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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, 1972

This report presents estimates on inpatients discharged from non-Federal short-stay hospitals in the United States during 1972. Number of discharges, rate of discharges, and average length of stay are shown by first-listed diagnosis and age and sex of patient.

These estimates are based on information collected by the Hospital Discharge Survey, conducted by the National Center for Health Statistics. Data for the survey are collected from the medical records of a sample of patients discharged from a national sample of short-stay hospitals. A description of the survey and definitions of terms used in this report are shown in the Technical Notes.

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 31.6 million inpatients, excluding newborn infants, were discharged from the Nation's non-Federal short-stay hospitals during 1972 (table 1). Of these inpatients, 12.6 million (40 percent) were male and 19.0 million (60 percent) were female. Excluding obstetrical conditions, there were 14.9 million female discharges. The rates per 10,000 persons in the civilian, noninstitutional population were 1,548.6 for all discharges; 1,278.3 for males; 1,796.8 for all females; and 1,408.8 for females excluding obstetrical conditions (table 2). Average lengths of stay were 7.7 days for all patients, 8.3 days for males, and 7.4 days for all females. Excluding obstetrical conditions, the average length of stay for females was 8.4 days (table 3).

Of the 17 ICDA classes, six accounted for 70 percent of all first-listed diagnoses. These were com-

plications of pregnancy, childbirth, and the puerperium, 4.1 million discharges; diseases of the digestive system, 4.0 million; diseases of the circulatory system, 3.9 million; diseases of the respiratory system, 3.5 million; accidents, poisonings, and violence, 3.3 million; and diseases of the genitourinary system, 3.3 million discharges. The average length of stay for the ICDA classes ranged from 3.7 days for complications of pregnancy, childbirth, and the puerperium to 11.6 days for mental disorders.

The leading diagnostic group was heart and hypertensive diseases with 2.4 million discharges. This category combines discharges shown in the tables with a first-listed diagnosis of acute myocardial infarction, other ischemic heart disease, and all other heart and hypertensive diseases. Other leading groups of diagnoses were malignant neoplasms, 2.1 million discharges; diseases of the urinary system, 1.2 million discharges; and fractures, all sites, 1.1 million discharges.

Annual rates of discharges per 10,000 population for the 17 ICDA classes by sex are shown in the chart. For females, complications of pregnancy, childbirth, and the puerperium had the highest discharge rate. This was 388.0 per 10,000 population, followed by a rate of 214.5 per 10,000 population for diseases of the genitourinary system. For males, the leading class was diseases of the circulatory system with a discharge rate of 201.1 per 10,000 population. This was followed by diseases of the digestive system with a discharge rate of 197.7 per 10,000 population.

