AND DUODENITIS 535	146	30	40	59	17
35	APPENDICITIS 540-543	242	43	64	82	54
36	INGUINAL HERNIA 550	257	82	65	87	23
37	NONINFECTIOUS ENTERITIS AND COLITIS 555-556,558	333	64	98	114	57
38	CHOLELITHIASIS 574	484	103	117	189	75
39	DISEASES OF THE GENITOURINARY SYSTEM 580-629	2,204	477	556	837	334
40	CALCULUS OF KIDNEY AND URETER 592	287	73	72	112	30
41	HYPERPLASIA OF PROSTATE 600	247	57	62	87	41
42	COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM 1/ 630-676	837	187	197	306	147
43	ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES 630-639	266	77	52	88	47
44	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE 680-709	460	123	108	157	72
45	DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE 710-739	1,647	387	409	590	260
46	ARTHROPATHIES AND RELATED DISORDERS 710-719	459	120	112	135	91
47	INTERVERTEBRAL DISC DISORDERS 722	417	88	111	167	51
48	CONGENITAL ANOMALIES 740-759	227	73	49	54	51
49	CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD 760-779	158	24	35	34	66
50	SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS 780-799	398	60	119	143	76
51	INJURY AND POISONING 800-999	2,817	643	702	999	473
52	FRACTURES, ALL SITES 800-829	1,014	234	257	350	173
53	FRACTURE OF NECK OF FEMUR 820	254	61	60	94	39
54	SPRAINS AND STRAINS OF BACK (INCLUDING NECK) 846-847	97	17	27	42	10
55	INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE) 850-854	201	51	50	74	27
56	LACERATIONS AND OPEN WOUNDS 870-904	232	51	52	93	36
57	SUPPLEMENTARY CLASSIFICATIONS V01-V82	4,295	871	1,018	1,489	917
58	FEMALES WITH DELIVERIES V27	3,781	698	878	1,371	834

1/ FIRST-LISTED DIAGNOSIS FOR FEMALES WITH DELIVERIES IS CODED V27, SHOWN UNDER "SUPPLEMENTARY CLASSIFICATIONS."

TABLE 8. NUMBER OF PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, RATE OF DISCHARGES, AND AVERAGE LENGTHS OF STAY, BY GEOGRAPHIC REGION AND CATEGORY OF FIRST-LISTED DIAGNOSIS: UNITED STATES, 1988 --CON.

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

UNITED STATES	NORTH-EAST	MIDWEST	SOUTH	WEST	UNITED STATES	NORTH-EAST	MIDWEST	SOUTH	WEST	
RATE OF PATIENTS DISCHARGED PER 10,000 POPULATION					AVERAGE LENGTH OF STAY IN DAYS					
1,275.8	1,402.3	1,311.1	1,294.3	1,075.6	6.5	7.7	6.4	6.2	5.8	01
28.4	31.0	28.6	28.0	26.2	8.1	10.8	7.5	7.5	6.7	02
85.9	108.2	76.4	91.5	65.6	8.5	9.4	8.6	8.1	7.6	03
68.4	84.0	60.8	74.2	52.1	9.4	10.8	9.5	8.7	8.3	04
6.7	9.2	7.6	7.0	2.8	13.1	16.1	12.6	11.5	11.1	05
9.7	11.2	7.5	12.4	6.0	9.5	11.9	9.1	8.9	7.5	06
7.2	9.2	5.0	8.2	6.3	5.6	4.8	5.2	6.9	4.4	07
17.5	24.1	15.6	17.3	13.5	4.9	4.6	5.1	5.2	4.8	08
42.5	45.8	47.7	44.2	30.1	7.5	10.1	7.3	6.8	5.6	09
18.6	19.0	20.1	20.5	13.1	8.2	10.4	8.8	7.5	5.9	10
12.1	13.7	11.9	12.1	10.6	6.2	7.9	6.0	5.7	5.2	11
63.8	65.8	67.6	52.5	76.2	13.0	13.9	12.7	13.1	12.6	12
32.0	35.3	30.0	24.3	43.9	15.1	17.2	15.0	14.7	13.9	13
9.7	10.4	11.6	8.6	8.5	11.2	8.1	11.9	10.8	14.2	14
37.8	55.0	35.2	34.7	28.7	5.4	4.8	6.3	5.3	5.6	15
14.3	16.3	15.9	13.5	11.5	9.4	10.2	9.9	8.5	9.3	16
3.8	10.8	*0.8	2.3	2.6	1.4	1.3	*1.9	1.6	1.1	17
8.2	12.6	7.0	7.6	6.2	2.5	2.3	2.6	2.6	2.6	18
216.9	245.7	236.5	219.2	160.9	7.5	9.5	7.2	7.1	6.1	19
149.2	172.4	158.6	149.7	113.5	7.1	8.8	6.9	6.7	5.9	20
29.3	36.7	29.4	28.7	23.0	9.0	11.4	8.5	8.2	7.4	21
16.9	18.5	21.7	14.8	12.9	6.1	6.2	6.2	6.2	5.3	22
37.7	43.8	36.2	39.8	30.1	5.3	6.3	5.1	5.2	4.3	23
20.1	21.6	21.1	21.1	15.9	5.6	7.2	5.3	5.3	4.6	24
26.0	30.5	29.3	26.5	16.6	8.8	10.9	8.5	8.2	7.0	25
32.1	34.4	37.5	33.2	21.5	9.7	14.2	8.1	8.9	7.8	26
120.3	127.0	134.0	121.4	95.5	6.6	7.5	6.2	6.8	5.6	27
18.2	18.2	21.0	18.3	14.9	5.1	6.4	5.0	4.9	4.4	28
8.0	13.8	9.4	5.8	4.5	1.2	1.2	1.2	1.3	1.1	29
37.9	36.0	42.4	40.2	30.4	8.4	10.4	7.4	8.7	7.3	30
19.6	22.2	23.3	17.0	17.1	4.8	5.6	4.5	4.9	3.9	31
133.9	146.6	138.6	140.7	104.0	6.2	7.5	5.8	5.9	5.4	32
10.5	9.8	11.8	11.4	8.1	7.2	9.4	6.7	6.8	6.7	33
6.0	6.0	6.6	7.1	3.3	4.4	4.8	5.1	4.0	3.6	34
9.9	8.4	10.7	9.8	10.7	5.2	8.2	4.5	4.6	4.5	35
10.5	16.3	10.9	10.3	4.6	2.5	2.4	2.5	2.7	1.8	36
13.6	12.7	16.4	13.6	11.3	4.7	7.0	4.0	4.5	3.7	37
19.8	20.3	19.6	22.6	15.0	6.5	7.9	6.0	6.4	5.7	38
90.3	94.5	93.1	99.9	66.6	5.3	6.1	5.1	5.1	4.7	39
11.8	14.4	12.1	13.4	6.0	3.1	3.2	2.7	3.2	3.2	40
10.1	11.2	10.4	10.4	8.1	6.3	6.9	5.1	6.1	7.7	41
34.3	37.1	32.9	36.6	29.3	2.7	2.7	2.8	2.8	2.6	42
10.9	15.3	8.8	10.6	9.4	2.3	2.1	2.3	2.4	2.4	43
18.8	24.4	18.0	18.7	14.4	8.1	9.4	7.2	7.9	7.5	44
67.4	76.8	68.4	70.5	51.9	6.3	6.8	6.2	6.2	6.0	45
18.8	23.8	18.7	16.2	18.2	7.4	7.6	7.6	7.8	6.6	46
17.1	17.5	18.6	19.9	10.1	5.9	6.4	6.1	5.7	5.5	47
9.3	14.4	8.3	6.4	10.1	5.9	6.3	6.3	5.3	5.9	48
6.5	4.7	5.9	4.0	13.2	12.4	15.4	9.4	11.3	13.6	49
16.3	11.8	20.0	17.0	15.2	3.3	3.0	3.6	2.8	4.1	50
115.4	127.4	117.5	119.2	94.3	6.8	8.1	6.3	6.6	6.0	51
41.5	46.3	43.0	41.8	34.6	8.4	10.8	7.9	7.9	7.0	52
10.4	12.1	10.0	11.2	7.8	13.4	17.5	12.4	11.9	12.2	53
4.0	3.4	4.6	5.0	2.1	4.8	6.7	4.7	4.2	4.5	54
8.2	10.0	8.3	8.9	5.4	5.5	6.1	5.8	4.6	6.3	55
9.5	10.2	8.7	11.1	7.2	4.1	4.0	3.9	4.8	3.0	56
175.9	172.6	170.4	177.7	182.9	3.3	3.7	3.7	3.2	2.6	57
154.9	138.3	146.9	163.6	166.5	2.9	3.4	3.0	2.9	2.4	58

Table 9. Number of all-listed diagnoses for patients discharged from short-stay hospitals, by age, sex, race, geographic region, and diagnostic category: United States, 1988

