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**Public Health Service** 

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION Rockville, Maryland 20852

# VITAL STATISTICS REPORT

Hospital Discharge Survey\_Provisional Data

FROM THE

NATIONAL CENTER FOR HEALTH STATISTICS

## Utilization of Short-Stay Hospitals, 1968

This report presents summary estimates on patients, excluding the newborn, who were discharged in 1968 from short-stay hospitals in the United States. Information is included on their number, rate per 1,000 civilian, noninstitutional population, days of care, and average length of stay by various patient characteristics and region of the country in which they were hospitalized. (For definitions of terms used in this report, see Technical Notes.)

Number of discharges.—During 1968 over 28 million patients were discharged from short-stay hospitals. Of this number, data by color and discharge status were available on 24.4 million, of which 21.6 million were white patients and 2.9 million were patients other than white (fig. 1). Each group discharged 97 percent of its patients alive.

Two of the four geographic regions, the North Central and the South—with more than 8.6 million patients each—had the largest number of discharges. The West—which had slightly less than half the number of patients as the other two regions—had the smallest number of discharges, 4.2 million (table 1).

Almost half of the 28.1 million discharges were patients between 15 and 44 years of age (table 1). Females, including those hospitalized for deliveries, accounted for over half of the total hospitalizations. But even when deliveries were excluded, females represented approximately half of the total discharges (table 1).

Rate of discharges.—The rate, as well as the number, of discharges was higher for females than that for males. Including deliveries, the discharge rate for females was 165.8 per 1,000 population; excluding deliveries, the rate was 132.8. The discharge rate for males was 119.2 (table 1).

However, the highest rate of discharges (314.4) was among males 65 years of age and over. This was followed by a rate of 288.7 for females in the same

age category. For both sexes combined the rate nearly doubled (300.8) that of the 45-64-year-age group (162.0, table 1). This ratio holds true for each region except the North Central where it slightly more than doubled for males in the age group 65 years and over. This region also had the highest rate (158.5) of total discharges. The West Region had the lowest rate (130.9) but was followed closely by the Northeast with a rate of 132.1 per 1,000 population (table 1).

With the exception of the age group 65 years and over, the second highest rate of discharges (2:3.0) was found among females 15-44 years of age and was primarily attributable to deliveries. This age group also had the most days of care for a single age-sex category (table 1).

Average length of stay.—When age is combined with sex, females under 45 years of age had a shorter average length of stay than did males in the same age bracket. But among those 65 years and over females had a longer length of stay than did males (table 1).

In all regions, females in the age group 15-44 years including those with deliveries had a shorter length of stay than did females in the same age group

Figure 1. TOTAL DISCHARGES BY COLOR: UNITED STATES, 1968

White

All other

All ages Under 15 15-44 45-64 65 years years AGE

<sup>&</sup>lt;sup>1</sup>Statistics on color must be used with caution since the number for whom color is not stated (3,497,000) is larger than that for the all-other color category (2,895,000).

Table 1. Number and rate of patients discharged from short-stay hospitals, number of days of care, and average length of stay in days, by sex, age, and geographic region: United States, 1968

[Excludes newborn]

