

**Average Length of Stay in
Short-Stay Hospitals:
Demographic, Diagnostic, and
Surgical Statistics
United States, 1977**

Statistics are presented on the utilization of short-stay hospitals based on data collected by means of the National Hospital Discharge Survey from a national sample of hospital records of discharged patients. Average length of stay is presented by patient characteristics of age, sex, marital status, color, and diagnostic and surgical status in conjunction with hospital characteristics of size, ownership or control, and geographic region in which located.

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Under the legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies.

In accordance with specifications established by the National Center for Health Statistics, the Bureau of the Census, under a contractual arrangement, participated in planning the survey and collecting the data.

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AVERAGE LENGTH OF STAY IN SHORT-STAY HOSPITALS: DEMOGRAPHIC, DIAGNOSTIC, AND SURGICAL STATISTICS

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INTRODUCTION

Background of Study

This report presents a special analysis of the average length of stay in short-stay hospitals by using data collected in the National Hospital Discharge Survey, a continuous nationwide survey conducted by the National Center for Health Statistics. Data were abstracted from approximately 224,000 hospital records of inpatients discharged from the 423 hospitals that participated in the survey in 1977.

Data from this survey provide input for three basic types of reports—nonmedical, diagnostic, and surgical—that are published both in Series 13 of *Vital and Health Statistics* and as selected supplements of *Monthly Vital Statistics Reports*. Nonmedical data have been published for 1965-78; diagnostic data for 1965-68 and 1971-78; and surgical data on operations performed in 1965, 1968, and 1971-78. In addition, one report has been published on a study of charges of care in short-stay hospitals that was based on data collected by the National Hospital Discharge Survey in 1968-70.

Information on hospitalization is collected by means of the National Health Interview Survey, another program of the National Center for Health Statistics. The estimates provided by the National Health Interview Survey are usually lower for the number of discharges and greater for the average length of stay than the National

Hospital Discharge Survey estimates because of differences in collection procedures, definitions, and population sampled. The National Health Interview Survey data are published in Series 10 reports. Data used in this report include a classification of discharges by age, sex, race, marital status, bed size of hospital and hospital ownership, and geographic region. Diagnostic and surgical data include only those discharges with first-listed diagnosis (all patients), single-listed diagnosis, and single-listed surgery.

Definitions of the terms used in this report relating to hospitalization and characteristics of the inpatients are given in appendix II. Because several terms used in this report have specialized meanings, familiarity with these definitions will be useful in interpreting the data. Appendix I provides a description of the survey design, data collection procedures, and the estimation process. A detailed report on the design of the National Hospital Discharge Survey has previously been published.¹

Scope and Plan of Report

Average length of stay is an important means by which comparisons can be made in hospital utilization. Differences in length of stay between hospitals can be related to their size, ownership, or geographical location because these variables reflect differences in availability of services. In addition to these factors, differences among hospitals can be related to the characteristics of

the patients who are discharged from them. Finally, length-of-stay differences among hospitals can be related to the number and kinds of diagnoses and to the surgical procedures that these hospitals employ.

Prior studies by the National Hospital Discharge Survey (NHDS) have shown that the average length of stay is influenced by these factors in a predictable and consistent manner. Specifically, NHDS data have indicated the following about length of stay:

1. Length of stay is lowest for patients under 15 years of age and increases steadily with age.
2. Length of stay for males, overall, is higher than that for females, except for patients 65 years of age and over where it is higher for females.
3. White patients have a shorter average length of stay than patients in the category classified as "all other" have.
4. Patients discharged from small hospitals generally have the shortest length of stay, and patients discharged from the largest hospitals have the longest length of stay.
5. Voluntary nonprofit hospitals have the longest average length of stay, and proprietary hospitals have the shortest.
6. Unmarried patients over 15 years of age have longer lengths of stay than married patients have.
7. Average length of stay is consistently highest in the Northeast Region and lowest in the West Region.
8. Patients discharged with single-listed surgery have shorter length of stays than those with multiple surgery.
9. Patients discharged with a single-listed diagnosis have shorter stays than those with multiple diagnoses.

Interviews conducted during the National Health Interview Survey (NHIS) have shown similar length of stay patterns for age, sex, color, type of hospital, marital status, and region. No

satisfactory answer has been given as to why the average length of stay in the West Region is always lower than that in the Northeast, North Central, or South Regions. This report describes the singular effects of patient, hospital, diagnostic, and surgical characteristics on the length of stay and analyzes their cumulative effect on length of stay, especially as they may affect regional differences.

