

1986 Summary: National Hospital Discharge Survey

Hospital Care Statistics Branch, Division of Health Care Statistics

Introduction

The hospital discharge rate has continued a decline that began in 1983. The 1986 rate was 143 discharges per 1,000 civilian population—a 14 percent decrease in 3 years (figure 1). In addition, the average length of stay in 1986 was 6.4 days compared with 7.6 days a decade ago (figure 2).

During 1986 an estimated 34.3 million inpatients, excluding newborn infants, were discharged from short-stay non-Federal hospitals in the United States. These patients were hospitalized an average of 6.4 days and used 218.5 million days of inpatient hospital care. Patients hospitalized during 1986 accounted for 143 discharges per 1,000 civilian population.

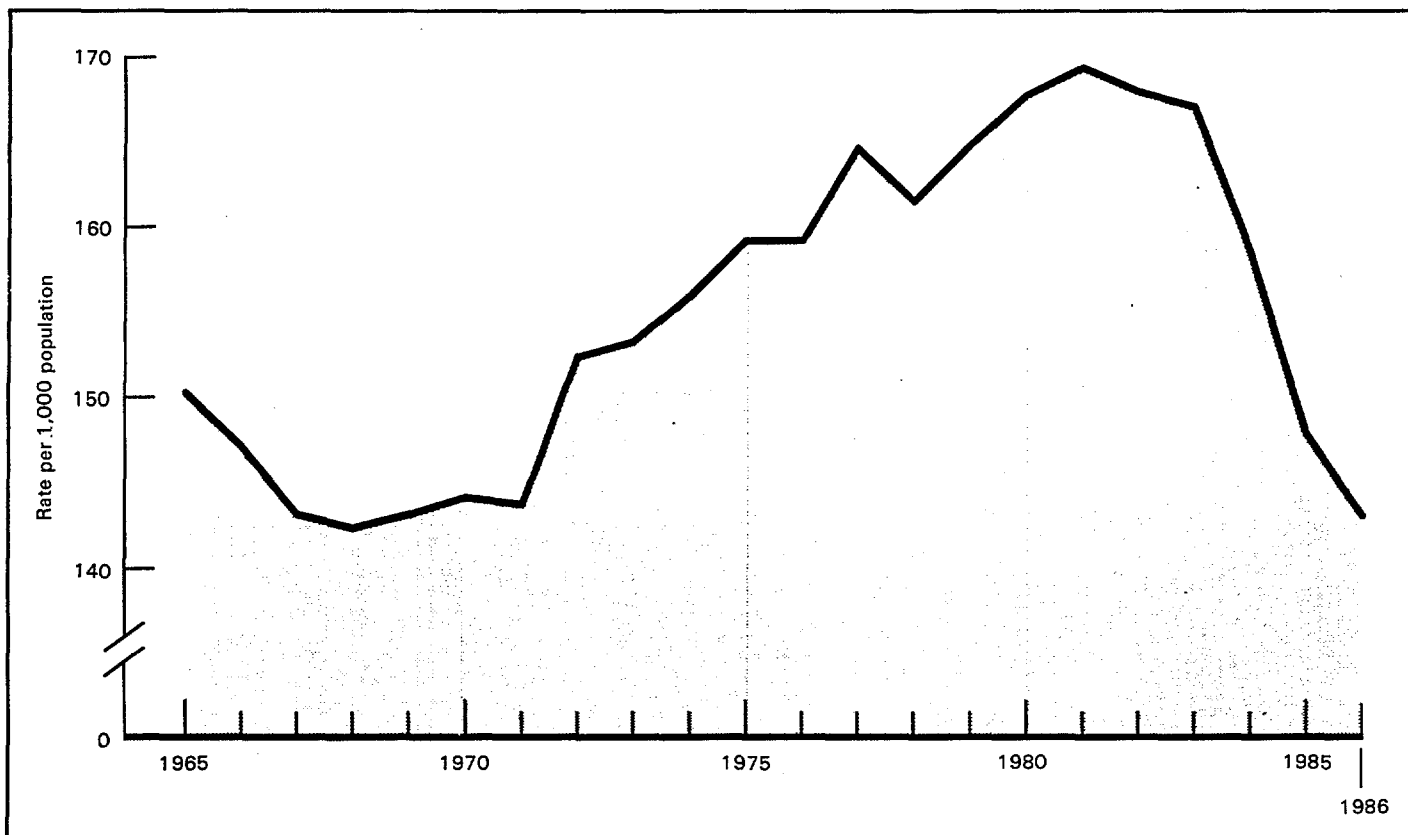


Figure 1. Discharge rate in non-Federal short-stay hospitals: United States, 1965–86

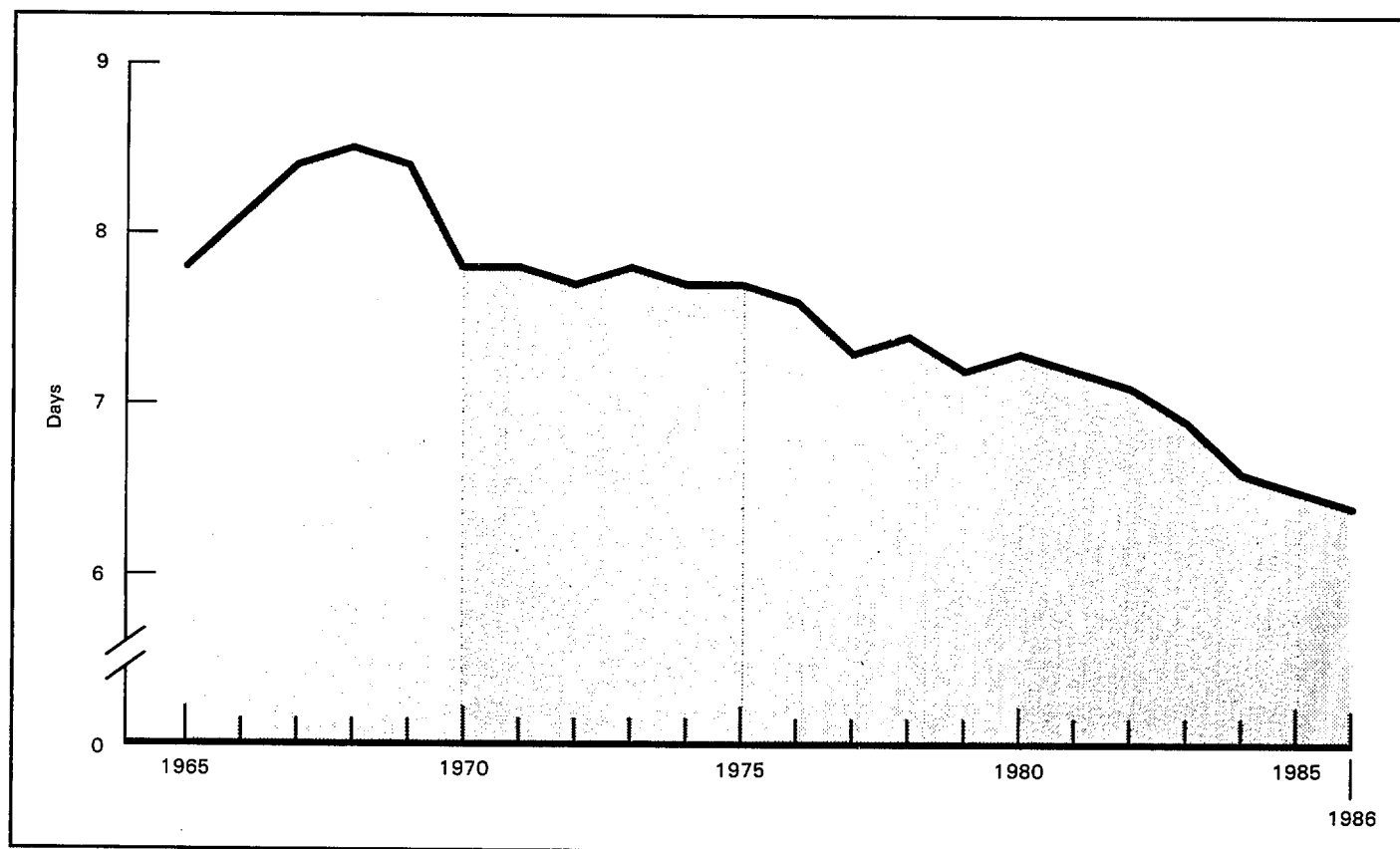


Figure 2. Average length of stay in non-Federal short-stay hospitals: United States, 1965–86

These and other statistics presented in this report are based on data collected by means of the National Hospital Discharge Survey, a continuous survey that has been conducted by the National Center for Health Statistics since 1965. In 1986, data were abstracted from the medical records of approximately 193,000 patients discharged from 418 short-stay non-Federal hospitals. A brief description of the sample design, data collection procedures, and estimation process, and definition of terms used in this report can be found in the section entitled "Technical notes." Detailed discussions of these items, as well as the survey form used to collect the data, have been published (NCHS, 1970, 1987).