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants. Diagnostic groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Diagnostic category and ICD–9–CM code	All diagnoses	Age				Sex		Race			Region			
		Under 15 years	15–44 years	45–64 years	65 years and over	Male	Female	White	All other	Not stated	North-east	Midwest	South	West
	Number of all-listed diagnoses in thousands													
All conditions	100,650	5,781	30,517	21,227	43,125	41,249	59,401	76,704	15,837	8,109	24,019	25,723	34,463	16,445
Infectious and parasitic diseases .001–139	2,744	436	754	449	1,105	1,224	1,520	2,003	516	225	631	710	939	465
Neoplasms .140–239	4,458	96	697	1,442	2,223	1,920	2,539	3,505	613	340	1,231	1,084	1,494	650
Malignant neoplasms .140–208, 230,234	3,547	72	343	1,151	1,982	1,709	1,838	2,816	457	274	980	875	1,179	513
Malignant neoplasm of large intestine and rectum .153–154, 197.5	245	*	*9	58	179	114	131	198	30	17	68	70	83	23
Malignant neoplasm of trachea, bronchus, and lung .162, 197.0, 197.3	527	*	26	205	292	308	219	429	57	41	141	128	188	70
Malignant neoplasm of breast .174–175, 198.81	251	*	28	106	118	*	250	191	41	19	67	52	92	41
Benign neoplasms and neoplasms of uncertain behavior and unspecified nature .210–229, 235–239	911	24	353	292	242	210	701	689	156	66	251	209	315	137
Endocrine, nutritional and metabolic diseases and immunity disorders .240–279	7,742	351	1,154	2,065	4,171	3,126	4,617	5,885	1,301	556	1,867	2,100	2,684	1,091
Diabetes mellitus .250	2,918	35	377	913	1,593	1,281	1,637	2,169	545	204	728	766	1,039	385
Diseases of the blood and blood-forming organs .280–289	2,465	143	602	498	1,222	1,009	1,456	1,734	540	191	633	602	848	382
Mental disorders .290–319	4,816	135	2,409	949	1,322	2,305	2,511	3,655	809	352	1,105	1,248	1,429	1,033
Psychoses .290–299	1,527	26	592	279	630	656	872	1,210	217	100	370	373	438	346
Alcohol dependence syndrome .303	674	*	383	210	79	485	189	456	162	56	160	184	195	136
Diseases of the nervous system and sense organs .320–389	3,441	560	652	699	1,531	1,629	1,813	2,659	515	268	914	914	1,070	544
Diseases of the central nervous system .320–336, 340–349	1,619	143	351	312	813	765	853	1,255	244	120	404	445	515	254
Cataract .366	153	*	*	26	120	56	97	118	22	12	71	21	42	18
Diseases of the ear and mastoid process .380–389	604	340	87	67	110	314	290	455	92	57	157	157	173	117
Diseases of the circulatory system .390–459	20,323	105	1,288	5,279	13,651	10,062	10,262	16,347	2,536	1,440	5,145	5,366	6,883	2,929
Heart disease .391–392.0, 393–398, 402, 404, 410–416, 420–429	13,120	68	663	3,331	9,059	6,774	6,346	10,754	1,432	934	3,368	3,412	4,406	1,934
Acute myocardial infarction .410	819	*	50	267	501	508	311	683	71	64	222	200	267	131
Artherosclerotic heart disease .414.0	2,200	*	65	642	1,490	1,221	978	1,878	153	168	577	615	665	343
Other ischemic heart disease .411–413, 414.1–414.9	2,669	*	119	928	1,620	1,477	1,192	2,212	252	205	728	662	880	400
Cardiac dysrhythmias .427	2,753	24	148	554	2,027	1,411	1,341	2,255	297	202	668	715	928	442
Congestive heart failure .428.0	1,782	13	46	295	1,428	789	993	1,434	234	115	445	502	601	234
Cerebrovascular disease .430–438	1,654	*8	56	328	1,262	732	922	1,306	216	132	370	456	614	215
Diseases of the respiratory system .460–519	7,795	1,104	1,182	1,632	3,877	4,003	3,792	6,159	1,083	554	1,839	2,090	2,660	1,206
Acute respiratory infections, except influenza .460–466	863	274	156	148	286	410	454	668	130	65	181	238	308	136
Chronic diseases of tonsils and adenoids .474	261	172	86	*	*	119	142	221	20	20	88	73	71	29
Pneumonia, all forms .480–486	1,447	241	169	238	799	744	703	1,110	229	108	299	401	513	233
Asthma .493	828	224	193	180	230	343	485	546	218	64	207	239	232	149
Diseases of the digestive system .520–579	7,474	442	1,865	1,883	3,284	3,356	4,118	5,892	998	584	1,788	1,900	2,657	1,129
Ulcers of the stomach and small intestine .531–534	510	*	86	134	288	265	245	401	73	36	117	137	183	74
Gastritis and duodenitis .535	477	13	122	134	209	208	269	373	74	30	107	125	193	53
Appendicitis .540–543	294	62	171	34	27	163	132	223	39	32	55	79	98	62
Inguinal hernia .550	328	43	74	92	120	294	34	266	38	23	101	84	110	34
Noninfectious enteritis and colitis .555–556, 558	587	145	185	95	162	226	362	460	81	46	133	164	198	93
Cholelithiasis .574	772	*	240	217	312	233	539	620	80	71	175	181	298	117
Diseases of the genitourinary system .580–629	6,917	151	2,392	1,541	2,833	2,395	4,523	5,335	1,099	483	1,601	1,701	2,588	1,027
Calculus of kidney and ureter .592	368	*	162	128	74	228	140	313	31	24	97	86	145	40
Hyperplasia of prostate .600	416	-	*	88	327	416	...	341	40	35	106	107	139	64

See footnote at end of table.

Table 9. Number of all-listed diagnoses for patients discharged from short-stay hospitals, by age, sex, race, geographic region, and diagnostic category: United States, 1988—Con.

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants. Diagnostic groupings and code number inclusions are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)]

Diagnostic category and ICD–9–CM code	All diagnoses	Age				Sex		Race			Region			
		Under 15 years	15–44 years	45–64 years	65 years and over	Male	Female	White	All other	Not stated	North-east	Midwest	South	West
	Number of all-listed diagnoses in thousands													
Complications of pregnancy, childbirth, and the puerperium[1] .630–676	7,147	27	7,117	*	...	...	7,147	4,555	1,737	856	1,429	1,654	2,551	1,513
Abortions and ectopic and molar pregnancies .630–639	305	*	304	*	...	...	305	185	88	32	92	58	101	55
Diseases of the skin and subcutaneous tissue .680–709	1,278	105	316	306	550	612	665	940	237	101	361	311	406	200
Diseases of the musculoskeletal system and connective tissue .710–739	4,104	89	1,076	1,080	1,859	1,661	2,443	3,334	424	346	975	1,066	1,440	623
Arthropathies and related disorders .710–719	1,565	29	283	353	899	562	1,003	1,248	180	136	383	421	515	245
Intervertebral disc disorders .722	543	*	261	181	101	308	235	462	43	38	118	145	212	68
Congenital anomalies .740–759	635	363	135	82	56	338	297	456	116	63	208	147	147	133
Certain conditions originating in the perinatal period .760–779	428	419	*	*7	*	256	172	228	129	71	70	80	105	173
Symptoms, signs, and ill-defined conditions .780–799	5,037	437	1,253	1,250	2,096	2,358	2,679	3,837	781	418	1,098	1,378	1,756	805
Injury and poisoning .800–999	6,066	588	2,582	1,105	1,791	3,344	2,722	4,628	963	475	1,456	1,485	2,105	1,021
Fractures, all sites .800–829	1,516	135	580	233	568	779	737	1,195	200	122	359	381	528	247
Fracture of neck of femur .820	280	*	13	26	237	78	202	240	18	21	72	65	101	43
Sprains and strains of back (including neck) .846–847	175	*	106	43	23	86	89	138	21	15	40	42	75	17
Intracranial injuries (excluding those with skull fracture .850–854	290	58	152	38	41	179	111	229	46	15	79	69	102	39
Lacerations and open wounds .870–904	642	76	411	75	80	451	192	440	159	43	147	151	239	106
Supplementary classifications .V01–V82	7,777	230	5,040	955	1,553	1,653	6,125	5,551	1,441	786	1,666	1,888	2,703	1,519
Females with deliveries .V27	3,781	10	3,768	*	...	...	3,781	2,464	842	474	698	878	1,371	834

[1]First-listed diagnosis for females with deliveries is coded V27, shown under "supplementary classification."

TABLE 10. NUMBER OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY AGE AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	ALL AGES	UNDER 15 YEARS	15–44 YEARS	45–64 YEARS	65 YEARS AND OVER
	NUMBER OF ALL-LISTED PROCEDURES IN THOUSANDS				
ALL PROCEDURES	39,192	2,050	15,520	8,939	12,682
OPERATIONS ON THE NERVOUS SYSTEM 01–05	896	216	279	200	201
SPINAL TAP 03.31	353	154	79	48	72
OPERATIONS ON THE ENDOCRINE SYSTEM 06–07	111	*	43	39	26
OPERATIONS ON THE EYE 08–16	547	33	80	126	308
EXTRACTION OF LENS 13.1–13.6	113	*	*	22	85
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS) 13.7	106	*	*	18	87
OPERATIONS ON THE EAR 18–20	198	107	46	25	19
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX 21–29	820	220	372	135	94
RHINOPLASTY AND REPAIR OF NOSE 21.8	97	*6	68	18	*6
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY 28.2–28.3	213	135	75	*	*
OPERATIONS ON THE RESPIRATORY SYSTEM 30–34	991	69	190	291	441
BRONCHOSCOPY 33.21–33.23	145	22	28	38	57
OPERATIONS ON THE CARDIOVASCULAR SYSTEM 35–39	3,626	169	422	1,358	1,676
REMOVAL OF CORONARY ARTERY OBSTRUCTION 36.0	227	–	18	117	92
DIRECT HEART REVASCULARIZATION 36.1	353	*	15	167	170
CARDIAC CATHETERIZATION 37.21–37.23	930	20	93	432	385
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR 37.7–37.8	291	*	*8	58	223
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM 40–41	392	24	91	106	172
OPERATIONS ON THE DIGESTIVE SYSTEM 42–54	5,257	233	1,544	1,335	2,145
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE) 42.23,44.13	127	*8	23	36	60
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE 43.5–43.8,45.6–45.8	292	*7	36	81	169
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE) 45.24	202	*	26	50	124
APPENDECTOMY, EXCLUDING INCIDENTAL 47.0	273	58	162	29	24
HEMORRHOIDECTOMY 49.43–49.46	74	*	28	31	15
CHOLECYSTECTOMY 51.2	497	*	191	150	155
REPAIR OF INGUINAL HERNIA 53.0–53.1	290	36	70	86	98
DIVISION OF PERITONEAL ADHESIONS 54.5	296	*	146	66	79
OPERATIONS ON THE URINARY SYSTEM 55–59	1,706	48	398	426	833
ENDOSCOPIES THROUGH NATURAL ORIFICE 55.21–55.22,56.31,57.32,58.22	588	*9	98	139	343
OPERATIONS ON THE MALE GENITAL ORGANS 60–64	633	50	54	128	400
PROSTATECTOMY 60.2–60.6	358	...	*	67	290
OPERATIONS ON THE FEMALE GENITAL ORGANS 65–71	2,501	10	1,773	516	202
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY 65.3–65.6	451	*	246	165	39
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES 66.2–66.3	406	*	404	*	...
HYSTERECTOMY 68.3–68.7	578	–	340	188	50
DILATION AND CURETTAGE OF UTERUS 69.0	279	*	222	40	16
REPAIR OF CYSTOCELE AND RECTOCELE 70.5	136	–	34	54	49
OBSTETRICAL PROCEDURES 72–75	6,042	16	6,024	*	–
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION 72.1,72.21,72.31,72.71,73.6	1,680	*6	1,674	*	–
CESAREAN SECTION 74.0–74.2,74.4,74.99	933	*	931	*	–
REPAIR OF CURRENT OBSTETRIC LACERATION 75.5–75.6	690	*	688	*	–
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM 76–84	3,143	203	1,325	747	868
OPEN REDUCTION OF FRACTURE, EXCEPT JAW 76.79,79.2–79.3,79.5–79.6	456	32	185	82	157
OTHER REDUCTION OF FRACTURE, EXCEPT JAW 76.70,76.78,79.0–79.1,79.4	183	44	62	24	53
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION 80.5,81.0	340	*	178	110	48
ARTHROPLASTY AND REPLACEMENT OF KNEE 81.41–81.47	204	*	78	34	90
ARTHROPLASTY AND REPLACEMENT OF HIP 81.5,81.6	206	*	10	38	158
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA 82–83.1,83.3–83.9	305	36	140	81	48
OPERATIONS ON THE INTEGUMENTARY SYSTEM 85–86	1,475	105	537	393	440
MASTECTOMY 85.4	124	*	14	51	58
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE 86.2–86.4	531	37	194	124	177
SKIN GRAFT (EXCEPT LIP OR MOUTH) 86.6–86.7	148	21	51	31	44
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES 87–99	10,854	544	2,342	3,112	4,856
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN) 87.03,87.41,87.71,88.01,88.38	1,613	80	374	388	771
PYELOGRAM 87.73–87.75	324	*9	122	90	102
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL 88.4–88.5	1,624	20	189	734	680
DIAGNOSTIC ULTRASOUND 88.7	1,562	97	476	348	641
CIRCULATORY MONITORING 89.6	846	32	127	217	469
RADIOISOTOPE SCAN 92.0–92.1	704	17	124	215	348