AVERAGE LENGTH OF STAY

Age, Sex, and Color

The average length of stay for the 35.9 million patients discharged from short-stay hospitals with a first-listed diagnosis during 1977 was 7.3 days. Average length of stay increased with each successive age group from a low of 4.2 days for patients under 15 years of age to a high of 11.1 days for patients 65 years and over (table A). Males had an average length of stay of 7.8 days and females, including deliveries, had an average length of stay of 7.0 days. This difference is primarily due to the longer length of stay for males in the age group 15-44 years (6.3 days for males and 4.9 for females). Excluding deliveries, the length of stay for females increased to 7.6 days for all ages and 5.4 days for the age group 15-44 years. This increase is caused by the removal of relatively short stays associated with deliveries, 99 percent of which occur in the age group 15-44 years.

There was no significant overall difference in the average length of stay by color, with white patients averaging 7.3 days and all other patients averaging 7.6 days per stay (table 1). The average length of stay for the total of both color groups was about the same because the white discharged patients included a larger percent of older patients with longer hospital stays than the all other group did (figure 1). However, for every age and sex group, except females aged 15-44 years, the average stay for white patients was shorter than the average stay for all other patients. Regardless of color, males overall had longer stays than females had.

All other males in the age group 45-64 years had an average length of stay that was 3.1 days

Table A. Number of discharges and average length of stay for patients discharged from short-stay hospitals with first-listed diagnoses, single-listed diagnoses, and single-listed surgery, by sex and age: United States, 1977

Type of diagnosis or surgery and age	Both sexes	Male	Female	
			Including deliveries	Excluding deliveries
<u>First-listed diagnosis</u>				
Number of discharges in thousands				
All ages.....	35,902	14,385	21,518	18,186
Under 15 years.....	3,775	2,137	1,638	1,624
15-44 years.....	15,180	4,553	10,627	7,315
45-64 years.....	8,604	4,042	4,562	4,557
65 years and over	8,344	3,653	4,690	4,690
Average length of stay in days				
All ages.....	7.3	7.8	7.0	7.6
Under 15 years.....	4.2	4.3	4.1	4.1
15-44 years.....	5.3	6.3	4.9	5.4
45-64 years.....	8.5	8.6	8.4	8.4
65 years and over	11.1	10.8	11.3	11.3
<u>Single-listed diagnosis</u>				
Number of discharges in thousands				
All ages.....	18,627	7,025	11,602	8,733
Under 15 years.....	2,474	1,404	1,070	1,058
15-44 years.....	10,208	2,822	7,386	4,533
45-64 years.....	3,652	1,765	1,886	1,882
65 years and over	2,293	1,034	1,260	1,260
Average length of stay in days				
All ages.....	5.4	5.9	5.1	5.5
Under 15 years.....	3.7	3.9	3.6	3.6
15-44 years.....	4.5	5.4	4.1	4.4
45-64 years.....	6.9	6.9	7.0	7.0
65 years and over	8.7	8.2	9.1	9.1
<u>Single-listed surgery</u>				
Number of discharges in thousands				
All ages.....	10,227	4,093	6,133	5,280
Under 15 years.....	1,202	682	520	516
15-44 years.....	4,847	1,441	3,406	2,558
45-64 years.....	2,350	1,115	1,235	1,233
65 years and over	1,827	855	972	972
Average length of stay in days				
All ages.....	6.6	7.2	6.2	6.4
Under 15 years.....	3.7	3.8	3.4	3.4
15-44 years.....	4.7	5.6	4.4	4.2
45-64 years.....	8.0	8.4	7.7	7.7
65 years and over	11.7	11.1	12.2	12.2