Coding of medical data for patients hospitalized is done according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (U.S. Public Health Service and Health Care Financing Administration, 1980). Up to seven diagnoses and four procedures are coded for each discharge. Although diagnoses included in the ICD-9-CM section entitled "Supplementary classification of external causes of injury and poisoning" (codes E800–E999) are used by the National Hospital Discharge Survey, these diagnoses are excluded from this report. The conditions diagnosed and procedures performed are presented here by chapter of ICD-9-CM. Within these chapters, a few diagnoses and procedures or groups thereof also are shown. These specific categories were selected primarily because of large numbers of occurrences or because they are of special interest. Residual categories of the diagnostic and procedure classes, however, are not included in the tables. More detailed analyses of these

data will be presented in later reports in Series 13 of *Vital and Health Statistics*.

In 1986, approximately 19 percent of the hospitals submitted machine-readable data tapes through commercial abstracting services. Preliminary analysis indicates that a greater number of nonsurgical procedures per patient are obtained from these hospitals than from hospitals submitting data in the traditional manual mode (see "Technical notes"). This has resulted in increases from 1984 to 1986 in the estimates for miscellaneous diagnostic and therapeutic procedures and, therefore, for total procedures.

Data highlights

Utilization by patient and hospital characteristics

The number, rate, and average length of stay of patients discharged from short-stay non-Federal hospitals are shown by selected patient and hospital characteristics in tables 1–3. The 34.3 million patients discharged from short-stay hospitals during 1986 included an estimated 13.9 million males and 20.3 million females. The rates per 1,000 population were 121 for males and 164 for females, making the rate for females about 36 percent higher than the rate for males. The number and rate of discharges are always higher for females than for males because of the large number of women in their child-bearing years (15–44 years of age) who are hospitalized for deliveries and other obstetrical conditions.

The average length of stay was 6.8 days for males and 6.1 days for females during 1986. The length of stay for females

was shorter than that for males primarily because the average length of stay of the 3.8 million women who were hospitalized for deliveries was only 3.2 days.

The number of discharges from short-stay hospitals by geographic region during 1986 ranged from 11.9 million in the South Region to 6.5 million in the West Region, and the rates per 1,000 population ranged from 151 in the Midwest Region to 134 in the West Region. Regional differences in the number of discharges are accounted for mainly by variations in population sizes.

Average lengths of stay by geographic region were 5.5 days in the West, 6.1 days in the South, 6.6 days in the Midwest, and 7.4 days in the Northeast.

Discharges from short-stay hospitals were about 40 percent male and 60 percent female in every hospital bed-size group. The average length of stay increased steadily from 5.3 days in the smallest hospitals (6–99 beds) to 7.3 days in the largest hospitals (500 beds or more) for all patients.

During 1986, voluntary nonprofit hospitals provided medical care to an estimated 23.5 million patients, or 69 percent of all patients hospitalized. Hospitals operated by State and local governments cared for 7.1 million patients, or 21 percent of all discharges, and proprietary hospitals operated for profit cared for 3.6 million patients or 11 percent of all discharges. Average lengths of stay were 6.6 days in voluntary nonprofit hospitals, 5.9 days in State and local government hospitals, and 6.0 days in proprietary hospitals.

Utilization by diagnosis

Diseases of the circulatory system ranked first in 1986 among the ICD–9–CM diagnostic chapters as a principal or first-listed diagnosis among patients discharged from non-Federal short-stay hospitals. These conditions accounted for an estimated 5.6 million discharges. Other leading ICD–9–CM diagnostic chapters were supplementary classifications (including females with deliveries) (4.2 million discharges) and diseases of the digestive system (3.7 million discharges). About 39 percent of the patients discharged from non-Federal short-stay hospitals were included in these three ICD–9–CM diagnostic chapters.

The diagnostic categories presented in this report 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; psychoses; and fractures, all sites) are groupings of more detailed diagnoses, they are presented as single categories without showing all of the specific diagnostic inclusions.

The number and rate of discharges and average length of stay for each ICD–9–CM diagnostic chapter and selected categories are shown by sex and age in tables 4–6. The most common diagnostic category for all patients was females with deliveries. This was followed by the diagnostic categories heart disease and malignant neoplasms. Excluding females with deliveries, these last two non-sex-specific diagnostic categories were also the most common first-listed diagnoses for each sex.

The most frequent first-listed diagnoses for 1986 varied

for the different age groups. For patients under 15 years of age, the most frequent diagnoses were pneumonia, all forms; acute respiratory infections, except influenza; chronic disease of tonsils and adenoids; and asthma. Excluding females with deliveries, the most frequent diagnoses for patients 15–44 years of age were psychoses; fractures, all sites; and abortions and ectopic and molar pregnancies. Patients 45–64 years of age were hospitalized most frequently for heart disease. The most common diagnoses for patients 65 years of age and over were heart disease and malignant neoplasms.

The average length of stay for all patients ranged from a low of 1.3 days for the diagnostic category chronic disease of tonsils and adenoids, 1.7 days for the diagnostic category of cataract, and 2.1 days for abortions and ectopic and molar pregnancies to a high of 14.4 days for psychoses and 14.2 days for fracture of neck of femur. Although the overall average length of stay for females was shorter than that for males, females stayed in the hospital longer than males for many of the specific diagnostic categories shown in this report.

The average length of stay increased with increasing age for most categories of diagnoses shown. Overall, the average length of stay ranged from 4.6 days for patients under 15 years of age to 8.5 days for patients 65 years and over.

Utilization by procedures

One or more surgical or nonsurgical procedures were performed for an estimated 20.6 million of the 34.3 million inpatients discharged from short-stay hospitals during 1986. A total of 38.0 million procedures, or an average of 1.8 per patient who underwent at least one procedure, were recorded in 1986.

Procedures are grouped in the tables of this report by the ICD–9–CM procedure chapters. Selected procedures within these chapters also are presented by specific categories. Some of these categories (such as extraction of lens and hysterectomy) are presented as single categories although they may be divided into more precise subgroups.

When grouped by chapters, miscellaneous diagnostic and therapeutic procedures with 9.8 million procedures ranked first among the surgical and nonsurgical procedures performed during 1986. These were followed by operations on the digestive system with 5.7 million procedures performed. Other leading chapters were obstetrical procedures with 4.7 million procedures, operations on the musculoskeletal system with 3.5 million procedures, and operations on female genital organs with 3.0 million procedures. Approximately two-thirds of all procedures performed in 1986 were included in these five ICD–9–CM procedure chapters.

The number and rate of all-listed procedures in 1986 for each ICD–9–CM procedure chapter and selected procedure categories are shown by sex and age in tables 7 and 8. Of the 38.0 million procedures performed during 1986, 15.3 million were for males and 22.7 million were for females. The corresponding rates per 1,000 population were 159 for both sexes, 132 for males, and 184 for females. Of the procedures shown in table 7, some common ones for males were arteriography and angiocardiology and computerized axial tomography;

the most frequently performed procedures for females were episiotomy and cesarean section.

