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## **National Hospital Discharge Survey: 2007 Summary**

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#### **Abstract**

Objectives—This report presents national estimates of hospital inpatient care in the United States during 2007 and selected trend data. Numbers and rates of discharges, diagnoses, and procedures are shown by age and sex. Average lengths of stay are presented for all discharges and for selected diagnostic categories by age and by sex.

Methods—The estimates are based on data collected through the 2007 National Hospital Discharge Survey, an annual national probability sample survey of discharges from nonfederal, general, and short-stay hospitals. Sample data are weighted to produce annual estimates of inpatient care, excluding newborns. Diagnoses and procedures are coded using the International Classification of Diseases, Ninth Revision, Clinical Modification.

Results—In 2007, there were an estimated 34.4 million hospital discharges, excluding newborns. The total hospitalization rate leveled off from 1995 to 2007 after declining during the period from 1980 to 1995. Throughout the period from 1970 to 2007 the rates for those aged 65 years and over were significantly higher than the rates for the younger groups.

Although those aged 65 years and over accounted for only 13 percent of the total population, they comprised 37 percent of hospital discharges and 43 percent of hospital days. One-quarter of inpatients under age 15 years were hospitalized for respiratory diseases. There were 45 million inpatient procedures during 2007 and 15 percent of these were cardiovascular. Males aged 45–64 and 65 years and over had higher cardiac catheterization rates than females in these age groups each year from 1997 to 2007. From 2002 to 2007 the rate of inpatient cardiac catheterization procedures declined.

Keywords: inpatients • diagnoses • procedures • ICD-9-CM

#### Introduction

This report presents data from the 2007 National Hospital Discharge Survey (NHDS). The survey has been conducted continuously by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) since 1965. NHDS is the principal source for national data on the characteristics of discharges from nonfederal short-stay hospitals. National estimates of hospital use derived from NHDS are published annually by NCHS. This report provides an overview of the 2007 data (Table 1), and includes the number and rate of discharges and average lengths of stay by age and by sex of patients for selected diagnoses (Tables 2-7). Average lengths of stay are also presented for selected diagnostic categories. Estimates of the number and rate of selected procedures performed on hospital inpatients are shown by age and by sex (Tables 8-11). Detailed data from NHDS for earlier years have been published annually in Series 13 of Vital and Health Statistics (1). Trend data from NHDS have been included in annual Health, United States reports (2). NHDS data have been used in articles examining important topics of interest in public health and health services





research (3–7). A list of NCHS and selected other publications using NHDS data is available at http://www.cdc.gov/nchs/nhds/nhds products.htm.

Estimates of the number of procedures shown in this report are for inpatients only. Surgery and other medical procedures are performed in a variety of other health care settings that are covered by the National Health Care Surveys. Data from these surveys have been published (8–12). Reports and more information about the surveys can be found at: http://www.cdc.gov/nchs/nhcs.htm.

#### **Methods**

#### Data source

NHDS collects data from a sample of inpatient records acquired from a national sample of hospitals. Because persons with multiple discharges during the year may be sampled more than once, estimates are for discharges, not persons. Only hospitals with an average length of stay of fewer than 30 days for all patients, and general hospitals and children's general hospitals are included in the survey. Federal, military, and Department of Veterans Affairs hospitals, as well as hospital units of institutions, such as prison hospitals, and hospitals with fewer than six beds staffed for patient use, are excluded.

Prior to 1988, NHDS was based on a two-stage design. The survey was redesigned in 1988 (13) and thereafter used a modified, three-stage design. Units selected at the first stage consist of either hospitals or geographic areas, such as counties, groups of counties, or metropolitan statistical areas in the 50 states and the District of Columbia. Within a sampled geographic area, hospitals are selected. Finally at the last stage, systematic random sampling is used to select discharges within sampled hospitals. Until 2003, the hospital sampling frame for the redesigned survey was constructed from the SMG Hospital Market Database (14). In 2003 and 2006, the sample frame was constructed from the products of Verispan, L.L.C., specifically their "Healthcare Market Index," and their

"Hospital Market Profiling Solution" (15). These two products were formerly known as the SMG Hospital Market Database. The hospital sampling frame and sample are updated every 3 years (13).

For 2007, the sample consisted of 501 hospitals, of which 24 were found to be out of scope (ineligible) because they had gone out of business or otherwise failed to meet the criteria for NHDS universe. Of the 477 in-scope (eligible) hospitals, 422 responded to the survey for an unweighted response rate of 88 percent. The weighted response rate was 82 percent. Data were collected for approximately 366,000 discharges.

The survey includes a sample of discharges from January 1 through December 31, 2007. NHDS data collection is authorized under Section 306 of the Public Health Service Act (Title 42 U.S. Code, 242k). Participation is voluntary. Data collected in NHDS are consistent with the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA). No personally identifying information, such as patient's name, address, or Social Security number, is collected in NHDS. All information collected is held in the strictest confidence according to law, including the Confidential Information Protection and Statistical Efficiency Act (Title 5 of PL 107-347). Approval for the 2007 NHDS protocol was renewed by the NCHS Research Ethics Review Board in 2007. Waivers of the requirements to obtain informed consent of patients and patient authorization for release of patient medical record data by health care providers were granted.

Two data collection procedures are used in the survey. One is a manual system in which sample selection and medical transcription from the hospital records to abstract forms are performed by the hospital's staff or by staff of the U.S. Census Bureau on behalf of NCHS. The other data collection procedure is an automated system in which NCHS purchases electronic medical record data from commercial organizations, state data systems, hospitals, or hospital associations, and then systematically samples these data. Whether a particular hospital's data are obtained manually or

from these electronic sources is determined in accordance with agreements with individual hospitals. In 2007, approximately 45 percent of respondent hospitals provided data through the automated system. A detailed report on the design and operation of NHDS has been published (13). The medical abstract form (Figure I) and the automated data contain items that relate to the personal characteristics of the patient. These items include birth date (converted to age), sex, race, ethnicity, marital status, ZIP Code, and expected sources of payment. Administrative items, such as admission and discharge dates, admission type and source, and discharge status, are also included. Admitting diagnosis and a present on admission checkbox for all of the diagnosis variables were added to the data hospitals were required to collect for billing effective in the last quarter of 2007 only. Although these data items were included in the 2007 NHDS data collection, they are not reported in the NHDS 2007 data file because it was not possible to make full year estimates based on 3 months of data. The medical information about patients includes up to seven discharge diagnoses, as many as four surgical and nonsurgical operations and procedures, and dates of surgery. Medical data are coded according to the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) (16). In 2002, the ICD-9-CM Coordination and Maintenance Committee created Chapter 00, Procedures and Interventions Not Elsewhere Classified, as a way of handling space limitations in the existing hierarchical structure. For the 2003-2005 NHDS data, this new chapter was included in the miscellaneous diagnostic and therapeutic procedures and new technologies category shown in reports for those years in Tables 8-11. Beginning with the 2006 NHDS report, the 00 codes that had previous code assignments in other chapters were included in the categories and chapters of their previous codes to make longitudinal analyses of these conditions easier for researchers. For

example, "Balloon angioplasty of coronary artery or coronary atherectomy" had been reassigned ICD-CM-9 code 00.66, but it was included with other operations on the cardiovascular system.

The NHDS contractor for coding and entry of the data from the abstracts gathered through manual data collection, conducts an ongoing quality control program. As part of this program, approximately 10 percent of the abstracts are independently recoded, with discrepancies resolved by a chief coder. The overall error rate for records manually coded for the 2007 data year was 0.2 percent for medical (ICD–9–CM) coding and keying combined and was also 0.2 percent for demographic coding and keying combined.

#### Results

# Patient and hospital characteristics

- The total hospitalization rate leveled off from 1995 to 2007 after declining during the period from 1980 to 1995.
   Throughout the entire period from 1970 to 2007, the rates for those aged 65 years and over were significantly higher than those for the younger age groups (Figure 1).
- In 2007, an estimated 34.4 million inpatients, excluding newborn infants, were discharged from nonfederal short-stay hospitals in the United States (Table 1).
- The discharge rate was 1,143.9 per 10,000 population: 936.7 for males and 1,344.0 for females (Table 1). This difference was largely driven by the 15–44 year-old female's discharge rates (1,247.7 per 10,000 population) compared with male's discharge rates (449.8 per 10,000 population) in this same age group. It is primarily in the 15–44 year-old group that most of the hospitalizations for childbirth occurred. Males had an average length of stay of 5.3 days compared with 4.6 days for females (Table 1).
- The discharge rate per 10,000 population ranged from 947.8 in the West to 1,347.9 in the Northeast region. The average length of stay

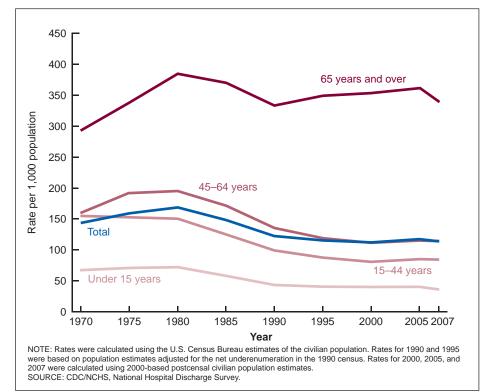


Figure 1. Hospitalization rates, by age: United States, 1970–2007

ranged from 4.3 days in the Midwest and West to 5.8 days in the Northeast region (Table 1).

- In 2007, those aged 65 years and over accounted for just 13 percent of the U.S. population, but 37 percent of the hospital discharges, and 43 percent of the days of care. In contrast, 15–44 year-olds comprised 42 percent of the population and 31 percent of the hospital discharges, but only 24 percent of the days of care. Children under age 15 years who made up 20 percent of the population, were only 6 percent of the hospitalizations and used only 6 percent of the days of care (Figure 2).
- The average length of stay for those aged 65 years and over was 5.6 days; for those 45–64 years, it was 5.1 days; for those 15–44 years, it was 3.7 days; and for children under age 15 years, it was 4.7 days (Table 1).

### Diagnoses

• Six diagnostic categories together accounted for 13.1 million or about

- 38 percent of all discharges. These were delivery (4.1 million), heart disease (4.0 million), psychoses (1.7 million), malignant neoplasms (1.2 million), pneumonia (1.1 million), and fractures (1.0 million) (Table 2).
- Overall, the average length of stay was 4.8 days, but it was 2.6 days for delivery, 4.4 days for heart disease, 5.0 days for pneumonia, 5.1 days for fractures, 6.5 days for malignant neoplasms, and 7.5 days for psychoses (Table 4).
- Of the 1.0 million discharges hospitalized for fractures, more than one-half (531,000) were aged 65 years and over (Table 2). Those 65 years and over had 140.2 discharges per 10,000 population with a first-listed diagnosis of fracture (Table 3), and the average length of stay for these discharges was 5.6 days (Table 4). Almost one-half of the fracture hospitalizations for this age group were for hip fractures (fractures of neck of femur).
- Among children under age 15 years, respiratory diseases were responsible for a quarter of all hospitalizations.