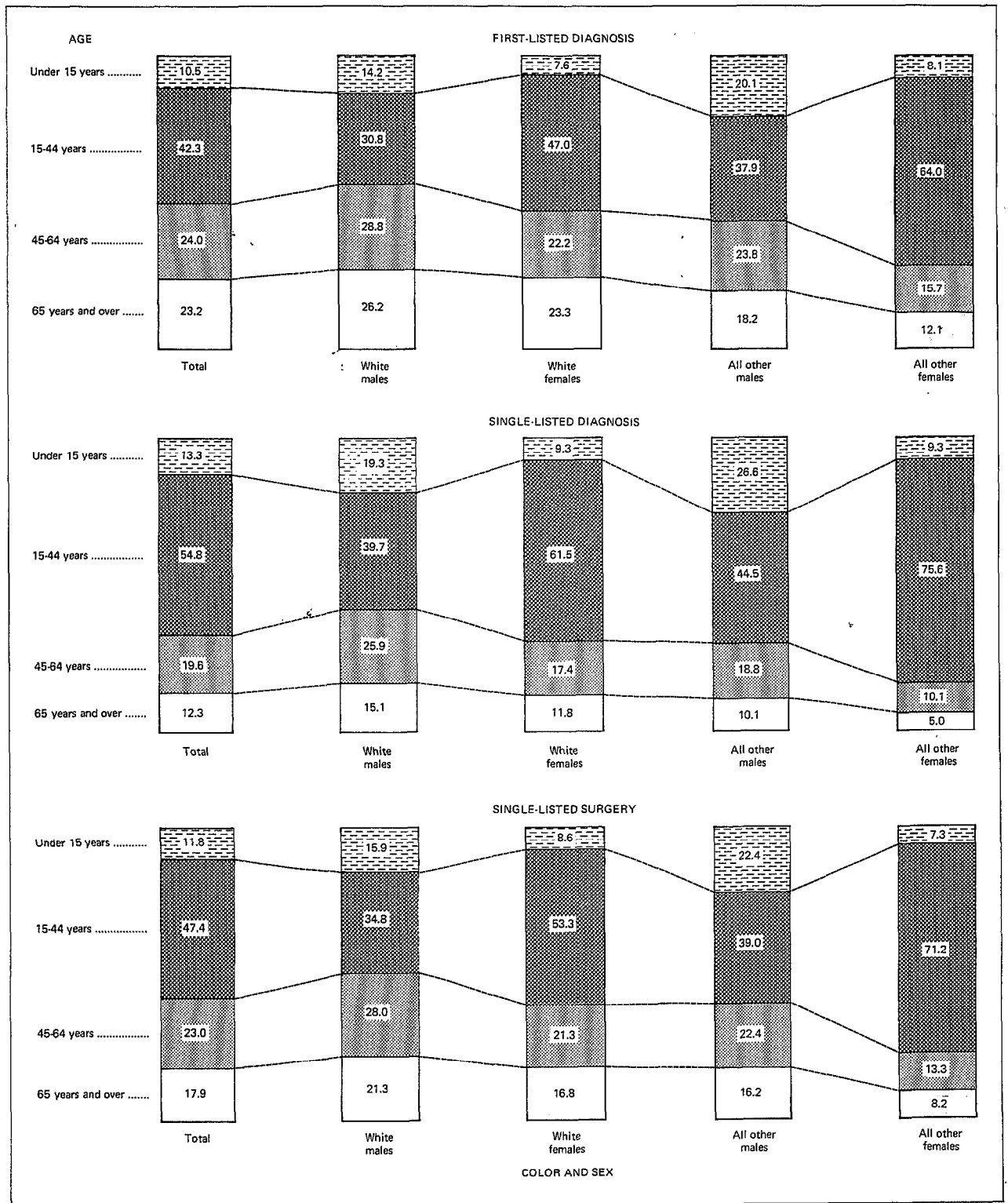


Figure 1. Percent distribution of patients discharged from short-stay hospitals with first-listed diagnoses, single-listed diagnoses, and single-listed surgery, by age, color, and sex: United States, 1977

longer than that for white males in the same age group. The difference between the length of stay of all other females and white females in this age group was only 1.3 days.

The percent distribution of white males discharged in the age groups over 14 years was almost evenly distributed among the age groups 15-44 years, 45-64 years, and 65 years and over—30.8, 28.8, and 26.2 percent, respectively (figure 1). The proportion of male discharges in the all other group was largest for ages 15-44 (37.9 percent), followed by 23.8 for ages 15-64 and 18.2 for ages 65 and over. Females in the all other group accounted for proportionately more discharges at ages 15-44 than white females of the same ages (64.0 compared with 47.0 percent) and proportionately less at ages over 44.

Patients discharged with only a single-listed diagnosis totaled 18.6 million and had an average length of stay of 5.4 days. The average length of stay for males was longer than that for females at all ages and longest at ages 15-44 (table A). In figure 2, the length of stay is shown by sex and color. Males with a single-listed diagnosis in both color categories, showed an increase in the length of stay with each succeeding age group. However, female patients in the age group 15-44 years did not have a significantly longer length of stay than those under 15 years of age, primarily because of the inclusion of deliveries. The average length of stay for both white and all other patients was 5.4 days. The all other group showed longer stays for each age group except ages 15-44 years, primarily because the length of stay for both all other and white females was 4.1 days (table 2).