The rate of procedures per 1,000 population increased with advancing age from 36 for patients under 15 years to 409 for patients 65 years of age and over. The most frequently performed procedures for patients under 15 years of age were ton-

sillectomy with or without adenoidectomy; for patients 15–44 years of age, episiotomy and cesarean section; for patients 45–64 years of age, arteriography and angiocardiology, computerized axial tomography, and cardiac catheterization; and for patients 65 years of age and over, computerized axial tomography and diagnostic ultrasound.

TABLE 1. NUMBER OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS BY SELECTED CHARACTERISTICS: UNITED STATES, 1986

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

SELECTED CHARACTERISTIC	BOTH SEXES	MALE	FEMALE
NUMBER OF PATIENTS DISCHARGED IN THOUSANDS			
TOTAL.....	34,256	13,949	20,307
AGE			
UNDER 15 YEARS.....	2,783	1,603	1,179
15-44 YEARS.....	13,458	4,100	9,358
45-64 YEARS.....	7,300	3,569	3,731
65 YEARS AND OVER.....	10,716	4,677	6,039
REGION			
NORTHEAST.....	6,955	2,925	4,031
MIDWEST.....	8,931	3,712	5,219
SOUTH.....	11,892	4,758	7,134
WEST.....	6,478	2,555	3,923
BED SIZE			
6-99 BEDS.....	5,614	2,260	3,354
100-199 BEDS.....	6,243	2,444	3,799
200-299 BEDS.....	6,215	2,670	3,544
300-499 BEDS.....	8,803	3,512	5,291
500 BEDS OR MORE.....	7,381	3,063	4,318
OWNERSHIP			
NONPROFIT.....	23,506	9,578	13,928
STATE AND LOCAL GOVERNMENT.....	7,131	2,903	4,229
PROPRIETARY.....	3,618	1,468	2,150

TABLE 2. RATE OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY AGE, GEOGRAPHIC REGION, AND SEX: UNITED STATES, 1986

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

AGE AND REGION	BOTH SEXES	MALE	FEMALE
RATE OF PATIENTS DISCHARGED PER 1,000 POPULATION			
TOTAL.....	143.1	120.5	164.4
AGE			
UNDER 15 YEARS.....	53.5	60.3	46.5
15-44 YEARS.....	118.9	73.4	163.2
45-64 YEARS.....	162.2	166.1	158.7
65 YEARS AND OVER.....	367.3	395.6	348.1
REGION			
NORTHEAST.....	139.4	122.7	154.6
MIDWEST.....	150.9	129.2	171.4
SOUTH.....	144.9	120.4	167.6
WEST.....	134.4	107.7	160.3

TABLE 3. AVERAGE LENGTH OF STAY FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS BY SELECTED CHARACTERISTICS: UNITED STATES, 1986

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

SELECTED CHARACTERISTIC	BOTH SEXES	MALE	FEMALE
AVERAGE LENGTH OF STAY IN DAYS			
TOTAL.....	6.4	6.8	6.1
AGE			
UNDER 15 YEARS.....	4.6	4.5	4.6
15-44 YEARS.....	4.8	6.1	4.3
45-64 YEARS.....	6.8	6.7	6.9
65 YEARS AND OVER.....	8.5	8.2	8.7
REGION			
NORTHEAST.....	7.4	7.7	7.1
MIDWEST.....	6.6	7.0	6.3
SOUTH.....	6.1	6.4	5.9
WEST.....	5.5	6.0	5.1
BED SIZE			
6-99 BEDS.....	5.3	5.4	5.2
100-199 BEDS.....	5.7	5.9	5.6
200-299 BEDS.....	6.5	6.8	6.2
300-499 BEDS.....	6.7	7.2	6.4
500 BEDS OR MORE.....	7.3	8.0	6.8
OWNERSHIP			
NONPROFIT.....	6.6	7.0	6.3
STATE AND LOCAL GOVERNMENT.....	5.9	6.4	5.5
PROPRIETARY.....	6.0	6.3	5.8

TABLE 4. NUMBER OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY CATEGORY OF FIRST-LISTED DIAGNOSIS, SEX, AND AGE: UNITED STATES, 1986

[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	TOTAL	SEX		AGE			
		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
		NUMBER OF PATIENTS DISCHARGED IN THOUSANDS					
ALL CONDITIONS.....	34,256	13,949	20,307	2,783	13,458	7,300	10,716
INFECTIOUS AND PARASITIC DISEASES.....001-139	700	343	357	184	223	95	198
NEOPLASMS.....140-239	2,305	959	1,346	60	423	774	1,049
MALIGNANT NEOPLASMS.....140-208,230-234	1,860	866	994	42	222	631	964
MALIGNANT NEOPLASM OF LARGE INTESTINE AND RECTUM.....153-154,197.5	210	105	105	*	*5	59	146
MALIGNANT NEOPLASM OF TRACHEA, BRONCHUS, AND LUNG.....162,197.0,197.3	290	175	115	-	15	120	155
MALIGNANT NEOPLASM OF BREAST.....174-175,198.81	216	*	214	-	35	84	96
BENIGN NEOPLASMS AND NEOPLASMS OF UNCERTAIN BEHAVIOR AND UNSPECIFIED NATURE.....210-229,235-239	445	93	353	17	201	143	85
ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS.....240-279	1,117	422	695	80	268	285	484
DIABETES MELLITUS.....250	491	205	286	20	133	159	179
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.....280-289	333	147	186	60	92	55	126
MENTAL DISORDERS.....290-319	1,807	962	845	53	1,111	392	251
PSYCHOSES.....290-299	766	356	410	*6	422	180	158
ALCOHOL DEPENDENCE SYNDROME.....303	397	303	93	*	258	114	24
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....320-389	1,039	480	558	196	270	225	348
DISEASES OF THE CENTRAL NERVOUS SYSTEM.....320-336,340-349	401	194	206	60	134	79	127
CATARACT.....366	104	41	62	*	*5	20	76
DISEASES OF THE EAR AND MASTOID PROCESS.....380-389	217	107	110	94	48	41	35
DISEASES OF THE CIRCULATORY SYSTEM.....390-459	5,563	2,846	2,717	38	468	1,717	3,341
HEART DISEASE.....391-392.0,393-398,402,404,410-416,420-429	3,731	2,002	1,729	25	247	1,219	2,240
ACUTE MYOCARDIAL INFARCTION.....410	758	467	290	*	42	263	452
ATHEROSCLEROTIC HEART DISEASE.....414.0	338	219	119	*	16	156	164
OTHER ISCHEMIC HEART DISEASE.....411-413,414.1-414.9	1,043	565	479	*	67	412	561
CARDIAC DYSRHYTHMIAS.....427	515	240	275	*8	41	128	338
CONGESTIVE HEART FAILURE.....428.0	582	274	308	*	13	104	461
CEREBROVASCULAR DISEASE.....430-438	889	398	491	*	34	178	674
DISEASES OF THE RESPIRATORY SYSTEM.....460-519	3,204	1,560	1,644	772	657	585	1,189
ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA.....460-466	426	213	213	169	80	60	118
CHRONIC DISEASE OF TONSILS AND ADENOIDS.....474	255	107	148	166	86	*	*
PNEUMONIA, ALL FORMS.....480-486	943	471	472	194	134	148	466
ASTHMA.....493	477	206	271	158	122	99	98
DISEASES OF THE DIGESTIVE SYSTEM.....520-579	3,732	1,696	2,036	308	1,158	977	1,288
ULCERS OF THE STOMACH AND SMALL INTESTINE.....531-534	295	149	146	*	67	80	146
GASTRITIS AND DUODENITIS.....535	196	79	117	11	77	54	54
APPENDICITIS.....540-543	250	138	112	56	153	28	13
INGUINAL HERNIA.....550	304	273	31	34	78	94	98
NONINFECTIOUS ENTERITIS AND COLITIS.....555-556,558	429	169	260	115	159	65	90
CHOLELITHIASIS.....574	494	142	352	*	171	150	170
DISEASES OF THE GENITOURINARY SYSTEM.....580-629	2,665	949	1,715	91	1,210	613	751
CALCULUS OF KIDNEY AND URETER.....592	331	219	112	*	164	114	51
HYPERPLASIA OF PROSTATE.....600	256	256	...	*	*	60	194
COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM 1/.....630-676	889	...	889	*5	883	*	...
ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES.....630-639	343	...	343	*	341	*	...
DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE.....680-709	515	249	266	50	177	132	156
DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE.....710-739	2,081	940	1,142	53	838	639	552
ARTHROPATHIES AND RELATED DISORDERS.....710-719	475	194	280	14	142	125	193
INTERVERTEBRAL DISC DISORDERS.....722	504	288	216	*	273	178	52
CONGENITAL ANOMALIES.....740-759	267	149	118	163	59	31	14
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....760-779	139	79	60	138	*	*	-
SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS.....780-799	454	225	229	83	196	109	66
INJURY AND POISONING.....800-999	3,225	1,776	1,449	395	1,453	561	816
FRACTURES, ALL SITES.....800-829	1,100	540	560	134	381	173	413
FRACTURE OF NECK OF FEMUR.....820	252	62	190	*	*8	23	218
SPRAINS AND STRAINS OF BACK (INCLUDING NECK).....846-847	192	98	95	*	118	55	16
INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE).....850-854	267	163	104	60	140	29	38
LACERATIONS AND OPEN WOUNDS.....870-904	284	219	65	35	187	36	26
SUPPLEMENTARY CLASSIFICATIONS.....V01-V82	4,222	169	4,052	55	3,973	110	84
FEMALES WITH DELIVERIES.....V27	3,762	...	3,762	11	3,748	*	...

