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1984 Summary: National Hospital Discharge Survey

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Introduction

During 1984 an estimated 37.2 million inpatients, excluding newborn infants, were discharged from short-stay non-Federal hospitals in the United States. These patients were hospitalized an average of 6.6 days and used 244.7 million days of inpatient hospital care. Patients hospitalized during 1984 accounted for 159 discharges and 1,044 days of care per ,000 civilian population.

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 1984, data were abstracted from the face sheets of medical records of approximately 192,000 patients discharged from 407 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." A detailed discussion of these items, as well as the survey form used to collect the data, have been published. 1,2

Coding of medical data for patients hospitalized is done according to the International Classification of Diseases, 9th Revision, Clinical Modification³ (ICD-9-CM). 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 becial 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*.

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 37.2 million patients discharged from short-stay hospitals during 1984 included an estimated 14.9 million males and 22.3 million females. The rates per 1,000 population were 132 for males and 184 for females, making the rate for females about 39 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 childbearing years (15–44 years of age) who are hospitalized for deliveries and other obstetrical conditions. Excluding deliveries, the rate for females discharged was 152, or only about 15 percent higher than the rate for males.

The average length of stay was 7.0 days for males and 6.3 days for females during 1984. The length of stay for females was shorter than that for males primarily because the average length of stay of the 3.9 million women who were hospitalized for deliveries was only 3.4 days. The average length of stay for females who were not hospitalized for deliveries during 1984 was 6.9 days.

The number of discharges from short-stay hospitals by geographic region during 1984 ranged from 13.5 million in the South Region to 6.4 million in the West Region, and the rates per 1,000 population ranged from 169 in the South Region to 139 in the West Region. Regional differences in the number of discharges are accounted for mainly by variations in population sizes and to a lesser extent by variations in the

discharge rates. This is apparent when number of discharges and rate of discharges are compared among the regions. Although the rate of discharges per 1,000 population was highest in the North Central and South Regions with no significant difference between them, the number of discharges and the civilian population in the South Region was about 35 percent higher than the North Central Region.

Average lengths of stay by geographic region were 5.7 days in the West, 6.1 days in the South, 6.9 days in the North Central, and 7.8 days in the Northeast.

Discharges from short-stay hospitals were about 40 percent male and 60 percent female in every hospital bed-size group; females with deliveries accounted for about 10.4 percent of all discharges regardless of hospital size. The average length of stay increased steadily from 5.3 days in the smallest hospitals (6–99 beds) to 7.5 days in the largest hospitals (500 beds or more) for all patients.

During 1984, voluntary nonprofit hospitals provided medical care to an estimated 25.7 million patients, or 69 percent of all patients hospitalized. Hospitals operated by State and local governments cared for 7.8 million patients, or 21 percent of all discharges, and proprietary hospitals operated for profit cared for 3.7 million patients or 10 percent of all discharges. Average lengths of stay were 6.8 days in voluntary nonprofit hospitals, 6.1 days in State and local government hospitals, and 6.2 days in proprietary hospitals.

Utilization by diagnosis

Diseases of the circulatory system ranked first in 1984 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 diseases of the digestive system (4.3 million discharges) and supplementary classifications (including females with deliveries) (4.3 million discharges). Over 38 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 1984 varied for the different age groups. For patients under 15 years of age, the most frequent diagnoses were acute respiratory infections, except influenza, and chronic disease of tonsils and adenoids. Excluding females with deliveries, the two most frequent diagnoses for patients 15–44 years of age were abortions and ectopic and molar pregnancies, and fractures, all sites. 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 1.7 day for the diagnostic category chronic disease of tonsils and adenoids, 1.8 days for patients admitted for sterilization, and 2.3 days for the diagnostic category abortions and ectopic and molar pregnancies to a high of 15.8 days for the diagnostic category 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 4.5 days for patients under 15 years of age to 8.9 days for patients 65 and over. By diagnosis, stays were highest (when compared with the average length of stay) for patients with fracture of neck of femur (15.8 days) and psychoses (14.5 days).

Utilization by procedures

One or more surgical or nonsurgical procedures were performed for an estimated 20.9 million of the 37.2 million inpatients discharged from short-stay hospitals during 1984. A total of 36.2 million procedures, or an average of 1.7 per patien who underwent at least one procedure, were recorded in 1984.

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, open heart surgery, 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 7.2 million procedures ranked first among the surgical and nonsurgical procedures performed during 1984. These were followed by operations on the digestive system with 5.9 million procedures performed. Other leading procedures were obstetrical procedures with 3.9 million procedures, operations on the musculoskeletal system with 3.7 million procedures and operations on female genital organs with 3.5 million procedures. Approximately two-thirds of all procedures performed in 1984 were included in these five ICD-9-CM procedure chapters.

The number and rate of all-listed procedures in 1984 for each ICD-9-CM procedure chapter and selected procedure categories are shown by sex and age in tables 7 and 8. Of the 36.2 million procedures performed during 1984, 14.4 million were for males and 21.8 million were for females. The corresponding rates per 1,000 population were 154 for both sexes, 127 for males, and 180 for females. Of the procedures shown in table 7, some common ones for males were endoscopie on the urinary system (natural orifice) and repair of inguinal hernia; the most frequently performed procedures for females were episiotomy and cesarean section.