Patients discharged with single-listed surgery totaled 10.2 million and had an average length of stay of 6.6 days (table A). This was less than that for all discharges (7.3 days), but more than that for discharges with a single-listed diagnosis (5.4 days). The average stay for males (7.2 days) was longer than that for females (6.2 days) for the total of all ages. Stays for females aged 15-44 years were significantly greater than for those under 15 years of age, because deliveries are not counted as operations. Patients with single-listed surgery had 47.4 percent of their discharges in the age group 15-44 years (figure 1). For white males, the proportion of discharges in the age

group under 15 years was 15.9 percent, and for all other males, it was 22.4 percent.

Table 3 shows the average length of stay for discharges with a single-listed surgery. For both color groups the single-listed surgery discharges in all age and sex groups included a smaller percent in the age group 65 years and over than those with a first-listed diagnosis did, but included a larger percent than those with a single-listed diagnosis did (figure 1). Females in the all other category with single-listed surgery had a greater percent of discharges (71.2 percent) in the age group 15-44 years than those discharged with a first-listed diagnosis (64.0 percent).

Bed Size of Hospital and Hospital Ownership

The average length of stay increased as age or hospital bed size increased, ranging from 6.0 days in the smallest hospitals to 8.4 days in the largest hospitals and from 4.2 days in the youngest group to 12.4 days for the age group 65 years and over who were discharged from hospitals with 500 beds or more (table 4). Male discharges from hospitals with 6-99 beds averaged 6.1 days per stay. The stay increased to 9.3 days in hospitals with 500 beds or more. Females showed a significantly smaller increase in stay by bed size of hospital, from 6.0 days (6-99 beds) to 7.8 days (500 beds or more).

Length of stay for single-listed diagnosis showed differences between the youngest and oldest age group of only 5.0 days (3.7 and 8.7 days, respectively) and between the smallest and the largest hospitals of 1.8 days (table 5). Discharges with only a single-listed surgery showed a length of stay for the age group 65 years and over to be 3.2 times greater than that for the age group under 15 years (table 6).

The average length of stay was shorter in government and proprietary hospitals than in voluntary nonprofit hospitals (table 7). This difference was due to the longer stays for males (8.0 days) and for the age groups 45 years and over discharged from nonprofit hospitals. In government hospitals, for the age group 15-44 years the average length of stay for males was 2.0 days longer than it was for females.