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

TABLE 5. RATE OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY CATEGORY OF FIRST-LISTED DIAGNOSIS, SEX, AND AGE: UNITED STATES, 1986

[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	TOTAL	SEX		AGE			
		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
RATE OF INPATIENTS DISCHARGED PER 10,000 POPULATION							
ALL CONDITIONS.....	1,431.2	1,204.6	1,643.5	535.3	1,188.8	1,622.2	3,673.1
INFECTIOUS AND PARASITIC DISEASES.....001-139	29.3	29.6	28.9	35.4	19.7	21.1	68.0
NEOPLASMS.....140-239	96.3	82.8	109.0	11.5	37.3	171.9	359.6
MALIGNANT NEOPLASMS.....140-208,230-234	77.7	74.8	80.4	8.2	19.6	140.2	330.6
MALIGNANT NEOPLASM OF LARGE INTESTINE AND RECTUM.....153-154,197.5	8.8	9.1	8.5	*	*0.4	13.0	50.1
MALIGNANT NEOPLASM OF TRACHEA, BRONCHUS, AND LUNG.....162,197.0,197.3	12.1	15.1	9.3	-	1.3	26.7	53.3
MALIGNANT NEOPLASM OF BREAST.....174-175,198.81	9.0	*	17.3	-	3.1	18.8	32.9
BENIGN NEOPLASMS AND NEOPLASMS OF UNCERTAIN BEHAVIOR AND UNSPECIFIED NATURE.....210-229,235-239	18.6	8.0	28.6	3.3	17.7	31.7	29.0
ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS.....240-279	46.7	36.4	56.3	15.5	23.6	63.3	165.9
DIABETES MELLITUS.....250	20.5	17.7	23.1	3.8	11.7	35.4	61.5
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.....280-289	13.9	12.7	15.0	11.5	8.2	12.2	43.3
MENTAL DISORDERS.....290-319	75.5	83.1	68.4	10.2	98.1	87.1	86.1
PSYCHOSES.....290-299	32.0	30.8	33.2	*1.1	37.3	40.1	54.2
ALCOHOL DEPENDENCE SYNDROME.....303	16.6	26.2	7.6	*	22.8	25.4	8.1
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....320-389	43.4	41.5	45.2	37.6	23.8	50.0	119.4
DISEASES OF THE CENTRAL NERVOUS SYSTEM.....320-336,340-349	16.7	16.8	16.7	11.6	11.9	17.5	43.7
CATARACT.....366	4.3	3.6	5.0	*	*0.5	4.4	26.0
DISEASES OF THE EAR AND MASTOID PROCESS.....380-389	9.1	9.3	8.9	18.0	4.2	9.0	12.0
DISEASES OF THE CIRCULATORY SYSTEM.....390-459	232.4	245.8	219.9	7.3	41.3	381.5	1,145.3
HEART DISEASE.....391-392.0,393-398,402,404,410-416,420-429	155.9	172.9	139.9	4.8	21.8	270.9	767.7
ACUTE MYOCARDIAL INFARCTION.....410	31.7	40.4	23.5	*	3.7	58.4	155.0
ATHEROSCLEROTIC HEART DISEASE.....414.0	14.1	18.9	9.6	*	1.5	34.7	56.4
OTHER ISCHEMIC HEART DISEASE.....411-413,414.1-414.9	43.6	48.8	38.8	*	5.9	91.5	192.3
CARDIAC DYSRHYTHMIAS.....427	21.5	20.7	22.3	*1.5	3.6	28.5	116.0
CONGESTIVE HEART FAILURE.....428.0	24.3	23.7	24.9	*	1.2	23.1	158.2
CEREBROVASCULAR DISEASE.....430-438	37.1	34.4	39.7	*	3.0	39.5	231.0
DISEASES OF THE RESPIRATORY SYSTEM.....460-519	133.8	134.7	133.0	148.6	58.1	130.0	407.6
ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA.....460-466	17.8	18.4	17.2	32.4	7.1	13.3	40.3
CHRONIC DISEASE OF TONSILS AND ADENOIDS.....474	10.6	9.2	12.0	31.9	7.6	*	*
PNEUMONIA, ALL FORMS.....480-486	39.4	40.6	38.2	37.4	11.9	32.9	159.9
ASTHMA.....493	19.9	17.8	21.9	30.3	10.8	22.0	33.7
DISEASES OF THE DIGESTIVE SYSTEM.....520-579	155.9	146.4	164.8	59.3	102.3	217.1	441.7
ULCERS OF THE STOMACH AND SMALL INTESTINE.....531-534	12.3	12.9	11.8	*	5.9	17.8	50.2
GASTRITIS AND DUODENITIS.....535	8.2	6.8	9.5	2.2	6.8	12.1	18.4
APPENDICITIS.....540-543	10.5	11.9	9.1	10.8	13.5	6.2	4.6
INGUINAL HERNIA.....550	12.7	23.6	2.5	6.5	6.9	20.8	33.7
NONINFECTIOUS ENTERITIS AND COLITIS.....555-556,558	17.9	14.6	21.1	22.1	14.1	14.5	30.8
CHOLELITHIASIS.....574	20.6	12.2	28.5	*	15.1	33.4	58.3
DISEASES OF THE GENITOURINARY SYSTEM.....580-629	111.3	82.0	138.8	17.4	106.9	136.2	257.4
CALCULUS OF KIDNEY AND URETER.....592	13.8	18.9	9.1	*	14.5	25.3	17.5
HYPERPLASIA OF PROSTATE.....600	10.7	22.1	...	*	*	13.3	66.5
COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM 1/.....630-676	37.1	...	72.0	*0.9	78.0	*	...
ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES.....630-639	14.3	...	27.8	*	30.1	*	...
DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE.....680-709	21.5	21.5	21.5	9.6	15.6	29.4	53.5
DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE.....710-739	87.0	81.2	92.4	10.2	74.0	142.0	189.1
ARTHROPATHIES AND RELATED DISORDERS.....710-719	19.8	16.8	22.7	2.7	12.6	27.9	66.0
INTERVERTEBRAL DISC DISORDERS.....722	21.0	24.8	17.5	*	24.1	39.5	17.8
CONGENITAL ANOMALIES.....740-759	11.1	12.8	9.6	31.4	5.2	6.8	4.8
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....760-779	5.8	6.8	4.9	26.5	*	*	-
SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS.....780-799	19.0	19.4	18.5	16.0	17.3	24.3	22.7
INJURY AND POISONING.....800-999	134.7	153.4	117.3	76.0	128.3	124.6	279.8
FRACTURES, ALL SITES.....800-829	46.0	46.6	45.4	25.7	33.6	38.4	141.5
FRACTURE OF NECK OF FEMUR.....820	10.5	5.4	15.4	*	*0.7	5.1	74.8
SPRAINS AND STRAINS OF BACK (INCLUDING NECK).....846-847	8.0	8.4	7.7	*	10.4	12.3	5.6
INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE).....850-854	11.1	14.1	8.4	11.6	12.3	6.4	13.0
LACERATIONS AND OPEN WOUNDS.....870-904	11.9	18.9	5.3	6.7	16.5	8.1	8.9
SUPPLEMENTARY CLASSIFICATIONS.....V01-V82	176.4	14.6	328.0	10.6	350.9	24.5	28.7
FEMALES WITH DELIVERIES.....V27	157.2	...	304.5	2.1	331.1	*	...

