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VITAL STATISTICS REPORT

Hospital Discharge Survey

FROM THE
NATIONAL CENTER FOR HEALTH STATISTICS

Utilization of Short-Stay Hospitals, by Diagnosis: United States, 1971

Estimates are presented in this report on the first-listed final diagnoses, or discharges, for inpatients discharged from non-Federal short-stay hospitals in the United States during 1971. Hospital utilization is shown by number and rate of discharges and average length of stay by first-listed diagnoses.

The estimates are based on information collected by the Hospital Discharge Survey (HDS), a continuous nationwide survey conducted by the National Center for Health Statistics (NCHS). Data for the survey are abstracted from the medical records of a sample of patients discharged from a national sample of the short-stay hospitals. (See Technical Notes for a description of the survey and definitions of terms used.)

The diagnostic data are shown by the diagnostic classes of the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA), with some modifications. Within these classes, selected diagnostic categories, or groups of diagnoses, are shown to provide more detailed information for conditions of special interest or with large frequencies.

An estimated 29.5 million inpatients, excluding newborn infants, were discharged from the Nation's non-Federal short-stay hospitals during 1971 (table 1). These patients comprised 11.6 million males and 17.8 million females. Females hospitalized for other than obstetrical conditions accounted for 13.6 million discharges. The corresponding rates per 10,000 persons in the civilian, noninstitutional population were 1,457.7 for all discharges, 1,196.3 for males, 1,696.0 for all females, and 1,294.8 for females excluding obstetrical conditions (table 2). Average lengths of stay were 7.8 days for all patients, 8.4 days for males, and 7.5 days for females. Excluding obstetrical conditions, the average stay for females was 8.6 days (table 3).

About 60 percent of the first-listed diagnoses were clustered in five of the 17 ICDA classes. The leading classes were complications of pregnancy, childbirth, and the puerperium (4.2 million discharges), diseases of the digestive system (3.7 million discharges), diseases of the circulatory system (3.5 million discharges), diseases of the respiratory system (3.2 million discharges), and accidents, poisonings, and violence (3.1 million discharges). Average length of stay for the ICDA classes ranged from 3.8 days for complications of pregnancy, childbirth, and the puerperium to 11.9 days for diseases of the circulatory system.

Exclusive of obstetric discharges, conditions with the largest frequencies were heart and hypertensive diseases (2,211,000 discharges), malignant neoplasms (1,196,000 discharges), and fractures (1,066,000 discharges). Hypertrophy of tonsils and adenoids (979,000 discharges) was the single most frequently reported diagnosis. Heart and hypertensive diseases was the leading nonobstetric diagnostic group for both males (1,188,000 discharges) and females (1,019,000 discharges). However, acute myocardial infarction occurred twice as often among men (224,000 discharges) as among women (112,000 discharges). Annual rates of discharge for the ICDA classes, by sex, are shown in figure 1.

The number of discharges per 10,000 population increased with age, from 702.3 for persons under age 15 to 3,057.4 for those 65 and over. Average length of stay also increased with age, from 4.7 days for patients under age 15 to 12.6 days for those 65 and over.