				Ge	ographic	region				
Sex and age	All regions	North- east	North Central	South	West	All regions	North- east	North Central	South	West
BOTH SEXES <sup>1</sup>	Discharges in thousands				Rate of discharges per 1,000 population					
All ages <sup>2</sup>	28,070	6,279	8,679	8,872	4,241	143.7	132.1	158.5	146.3	130.9
Under 15 years	3,988 12,036 6,517 5,520	862 2,669 1,504 1,242	1,327 3,631 1,951 1,767	1,246 3,868 2,039 1,715	553 1,868 1,024 796	67.1 155.8 162.0 300.8	63.6 144.8 139.7 259.2	79.2 170.3 172.0 332.3	65.5 157.9 174.7 314.2	54.5 143.5 153.5 285.9
MALE All ages <sup>2</sup>	11.004	2 (0)	2 / 71	2.52/	1 705	110.2	100.0	122.6	122.0	100 6
		2,494 496	3,471 745	3,534 688	1,705 310	74.0	109.8 71.8	130.6 87.3	71.3	
Under 15 years	2,239 3,364 3,111 2,486	705 731 561	1,007 921 797	1,111 974 759	541 484 370	74.0 91.9 162.0 314.4	80.8 144.3 278.4	98.2		87.5
FEMALE (Including Deliveries)			]							
All ages <sup>2</sup>	16,801	3,770	5,138		2,529	165.8	151.8	184.3	167.8	151.6
Under 15 years	1,739 8,654 3,389 3,015	365 1,958 769 677	579 2,618 1,025 965	554 2,753 1,057 949	241 1,325 538 425	59.6 213.0 161.1 288.7	54.9 201.8 135.0 243.7	70.5 236.6 174.6 321.8	59.2 211.2 171.2 305.7	193.8 163.3
FEMALE (Excluding Deliveries)										
All ages <sup>2</sup>	13,455	1	4,145	4,339	2,019	132.8	118.9	147.2	137.0	121.0
Under 15 years	1,726 5,327 3,383 3,015	363 1,145 767 677	575 1,580 1,024 965	548 1,786 1,054 949	240 816 537 425	59.1 131.1 160.8 288.7	54.5 118.0 134.7 243.7	70.0 142.7 174.4 321.8	58.6 137.0 170.8 305.7	48.3 119.4 163.0 271.2
BOTH SEXES <sup>1</sup>			re in tho	ousands		Aver	age lengt	h of stay	in day	's
All ages <sup>2</sup>	237,201	62,308	76,076	68,871	29,946	8.5	9.9	8.8	7.8	7.1
Under 15 years	19,999 73,713 65,014 78,400	4,841 18,481 17,650 21,317	6,876 23,242 20,077 25,867	6,142 22,381 13,522 21,785	2,140 9,610 8,755 9,431	5.0 6.1 10.0 14.2	5.6 6.9 11.7 17.2	5.2 6.4 10.3 14.6	4.9 5.8 9.1 12.7	3.9 5.1 8.6 11.9
MALE			}	}				}		
All ages <sup>2</sup>		l ł	1	29,230	•	{	10.7	ì	8.3	7.6
Under 15 years	11,595 24,610 31,028 33,693	2,839 6,138 8,750 9,023	4,129 7,319 9,355 11,153	3,465 7,705 8,818 9,223	1,162 3,448 4,105 4,294	5.2 7.3 10.0 13.6	5.7 8.7 12.0 16.1	5.5 7.3 10.2 14.0	5.0 6.9 9.0 12.2	3.8 6.4 8.5 11.6
FEMALE (Including Deliveries)	}									
All ages <sup>2</sup>	135,650	35,410	43,899	39,458	16,883	8.1	9.4	8.5	7.4	6.7
Under 15 years	8,371 48,934 33,817 44,501	1,995 12,300 8,872 12,241	2,736 15,862 10,662 14,629	2,666 14,636 9,639 12,505	974 6,135 4,644 5,126	4.8 5.7 10.0 14.8	5.5 6.3 11.5 18.1	4.7 6.1 10.4 15.2	4.8 5.3 9.1 13.2	4.0 4.6 8.6 12.1
FEMALE (Excluding Deliveries)										
All ages <sup>2</sup>	121,321	31,377	39,150	35,756	15,037	9.0	10.6	9.4	8.2	7.4
Under 15 years	8,318 34,685 33,789 44,501	1,985 8,286 8,863 12,241	2,720 11,135 10,657 14,629	2,643 10,969 9,628 12,505	971 4,295 4,640 5,126	4.8 6.5 10.0 14.8	5.5 7.2 11.6 18.1	4.7 7.0 10.4 15.2	4.8 6.1 9.1 13.2	4.0 5.3 8.6 12.1

 $<sup>^{1}</sup>_{2}\mathrm{Includes}$  data for which sex was not stated. Includes data for which age was not stated.