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

TABLE 6. AVERAGE LENGTH OF STAY FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY CATEGORY OF FIRST-LISTED DIAGNOSIS, SEX, AND AGE: UNITED STATES, 1986

[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	TOTAL	SEX		AGE			
		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
AVERAGE LENGTH OF STAY IN DAYS							
ALL CONDITIONS.....	6.4	6.8	6.1	4.6	4.8	6.8	8.5
INFECTIOUS AND PARASITIC DISEASES.....001-139	7.0	7.4	6.6	3.9	6.3	8.7	9.8
NEOPLASMS.....140-239	8.4	9.0	7.9	5.4	5.9	8.2	9.6
MALIGNANT NEOPLASMS.....140-208,230-234	9.1	9.4	8.8	6.6	6.8	8.8	9.9
MALIGNANT NEOPLASM OF LARGE INTESTINE AND RECTUM.....153-154,197.5	12.8	13.1	12.5	*	*10.9	11.3	13.5
MALIGNANT NEOPLASM OF TRACHEA, BRONCHUS, AND LUNG.....162,197.0,197.3	8.8	8.6	9.2	-	8.0	8.7	9.0
MALIGNANT NEOPLASM OF BREAST.....174-175,198.81	7.1	*	7.0	-	6.2	6.8	7.7
BENIGN NEOPLASMS AND NEOPLASMS OF UNCERTAIN BEHAVIOR AND UNSPECIFIED NATURE.....210-229,235-239	5.3	4.9	5.4	2.5	4.9	5.4	6.6
ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS.....240-279	7.2	7.2	7.1	5.6	5.4	7.0	8.5
DIABETES MELLITUS.....250	7.6	7.4	7.8	4.1	5.4	8.0	9.4
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.....280-289	5.8	5.9	5.8	4.0	5.4	5.9	7.0
MENTAL DISORDERS.....290-319	12.3	11.9	12.7	24.2	12.0	11.5	12.2
PSYCHOSES.....290-299	14.4	13.7	15.1	*41.6	14.5	14.2	13.5
ALCOHOL DEPENDENCE SYNDROME.....303	10.7	10.5	11.2	*	10.4	10.7	13.1
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.....320-389	5.6	6.0	5.3	4.0	5.8	5.4	6.5
DISEASES OF THE CENTRAL NERVOUS SYSTEM.....320-336,340-349	9.3	10.0	8.5	6.8	8.1	9.8	11.3
CATARACT.....366	1.7	1.9	1.6	*	*2.3	1.7	1.7
DISEASES OF THE EAR AND MASTOID PROCESS.....380-389	2.9	2.7	3.1	2.3	2.5	2.9	4.9
DISEASES OF THE CIRCULATORY SYSTEM.....390-459	7.5	7.2	7.8	6.8	5.7	6.7	8.1
HEART DISEASE.....391-392.0,393-398,402,404,410-416,420-429	7.0	6.7	7.4	7.7	5.7	6.4	7.5
ACUTE MYOCARDIAL INFARCTION.....410	8.9	8.5	9.5	*	7.2	8.2	9.4
ATHEROSCLEROTIC HEART DISEASE.....414.0	6.2	6.2	6.2	*	5.0	5.5	7.0
OTHER ISCHEMIC HEART DISEASE.....411-413,414.1-414.9	5.3	5.1	5.5	*	4.2	4.9	5.8
CARDIAC DYSRHYTHMIAS.....427	5.9	5.2	6.5	*9.9	4.2	5.5	6.1
CONGESTIVE HEART FAILURE.....428.0	8.2	7.7	8.7	*	7.3	8.0	8.3
CEREBROVASCULAR DISEASE.....430-438	9.7	9.5	9.9	*	10.9	9.7	9.6
DISEASES OF THE RESPIRATORY SYSTEM.....460-519	6.0	5.9	6.1	3.2	4.0	6.7	8.6
ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA.....460-466	4.7	4.4	5.1	3.2	3.6	5.9	7.0
CHRONIC DISEASE OF TONSILS AND ADENOIDS.....474	1.3	1.3	1.3	1.3	1.3	*	*
PNEUMONIA, ALL FORMS.....480-486	7.8	7.6	8.0	4.6	6.3	8.0	9.5
ASTHMA.....493	4.8	4.4	5.1	3.2	4.1	6.1	6.8
DISEASES OF THE DIGESTIVE SYSTEM.....520-579	6.1	5.5	6.5	3.4	4.8	6.2	7.8
ULCERS OF THE STOMACH AND SMALL INTESTINE.....531-534	7.1	6.6	7.7	*	5.2	7.2	8.0
GASTRITIS AND DUODENITIS.....535	4.5	4.2	4.7	2.9	3.8	4.6	5.8
APPENDICITIS.....540-543	4.9	4.7	5.0	4.1	4.2	6.8	11.3
INGUINAL HERNIA.....550	3.0	2.9	3.8	1.7	2.3	3.0	3.9
NONINFECTIOUS ENTERITIS AND COLITIS.....555-556,558	4.8	4.5	5.1	3.0	5.0	5.4	6.6
CHOLELITHIASIS.....574	6.9	7.6	6.6	*	5.3	6.5	8.8
DISEASES OF THE GENITOURINARY SYSTEM.....580-629	5.2	5.5	5.0	4.0	4.2	5.0	7.2
CALCULUS OF KIDNEY AND URETER.....592	3.6	3.3	4.0	*	2.9	3.7	5.2
HYPERPLASIA OF PROSTATE.....600	5.7	5.7	...	*	*	5.0	6.0
COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM 1/.....630-676	2.5	...	2.5	*2.0	2.5	*	...
ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES.....630-639	2.1	...	2.1	*	2.1	*	...
DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE.....680-709	7.9	7.7	8.0	4.4	5.9	8.1	10.9
DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE.....710-739	6.6	6.3	6.9	6.3	5.1	6.4	9.3
ARTHRITIS AND RELATED DISORDERS.....710-719	7.8	7.0	8.4	7.2	4.4	7.0	10.9
INTERVERTEBRAL DISC DISORDERS.....722	6.9	6.4	7.5	*	6.4	7.0	8.9
CONGENITAL ANOMALIES.....740-759	5.5	5.5	5.5	5.1	4.4	8.1	8.7
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....760-779	9.0	7.6	10.8	9.0	*	*	-
SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS.....780-799	3.4	3.2	3.5	3.0	3.2	3.2	4.7
INJURY AND POISONING.....800-999	6.4	5.8	7.2	4.2	5.2	6.4	9.8
FRACTURES, ALL SITES.....800-829	8.6	7.4	9.7	5.2	6.4	7.8	11.9
FRACTURE OF NECK OF FEMUR.....820	14.2	12.9	14.6	*	*15.1	13.0	14.2
SPRAINS AND STRAINS OF BACK (INCLUDING NECK).....846-847	5.6	5.3	5.8	*	5.4	5.8	6.5
INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE).....850-854	5.0	4.8	5.4	2.8	5.3	4.9	7.4
LACERATIONS AND OPEN WOUNDS.....870-904	4.5	4.2	5.2	3.1	4.1	5.8	7.3
SUPPLEMENTARY CLASSIFICATIONS.....V01-V82	3.3	4.3	3.2	4.0	3.2	4.2	6.8
FEMALES WITH DELIVERIES.....V27	3.2	...	3.2	3.5	3.2	*	...