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

TABLE 11. RATE OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY AGE AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	ALL AGES	UNDER 15 YEARS	15–44 YEARS	45–64 YEARS	65 YEARS AND OVER
	RATE OF ALL-LISTED PROCEDURES PER 100,000 POPULATION				
ALL PROCEDURES	16,054.0	3,860.0	13,532.0	19,453.4	41,761.8
OPERATIONS ON THE NERVOUS SYSTEM 01–05	367.0	407.4	243.0	435.6	661.2
SPINAL TAP 03.31	144.8	290.8	69.2	104.0	236.8
OPERATIONS ON THE ENDOCRINE SYSTEM 06–07	45.3	*	37.4	85.9	84.2
OPERATIONS ON THE EYE 08–16	224.0	61.3	70.0	274.0	1,014.4
EXTRACTION OF LENS 13.1–13.6	46.4	*	*	47.4	279.3
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS) 13.7	43.5	*	*	40.0	285.9
OPERATIONS ON THE EAR 18–20	80.9	201.2	40.4	54.8	63.2
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX 21–29	336.0	413.5	324.5	293.5	308.4
RHINOPLASTY AND REPAIR OF NOSE 21.8	39.7	*11.2	58.9	38.1	*19.0
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY 28.2–28.3	87.3	254.4	65.8	*	*
OPERATIONS ON THE RESPIRATORY SYSTEM 30–34	406.0	130.3	165.5	632.5	1,453.8
BRONCHOSCOPY 33.21–33.23	59.3	41.2	24.2	81.7	189.2
OPERATIONS ON THE CARDIOVASCULAR SYSTEM 35–39	1,485.2	319.0	367.9	2,956.0	5,519.6
REMOVAL OF CORONARY ARTERY OBSTRUCTION 36.0	92.8	–	15.4	255.0	302.0
DIRECT HEART REVASCULARIZATION 36.1	144.6	*	13.2	362.7	558.6
CARDIAC CATHETERIZATION 37.21–37.23	380.9	37.0	81.5	940.5	1,266.3
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR 37.7–37.8	119.2	*	*7.4	127.2	733.1
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM 40–41	160.7	45.5	79.1	229.6	565.9
OPERATIONS ON THE DIGESTIVE SYSTEM 42–54	2,153.5	437.8	1,346.3	2,905.5	7,065.1
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE) 42.23,44.13	52.2	*15.8	20.3	78.1	197.1
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE 43.5–43.8,45.6–45.8	119.7	*12.4	31.0	176.6	555.8
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE) 45.24	82.7	*	23.1	109.1	409.0
APPENDECTOMY, EXCLUDING INCIDENTAL 47.0	111.8	109.1	141.4	63.3	78.2
HEMORRHOIDECTOMY 49.43–49.46	30.5	*	24.4	68.2	49.7
CHOLECYSTECTOMY 51.2	203.6	*	166.2	326.5	509.5
REPAIR OF INGUINAL HERNIA 53.0–53.1	118.7	68.2	61.3	186.5	321.3
DIVISION OF PERITONEAL ADHESIONS 54.5	121.2	*	127.6	144.2	261.6
OPERATIONS ON THE URINARY SYSTEM 55–59	698.7	91.1	346.9	928.0	2,743.3
ENDOSCOPIES THROUGH NATURAL ORIFICE 55.21–55.22,56.31,57.32,58.22	240.8	*16.2	85.2	301.8	1,129.4
OPERATIONS ON THE MALE GENITAL ORGANS 60–64	259.2	94.9	47.4	278.5	1,316.9
PROSTATECTOMY 60.2–60.6	146.5	***	*	146.7	953.9
OPERATIONS ON THE FEMALE GENITAL ORGANS 65–71	1,024.6	18.5	1,546.2	1,122.6	665.8
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY 65.3–65.6	184.7	*	214.2	359.3	128.3
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES 66.2–66.3	166.3	*	352.1	*	***
HYSTERECTOMY 68.3–68.7	236.9	–	296.4	410.0	164.7
DILATION AND CURETTAGE OF UTERUS 69.0	114.4	*	193.2	87.6	53.9
REPAIR OF CYSTOCELE AND RECTOCELE 70.5	55.7	–	29.3	116.8	160.1
OBSTETRICAL PROCEDURES 72–75	2,474.9	29.5	5,252.3	*	***
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION 72.1,72.21,72.31,72.71,73.6	688.3	*10.4	1,459.5	*	***
CESAREAN SECTION 74.0–74.2,74.4,74.99	382.3	*	811.7	*	***
REPAIR OF CURRENT OBSTETRIC LACERATION 75.5–75.6	282.8	*	599.6	*	***
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM 76–84	1,287.6	382.9	1,155.0	1,625.8	2,858.8
OPEN REDUCTION OF FRACTURE, EXCEPT JAW 76.79,79.2–79.3,79.5–79.6	186.7	60.0	161.0	177.9	518.6
OTHER REDUCTION OF FRACTURE, EXCEPT JAW 76.70,76.78,79.0–79.1,79.4	74.9	83.0	54.3	52.2	173.3
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION 80.5,81.0	139.1	*	155.3	239.5	156.7
ARTHROPLASTY AND REPLACEMENT OF KNEE 81.41–81.47	83.5	*	68.2	74.0	295.5
ARTHROPLASTY AND REPLACEMENT OF HIP 81.5,81.6	84.6	*	8.6	82.9	519.2
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA 82–83.1,83.3–83.9	124.9	68.5	121.8	176.2	157.3
OPERATIONS ON THE INTEGUMENTARY SYSTEM 85–86	604.1	197.1	468.0	854.9	1,450.2
MASTECTOMY 85.4	50.8	*	12.3	112.0	192.1
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE 86.2–86.4	217.6	69.5	168.8	269.5	582.4
SKIN GRAFT (EXCEPT LIP OR MOUTH) 86.6–86.7	60.5	38.8	44.8	68.1	146.4
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES 87–99	4,446.2	1,024.8	2,042.0	6,772.0	15,991.1
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN) 87.03,87.41,87.71,88.01,88.38	660.6	151.4	325.7	843.8	2,538.6
PYELOGRAM 87.73–87.75	132.7	*17.5	106.8	195.8	336.6
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL 88.4–88.5	665.2	38.4	165.0	1,597.9	2,238.8
DIAGNOSTIC ULTRASOUND 88.7	639.8	181.8	415.0	758.3	2,110.3
CIRCULATORY MONITORING 89.6	346.3	61.0	110.7	471.7	1,545.8
RADIOISOTOPE SCAN 92.0–92.1	288.5	32.6	108.1	468.6	1,144.6

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

TABLE 12. NUMBER OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY SEX AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	BOTH SEXES	MALE	FEMALE
	NUMBER OF ALL-LISTED PROCEDURES IN THOUSANDS		
ALL PROCEDURES	39,192	15,735	23,457
OPERATIONS ON THE NERVOUS SYSTEM 01-05	896	467	429
SPINAL TAP 03.31	353	183	171
OPERATIONS ON THE ENDOCRINE SYSTEM 06-07	111	31	79
OPERATIONS ON THE EYE 08-16	547	243	304
EXTRACTION OF LENS 13.1-13.6	113	40	73
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS) 13.7	106	35	71
OPERATIONS ON THE EAR 18-20	198	109	88
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX 21-29	820	436	385
RHINOPLASTY AND REPAIR OF NOSE 21.8	97	58	39
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY 28.2-28.3	213	94	119
OPERATIONS ON THE RESPIRATORY SYSTEM 30-34	991	561	430
BRONCHOSCOPY 33.21-33.23	145	84	61
OPERATIONS ON THE CARDIOVASCULAR SYSTEM 35-39	3,626	2,220	1,406
REMOVAL OF CORONARY ARTERY OBSTRUCTION 36.0	227	160	67
DIRECT HEART REVASCULARIZATION 36.1	353	270	83
CARDIAC CATHETERIZATION 37.21-37.23	930	598	332
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR 37.7-37.8	291	165	125
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM 40-41	392	192	200
OPERATIONS ON THE DIGESTIVE SYSTEM 42-54	5,257	2,277	2,981
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE) 42.23,44.13	127	68	59
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE 43.5-43.8,45.6-45.8	292	123	170
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE) 45.24	202	83	119
APPENDECTOMY, EXCLUDING INCIDENTAL 47.0	273	147	126
HEMORRHOIDECTOMY 49.43-49.46	74	42	32
CHOLECYSTECTOMY 51.2	497	132	365
REPAIR OF INGUINAL HERNIA 53.0-53.1	290	261	29
DIVISION OF PERITONEAL ADHESIONS 54.5	296	51	245
OPERATIONS ON THE URINARY SYSTEM 55-59	1,706	1,018	688
ENDOSCOPIES THROUGH NATURAL ORIFICE 55.21-55.22,56.31,57.32,58.22	588	424	164
OPERATIONS ON THE MALE GENITAL ORGANS 60-64	633	633	---
PROSTATECTOMY 60.2-60.6	358	358	---
OPERATIONS ON THE FEMALE GENITAL ORGANS 65-71	2,501	---	2,501
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY 65.3-65.6	451	---	451
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES 66.2-66.3	406	---	406
HYSTERECTOMY 68.3-68.7	578	---	578
DILATION AND CURETTAGE OF UTERUS 69.0	279	---	279
REPAIR OF CYSTOCELE AND RECTOCELE 70.5	136	---	136
OBSTETRICAL PROCEDURES 72-75	6,042	---	6,042
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION 72.1,72.21,72.31,72.71,73.6	1,680	---	1,680
CESAREAN SECTION 74.0-74.2,74.4,74.99	933	---	933
REPAIR OF CURRENT OBSTETRIC LACERATION 75.5-75.6	690	---	690
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM 76-84	3,143	1,648	1,496
OPEN REDUCTION OF FRACTURE, EXCEPT JAW 76.79,79.2-79.3,79.5-79.6	456	235	221
OTHER REDUCTION OF FRACTURE, EXCEPT JAW 76.70,76.78,79.0-79.1,79.4	183	101	82
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION 80.5,81.0	340	206	134
ARTHROPLASTY AND REPLACEMENT OF KNEE 81.41-81.47	204	95	109
ARTHROPLASTY AND REPLACEMENT OF HIP 81.5,81.6	206	66	140
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA 82-83.1,83.3-83.9	305	181	124
OPERATIONS ON THE INTEGUMENTARY SYSTEM 85-86	1,475	639	836
MASTECTOMY 85.4	124	*	123
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE 86.2-86.4	531	291	241
SKIN GRAFT (EXCEPT LIP OR MOUTH) 86.6-86.7	148	91	56
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES 87-99	10,854	5,262	5,593
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN) 87.03,87.41,87.71,88.01,88.38	1,613	775	838
PYELOGRAM 87.73-87.75	324	191	133
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL 88.4-88.5	1,624	995	629
DIAGNOSTIC ULTRASOUND 88.7	1,562	599	963
CIRCULATORY MONITORING 89.6	846	430	415
RADIOISOTOPE SCAN 92.0-92.1	704	315	390