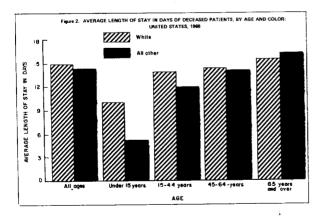
without deliveries. The Northeast Region's total average length of stay (9.9 days) was the longest of all the regions for all age-sex categories, whereas the West's was the shortest (7.1 days, table 1).

Average length of stay increased with age from 5 days for persons under age 15 to 14.2 days for persons aged 65 and over (table 1). This was true whether the patients were discharged alive or dead, except for the category "all other" patients discharged alive under 15 years of age (table 2). However, the average length of stay for patients discharged dead (14.8 days) was almost twice that for patients discharged alive (8.2 days).

Of patients discharged alive, all other patients averaged almost a half day longer stay (8.7 days) than did white patients (8.3 days). Within age groups, white patients 15-44 years of age stayed just over half a day less than all other patients in the same age group. For the remaining age groups, white patients stayed from 2.3 to 2.6 days less than all other patients in the same age groups.

Among patients discharged dead, all other patients averaged more than half a day shorter stay (14.3 days) than did white patients (15.0 days). The most striking difference was among deceased patients under age 15; all other patients averaged a stay of 5.2 days while white patients averaged a stay of 10 days (table 2, fig. 2).

Diagnoses.—There was a total of 47.4 million diagnoses (table 4). Since each of the 28.1 million discharges had at least one diagnosis, there were 28.1 million first-listed diagnoses (tables 3, 4). Therefore, the average number of diagnoses was 1.7 for each period of hospitalization. The largest single diagnostic category for both first-listed and all-listed diagnoses was that for obstetrical conditions. Following this



<sup>&</sup>lt;sup>2</sup>It appears reasonable to assume that in patients with multiple diagnoses the first-listed diagnosis was probably the primary cause of hospitalization.

Table 2. Number of patients discharged from short-stay hospitals, days of care, and average length of stay in days, by discharge status, color, and age: United States, 1968

[Excludes newborn]

Discharge status, color, and age	Number of dis- charges	Days of care	Average length of stay	
	In the	In days		
All dis- charges <sup>1</sup> -	28,070	237,201	8.5	
Under 15 years 15-44 years 45-64 years 65 years and over-	3,988 12,036 6,517 5,520	19,999 73,713 65,014 78,400	5.0 6.1 10.0 14.2	
Discharged alive <sup>2</sup>	27,086	223,294	8.2	
White <sup>3</sup>	20,882	172,709	8.3	
Under 15 years 15-44 years 45-64 years 65 years and over-	2,962 8,873 5,030 4,011	14,137 53,498 48,753 56,277	4.8 6.0 9.7 14.0	
All other	2,798	24,224	8.7	
Under 15 years 15-44 years 45-64 years 65 years and over-	460 1,586 466 285	3,299 10,528 5,753 4,640	7.2 6.6 12.3 16.3	
Discharged dead <sup>2</sup>	860	12,746	14.8	
White	673	10,099	15.0	
Under 15 years 15-44 years 45-64 years 65 years and over-	14 42 171 444	142 592 2,471 6,892	10.0 13.9 14.4 15.5	
All other	97	1,382	14.3	
Under 15 years 15-44 years 45-64 years 65 years and over-	6 13 33 45	29 160 468 724	5.2 11.9 14.1 16.3	

<sup>&</sup>lt;sup>1</sup>Includes data for which age, color, and/or discharge status was not stated.

<sup>&</sup>lt;sup>2</sup>Includes data for which color and/or age

was not stated.