The rate of procedures per 1,000 population increased with vancing age from 39 for patients under 15 years to 378 for atients 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

TABLE 1. NUMBER OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS BY SELECTED CHARACTERISTICS: UNITED STATES, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS)

SELECTED CHARACTERISTIC	BOTH Sexes	MALE	FEMALE
		R OF PATIE	
TOTAL	37,162	14,899	22,263
AGE	21,100	21,000	22,203
UNDER 15 YEARS	3,208	1,831	1,377
15-44 YEARS	14,533	4:305	10,228
45-64 YEARS	8,195	3,964	4,231
65 YEARS AND OVER	11,226	4,79 9	6,427
REGION			
NORTHEAST	7.408	3.086	4,321
NORTH CENTRAL	9,899	4,042	5.857
SOUTH	13,451	5,261	8,190
WEST	6,405	2,510	3,895
BED SIZE			
6-99 BEDS	5,972	2,352	3,621
100-199 BEDS	6,624	2,605	4,019
200-299 BEDS	6,361	2,614	3,747
300-499 BEDS	10,139	4,055	6,084
500 BEDS OR MORE	8,066	3,273	4,793
OWNERSHIP-			
NONPROFIT	25,651	10,208	15,443
STATE AND LOCAL GOVERNMENT	7,849	3,218	
PROPRIETARY	3,662	1,473	4,631 2,189
	3,002	19413	21109

TABLE 2. RATE OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY AGE, GEOGRAPHIC REGION, AND SEX: UNITED STATES, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS)

AGE AND REGION	BOTH Sexes	MALE	FEMALE
		ATIENTS (DISCHARGED LATION
TOTAL	158.5	131.6	183.6
AGE			
UNDER 15 YEARS	62.0	69.2	54.5
15-44 YEARS	132.2	79.6	183.1
45-64 YEARS	183.3	185.8	180.9
65 YEARS AND OVER	400-4	424.8	383.9
REGION			
NORTHEAST	149.3	130.5	166.4
NORTH CENTRAL	167.9	141.4	192.8
SOUTH	168.8	137.3	198.0
WEST	138.7	110-8	165.5

years of age, episiotomy and cesarean section; for patients 45-64 years of age, arteriography and angiocardiography, and cardiac catheterization; and for patients 65 years of age and over, extraction of lens, computerized axial tomography, and endoscopies of the urinary system (natural orifice).

TABLE 3. AVERAGE LENGTH OF STAY FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS BY SELECTED CHARACTERISTICS: UNITED STATES, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS)

SELECTED CHARACTERISTIC	BOTH Sexes	MALE	FEMALE
	AVERAGE LENGTH	OF STAY	IN DAYS
TOTAL	6.6	7.0	6.3
AGE			
UNDER 15 YEARS	4.5 4.9 7.2	4.4 6.0 7.1	4.6 4.4 7.2
65 YEARS AND OVERREGION	8.9	8.8	9.0
NORTHEASTNORTH CENTRALSOUTHWEST	7.8 6.9 6.1 5.7	8.1 7.3 6.5 6.3	7.6 6.6 5.9 5.3
BED SIZE			
6-99 BEDS	5.3 6.0 6.6 6.9 7.5	5.5 6.6 6.8 7.3 8.3	5.3 5.7 6.4 6.7 7.0
OWNERSHIP			
NONPROFIT	6.8 6.1 6.2	7.2 6.6 6.5	6.5 5.7 6.1

Symbols

- --- Data not available
- ... Category not applicable
- Quantity zero
- 0.0 Quantity more than zero but less than 0.05
- Quantity more than zero but less than500 where numbers are rounded to thousands
- Figure does not meet standards of reliability or precision
- # Figure suppressed to comply with confidentiality requirements

TABLE 4. NUMBER OF INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY CATEGORY OF FIRST-LISTED DIAGNOSIS, SEX, AND AGE: UNITED STATES, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION)