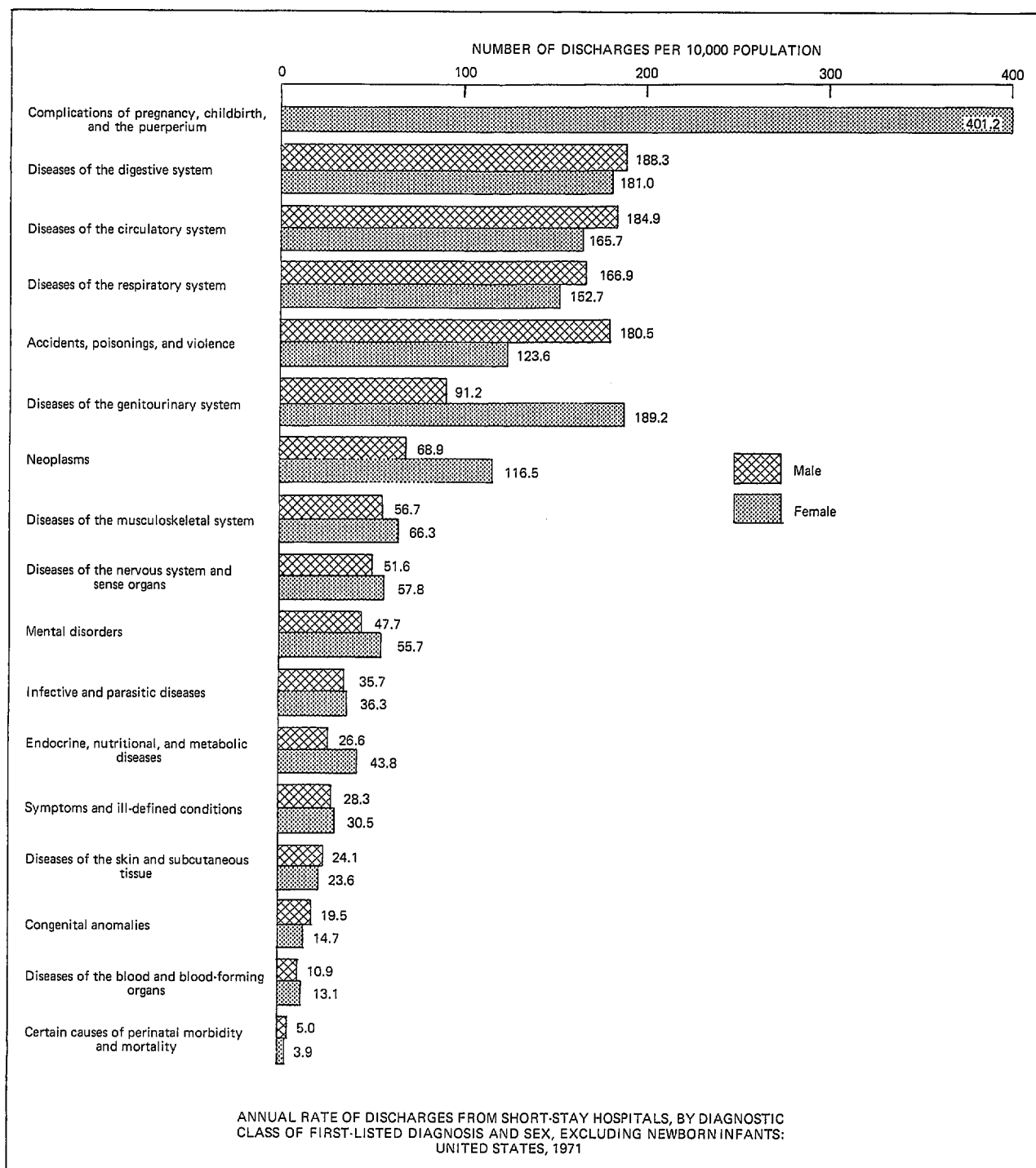
The discharge rate per 10,000 persons under 15 years of age was highest for respiratory system diseases with a rate of 258.2 or over a third (36.8 per-

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cent) of the discharges in this age group. About half (discharge rate 130.2) were hospitalized because of hypertrophy of tonsils and adenoids. Other leading diagnostic classes were accidents, poisonings, and violence (discharge rate 95.0) and diseases of the digestive system (discharge rate 66.2). Average length of stay, by diagnostic category, ranged from 2.0 days for patients with hypertrophy of tonsils and

adenoids to 10.1 days for patients with malignant neoplasms.