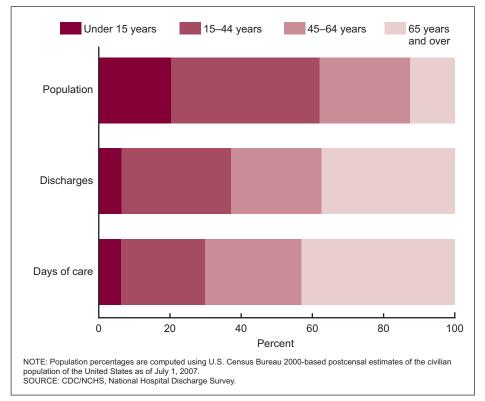


Figure 2. Distribution of civilian population, hospital discharges, and days of care, by age: United States, 2007

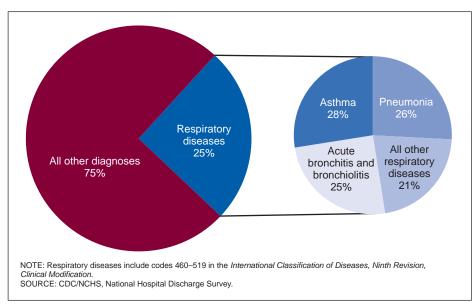


Figure 3. Hospitalization for respiratory diseases among children under age 15 years: United States, 2007

Asthma, pneumonia, and acute bronchitis and bronchiolitis were the first-listed diagnoses for over three quarters of these hospitalizations (Figure 3).

- About one-fifth (4.1 million) of female discharges were for childbirth (Table 5).
- About 15 percent (2.1 million) of male discharges and 9 percent (1.8

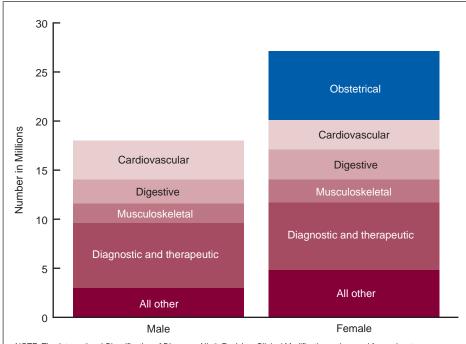
million) of female discharges were for heart disease (Table 5).

#### **Procedures**

- During 2007, 45.0 million procedures were performed on hospital inpatients (Table 8). Nationally, the rate of procedures was 1,497.4 per 10,000 population (Table 9). For males, this rate was 1,216.4 per 10,000 population and for females it was 1,769.1 per 10,000 population (Table 11).
- About 4 million procedures, which was over one-fifth of all procedures performed on males, were cardiovascular (Table 10, Figure 4).
   For females, about 3 million of their procedures—11 percent—fell into this category (Table 10 and Figure 4).
- The rate of cardiovascular procedures was also higher for males (268.4 per 10,000 population) than for females (195.0 per 10,000 population) (Table 11).
- Over 1 million inpatient cardiac catheterization procedures were performed in 2007 and more than 90 percent of them were on patients aged 45 years and over (Table 8).
- Males aged 65 years and over, and those 45–64 years, had higher cardiac catheterization rates than females in the same age groups for each of the years from 1997 to 2007. The rate of inpatient cardiac catheterization procedures declined during the time period from 2002 to 2007 (Figure 5).
- About 26 percent of all procedures performed on females were obstetrical (Figure 4). Cesarean section and repair of current obstetric laceration were the most frequent obstetrical procedures performed (Table 10).
- Females had more operations on the digestive system than males (3.1 million compared with 2.4 million) (Table 10 and Figure 4). Similarly, the rate of digestive procedures was more for females (202.2 per 10,000 population) than for males (161.5 per 10,000 population) (Table 11).

#### References

 DeFrances CJ, Cullen KA, Kozak LJ. National Hospital Discharge Survey:



NOTE: The International Classification of Diseases, Ninth Revision, Clinical Modification codes used for each category are as follows: Cardiovascular (35–39, 00.50–00.51,00.53–00.55,00.57,00.61–00.66); Digestive (42–54); Obstetrical (72–75); Musculoskeletal (76–84, 00.70–00.73, 00.80–00.84,00.85–00.87); Diagnostic and therapeutic (87–99, 00 codes not included in the other categories), and All other (01–16, 18–34, 40–41, 55–59, 60–71, 85–86). SOURCE: CDC/NCHS, National Hospital Discharge Survey.

Figure 4. All-listed inpatient procedures, by sex: United States, 2007

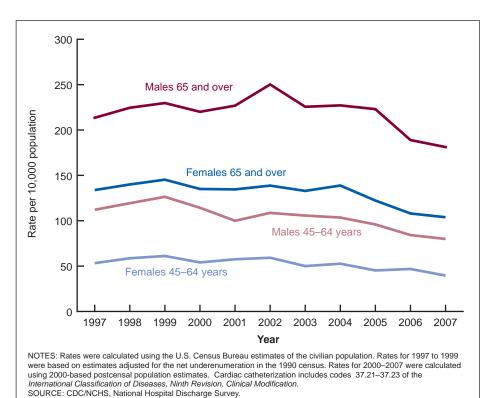


Figure 5. Cardiac catheterization rates, by sex and age: United States, 1997–2007

- 2005 annual summary with detailed diagnosis and procedure data.

  National Center for Health Statistics.

  Vital Health Stat 13(165): 2007.

  Available from: www.cdc.gov/nchs/data/series/sr\_13/sr13\_165.pdf.
- National Center for Health Statistics. Health, United States, 2009: With special feature on medical technology. Hyattsville, MD. 2010. Available from: http://www.cdc.gov/ nchs/data/hus/hus09.pdf.
- Branum AM, Lukacs SL. Food allergy among children in the United States. Pediatrics 124(6):1549–55.
   December 2009.
- 4. Saba S, Ravipati LP, Voigt A. Recent trends in utilization of implantable cardioverter-defibrillators in survivors of cardiac arrest in the United States. Pacing Clin Electrophysiol 32(11):1444–9. November 2009.
- Frankman EA, Wang L, Bunker CH, Lowder JL. Episiotomy in the United States: has anything changed? Am J Obstet Gynecol 200(5):573.e1-7.
   E-pub February 24, 2009. May 2009.
- Esper AM, Moss M, Martin GS. The effect of diabetes mellitus on organ dysfunction with sepsis: an epidemiological study. Critical Care 13(1):R18. [E-pub ahead of print]. February 13, 2009.
- Whiteman MK, Hillis SD, Jamieson DJ, et al. Inpatient hysterectomy surveillance in the United States, 2000–2004. Am J Obstet Gynecol 198(1):34.el–7. 2008.
- Owings MF, Kozak LJ. Ambulatory and inpatient procedures in the United States, 1996. National Center for Health Statistics. Vital Health Stat 13(139). 1998. Available from: http://www.cdc.gov/nchs/data/series/ sr\_13/sr13\_139.pdf.
- Cullen KA, Hall MJ, Golosinskiy A. Ambulatory Surgery in the United States. 2006. National health statistics reports; no 11. Revised. Hyattsville, MD: National Center for Health Statistics. 2009. Available from: http://www.cdc.gov/nchs/data/ nhsr/nhsr011.pdf.
- Hsiao J, Cherry DK, Woodwell DA, Rechsteiner EA. National Ambulatory Medical Care Survey: 2007 summary. National health statistics reports; no 27. Hyattsville, MD: National Center for Health Statistics. 2010. Forthcoming.

- 11. Hing E, Hall MJ, Ashman JJ, Xu J. National Hospital Ambulatory Medical Care Survey: 2007 outpatient department summary. National health statistics reports; no 28. Hyattsville, MD: National Center for Health Statistics. 2010. Available from: http://www.cdc.gov/nchs/data/ nhsr/nhsr028.pdf.
- 12. Niska RW, Bhuiya FA, Xu J. National Hospital Ambulatory Medical Care Survey: 2007 emergency department summary. National health statistics reports; no 26. Hyattsville, MD: National Center for Health Statistics. 2010. Available from: http://www.cdc.gov/nchs/data/ nhsr/nhsr026.pdf.
- Dennison CF, Pokras R. Design and operation of the National Hospital Discharge Survey: 1988 redesign.
   National Center for Health Statistics.
   Vital Health Stat 1(39). 2000.
   Available from: http://www.cdc.gov/nchs/data/series/sr\_01/sr01\_039.pdf.
- 14. SMG Marketing Group, Inc. Hospital Market Database. Chicago: Healthcare Information Specialists, 1342 North LaSalle Drive, Chicago, IL. April 1987, April 1991, April 1994, April 1997, April 2000.
- Verispan, L.L.C. 2003 and 2006
   Releases of the Healthcare Market
   Index and Hospital Market Profiling
   Solution.
- 16. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention, Centers for Medicare & Medicaid Services. Official version. International Classification of Diseases, Ninth Revision, Clinical Modification, sixth edition. DHHS Pub No. (PHS) 06–1260.CD–ROM issued October 2006.
- 17. Research Triangle Institute. SUDAAN Language Manual, Release 9.0. Research Triangle Park, NC: Research Triangle Institute. 2004.
- 18. Gillum BS, Graves EJ, Kozak LJ. Trends in hospitalization: United States, 1988–92. National Center for Health Statistics. Vital Health Stat 13(124). 1996. Available from: http://www.cdc.gov/nchs/data/series/sr 13/sr13\_124.pdf.

Table 1. Hospital discharges by age, region, and sex (number, rate, and average length of stay): United States, 2007 [Discharges of inpatients from short-stay nonfederal hospitals. Excludes newborn infants]

	Both	sexes	N	1ale	Fe	male
Selected characteristic	Number	Standard error	Number	Standard error	Number	Standard error
			Number in	n thousands		
Total	34,369	1,378	13,834	623	20,535	785
Age						
Under 15 years	2,181	394	1,221	224	960	171
5–44 years	10,571	417	2,845	137	7,727	316
45–64 years	8,753	356	4,316	185	4,437	180
S5 years and over	12,863	573	5,453	264	7,411	317
Region						
Northeast	7,361	743	3,196	377	4,165	373
Midwest	7,706	774	3,021	310	4,685	472
South	12,689	641	4,945	266	7,744	397
West	6,612	569	2,672	279	3,940	306
			Rate per 10,0	000 population <sup>1</sup>		
Total	1,143.9	45.8	936.7	42.2	1,344.0	51.4
Age						
Under 15 years	358.2	64.8	391.8	71.9	323.0	57.6
15–44 years	844.6	33.3	449.8	21.6	1,247.7	51.1
45–64 years	1,143.9	46.5	1,156.6	49.5	1,131.7	46.0
65 years and over	3,395.1	151.3	3,412.9	165.4	3,382.1	144.6
Region						
Northeast	1,347.9	136.0	1,204.0	141.9	1,483.9	132.8
Midwest	1,162.8	116.7	926.5	95.0	1,391.6	140.2
South	1,155.5	58.4	920.6	49.6	1,380.5	70.7
West	947.8	81.5	767.5	80.0	1,127.4	87.6
			Average lengt	h of stay in day	S	
Total	4.8	0.1	5.3	0.1	4.6	0.1
Age						
Under 15 years	4.7	0.3	4.7	0.4	4.8	0.3
15–44 years	3.7	0.1	4.9	0.1	3.3	0.1
45–64 years	5.1	0.1	5.3	0.1	5.0	0.1
65 years and over	5.6	0.1	5.6	0.1	5.6	0.1
Region						
Northeast	5.8	0.3	6.1	0.3	5.5	0.3
Midwest	4.3	0.1	4.6	0.1	4.1	0.1
South	4.9	0.1	5.4	0.1	4.6	0.1
West	4.3	0.2	4.8	0.2	4.0	0.1

<sup>&</sup>lt;sup>1</sup>Rates were calculated using U.S. Census Bureau 2000-based postcensal estimates of the civilian population as of July 1, 2007.