For patients discharged with a single-listed

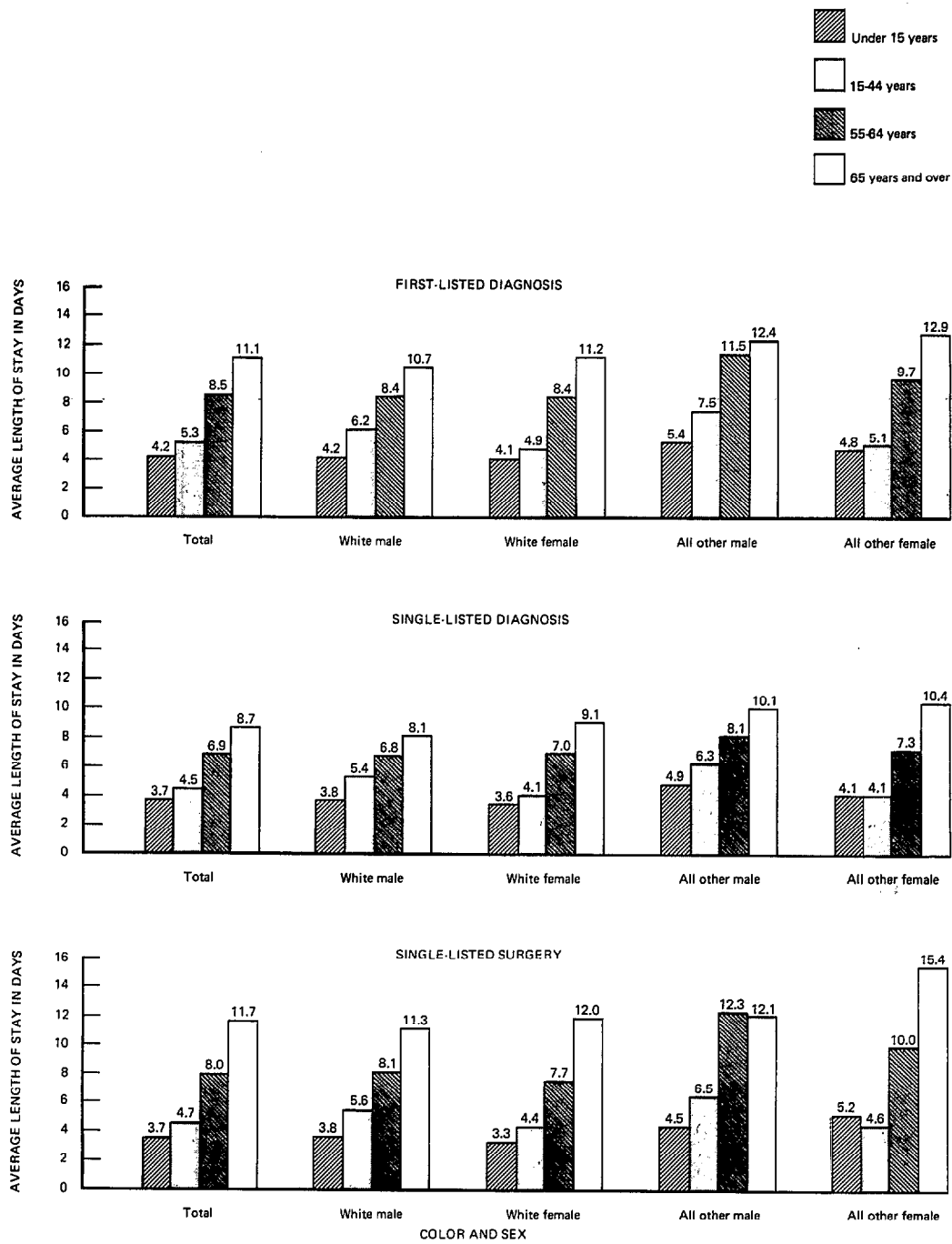


Figure 2. Average length of stay for patients discharged from short-stay hospitals with first-listed diagnoses, single-listed diagnoses, and single-listed surgery, by age, color, and sex: United States, 1977

diagnosis, voluntary, government, and proprietary hospitals showed stays that were not significantly different (table 8). Females discharged from proprietary hospitals had a length of stay of 5.1 days, which was not significantly different from male discharges (5.5 days). Table 9 shows persons discharged with a single-listed surgery.

Marital Status

For all discharges 15 years of age and over, unmarried persons had longer stays (8.7 days) than married persons (7.1 days) (table 10). However, for discharges aged 15-44 years, there was little significant difference between married and unmarried discharged persons. In hospitals with less than 100 beds, no significant difference existed for this age group. In government and voluntary hospitals, the average length of stay was 1.6 and 1.7 days longer, respectively, for unmarried discharged persons than for married persons (table 11). In voluntary hospitals, the average length of stay of 8.6 days for discharged married males exceeded that for married females (6.4 days) by 2.2 days. However, unmarried females discharged from voluntary hospitals had stays similar to those of unmarried males. Regardless of hospital ownership, unmarried females had longer stays than married females.

Table 12 shows the average length of stay for persons discharged with a single-listed diagnosis by marital status. The difference between the length of stay of married and unmarried discharges 15 years and over was 1.0 days. However, for persons aged 15-44 years discharged from hospitals with less than 100 beds, there was no significant difference between the married and unmarried.

The difference between stays of married and unmarried discharges with a single-listed surgery was 1.1 days (table 13). For ages 15-44 years, length of stay was about the same regardless of marital status or hospital size.

AVERAGE LENGTH OF STAY BY GEOGRAPHIC REGION

Age and Sex

Average length of stay was highest in the Northeast Region and lowest in the West Region,

8.6 days and 6.0 days, respectively (table 14). This regional pattern was consistent for all age groups, with the difference between the Northeast and the West Regions being greatest in the age group 65 years and over, 13.6 and 8.9 days, respectively, or a difference of 4.7 days. Length of stay for both sexes was longest in the Northeast Region for the age group 65 years and over, and shortest in the West Region for the age group under 15 years. The average length of stay for males was longer than that for females in each of the four Regions.