For the age group 15-44 years, obstetrical conditions with a rate of 501.4 discharges per 10,000 population accounted for a third (33.1 percent) of the patients hospitalized. Diseases of the genitourinary system (discharge rate 166.9) and accidents, poisonings, and violence (discharge rate 165.5) ranked



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Table 1. Number of inpatients discharged from short-stay hospitals, by class of first-listed diagnosis, selected diagnostic categories, sex, and age: United States, 1971

[Excludes newborn infants and Federal hospitals. Diagnostic groupings and code number inclusions are based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States]

Diagnostic category and ICDA codes	All discharges ¹	Male	Female	Under 15 years	15-44 years	45-64 years	65 years and over
Number of inpatients discharged in thousands							
All conditions-----	29,459	11,644	17,767	4,029	12,605	6,840	5,986
Excluding obstetrical conditions-----	25,256	11,644	13,564	4,010	8,430	6,830	5,986
Infective and parasitic diseases-----000-136	729	347	380	266	281	105	78
Neoplasms-----140-239	1,894	670	1,220	67	511	703	614
Malignant neoplasms-----140-209	1,196	535	658	26	163	466	540
Benign neoplasms and neoplasms of unspecified nature-----210-239	698	135	562	40	348	237	73
Endocrine, nutritional and metabolic diseases-----240-279	719	259	459	46	204	258	211
Diabetes mellitus-----250	430	172	257	18	91	158	164
Diseases of the blood and blood-forming organs-----280-289	244	106	138	65	63	45	71
Mental disorders-----290-315	1,050	464	583	40	590	302	118
Diseases of the nervous system and sense organs-----320-389	1,109	502	605	250	245	289	325
Diseases of the nervous system-----320-358	386	167	219	56	128	121	81
Cataract-----374	240	100	140	23	8	61	168
Other conditions and diseases of eye-----360-373;375-379	220	101	118	71	48	50	50
Diseases of ear and mastoid process-----380-389	263	134	128	120	61	56	26
Diseases of the circulatory system-----390-458	3,543	1,800	1,736	36	478	1,247	1,782
Acute myocardial infarction-----410	336	224	112	*	27	147	162
Other ischemic heart diseases-----411-414	1,143	624	515	*	65	424	652
All other heart and hypertensive disease-----390-404;420-429	732	340	392	25	134	259	314
Cerebrovascular disease-----430-438	530	243	285	*	24	126	377
Diseases of the respiratory system-----460-519	3,229	1,624	1,600	1,481	723	494	531
Acute respiratory infections except influenza-----460-466	577	294	281	324	102	72	79
Pneumonia, all forms-----480-486	642	342	299	243	102	119	177
Hypertrophy of tonsils and adenoids-----500	979	447	529	747	225	7	*
Diseases of the digestive system-----520-577	3,736	1,833	1,896	380	1,298	1,200	858
Ulcer of stomach, duodenum, and gastrojejunal ulcer-----531-534	421	248	172	25	140	170	105
Appendicitis-----540-543	285	156	129	94	150	30	11
Inguinal hernia-----550;552	471	419	51	114	108	161	87
Cholelithiasis, cholecystitis, and cholangitis-----574-575	531	132	398	*	189	191	150
Diseases of the genitourinary system-----580-629	2,872	888	1,982	234	1,390	794	455
Diseases of urinary system-----580-599	1,034	461	571	157	370	284	222
Hyperplasia of prostate-----600	191	191	...	-	*	58	132
Disorders of menstruation-----626	432	...	432	25	289	127	11
Complications of pregnancy, childbirth, and the puerperium-----630-678	4,203	...	4,203	19	4,175	10	...
Diseases of the skin and subcutaneous tissue-----680-709	482	234	247	89	216	111	66
Diseases of the musculoskeletal system and connective tissue-----710-738	1,247	552	694	76	475	441	255
Arthritis, all forms-----710-718	366	132	233	12	73	148	133
Displacement of intervertebral disc-----725	282	162	120	*	143	116	22
Congenital anomalies-----740-759	344	189	154	217	85	30	12
Certain causes of perinatal morbidity and mortality-----772,774-778	90	49	41	90	...	...	...
Symptoms and ill-defined conditions-----780-792,794-796	601	276	320	100	270	149	82
Accidents, poisonings, and violence-----800-999	3,056	1,756	1,295	545	1,378	623	511
Fractures, all sites-----800-829	1,066	561	503	186	358	229	293
Intracranial injury (excluding skull fracture)-----850-854	266	168	97	90	122	34	19
Laceration and open wound-----870-907	373	269	103	67	214	63	28
Special conditions and examinations without sickness or tests with negative findings---793,Y00-Y14	310	94	215	29	224	38	19

¹Includes inpatients discharged for whom sex was not stated.