CATEGORY OF FIRST-LISTED DIAGNOSIS AND ICO-9-CM CODE		SE	×	AGE				
		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS	
		NUMBER	OF PATIENT	TS DISCHARG	ED IN THO	USANDS		
LL CONDITIONS	37,162	14,899	22, 263	3,208	14,533	8,195	11,226	
NFECTIOUS AND PARASITIC DISEASES001-139	658	301	357	185	217	89	166	
EOPLASMS140-239	2,576	1,060	1,516	62	456	884	1,174	
MALIGNANT NEUPLASMS	2•059 340	943 214	1,117 126	36 *	227 13	727 155	1,070	
MALIGNANT NEOPLASM OF BREAST	234	*	231	*	33	101	100	
DIABETES MELLITUS250	1,139 593	427 238	712 354	78 23	273 143	314 199	474 227	
ISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS280-289	354	152	202	57	86	58	153	
ENTAL DI SORDERS290-319	1,690	875	815	50	966	413	261	
PSYCHOSES	625 228	283 77	341 151	*7 *7	329 134	155 58	133 28	
ALCOHOL DEPENDENCE SYNDROME	392	288	104	*	232	128	31	
ISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS320-389 DISEASES OF THE CENTRAL NERVOUS SYSTEM320-336,340-349	1,669	709	960	257	349	345	718	
URIAKAL I e e e e e e e e e e e e e e e e e e	441 481	211 165	230 316	58 *	157 10	92 74	134 395	
DISEASES OF THE EAR AND MASTOID PROCESS380-389	321	158	162	152	60	56	53	
ISEASES OF THE CIRCULATORY SYSTEM	5,593	2,856	2,737	35	531	1,762	3, 265	
MEAK! UISEASE391-392.0.393-398.402.404.410-416.420-429	266 3,599	110 1,905	155 1,694	* 20	48 266	115 1,203	102 2,110	
ACUTE MYDCARDIAL INFARCTION	700	435	266	*	42	257	401	
ATHEROSCLEROTIC HEART DISEASE411-413,414-1-414-9	365 969	225 535	140 434	*	18 74	135 422	212 · 471	
CONGESTIVE HEART FAILURE428.0	531	228	303	*	11	92	425	
CEREBROVASCULAR DISEASE430-438	896	420	476	* 5	32	192	667	
ISEASES OF THE RESPIRATORY SYSTEM	3,365	1,654	1,711	877	708	642	1,137	
CHRONIC DISEASE OF TONSILS AND ADENOIDS	449 327	207 142	243 185	199 218	86 105	65 *	99	
PNEUMONIA, ALL FORMS480-486 ASTHMA493	837 465	424 197	413 268	207 150	114 109	136 102	380 105	
ISEASES OF THE DIGESTIVE SYSTEM	4,305	2,013	2, 292	409				
ULLERS OF THE STOMACH AND SMALL INTESTINE531-534	327	179	148	*	1,365 81	1,169 98	1,361 146	
GASTRITIS AND DUODENITIS535 APPENDICITIS540-543	266 270	108 154	158 116	17 69	103	85	61	
INGUINAL HERNIA	440	390	50	58	158 125	28 131	15 125	
NONINFECTIOUS ENTERITIS AND COLITIS555-556,558 CHOLELITHIASIS	540 488	213 141	327 347	171	175 177	88 155	106 155	
ISEASES OF THE GENITOURINARY SYSTEM580+629 CALCULUS OF KIDNEY AND URETER592	3,116 328	1 • 043 222	2,073 106	134	1,460 149	753 126	769 52	
DISORDERS OF MENSTRUATION AND OTHER ABNORMAL VAGINAL BLEEDING	254		254	*	191	59		
OMPLICATIONS OF PREGNANCY, CHILDBIRTH,	969	•••	969	*6	960	•	•••	
ABURITUMS AND ECTOPIC AND MOLAR PREGNANCIES630-639	418	•••	418		413	*	•••	
ISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE680-709	568	263	305	60	205	147	156	
ISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE	2,375	1.007	1 2/0					
AKIMKUPAIHIES AND RELATED DISORDERS	536	207	1,368 329	68 19	925 161	755 161	627 196	
INTERVERTEBRAL DISC DISORDERS722	509	288	221	*	271	183	53	
DOMENITAL ANOMALIES740-759	317	174	143	166	81	43	26	
ERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD760-779	167	88	79	166		_		
YMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS780-799	520	245	276	93	209	140	79	
NJURY AND POISONING800-999	3,472	1,892	1,580	438	1,622	596	816	
FRACTURES, ALL SITES	1,114	541	573	146	387	161	420	
SPRAINS AND STRAINS OF BACK (INCLUDING NECK)	244 269	64 128	179 142	*	11 168	25 70	205 28	
INCHARMANIAL IN HIDTER (CVC) HOTHIC THOSE CORN.		157	112	68				
INTRACRANIAL INJURIES (EXCLUDING THOSE WITH SKULL FRACTURE)	270			b d	141	25	35	
SKULL FRACTURE)	270 315	230	86	45	204	42	25	
SKULL FRACTURE)							25 42	

^{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, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION)