Table 2. Hospital discharges (number) by first-listed diagnosis and age: United States, 2007

	All a	ges	Unde 15 ye		15–4 year		45–6 year		65 ye and o	
Category of first-listed diagnosis and ICD-9-CM code	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE
				Nu	mber in th	ousan	ds			
All conditions	34,369	1,378	2,181	394	10,571	417	8,753	356	12,863	573
Infectious and parasitic diseases	1,215	63	131	27	225	11	295	15	565	32
Septicemia	592	37	12	3	52	5	136	11	392	27
Neoplasms	1,598	77	38	10	242	16	649	38	670	32
Malignant neoplasms	1,225	64	*	*	116	11	484	33	596	29
Malignant neoplasm of large intestine and rectum	146	9	*	*	10	2	45	5	90	(
Malignant neoplasm of trachea, bronchus, and lung162,176.4,197.0,197.3	179	16	*		*		64	8	107	!
Benign neoplasms	332 174	18 13	6	2	118	8 7	154 87	11 8	54	
Benign neoplasm of uterus	1,816	87	154	29	85 364	19	67 545	6 27	753	4
Diabetes mellitus	626	32	22	5	156	10	220	13	228	1
Volume depletion	469	31	102	19	44	6	79	6	244	1
Diseases of the blood and blood-forming organs	527	50	*	*	127	12	116	11	226	2
Anemias	382	43	24	5	98	11	79	9	181	2
Mental disorders	2,386	310	148	32	1,251	185	743	85	244	2
Psychoses	1,690	253	89	24	883	149	526	72	193	1
Schizophrenic disorders	324	40	*	*	167	22	131	18	23	
Major depressive disorder	430	77	*	*	228	44	136	23	44	
Diseases of the nervous system and sense organs	794	73	101	25	174	13	224	25	295	3
Diseases of the circulatory system	5,890	236	33	8	435	21	1,808	76	3,615	15
Essential hypertension	349	20	*	*	51	6	148	10	148	1
Heart disease	3,965	165	17	5	250	15	1,205	55	2,493	10
Acute myocardial infarction	577	33	*	*	33	5	198	13	346	2
Coronary atherosclerosis	812	54	*	*	32	3	329	21	451	3
Other ischemic heart disease	182	14	*	*	14	2	81	9	88	
Cardiac dysrhythmias	827	39	*	*	51	4	207	13	562	2
Congestive heart failure	982	43			40	4	227	14	713	3
Cerebrovascular disease	829	42	*5	*1	44	5	223	14	558	3
Diseases of the respiratory system	3,300	162 24	547 138	92 22	332 12	16 2	781	37 3	1,641	8
Acute bronchitis and bronchiolitis	196 1,056	56	141	18	12 89	6	16 217	13	31 610	4
Chronic bronchitis	476	27	*	*	18	4	141	10	316	2
Asthma	456	39	151	32	86	7	123	10	96	_
Diseases of the digestive system	3,290	134	203	35	819	38	1,040	46	1,229	5
Appendicitis	300	22	71	12	149	10	53	5	27	
Noninfectious enteritis and colitis	304	19	40	8	86	8	74	6	104	
Intestinal obstruction	315	18	12	2	44	5	100	8	159	1
Diverticula of intestine	276	17	*	*	39	6	97	7	139	1
Cholelithiasis	310	16	*2	*1	110	8	88	6	109	
Acute pancreatitis	235	13	*	*	77	6	101	8	55	
Diseases of the genitourinary system	2,092	85	71	14	523	28	550	28	947	4
Calculus of kidney and ureter	135	8	*	*	50	5	54	4	31	
Urinary tract infection	517	34	23	5	40	5	85	10	370	2
Complications of pregnancy, childbirth, and the puerperium <sup>2</sup> 630–677	498	31	*	*	490	31	*	*		٠.
Diseases of the skin and subcutaneous tissue	752	41	83	20	192	11	240	15	236	1
Cellulitis and abscess	554	28	52	10	152	10	189	13	161	1
Diseases of the musculoskeletal system and connective tissue	1,881	112 56	28	7	270	16 3	702 271	43	880	6
Osteoarthrosis and allied disorders	718 320	22	*	*	18 99	8	145	23 10	429 76	3
Congenital anomalies	185	42	*	*	99 29	4	145 29	8	14	
Certain conditions originating in the perinatal period	171	34	169	34	29 *	*	29 *	*	*	
Symptoms, signs, and ill-defined conditions	188	23	44	11	52	6	46	7	46	1
Injury and poisoning	2,855	154	190	31	796	44	768	40	1,102	6
Fractures, all sites <sup>3</sup>	1,045	68	60	11	249	21	205	15	531	3
Fracture of neck of femur <sup>3</sup>	297	22	*	*	9	2	25	3	264	2
Poisonings	239	16	13	3	123	9	76	7	28	_
Certain complications of surgical and medical care	908	54	32	7	186	13	336	20	355	2
Supplementary classifications	4,930	234	65	14	4,249	209	217	19	400	42
Females with deliveries	4,136	206	*7	*2	4,121	206	8	1		

<sup>\*</sup> Figure does not meet standards of reliability or precision.

SE is standard error. ... Category not applicable.

<sup>&</sup>lt;sup>2</sup>First-listed diagnosis for females with deliveries is coded V27, shown under "Supplementary classifications."

<sup>&</sup>lt;sup>3</sup>Excludes fractures coded as 733.1, pathologic fracture.

Table 3. Hospital discharges (rate) by first-listed diagnosis and age: United States, 2007

	All aç	ges	Und 15 ye		15- yea				65 years and over	
Category of first-listed diagnosis and ICD-9-CM code	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>
				Rate	per 10.0	og 000	pulation <sup>2</sup>			
All conditions	1,143.9	45.8	358.2	64.8	844.6		1,143.9	46.5	3,395.1	151.0
Infectious and parasitic diseases	40.4	2.1	21.4	4.5	18.0	0.9	38.5	2.0	149.0	8.9
Septicemia	19.7	1.2	1.9	0.5	4.2	0.4	17.8	1.4	103.6	7.0
Neoplasms	53.2	2.6	6.2	1.7	19.3	1.3	84.8	5.0	176.8	8.8
Malignant neoplasms	40.8	2.1	*	*	9.3	0.9	63.2	4.3	157.2	7.
Malignant neoplasm of large intestine and rectum	4.9	0.3	*	*	0.8	0.1	5.9	0.7	23.7	1.1
Malignant neoplasm of trachea, bronchus, and lung	6.0	0.5	*	*	*	*	8.4	1.0	28.2	2.3
Benign neoplasms	11.1 5.8	0.6 0.4	1.1	0.3	9.4 6.8	0.6 0.5	20.1 11.4	1.4 1.1	14.3	1.2
Endocrine, nutritional and metabolic diseases, and immunity disorders	60.4	2.9	25.2	4.7	29.1	1.6	71.3	3.5	198.8	10.8
Diabetes mellitus	20.8	1.1	3.6	0.8	12.5	0.8	28.8	1.7	60.2	5.0
Volume depletion	15.6	1.0	16.8	3.1	3.5	0.4	10.3	0.8	64.3	4.2
Diseases of the blood and blood-forming organs	17.5	1.7	*	*	10.2	1.0	15.2	1.5	59.7	7.4
Anemias	12.7	1.4	3.9	0.8	7.9	0.8	10.3	1.2	47.8	7.2
Mental disorders	79.4	10.3	24.3	5.2	100.0	14.8	97.1	11.2	64.5	7.2
Psychoses	56.3	8.4	14.6	4.0	70.5	11.9	68.7	9.4	50.9	5.1
Schizophrenic disorders	10.8 14.3	1.3 2.6	*	*	13.3 18.2	1.8 3.5	17.1 17.7	2.3	6.1 11.7	1.0
Diseases of the nervous system and sense organs	26.4	2.4	16.7	4.2	13.9	1.1	29.2	3.3	77.9	9.4
Diseases of the circulatory system	196.0	7.8	5.3	1.4	34.7	1.7	236.3	9.9	954.0	40.5
Essential hypertension	11.6	0.7	*	*	4.1	0.5	19.3	1.3	39.0	3.1
Heart disease	131.9	5.5	2.8	0.8	19.9	1.2	157.4	7.2	658.1	28.4
Acute myocardial infarction	19.2	1.1	*	*	2.6	0.4	25.8	1.7	91.4	5.7
Coronary atherosclerosis	27.0	1.8	*	*	2.6	0.3	43.0	2.7	119.1	8.7
Other ischemic heart disease	6.1	0.4	*	*	1.1	0.2	10.5	1.2	23.1	1.9
Cardiac dysrhythmias	27.5 32.7	1.3 1.4	*	*	4.1 3.2	0.4	27.0 29.6	1.7 1.8	148.3 188.3	7.4 8.7
Congestive heart failure	27.6	1.4	*0.8	*0.2	3.5	0.3	29.0	1.9	147.2	8.0
Diseases of the respiratory system	109.8	5.4	89.8	15.1	26.5	1.3	102.0	4.9	433.2	23.2
Acute bronchitis and bronchiolitis	6.5	0.8	22.6	3.6	1.0	0.2	2.1	0.3	8.1	1.1
Pneumonia	35.2	1.9	23.1	3.0	7.1	0.5	28.3	1.7	161.0	11.5
Chronic bronchitis	15.8	0.9	*	*	1.4	0.3	18.5	1.3	83.4	5.2
Asthma	15.2	1.3	24.8	5.3	6.9	0.5	16.0	1.4	25.4	2.0
Diseases of the digestive system	109.5	4.5	33.3	5.8	65.4	3.0	135.9	6.0	324.2	13.6
Appendicitis	10.0	0.7	11.6	2.0	11.9	0.8	6.9	0.6	7.2	1.1
Noninfectious enteritis and colitis	10.1 10.5	0.6	6.6 2.0	1.4 0.4	6.9 3.5	0.6 0.4	9.7 13.1	0.7 1.0	27.4 41.9	2.3
Diverticula of intestine	9.2	0.6	z.u *	*	3.1	0.4	12.7	1.0	36.6	2.6
Cholelithiasis	10.3	0.5	*0.4	*0.1	8.8	0.6	11.5	0.8	28.9	1.8
Acute pancreatitis	7.8	0.4	*	*	6.1	0.5	13.2	1.1	14.5	1.3
Diseases of the genitourinary system	69.6	2.8	11.7	2.3	41.8	2.2	71.8	3.6	250.0	11.9
Calculus of kidney and ureter	4.5	0.3	*	*	4.0	0.4	7.0	0.5	8.1	0.9
Urinary tract infection	17.2	1.1	3.7	0.9	3.2	0.4	11.0	1.3	97.6	7.4
Complications of pregnancy, childbirth, and the puerperium <sup>3</sup>	16.6	1.0	10.7	~ 1	39.1	2.5				
Diseases of the skin and subcutaneous tissue	25.0 18.4	1.3 0.9	13.7 8.5	3.4 1.6	15.3 12.1	0.9	31.4 24.7	2.0 1.7	62.3 42.6	4.0 2.9
Diseases of the musculoskeletal system and connective tissue	62.6	3.7	4.7	1.2	21.6	1.2	91.7	5.7	232.3	16.0
Osteoarthrosis and allied disorders	23.9	1.9	*	*	1.5	0.3	35.4	3.0	113.1	8.9
Intervertebral disc disorders	10.6	0.7	*	*	7.9	0.7	18.9	1.4	20.0	2.0
Congenital anomalies	6.2	1.4	*	*	2.3	0.3	3.8	1.1	3.8	1.0
Certain conditions originating in the perinatal period	5.7	1.1	27.8	5.6	*	*	*	*	*	,
Symptoms, signs, and ill-defined conditions	6.3	0.8	7.3	1.8	4.2	0.5	6.0	0.9	12.2	2.6
Injury and poisoning	95.0	5.1	31.2	5.1	63.6	3.5	100.4	5.2	290.8	17.8
Fractures of neck of femur <sup>4</sup>	34.8	2.3	9.8	1.7	19.9	1.7	26.8	2.0	140.2	9.2
Fracture of neck of femur <sup>4</sup>	9.9 8.0	0.7 0.5	2.1	0.4	0.7 9.8	0.1	3.2 10.0	0.4	69.6 7.3	5.5 0.9
Certain complications of surgical and medical care	30.2	1.8	5.2	1.2	14.8	1.0	43.9	2.6	93.6	7.0
Supplementary classifications	164.1	7.8	10.6	2.3	339.4	16.7	28.4	2.5	105.6	11.2
Females with deliveries	137.7	6.9	*1.1	*0.3	329.2	16.4	1.1	0.2		

<sup>\*</sup> Figure does not meet standards of reliability or precision.