²Caution should be exercised in the use of this figure since the relative standard error of the estimated number of discharges exceeds 25 percent.

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Table 2. Annual rate of discharges from short-stay hospitals, by class of first-listed diagnosis, selected diagnostic categories, sex, and age: United States, 1971

[Excludes newborn infants and Federal hospitals. Diagnostic groupings and code number inclusions are based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States]

Diagnostic category and ICDA codes	All discharges ¹	Male	Female	Under 15 years	15-44 years	45-64 years	65 years and over
Number of discharges per 10,000 population							
All conditions-----	1,457.7	1,196.3	1,696.0	702.3	1,514.0	1,632.7	3,057.4
Excluding obstetrical conditions-----	1,249.7	1,196.3	1,294.8	699.0	1,012.6	1,630.3	3,057.4
Infective and parasitic diseases-----000-136	36.1	35.7	36.3	46.3	33.7	25.0	39.9
Neoplasms-----140-239	93.7	68.9	116.5	11.6	61.4	167.7	313.4
Malignant neoplasms-----140-209	59.2	55.0	62.8	4.6	19.6	111.2	276.0
Benign neoplasms and neoplasms of unspecified nature-----210-239	34.5	13.9	53.7	7.0	41.8	56.6	37.4
Endocrine, nutritional and metabolic diseases-----240-279	35.6	26.6	43.8	8.0	24.5	61.5	107.6
Diabetes mellitus-----250	21.3	17.6	24.6	3.1	10.9	37.7	83.7
Diseases of the blood and blood-forming organs-----280-289	12.1	10.9	13.1	11.3	7.6	10.7	36.0
Mental disorders-----290-315	51.9	47.7	55.7	6.9	70.9	72.1	60.0
Diseases of the nervous system and sense organs-----320-389	54.9	51.6	57.8	43.6	29.4	69.1	165.8
Diseases of the nervous system-----320-358	19.1	17.1	20.9	9.8	15.3	29.0	41.3
Cataract-----374	11.9	10.2	13.4	20.5	1.0	14.6	85.8
Other conditions and diseases of eye-----360-373;375-379	10.9	10.4	11.3	12.4	5.8	12.0	25.4
Diseases of ear and mastoid process-----380-389	13.0	13.8	12.2	20.9	7.3	13.5	13.3
Diseases of the circulatory system-----390-458	175.3	184.9	165.7	6.3	57.4	297.7	910.0
Acute myocardial infarction-----410	16.6	23.0	10.7	*	3.3	35.0	82.7
Other ischemic heart diseases-----411-414	56.5	64.2	49.2	*	7.8	101.1	333.0
All other heart and hypertensive disease-----390-404;420-429	36.2	34.9	37.4	4.4	16.1	61.7	160.3
Cerebrovascular disease-----430-438	26.2	25.0	27.2	*	2.9	30.1	192.6
Diseases of the respiratory system-----460-519	159.8	166.9	152.7	258.2	86.8	117.9	271.0
Acute respiratory infections except influenza-----460-466	28.5	30.3	26.8	56.4	12.3	17.2	40.6
Pneumonia, all forms-----480-486	31.7	35.1	28.6	42.3	12.3	28.4	90.5
Hypertrophy of tonsils and adenoids-----500	48.4	46.0	50.5	130.2	27.0	1.6	*
Diseases of the digestive system-----520-577	184.9	188.3	181.0	66.2	155.9	286.5	438.5
Ulcer of stomach, duodenum, and gastrojejunal ulcer-----531-534	20.8	25.4	16.4	20.9	16.8	40.6	53.8
Appendicitis-----540-543	14.1	16.0	12.3	16.4	18.1	7.1	5.7
Inguinal hernia-----550;552	23.3	43.0	4.8	19.8	13.0	38.6	44.6
Cholelithiasis, cholecystitis, and cholangitis-----574-575	26.3	13.5	38.0	*	22.7	45.6	76.4
Diseases of the genitourinary system-----580-629	142.1	91.2	189.2	40.8	166.9	189.5	232.3
Diseases of urinary system-----580-599	51.1	47.3	54.5	27.4	44.5	67.9	113.2
Hyperplasia of prostate-----600	9.4	19.6	...	...	*	13.8	67.2
Disorders of menstruation-----626	21.4	...	41.3	20.8	34.7	30.3	5.7
Complications of pregnancy, childbirth, and the puerperium-----630-678	208.0	...	401.2	3.3	501.4	2.4	...
Diseases of the skin and subcutaneous tissue-----680-709	23.9	24.1	23.6	15.4	26.0	26.6	33.8
Diseases of the musculoskeletal system and connective tissue-----710-738	61.7	56.7	66.3	13.3	57.0	105.3	130.2
Arthritis, all forms-----710-718	18.1	13.6	22.3	2.1	8.8	35.3	68.1
Displacement of intervertebral disc-----725	14.0	16.7	11.4	*	17.2	27.6	11.3
Congenital anomalies-----740-759	17.0	19.5	14.7	37.8	10.2	7.3	6.2
Certain causes of perinatal morbidity and mortality-----772,774-778	4.4	5.0	3.9	15.6	...	...	...
Symptoms and ill-defined conditions-----780-792,794-796	29.8	28.3	30.5	17.4	32.4	35.6	41.9
Accidents, poisonings, and violence-----800-999	151.2	180.5	123.6	95.0	165.5	148.7	261.0
Fractures, all sites-----800-829	52.7	57.7	48.0	32.5	43.0	54.6	149.6
Intracranial injury (excluding skull fracture)-----850-854	13.2	17.3	9.3	15.7	14.7	8.1	9.9
Laceration and open wound-----870-907	18.5	27.7	9.8	11.7	25.7	15.1	14.5
Special conditions and examinations without sickness or tests with negative findings-----793,Y00-Y14	15.3	9.7	20.5	5.1	26.9	9.0	9.6