		SI	EX	AGE			
CATEGORY OF FIRST-LISTED DIAGNOSIS AND ICD-9-CM CODE		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS
		RATE OF IN	PATIENTS D	ISCHARGED P	ER 10,000	POPULATIO	N
ALL CONDITIONS	1,585.1	1,316.2	1,836.2	620.1	1,321.7	1,832.8	4,003.0
INFECTIOUS AND PARASITIC DISEASES	28.1	26.6	29.4	35.9	19.8	19.9	59.
NEOPL ASMS140-239	109.9	93.7	125.1	12.1	41.5	197.7	418.
MALIGNANT NEOPLASMS	87.8	83.3	92.1	7.0	20.6	162.6	381.
BRONCHUS, AND LUNG	14.5 10.0	18.9 *	10.4 19.1	*	1.2 3.0	34.7 22.5	61.35.
ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES,	40.4	22.7	50.0	15.0	24.8	70.3	169.
AND IMMUNITY DISORDERS240-279 DIABETES MELLITUS250	48.6 25.3	37.7 21.0	58.8 29.2	4.5	13.0	44.5	81.
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS280-289	15.1	13.4	16.7	11.0	7.8	13-1	54.
MENTAL DISORDERS290-319	72.1	77.3	67.3	9.6	87.8	92.4	93.
PSYCHOSES290-299 NEUROTIC AND PERSONALITY DISORDERS	26.6 9.7	25.0 6.8	28.2 12.4	*1.4 *1.4	29.9 12.2	34.6 13.0	47. 10.
ALCOHOL DEPENDENCE SYNDROME	16.7	25.5	8.6	*	21.1	28.6	ii.
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS320-389	71.2	62.6	79.2	49.7	31.7	77.2	256.
DISEASES OF THE CENTRAL NERVOUS SYSTEM320-336,340-349 CATARACT366	18.8 20.5	18.6 14.6	19.0 26.1	11.1	14.3 0.9	20.7 16.6	47. 140.
DISEASES OF THE EAR AND MASTOID PROCESS380-389	13.7	14.0	13.4	29.4	5.4	12.5	18.
DISEASES OF THE CIRCULATORY SYSTEM390-459	238.6	252.3	225.8	6.7	48.3	394.1	1,164.
ESSENTIAL HYPERTENSION401	11.3	9.8	12.8	•	4.4	25.6	36.
HEART DISEASE391-392.0,393-398,402,404,410-416,420-429 ACUTE MYOCARDIAL INFARCTION410	153.5 29.9	168.3 38.4	139.7 21.9	3.8 *	24.2 3.8	269 . 1 57 . 5	752. 142.
ATHEROSCLEROTIC HEART DISEASE414.0	15.6	19.9	11.5	•	1.6	30.1	75.
OTHER ISCHEMIC HEART DISEASE411-413,414-1-414-9	41-3	47.3	35.8		6.7	94.3	168.
CONGESTIVE HEART FAILURE428.0 CEREBROVASCULAR DISEASE430-438	22.6 38.2	20.1 37.1	25.0 39.3	* *0.9	1.0 3.0	20.6 42.9	151. 237.
DISEASES OF THE RESPIRATORY SYSTEM460-519	143.5	146.1	141.1	169.6	64.4	143.6	405.
ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA460-466	19.2	18.2	20.0	38.5	7.8	14.5	35.
CHRONIC DISEASE OF TONSILS AND ADENOIDS	14-0	12.5	15.3	42.2	9.6 10.3	* 30.5	135.
PNEUMONIA, ALL FORMS480-486 ASTHMA493	35.7 19.8	37.4 17.4	34.1 22.1	39.9 28.9	9.9	22.8	37.
DISEASES OF THE DIGESTIVE SYSTEM520-579	183.6	177.8	189.0	79.1	124.2	261.5	485.
ULCERS OF THE STOMACH AND SMALL INTESTINE531-534	13.9	15.8	12.2	*	7.3	21.8	51. 21.
GASTRITIS AND DUODENITIS535 APPENDICITIS540-543	11.3 11.5	9.5 13.6	13.0 9.6	3.2 13.4	9.4 14.4	19.0 6.3	5.
INGUINAL HERNIA550	18.8	34.4	4.1	11.3	11.4	29.4	44.
NONINFECTIOUS ENTERITIS AND COLITIS555-556,558	23.0	18.8	27.0	33.0	15.9	19.7	37.
CHOLELITHIASIS574	20.8	12.5	28.6	*	16.1	34.7	55.
DISEASES OF THE GENITOURINARY SYSTEM580-629 CALCULUS OF KIDNEY AND URETER592	132.9 14.0	92•1 19•6	171.0 8.7	26.0 *	132.8 13.5	168.3 28.2	274. 18.
DISORDERS OF MENSTRUATION AND OTHER ABNORMAL VAGINAL BLEEDING626	10-8	•••	21.0	*	17.3	13.3	
COMPLICATIONS OF PREGNANCY, CHILDBIRTH,							
AND THE PUERPERIUM	41.3 17.8	•••	79.9 34.5	*1.2	87.3 37.5	*	••
DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE680-709	24.2	23.2	25.1	11.6	18.7	32.8	55.
DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE	101.3	90.0	112.0	13.1	84.1	169.0	223.
ARTHROPATHIES AND RELATED DISCROERS710-719	101.3 22.9	89.0 18.3	112.8 27.1	3.7	14.6	35.9	69.
INTERVERTEBRAL DISC DISORDERS722	21.7	25.4	18.2	*	24.6	41.0	19.
CONGENITAL ANOMALIES740-759	13.5	15.4	11.8	32.1	7.4	9.7	9.
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD760-779	7-1	7-8	6.5	32.1	*	-	
SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS780-799	22.2	21.6	22.7	17.9	19.0	31.4	28.
INJURY AND POISONING800-999	148.1	167.2	130.3	84.7	147.5	133.3	291.
FRACTURES, ALL SITES800-829	47.5	47.8	47.2	28.3	35.2	36.0	149.
FRACTURE OF NECK OF FEMUR820	10.4	5.7	14-8	*	1.0	5.5 15.7	73. 9.
SPRAINS AND STRAINS OF BACK (INCLUDING NECK)846-847 INTRACRANIAL INJURIES (EXCLUDING THOSE WITH	11.5	11.3	11.7	*	15.3	15.7	7.
SKULL FRACTURE)	11.5 13.5	13.9 20.3	9.3 7.1	13.1 8.7	12.9 18.5	5.6 9.3	12. 9.
						18.2	15.
SUPPLEMENTARY CLASSIFICATIONS	183.8	12.5	343.7	12.8	374.6	18.2	15.
PEKSUNS AUMITTED FUK STEKILIZATIONAAAAAAAAAAAAAAAAAAAAAAAAAAA	4.8	*	9.2	_	10.1	-	

^{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, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. DIAGNOSTIC GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION)