SE is standard error. ... Category not applicable.

<sup>&</sup>lt;sup>2</sup>Rates were calculated using U.S. Census Bureau 2000-based postcensal estimates of the civilian population as of July 1, 2007.

<sup>&</sup>lt;sup>3</sup>First-listed diagnosis for females with deliveries is coded V27, shown under "Supplementary classifications. <sup>4</sup>Excludes fractures coded as 733.1, pathologic fracture.

Table 4. Hospital discharges by first-listed diagnosis and age (average length of stay): United States, 2007

	All ag	jes	Und 15 ye		15–4 year		45 yea		65 ye	
Category of first-listed diagnosis and ICD-9-CM code	ALOS <sup>1</sup>	SE <sup>2</sup>	ALOS <sup>1</sup>	SE						
All conditions	4.8	0.1	4.7	0.3	3.7	0.1	5.1	0.1	5.6	0.1
Infectious and parasitic diseases	7.2	0.2	3.4	0.3	6.3	0.4	8.4	0.5	7.9	0.2
Septicemia	9.4	0.3	7.1	1.1	10.1	1.3	11.3	0.9	8.6	0.3
Neoplasms	5.8	0.1	6.3	1.1	4.2	0.2	5.4	0.2	6.7	0.2
Malignant neoplasms	6.5	0.1	6.7	1.2	5.9	0.4	6.2	0.2	6.9	0.2
Malignant neoplasm of large intestine and rectum	8.5	0.4	*	*	7.2	0.7	8.7	1.2	8.5	0.4
Malignant neoplasm of trachea, bronchus, and lung162,176.4,197.0,197.3	6.8	0.3	*	*	6.1	0.8	6.0	0.4	7.3	0.
Benign neoplasms	3.4	0.1	3.3	0.4	2.6	0.1	3.0	0.1	6.0	0.
Benign neoplasm of uterus	2.4	0.1	*	*	2.4	0.1	2.5	0.1	*	0.
Endocrine, nutritional and metabolic diseases, and immunity disorders240–279	4.2	0.1	2.9	0.2	3.2	0.1	4.2	0.1	4.9	0.:
Diabetes mellitus	5.1	0.1	3.1	0.8	3.8	0.1	5.3	0.2	6.2	0.
Volume depletion	3.4	0.1	2.1	0.1	2.7	0.2	3.2	0.2	4.1	0.
Diseases of the blood and blood-forming organs	5.1	0.4	3.3	0.2	5.4	0.4	5.3	0.6	5.2	0.
Anemias	5.1	0.6	3.6	0.4	5.8	0.5	4.9	0.8	5.0	0.7
Mental disorders	7.1	0.3	13.3	3.2	6.2	0.2	7.1	0.3	8.0	0.4
Psychoses	7.5	0.2	9.7	1.3	6.6	0.2	8.2	0.4	8.6	0.4
Schizophrenic disorders	11.1	0.5	*	*	9.8	0.5	12.6	0.8	12.8	1.0
Major depressive disorder	6.3	0.2	7.1	0.7	5.4	0.2	6.7	0.3	9.8	0.
Diseases of the nervous system and sense organs	5.9	0.9	3.9	0.3	4.7	0.4	6.3	1.2	6.9	1.
Diseases of the circulatory system	4.5	0.1	5.9	1.0	4.4	0.2	4.1	0.1	4.7	0.
Essential hypertension	2.6	0.1	*	*	2.3	0.2	2.5	0.1	2.9	0.
Heart disease	4.4	0.1	5.6	1.3	3.8	0.2	3.9	0.1	4.7	0.
Acute myocardial infarction	5.1	0.1	*	*	3.5	0.3	4.2	0.2	5.8	0.
Coronary atherosclerosis	3.4	0.1	*	*	2.4	0.1	3.2	0.1	3.6	0.
Other ischemic heart disease	2.4	0.1	*	*	2.7	0.5	2.1	0.1	2.7	0.
Cardiac dysrhythmias	3.6	0.1	3.5	0.9	2.3	0.1	3.2	0.1	3.9	0.
Congestive heart failure	5.1	0.1	*	*	5.2	0.7	4.9	0.2	5.1	0.
Cerebrovascular disease	5.3	0.2	*	*	8.3	1.7	5.4	0.4	5.0	0.2
Diseases of the respiratory system	5.1	0.1	3.3	0.2	4.3	0.2	5.4	0.2	5.7	0.
Acute bronchitis and bronchiolitis	3.1	0.1	2.9	0.1	2.4	0.3	3.7	0.4	3.8	0.2
Pneumonia	5.0	0.1	3.2	0.2	4.6	0.3	5.1	0.2	5.4	0.
Chronic bronchitis	4.7	0.1	*	*	4.4	0.5	4.6	0.3	4.7	0.
Asthma	3.4	0.1	2.4	0.1	3.1	0.2	4.0	0.2	4.6	0.5
Diseases of the digestive system	4.6	0.1	4.3	0.4	3.7	0.1	4.7	0.1	5.3	0.
Appendicitis	3.1	0.2	3.5	0.3	2.3	0.1	2.9	0.2	6.6	1.4
Noninfectious enteritis and colitis	4.4	0.2	2.9	0.5	4.3	0.3	4.5	0.3	5.0	0.4
Intestinal obstruction	6.0	0.2	5.5	1.2	4.5	0.3	5.9	0.4	6.5	0.3
Diverticula of intestine	4.8	0.1	*	*	4.4	0.3	4.5	0.2	5.0	0.2
Cholelithiasis	3.9	0.1	*2.7	*0.2	2.7	0.1	3.5	0.2	5.5	0.2
Acute pancreatitis	6.1	0.5	*4.1	*0.6	4.9	0.1	7.1	1.2	5.9	0.
Diseases of the genitourinary system	4.1	0.5	2.9	0.0	2.8	0.3	4.0	0.2	5.0	0.
			Z.5 *	V. I			2.7	0.2		0.
Calculus of kidney and ureter	2.5	0.1	0.0	0.4	2.2	0.1			2.7	
Urinary tract infection	4.6	0.1	2.6	0.1	3.6	0.4	4.5	0.3	4.9	0.2
Complications of pregnancy, childbirth, and the puerperium <sup>3</sup> 630–677	2.9	0.1			2.8	0.1				
Diseases of the skin and subcutaneous tissue	4.8	0.1	2.8	0.2	4.7	0.3	5.0	0.2	5.5	0.2
Cellulitis and abscess	4.5	0.1	2.6	0.1	4.0	0.2	4.7	0.2	5.2	0.
Diseases of the musculoskeletal system and connective tissue710–739	4.1	0.2	4.2	0.4	3.7	0.3	3.9	0.2	4.4	0.
Osteoarthrosis and allied disorders	3.7	0.1	*	*	3.1	0.1	3.4	0.1	3.9	0.
Intervertebral disc disorders	3.1	0.1	*	*	2.6	0.2	2.9	0.1	4.1	0.
Congenital anomalies	6.1	1.3	5.3	0.9	3.5	0.3	*	*	*	
Certain conditions originating in the perinatal period	7.8	1.0	7.9	1.0	*	*	*	*	*	
Symptoms, signs, and ill-defined conditions	3.1	0.3	2.9	0.5	2.7	0.4	3.0	0.4	3.8	0.
njury and poisoning	5.3	0.1	4.2	0.4	4.4	0.2	5.7	0.2	5.8	0.
Fractures, all sites <sup>4</sup>	5.1	0.2	2.5	0.2	4.3	0.2	5.7	0.4	5.6	0.
Fracture of neck of femur <sup>4</sup>	6.1	0.2	*	*	6.2	1.2	6.2	0.6	6.1	0.
Poisonings	3.0	0.2	1.6	0.1	2.5	0.1	3.0	0.2	5.4	1.
Certain complications of surgical and medical care	6.2	0.2	7.9	1.7	5.4	0.3	6.1	0.2	6.5	0.3
Supplementary classifications	3.7	0.1	4.9	0.6	2.7	0.0	8.5	0.6	10.8	0.4

<sup>\*</sup> Figure does not meet standards of reliability or precision. . . . Category not applicable. 0.0 Quar <sup>1</sup>ALOS is average length of stay. <sup>2</sup>SE is standard error of average length of stay. <sup>3</sup>First-listed diagnosis for females with deliveries is coded V27, shown under "Supplementary classifications." <sup>4</sup>Excludes fractures coded as 733.1, pathologic fracture.

<sup>0.0</sup> Quantity more than zero, but less than 0.05.