3 Includes data for which age was not stated.

10 most frequent categories of first-listed and all-listed diagnoses excluding obstetrical conditions: Rank order by age, United States, 1968

	First-listed diagnoses						All-listed diagnoses	
Diagnostic category	Number in thou- sands	All ages	Under 15 years <sup>1</sup>	15-44 years	45-64 years	65 years and over	Number in thou- sands	All ages
			R	ank ord	er			Rank order
Digestive system	3,986 3,272	1 2	3 1	1 4	1 6	2 5	6,101 4,881	1 4
effects of chemical and other external causes Circulatory system Genitourinary system Malignant and benign neoplasms Nervous system and sense organs Bones and organs of movement	2,886 2,669 2,647 1,927 1,542 1,080	3 4 5 6 7 8	2 ( <sup>2</sup> ) 4 9 5 8	2 7 3 5 9 8	5 2 3 4 7 8	6 1 7 4 3 9	4,255 5,973 5,070 3,181 2,823 2,043	5 2 3 6 7 9
Mental, psychoneurotic, and personality disordersAllergies, endocrine system, metabolic, and nutritional	799	9	( <sup>2</sup> )	6	10	10	1,508	10
diseases	785	10	10	10	9	8	2,337	8

 $^{1}\mathrm{Congenital}$  malformations ranked 6th and infective and parasitic diseases ranked 7th in this age group.  $^2$ This diagnosis was not among the first 10 for this age group.

category the 10 most frequently recorded first-listed diagnoses, in descending order of magnitude for all age groups combined, are shown in table A.

By age groups, those 15-64 years of age showed digestive system diseases as the largest category of first-listed diagnoses. Diseases of the circulatory system, the highest first-listed diagnoses among the oldest age group, gradually decreased in frequency as age decreased. However, the reverse was true for injuries and other adverse effects. Within this category the largest number of discharges was among those under 45 years of age but decreased as age increased.

Nervous system and sense organ diseases were among the first five diagnoses for those under age 15 and for those over 65 years of age, but were not among the top five for those 15-64 years of age. Mental illness diagnoses were among the first six diagnoses in frequency only for those aged 15-44 years (table A).

When all-listed diagnoses were ranked, the first 10 were the same as those for first-listed diagnoses except that in three cases their rank order changed slightly. Exclusive of obstetrical conditions, diseases of the digestive system remained as the most prevalent diagnoses of all discharged patients (table A).

Patients with a diagnosis of acute coronary occlusion had the longest average length of stay (18.8 days). The rank order for average length of stay by first-listed diagnosis is shown in table B.

Table B. Rank order of average length of stay in days for 7 first-listed diagnoses by body site: United States, 1968

Diagnostic site	Average length of stay in days, by rank order
Circulatory system:	
Acute coronary occlusion Nervous system and sense organs: Vascular lesions affecting	18.8
central nervous system Malignant and benign neoplasms:	16.6
MalignantGenitourinary system:	15.3
Hyperplasia of prostate Injuries and other adverse effects of chemical and other external causes:	14.1
Fractures	13.6
Arthritis	13.0
Displacement of intervertebral disc	12.9

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Table 3. Number of patients discharged from short-stay hospitals, by category of first-listed diagnosis and age: United States, 1968

[Excludes newborn. Diagnostic groupings and code number inclusions are based on the December 1962] International Classification of Diseases, Adapted, revised edition,