		S	EX		A	GE	
CATEGORY OF FIRST-LISTED DIAGNOSIS AND ICD-9-CM CODE		MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEAR!
			AVERAGE LE	NGTH DF STA	Y IN DAYS		
ALL CONDITIONS	6-6	7.0	6.3	4.5	4.9	7.2	8.9
INFECTIOUS AND PARASITIC DISEASES001-139	6-6	6.9	6.4	4.0	5.7	8.1	10.1
NEOPLASMS140-239	9.0	9.6	8.5	5.1	6.4	8.7	10.4
MALIGNANT NEOPLASMS	9.8 9.5	10.1 9.4	9•5 9•8	6.6 *	7.9 7.6	9.1 8.7	10.7 10.4
MALIGNANT NEOPLASM OF BREAST174-175,198.81	8.3	*	8.3	*	6.9	7.7	9.4
ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS240-279 DIABETES MELLITUS	7.6 8.2	7.5 7.8	7•7 8•5	4•7 5•8	5•7 5•9	7.4 8.2	9.4 9.9
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS280-289	6.2	5.7	6.5	3.7	5.1	6.7	7.4
MENTAL DISORDERS290-319	11.9	11.5	12.4	16.7	11.8	11.4	12.2
PSYCHOSES290-299	14.5	14.0	14.9	*26.5	14.5	14.3	14.1
NEUROTIC AND PERSONALITY DISORDERS	11-2 10-6	10.1 10.4	11.7 11.2	*22.2 *	11.7 10.6	10.0 10.0	8.4 13.3
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS320-389	4.8	5.1	4.5	3.6	5.0	5.1	5.0
DISEASES OF THE CENTRAL NERVOUS SYSTEM320-336,340-349 CATARACT366	9.3 2.4	9•9 2•2	8.8 2.5	6.9 *	7.1 2.8	9.6 2.5	12.9 2.4
DISEASES OF THE EAR AND MASTOID PROCESS	3.2	3.2	3.1	2.6	2.7	3.6	4.9
DISEASES OF THE CIRCULATORY SYSTEM	8.2	7.9	8.6	6.3	6.2	7.5	9.0
ESSENTIAL HYPERTENSION	5.6	5.4	5.8	*	4.4	5-1	6.8
ACUTE MYOCARDIAL INFARCTION410	7.8 10.0	7•5 9•5	8.1 10.8	6.1 *	6.1 8.3	7•1 9•5	8.4 10.4
ATHEROSCLERÒTIC HEART DISEASE414.0	7.2	7.2	7.3	*	5.4	6.4	7.9
OTHER ISCHEMIC HEART DISEASE411-413,414.1-414.9 CONGESTIVE HEART FAILURE428.0	6.0	5.8	6.3	*	5.0	5.7	6-4
CEREBROVASCULAR DISEASE430-438	8.6 10.4	8 • 2 9 • 8	8.9 10.8	* *8.5	6.1 11.1	8.3 10.3	8.7 10.4
DISEASES OF THE RESPIRATORY SYSTEM460-519	6.0	5.9	6.1	3.4	3.9	6.8	8.9
ACUTE RESPIRATORY INFECTIONS, EXCEPT INFLUENZA460-466 CHRONIC DISEASE OF TONSILS AND ADENOIDS474	4.6	4-3	4-8	3.2	3.9	5.8	7.1
PNEUMONIA, ALL FORMS460-486	1.7 7.8	1.6 7.3	1.7 8.2	1.6 4.8	1.7 5.9	* 8.1	* 9•8
ASTHMA493	5.2	4.6	5.6	3.6	4.5	5.7	7.6
DISEASES OF THE DIGESTIVE SYSTEM	6.3	6.0	6.6	3.6	4.9	6.6	8.2
ULCERS OF THE STOMACH AND SMALL INTESTINE531-534 GASTRITIS AND DUODENITIS535	7.4 4.7	7.5 4.5	7.3	*	5.2	7.1	8.8
APPENDICITIS540-543 INGUINAL HERNIA550	5.1	4.9	4.8 5.4	2•9 4•6	4.0 4.7	5•2 6•8	5.6 9.0
INGUINAL HERNIA	3.8	3.7	3.9	1.9	2.9	4.0	5.2
NONINFECTIOUS ENTERITIS AND COLITIS555-556,558 CHOLELITHIASIS574	4•9 7•6	4.7 8.1	5.0	3-4 *	4.9	6.0	6.4
	1.0	0.1	7-4	7	6.2	7.3	9.7
DISEASES OF THE GENITOURINARY SYSTEM	5•4 4•2	5.9 4.0	5•2 4•7	3.6	4.4 3.3	5.2 4.2	7.7 6.7
ABNORMAL VAGINAL BLEEDING626	3.5	•••	3.5	*	3.4	3.9	*
OMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM	2.4						
ABORTIONS AND ECTOPIC AND MOLAR PREGNANCIES630-639	2.6 2.3	•••	2.6 2.3	*6•2 *	2.6 2.3	*	•••
DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE680-709	8.0	7.8	8.1	4.0	6.0	8.5	11.7
DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE	7.0	6.5	7.3				
ARTHROPATHIES AND RELATED DISORDERS710-719	8.1	7.0	7•3 8•8	5.5 6.1	5.6 4.7	6.9 .8.3	9.3 10.9
INTERVERTEBRAL DISC DISORDERS722	7.6	7.0	8.3	*	7-1	7.9	9.0
CONGENITAL ANOMALIES740-759	6.0	5.9	6.2	5.7	4.4	8.3	9.6
PERINATAL PERIOD760-779	12.2	11.1	13.4	12.2	*	-	
YMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS780-799	4.1	4.0	4.3	3.1	3.6	4.7	5.6
NJURY AND POISONING800-999	6.8	6.3	7.5	3.9	5.4	7.2	11.0
FRACTURES, ALL SITES	9.3	8.2	10.3	4.7	7.0	8.7	13.3
FRACTURE OF NECK OF FEMUR820 SPRAINS AND STRAINS OF BACK (INCLUDING NECK)846-847	15.8 6.4	16.1 6.0	15.6 6.8	*	17.5	13.6	15.9
INTRACRANIAL INJURIES (EXCLUDING THOSE WITH				•	6.1	7.1	7.5
SKULL FRACTURE)850-854 LACERATIONS AND OPEN WOUNDS870-904	5-3 4-5	5.2 4.4	5.3 4.9	2.6 3.8	5.2 4.2	6.9 5.5	9.5 6.9
UPPLEMENTARY CLASSIFICATIONS							
PERSONS ADMITTED FOR STERILIZATION	3.4 1.8	3•7 *	3.4 1.8	3.3	3.4 1.9	4•0 *	5.0
FEMALES WITH DELIVERIESV27	3.4	•••	3.4	3.2	3.4	*	

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

ABLE 7. NUMBER OF ALL-LISTED PROCEDURES FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY PROCEDURE CATEGORY, SEX, AND AGE: INITED STATES, 1984

(DISCHARGES FROM NONFEDERAL HOSPITALS. EXCLUDES NEWBORN INFANTS. PROCEDURE GROUPINGS AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION)