For patients discharged with a single-listed diagnosis, the Northeast Region had a length of stay of 6.1 days, or 1.7 days longer than that for discharges in the West Region (4.4 days). Length of stay did not differ significantly among the Northeast, North Central, and South Regions for persons discharged under 15 years of age with a single-listed diagnosis (table 15) or with a single-listed surgery (table 16).

Bed Size of Hospital and Hospital Ownership

Average length of stay by bed size of hospital, region, age, and sex is shown in table 17. For each region, length of stay increased with bed size and age; it was shortest in hospitals with less than 100 beds for discharges under 15 years of age, and longest in hospitals with 500 beds or more for discharges 65 years of age and over. Average stays were longest in the Northeast Region for persons 65 years of age and over discharged from hospitals with 500 beds or more. The West Region consistently had a shorter average length of stay for each hospital size and age group than the Northeast Region did. Length of stay for hospitals with 500 beds or more in the Northeast Region was only 28.9 percent longer than that for hospitals with less than 100 beds; however, in the West Region, the comparative difference was 40.8 percent.

Patients discharged with a single-listed diagnosis showed length of stay for hospitals with 500 beds or more (6.7 days) in the Northeast Region to be only 13.6 percent greater than that for hospitals with less than 100 beds (5.9 days) (table B). In the West Region, the difference between the largest and smallest hospitals was 43.2 percent (5.3 and 3.7 days, respectively). Females discharged under 15 years of age from

Table B. Average length of stay for patients discharged from short-stay hospitals with first-listed diagnoses, single-listed diagnoses, and single-listed surgery, by geographic region, bed size of hospital, age, and sex: United States, 1977

Type of diagnosis or surgery, age, and sex	All regions	Northeast			North Central			South			West		
		6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more
First-listed diagnosis		Average length of stay in days											
All ages, both sexes ¹	7.3	7.6	8.5	9.8	6.1	7.4	8.4	6.0	6.8	8.1	4.9	6.3	6.9
Under 15 years.....	4.2	3.2	4.3	6.0	3.4	4.0	5.4	3.3	4.0	5.6	2.8	3.8	5.6
15-44 years.....	5.3	5.6	5.6	6.8	4.6	5.5	6.6	4.3	4.8	6.3	3.7	4.8	5.4
45-64 years.....	8.5	8.1	9.7	12.0	6.7	8.9	9.8	6.4	8.3	9.6	5.4	7.2	7.7
65 years and over.....	11.1	11.8	13.5	15.5	8.5	11.6	12.1	9.1	10.8	11.7	7.8	9.1	9.8
Single-listed diagnosis													
All ages, both sexes ¹	5.4	5.9	6.0	6.7	4.5	5.4	6.5	4.5	5.0	6.2	3.7	4.6	5.3
Under 15 years.....	3.7	2.8	3.9	5.1	3.1	3.6	4.6	3.1	3.6	5.1	2.6	3.4	4.2
15-44 years.....	4.5	5.0	4.8	5.5	3.8	4.7	5.4	3.8	4.1	5.2	3.2	3.9	4.2
45-64 years.....	6.9	6.8	7.9	8.6	5.4	7.2	8.1	5.4	6.7	7.7	4.7	5.8	6.4
65 years and over.....	8.7	11.2	10.8	11.1	6.8	8.6	9.9	7.5	8.5	9.2	5.4	7.0	8.0
Single-listed surgery													
All ages, both sexes ¹	6.6	5.9	7.6	8.3	5.5	6.4	7.5	5.5	6.2	7.6	4.3	5.8	6.5
Under 15 years.....	3.7	2.4	3.4	5.3	2.6	3.4	4.7	2.9	3.4	5.5	2.1	3.4	5.2
15-44 years.....	4.7	4.0	5.0	5.7	4.0	4.6	5.7	4.1	4.5	5.6	3.6	4.3	5.3
45-64 years.....	8.0	7.5	9.0	9.9	6.5	7.9	8.9	7.0	7.7	9.2	5.4	6.8	6.9
65 years and over.....	11.7	12.1	13.8	14.7	10.6	11.4	11.8	11.2	11.9	12.1	7.2	9.3	9.6

¹Includes discharge data for which sex was not stated.

hospitals with less than 100 beds had stays that did not significantly differ among the Northeast, North Central, and South Regions (table 18).

Average stays for single-listed surgery discharges in the Northeast Region were not always higher than comparable stays in the West Region (table 19). This statement is especially true in the age group 15-44 years where males discharged from small hospitals showed similar stays for the Northeast and West Regions (4.1 and 4.0 days, respectively). Female patients in the age group 15-44 years (excluding deliveries) in the West Region had stays similar to those of females discharged in the Northeast Region.