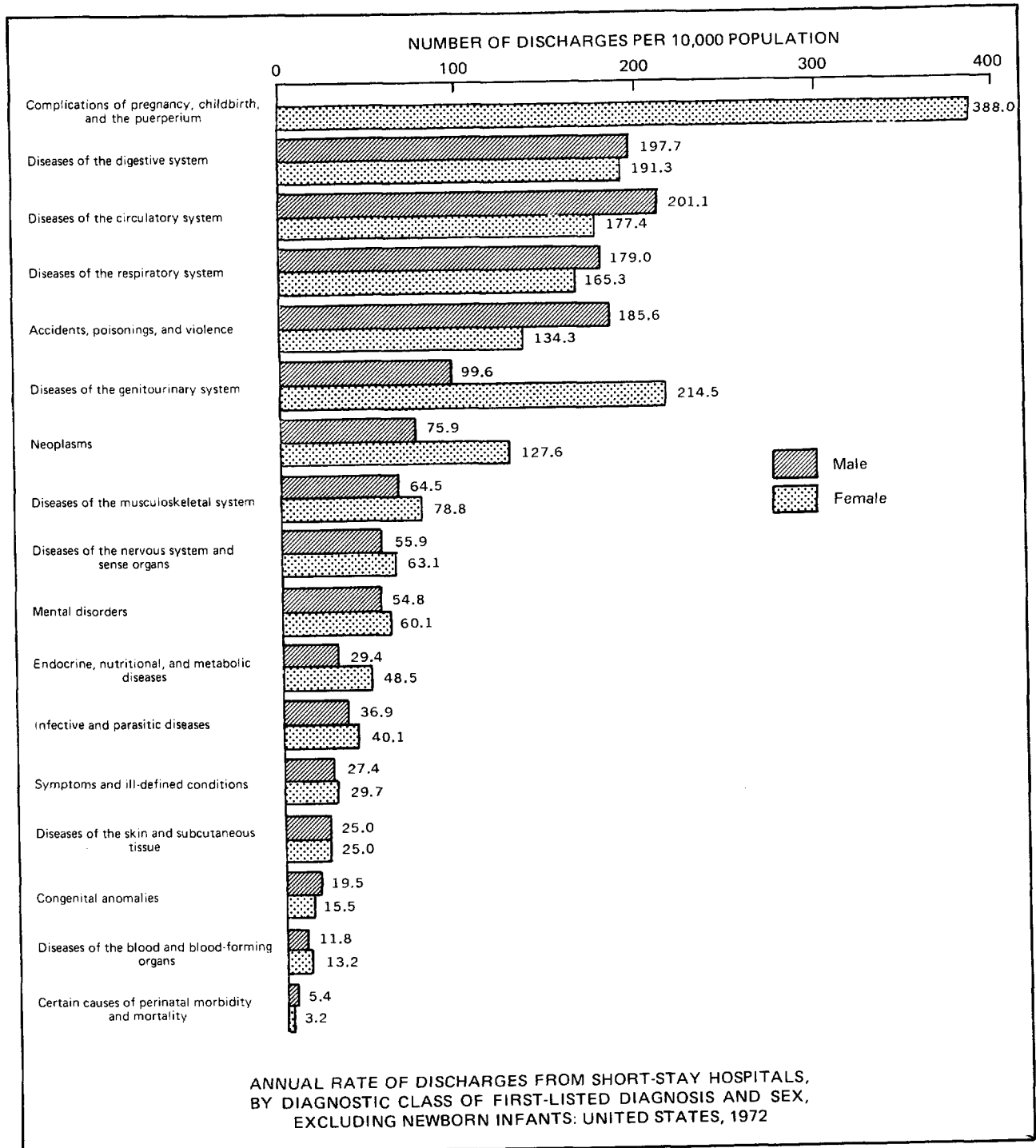
The number of discharges per 10,000 population increased with age, from 737.4 for those under 15 years to 3,329.3 for patients 65 years and over. The average length of stay also increased with age, from 4.5 days to 12.2 days.

For patients under 15 years of age the discharge rates per 10,000 population were highest for diseases of the respiratory system, 266.2; accidents, poison-

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ings, and violence, 101.1; and diseases of the digestive system, 73.1. These three classes accounted for 60 percent of all discharges in this age group. By specific diagnosis, hypertrophy of tonsils and adenoids accounted for 17 percent of all discharges. The average length of stay ranged from 1.8 days for hypertrophy of tonsils and adenoids to 10.6 for mental disorders.

In the age group 15-44 years, complications of pregnancy, childbirth, and the puerperium had a discharge rate of 476.8 per 10,000 population and accounted for over 30 percent of all discharges of both sexes. The discharge rate per 10,000 population for other leading classes was 181.9 for diseases of the genitourinary system and 175.3 for accidents, poisonings, and violence. Leading diagnostic conditions were



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Table 1. Number of inpatients discharged from short-stay hospitals, by class of first-listed diagnosis, selected diagnostic categories, age, and sex: United States, 1972