		SE	EX		A	GE	
PROCEDURE CATEGORY AND ICD-9-CM CODE	TOTAL	MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEARS AND OVER
		NUMBER C	F ALL-LIST	TED PROCEDU	RES IN TH	OUSANDS	
ALL PROCEDURES	36,155	14,359	21,796	2,024	14,757	8,762	10,612
OPERATIONS ON THE NERVOUS SYSTEM01-05	895	460	435	133	317	249	196
OPERATIONS ON THE ENDOCRINE SYSTEM06-07	111	26	84	* 5	45	43	18
OPERATIONS ON THE EYE08-16	1,347	518	829	59	116	258	914
EXTRACTION OF LENS	506 455	175 159	331 296	*5 *	11 *5	81 73	409 375
OPERATIONS ON THE EAR	326 138	180 79	146 58	168 121	83 11	46 *	29 *
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX21-29 RHINOPLASTY AND REPAIR OF NOSE21.8	1,331 235	658 111	674 124	351 *9	618 163	231 46	131 17
TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY28.2-28.3	348	148	200	224	118	*6	*
OPERATIONS ON THE RESPIRATORY SYSTEM30-34 BRONCHOSCOPY33-21-33-23	989 214	587 127	402 87	61 16	174 30	336 71	418 97
OPERATIONS ON THE CARDIOVASCULAR SYSTEM35-39	2,101	1,248	853	91	303	832	875
OPEN HEART SURGERY35.1-35.51, 35.53-36.2,36.9,37.10-37.11,37.32-37.33,37.5	314	218	96	13	39	160	102
DIRECT HEART REVASCULARIZATION	202 570	156 372	46 198	* 27	15 85	115 288	71 171
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, REPAIR37.7-37.8	208	110	98	*	*7	35	164
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM40-41	367	182	185	18	81	109	159
PERATIONS ON THE DIGESTIVE SYSTEM	5,930 230	2,581 114	3,350 117	264 *8	1,994 45	1,591 75	2,081 102
OF INTESTINE	257 294	118 160	138 134	* 70	37 177	76 30	139 16
HEMORRHOI DECTOMY49-46	131	6 9	62	*	62	49 155	21 145
CHOLECYSTECTOMY	485 469	145 411	339 57	65	183 130	136	138
DIVISION OF PERITONEAL ADHESIONS54-5	308	40	268	*	185	56	64
OPERATIONS ON THE URINARY SYSTEM55-59 ENDOSCOPIES (NATURAL ORIFICE)55.21-55.22,56.31,57.32,58.22	1,886 774	1,149 536	737 238	89 26	392 123	530 208	875 416
DILATION OF URETHRA58.6	164	91	74	14	34	45	. 71
OPERATIONS ON THE MALE GENITAL ORGANS	822 361	822 361	•••	103	113 *	195 83	410 275
PROSTATECTOMY	71	71	•••	42	*10	11	*8
OPERATIONS ON THE FEMALE GENITAL ORGANS	3,532 498	•••	3+532 498	14 *	2,616 298	641 155	261 44
BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES	488	•••	488	-	484	*	-
HYSTERECTOMY68.3-68.7 CURETTAGE OF UTERUS TO TERMINATE PREGNANCY69.01,69.51	664 67	•••	664 67	*	416 66	188 *	60
DILATION AND CURETTAGE OF UTERUS AFTER DELIVERY OR ABORTION69.02	251	•••	251	*	249	*	
DIAGNOSTIC DILATION AND CURETTAGE OF UTERUS69.09 REPAIR OF CYSTOCELE AND RECTOCELE70.5	470 172	•••	470 172	*	317 59	115 67	38 46
OBSTETRICAL PROCEDURES72-75	3,872	•••	3, 872	11	3,858	*	•••
EPISIOTOMY WITH OR WITHOUT FORCEPS OR VACUUM EXTRACTION	1,861	•••	1,861	*5	1,855	*	•••
CESAREAN SECTION74.0-74.0-74.2,74.4,74.99 REPAIR OF CURRENT OBSTETRIC LACERATION75.5-75.6	813 483	•••	813 483	*	810 481	*	•••
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM	3,698	1,793	1,905	249	1,594	980	874
76.74,76.76-76-77,76.79,79.2-79.3,79.5-79.6 OTHER REDUCTION OF	436	234	202	32	190	70	143
FRACTURE76.70-76.71,76.73,76.75,76.78,79.0-79.1,79.4 EXCISION OR DESTRUCTION OF INTERVENTEBRAL DISC	241	131	109	71	82	35	52 19
AND SPINAL FUSION	277 136	163 91	114 45	*	152 82	102 36	15
ARTHROPLASTY AND REPLACEMENT OF KNEE81-41-81-47 ARTHROPLASTY AND REPLACEMENT OF HIP81-5-81-6	164 184	85 53	79 130	*	70 *8	35 34	56 141
OPERATIONS ON THE INTEGUMENTARY SYSTEM85-86 MASTECTOMY85-4	1,785 121	681 *6	1,103 116	112 *	743 16	501 50	428 54
SKIN GRAFT (EXCEPT LIP OR MOUTH)86.6-86.7	161	101	60	15	68	37	40
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES87-99	7,163	3,474	3,689	294	1,710	2,216	2,942 502
COMPUTERIZED AXIAL TOMOGRAPHY87.03,87.41,87.71,88.01,88.38 PYELOGRAM87.73-87.75	1,091 421	530 230	561 191	46 14	2 4 7 126	297 136	145
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY							202
USING CONTRAST MATERIAL88.4-88.5	972 836	587 317	385 519	14 32	134 260	431 211	392 333

TABLE 8. RATE OF ALL-LISTED PROCEDURES FOR INPATIENTS DISCHARGED FROM SHORT-STAY HOSPITALS, BY PROCEDURE CATEGORY, SEX, AND AGE: UNITED STATES, 1984

(DISCHARGES FROM NUMBER AND CODE NUMBER INCLUSIONS ARE BASED ON THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION)