Diagnostic category	All ages <sup>1</sup>	Under 15 years	15-44 years	45-64 years	65+ years
	Number o	f patients	discharg	ed in th	ousands
All conditions	28,070	3,988	12,036	6,517	5,520
Excluding obstetrical conditions	23,887	3,970	7,880	6,508	5,520
Infective and parasitic diseases	319 1,044 883	92 18 51	135 159 476	53 410 281	39 456 76
Allergic, endocrine system, metabolic and nutritional diseases240-289 Hay fever and asthma240-241 Diabetes mellitus260	785 134 385	67 32 13	222 37 77	271 38 140	225 27 155
Diseases of blood and blood-forming organs290-299 Mental, psychoneurotic, and personality disorders300-329 Diseases of the nervous system and sense organs330-398 Vascular lesions affecting central nervous system330-335 Cataract385	175 799 1,542 504 217	31 30 232 8 4	40 432 261 20 6	41 244 386 120 54	64 93 662 356 153
Diseases of the circulatory system400-468 Acute coronary occlusion420.1 All other diseases of the heart400-420.0,420.2-443 Hemorrhoids (with and without ulcer)401	2,669 372 1,375 208	64 * 20 *	431 27 115 99	966 168 455 89	1,207 176 785 19
Diseases of the respiratory system	3,272 387 1,062 704	1,550 221 845 288	705 86 210 101	501 42 6 131	515 37 185
Diseases of the digestive system530-587 Ulcer of stomach, duodenum, and gastrojejunal ulcer540-552 Appendicitis550-552 Inguinal hernia560.0,561.0 Gastroenteritis and colitis, except ulcerative571 Cholelithiasis and cholecystitis584-585	3,986 445 334 502 509 482	535 6 116 124 178	1,367 157 176 120 148 154	1,247 179 29 170 102 191	836 103 13 87 80 136
Diseases of the genitourinary system590-637 Hyperplasia of prostate610 Disorders of menstruation634	2,647 191 396	238 - 4	1,288 2 282	698 55 100	422 134 9
Deliveries and complications of pregnancy, childbirth, and puerperium	4,183 388 1,080 263 256	18 66 86 7 *	4,156 160 408 44 127	9 101 385 108 111	61 201 105 17
Congenital malformations750-759	228	134	60	25	9
Injuries and adverse effects of chemical and other external causes	2,886 1,034 347 1,185	539 196 61 238	1,306 335 213 430	600 231 57 300	439 272 16 216

<sup>&</sup>lt;sup>1</sup>Includes data for which age was not stated.

Table 4. Number of all-listed and first-listed diagnoses, days of care, and average length of stay for patients discharged from short-stay hospitals, by category of first-listed diagnoses: United States, 1968

[Excludes newborn. Diagnostic groupings and code number inclusions are based on the <u>International Classification of Diseases, Adapted</u>, revised, edition, December 1962]

		First-	listed dia	gnoses
Diagnostic category	Number of all-listed diagnoses	Number	Days of care	Average length of stay
	In	thousands		In days
All conditions	47,434	28,070	237,201	8.5
Excluding obstetrical conditions	42,890	23,887	220,026	9.2
Infective and parasitic diseases	572 1,644 1,537	319 1,044 883	3,147 16,014 5,960	9.9 15.3 6.7
Allergic, endocrine system, metabolic, and nutritional diseases240-289 Hay fever and asthma240-241 Diabetes mellitus260	2,337 228 1,204	785 134 385	8,158 1,108 4,719	10.4 8.3 12.2
Diseases of blood and blood-forming organs290-299 Mental, psychoneurotic, and personality disorders300-329 Diseases of the nervous system and sense organs330-398 Vascular lesions affecting central nervous system330-334 Cataract385	648 1,508 2,823 847 257	175 799 1,542 504 217	1,872 9,760 17,011 8,364 1,736	10.7 12.2 11.0 16.6 8.0
Diseases of the circulatory system400-468 Acute coronary occlusion420.1 All other diseases of the heart400-420.0,420.2-443 Hemorrhoids (with and without ulcer)461	5,973 441 3,596 316	2,669 372 1,375 208	33,961 7,001 16,874 1,479	12.7 18.8 12.3 7.1
Diseases of the respiratory system	4,881 597 1,093 1,023	3,272 387 1,062 704	20,459 2,024 2,351 6,880	6.3 5.2 2.2 9.8
Diseases of the digestive system530-587 Ulcer of stomach, duodenum, and gastrojejumal ulcer540-542 Appendicitis550-552 Inguinal hernia561.0 Gastroenteritis and colitis, except ulcerative571 Cholelithiasis and cholecystitis584-585	6,101 627 371 580 641 640	3,986 445 334 502 509 482	32,868 4,762 2,278 3,590 2,634 5,327	8.2 10.7 6.8 7.2 5.2 11.0
Diseases of the genitourinary system590-637 Hyperplasia of prostate610 Disorders of menstruation634	5,070 338 519	2,647 191 396	19,053 2,685 1,793	7.2 14.1 4.5
Deliveries and complications of pregnancy, childbirth, and puerperium		4,183 388 1,080 263 256	17,175 3,243 11,181 3,434 3,296	4.1 8.4 10.4 13.0 12.9
Congenital malformations750-759		228	2,127	9.3
Injuries and adverse effects of chemical and other external causes		2,886 1,034 347 1,185	27,084 14,100 1,963 8,130	9.4 13.6 5.7 6.9