[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 code	All dis- charges <sup>1</sup>	Under 15 years	15-44 years	45-64 years	65 years and over	Male	Female
	Number of discharges in thousands						
All conditions-----	31,627	4,174	13,331	7,488	6,634	12,593	18,996
Excluding obstetrical conditions-----	27,525	4,154	9,257	7,480	6,634	12,593	14,893
Infective and parasitic diseases-----000-136	789	282	304	110	93	363	424
Neoplasms-----140-239	2,100	70	568	792	669	747	1,349
Malignant neoplasms-----140-209	1,336	28	187	536	585	598	735
Benign neoplasms and neoplasms of unspecified nature-----210-239	764	42	381	257	84	149	614
Endocrine, nutritional, and metabolic diseases-----240-279	804	55	239	270	240	290	513
Diabetes mellitus-----250	488	22	106	172	188	188	300
Diseases of the blood and blood-forming organs-----280-289	256	63	71	40	82	116	140
Mental disorders-----290-315	1,176	40	645	357	134	540	635
Diseases of the nervous system and sense organs-----320-389	1,220	281	283	309	347	551	667
Diseases of the nervous system-----320-358	443	64	158	138	84	190	252
Cataract-----374	258	5	10	65	179	112	147
Other conditions and diseases of eye-----360-373, 375-379	241	81	51	55	55	112	129
Diseases of ear and mastoid process-----380-389	277	132	64	52	29	137	140
Diseases of the circulatory system-----390-458	3,860	32	495	1,376	1,957	1,981	1,875
Acute myocardial infarction-----410	374	*	27	160	186	246	128
Other ischemic heart disease-----411-414	1,254	*	75	474	701	689	563
All other heart and hypertensive disease-----390-404, 420-429	801	19	135	289	358	375	425
Cerebrovascular disease-----430-438	586	*	23	147	413	276	309
Diseases of the respiratory system-----460-519	3,515	1,507	824	548	637	1,764	1,747
Acute respiratory infections, except influenza-----460-466	609	332	114	77	86	308	300
Pneumonia, all forms-----480-486	744	289	121	129	205	393	350
Hypertrophy of tonsils and adenoids-----500	929	694	229	5	*	423	505
Diseases of the digestive system-----520-577	3,976	414	1,391	1,256	915	1,947	2,022
Ulcer of stomach, duodenum, and gastrojejunal ulcer-----531-534	429	7	139	175	108	256	173
Appendicitis-----540-543	306	104	168	26	9	168	137
Inguinal hernia-----550, 552	491	118	115	161	96	441	48
Cholelithiasis, cholecystitis, and cholangitis-----574, 575	570	*	201	204	164	144	425
Diseases of the genitourinary system-----580-629	3,250	255	1,554	935	506	982	2,268
Diseases of urinary system-----580-599	1,198	174	414	363	246	516	681
Hyperplasia of prostate-----600	221	*	*	69	149	221	...
Disorders of menstruation-----626	518	5	342	160	10	...	518
Complications of pregnancy, childbirth, and the puerperium-----630-678	4,102	20	4,074	8	...	...	4,102
Diseases of the skin and subcutaneous tissue-----680-709	511	80	240	116	75	246	264
Diseases of the musculoskeletal system and connective tissue-----710-738	1,470	81	564	525	300	635	833
Arthritis, all forms-----710-718	419	13	86	164	156	162	257
Displacement of intervertebral disc-----725	322	*	166	129	26	178	144
Congenital anomalies-----740-759	357	213	90	37	16	192	164
Certain causes of perinatal morbidity and mortality-----772, 774-778	87	87	-	-	-	53	34
Symptoms and ill-defined conditions-----780-792, 794-796	588	96	266	142	84	270	314
Accidents, poisonings, and violence-----800-999	3,253	572	1,498	626	557	1,828	1,420
Fractures, all sites-----800-829	1,127	198	397	218	315	578	547
Intracranial injury (excluding those with skull fracture)-----850-854	292	96	139	37	20	183	109
Laceration and open wound-----870-907	379	70	224	57	28	272	106
Special conditions and examinations without sickness or tests with negative findings-----793, Y00-Y13	312	27	224	39	22	88	224

<sup>1</sup>Includes inpatients discharged for whom sex was not stated.

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Table 2. Annual rate of discharges from short-stay hospitals, by class of first-listed diagnosis, selected diagnostic categories, age, and sex: United States, 1972