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

TABLE 13. RATE OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY SEX AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	BOTH SEXES	MALE	FEMALE
	RATE OF ALL-LISTED PROCEDURES PER 100,000 POPULATION		
ALL PROCEDURES	16,054.0	13,309.3	18,631.2
OPERATIONS ON THE NERVOUS SYSTEM 01-05	367.0	395.4	340.4
SPINAL TAP 03.31	144.8	154.6	135.6
OPERATIONS ON THE ENDOCRINE SYSTEM 06-07	45.3	26.5	63.0
OPERATIONS ON THE EYE 08-16	224.0	205.4	241.4
EXTRACTION OF LENS 13.1-13.6	46.4	34.0	58.0
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS) 13.7	43.5	29.7	56.6
OPERATIONS ON THE EAR 18-20	80.9	92.3	70.2
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX 21-29	336.0	368.4	305.7
RHINOPLASTY AND REPAIR OF NOSE 21.8	39.7	49.1	30.8
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY 28.2-28.3	87.3	79.3	94.8
OPERATIONS ON THE RESPIRATORY SYSTEM 30-34	406.0	474.5	341.6
BRONCHOSCOPY 33.21-33.23	59.3	70.8	48.4
OPERATIONS ON THE CARDIOVASCULAR SYSTEM 35-39	1,485.2	1,877.8	1,116.6
REMOVAL OF CORONARY ARTERY OBSTRUCTION 36.0	92.8	135.3	52.9
DIRECT HEART REVASCULARIZATION 36.1	144.6	228.1	66.2
CARDIAC CATHETERIZATION 37.21-37.23	380.9	505.6	263.8
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR 37.7-37.8	119.2	139.9	99.6
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM 40-41	160.7	162.7	158.8
OPERATIONS ON THE DIGESTIVE SYSTEM 42-54	2,153.5	1,925.6	2,367.5
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE) 42.23,44.13	52.2	57.7	47.1
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE 43.5-43.8,45.6-45.8	119.7	103.7	134.7
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE) 45.24	82.7	69.9	94.7
APPENDECTOMY, EXCLUDING INCIDENTAL 47.0	111.8	124.0	100.4
HEMORRHOIDECTOMY 49.43-49.46	30.5	35.7	25.6
CHOLECYSTECTOMY 51.2	203.6	111.4	290.1
REPAIR OF INGUINAL HERNIA 53.0-53.1	118.7	220.4	23.2
DIVISION OF PERITONEAL ADHESIONS 54.5	121.2	43.1	194.5
OPERATIONS ON THE URINARY SYSTEM 55-59	698.7	861.0	546.3
ENDOSCOPIES THROUGH NATURAL ORIFICE 55.21-55.22,56.31,57.32,58.22	240.8	358.5	130.4
OPERATIONS ON THE MALE GENITAL ORGANS 60-64	259.2	535.2	...
PROSTATECTOMY 60.2-60.6	146.5	302.4	...
OPERATIONS ON THE FEMALE GENITAL ORGANS 65-71	1,024.6	...	1,986.7
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY 65.3-65.6	184.7	...	358.1
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES 66.2-66.3	166.3	...	322.5
HYSTERECTOMY 68.3-68.7	236.9	...	459.4
DILATION AND CURETTAGE OF UTERUS 69.0	114.4	...	221.8
REPAIR OF CYSTOCELE AND RECTOCELE 70.5	55.7	...	108.0
OBSTETRICAL PROCEDURES 72-75	2,474.9	...	4,798.8
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION 72.1,72.21,72.31,72.71,73.6	688.3	...	1,334.7
CESAREAN SECTION 74.0-74.2,74.4,74.99	382.3	...	741.4
REPAIR OF CURRENT OBSTETRIC LACERATION 75.5-75.6	282.8	...	548.3
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM 76-84	1,287.6	1,393.7	1,187.9
OPEN REDUCTION OF FRACTURE, EXCEPT JAW 76.79,79.2-79.3,79.5-79.6	186.7	199.0	175.2
OTHER REDUCTION OF FRACTURE, EXCEPT JAW 76.70,76.78,79.0-79.1,79.4	74.9	85.8	64.8
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION 80.5,81.0	139.1	173.8	106.5
ARTHROPLASTY AND REPLACEMENT OF KNEE 81.41-81.47	83.5	80.3	86.6
ARTHROPLASTY AND REPLACEMENT OF HIP 81.5,81.6	84.6	55.9	111.5
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA 82-83.1,83.3-83.9	124.9	153.1	98.3
OPERATIONS ON THE INTEGUMENTARY SYSTEM 85-86	604.1	540.2	664.1
MASTECTOMY 85.4	50.8	*	97.3
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE 86.2-86.4	217.6	245.8	191.1
SKIN GRAFT (EXCEPT LIP OR MOUTH) 86.6-86.7	60.5	77.3	44.8
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES 87-99	4,446.2	4,450.6	4,442.1
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN) 87.03,87.41,87.71,88.01,88.38	660.6	655.5	665.3
PYELOGRAM 87.73-87.75	132.7	161.6	105.5
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL 88.4-88.5	665.2	841.3	499.7
DIAGNOSTIC ULTRASOUND 88.7	639.8	506.5	764.9
CIRCULATORY MONITORING 89.6	346.3	363.8	329.9
RADIOISOTOPE SCAN 92.0-92.1	288.5	266.2	309.4

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

TABLE 14. NUMBER OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY RACE AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	ALL RACES	WHITE	ALL OTHER	NOT STATED
	NUMBER OF ALL-LISTED PROCEDURES IN THOUSANDS			
ALL PROCEDURES	39,192	29,572	6,106	3,514
OPERATIONS ON THE NERVOUS SYSTEM..01-05	896	645	176	75
SPINAL TAP..03.31	353	228	96	30
OPERATIONS ON THE ENDOCRINE SYSTEM..06-07	111	85	22	*
OPERATIONS ON THE EYE..08-16	547	426	74	46
EXTRACTION OF LENS..13.1-13.6	113	87	14	12
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS)..13.7	106	85	13	*8
OPERATIONS ON THE EAR..18-20	198	160	18	20
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX..21-29	820	670	77	73
RHINOPLASTY AND REPAIR OF NOSE..21.8	97	81	*6	*9
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY..28.2-28.3	213	178	18	17
OPERATIONS ON THE RESPIRATORY SYSTEM..30-34	991	759	160	72
BRONCHOSCOPY..33.21-33.23	145	109	24	11
OPERATIONS ON THE CARDIOVASCULAR SYSTEM..35-39	3,626	2,833	467	325
REMOVAL OF CORONARY ARTERY OBSTRUCTION..36.0	227	176	13	38
DIRECT HEART REVASCULARIZATION..36.1	353	302	21	30
CARDIAC CATHETERIZATION..37.21-37.23	930	751	75	104
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR..37.7-37.8	291	248	32	11
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM..40-41	392	303	52	37
OPERATIONS ON THE DIGESTIVE SYSTEM..42-54	5,257	4,087	741	429
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE)..42.23,44.13	127	100	20	*7
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE..43.5-43.8,45.6-45.8	292	235	38	20
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE)..45.24	202	161	27	15
APPENDECTOMY, EXCLUDING INCIDENTAL..47.0	273	207	35	32
HEMORRHOIDECTOMY..49.43-49.46	74	61	*8	*5
CHOLECYSTECTOMY..51.2	497	393	52	52
REPAIR OF INGUINAL HERNIA..53.0-53.1	290	235	32	22
DIVISION OF PERITONEAL ADHESIONS..54.5	296	233	44	19
OPERATIONS ON THE URINARY SYSTEM..55-59	1,706	1,371	191	144
ENDOSCOPIES THROUGH NATURAL ORIFICE..55.21-55.22,56.31,57.32,58.22	588	482	61	45
OPERATIONS ON THE MALE GENITAL ORGANS..60-64	633	501	77	55
PROSTATECTOMY..60.2-60.6	358	290	34	34
OPERATIONS ON THE FEMALE GENITAL ORGANS..65-71	2,501	1,824	453	225
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY..65.3-65.6	451	349	62	39
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES..66.2-66.3	406	255	111	40
HYSTERECTOMY..68.3-68.7	578	441	89	48
DILATION AND CURETTAGE OF UTERUS..69.0	279	189	59	31
REPAIR OF CYSTOCELE AND RECTOCELE..70.5	136	114	10	12
OBSTETRICAL PROCEDURES..72-75	6,042	4,047	1,228	766
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION..72.1,72.21,72.31,72.71,73.6	1,680	1,190	300	191
CESAREAN SECTION..74.0-74.2,74.4,74.99	933	631	198	104
REPAIR OF CURRENT OBSTETRIC LACERATION..75.5-75.6	690	442	147	101
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM..76-84	3,143	2,455	389	300
OPEN REDUCTION OF FRACTURE, EXCEPT JAW..76.79,79.2-79.3,79.5-79.6	456	357	58	41
OTHER REDUCTION OF FRACTURE, EXCEPT JAW..76.70,76.78,79.0-79.1,79.4	183	144	25	14
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION..80.5,81.0	340	278	31	30
ARTHROPLASTY AND REPLACEMENT OF KNEE..81.41-81.47	204	171	21	13
ARTHROPLASTY AND REPLACEMENT OF HIP..81.5,81.6	206	175	*7	24
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA..82-83.1,83.3-83.9	305	223	49	33
OPERATIONS ON THE INTEGUMENTARY SYSTEM..85-86	1,475	1,097	247	131
MASTECTOMY..85.4	124	95	14	14
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE..86.2-86.4	531	406	91	34
SKIN GRAFT (EXCEPT LIP OR MOUTH)..86.6-86.7	148	107	29	11
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES..87-99	10,854	8,308	1,733	813
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN)..87.03,87.41,87.71,88.01,88.38	1,613	1,244	262	106
PYELOGRAM..87.73-87.75	324	259	43	22
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL..88.4-88.5	1,624	1,301	162	161
DIAGNOSTIC ULTRASOUND..88.7	1,562	1,066	354	142
CIRCULATORY MONITORING..89.6	846	651	152	42
RADIOISOTOPE SCAN..92.0-92.1	704	550	101	54