		SE	x	AGE			
PROCEDURE CATEGORY AND ICD-9-CM CODE	TOTAL	MALE	FEMALE	UNDER 15 YEARS	15-44 YEARS	45-64 YEARS	65 YEAR AND OVE
	R	ATE OF ALL-	LISTED PRO	CEDURES PE	R 100,000	POPULATI ON	
LL PROCEDURES	15,421.7	12,684.7	17,977.1	3,912.9	13,420.4	19,597.5	37,844.
PERATIONS ON THE NERVOUS SYSTEM	381.8	406.2	359.0	257.3	288.4	557.4	697.
PERATIONS ON THE ENDOCRINE SYSTEM	47.2	23.2	69.7	*9.3	40.8	96.4	64.
PERATIONS ON THE EYE08-16	574.8	457.9	683.9	114.8	105.4	576.3	3,261.
EXTRACTION OF LENS	215.8 194.0	154.6 140.2	273.0 244.2	*9•6 *	10-4 *4-4	180.2 164.3	1,458. 1,338.
PERATIONS ON THE EAR18-20 MYRINGOTOMY20-0	139.0 58.7	159.1 70.1	120.2 48.1	325.2 233.4	75.4 10.2	102.7	102.
PERATIONS ON THE NOSE, MOUTH, AND PHARYNX21-29	567.8	581-1	555.5	678.9	562-5	516.3 101.8	466. 60.
RHINOPLASTY AND REPAIR OF NOSE21.8 TONSILLECTOMY WITH OR WITHOUT ADENOIDECTOMY28.2-28.3	100.3 148.5	98.1 130.7	102.3 165.0	*18.0 433.8	148-6 107-0	*12.3	60.
PERATIONS ON THE RESPIRATORY SYSTEM30-34 BRONCHOSCOPY33-21-33-23	421.7 91.3	518.5 112.5	331.4 71.6	118.5 31.8	157•9 27•2	751.2 157.8	1,490. 346.
PERATIONS ON THE CARDIDVASCULAR SYSTEM	896.3	1,102.7	703.6	176.8	275•6	1,861.3	3,119.
35.53-36.2,36.9,37.10-37.11,37.32-37.33,37.5	134.0	192.7	79.3	24.3	35.8	358.9	363.
DIRECT HEART REVASCULARIZATION36.1 CARDIAC CATHETERIZATION37.21-37.23	86.3 242.9	137.7 328.6	38.2 162.9	* 51.7	13.9 76.9	257.7 643.6	254. 608.
PACEMAKER INSERTION, REPLACEMENT, REMOVAL, REPAIR37.7-37.8	88.8	97.1	81.1	*	*6.8	77.8	586
PERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM40-41	156.4	160-9	152.3	34.1	73.4	243.7	568
PERATIONS ON THE DIGESTIVE SYSTEM42-54 ESOPHAGOSCOPY AND GASTROSCOPY (NATURAL ORIFICE)42.23,44.13 PARTIAL GASTRECTOMY AND RESECTION		2,279.8 100.3	2,762.8 96.4	511.0 *16.4	1,813.3 40.7	3,558.4 168.4	7,422 363
OF INTESTINE43.5-43.8,45.6-45.8 APPENDECTOMY, EXCLUDING INCIDENTAL47.0	109.4 125.5	104.4 141.8	114.1 110.3	* 135.4	33.6 161.4	171.1 68.1	494 58
HEMORRHOIDECTOMY49-43-49	56.0	61.1	51.2	-	56.0	108.7	75
CHOLECYSTECTOMY	206.7 199.9	128.5 363.3	279 . 7 47 . 4	* 125•0	166.5 118.2	346.2 304.8	518 491
DIVISION OF PERITONEAL ADHESIONS	131.3	35.6	220.7	*	168.7	124.6	226
PERATIONS ON THE URINARY SYSTEM55-59		1,015.0	608.0	172.4	356.4	1,185.7	3,120
ENDOSCOPIES (NATURAL ORIFICE)55.21-55.22,56.31,57.32,58.22 DILATION OF URETHRA58.6		473.1 80.3	196.3 60.6	51.0 27.4	111.5 30.7	466.0 101.5	1,484 253
PERATIONS ON THE MALE GENITAL ORGANS60-64	350.5	726.0	•••	199.7	102.7	436.5	1,463
PROSTATECTOMY60.2-60.6	154.0	319-0	•••	•••	* * *	185.7	980
CIRCUMCISION64.0	30.1	62.3	•••	81.1	*8.7	24.8	*28
PERATIONS ON THE FEMALE GENITAL ORGANS65-71 OOPHORECTOMY AND SALPINGO-OOPHORECTOMY65-3-65-6 BILATERAL DESTRUCTION OR OCCLUSION		•••	2,913.4 410.9	27•2 *	2,378.9 270.9	1,434.4 347.2	931 158
OF FALLOPIAN TUBES66.2-66.3	208.0	•••	402-1		439.8	*	
HYSTERECTOMY	283.4 28.6	***	548.1 55.3		378•3 59•9	421.4 *	213
AFTER DELIVERY OR ABORTION69.02	107.0	•••	206.9		226-2	*	12/
DIAGNOSTIC DILATION AND CURETTAGE OF UTERUS69.09 REPAIR OF CYSTOCELE AND RECTOCELE70.5	200.4 73.5	•••	387.5 142.2	-	288-1 53-7	257.1 149.6	134 165
BSTETRICAL PROCEDURES72-75 EPISIOTOMY WITH OR WITHOUT FORCEPS	1,651.7	•••	3,193.7	20.4	3,508.8	*	•
OR VACUUM EXTRACTION72.1,72.21,72.31,72.71,73.6	793.8	•••	1,534.8	*10-0	1,687.1	*	
CESAREAN SECTION74.0-74.2,74.4,74.99 REPAIR OF CURRENT OBSTETRIC LACERATION75.5-75.6	346.6 206.1	•••	670.3 398.5	*	736•5 437•2	*	•
PERATIONS ON THE MUSCULOSKELETAL SYSTEM	. 1,577.2	1,584.0	1,570.9	482.2	1,449-8	2,192.0	3,116
OPEN REDUCTION OF FRACTURE 76.72, 76.74,76.76.79,79.2-79.3,79.5-79.6	185.9	206-6	166.6	61.8	173-2	157.6	510
OTHER REDUCTION OF FRACTURE OF THE TRANSPORT OF THE TRANS	102.7	116.1	90-2	138-1	74.4	78.6	186
AND SPINAL FUSION	118.1 57.9	143.8 80.5	94-2		138-4	228.7	67 54
ARTHROPLASTY AND REPLACEMENT OF HIP	69.9	75.0 47.1	36.8 65.0 107.5	*	75.0 63.7 *6.9	81.1 78.9 77.0	54 1 98 501
PERATIONS ON THE INTEGUMENTARY SYSTEM85-86		601.9	910.1		675.5	1,121.5	1,527
MASTECTOMY85.4 SKIN GRAFT (EXCEPT LIP OR MOUTH)86.6-86.7		*4.9 89.5	95•3 49•2	* 29.9	14.9 61.7	112.6 83.8	193 143
ISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES87-99		3,068.6	3,042.7	568.4	1,555.5	4,956.7	
COMPUTERIZED AXIAL TOMOGRAPHY87.03,87.41,87.71,88.01,88.38 PYELOGRAM87.73-87.75	465.5	468-6 203-0	462.6 157.8	89.5	224.5 114.5	663.5 303.9	1,788 517
ARTERIOGRAPHY AND ANGIOCARDIOGRAPHY USING CONTRAST MATERIAL88.4-88.5		518.7	317.5		122.3	964.8	1,399
DIAGNOSTIC ULTRASOUND88.7	356.5	280.3	427.7	61.8	236.5	472.0	1,186
RADIOISOTOPE SCAN92.0-92.1	325.8	308-7	341.8	26.1	129.0	513.8	1,351