[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 code	All discharges <sup>1</sup>	Under 15 years	15-44 years	45-64 years	65 years and over	Male	Female
	Number of discharges per 10,000 population						
All conditions-----	1,548.6	737.4	1,560.2	1,772.3	3,329.3	1,278.3	1,796.8
Excluding obstetrical conditions-----	1,347.7	733.8	1,083.4	1,770.4	3,329.3	1,278.3	1,408.8
Infective and parasitic diseases-----000-136	38.6	49.7	35.6	26.1	46.5	36.9	40.1
Neoplasms-----140-239	102.8	12.4	66.5	187.6	335.9	75.9	127.6
Malignant neoplasms-----140-209	65.4	5.0	21.9	126.8	293.6	60.7	69.5
Benign neoplasms and neoplasms of unspecified nature-----210-239	37.4	7.3	44.6	60.8	42.3	15.2	58.0
Endocrine, nutritional, and metabolic diseases-----240-279	39.4	9.6	28.0	64.0	120.4	29.4	48.5
Diabetes mellitus-----250	23.9	3.8	12.5	40.8	94.4	19.1	28.3
Diseases of the blood and blood-forming organs-----280-289	12.6	11.2	8.3	9.5	41.3	11.8	13.2
Mental disorders-----290-315	57.6	7.0	75.5	84.5	67.2	54.8	60.1
Diseases of the nervous system and sense organs-----320-389	59.7	49.7	33.1	73.1	174.2	55.9	63.1
Diseases of the nervous system-----320-358	21.7	11.4	18.5	32.6	42.0	19.3	23.9
Cataract-----374	12.7	0.9	1.1	15.3	90.0	11.3	13.9
Other conditions and diseases of eye-----360-373,375-379	11.8	14.2	6.0	12.9	27.6	11.4	12.2
Diseases of ear and mastoid process-----380-389	13.6	23.2	7.5	12.3	14.7	13.9	13.2
Diseases of the circulatory system-----390-458	189.0	5.6	58.0	325.7	982.3	201.1	177.4
Acute myocardial infarction-----410	18.3	*	3.2	38.0	93.4	24.9	12.1
Other ischemic heart disease-----411-414	61.4	*	8.8	112.2	351.8	69.9	53.3
All other heart and hypertensive disease-----390-404,420-429	39.2	3.4	15.8	68.4	179.5	38.1	40.2
Cerebrovascular disease-----430-438	28.7	*	2.7	34.8	207.1	28.0	29.3
Diseases of the respiratory system-----460-519	172.1	266.2	96.4	129.7	319.7	179.0	165.3
Acute respiratory infections, except influenza-----460-466	29.8	58.6	13.3	18.1	43.2	31.2	28.4
Pneumonia, all forms-----480-486	36.4	51.0	14.2	30.5	103.0	39.9	33.1
Hypertrophy of tonsils and adenoids-----500	45.5	122.7	26.8	1.1	*	42.9	47.8
Diseases of the digestive system-----520-577	194.7	73.1	162.8	297.3	459.3	197.7	191.3
Ulcer of stomach, duodenum, and gastrojejunal ulcer-----531-534	21.0	1.2	16.3	41.5	54.4	26.0	16.4
Appendicitis-----540-543	15.0	18.3	19.6	6.1	4.4	17.1	13.0
Inguinal hernia-----550,552	24.0	20.9	13.5	38.2	48.0	44.8	4.6
Cholelithiasis, cholecystitis, and cholangitis-----574,575	27.9	*	23.5	48.2	82.4	14.6	40.2
Diseases of the genitourinary system-----580-629	159.2	45.1	181.9	221.4	253.7	99.6	214.5
Diseases of urinary system-----580-599	58.6	30.7	48.5	86.0	123.6	52.4	64.4
Hyperplasia of prostate-----600	10.8	*	16.3	74.8	22.5	...	...
Disorders of menstruation-----626	25.4	0.9	40.1	37.9	5.2	...	49.0
Complications of pregnancy, childbirth, and the puerperium-----630-678	200.9	3.6	476.8	1.9	...	...	388.0
Diseases of the skin and subcutaneous tissue-----680-709	25.0	14.2	28.1	27.5	37.6	25.0	25.0
Diseases of the musculoskeletal system and connective tissue-----710-738	72.0	14.3	66.1	124.2	150.5	64.5	78.8
Arthritis, all forms-----710-718	20.5	2.3	10.0	38.8	78.2	16.4	24.3
Displacement of intervertebral disc-----725	15.8	*	19.4	30.6	13.0	18.1	13.6
Congenital anomalies-----740-759	17.5	37.6	10.6	8.8	8.2	19.5	15.5
Certain causes of perinatal morbidity and mortality-----772,774-778	4.2	15.3	-	-	-	5.4	3.2
Symptoms and ill-defined conditions-----780-792,794-796	28.8	16.9	31.1	33.7	42.2	27.4	29.7
Accidents, poisonings, and violence-----800-999	159.3	101.1	175.3	148.1	279.4	185.6	134.3
Fractures, all sites-----800-829	55.2	35.0	46.5	51.5	157.9	58.7	51.8
Intracranial injury (excluding those with skull fracture)-----850-854	14.3	16.9	16.2	8.7	10.2	18.5	10.3
Laceration and open wound-----870-907	18.5	12.3	26.2	13.5	14.2	27.6	10.0
Special conditions and examinations without sickness or tests with negative findings-----793,Y00-Y13	15.3	4.8	26.2	9.3	10.9	8.9	21.2

<sup>1</sup>Includes inpatients discharged for whom sex was not stated.