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

TABLE 15. NUMBER OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY GEOGRAPHIC REGION AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	UNITED STATES	NORTH-EAST	MIDWEST	SOUTH	WEST
	NUMBER OF ALL-LISTED PROCEDURES IN THOUSANDS				
ALL PROCEDURES	39,192	10,012	9,195	12,836	7,149
OPERATIONS ON THE NERVOUS SYSTEM 01-05	896	239	197	280	180
SPINAL TAP 03.31	353	98	72	110	74
OPERATIONS ON THE ENDOCRINE SYSTEM 06-07	111	22	28	36	24
OPERATIONS ON THE EYE 08-16	547	200	87	184	76
EXTRACTION OF LENS 13.1-13.6	113	61	10	28	15
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS) 13.7	106	60	÷9	25	12
OPERATIONS ON THE EAR 18-20	198	77	41	49	31
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX 21-29	820	266	201	231	122
RHINOPLASTY AND REPAIR OF NOSE 21.8	97	33	25	25	15
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY 28.2-28.3	213	69	60	61	24
OPERATIONS ON THE RESPIRATORY SYSTEM 30-34	991	285	219	324	163
BRONCHOSCOPY 33.21-33.23	145	39	35	40	31
OPERATIONS ON THE CARDIOVASCULAR SYSTEM 35-39	3,626	797	1,022	1,137	671
REMOVAL OF CORONARY ARTERY OBSTRUCTION 36.0	227	30	74	61	61
DIRECT HEART REVASCULARIZATION 36.1	353	74	106	114	59
CARDIAC CATHETERIZATION 37.21-37.23	930	190	255	302	183
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR 37.7-37.8	291	72	77	100	42
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM 40-41	392	105	91	124	71
OPERATIONS ON THE DIGESTIVE SYSTEM 42-54	5,257	1,294	1,266	1,890	808
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE) 42.23,44.13	127	28	36	48	15
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE 43.5-43.8,45.6-45.8	292	76	66	107	43
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE) 45.24	202	65	53	64	19
APPENDECTOMY, EXCLUDING INCIDENTAL 47.0	273	46	72	95	60
HEMORRHOIDECTOMY 49.43-49.46	74	17	18	27	13
CHOLECYSTECTOMY 51.2	497	102	117	190	87
REPAIR OF INGUINAL HERNIA 53.0-53.1	290	89	74	98	29
DIVISION OF PERITONEAL ADHESIONS 54.5	296	65	74	115	42
OPERATIONS ON THE URINARY SYSTEM 55-59	1,706	514	398	560	233
ENDOSCOPIES THROUGH NATURAL ORIFICE 55.21-55.22,56.31,57.32,58.22	588	183	143	202	59
OPERATIONS ON THE MALE GENITAL ORGANS 60-64	633	160	163	215	95
PROSTATECTOMY 60.2-60.6	358	77	94	130	57
OPERATIONS ON THE FEMALE GENITAL ORGANS 65-71	2,501	516	544	1,009	432
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY 65.3-65.6	451	72	106	195	78
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES 66.2-66.3	406	68	76	198	64
HYSTERECTOMY 68.3-68.7	578	88	143	251	96
DILATION AND CURETTAGE OF UTERUS 69.0	279	95	57	77	49
REPAIR OF CYSTOCELE AND RECTOCELE 70.5	136	24	35	51	25
OBSTETRICAL PROCEDURES 72-75	6,042	1,197	1,483	1,942	1,421
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION 72.1,72.21,72.31,72.71,73.6	1,680	347	409	584	341
CESAREAN SECTION 74.0-74.2,74.4,74.99	933	164	214	375	181
REPAIR OF CURRENT OBSTETRIC LACERATION 75.5-75.6	690	146	163	212	169
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM 76-84	3,143	814	688	1,084	558
OPEN REDUCTION OF FRACTURE, EXCEPT JAW 76.79,79.2-79.3,79.5-79.6	456	93	102	174	86
OTHER REDUCTION OF FRACTURE, EXCEPT JAW 76.70,76.78,79.0-79.1,79.4	183	51	45	63	23
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION 80.5,81.0	340	66	79	146	48
ARTHROPLASTY AND REPLACEMENT OF KNEE 81.41-81.47	204	48	51	66	38
ARTHROPLASTY AND REPLACEMENT OF HIP 81.5,81.6	206	51	45	76	35
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA 82-83.1,83.3-83.9	305	85	65	95	60
OPERATIONS ON THE INTEGUMENTARY SYSTEM 85-86	1,475	427	321	491	236
MASTECTOMY 85.4	124	33	25	43	23
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE 86.2-86.4	531	168	122	175	66
SKIN GRAFT (EXCEPT LIP OR MOUTH) 86.6-86.7	148	39	28	60	20
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES 87-99	10,854	3,099	2,447	3,281	2,027
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN) 87.03,87.41,87.71,88.01,88.38	1,613	535	321	493	264
PYELOGRAM 87.73-87.75	324	89	74	118	43
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL 88.4-88.5	1,624	371	469	495	289
DIAGNOSTIC ULTRASOUND 88.7	1,562	439	369	407	347
CIRCULATORY MONITORING 89.6	846	270	127	248	201
RADIOISOTOPE SCAN 92.0-92.1	704	233	133	196	142

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

TABLE 16. RATE OF ALL-LISTED PROCEDURES FOR PATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY GEOGRAPHIC REGION AND PROCEDURE CATEGORY: UNITED STATES, 1988

[DISCHARGES FROM NON-FEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. GROUPINGS OF PROCEDURES BY ANATOMICAL SYSTEMS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION ICD-9-CM)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	UNITED STATES	NORTH-EAST	MIDWEST	SOUTH	WEST
	RATE OF ALL-LISTED PROCEDURES PER 100,000 POPULATION				
ALL PROCEDURES	16,054.0	19,834.2	15,392.4	15,319.0	14,263.5
OPERATIONS ON THE NERVOUS SYSTEM 01-05	367.0	473.7	329.1	334.8	358.8
SPINAL TAP 03.31	144.8	194.0	119.8	131.0	148.2
OPERATIONS ON THE ENDOCRINE SYSTEM 06-07	45.3	44.2	47.4	42.9	48.1
OPERATIONS ON THE EYE 08-16	224.0	396.7	144.9	219.4	152.1
EXTRACTION OF LENS 13.1-13.6	46.4	121.0	16.2	33.3	29.0
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS) 13.7	43.5	119.4	÷15.0	29.8	24.1
OPERATIONS ON THE EAR 18-20	80.9	152.1	69.0	58.0	61.6
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX 21-29	336.0	527.5	335.9	276.2	243.4
RHINOPLASTY AND REPAIR OF NOSE 21.8	39.7	65.3	41.5	29.3	29.0
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY 28.2-28.3	87.3	135.9	100.8	72.3	47.4
OPERATIONS ON THE RESPIRATORY SYSTEM 30-34	406.0	564.9	367.2	386.3	325.2
BRONCHOSCOPY 33.21-33.23	59.3	77.7	58.9	47.5	60.9
OPERATIONS ON THE CARDIOVASCULAR SYSTEM 35-39	1,485.2	1,578.1	1,710.1	1,356.9	1,338.2
REMOVAL OF CORONARY ARTERY OBSTRUCTION 36.0	92.8	60.3	124.5	72.3	122.0
DIRECT HEART REVASCULARIZATION 36.1	144.6	146.7	177.5	136.4	116.9
CARDIAC CATHETERIZATION 37.21-37.23	380.9	377.3	426.9	359.9	364.8
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, AND REPAIR 37.7-37.8	119.2	142.5	128.6	119.0	84.6
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM 40-41	160.7	208.5	153.1	148.2	142.5
OPERATIONS ON THE DIGESTIVE SYSTEM 42-54	2,153.5	2,563.1	2,119.1	2,255.2	1,611.9
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE) 42.23,44.13	52.2	55.8	60.8	57.2	30.0
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE 43.5-43.8,45.6-45.8	119.7	149.8	110.6	127.9	86.4
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE) 45.24	82.7	129.7	89.4	76.7	37.5
APPENDECTOMY, EXCLUDING INCIDENTAL 47.0	111.8	90.2	120.4	113.5	120.5
HEMORRHOIDECTOMY 49.43-49.46	30.5	32.9	30.6	31.6	26.1
CHOLECYSTECTOMY 51.2	203.6	203.0	196.5	226.8	173.8
REPAIR OF INGUINAL HERNIA 53.0-53.1	118.7	177.3	123.4	116.9	57.2
DIVISION OF PERITONEAL ADHESIONS 54.5	121.2	128.8	123.7	137.1	83.8
OPERATIONS ON THE URINARY SYSTEM 55-59	698.7	1,019.0	665.7	668.8	465.4
ENDOSCOPIES THROUGH NATURAL ORIFICE 55.21-55.22,56.31,57.32,58.22	240.8	363.3	239.8	241.6	117.5
OPERATIONS ON THE MALE GENITAL ORGANS 60-64	259.2	316.4	273.0	256.6	189.3
PROSTATECTOMY 60.2-60.6	146.5	153.0	157.1	155.0	112.9
OPERATIONS ON THE FEMALE GENITAL ORGANS 65-71	1,024.6	1,021.7	910.6	1,204.3	862.9
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY 65.3-65.6	184.7	142.2	178.1	232.8	154.9
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES 66.2-66.3	166.3	134.1	127.7	236.5	127.5
HYSTERECTOMY 68.3-68.7	236.9	175.1	238.8	299.9	191.7
DILATION AND CURETTAGE OF UTERUS 69.0	114.4	188.3	96.1	92.4	98.6
REPAIR OF CYSTOCELE AND RECTOCELE 70.5	55.7	48.3	58.4	61.3	50.4
OBSTETRICAL PROCEDURES 72-75	2,474.9	2,370.5	2,482.6	2,317.1	2,834.4
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION 72.1,72.21,72.31,72.71,73.6	688.3	686.9	684.4	696.5	680.8
CESAREAN SECTION 74.0-74.2,74.4,74.99	382.3	324.5	357.6	447.1	361.8
REPAIR OF CURRENT OBSTETRIC LACERATION 75.5-75.6	282.8	289.3	272.5	253.1	338.0
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM 76-84	1,287.6	1,611.7	1,150.9	1,293.8	1,113.9
OPEN REDUCTION OF FRACTURE, EXCEPT JAW 76.79,79.2-79.3,79.5-79.6	186.7	184.8	171.5	208.0	171.2
OTHER REDUCTION OF FRACTURE, EXCEPT JAW 76.70,76.78,79.0-79.1,79.4	74.9	101.9	75.2	75.7	46.2
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION 80.5,81.0	139.1	130.8	132.4	174.5	96.4
ARTHROPLASTY AND REPLACEMENT OF KNEE 81.41-81.47	83.5	95.6	85.8	78.7	76.8
ARTHROPLASTY AND REPLACEMENT OF HIP 81.5,81.6	84.6	100.7	75.2	90.2	70.1
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA 82-83.1,83.3-83.9	124.9	168.4	109.1	112.8	120.0
OPERATIONS ON THE INTEGUMENTARY SYSTEM 85-86	604.1	845.7	537.4	585.4	471.4
MASTECTOMY 85.4	50.8	64.5	41.8	51.6	46.2
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE 86.2-86.4	217.6	333.4	204.1	208.4	132.3
SKIN GRAFT (EXCEPT LIP OR MOUTH) 86.6-86.7	60.5	77.4	46.3	72.2	40.8
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES 87-99	4,446.2	6,140.3	4,096.5	3,915.1	4,044.7
COMPUTERIZED AXIAL TOMOGRAPHY (CAT SCAN) 87.03,87.41,87.71,88.01,88.38	660.6	1,059.5	537.5	587.8	527.0
PYELOGRAM 87.73-87.75	132.7	176.6	123.5	140.8	85.9
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL 88.4-88.5	665.2	734.2	785.3	591.2	576.1
DIAGNOSTIC ULTRASOUND 88.7	639.8	870.1	617.4	485.9	691.5
CIRCULATORY MONITORING 89.6	346.3	535.4	211.9	295.5	401.2
RADIOISOTOPE SCAN 92.0-92.1	288.5	462.1	222.5	234.2	282.8

NOTE: SEE "MEDICAL CODING AND EDIT," APPENDIX I, FOR CODING MODIFICATIONS FOR THE NATIONAL HOSPITAL DISCHARGE SURVEY.

Appendixes

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Appendix I
Technical notes on methods

Statistical design of the National Hospital Discharge Survey

Scope of the survey—The National Hospital Discharge Survey (NHDS) covers discharges from noninstitutional hospitals, exclusive of Federal, military, and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only short-stay hospitals (hospitals with an average length of stay for all patients of less than 30 days) or those whose specialty is general (medical or surgical), or children's general are included in the survey. These hospitals must also have six beds or more staffed for patient use.

NHDS history—The National Center for Health Statistics (NCHS) has conducted the NHDS continuously since 1965. The original sample was selected in 1964 from a frame of short-stay hospitals listed in the National Master Facility Inventory. That sample was updated periodically with samples of hospitals that opened later. Sample hospitals were selected with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals. Within each sample hospital, a systematic random sample of discharges was selected. The development and design of the original NHDS has been published (1).

Until 1985, all data were collected by a system in which sample selection and transcription of information were done manually. Starting in 1985 some data were also collected using a system in which NCHS purchased data tapes containing discharge medical abstracts from commercial abstracting services and selected the samples from those tapes.

In 1988, the NCHS redesigned the NHDS to link it with other surveys conducted by NCHS and to improve efficiency through use of information and technologies that were not available when the survey was first designed in 1964. Details of the new design are outlined below.