¹Includes inpatients discharged for whom sex was not stated.²Caution should be exercised in the use of this figure since the relative standard error of the estimated number of discharges exceeds 25 percent.

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Table 3. Average length of stay of inpatients discharged from short-stay hospitals, by class of first-listed diagnosis, selected diagnostic categories, sex, and age: United States, 1971.

[Excludes newborn infants and Federal hospitals. Diagnostic groupings and code number inclusions are based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States]

Diagnostic category and ICDA codes	All discharges ¹	Male	Female	Under 15 years	15-44 years	45-64 years	65 years and over
	Average length of stay in days						
All conditions-----	7.8	8.4	7.5	4.7	5.7	9.4	12.6
Excluding obstetrical conditions-----	8.5	8.4	8.6	4.7	6.7	9.4	12.6
Infective and parasitic diseases-----000-136	6.7	6.9	6.5	5.1	6.6	8.5	10.3
Neoplasms-----140-239	11.3	12.7	10.5	6.7	7.1	11.7	14.8
Malignant neoplasms-----140-209	14.1	14.4	13.9	10.1	10.2	14.0	15.6
Benign neoplasms and neoplasms of unspecified nature-----210-239	6.5	6.0	6.6	4.5	5.6	7.1	9.4
Endocrine, nutritional and metabolic diseases-----240-279	10.4	9.8	10.7	7.9	8.3	10.1	13.2
Diabetes mellitus-----250	11.3	10.3	12.0	8.4	8.9	11.1	13.2
Diseases of the blood and blood-forming organs-----280-289	8.4	8.4	8.4	5.6	6.3	9.8	12.0
Mental disorders-----290-315	11.8	11.2	12.2	10.0	11.3	11.4	15.5
Diseases of the nervous system and sense organs-----320-389	7.1	7.1	7.2	4.2	6.9	7.8	8.9
Diseases of the nervous system-----320-358	10.8	11.6	10.2	8.9	9.2	10.7	14.7
Cataract-----374	7.1	7.0	7.2	6.4	5.8	6.6	7.4
Other conditions and diseases of eye-----360-373;375-379	4.8	4.6	5.0	2.6	5.0	6.0	6.5
Diseases of ear and mastoid process-----380-389	3.8	3.4	4.1	2.9	3.7	4.7	5.7
Diseases of the circulatory system-----390-458	11.9	11.7	12.2	9.6	8.7	11.1	13.4
Acute myocardial infarction-----410	16.4	15.9	17.5	*	16.6	16.4	16.4
Other ischemic heart diseases-----411-414	11.4	10.9	12.1	*	7.9	10.1	12.7
All other heart and hypertensive disease-----390-404;420-429	9.8	9.6	9.9	8.8	8.3	9.0	11.1