Table 5. Hospital discharges by first-listed diagnosis and sex (number): United States, 2007

	Both s	exes	Mal	е	Fema	ıle
Category of first-listed diagnosis and ICD-9-CM code	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>
			Number in th	ousands		
All conditions	34,369	1,378	13,834	623	20,535	785
Infectious and parasitic diseases	1,215	63	570	34	645	34
Septicemia	592	37	271	19	321	20
Neoplasms	1,598	77	648	37	950	48
Malignant neoplasms	1,225	64	580	34	644	35
Malignant neoplasm of large intestine and rectum	146	9	70	5	76	6
Malignant neoplasm of trachea, bronchus, and lung162,176.4,197.0,197.3	179	16	87	9	93	10
Benign neoplasms	332	18	51	5	281	16
Benign neoplasm of uterus	174	13			174	13
Endocrine, nutritional and metabolic diseases, and immunity disorders240–279	1,816	87	771	41	1,045	50
Diabetes mellitus	626	32	322	17	304	18
Volume depletion	469 527	31 50	188 216	17 23	281 311	19 29
Diseases of the blood and blood-forming organs	382	43	146	23 19	236	29 26
Mental disorders	2,386	310	1,261	157	1,125	160
Psychoses	1,690	253	852	121	838	137
Schizophrenic disorders	324	40	180	23	144	21
Major depressive disorder	430	77	180	31	250	47
Diseases of the nervous system and sense organs	794	73	353	41	441	33
Diseases of the circulatory system	5,890	236	3,016	135	2,873	107
Essential hypertension	349	20	138	11	211	13
Heart disease	3,965	165	2,121	97	1,844	74
Acute myocardial infarction	577	33	341	22	236	14
Coronary atherosclerosis	812	54	527	39	285	18
Other ischemic heart disease	182	14	96	8	86	8
Cardiac dysrhythmias	827	39	421	24	407	20
Congestive heart failure	982	43	464	25	518	24
Cerebrovascular disease	829	42	371	23	458	22
Diseases of the respiratory system	3,300 196	162 24	1,536 101	83 15	1,765 95	88 10
Pneumonia	1,056	56	502	27	554	36
Chronic bronchitis	476	27	217	13	259	17
Asthma	456	39	182	22	274	20
Diseases of the digestive system	3,290	134	1,510	68	1,781	72
Appendicitis	300	22	179	15	121	9
Noninfectious enteritis and colitis	304	19	121	11	183	12
Intestinal obstruction	315	18	147	11	168	10
Diverticula of intestine	276	17	116	8	160	12
Cholelithiasis	310	16	104	7	206	12
Acute pancreatitis	235	13	122	8	114	8
Diseases of the genitourinary system	2,092	85	673	30	1,419	62
Calculus of kidney and ureter	135	8	71	6	64	5
Urinary tract infection	517	34	149	12	368	26
Complications of pregnancy, childbirth, and the puerperium <sup>2</sup>	498 752	31 41	396	24	498 355	31 19
Diseases of the skin and subcutaneous tissue	554	28	294	17	260	19
Diseases of the musculoskeletal system and connective tissue	1,881	112	804	49	1,077	67
Osteoarthrosis and allied disorders	718	56	283	25	435	34
Intervertebral disc disorders	320	22	161	12	159	13
Congenital anomalies	185	42	96	25	90	19
Certain conditions originating in the perinatal period	171	34	94	18	77	17
Symptoms, signs, and ill-defined conditions	188	23	82	10	106	14
Injury and poisoning	2,855	154	1,441	81	1,415	79
Fractures, all sites <sup>3</sup> 800–829	1,045	68	472	35	573	37
Fracture of neck of femur <sup>3</sup>	297	22	89	8	208	17
Poisonings	239	16	113	10	126	9
Certain complications of surgical and medical care	908	54	441	27	467	30
Supplementary classifications	4,930	234	367	40	4,564	219
Females with deliveries	4,136	206			4,136	206

<sup>...</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>SE is standard error.

<sup>&</sup>lt;sup>2</sup>First-listed diagnosis for females with deliveries is coded V27, shown under "Supplementary classifications."

<sup>&</sup>lt;sup>3</sup>Excludes fractures coded as 733.1, pathologic fracture.

Table 6. Hospital discharges by first-listed diagnosis and sex (rate): United States, 2007

	Both s	exes	Ma	ıle	Female		
Category of first-listed diagnosis and ICD-9-CM code	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>	
			Rate per 10,00	00 population <sup>2</sup>	2		
All conditions	1,143.9	45.8	936.7	42.2	1,344.0	51.4	
Infectious and parasitic diseases	40.4	2.1	38.6	2.3	42.2	2.2	
Septicemia	19.7	1.2	18.4	1.3	21.0	1.3	
Veoplasms	53.2	2.6	43.9	2.5	62.2	3.1	
Malignant neoplasms	40.8	2.1	39.3	2.3	42.2	2.3	
Malignant neoplasm of large intestine and rectum153–154,197.5	4.9	0.3	4.8	0.4	5.0	0.4	
Malignant neoplasm of trachea, bronchus, and lung162,176.4,197.0,197.3	6.0	0.5	5.9	0.6	6.1	0.6	
Benign neoplasms	11.1	0.6	3.4	0.3	18.4	1.0	
Benign neoplasm of uterus	5.8	0.4			11.4	0.9	
Endocrine, nutritional and metabolic diseases, and immunity disorders240–279	60.4	2.9	52.2	2.8	68.4	3.3	
Diabetes mellitus	20.8	1.1	21.8	1.2	19.9	1.2	
Volume depletion	15.6	1.0	12.7	1.1	18.4	1.2	
Diseases of the blood and blood-forming organs	17.5	1.7	14.6	1.5	20.3	1.9	
Anemias	12.7	1.4	9.9	1.3	15.5	1.7	
Mental disorders	79.4	10.3	85.4	10.6	73.6	10.5	
Psychoses	56.3	8.4	57.7	8.2	54.9	9.0	
Schizophrenic disorders	10.8	1.3	12.2	1.6	9.4	1.4	
Major depressive disorder	14.3	2.6	12.2	2.1	16.4	3.1	
Diseases of the nervous system and sense organs	26.4	2.4	23.9	2.8	28.9	2.2	
Diseases of the circulatory system	196.0	7.8	204.2	9.2	188.1	7.0	
Essential hypertension	11.6	0.7	9.3	0.7	13.8	0.9	
Heart disease	131.9	5.5	143.6	6.6	120.7	4.8	
Acute myocardial infarction	19.2	1.1	23.1	1.5	15.4	0.9	
Coronary atherosclerosis	27.0	1.8	35.7	2.6	18.6	1.2	
Other ischemic heart disease	6.1	0.4	6.5	0.6	5.7	0.5	
Cardiac dysrhythmias	27.5	1.3	28.5	1.6	26.6	1.3	
Congestive heart failure	32.7	1.4	31.4	1.7	33.9	1.6	
Cerebrovascular disease	27.6	1.4	25.1	1.6	30.0	1.5	
Diseases of the respiratory system	109.8	5.4	104.0	5.6	115.5	5.8	
Acute bronchitis and bronchiolitis	6.5	0.8	6.8	1.0	6.3	0.7	
Pneumonia	35.2	1.9	34.0	1.8	36.3	2.3	
Chronic bronchitis	15.8	0.9	14.7	0.9	17.0	1.1	
Asthma	15.2	1.3	12.3	1.5	17.9	1.3	
Diseases of the digestive system	109.5	4.5	102.2	4.6	116.5	4.7	
Appendicitis	10.0	0.7	12.1	1.0	7.9	0.6	
Noninfectious enteritis and colitis	10.1	0.6	8.2	0.7	12.0	0.8	
Intestinal obstruction	10.5	0.6	10.0	0.7	11.0	0.7	
Diverticula of intestine	9.2	0.6	7.9	0.5	10.5	0.8	
Cholelithiasis	10.3	0.5	7.0	0.5	13.5	0.8	
Acute pancreatitis	7.8	0.4	8.2	0.6	7.5	0.5	
Diseases of the genitourinary system	69.6	2.8	45.6	2.0	92.9	4.1	
Calculus of kidney and ureter	4.5	0.3	4.8	0.4	4.2	0.3	
Urinary tract infection	17.2	1.1	10.1	0.8	24.1	1.7	
Complications of pregnancy, childbirth, and the puerperium <sup>3</sup> 630–677	16.6	1.0			32.6	2.1	
Diseases of the skin and subcutaneous tissue	25.0	1.3	26.8	1.7	23.3	1.3	
Cellulitis and abscess	18.4	0.9	19.9	1.2	17.0	0.9	
Diseases of the musculoskeletal system and connective tissue	62.6	3.7	54.4	3.3	70.5	4.4	
Osteoarthrosis and allied disorders	23.9	1.9	19.2	1.7	28.4	2.2	
Intervertebral disc disorders	10.6	0.7	10.9	0.8	10.4	0.9	
Congenital anomalies	6.2	1.4	6.5	1.7	5.9	1.2	
Certain conditions originating in the perinatal period	5.7	1.1	6.4	1.2	5.0	1.1	
Symptoms, signs, and ill-defined conditions	6.3	0.8	5.6	0.7	6.9	0.9	
njury and poisoning	95.0	5.1	97.5	5.5	92.6	5.2	
Fractures, all sites <sup>4</sup>	34.8	2.3	32.0	2.3	37.5	2.4	
Fracture of neck of femur <sup>4</sup>	9.9	0.7	6.1	0.6	13.6	1.1	
Poisonings	8.0	0.5	7.7	0.7	8.3	0.6	
Certain complications of surgical and medical care	30.2	1.8	29.9	1.8	30.5	1.9	
Supplementary classifications	164.1	7.8	24.8	2.7	298.7	14.3	
Females with deliveries	137.7	6.9			270.7	13.5	

<sup>...</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>SE is standard error of rate.

<sup>&</sup>lt;sup>2</sup>Rates were calculated using U.S. Census Bureau 2000-based postcensal estimates of the civilian population as of July 1, 2007.

<sup>&</sup>lt;sup>3</sup>First-listed diagnosis for females with deliveries is coded V27, shown under "Supplementary classifications."

<sup>&</sup>lt;sup>4</sup>Excludes fractures coded as 733.1, pathologic fracture.

Table 7. Hospital discharges by first-listed diagnosis and sex (average length of stay): United States, 2007