The changes in the survey may affect trend data. That is, some of the differences between NHDS estimates based on the 1965–87 sample and estimates based on the 1988 sample may be due to survey redesign rather than to real changes in hospital utilization.

1988 sampling design—The NHDS sampling frame consists of hospitals that were listed in the April 1987 SMG Hospital Market Data Tape (2) and that began to accept inpatients by August 1987. The NHDS sample includes with certainty all hospitals with 1,000 beds or more or 40,000 discharges or more annually. The remaining sample of hospitals is based on a stratified three stage design.

The first stage consists of 112 primary sampling units (PSU's) that comprise a probability subsample of PSU's used in the 1985–94 National Health Interview Survey (NHIS). The PSU's are counties, groups of counties, county equivalents (such as parishes or independent cities), or towns and townships (for some PSU's in New England). The NHDS sample includes with certainty the 26 PSU's with the largest populations. In addition, the sample includes half of the next 26 largest PSU's, and one PSU from each of 73 PSU strata formed from the remaining PSU's for the NHIS sample design. Those 73 PSU strata were defined within four geographical regions and were assigned metropolitan statistical area (MSA) or non-MSA status by using 1980 Census of Population data and a computer program that minimized the between-PSU variances for NHIS stratification variables. (MSA is a metropolitan statistical area defined by the U.S. Office of Management and Budget on the basis of the 1980 Census.) From the 73 strata thus formed, the PSU's were selected with probability proportional to the projected 1985 population. A more detailed analysis of the NHIS PSU sample design is presented in a Series 2 *Vital and Health Statistics* report (5).

The second stage consists of noncertainty hospitals selected from the sample PSU's. To assure distribution of the sample across PSU's and to maximize the potential for automated data collection, the noncertainty hospitals in those PSU's were stratified. The strata were defined by region, PSU, and in the 12 largest PSU's, by abstracting status (whether or not the hospital subscribes to a commercial abstracting service). Within the strata, the hospitals were ordered by PSU, abstracting service status, and the hospital specialty-size groups defined in table I. Within each specialty-size group, hospitals were arrayed by their annual numbers of discharges recorded in the April 1987 SMG Hospital Market Data Tape. Hospitals were then selected from each stratum's ordered array by systematic random sampling with probability proportional to their SMG recorded 1987 annual numbers of discharges. The sampling rates were such that at least three hospitals were selected from every PSU containing three eligible hospitals or more. In PSU's with fewer than three hospitals, all hospitals in the PSU were selected. For 1988,

Table I. Definition of noncertainty hospital specialty-size groups used as secondary strata in the National Hospital Discharge Survey 1988 sample design

Hospital group	Bed size	Type of service
Group 1	6–999 beds	Selected specialties[1]
Group 2	6–174 beds	General (medical and surgical) and other specialties[2]
Group 3	175–349 beds	General (medical and surgical) and other specialties[2]
Group 4	350–999 beds	General (medical and surgical) and other specialties[2]

[1]Includes psychiatry; tuberculosis and other respiratory disease; rehabilitation; chronic disease; mental retardation; alcoholism and other chemical dependency; and children's psychiatry.
[2]"Other specialties" include: obstetrics and gynecology; eye, ear, nose, and throat; orthopedics; other specialty; children's general; children's tuberculosis and other respiratory disease; children's eye, ear, nose, and throat; children's rehabilitation; children's orthopedics; children's chronic disease; and children's other specialty.

Table II. Hospitals in the National Hospital Discharge Survey universe and sample, the number of in-scope and responding sample hospitals, and response rates, by geographic region: United States, 1988

Hospital region and size	Universe	Total sample	Sample in-scope[1]	Respondents[2]	Response rate
	Number				Percent
All hospitals	6,400	542	531	422	79
Region					
Northeast	931	117	116	101	87
Midwest	1,797	120	118	87	74
South	2,458	219	215	174	81
West	1,214	86	82	60	73

[1]Excludes hospitals that for the whole year either were out of business or failed to meet the definition of a general, a children's general, or a short-stay hospital.
[2]Hospitals for which data were collected by the National Center for Health Statistics for at least half of the number of sample discharges expected in half or more of the months the hospitals were in scope.

the sample consisted of 542 hospitals. Of the 542 hospitals, 11 were found to be out of scope (ineligible) because prior to 1988 they went out of business or otherwise failed to meet the criteria for the NHDS universe. Of the 531 in-scope (eligible) hospitals, 422 hospitals responded (NCHS collected data for at least half of the number of sample discharges expected in half or more of the months these hospitals were in scope). The number of hospitals in the universe, the sample, and the responding sample are shown by region in table II.

At the third stage, a sample of discharges from each hospital was selected by a systematic random sampling technique. For hospitals using the manual system of data collection, the discharges were selected at the hospital from daily listing sheets, computer files, or other lists in which discharges were listed in some chronological order. For most of these hospitals, the sample discharges were selected on the basis of the terminal digit(s) of the patient's medical record number. In some cases, an admission number, billing number, or other number was used. If no patient numbers useful for sampling purposes were available in a hospital's list of discharges, the sample was selected by starting with a randomly selected discharge and taking every *k*th discharge thereafter.

For hospitals whose data were collected via the automated system, the discharges were selected by NCHS from discharge medical abstract files after sorting by the first two digits of the ICD–9–CM code of the first-listed diagnosis, patient age group at time of admission (under 1 year, 1–14 years, 15–44 years, 45–64 years, 65–74 years, 75–84 years, 85 years and over, and age unknown), sex, and date of discharge. These samples were selected by starting with a randomly selected discharge and taking every *k*th discharge thereafter.

The third-stage sampling rate was determined by the hospital's sampling stratum and the system (manual or automated) used to collect data from the hospital. One percent and 5 percent of discharges in the certainty hospitals were selected under the manual and automated systems, respectively. Except for certainty hospitals, the target sample size was 250 discharges each from all manual system hospitals and from the automated system hospitals that had fewer than 4,000 discharges annually according to the 1987 sampling frame data. Samples of 2,000 were targeted for each of the remaining noncertainty automated system hospitals. The final sample for 1988 included about 250,000 discharge medical record abstracts.

Data collection and processing

Data collection—Two data collection procedures were used for the survey. One was a manual system of sample selection and data abstraction. The other was an automated method, used with approximately 37 percent of the respondent hospitals in 1988, that involved the purchase of data tapes from abstracting service organizations.

In the manual system, the sample selection and the transcription of information from the hospital records to abstract forms were performed at the hospitals. The completed forms, along with sample selection control sheets, were then forwarded to NCHS for coding, editing, and weighting. A few of these hospitals submitted their data via computer printout or tape. Of the hospitals using the manual system in 1988, about two-thirds had the work performed by their own medical records staff. In the remaining hospitals using the manual system, personnel of the U.S. Bureau of the Census did this work on behalf of

NCHS. For the automated system, NCHS purchased tapes containing machine-readable medical record data from abstracting service organizations and selected sample discharges from these tapes.

Figure I shows the information collection form used in 1988. This form and the records on abstract service data tapes contain items relating to personal characteristics of the patient, including birth date, sex, race, ethnicity, marital status, ZIP Code, (but not name and address), and expected sources of payment; administrative information, including admission and discharge dates, discharge status, and medical record number; and medical information, including diagnoses, surgical and nonsurgical operations or procedures, and dates of surgery. These data items conform with the Uniform Hospital Discharge Data Set (UHDDS) (6). The PSU, hospital name, medical record number, and patient ZIP Code are confidential information and are not available to the public.

Medical coding and edit—The medical information recorded on the sample patient abstracts that was collected by the manual system was coded by NCHS staff. A maximum of seven diagnostic codes were assigned for each sample abstract; in addition, if the medical information included surgical or nonsurgical procedures, a maximum of four codes for these procedures were assigned. The system currently used for coding the diagnoses and procedures on the medical abstract forms, as well as the data that appear on the commercial abstracting services data tapes, is the *International Classification of Diseases, 9th Revision, Clinical Modification,* or ICD–9–CM (3). All of the diagnostic codes and most of the procedure codes in the ICD–9–CM are used with the exception of selected procedure codes in Chapter 16 (see appendix II).

Although the ICD–9–CM has been used for coding NHDS data since 1979, it should be noted that this coding system is not static, but undergoes periodic updating. The volumes used to code the 1988 data are the third edition of the ICD–9–CM, published in 1989. Beginning October 1, 1986, annual addenda to the ICD–9–CM have been published. These addenda, which go into effect on October 1 of affected years, add, delete, or change codes. The actual dates when these coding changes go into effect vary by source of data. Thus for a given data year different codes may refer to the same diagnosis or procedure. Because data are generally presented in this report by aggregated groups of codes, the coding changes have had limited impact.

With two exceptions, the order of diagnoses and procedures for sampled discharges is preserved to reflect the order on the medical record face sheet or in the abstracting service file. One exception is for women admitted for delivery. In this case, a code of V27 from the supplemental classification must be assigned and it must be listed first. In the other exception, a decision was made to reorder some acute myocardial infarction diagnoses based on accepted medical coding practice. Whenever an acute myocardial infarction is encountered with other circulatory diagnoses and is other than the first entry, it must be reordered to first position.

An ongoing quality control program is undertaken on the coding and entering of data from abstracts to machine readable form. Approximately 5 percent of the abstracts are independently recoded by an NHDS coder, with discrepancies resolved by the chief coder. The overall error rate for records manually coded by NCHS for the 1988 data year was 2.8 percent for medical (ICD–9–CM) coding and entering and 0.4 percent for demographic coding and entering.

Following conversion of the data on the medical abstract to computer tape and combining the data with the automated data tapes, a final medical edit was performed by computer inspection and by a manual review of rejected abstracts. If the sex or age of the patient was incompatible with the recorded medical information, priority was given to the medical information in the editing decision.

Presentation of estimates

Grouping of diagnoses and procedures—In this report, the broadest groupings of disease and injuries shown correspond to ICD–9–CM chapters 1–17 and the supplementary classification of factors influencing health status and contact with health services. The diagnostic categories, the most detailed groupings of diseases and injuries shown, are subsets of the major groups or chapters. The titles and the ordering of the categories in the tabular list developed for NHDS follow the format of the ICD–9–CM tabular list as closely as possible.

The procedure groupings used in this report are the groups numbered 1–16 in the ICD–9–CM section entitled "Procedure Classification." Specific categories of operations or procedures, the most detailed of these groupings shown, are subsets of the major groups and are based on the 4-digit codes provided by the ICD–9–CM.

In developing tables of diagnoses and of procedures, an effort was made to present data for the most frequently occurring conditions or procedures, as well as those of significant public health interest.

Patient characteristics not stated—Age or sex of the patient were not stated for about 2 percent of the sample discharges for 1988. These data were imputed by assigning the patient an age or sex consistent with the age or sex of other sampled patients with the same diagnostic code. Data on race were not available for 9 percent of the discharges, and missing values were not imputed. During 1988, 0.08 percent of the sampled records lacked an admission or discharge date. For these cases a length of stay was imputed based on age unless the discharge was a newborn or a female with delivery, in which case a length of stay was assigned similar to the length of stay of sampled cases in these categories.

In addition to the edits performed by NCHS, data obtained through the automated system may have been

OMB No. 0937-0004: Approval Expires November 30, 1990

CONFIDENTIAL — All information which would permit identification of an individual or of an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to other persons or used for any other purpose.