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

TABLE 7. NUMBER OF ALL-LISTED PROCEDURES FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY PROCEDURE CATEGORY, SEX, AND AGE: UNITED STATES, 1986

[DISCHARGES FROM NON-FEDERAL 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)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	TOTAL	SEX		AGE			
		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
NUMBER OF ALL-LISTED PROCEDURES IN THOUSANDS							
ALL PROCEDURES.....	38,000	15,318	22,682	1,887	15,192	8,976	11,946
OPERATIONS ON THE NERVOUS SYSTEM.....01-05	933	480	453	164	326	214	229
SPINAL TAP.....03.31	347	180	167	123	99	45	80
OPERATIONS ON THE ENDOCRINE SYSTEM.....06-07	101	26	75	*5	41	32	23
OPERATIONS ON THE EYE.....08-16	561	252	310	37	96	132	297
EXTRACTION OF LENS.....13.1-13.6	122	48	74	*	*8	23	87
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS).....13.7	105	40	65	*	*	18	83
OPERATIONS ON THE EAR.....18-20	208	120	88	102	60	31	16
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX.....21-29	1,046	535	511	280	484	185	96
RHINOPLASTY AND REPAIR OF NOSE.....21.8	153	79	74	*7	109	27	10
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY.....28.2-28.3	281	121	160	176	100	*	*
OPERATIONS ON THE RESPIRATORY SYSTEM.....30-34	1,011	585	426	57	199	313	442
BRONCHOSCOPY.....33.21-33.23	199	119	80	14	36	65	85
OPERATIONS ON THE CARDIOVASCULAR SYSTEM.....35-39	2,786	1,684	1,102	129	332	1,108	1,217
REMOVAL OF CORONARY ARTERY OBSTRUCTION.....36.0	133	94	39	*	15	74	44
DIRECT HEART REVASCLARIZATION.....36.1	284	214	70	-	16	144	125
CARDIAC CATHETERIZATION.....37.21-37.23	775	495	280	32	82	386	275
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, REPAIR.....37.7-37.8	214	113	101	*	*8	44	158
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM.....40-41	403	203	200	20	96	116	171
OPERATIONS ON THE DIGESTIVE SYSTEM.....42-54	5,728	2,434	3,294	221	1,798	1,471	2,238
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE).....42.23,44.13	194	92	102	*7	38	56	93
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE.....43.5-43.8,45.6-45.8	293	128	165	*5	41	80	168
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE).....45.24	448	192	256	*5	80	110	254
APPENDECTOMY, EXCLUDING INCIDENTAL.....47.0	275	143	132	59	174	28	15
HEMORRHOIDECTOMY.....49.43-49.46	114	60	55	*	54	40	19
CHOLECYSTECTOMY.....51.2	502	144	358	*	176	157	166
REPAIR OF INGUINAL HERNIA.....53.0-53.1	329	293	36	37	84	101	107
DIVISION OF PERITONEAL ADHESIONS.....54.5	325	54	271	*	175	67	81
OPERATIONS ON THE URINARY SYSTEM.....55-59	1,885	1,159	726	61	427	520	877
ENDOSCOPES (NATURAL ORIFICE).....55.21-55.22,56.31,57.32,58.22	671	493	178	14	113	178	366
OPERATIONS ON THE MALE GENITAL ORGANS.....60-64	718	718	...	79	80	147	411
PROSTATECTOMY.....60.2-60.6	367	367	...	...	*	77	287
OPERATIONS ON THE FEMALE GENITAL ORGANS.....65-71	2,999	...	2,999	*9	2,186	573	230
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY.....65.3-65.6	502	...	502	*	277	173	51
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES.....66.2-66.3	423	...	423	-	421	*	...
HYSTERECTOMY.....68.3-68.7	644	...	644	-	397	191	57
DILATION AND CURETTAGE OF UTERUS.....69.0	472	...	472	*	382	66	23
REPAIR OF CYSTOCELE AND RECTOCELE.....70.5	147	...	147	-	48	60	39
OBSTETRICAL PROCEDURES.....72-75	4,701	...	4,701	15	4,682	*	...
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION.....72.1,72.21,72.31,72.71,73.6	1,741	...	1,741	*7	1,732	*	...
CESAREAN SECTION.....74.0-74.2,74.4,74.99	906	...	906	*	904	*	...
REPAIR OF CURRENT OBSTETRIC LACERATION.....75.5-75.6	612	...	612	*	609	*	...
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM.....76-84	3,521	1,754	1,767	220	1,533	862	905
OPEN REDUCTION OF FRACTURE EXCEPT JAW.....76.79,79.2-79.3,79.5-79.6	459	239	220	32	180	82	165
OTHER REDUCTION OF FRACTURE EXCEPT JAW.....76.70,76.78,79.0-79.1,79.4	214	110	104	55	73	33	53
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION.....80.5,81.0	338	211	127	*	191	115	29
ARTHROPLASTY AND REPLACEMENT OF KNEE.....81.41-81.47	185	91	94	*	75	33	74
ARTHROPLASTY AND REPLACEMENT OF HIP.....81.5-81.6	201	63	138	*	*8	40	152
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA.....82-83.1,83.3-83.9	344	196	149	30	163	98	54
OPERATIONS ON THE INTEGUMENTARY SYSTEM.....85-86	1,619	651	969	93	642	446	438
MASTECTOMY.....85.4	132	*	130	-	19	51	63
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE.....86.2-86.4	565	283	282	40	225	134	166
SKIN GRAFT (EXCEPT LIP OR MOUTH).....86.6-86.7	150	87	63	17	50	37	46
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES.....87-99	9,781	4,718	5,062	392	2,209	2,825	4,355
COMPUTERIZED AXIAL TOMOGRAPHY.....87.03,87.41,87.71,88.01,88.38	1,531	747	784	68	346	373	743
PYELOGRAM.....87.73-87.75	406	223	183	13	145	110	138
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL.....88.4-88.5	1,285	771	514	17	159	579	529
DIAGNOSTIC ULTRASOUND.....88.7	1,411	547	865	52	435	337	587
CIRCULATORY MONITORING.....89.6	799	414	385	20	104	184	492
RADIOISOTOPE SCAN.....92.0-92.1	851	389	462	18	149	254	429

TABLE 8. RATE OF ALL-LISTED PROCEDURES FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY PROCEDURE CATEGORY, SEX, AND AGE: UNITED STATES, 1986

[DISCHARGES FROM NON-FEDERAL 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)]