	Both s	exes	Ma	le	Female		
Category of first-listed diagnosis and ICD-9-CM code	ALOS <sup>1</sup>	SE <sup>2</sup>	ALOS <sup>1</sup>	SE <sup>2</sup>	ALOS <sup>1</sup>	SE <sup>2</sup>	
All conditions	4.8	0.1	5.3	0.1	4.6	0.1	
Infectious and parasitic diseases	7.2	0.2	7.4	0.3	7.1	0.2	
Septicemia	9.4	0.3	9.7	0.6	9.1	0.4	
Neoplasms	5.8	0.1	6.7	0.2	5.2	0.1	
Malignant neoplasms	6.5	0.1	6.9	0.2	6.1	0.2	
Malignant neoplasm of large intestine and rectum	8.5	0.4	8.6	0.6	8.4	0.5	
Malignant neoplasm of trachea, bronchus, and lung162,176.4,197.0,197.3	6.8	0.3	7.3	0.4	6.4	0.4	
Benign neoplasms	3.4	0.1	4.5	0.4	3.2	0.2	
Benign neoplasm of uterus	2.4	0.1			2.4	0.1	
Endocrine, nutritional and metabolic diseases, and immunity disorders240–279	4.2	0.1	4.3	0.2	4.1	0.2	
Diabetes mellitus	5.1	0.3	5.0	0.2	5.2	0.4	
Volume depletion	3.4	0.1	3.1	0.1	3.6	0.1	
Diseases of the blood and blood-forming organs	5.1	0.4	5.3	0.5	4.9	0.4	
Anemias	5.1	0.6	5.3	0.7	4.9	0.6	
Mental disorders	7.1	0.3	7.1	0.4	7.2	0.3	
Psychoses	7.5 11.1	0.2 0.5	7.4 10.6	0.3 0.6	7.7 11.8	0.3 0.7	
Schizophrenic disorders	6.3	0.5	6.4	0.8	6.3	0.7	
Diseases of the nervous system and sense organs	5.9	0.2	6.2	0.2	5.6	0.8	
Diseases of the circulatory system	4.5	0.9	4.4	0.9	4.6	0.0	
Essential hypertension	2.6	0.1	2.7	0.2	2.6	0.1	
Heart disease	4.4	0.1	4.3	0.1	4.5	0.1	
Acute myocardial infarction	5.1	0.1	5.0	0.2	5.3	0.2	
Coronary atherosclerosis	3.4	0.1	3.4	0.1	3.4	0.1	
Other ischemic heart disease	2.4	0.1	2.3	0.2	2.5	0.1	
Cardiac dysrhythmias	3.6	0.1	3.6	0.1	3.7	0.1	
Congestive heart failure	5.1	0.1	5.1	0.1	5.1	0.1	
Cerebrovascular disease	5.3	0.2	5.3	0.3	5.4	0.3	
Diseases of the respiratory system	5.1	0.1	5.0	0.1	5.2	0.1	
Acute bronchitis and bronchiolitis	3.1	0.1	3.1	0.1	3.1	0.2	
Pneumonia	5.0	0.1	4.8	0.1	5.2	0.1	
Chronic bronchitis	4.7	0.1	4.5	0.2	4.8	0.1	
Asthma	3.4	0.1	3.1	0.1	3.7	0.1	
Diseases of the digestive system	4.6	0.1	4.7	0.1	4.6	0.1	
Appendicitis	3.1	0.2	3.4	0.3	2.7	0.1	
Noninfectious enteritis and colitis	4.4	0.2	3.9	0.2	4.7	0.3	
Intestinal obstruction	6.0	0.2	5.7	0.3	6.2	0.3	
Diverticula of intestine	4.8	0.1	4.6	0.2	4.9	0.2	
Cholelithiasis	3.9	0.1	4.4	0.2	3.7	0.1	
Acute pancreatitis	6.1 4.1	0.5 0.1	6.2 4.5	0.9 0.1	5.9 3.9	0.5 0.1	
Diseases of the genitourinary system	2.5	0.1	2.3	0.1	2.8	0.1	
Urinary tract infection	4.6	0.1	4.4	0.1	4.7	0.2	
Complications of pregnancy, childbirth, and the puerperium <sup>3</sup>	2.9	0.1			2.9	0.1	
Diseases of the skin and subcutaneous tissue	4.8	0.1	4.9	0.2	4.8	0.1	
Cellulitis and abscess	4.5	0.1	4.3	0.1	4.7	0.1	
Diseases of the musculoskeletal system and connective tissue	4.1	0.2	4.0	0.2	4.2	0.2	
Osteoarthrosis and allied disorders	3.7	0.1	3.6	0.2	3.7	0.1	
Intervertebral disc disorders	3.1	0.1	2.7	0.1	3.5	0.2	
Congenital anomalies	6.1	1.3	4.7	0.7	7.7	2.2	
Certain conditions originating in the perinatal period	7.8	1.0	7.9	1.1	7.8	0.9	
Symptoms, signs, and ill-defined conditions	3.1	0.3	3.3	0.4	2.9	0.3	
Injury and poisoning	5.3	0.1	5.2	0.2	5.3	0.2	
Fractures, all sites <sup>4</sup>	5.1	0.2	5.2	0.2	5.1	0.2	
Fracture of neck of femur <sup>4</sup>	6.1	0.2	6.5	0.3	5.9	0.2	
Poisonings	3.0	0.2	3.2	0.3	2.7	0.1	
Certain complications of surgical and medical care	6.2	0.2	6.2	0.2	6.2	0.2	
Supplementary classifications	3.7	0.1	9.7	0.5	3.2	0.1	
Females with deliveries	2.6	0.0			2.6	0.0	

<sup>...</sup> Category not applicable.

<sup>0.0</sup> Quantity more than zero, but less than 0.05.

<sup>&</sup>lt;sup>1</sup>ALOS is average length of stay.

<sup>&</sup>lt;sup>2</sup>SE is standard error of average length of stay.

<sup>&</sup>lt;sup>3</sup>First-listed diagnosis for females with deliveries is coded V27, shown under "Supplementary classifications."

<sup>&</sup>lt;sup>4</sup>Excludes fractures coded as 733.1, pathologic fracture.

Table 8. All-listed procedures for hospital discharges by procedure category and age (number): United States, 2007

	All aç	ges	Unde 15 yea		15–4 year		45–6 year	,		
Procedure category and ICD-9-CM code	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE
				Nur	mber in th	ousan	ds			
All procedures <sup>2</sup>	44,993	1,846	1,882	380	14,684	611	12,398	540	16,029	71
Operations on the nervous system	1,197	92	190	52	335	34	322	24	350	2
Spinal tap	338	41	133	37	80	7	68	6	57	_
Operations on the endocrine system	118	15	*	*	34	7	50	6	30	
Operations on the eye	79	12	9	3	18	3	20	4	32	
Operations on the ear	41	6	21	5	*10	*2	*	*	*7	*
Operations on the nose, mouth, and pharynx	257	26	55	15	90	10	61	7	52	
Operations on the respiratory system	1,109	61	*	*	155	12	363	25	535	3
Bronchoscopy with or without biopsy	259	19	•	•	33	4	94	9	117	1
Operations on the cardiovascular system	6,942	342	*	*	726	40	2,517	125	3,526	19
Balloon angioplasty of coronary artery or coronary atherectomy	618	48	*	*	35	5	263	19	320	3
Insertion of coronary artery stent(s)	560	45	*	*	31	5	238	18	290	3
Coronary artery bypass graft <sup>3</sup>	405	34	*	*	9	2	165	17	231	2
Cardiac catheterization	1,061	64	*	*	82	8	453	27	517	3
Insertion, replacement, removal, and revision of pacemaker leads										
or device	358	22	*	*	*11	*3	59	7	288	1
Hemodialysis	679	50			115	14	271	21	291	2
Operations on the hemic and lymphatic system	370	30	16	5	51	7	155	17	146	1
Operations on the digestive system	5,474 1,006	231 51	221 14	49 4	1,243 151	56 10	1,743 296	86 19	2,267 545	9
Endoscopy of large intestine with or without biopsy	510	23	*	*	74	7	145	9	285	1
Partial excision of large intestine	258	15	*	*	33	4	94	7	129	'
Appendectomy, excluding incidental	326	23	69	12	169	11	59	5	29	
Cholecystectomy	403	18	*	*	137	8	128	8	134	
Lysis of peritoneal adhesions	357	19	6	2	120	8	128	10	103	
Operations on the urinary system	995	61	26	6	212	18	346	22	410	3
Cystoscopy with or without biopsy	125	9	*	*	24	4	44	4	55	
Operations on the male genital organs	230	21	21	6	17	3	90	11	102	
Prostatectomy	156	17	*	*	*	*	74	10	80	
Operations on the female genital organs	1,785	102	11	3	1,024	63	553	33	197	1
Oophorectomy and salpingo-oophorectomy	366	23	*	*	144	12	172	11	47	
Bilateral destruction or occlusion of fallopian tubes	325	23	*	*	323	23	*	*	*	
Hysterectomy	517	33	*		250	20	216	14	51	
Obstetrical procedures	7,003 443	343 33	*	*	6,977 442	342	14	3		
Episiotomy with or without forceps or vacuum extraction	887	68	*	*	884	68	*	*		• •
Medical induction of labor	670	47	*	*	666	47	*	*		
Cesarean section	1,339	73	*	*	1,333	73	*4	*1		
Repair of current obstetric laceration	1,261	65	*	*	1,257	65	*	*		
Operations on the musculoskeletal system76–84,00.70–00.73,00.80–00.84,00.85–00.87	4,300	256	144	28	922	65	1,550	95	1,683	10
Partial excision of bone	184	13	*	*	47	5	81	7	51	
Reduction of fracture	677	43	44	8	208	19	163	13	263	1
Open reduction of fracture with internal fixation	453	29	15	3	132	14	115	9	190	1
Excision or destruction of intervertebral disc	310	24	*	*	92	8	151	12	67	
Total hip replacement	230	18	*	*	13	2	91	9	125	1
Total knee replacement	543	43	*	*	11	3	213	17	316	2
Operations on the integumentary system	1,558	118	*	*	468	41	510	31	435	3
Debridement of wound, infection, or burn	377	42			100	15	122	12	120	1
Viscellaneous diagnostic and therapeutic procedures and new technologies <sup>4</sup> 87–99,00 Computerized axial tomography	13,516 632	669 118	778 *	135	2,400 135	147 24	4,094 180	205 32	6,245 287	31 6
Arteriography and angiocardiography using contrast material	1,861	102	*	*	174	14	759	32 44	915	5
Diagnostic ultrasound	866	97	25	6	116	15	268	27	458	6
Physical therapy procedures	368	63	*	*	40	9	80	14	236	4
Respiratory therapy	1,093	65	132	23	160	11	308	21	493	3
Insertion of endotracheal tube	511	28	35	7	75	6	144	9	257	1
		115	70	18		20	521	32	1,211	7
Transfusion of blood and blood components	2,058	113	70	10	255	20	321	32	1,411	

Table 9. All-listed procedures for hospital discharges by procedure category and age (rate): United States, 2007