Cerebrovascular disease-----430-438	14.2	13.4	14.9	*	10.8	12.9	14.9
Diseases of the respiratory system-----460-519	5.7	5.8	5.6	3.6	4.6	8.3	10.7
Acute respiratory infections except influenza-----460-466	5.5	5.3	5.8	4.5	4.8	6.8	9.6
Pneumonia, all forms-----480-486	9.1	8.9	9.3	6.6	8.1	10.4	12.1
Hypertrophy of tonsils and adenoids-----500	2.1	2.1	2.1	2.0	2.3	3.9	*
Diseases of the digestive system-----520-577	8.2	7.6	8.7	4.6	6.4	8.9	11.4
Ulcer of stomach, duodenum, and gastrojejunal ulcer-----531-534	9.8	9.4	10.4	7.0	7.9	10.0	12.2
Appendicitis-----540-543	6.5	6.5	6.4	5.4	5.8	9.8	14.6
Inguinal hernia-----550;552	6.5	6.4	7.3	3.2	6.0	7.3	10.0
Cholelithiasis, cholecystitis, and cholangitis-----574-575	10.9	11.8	10.6	*	8.7	10.6	13.9
Diseases of the genitourinary system-----580-629	6.6	7.6	6.2	4.0	5.4	7.0	11.2
Diseases of urinary system-----580-599	7.2	7.5	7.0	4.5	5.6	8.1	10.8
Hyperplasia of prostate-----600	11.9	11.9	...	*	9.2	13.2	13.2
Disorders of menstruation-----626	4.2	...	4.2	3.5	4.2	4.2	5.6
Complications of pregnancy, childbirth, and the puerperium-----630-678	3.8	...	3.8	3.4	3.8	4.4	...
Diseases of the skin and subcutaneous tissue-----680-709	7.3	6.8	7.7	4.8	6.2	8.2	12.6
Diseases of the musculoskeletal system and connective tissue-----710-738	9.8	9.3	10.3	8.0	8.3	10.0	12.9
Arthritis, all forms-----710-718	11.0	10.2	11.4	8.9	8.9	10.3	13.1
Displacement of intervertebral disc-----725	11.8	11.3	12.6	*	11.2	12.3	13.8
Congenital anomalies-----740-759	7.2	7.1	7.3	6.9	6.7	8.9	11.3
Certain causes of perinatal morbidity and mortality-----772,774-778	7.0	6.9	7.1	7.0	...	...	...
Symptoms and ill-defined conditions-780-792,794-796	5.7	5.3	6.0	3.9	5.0	6.3	8.7
Accidents, poisonings, and violence-----800-999	8.4	7.6	9.4	5.0	6.8	9.0	15.3
Fractures, all sites-----800-829	11.7	10.0	13.6	5.7	9.3	11.3	18.8
Intracranial injury (excluding skull fracture)-----850-854	5.8	6.0	5.5	3.3	5.9	8.7	11.6
Laceration and open wound-----870-907	5.3	5.1	5.7	3.7	5.0	6.2	8.9
Special conditions and examinations without sickness or tests with negative findings-----793,Y00-Y14	3.9	4.0	3.8	3.5	3.4	5.0	8.3

¹Includes inpatients discharged for whom sex was not stated.