PROCEDURE CATEGORY AND ICD-9-CM CODE	TOTAL	SEX		AGE			
		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
RATE OF ALL-LISTED PROCEDURES PER 100,000 POPULATION							
ALL PROCEDURES.....	15,876.0	13,228.2	18,357.7	3,629.2	13,420.4	19,946.6	40,947.9
OPERATIONS ON THE NERVOUS SYSTEM.....01-05	389.8	414.9	366.3	316.0	287.9	474.8	786.0
SPINAL TAP.....03.31	144.9	155.2	135.2	235.7	87.8	99.6	274.3
OPERATIONS ON THE ENDOCRINE SYSTEM.....06-07	42.2	22.1	61.0	*10.5	36.3	70.1	78.8
OPERATIONS ON THE EYE.....08-16	234.5	217.4	250.5	71.6	84.4	292.6	1,017.8
EXTRACTION OF LENS.....13.1-13.6	51.0	41.4	60.0	*	*7.1	51.8	298.1
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS).....13.7	43.7	34.5	52.4	*	*	40.1	285.8
OPERATIONS ON THE EAR.....18-20	87.1	103.6	71.6	196.5	52.7	68.6	54.3
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX.....21-29	436.9	462.0	413.4	539.1	428.0	410.1	330.7
RHINOPLASTY AND REPAIR OF NOSE.....21.8	64.1	68.4	60.1	*13.9	96.2	60.5	34.4
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY.....28.2-28.3	117.4	104.1	129.8	339.2	88.5	*	*
OPERATIONS ON THE RESPIRATORY SYSTEM.....30-34	422.4	505.0	345.0	109.9	176.1	694.8	1,514.8
BRONCHOSCOPY.....33.21-33.23	83.3	102.7	65.1	26.6	31.6	143.6	291.9
OPERATIONS ON THE CARDIOVASCULAR SYSTEM.....35-39	1,164.0	1,454.1	892.1	248.8	293.4	2,462.1	4,170.8
REMOVAL OF CORONARY ARTERY OBSTRUCTION.....36.0	55.8	81.5	31.7	*	13.2	164.6	150.4
DIRECT HEART REVASCULARIZATION.....36.1	118.8	185.1	56.8	-	13.9	319.1	429.0
CARDIAC CATHETERIZATION.....37.21-37.23	323.8	427.6	226.4	62.1	72.5	857.8	941.4
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, REPAIR.....37.7-37.8	89.5	97.8	81.8	*	*6.9	97.5	542.9
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM.....40-41	168.3	175.2	161.7	38.3	85.2	257.4	584.7
OPERATIONS ON THE DIGESTIVE SYSTEM.....42-54	2,393.2	2,102.1	2,666.0	424.7	1,588.5	3,268.8	7,672.5
ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE).....42.23,44.13	81.1	79.3	82.7	*13.1	33.9	124.4	318.1
PARTIAL GASTRECTOMY AND RESECTION OF INTESTINE.....43.5-43.8,45.6-45.8	122.5	110.5	133.8	*8.8	36.1	177.4	576.0
ENDOSCOPY OF LARGE INTESTINE (NATURAL ORIFICE).....45.24	187.3	165.9	207.3	*8.8	70.3	244.7	870.6
APPENDECTOMY, EXCLUDING INCIDENTAL.....47.0	115.0	123.3	107.1	112.7	153.5	62.3	50.7
HEMORRHOIDECTOMY.....49.43-49.46	47.7	51.5	44.2	*	48.0	89.8	64.7
CHOLECYSTECTOMY.....51.2	209.8	124.1	290.1	*	155.6	348.5	569.5
REPAIR OF INGUINAL HERNIA.....53.0-53.1	137.5	253.3	29.0	72.1	74.0	225.0	365.7
DIVISION OF PERITONEAL ADHESIONS.....54.5	135.9	46.6	219.7	*	154.7	147.9	276.0
OPERATIONS ON THE URINARY SYSTEM.....55-59	787.5	1,000.8	587.6	117.2	376.8	1,156.3	3,006.7
ENDOSCOPIES (NATURAL ORIFICE).....55.21-55.22,56.31,57.32,58.22	280.3	425.6	144.2	26.9	99.6	396.6	1,253.9
OPERATIONS ON THE MALE GENITAL ORGANS.....60-64	299.8	619.7	...	152.5	70.7	327.1	1,409.1
PROSTATECTOMY.....60.2-60.6	153.2	316.7	...	...	*	171.3	985.2
OPERATIONS ON THE FEMALE GENITAL ORGANS.....65-71	1,252.8	...	2,427.0	*16.9	1,931.4	1,274.0	789.3
OOPHORECTOMY AND SALPINGO-OOPHORECTOMY.....65.3-65.6	209.8	...	406.4	*	244.3	385.4	173.6
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES.....66.2-66.3	176.8	...	342.6	-	372.0	*	...
HYSTERECTOMY.....68.3-68.7	269.1	...	521.4	-	350.3	424.5	194.0
DILATION AND CURETTAGE OF UTERUS.....69.0	197.0	...	381.6	*	337.2	146.3	79.3
REPAIR OF CYSTOCELE AND RECTOCELE.....70.5	61.3	...	118.8	-	42.5	133.2	132.7
OBSTETRICAL PROCEDURES.....72-75	1,963.8	...	3,804.4	29.7	4,136.2	*	...
EPISITOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION.....72.1,72.21,72.31,72.71,73.6	727.5	...	1,409.3	*14.0	1,530.3	*	...
CESAREAN SECTION.....74.0-74.2,74.4,74.99	378.4	...	733.0	*	798.4	*	...
REPAIR OF CURRENT OBSTETRIC LACERATION.....75.5-75.6	255.8	-	495.6	*	537.8	*	...
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM.....76-84	1,470.9	1,514.5	1,430.0	424.2	1,354.3	1,914.9	3,103.4
OPEN REDUCTION OF FRACTURE EXCEPT JAW.....76.79,79.2-79.3,79.5-79.6	191.7	206.4	177.9	61.9	158.7	182.3	565.7
OTHER REDUCTION OF FRACTURE EXCEPT JAW.....76.70,76.78,79.0-79.1,79.4	89.5	95.4	84.0	105.2	64.7	73.7	182.3
EXCISION OR DESTRUCTION OF INTERVERTEBRAL DISC AND SPINAL FUSION.....80.5,81.0	141.1	181.8	102.9	*	168.7	255.2	98.6
ARTHROPLASTY AND REPLACEMENT OF KNEE.....81.41-81.47	77.4	78.4	76.5	*	65.9	72.7	252.8
ARTHROPLASTY AND REPLACEMENT OF HIP.....81.5-81.6	83.9	54.7	111.3	*	*7.1	89.7	521.2
OPERATIONS ON MUSCLES, TENDONS, FASCIA, AND BURSA.....82-83.1,83.3-83.9	143.8	169.0	120.2	57.3	143.8	217.4	184.6
OPERATIONS ON THE INTEGUMENTARY SYSTEM.....85-86	676.5	561.9	784.0	179.1	567.5	991.7	1,500.0
MASTECTOMY.....85.4	55.3	*	105.4	-	16.4	112.9	216.2
EXCISION OR DESTRUCTION OF LESION OR TISSUE OF SKIN OR SUBCUTANEOUS TISSUE.....86.2-86.4	235.9	244.0	228.4	77.2	198.6	297.4	568.9
SKIN GRAFT (EXCEPT LIP OR MOUTH).....86.6-86.7	62.6	75.4	50.7	32.2	44.3	83.0	156.6
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES.....87-99	4,086.2	4,074.7	4,097.1	754.3	1,951.1	6,276.9	14,928.9
COMPUTERIZED AXIAL TOMOGRAPHY.....87.03,87.41,87.71,88.01,88.38	639.6	645.5	634.2	131.6	305.5	829.7	2,548.1
PYELOGRAM.....87.73-87.75	169.8	192.6	148.4	25.8	127.7	244.3	474.6
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL.....88.4-88.5	536.7	665.7	415.8	33.3	140.3	1,287.2	1,814.2
DIAGNOSTIC ULTRASOUND.....88.7	589.7	472.1	699.8	100.8	384.2	748.8	2,012.5
CIRCULATORY MONITORING.....89.6	334.0	357.9	311.6	38.0	91.7	409.6	1,685.0
RADIOISOTOPE SCAN.....92.0-92.1	355.3	335.8	373.6	35.0	131.5	564.8	1,471.4

References

National Center for Health Statistics, M. G. Sirken. 1967a. Utilization of short-stay hospitals, summary of nonmedical statistics, United States, 1965. *Vital and Health Statistics*. Series 13, No. 2. PHS Pub. No. 1000. Public Health Service. Washington. U.S. Government Printing Office.

National Center for Health Statistics, M. J. Witkin. 1967b. Utilization of short-stay hospitals by characteristics of discharged patients, United States, 1965. *Vital and Health Statistics*. Series 13, No. 3. PHS Pub. No. 1000. Public Health Service. Washington. U.S. Government Printing Office.

National Center for Health Statistics, W. R. Simmons. 1970. Development of the design of the NCHS Hospital Discharge Survey. *Vital*

and Health Statistics. Series 2, No. 39. PHS Pub. No. 1000. Public Health Service. Washington. U.S. Government Printing Office.

National Center for Health Statistics, E. J. Graves. 1987. Utilization of short-stay hospitals, United States, 1985, annual summary. *Vital and Health Statistics*. Series 13, No. 91. DHHS Pub. No. (PHS) 87-1752. Public Health Service. Washington. U.S. Government Printing Office.

U.S. Public Health Service and Health Care Financing Administration. 1980. *International Classification of Diseases, 9th Revision, Clinical Modification*. DHHS Pub. No. (PHS) 80-1260. Public Health Service. Washington. U.S. Government Printing Office.