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Technical notes

Survey methodology

burce of data

The National Hospital Discharge Survey (NHDS) encompasses patients discharged from short-stay hospitals, exclusive of military and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only hospitals with six or more beds 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, and 1983. In all, 553 hospitals were sampled in 1984. Of these hospitals, 86 refused to participate, and 60 were out of scope. The 407 participating hospitals provided approximately 192,000 abstracts of medical records. Table I provides a distribution of the current hospitals in the universe⁴ and NHDS sample of in-scope hospitals for 1984.

Sample design and data collection

All hospitals with 1,000 or more beds 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 he sample would be properly distributed with regard to type 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.

Table I. Distribution of non-Federal short-stay hospitals in the universe and National Hospital Discharge Survey in-scope sample by geographic region and bed size of hospital: United States, 1984

Bed size of hospital	All regions	Northeast	North Central	South	West
All sizes		Numbe	r of hospita	als	
Universe Sample	6,023 493	902 115	1,704 140	2,291 164	1,126 74
6-49 beds					
Universe Sample	1,372 39	78 6	415 11	535 13	344 9
50-99 beds					
Universe Sample	1,467 62	160 10	427 14	611 30	269 8
100-199 beds					
Universe Sample	1,398 93	203 16	373 22	571 43	251 12
200-299 beds					
Universe Sample	733 72	196 18	177 21	237 20	123 13
300-499 beds					
Universe Sample	715 119	176 37	202 35	224 25	113 22
500-999 beds					
Universe Sample	309 95	78 23	101 34	105 29	25 9
1,000 beds or more					
Universe Sample	29 13	11 5	9 3	8 4	1 1

Sample discharges were selected within the hospitals 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, a number assigned when the patient was admitted to the hospital. The within-hospital sampling ratio for selecting sample discharges varied inversely with the probability of selection of the hospital.

The sample selection and the transcription of information from the hospital records to abstract forms were performed by the hospital staff or by representatives of the National Center for Health Statistics or by both. The data were abstracted from the face sheets of the medical records. All discharge diagnoses and procedures were listed on the abstract in the order of the principal one, or the first-listed one if the principal one was not identified, followed by the order in which all other diagnoses or procedures were entered on the face sheet of the medical record.

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.^{5,6}

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 II. 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 III.

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.

Table II. Approximate relative standard errors of estimated numbers of first-listed discharges and all-listed procedures: United States, 1984

Size of estimate	First-listed diagnosis	All-listed procedures
5,000	16.0	17.1
10,000	12.8	14.0
50,000	8.1	9.2
100,000	6.8	7.8
500,000	4.8	5.7
1,000,000	4.2	5.1
3,000,000	3.5	4.3
5,000,000	3.2	4.0
10,000,000	2.9	3.6
20,000,000	2.7	3.3
30,000,000	2.5	
40,000,000	2.5	

Table III. Approximate standard errors of average lengths of stay by number of discharges: United States, 1984

	Average length of stay in da					
Number of discharges	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.		
5,000,000	0.2	0.5	0.8			

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 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

Hospitals and hospital characteristics

Hospitals—Short-stay special and general hospitals have six or more beds 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 a 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 pulation 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.³ 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.

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.

Procedure—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:

Region	States included
Northeast	Maine, New Hampshire, Vermont, Massa- chusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsyl- vania
North Central	Michigan, Ohio, Illinois, Indiana, Wis- consin, 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, Ken- tucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas
West	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Wash- ington, Oregon, California, Hawaii, and Alaska.

NOTE: A list of references follows the text.

Recent Issues of Advance Data From Vital and Health Statistics

No. 111. An Overview of the 1982 National Master Facility Inventory Survey of Nursing and Related Care Homes (Issued September 1985)

No. 110. Office-Based Ambulatory Care for Patients 75 Years Old and Over: National Medical Care Survey, 1980 and 1981 (Issued August 1985)

No. 109. Hospital Use by Children: United States, 1983 (Issued May 23, 1985)

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