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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, age, and sex: United States, 1972

[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 code	All discharges <sup>1</sup>	Under 15 years	15-44 years	45-64 years	65 years and over	Male	Female
All conditions-----	7.7	4.5	5.7	9.3	12.2	8.3	7.4
Excluding obstetrical conditions-----	8.4	4.5	6.6	9.3	12.2	8.3	8.4
Infective and parasitic diseases-----000-136	6.4	4.6	6.1	9.4	9.6	6.8	6.1
Neoplasms-----140-239	11.1	6.1	7.4	11.7	14.1	12.4	10.4
Malignant neoplasms-----140-209	13.9	8.3	11.0	14.0	15.0	14.0	13.8
Benign neoplasms and neoplasms of unspecified nature-----210-239	6.3	4.5	5.6	7.1	8.4	6.0	6.4
Endocrine, nutritional, and metabolic diseases-----240-279	9.9	8.1	7.8	10.2	12.1	9.9	9.9
Diabetes mellitus-----250	10.7	7.6	8.3	10.8	12.3	10.4	10.9
Diseases of the blood and blood-forming organs-----280-289	8.1	5.5	6.4	9.1	11.2	7.6	8.5
Mental disorders-----290-315	11.6	10.6	11.2	11.6	13.9	10.5	12.6
Diseases of the nervous system and sense organs-----320-389	6.9	3.9	6.4	7.4	9.3	5.7	7.1
Diseases of the nervous system-----320-358	9.8	8.0	7.9	9.2	15.5	10.0	9.6
Cataract-----374	6.8	4.8	5.5	6.5	7.0	6.5	7.0
Other conditions and diseases of eye-----360-373,375-379	5.0	2.6	5.5	6.8	6.5	4.9	5.2
Diseases of ear and mastoid process-----380-389	4.1	2.6	3.7	4.5	10.9	3.5	4.7
Diseases of the circulatory system-----390-458	11.5	8.4	8.1	10.8	12.9	11.3	11.7
Acute myocardial infarction-----410	15.6	*	14.9	16.2	15.2	15.4	16.1
Other ischemic heart disease-----411-414	11.0	*	7.8	9.9	12.2	10.4	11.7
All other heart and hypertensive disease-----390-404,420-429	9.7	7.1	7.5	8.8	11.3	9.3	10.0
Cerebrovascular disease-----430-438	13.4	*	10.0	12.4	13.9	12.7	14.0
Diseases of the respiratory system-----460-519	6.0	3.5	4.7	8.6	11.2	5.9	6.0
Acute respiratory infections, except influenza-----460-466	5.6	4.3	4.9	7.0	10.0	5.3	5.9
Pneumonia, all forms-----480-486	8.8	5.0	7.7	10.3	12.3	8.6	8.9
Hypertrophy of tonsils and adenoids-----500	1.9	1.8	2.4	2.9	*	1.8	2.0
Diseases of the digestive system-----520-577	8.0	4.2	6.4	8.7	11.1	7.6	8.4
Ulcer of stomach, duodenum, and gastrojejunal ulcer-----531-534	9.8	5.8	8.0	9.8	12.5	9.6	10.2
Appendicitis-----540-543	6.3	5.4	5.8	10.3	15.3	6.5	6.1
Inguinal hernia-----550,552	5.9	2.8	5.4	6.7	8.7	5.9	5.5
Cholelithiasis, cholecystitis, and cholangitis-----574,575	10.3	*	8.6	9.9	12.8	11.3	9.9
Diseases of the genitourinary system-----580-629	6.3	4.0	5.2	6.3	10.7	7.3	5.8
Diseases of urinary system-----580-599	6.6	4.4	5.3	6.6	10.1	6.7	6.4
Hyperplasia of prostate-----600	11.9	*	*	10.3	12.7	11.9	...
Disorders of menstruation-----626	4.0	2.8	3.9	4.0	6.2	...	4.0
Complications of pregnancy, childbirth, and the puerperium-----630-678	3.7	3.4	3.7	3.3	...	...	3.7
Diseases of the skin and subcutaneous tissue-----680-709	7.2	5.2	5.7	8.1	12.9	6.9	7.5
Diseases of the musculoskeletal system and connective tissue-----710-738	9.5	6.6	8.1	9.5	13.2	9.2	9.8
Arthritis, all forms-----710-718	10.8	8.4	8.5	9.9	13.3	10.2	11.2
Displacement of intervertebral disc-----725	12.1	*	11.2	12.4	15.4	11.2	13.1
Congenital anomalies-----740-759	6.6	5.9	6.9	8.8	8.6	6.7	6.3
Certain causes of perinatal morbidity and mortality-----772,774-778	7.6	7.6	...	...	...	8.1	6.8
Symptoms and ill-defined conditions-----780-792,794-796	5.1	3.7	4.4	5.3	8.9	5.1	5.1
Accidents, poisonings, and violence-----800-999	8.3	5.2	6.6	9.5	14.6	7.4	9.4
Fractures, all sites-----800-829	11.5	6.5	9.0	11.6	17.8	9.7	13.4
Intracranial injury (excluding those with skull fracture)-----850-854	5.9	3.6	5.5	8.7	14.9	5.5	6.6
Laceration and open wound-----870-907	5.3	3.8	4.8	7.3	8.3	5.2	5.4
Special conditions and examinations without sickness or tests with negative findings-----793,900-913	3.9	2.8	3.5	4.7	7.1	3.8	3.9