Table 11 shows the regional length of stay by type of hospital ownership, age, sex, and marital status for patients discharged. In government-owned hospitals, average stays for male patients (7.4 days) were 1.1 days longer than those for female patients (6.3 days). In contrast, in proprietary hospitals the stays for males were no longer than those for females. In

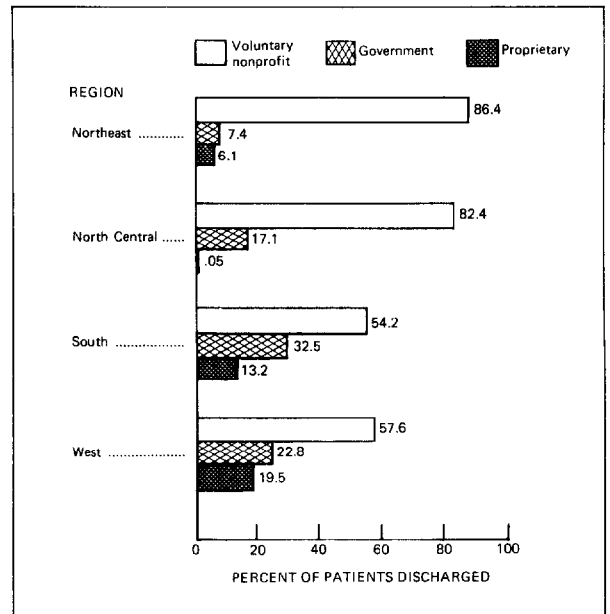


Figure 3. Percent of patients discharged from short-stay hospitals, by type of ownership of hospital and geographic region: United States, 1977

Table C. Percent distribution of patients discharged from short-stay hospitals with first-listed diagnoses, single-listed diagnoses, and single-listed surgery, by geographic region, bed size of hospital, age, and sex: United States, 1977

Type of diagnosis or surgery, age, and sex	All regions	Northeast			North Central			South			West		
		6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more
First-listed diagnosis		Percent distribution											
All ages, both sexes ¹	100.0	10.8	71.3	18.0	12.8	60.4	26.9	30.3	48.3	21.4	24.8	64.6	10.6
Under 15 years.....	100.0	7.7	73.8	18.7	10.4	63.6	26.1	28.4	51.3	20.2	25.6	63.4	11.0
15-44 years.....	100.0	10.8	69.5	19.7	11.4	61.0	27.5	28.0	49.4	22.6	25.0	64.2	10.8
45-64 years.....	100.0	12.2	70.5	17.4	12.6	58.3	29.1	29.6	48.1	22.3	24.0	64.7	11.3
65 years and over.....	100.0	10.5	74.1	15.4	16.8	59.7	23.6	35.9	45.2	19.0	25.1	65.8	9.1
Single-listed diagnosis													
All ages, both sexes ¹	100.0	10.7	70.3	19.0	11.2	60.4	28.5	29.1	48.7	22.2	25.4	63.9	10.7
Under 15 years.....	100.0	8.1	73.3	18.4	10.5	63.5	26.1	29.9	51.2	18.9	28.7	62.3	9.0
15-44 years.....	100.0	10.7	69.7	19.6	10.5	61.7	27.9	28.0	49.6	22.5	25.6	64.1	10.3
45-64 years.....	100.0	13.0	68.8	18.2	11.1	57.1	31.9	28.8	47.6	23.7	23.6	64.9	11.5
65 years and over.....	100.0	9.7	72.1	18.5	15.1	56.3	28.6	34.3	43.8	21.8	24.6	62.9	12.4
Single-listed surgery													
All ages, both sexes ¹	100.0	5.9	73.6	20.5	8.4	59.4	32.2	19.0	53.9	27.1	20.6	68.5	11.0
Under 15 years.....	100.0	6.3	72.7	21.4	9.0	62.9	28.1	23.1	53.0	24.2	27.1	63.3	10.0
15-44 years.....	100.0	6.6	72.3	21.1	8.7	59.6	31.7	19.6	55.1	25.4	22.2	67.2	10.6
45-64 years.....	100.0	5.3	74.3	20.6	7.3	56.0	36.7	16.3	53.3	30.4	18.1	70.0	12.1
65 years and over.....	100.0	4.8	76.3	18.6	8.5	60.9	30.4	17.8	52.4	30.0	15.9	72.9	11.2