Technical notes

Survey methodology

Source of data

The National Hospital Discharge Survey (NHDS) encompasses patients discharged from short-stay hospitals, exclusive of military and Veterans Administration hospitals, located in 50 States and the District of Columbia. Only hospitals with six beds or more and an average length of stay of less than 30 days for all patients are included in the survey. Discharges of newborn infants are excluded from this report.

The original universe for the survey consisted of 6,965 hospitals contained in the 1963 National Master Facility Inventory. New hospitals were sampled for inclusion in the survey in 1972, 1975, 1977, 1979, 1981, 1983, and 1985. In all, 558 hospitals were sampled in 1986. Of these hospitals, 75 refused to participate, and 65 were out of scope. The 418 participating hospitals provided approximately 193,000 abstracts of medical records.

Sample design and data collection

All hospitals with 1,000 beds or more in the universe of short-stay hospitals were selected with certainty in the sample. All hospitals with fewer than 1,000 beds were stratified, the primary strata being 24 size-by-region classes. Within each of these 24 primary strata, the allocation of the hospitals was made through a controlled selection technique so that hospitals in the sample would be properly distributed with regard to type of ownership and geographic division. Sample hospitals were drawn with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals. The within-hospital sampling ratio for selecting sample discharges varied inversely with the probability of selection of the hospital.

In 1985, for the first time, there were two data collection procedures used for the survey. The first was the traditional manual system of sample selection and data abstraction. The second involved the purchase of data tapes from commercial abstracting services. In 1986 this automated method was used in approximately 19 percent of the sample hospitals.

In the manual hospitals, sample discharges were selected using the daily listing sheet of discharges as the sampling frame. These discharges were selected by a random technique, usually on the basis of the terminal digit or digits of the patient's medical record number. The sample selection and abstraction of data from the face sheet and discharge summary of the medical records were performed by the hospital staff or by representatives of the National Center for Health Statistics (NCHS). The completed forms were forwarded to NCHS for coding, editing, and weighting procedures.

For the automated hospitals, tapes containing machine-readable medical record data are purchased from commercial abstracting services. These tapes are subject to NCHS sampling, editing, and weighting procedures. A detailed description of the automated process is to be published.

The Medical Abstract Form and the abstract service data tapes contain items relating to the personal characteristics of the patient, including birth date, sex, race, and marital status

but not name and address; administrative information, including admission and discharge dates, discharge status, and medical record number; and medical information, including diagnoses and surgical and nonsurgical operations or procedures. Since 1977, patient zip code, expected source of payment, and dates of surgery have also been collected. (The medical record number and patient zip code are considered confidential information and are not available to the public.)

Presentation of estimates

Statistics produced by NHDS are derived by a complex estimating procedure. The basic unit of estimation is the sample inpatient discharge abstract. The estimating procedure used to produce essentially unbiased national estimates in NHDS has three principal components: Inflation by reciprocals of the probabilities of sample selection, adjustment for nonresponse, and ratio adjustment to fixed totals. These components of estimation are described in appendix I of two earlier publications (NCHS, 1967a, 1967b).

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

- If the sample size is less than 30, the value of the estimate is not reported. Only an asterisk (*) is shown in the tables.
- If the sample size is 30–59, the value of the estimate is reported but should be used with caution. The estimate is preceded by an asterisk (*) in the tables.

Sampling errors and rounding of numbers

The standard error is a measure of the sampling variability that occurs by chance because only a sample, rather than an entire universe, is surveyed. The relative standard error of the estimate is obtained by dividing the standard error by the estimate itself and is expressed as a percent of the estimate. Relative standard errors for first-listed diagnoses and all-listed procedures are shown in table I. The relative standard errors for region and ownership of hospital are approximately 1½ times larger. The standard errors for average lengths of stay are shown in table II.

Estimates have been rounded to the nearest thousand. For this reason detailed figures within tables do not always add to the totals. Rates and average lengths of stay were calculated from original, unrounded figures and will not necessarily agree precisely with rates or average lengths of stay calculated from rounded data.

Tests of significance

In this report, the determination of statistical inference is based on the two-tailed Bonferroni test for multiple comparisons. Terms relating to differences such as "higher" and "less" indicate that the differences are statistically significant. Terms

NOTE: A list of references follows the text.

Table I. Approximate relative standard errors of estimated numbers of first-listed discharges and all-listed procedures: United States, 1986

Size of estimate	First-listed diagnosis	All-listed procedures
5,000	13.2	18.2
10,000	10.6	15.1
50,000	6.7	10.3
100,000	5.7	8.9
500,000	4.0	6.7
1,000,000	3.5	6.0
3,000,000	2.9	5.1
5,000,000	2.7	4.8
10,000,000	2.4	4.4
20,000,000	2.2	4.1
30,000,000	2.1	4.0
40,000,000	2.1	...

Table II. Approximate standard errors of average lengths of stay by number of discharges: United States, 1986

Number of discharges	Average length of stay in days			
	2	6	10	20
	Standard error in days			
10,000	0.7	1.2	1.7	2.2
50,000	0.3	0.7	1.0	1.4
100,000	0.3	0.6	0.9	1.2
500,000	0.2	0.5	0.8	0.9
1,000,000	0.2	0.5	0.8	0.7
5,000,000	0.2	0.5	0.8	...

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 to be not significant.

Definition of terms

Terms relating to hospitals and hospital characteristics

Hospitals—Short-stay special and general hospitals have six beds or more for inpatient use and an average length of stay of less than 30 days. Federal hospitals and hospital units of institutions are not included.

Bed size of hospital—Measured by the number of beds, cribs, and pediatric bassinets regularly maintained (set up and staffed for use) for patients; bassinets for newborn infants are not included. In this report the classification of hospitals by bed size reported by the hospitals is based on the number of beds at or near midyear.

Type of ownership of hospital—Determined by the organization that controls and operates the hospital. Hospitals are grouped as follows:

- **Voluntary nonprofit**—Hospitals operated by a church or another nonprofit organization.
- **Government**—Hospitals operated by a State or local government.

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

Terms relating to hospitalization

Patient—A person who is formally admitted to the inpatient service of a short-stay hospital for observation, care, diagnosis, or treatment. In this report the number of patients refers to the number of discharges during the year including any multiple discharges of the same individual from one or more short-stay hospitals. Infants admitted on the day of birth, directly or by transfer from another medical facility, with or without mention of disease, disorder, or immaturity, are included. All newborn infants, defined as those admitted by birth to the hospital, are excluded from this report. The terms "patient" and "inpatient" are used synonymously.

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 total number of patient days accumulated at time of discharge by patients discharged from short-stay hospitals during a year. 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 patient days accumulated at time of discharge by patients discharged from short-stay hospitals during a year to the number of persons in the civilian population on July 1 of that year.

Average length of stay—The total number of patient days accumulated at time of discharge by patients discharged during the year, divided by the number of patients discharged.

Terms relating to diagnoses

Discharge diagnoses—One or more diseases or injuries (or some factor that influences health status and contact with health services which is not itself a current illness or injury) listed by the attending physician or the medical record of a patient. In the NHDS all discharge (or final) diagnoses listed on the face sheet (summary sheet) of the medical record for patients discharged from the inpatient service of short-stay hospitals are transcribed in the order listed. Each sample discharge is assigned a maximum of seven five-digit codes according to ICD-9-CM (U.S. Public Health Service and Health Care Financing Administration, 1980). The number of principal or first-listed diagnoses is equivalent to the number of discharges.

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

NOTE: A list of references follows the text.

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

Procedures—One or more surgical or nonsurgical operations, procedures, or special treatments assigned by the physician to patients discharged from the inpatient service of short-stay hospitals. In the NHDS all terms listed on the face sheet (summary sheet) of the medical record under the captions “operation,” “operative procedures,” “operations and/or special treatment,” and the like are transcribed in the order listed. A maximum of four procedures is coded.

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

Demographic terms

Age—Refers to the age of the patient on the birthday prior to admission to the hospital inpatient service.

Population—Civilian population is the resident population excluding members of the Armed Forces.

Geographic regions—One of the four geographic regions of the United States corresponding to those used by the U.S. Bureau of the Census:

<i>Region</i>	<i>States included</i>
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.

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 (more than 30-percent relative standard error)
#	Figure suppressed to comply with confidentiality requirements

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