²Caution should be exercised in the use of this figure since the relative standard error of the estimated number of discharges exceeds 25 percent.

second and third. Leading nonobstetric diagnostic categories and their discharge rates were diseases of the urinary system (44.5), fractures (43.0), benign neoplasms (41.8), disorders of menstruation (34.7), and hypertrophy of tonsils and adenoids (27.0). Average length of stay was longest for acute myocardial infarction (16.6 days), displacement of intervertebral disc (11.2 days), and cerebrovascular disease (10.8 days).

The diagnostic classes for persons 45-64 years of age with the highest number of discharges per 10,000 population were diseases of the circulatory system (297.7), diseases of the digestive system (286.5), and diseases of the genitourinary system (189.5). Almost a fifth (18.9 percent) of the patients aged 45-64 were hospitalized because of heart and hypertensive diseases or malignant neoplasms. Av-

erage duration of hospitalization for patients aged 45-64 years was longest for acute myocardial infarction (16.4 days), malignant neoplasms (14.0 days), and cerebrovascular disease (12.9 days).

For patients 65 years of age and over, more than half (54.4 percent) of the first-listed diagnoses were in the classes of diseases of the circulatory system, diseases of the digestive system, and neoplasms. Diagnostic conditions accounting for over a third (34.2 percent) of the episodes of hospitalization were heart and hypertensive diseases (discharge rate 576.0), malignant neoplasms (276.0), and cerebrovascular diseases (192.6). Average length of stay for the aged was longest for fractures (18.8 days), acute myocardial infarction (16.4 days), and malignant neoplasms (15.6 days).

Technical Notes

SOURCE OF DATA. The Hospital Discharge Survey collects data on patients discharged from noninstitutional short-stay hospitals located in the 50 States and the District of Columbia. This report excludes data for newborn infants and discharges from Federal hospitals. Information in this report is based on a sample of about 200,000 abstracts of medical records of patients discharged from a national sample of 379 hospitals that participated in the survey in 1971.

MEDICAL CODING AND DIAGNOSIS ESTIMATES. A maximum of five diagnoses recorded on abstracts of sampled medical records for 1971 were coded according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA). The data in this report pertain to first-listed diagnoses only. The classification "Accidents, poisonings, and violence (External cause)" and the supplementary classification "Stillbirth" were not used. Some modifications were made in the coding system to accommodate incomplete or ill-defined terminology on the source documents. Data are presented for the ICDA classes and selected diagnostic categories, subsets of the ICDA classes.

SAMPLING ERRORS. The estimates presented are subject to sampling error since a sample rather than the entire population has been surveyed. The standard errors appropriate for the estimates of the number of discharges are shown in table I.

ROUNDING. Due to rounding, detailed figures within tables may not add to totals. Rates and average lengths of stay presented were computed from unrounded numbers.

DEFINITIONS. *Short-stay hospitals* are general and short-term special hospitals that have six beds or

Table I. Approximate standard errors of estimated numbers of discharges

Size of estimate	Standard error	Size of estimate	Standard error
5,000-----	1,400	500,000	22,000
10,000-----	2,000	1,000,000	38,000
20,000-----	2,800	5,000,000	160,000
50,000-----	4,600	10,000,000	310,000
100,000-----	6,800	20,000,000	610,000
200,000-----	11,000	30,000,000	900,000

more for inpatient use and an average length of stay of less than 30 days.

A *patient* or *inpatient* is a person who is formally admitted to the inpatient service of a short-stay hospital for observation, care, diagnosis, or treatment.

A *discharge* is the formal release of an inpatient 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.

Discharge rate is the ratio of the number of discharges (inpatients) to the number of persons in the civilian, noninstitutional population as of July 1, 1971.

Average length of stay is the total number of inpatient days accumulated by patients discharged from short-stay hospitals during 1971 divided by the number of patients discharged.

First-listed diagnoses are the aggregate of individually coded diagnoses listed first, including single (only) and first-of-multiple diagnoses. The number of first-listed diagnoses is equivalent to the number of discharges.

EXPLANATION OF SYMBOLS USED IN TABLES

Category not applicable----- ...

Quantity zero----- -

Figure does not meet standards of
reliability or precision----- *