FORM **HDS-1** (12-8-89)

DEPARTMENT OF HEALTH AND HUMAN SERVICES
U.S. PUBLIC HEALTH SERVICE
NATIONAL CENTER FOR HEALTH STATISTICS

MEDICAL ABSTRACT — NATIONAL HOSPITAL DISCHARGE SURVEY

A. PATIENT IDENTIFICATION

1. Hospital number . . . . . ☐☐☐☐
2. HDS number . . . . . ☐☐☐☐
3. Medical record number _____

4. Date of admission . . . Month ☐☐ – Day ☐☐ – Year ☐☐
5. Date of discharge . . . Month ☐☐ – Day ☐☐ – Year ☐☐
6. Residence ZIP code . . ☐☐☐☐☐

B. PATIENT CHARACTERISTICS

7. Date of birth Month ☐☐ – Day ☐☐ – Year ☐☐☐☐

8. Age *(Complete only if date of birth not given)* . . . . . Units ☐☐☐
1 ☐ Years
2 ☐ Months
3 ☐ Days

9. Sex *(Mark (X) one)*
1 ☐ Male 2 ☐ Female 3 ☐ Not stated

10. Race
1 ☐ White 3 ☐ American Indian/Eskimo/Aleut 5 ☐ Other *(Specify)* _____
2 ☐ Black 4 ☐ Asian/Pacific Islander 6 ☐ Not stated

11. Ethnicity *(Mark (X) one)*
1 ☐ Hispanic origin 2 ☐ Non-Hispanic 3 ☐ Not stated

12. Marital status *(Mark (X) one)*
1 ☐ Married 3 ☐ Widowed 5 ☐ Separated
2 ☐ Single 4 ☐ Divorced 6 ☐ Not stated

13. Expected source(s) of payment

		Principal *(Mark one only)*	Other additional sources *(Mark accordingly)*
Government sources	1. Worker's compensation	☐	☐
	2. Medicare	☐	☐
	3. Medicaid	☐	☐
	4. Title V	☐	☐
	5. Other government payments		
Private sources	6. Blue Cross	☐	☐
	7. Other private or commercial insurance	☐	☐
Other sources	8. Self pay	☐	☐
	9. No charge	☐	☐
	10. Other *(Specify)* _____	☐	☐

☐ **No source of payment indicated**

14. Status/Disposition of patient *(Mark (X) appropriate box(es))*

Status — Disposition

1 ☐ Alive →
a. ☐ Routine discharge/discharged home
b. ☐ Left against medical advice
c. ☐ Discharged, transferred to another short-term hospital
d. ☐ Discharged, transferred to long-term care institution
e. ☐ Other disposition/not stated

2 ☐ Died
3 ☐ Status not stated

C. FINAL DIAGNOSES (Including E- code diagnoses)

Optional — ICD-9-CM Nos.

Principal: _____
Other/additional: _____
_____
_____
_____
_____
_____

☐ See reverse side for additional diagnoses

D. SURGICAL AND DIAGNOSTIC PROCEDURES

		Date Month	Day	Year	Optional — ICD-9-CM Nos.
Principal:	1. _____				
Other/additional:	2. _____				
	3. _____				
	4. _____				

☐ NONE ☐ See reverse side for additional procedures

Completed by _____ Date _____

Figure I. Medical abstract for the National Hospital Discharge Survey, 1988

edited by an abstract service and had data imputed. The extent of this imputation, if any, is unknown.

Rounded numbers—Estimates in this report have been rounded. Therefore, detailed figures may not add to totals. Rates and percents were calculated using unrounded figures and may not agree with computations made from the rounded data.

Population estimates—The population estimates used in computing rates are from published and unpublished estimates for the U.S. civilian population, including institutionalized persons, on July 1 of the data year provided by the U.S. Bureau of the Census. The estimates by age, sex, race, and geographic region are presented in table III and are consistent with the population estimates published in *Current Population Reports*, Series P–25. Rates computed using these population estimates will be overestimates to the extent that military personnel and non-U.S. citizens use NHDS-eligible hospitals and will be underestimates to the extent that civilians (for example, military dependents or retirees) use hospitals that are not in the NHDS universe, that is, hospitals that are institutional, Federal, military, veteran, or long-stay hospitals that are not general, maternal, or children's general hospitals.

Published and flagged estimates—Estimates are not presented unless a reasonable assumption regarding the probability distribution of the sampling error is possible on the basis of the Central Limit Theorem. The Central Limit Theorem states that, given a sufficiently large sample size, the sample estimate approximates the population estimate, and upon repeated sampling, its distribution would be approximately normal.

Based on consideration of the complex sample design of the NHDS, the following guidelines are used for presenting the NHDS estimates:

- If the relative standard error of an estimate is larger than 30 percent, the estimate is not shown. Only an asterisk (*) appears in the tables.
- If the sample size is less than 60, the value of the estimate should not be assumed to be reliable. The estimate is preceded by an asterisk (*) in the tables.

Estimation procedures

Statistics from NHDS are derived by a multistage estimation procedure that produces essentially unbiased national estimates and has three basic components: (1) inflation by reciprocals of the probabilities of sample selection, (2) adjustment for nonresponse, and (3) population weighting ratio adjustments. The second and third components were made separately by admission types—that is, for discharges of newborn infants (whose hospital stay began with their own births) and for discharges to other than newborn infants.

Inflation by reciprocals of probabilities of selection—There is one probability for each stage of sampling: (a) the probability of selecting the PSU, (b) the probability of selecting the hospital, and (c) the probability of selecting the discharge within the hospital. The last probability varies monthly and is calculated to be the sample size from the hospital for the month divided by the total number of discharges occurring at the hospital that month. The overall probability of selection is the product of the probabilities at each stage. The inverse of the overall selection probability is the basic inflation weight.

Adjustment for nonresponse—NHDS data were adjusted to account for two types of nonresponse. The first type of nonresponse occurred when an in-scope (NHDS eligible) sample hospital did not respond for more than half of the months during which it was in scope, thus making it a nonrespondent hospital. In this case, the weights of discharges from hospitals similar to the nonrespondent hospitals were inflated to account for discharges represented by the nonrespondent hospitals. For this purpose, hospitals were judged to be similar if they were in the same region, hospital specialty-size group, and if possible, the same sampling stratum (that is, the same abstracting status group if the nonrespondent hospital was in the 12 largest PSU's and in the same PSU, otherwise). The adjustments for this nonresponse were made separately for admission types—that is, for discharges of newborn infants and for all other discharges. The adjustment consisted of a ratio for which the numerator was the weighted number of discharges of the admission type in all similar sample hospitals (regardless of response status) and the denominator was the weighted total of discharges of that admission type from the hospitals similar to the nonrespondent hospitals. Data on the number of discharges for each admission type for each hospital came from either the hospitals or the April 1989 SMG Hospital Market Data Tape (2).

The second type of nonresponse occurred when NCHS failed to collect all the discharge abstracts expected (the number expected is the product of the hospital's total discharges each month and the discharge sampling rate assigned to the hospital). In each month when the hospital was respondent (at least half the expected abstracts were collected), the weights of abstracts collected for the month were inflated to account for the missing abstracts. For a hospital's month(s) of nonresponse, the weights of discharges in the hospital's respondent months were inflated by ratios that varied with discharge groups defined by the ICD–9–CM diagnostic classes of those discharges' first-listed diagnoses. The adjustment ratio for each partially respondent hospital and each discharge group was calculated using only data from sample hospitals that were both NHDS eligible and respondent for all 12 months of the data year. The ratio had as its numerator the weighted sum of discharges in that discharge group for all months in which the partially respondent hospital was in scope and had as its denominator the weighted sum of discharges in that discharge group that occurred in the months when the partially respondent hospital did respond to the NHDS.

Population weighting ratio adjustment—Adjustments were made within each of 16 noncertainty hospital groups

Table III. Civilian population, by selected characteristics: United States, 1988

[Population estimates consistent with Series P–25, *Current Population Reports*, U.S. Bureau of the Census]

Age, geographic region, and race	*Both sexes*	*Male*	*Female*
All ages		Population in thousands	
Total	244,125	118,223	125,902
Region:			
Northeast	50,478	24,133	26,345
Midwest	59,739	29,022	30,716
South	83,791	40,378	43,413
West	50,118	24,690	25,428
Race:			
White	206,082	100,207	105,875
All other	38,043	18,016	20,027
Under 15 years			
Total	53,111	27,196	25,913
Under 1 year	3,859	1,976	1,883
1–4 years	14,596	7,470	7,126
5–14 years	34,655	17,750	16,904
Region:			
Northeast	9,946	5,093	4,852
Midwest	12,943	6,635	6,307
South	18,650	9,543	9,106
West	11,572	5,925	5,647
Race:			
White	42,728	21,926	20,801
All other	10,383	5,271	5,112
15–44 years			
Total	114,694	56,670	58,026
15–24 years	36,689	18,262	18,427
25–34 years	43,026	21,280	21,747
35–44 years	34,979	17,128	17,852
Region:			
Northeast	23,375	11,451	11,924
Midwest	27,972	13,913	14,059
South	39,138	19,195	19,943
West	24,210	12,110	12,100
Race:			
White	96,096	47,884	48,212
All other	18,598	8,785	9,813
45–64 years			
Total	45,953	22,004	23,948
45–54 years	24,125	11,714	12,410
55–64 years	21,828	10,290	11,538
Region:			
Northeast	10,292	4,877	5,413
Midwest	11,212	5,413	5,800
South	15,628	7,408	8,219
West	8,823	4,307	4,516
Race:			
White	39,959	19,294	20,663
All other	5,995	2,710	3,285
65 years and over			
Total	30,367	12,353	18,014
65–74 years	17,897	7,945	9,953
75–84 years	9,521	3,584	5,937
85 years and over	2,948	825	2,124
Region:			
Northeast	6,867	2,712	4,155
Midwest	7,612	3,063	4,549
South	10,374	4,230	6,144
West	5,513	2,347	3,165
Race:			
White	27,300	11,103	16,198
All other	3,067	1,251	1,816

defined by region and hospital specialty-size classes to adjust for oversampling or undersampling of discharges reported in the sampling frame for the data year. For discharges other than newborn infants, the adjustment is a multiplicative factor that had as its numerator the number of admissions reported for the year at sampling frame hospitals within each region-specialty-size group and as its denominator the estimated number of those admissions for that same hospital group. The adjustment for discharges of newborn infants was similar, but numbers of births were used in place of admissions. The ratio numerators were based on the figures obtained from the SMG Hospital Market Data Tape (2) and the ratio denominators were obtained through a simple inflation of the SMG figures for the NHDS sample hospitals.

Reliability of estimates

Nonsampling errors—As from any survey, results are subject to nonsampling errors, which include errors that are due to sampling frame errors, hospital nonresponse, missing abstracts, and recording processing errors. The magnitude of the nonsampling errors cannot be determined. However, errors resulting from the exclusion of in-scope hospitals from the sampling frame are believed to be small because the hospitals excluded are hospitals that opened after the frame was constructed and, hence, they tend to have few discharges relative to hospitals that are in the frame. Other nonsampling errors are kept to a minimum by methods built into the survey procedures, such as training the data collectors in sampling and data abstraction, quality checks of sampling and abstracting, manual and computer editing, and verification of keypunching and coding. Some nonsampling errors are discussed under "Presentation of estimates."