	All ag	jes	Und 15 ye		15–4 year		45–6 year		65 ye	
Procedure category and ICD-9-CM code	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>
				Rate	per 10,00	0 noni	ılation <sup>2</sup>			
All procedures <sup>3</sup>	1.497.4	61.5	309.2		1,173.2			70.6	4,230.5	189.2
Operations on the nervous system	39.8	3.1	31.2	8.6	26.7	2.7	42.1	3.2	92.4	7.0
Spinal tap	11.3	1.4	21.8	6.1	6.4	0.5	9.0	0.8	15.0	1.3
Operations on the endocrine system	3.9	0.5	*	*	2.7	0.5	6.6	0.8	8.0	1.2
Operations on the eye	2.6	0.4	1.5	0.4	1.5	0.2	2.6	0.5	8.3	2.
Operations on the ear	1.4	0.2	3.5	0.9	*0.8	*0.2	*	*	*1.7	*0.4
Operations on the nose, mouth, and pharynx	8.6	0.9	9.0	2.5	7.2	0.8	7.9	1.0	13.8	1.4
Operations on the respiratory system	36.9	2.0	*	*	12.4	1.0	47.4	3.2	141.3	8.3
Bronchoscopy with or without biopsy	8.6	0.6	*	*	2.7	0.3	12.2	1.2	30.9	2.0
Operations on the cardiovascular system	004.0				50.0	0.0	000.0	400	000.0	
00.53-00.55,00.57,00.61-00.66	231.0	11.4		*	58.0	3.2	328.9	16.3	930.8	51.
Balloon angioplasty of coronary artery or coronary atherectomy	20.6	1.6	*	*	2.8	0.4	34.4	2.5	84.4	8.
Insertion of coronary artery stent(s)	18.6 13.5	1.5 1.1	*	*	2.5 0.7	0.4	31.2 21.6	2.3	76.6 60.9	7.8 5.3
Cardiac catheterization	35.3	2.1	*	*	6.6	0.6	59.3	3.6	136.5	9.4
Insertion, replacement, removal, and revision of pacemaker leads	33.3	2.1			0.0	0.0	33.3	3.0	130.5	5.
or device	11.9	0.7	*	*	*0.9	*0.2	7.6	0.9	75.9	5.
Hemodialysis	22.6	1.7	*	*	9.2	1.1	35.4	2.7	76.8	6.
Operations on the hemic and lymphatic system	12.3	1.0	2.7	0.8	4.1	0.6	20.3	2.2	38.6	2.
Operations on the digestive system	182.2	7.7	36.4	8.1	99.3	4.5	227.8	11.2	598.3	26.
Endoscopy of small intestine with or without biopsy	33.5	1.7	2.3	0.6	12.1	0.8	38.6	2.5	143.8	7.
Endoscopy of large intestine with or without biopsy	17.0	8.0	1.1	0.3	5.9	0.6	18.9	1.2	75.2	4.
Partial excision of large intestine	8.6	0.5	*	*	2.6	0.3	12.3	1.0	34.0	2.
Appendectomy, excluding incidental	10.9	8.0	11.3	1.9	13.5	0.9	7.7	0.7	7.7	1.
Cholecystectomy	13.4	0.6	*	*	11.0	0.7	16.7	1.0	35.4	2.
Lysis of peritoneal adhesions	11.9	0.6	1.0	0.3	9.6	0.6	16.7	1.3	27.2	1.
Operations on the urinary system	33.1	2.0	4.3	1.0	17.0	1.4	45.3	2.8	108.3	8.
Cystoscopy with or without biopsy	4.2	0.3	*0.4	*0.1	1.9	0.3	5.8	0.6	14.4	1.
Operations on the male genital organs	7.6	0.7	3.4	0.9	1.4	0.3	11.7	1.4	26.9	2.
Prostatectomy	5.2	0.6 3.4					9.7 72.2	1.3	21.2	2. 5.
Operations on the female genital organs	59.4 12.2	0.7	1.9	0.5	81.8 11.5	5.0 1.0	22.5	4.3 1.4	51.9 12.4	5. 1.
Bilateral destruction or occlusion of fallopian tubes	10.8	0.7	*	*	25.8	1.8	*	*	*	1.
Hysterectomy	17.2	1.1	*	*	20.0	1.6	28.2	1.8	13.3	1.
Obstetrical procedures	233.1	11.4	*2.0	*0.6	557.4	27.3	1.8	0.4		
Episiotomy with or without forceps or vacuum extraction72.1,72.21,72.31,72.71,73.6	14.7	1.1	*	*	35.3	2.6	*	*		
Artificial rupture of membranes	29.5	2.3	*	*	70.6	5.4	*	*		
Medical induction of labor	22.3	1.6	*	*	53.2	3.8	*	*		
Cesarean section	44.6	2.4	*	*	106.5	5.8	*0.6	*0.1		
Repair of current obstetric laceration	42.0	2.2	*	*	100.4	5.2	*	*		
Operations on the musculoskeletal system76–84,00.70–00.73,00.80–00.84,00.85–00.87	143.1	8.5	23.7	4.5	73.7	5.2	202.6	12.4	444.2	27.
Partial excision of bone	6.1	0.4	1.0	0.3	3.7	0.4	10.5	0.9	13.4	1.
Reduction of fracture	22.5	1.4	7.2	1.2	16.6	1.5	21.3	1.6	69.4	4.
Open reduction of fracture with internal fixation	15.1	0.9	2.5	0.5	10.6	1.1	15.1	1.1	50.1	3.
Excision or destruction of intervertebral disc	10.3	0.8		*	7.3	0.7	19.8	1.6	17.6	2.
Total hip replacement	7.7	0.6	*	*	1.0 0.9	0.2	12.0	1.2 2.3	33.0	2. 7.
Operations on the integumentary system	18.1 51.8	1.4 3.9	*	*	37.4	3.3	27.9 66.6	4.0	83.4 114.8	7. 8.
Debridement of wound, infection, or burn	12.6	1.4	*	*	8.0	1.2	16.0	1.6	31.7	2.
Miscellaneous diagnostic and therapeutic procedures and new technologies <sup>5</sup> 87–99,00	449.8	22.3	127.7	22.2	191.7	11.7	534.9	26.8		82.
Computerized axial tomography	21.0	3.9	*	*	10.8	1.9	23.5	4.2	75.7	16.
Arteriography and angiocardiography using contrast material	61.9	3.4	*	*	13.9	1.1	99.2	5.8	241.4	13.
Diagnostic ultrasound	28.8	3.2	4.1	0.9	9.2	1.2	35.0	3.6	120.8	16.
Physical therapy procedures	12.2	2.1	*	*	3.2	0.7	10.4	1.9	62.2	11.
Respiratory therapy	36.4	2.2	21.7	3.7	12.8	0.9	40.2	2.7	130.3	8.
Insertion of endotracheal tube	17.0	0.9	5.8	1.1	6.0	0.5	18.8	1.2	67.8	4.
Transfusion of blood and blood components	68.5	3.8	11.5	3.0	20.4	1.6	68.1	4.1	319.6	19.
Injection or infusion of cancer chemotherapeutic substance	7.0	0.6	6.4	1.6	2.9	0.4	11.0	1.3	13.7	1.0

<sup>\*</sup> Figure does not meet standards of reliability or precision. ... Category not applicable.

<sup>&</sup>lt;sup>2</sup>Rates were calculated using U.S. Census Bureau 2000-based postcensal estimates of the civilian population as of July 1, 2007.

<sup>&</sup>lt;sup>3</sup>In 2002, the Chapter 00 codes were established. For reporting purposes, between 2003 and 2005, all Chapter 00 codes were grouped with the miscellaneous diagnostic and therapeutic procedures and new technologies category. Beginning in 2006, the 00 codes are included in the categories and chapters of their previous codes, where applicable. See Data source.

<sup>4</sup>The rate per 10,000 population of discharges with a coronary artery bypass graft was 7.7.

<sup>&</sup>lt;sup>5</sup>Chapter 00 codes included in this category: 00.01–00.03, 00.09, 00.10–00.18, 00.21–00.25, 00.28–00.29, 00.31–00.35, 00.39, 00.40–00.43, 00.45–00.48, 00.52, 00.56, 00.74–00.76, 00.91–00.93.

Table 10. All-listed procedures for hospital discharges by procedure category and sex (number): United States, 2007

	Both s	exes	Male	е	Fema	ale
Procedure category and ICD-9-CM code	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>	Number	SE <sup>1</sup>
			Number in the	nousands		
All procedures <sup>2</sup>	44,993	1,846	17,963	818	27,030	1,083
Operations on the nervous system	1,197	92	565	47	632	53
Spinal tap	338	41	177	26	161	16
Operations on the endocrine system	118	15	27	4	91	12
Operations on the eye	79	12	41	6	37	7
Operations on the ear	41	6	28	5	14	3
Operations on the nose, mouth, and pharynx	257	26	155	15	102	13
Operations on the respiratory system	1,109	61	577	38	531	28
Bronchoscopy with or without biopsy	259	19	137	12	122	10
Operations on the cardiovascular system35–39,00.50–00.51,00.53–00.55,00.57,00.61–00.66	6,942	342	3,963	205	2,979	146
Balloon angioplasty of coronary artery or coronary atherectomy	618	48	410	34	208	16
Insertion of coronary artery stent(s)	560	45	376	32	183	15
Coronary artery bypass graft <sup>3</sup>	405	34	291	24	114	12
Cardiac catheterization	1,061	64	639	42	422	25
Insertion, replacement, removal, and revision of pacemaker leads	050	00	100	40	470	45
or device	358	22	180	13	178	15
Hemodialysis	679	50	349	28	331	31
Operations on the hemic and lymphatic system	370	30	181	19	189	15
Operations on the digestive system	5,474	231 51	2,385 438	108 23	3,089 568	133 30
	1,006 510	23	212	13	298	15
Endoscopy of large intestine with or without biopsy	258	15	117	8	296 141	10
Appendectomy, excluding incidental	326	23	186	15	140	10
Cholecystectomy	403	18	142	8	261	13
Lysis of peritoneal adhesions	357	19	93	8	264	15
Operations on the urinary system	995	61	451	31	544	36
Cystoscopy with or without biopsy	125	9	55	5	70	7
Operations on the male genital organs	230	21	230	21		
Prostatectomy	156	17	156	17		
Operations on the female genital organs	1,785	102			1,785	102
Oophorectomy and salpingo-oophorectomy	366	23			366	23
Bilateral destruction or occlusion of fallopian tubes	325	23			325	23
Hysterectomy	517	33			517	33
Obstetrical procedures	7,003	343			7,003	343
Episiotomy with or without forceps or vacuum extraction	443	33			443	33
Artificial rupture of membranes	887	68			887	68
Medical induction of labor	670	47			670	47
Cesarean section	1,339	73			1,339	73
Repair of current obstetric laceration	1,261	65			1,261	65
Operations on the musculoskeletal system	4,300	256	2,042	119	2,257	145
Partial excision of bone	184	13	99	8	85	7
Reduction of fracture	677	43	325	24	352	23
Open reduction of fracture with internal fixation	453	29	208	15	244	17
Excision or destruction of intervertebral disc	310 230	24 18	158 108	14 10	152 122	13 10
Total knee replacement	543	43	202	18	341	27
Operations on the integumentary system	1,558	118	738	73	820	51
Debridement of wound, infection, or burn	377	42	210	30	167	16
Miscellaneous diagnostic and therapeutic procedures and new technologies <sup>4</sup> 87–99,00	13,516	669	6,573	335	6,942	348
Computerized axial tomography	632	118	297	57	335	63
Arteriography and angiocardiography using contrast material	1,861	102	1,034	62	827	46
Diagnostic ultrasound	866	97	383	40	482	60
Physical therapy procedures	368	63	162	28	206	37
Respiratory therapy	1,093	65	553	35	540	34
Insertion of endotracheal tube	511	28	259	15	252	16
Transfusion of blood and blood components	2,058	115	890	54	1,168	64
	210	19	107	12	103	10

<sup>. .</sup> Category not applicable.

<sup>&</sup>lt;sup>3</sup>The number of discharges with a coronary artery bypass graft was 232,000.

<sup>4</sup>Chapter 00 codes included in this category: 00.01–00.03, 00.09, 00.10–00.18, 00.21–00.25, 00.28–00.29, 00.31–00.35, 00.39, 00.40–00.43, 00.45–00.48, 00.52, 00.56, 00.74–00.76, 00.91–00.93.