#### **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 discharges for all Federal hospitals and newborn infants. Information for this report was obtained from a national sample of approximately 400 hospitals which furnished data on slightly over 210,000 medical abstracts of hospital discharges.

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 and those for days of care are shown in table II.

ROUNDING. Due to rounding, detailed figures within tables may not add to totals. However, all rounded numbers are obtained from computations done on unrounded numbers.

**DEFINITIONS.** Short-stay hospitals are general and short-term special hospitals that have six beds or more for inpatient use and an average stay of less than 30 days.

A patient or inpatient is a person who has been ormally 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. Total discharges could include more than one period of hospitalization for any one patient, but no distinction is made between one and more than one hospital episode per patient. "Discharges" and "patients (or inpatients) discharged" are used synonymously.

Discharge rate is the ratio of the number of hospital discharges during a specified year to the number of persons in the civilian, noninstitutional population as of July 1 of the specific year. Rates in this report are given for 1,000 persons in the population.

Days of care denotes the unit of measure for lodging facilities provided and services rendered to an inpatient between two successive dates (admission and discharge). A stay of less than 1 day (admission and discharge on the same calendar day) is counted as 1 day in the summations of inpatient days.

Average length of stay is the total number of inpatient days accumulated by patients at time of discharge from short-stay hospitals during a specified calendar year divided by the number of patients discharged.

First-listed diagnoses are the aggregate of individually coded diagnoses listed in position number 1 on the face sheet of the medical records for patients discharged, including single (only) and first of multiple discharge diagnoses.

All-listed diagnoses are the aggregate of individually coded diagnoses listed in all positions on the face sheet of the medical records for patients discharged, including single and all multiple discharge diagnoses. The maximum number for one hospitalization period is five.

Color is designated as either "White" or "All other." In 12.4 percent of the medical abstracts no designation was made.

Obstetrical conditions include deliveries, abortions, and complications of pregnancy, childbirth and puerperium.

Deliveries include deliveries with and without mention of complications.

Discharge status is the condition (i.e., either alive or dead) of a patient when discharged.

Table I. APPROXIMATE STANDARD ERRORS OF ESTI-MATED NUMBERS OF DISCHARGES

Size of estimate	Standard error
6,000	1,290 1,680 4,080 6,290 21,300 39,300 182,500 361,000 1,077,000
	l

Table II. APPROXIMATE STANDARD ERRORS OF ES-TIMATED NUMBERS OF DAYS OF CARE

Size of estimate	Standard error
500,000	104,900 148,800 341,500 497,000 1,350,000 2,260,000 4,000,000 5,730,000

#### SYMBOLS USED IN TABLES

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE
Health Services and Mental Health Administration
5600 Fishers Lane
Rockville, Maryland 20852

OFFICIAL BUSINESS
Penalty for Private Use \$300

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