Sampling errors—Because the statistics presented in this report are based on a sample, they may differ from the figures that would be obtained if a complete census had been taken using the same forms, definitions, instructions, and procedures. However, the probability design of NHDS permits the calculation of sampling errors. The standard error is primarily a measure of sampling variability that occurs by chance because only a sample rather than the entire population is surveyed. The standard error, as calculated for the NHDS, also reflects part of the variation that arises in the measurement process, but does not include estimates of any systematic bias. The chances are about 68 in 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 in 100 that the difference would be less than twice the standard error, and about 99 in 100 that it would be less than 2.5 times as large.

The relative standard error of an estimate is obtained by dividing the standard error by the estimate. The resulting value is multiplied by 100, which expresses the relative standard error as a percent of the estimate.

Estimates of sampling variability were calculated with SESUDAAN software, which computes standard errors by using a first-order Taylor approximation of the deviation of estimates from their expected values. A description of the software and the approach it uses was published (7).

Relative standard errors for aggregate estimates—The constants for relative standard error curves for the National Hospital Discharge Survey aggregate statistics by statistic type are presented in table IV. The relative standard error [RSE (X)] of an estimate X may be estimated from the formula:

$$\mathrm{RSE}(X) = \sqrt{a + b/x}$$

where X, a, and b are as defined in table IV.

Relative standard errors for estimates of percents—The relative standard errors for a percent $100p$ $(0 < p < 1)$ may be calculated directly using the formula:

$$\mathrm{RSE}(p) = 100\sqrt{b(1-p)/(p-X)}$$

where $100\,p$ is the percent of interest, X is the base of the percent, and b is the parameter b in the formula for approximating the RSE(X). The values for b are given in table IV.

The approximation is valid if the relative standard error of the denominator is less than 0.05 or the relative standard errors of the numerator and denominator are both less than 0.10 (8,9).

RSE for average length of stay and other averages, ratios, or rates where the numerator is not a subclass of the denominator—If the denominator of the rate is a number produced by the U.S. Bureau of the Census for the total U.S. population or one or more of the age-sex-race groups of the total population, then the approximate relative standard error of the rate is equivalent to the relative standard error of the numerator that can be obtained from table IV.

If the numerator X and denominator Y are both estimated from the NHDS, then the relative standard error of the ratio X/Y is approximated by

$$\mathrm{RSE}(X/Y) = \sqrt{[\mathrm{RSE}(X)]^2 + [\mathrm{RSE}(Y)]^2}$$

This approximation is valid if the relative standard error of the denominator is less than 0.05 or the relative standard errors of the numerator and denominator are both less than 0.10 (8,9).

Estimates of differences between two statistics—The relative standard errors shown in this appendix are not directly applicable to differences between two sample estimates. The standard error of a difference is approximately the square root of the sum of squares of each standard error considered separately. This formula represents the standard error quite accurately for the difference between separate and uncorrelated characteristics, although it is only a rough approximation in most other cases.

Table IV. Estimated parameters for relative standard error equations for National Hospital Discharge Survey statistics, by characteristics: United States, 1988

Characteristic	Number of discharges, first-listed diagnoses, or all-listed diagnoses		Number of days of care		Number of procedures	
	a	b	a	b	a	b
Total	0.00358	173.173	0.00446	1,222.400	0.00415	464.814
Sex						
Male	0.00273	263.937	0.00331	1,554.308	0.00376	428.402
Female	0.00214	355.406	0.00241	1,602.350	0.00332	467.482
Age						
Under 15 years	0.01984	109.886	0.01604	708.124	0.02228	428.541
15–44 years	0.00312	158.564	0.00289	1,097.768	0.00362	443.165
45–64 years	0.00361	139.812	0.00366	1,102.740	0.00374	463.928
65 years and over	0.00262	248.331	0.00312	2,314.965	0.00351	442.050
Region						
Northeast	0.00432	154.474	0.00421	1,003.567	0.00493	285.834
Midwest	0.01049	215.711	0.01152	1,086.414	0.01138	464.393
South	0.00637	194.720	0.00733	1,722.863	0.00833	449.500
West	0.00858	221.258	0.01053	1,188.078	0.01193	571.693
Source of payment						
Workers' compensation	0.07401	70.492	0.05854	676.112	0.03702	509.025
Medicare	0.00282	271.349	0.00290	2,836.696	0.00435	421.248
Medicaid	0.00758	192.934	0.00592	1,260.201	0.00962	365.296
Not stated	0.03639	174.982	0.03689	1,379.562	0.06001	345.075
Other government	0.04783	89.768	0.03705	1,171.965	0.04491	343.602
Private	0.00287	241.401	0.00257	1,583.291	0.00350	405.275
Self	0.00997	154.215	0.00773	1,309.867	0.01461	249.645
No charge or other	0.03056	89.094	0.02838	633.144	0.02929	312.749
Race						
White	0.00336	207.255	0.00335	1,861.807	0.00380	477.624
All other	0.00765	207.617	0.00820	1,219.833	0.00842	361.469
Not stated	0.05099	98.078	0.04631	881.690	0.04382	522.318

NOTE: The relative standard error (RSE) for an estimate (x) can be determined from the equation $RSE(X) = \sqrt{a + b/x}$

Tests of significance—In this report, the determination of statistical inference is based on the two-sided t-test with a critical value of 1.96 (0.05 level of significance). Terms such as "higher" and "less" that relate to differences are statistically significant. Terms such as "similar" or "no difference" mean that no statistically significant difference exists between the estimates being compared. A lack of comment on the difference between any two estimates does not mean that the difference was tested and found not significant.

Appendix II
Definitions of certain terms used in this report

Terms relating to hospitalization

Hospitals—All hospitals with an average length of stay for all patients of less than 30 days or hospitals whose specialty is general (medical or surgical) or children's general are eligible for inclusion in the National Hospital Discharge Survey except Federal hospitals and hospital units of institutions, and hospitals with less than six beds staffed for patients' use.

Patient—A person who is formally admitted to the inpatient service of a short-stay hospital for observation, care, diagnosis, or treatment. The terms "patient" and "inpatient" are used synonymously.

Newborn infant—A patient admitted by birth to a hospital.

Discharge—The formal release of a patient by a hospital; that is, the termination of a period of hospitalization by death or by disposition to place of residence, nursing home, or another hospital. The terms "discharges" and "patients discharged" are used synonymously.

Discharge rate—The ratio of the number of hospital discharges during a year to the number of persons in the civilian population on July 1 of that year.

Days of care—The number of patient days accumulated at time of discharge by a patient. A stay of less than 1 day (patient admission and discharge on the same day) is counted as 1 day in the summation of total days of care. For patients admitted and discharged on different days, the number of days of care is computed by counting all days from (and including) the date of admission to (but not including) the date of discharge.

Rate of days of care—The ratio of the number of days of care accumulated during a year to the number of persons in the civilian population on July 1 of that year.

Average length of stay—The number of days of care accumulated by patients discharged during the year divided by the number of these patients.

Terms relating to diagnoses

Diagnosis—A disease or injury (or factor that influences health status and contact with health services that is not itself a current illness or injury) listed on the medical record of a patient. (See "Medical coding and edit" in the "Data collection and processing" section of appendix I for further detail.)

Principal diagnosis—The condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.

First-listed diagnosis—The coded diagnosis identified as the principal diagnosis or listed first on the face sheet or discharge summary of the medical record if the principal diagnosis cannot be identified. The number of first-listed diagnoses is equivalent to the number of discharges.

All-listed diagnoses—The number of diagnoses on the face sheet of the medical record. In the NHDS a maximum of seven diagnoses are coded.

Normal delivery—A normal delivery is a delivery without abnormality or complication of pregnancy, childbirth, or the puerperium and with spontaneous cephalic delivery (that is, presentation of the child headfirst and delivery of the child without external aid). If no mention of fetal manipulation or instrumentation is made, ICD–9–CM code 650 is assigned.

Complicated delivery—All deliveries not considered normal, including deliveries of multiple gestation, are included; ICD–9–CM code numbers 640–648 and 651–676 are assigned.

Terms relating to procedures

Discharges with procedures—The estimated number of patients discharged from non-Federal short-stay hospitals during the year who underwent at least one procedure during their hospitalization are termed "discharges with procedures."

Procedure—A surgical or nonsurgical operation, diagnostic procedure, or special treatment reported on the medical record of a patient. (See "Medical coding and edit" in the "Data collection and processing" section of appendix I for further details.) The following ICD–9–CM procedure codes are not used in the the NHDS:

08.19, 16.21, 18.01, 18.11, 18.19, 21.21, 21.29, 22.19, 24.19, 25.09, 25.91, 26.19, 27.29, 27.91, 29.19, 31.48–31.49, 37.29, 41.38–41.39, 42.29, 44.19, 45.19, 45.28–45.29, 48.23, 48.29, 49.21, 49.29, 49.41, 58.29, 61.19, 64.19, 64.91, 64.94, 69.92, 70.21, 73.91–73.92, 75.35, 85.19, 86.19, 86.92, 87.09–87.12, 87.16–87.17, 87.22–87.29, 87.36–87.37, 87.39, 87.43–87.49, 87.69, 87.79, 87.85–87.89, 87.92, 87.95–87.99, 88.09, 88.16–88.31, 88.33, 88.35, 88.37, 88.39, 89.01–89.13, 89.15–89.16, 89.26–89.31, 89.33–89.39, 89.45–89.53, 89.55–89.59, 89.66,

89.7, 90.01–91.99, 93.01–93.25, 93.27–93.28, 93.31–93.39, 93.42– 93.44, 93.61–93.91, 93.94, 93.96, 93.99–94.23, 94.25, 94.29–95.03, 95.05–95.11, 95.14–95.15, 95.31–95.49, 96.09–96.19, 96.26–96.28, 96.34–97.04, 97.14–97.69, 97.72–97.89, 99.02–99.24, 99.26–99.59, 99.71–99.79, 99.82–99.99.

All-listed procedures—The number of procedures on the face sheet of the medical record. In the NHDS a maximum of four procedures are coded.

Surgical operations—All procedures except those listed under "nonsurgical procedures" are listed as surgical operations.

Nonsurgical procedures—Procedures generally not considered to be surgery are listed as nonsurgical procedures. These include diagnostic endoscopy and radiography, radiotherapy and related therapies, physical medicine and rehabilitation, and other nonsurgical procedures. The following ICD–9–CM are for diagnostic and nonsurgical procedures:

03.31, 11.21, 12.21, 14.11, 16.22, 20.31, 29.11, 31.41–31.42, 33.21–33.23, 34.21–34.22, 39.95, 42.21–42.23, 44.11–44.13, 45.21–45.24, 48.21–48.22, 51.11, 54.21, 55.21–55.22, 56.31, 57.31–57.32, 58.21–58.22, 60.19, 68.11–68.12, 70.22, 80.20–80.29, 87.01–99.99.

Rate of procedures—The ratio of the number of procedures during a year to the number of persons in the civilian population on July 1 of that year determines the rate of procedures.

Demographic terms

Population—The United States resident population excluding members of the Armed Forces.

Age—Patient's age at birthday prior to admission to the hospital.

Race—Patients are classified into two or three groups. The two groups are "white" and "all other," with all other including all categories other than white. Three groups are shown in tables E and F, "white," "black," and "all other," with all other including all categories other than white or black. In addition, 9.0 percent of the patients had no race stated on the face sheet of the medical record.

Geographic region—Hospitals are classified by location in one of the four geographic regions of the United States that correspond to those used by the U.S. Bureau of the Census.

Region	*States included*
Northeast	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania
Midwest	Michigan, Ohio, Illinois, Indiana, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas
South	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas
West	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, and Alaska

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