Table 11. All-listed procedures for hospital discharges by procedure category and sex (rate): United States, 2007

	Both s	exes	Mal	е	Fema	ale
Procedure category and ICD-9-CM code	Rate	SE <sup>1</sup>	Rate	SE <sup>1</sup>	Rate	SE
		Rate	per 10,000	0 popula	ation <sup>2</sup>	
All procedures <sup>3</sup>	1,497.4	61.5	1,216.4	55.4	1,769.1	70.9
Operations on the nervous system	39.8	3.1	38.2	3.2	41.4	3.
Spinal tap	11.3	1.4	12.0	1.8	10.5	1.
Operations on the endocrine system	3.9	0.5	1.8	0.3	6.0	0.8
Operations on the eye	2.6	0.4	2.8	0.4	2.4	0.
Operations on the ear	1.4	0.2	1.9	0.3	0.9	0.
Operations on the nose, mouth, and pharynx	8.6	0.9	10.5	1.0	6.7	0.
Operations on the respiratory system	36.9	2.0	39.1	2.6	34.8	1.3
Bronchoscopy with or without biopsy	8.6	0.6	9.3	8.0	8.0	0.
Operations on the cardiovascular system	231.0	11.4	268.4	13.9	195.0	9.
Balloon angioplasty of coronary artery or coronary atherectomy	20.6	1.6	27.8	2.3	13.6	1.
Insertion of coronary artery stent(s)	18.6	1.5	25.5	2.2	12.0	1.
Coronary artery bypass graft <sup>4</sup>	13.5	1.1	19.7	1.6	7.5	0.
Cardiac catheterization	35.3	2.1	43.3	2.8	27.6	1.
Insertion, replacement, removal, and revision of pacemaker leads or device37.7–37.8,00.50,00.53,00.57	11.9	0.7	12.2	0.9	11.7	1.
Hemodialysis	22.6	1.7	23.6	1.9	21.6	2.
Operations on the hemic and lymphatic system	12.3	1.0	12.2	1.3	12.4	1.0
Operations on the digestive system	182.2	7.7	161.5	7.3	202.2	8.
Endoscopy of small intestine with or without biopsy	33.5	1.7	29.6	1.6	37.2	2.
Endoscopy of large intestine with or without biopsy	17.0	0.8	14.3	0.9	19.5	1.0
Partial excision of large intestine	8.6	0.5	7.9	0.6	9.2	0.0
Appendectomy, excluding incidental	10.9	0.8	12.6	1.0	9.2	0.0
Cholecystectomy	13.4	0.6	9.6	0.5	17.1	0.8
Lysis of peritoneal adhesions	11.9	0.6	6.3	0.5	17.3	1.0
Operations on the urinary system	33.1	2.0	30.5	2.1	35.6	2.4
Cystoscopy with or without biopsy	4.2	0.3	3.7	0.4	4.6	0.
Operations on the male genital organs	7.6	0.7	15.6	1.4		
Prostatectomy	5.2	0.6	10.5	1.1		
Operations on the female genital organs	59.4	3.4			116.9	6.
Oophorectomy and salpingo-oophorectomy	12.2	0.7			23.9	1.
Bilateral destruction or occlusion of fallopian tubes	10.8	0.8			21.3	1.
Hysterectomy	17.2	1.1			33.8	2.
Obstetrical procedures	233.1	11.4			458.4	22.
Episiotomy with or without forceps or vacuum extraction	14.7	1.1			29.0	2.
Artificial rupture of membranes	29.5	2.3			58.0	4.
Medical induction of labor	22.3	1.6			43.9	3.
Cesarean section	44.6	2.4			87.6	4.
Repair of current obstetric laceration	42.0	2.2			82.5	4.
Operations on the musculoskeletal system	143.1	8.5	138.3	8.0	147.8	9.
Partial excision of bone	6.1	0.4	6.7	0.5	5.6	0.
Reduction of fracture	22.5	1.4	22.0	1.6	23.1	1.
Open reduction of fracture with internal fixation	15.1	0.9	14.1	1.0	16.0	1.
Excision or destruction of intervertebral disc	10.3	0.8	10.7	0.9	10.0	0.
Total hip replacement	7.7	0.6	7.3	0.7	8.0	0.
Total knee replacement	18.1	1.4	13.7	1.2	22.3	1.
Operations on the integumentary system	51.8	3.9	49.9	5.0	53.7	3.
Debridement of wound, infection, or burn	12.6	1.4	14.2	2.0	11.0	1.
Miscellaneous diagnostic and therapeutic procedures and new technologies <sup>5</sup>	449.8	22.3	445.1	22.7	454.4	22.
Computerized axial tomography	21.0	3.9	20.1	3.8	21.9	4.
Arteriography and angiocardiography using contrast material	61.9	3.4	70.0	4.2	54.1	3.
Diagnostic ultrasound	28.8	3.2	25.9	2.7	31.6	3.
Physical therapy procedures	12.2	2.1	11.0	1.9	13.5	2.
Respiratory therapy	36.4	2.2	37.4	2.3	35.4	2.
Insertion of endotracheal tube	17.0	0.9	17.5	1.0	16.5	1.
Transfusion of blood and blood components	68.5	3.8	60.2	3.7	76.4	4.
Injection or infusion of cancer chemotherapeutic substance	7.0	0.6	7.2	0.8	6.8	0.0

<sup>&</sup>lt;sup>1</sup>SE is standard error of rate. ... Category not applicable.

<sup>&</sup>lt;sup>2</sup>Rates were calculated using U.S. Census Bureau 2000-based postcensal estimates of the civilian population as of July 1, 2007.

In 2002, the Chapter 00 codes were established. For reporting purposes, between 2003 and 2005, all Chapter 00 codes were grouped with the miscellaneous diagnostic and therapeutic procedures and new technologies category. Beginning in 2006, the 00 codes are included in the categories and chapters of their previous codes, where applicable. See Data source.

4The rate per 10,000 population of discharges with a coronary artery bypass graft was 7.7.

<sup>&</sup>lt;sup>5</sup>Chapter 00 codes included in this category: 00.01–00.03, 00.09, 00.10–00.18, 00.21–00.25, 00.28–00.29, 00.31–00.35, 00.39, 00.40–00.43, 00.45–00.48, 00.52, 00.56, 00.74–00.76, 00.91–00.93.

#### **Technical Notes**

#### **Estimation**

Because of the complex multistage design of NHDS, the survey data must be inflated or weighted in order to produce national estimates. The estimation procedure produces essentially unbiased national estimates, and has three basic components: inflation by reciprocals of the probabilities of sample selection, adjustment for nonresponse, and population weighting ratio adjustments. These three components of the final weight are described in more detail in another report (13).

The standard error is primarily a measure of sampling variability that occurs by chance because only a sample rather than the entire universe is surveyed. Estimates of the sampling variability for this report were calculated with SUDAAN software, which takes into account the complex sample design. A description of the software and the approach it uses has been published (17). The standard errors of statistics presented in this report are included in each of the tables.

#### Use of tables

Discharges are reported by first-listed diagnosis, which is the one specified as the principal diagnosis on the face sheet or discharge summary of the medical record or, if a principal diagnosis is not specified, the first one listed on the face sheet or discharge summary of the medical record. It is usually the main cause of the hospitalization. The number of first-listed diagnoses is the same as the number of discharges.

Estimates of procedures include surgical or nonsurgical operations, diagnostic procedures, and special treatments reported on the medical record. Up to four procedures are coded for each discharge. All-listed procedures include all occurrences of the procedure coded regardless of the order on the medical record. Definitions of the terms used in this report have been published (1).

The diagnoses and procedures appear in separate tables of this report, presented by chapter of the ICD–9–CM. Within these chapters, subcategories of diagnoses or procedures are shown. These specific categories were selected primarily because of the large number of discharges or because they are of special interest. Data for newborn infants, defined as patients admitted to a hospital by birth, are excluded from this report.

Because of low reliability, estimates with a relative standard error of more than 30 percent or those based on a sample of fewer than 30 records are replaced by asterisks (\*). The estimates that are based on 30–59 patient records are preceded by an asterisk (\*) to indicate that they also have low reliability.

Estimates are rounded to the nearest thousand. Therefore, figures within tables do not always add to the totals. Rates and average lengths of stay are calculated from unrounded figures and may not precisely agree with rates or average lengths of stay calculated from rounded data.

Discharge rates were calculated by dividing the number of discharges by the U.S. civilian population and then multiplying by the unit reported, for example, when reporting rate per 10,000 population, multiply by 10,000. Rates are computed using adjustments made after the 2000 census (postcensal estimates) of the civilian population of the United States as of July 1, 2007. The data are from unpublished tabulations provided by the U.S. Census Bureau

This is the seventh year that NHDS publications have used rates calculated from the 2000 census. The rates for NHDS reports on 1991–2000 data were computed using postcensal estimates of the civilian population based on the 1990 census. Population estimates for the civilian population from the 2000 census were not available until after the 2000 NHDS reports were prepared.

A weighted least squares regression method (18) was used to test the significance of time trends shown in Figures 1 and 5, or mentioned in the text. Differences mentioned between

2007 NHDS estimates were tested using the two-sided *t*-test. Terms that express differences such as higher, lower, largest, smallest, leading, increased, or decreased, were only used when the differences were statistically significant at the 0.05 level.

#### OMB No. 0920-0212 FORM HDS-1 (3-20-2008) U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. CENSUS BUREAU ACTING AS COLLECTING AGENT FOR DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR DISEASE CONTROL AND PREVENTION **Notice** – All information which would permit identification of an individual or 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 NATIONAL CENTER FOR HEALTH STATISTICS or used for any other purpose. Public reporting burden of this collection of information or used for any other purpose. Public reporting burden of this collection of information is estimated to average 4 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road, MS D-74, Atlanta, GA 30333, ATTN: PRA (0920-0212). MEDICAL ABSTRACT NATIONAL HOSPITAL DISCHARGE SURVEY A. PATIENT IDENTIFICATION Month Day Year 1. Hospital number . . 4. Date of admission 2. HDS number Date of discharge 3. (Item deleted) 6. Residence ZIP Code 7. Date of birth 11. Race - Mark all that apply Month Year Day 6 ☐ Other - Specify ₹ 1 White 2 Black or African American 8. Age - Complete only if date of Units 3 American Indian 1 ☐ Years or Alaska Native 2 Months birth not given 3 Days 5 Native Hawaiian 7 Not stated or Other Pacific 9. Sex - Mark (X) one Islander 1 Male 2 Female 3 Not stated 12. Marital status - Mark (X) one 10. Ethnicity - Mark (X) one 1 Married з 🗌 Widowed 5 Separated 1 Hispanic 2 Not Hispanic 3 Not stated 6 ☐ Not stated 2 Single 4 Divorced or Latino or Latino 13. Type of Admission – Mark (X) one 16. Expected source(s) of payment Other Principal additional 1 ☐ Emergency з 🗌 Elective 5 Items not available/ sources unknown 2 Urgent 4 Newborn Mark all Mark one only that 14. Source of Admission - Mark (X) one apply 1 Physician referral 7 Emergency room 1. Worker's 2 Clinical referral 8 Court/Law enforcement 3 HMO referral 9 ☐ Other - Specify ~ 4 Transfer from a hospital 4. Other government payments . . . . . 5 Transfer from SNF 5. Blue Cross/Blue Shield . . . . . . . 6 Transfer from other 10 🗌 Item not available 6. HMO/PPO ...... health facility Other private or 15. Status/Disposition of patient – Mark (X) appropriate box(es) commercial insurance . . . . . . . . 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 з Status not stated ■ No source of payment indicated

(Over)

Figure I. Medical abstract National Hospital Dishcarge Survey, 2007

			_	_	_	_	_	_	_	_
17. ADMITTING DI										
	ICD-9-CM Code	Description								
Admitting diagnosis										
Diagnosis	ICD-9-CM Code	Description			Pre	sent (	on ac	lmiss	ion	
Principal diagnosis				4 🗌 (	Unkn Clinic	own ally ι	undet	No ermin	ned	heet
Diagnosis 2				4 🗌 (	Unkn Clinio	ally u	undet		ned	heet
Diagnosis 3				4 🔲 (	Unkn Clinio	ally u	undet	No ermin	ned	heet
Diagnosis 4				4 🔲 (	Unkn Clinio	ally u	undet	No ermin	ned	heet
Diagnosis 5				4	Unkn Clinio No in	ally u	undet ation	on fa	ned ace s	heet
Diagnosis 6				4 🗌 (	Unkn Clinio	own cally u	undet	No ermin	ned	heet
Diagnosis 7				4 🗌 (	Unkn Clinio	own ally u	undet	No erminates	ned	heet
Procedure	ICD-9-CM Code	Description -				of Pr	oced		-	
			Mon	ith	Da	ay		Ye	ear	
Principal procedure			+							
Procedure 2										
Procedure 3										
Procedure 4										
☐ No procedures										
Comments										
Completed by			Date							

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Figure I. Medical abstract National Hospital Dishcarge Survey, 2007—Con.

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