<sup>1</sup>Includes inpatients discharged for whom sex was not stated.

diseases of the urinary system, 48.5; fractures, all sites, 46.5; and disorders of menstruation, 40.1 discharges per 10,000 population. The longest lengths of stay were recorded for acute myocardial infarction (14.9 days), mental disorders (11.2 days), and malignant neoplasms (11.0 days). The largest class, complications of pregnancy, childbirth, and the puerperium, had a length of stay of only 3.7 days.

In the age group 45-64 years, the leading ICDA class was diseases of the circulatory system with a discharge rate of 325.7 per 10,000 population. This was followed by diseases of the digestive system with a rate of 297.3 discharges per 10,000 population and diseases of the genitourinary system with a rate of 221.4 discharges per 10,000 population. These three classes accounted for slightly less than half (48 percent) of all discharges in this age group. Leading groups were heart and hypertensive diseases (218.6

discharges per 10,000 population) and malignant neoplasms (126.8 discharges per 10,000 population). The longest average length of stay was for myocardial infarction (16.2 days). Other long stays were for malignant neoplasms (14.0 days) and displacement of intervertebral disc (12.4 days).

Thirty percent of the discharges 65 years of age and over had a first-listed diagnosis of diseases of the circulatory system. The discharge rate for this class was 982.3 per 10,000 population. The next two leading classes were diseases of the digestive system (459.3) and diseases of the respiratory system (319.7). Leading diagnostic groups included heart and hypertensive diseases (624.7 discharges per 10,000 population), malignant neoplasms (293.6), and cerebrovascular disease (207.1 discharges per 10,000 population). Fractures, all sites, had the longest average length of stay (17.8 days) in this age group.

### 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 225,000 abstracts of medical records of patients discharged from a national sample of 425 hospitals that participated in the survey in 1972.

**MEDICAL CODING AND DIAGNOSIS ESTIMATES.** A maximum of five diagnoses recorded on abstracts of sampled medical records for 1972 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 "Fetal Death" 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.

Table I. APPROXIMATE STANDARD ERRORS OF ESTIMATED NUMBERS OF DISCHARGES

Size of estimate	Standard error	Size of estimate	Standard error
5,000----	1,100	500,000----	22,000
10,000----	1,500	1,000,000--	38,000
20,000----	2,300	5,000,000--	160,000
50,000---	4,000	10,000,000-	310,000
100,000---	6,600	20,000,000-	610,000
200,000---	11,000	30,000,000-	900,000

**DEFINITIONS.** *Short-stay hospitals* are general and short-term special hospitals that have six beds or 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, 1972.

*Average length of stay* is the total number of inpatient days accumulated by patients discharged from short-stay hospitals during 1972 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----- \*