¹Includes discharge data for which sex was not stated.

both the voluntary and government-owned hospitals in each of the four regions, unmarried discharged persons had longer stays than married persons, especially in the Northeast Region. Overall, the number of discharges from government hospitals in the Northeast Region comprised the smallest percent of total discharges (7.4 percent) for any of the four regions (figure 3). The distribution of discharges by ownership in the South and West Regions showed a smaller percent of their discharges from voluntary nonprofit hospitals, 54.2 and 57.6 percent, respectively, in contrast to the Northeast and North Central Regions (86.4 and 82.4 percent, respectively). The South, like the West, when compared with the Northeast and North Central Regions, had a relatively larger percent of its discharges from smaller hospitals than from the largest ones. Hospitals with less than 100 beds in the South and West Regions comprised 30.3 and 24.8 percent, respectively, of patient discharges, compared with the Northeast and North

Central Regions where they comprised 10.8 and 12.8 percent, respectively, of patient discharges (table C).

RATIO COMPARISONS BY SELECTED CHARACTERISTICS

Table D shows the ratio of the average length of stay in the Northeast Region to those in the North Central, South, and West Regions by selected variables. By comparing the Northeast Region with the West Region by age, the average length of stay for ages 15-44 years in the Northeast Region is shown to be approximately 1.26 days for each 1-day stay in the West Region, compared with 1.43 days for each 1-day stay for the total of all ages. Similarly, by comparing hospital size, the ratio for hospitals with 100-499 beds is only 1.34 days; by ownership (voluntary), 1.39 days; and by marital status

Table D. Ratios of average length of stay in the Northeast Region to stays in the North Central, South, and West Regions, by selected characteristics: United States, 1977

Characteristic	North Cent.al	South	West
	Ratio		
Total	1.15	1.24	1.43
Age:			
Under 15 years.....	1.05	1.10	1.22
15-44 years.....	1.02	1.16	1.26
45-64 years.....	1.11	1.24	1.46
65 years and over.....	1.21	1.31	1.53
Hospital size:			
6-99 beds.....	1.24	1.27	1.55
100-499 beds.....	1.15	1.25	1.34
500 beds or more.....	1.17	1.21	1.42
Hospital ownership:			
Voluntary.....	1.10	1.20	1.39
Government.....	1.40	1.44	1.54
Proprietary.....	0.86	1.38	1.67
Sex:			
Male.....	1.16	1.26	1.41
Female.....	1.14	1.24	1.43
Marital status:			
Married.....	1.11	1.22	1.41
Unmarried.....	1.18	1.28	1.49
Color:			
White.....	1.13	1.26	1.41
All other.....	1.12	1.32	1.36
Voluntary nonprofit hospitals, 100-499 beds, unmarried, ages 15-44 years ¹	0.98	1.15	1.18
Single-listed diagnoses (all discharges).....	1.08	1.20	1.39
Single-listed surgery (all discharges).....	1.13	1.17	1.38

¹SOURCE: National Center for Health Statistics, Division of Health Resources Statistics: Unpublished data from the 1977 Hospital Discharge Survey.

(married), 1.41 days. Because each of the preceding characteristics shows the Northeast-to-West stay ratio to be less than or similar to the total ratio (1.43 days), the combination of these characteristics would yield a smaller ratio than any single characteristic. This situation occurs when stays for married patients, ages 15-44, discharged from voluntary hospitals with 100-499 beds in the Northeast Region are compared with similar discharges in the West Region. The average length-of-stay ratio is only 1.18 days, com-

pared with the total regional ratio of 1.43 days.

For discharges with a single-listed diagnosis, the Northeast-to-West length-of-stay ratio was 1.39 days (table D). The average stay in the Northeast Region for patients under 15 years of age discharged from hospitals with less than 100 beds was 2.8 days, and in the West Region, the stay was 2.6 days, or a ratio of 1.08 days (table 18).

The comparison of average stays for single-listed surgery discharges by region shows a significant reduction in regional differences by selected characteristics (table 19). Female discharges, ages 15-44, from hospitals with 500 beds or more had stays of 5.1 and 4.5 days, respectively, in the Northeast and West Regions, or a ratio of only 1.13 days. The same comparison for females (excluding deliveries) showed stays of 4.7 and 4.8 days, respectively, or a ratio of 0.98 days. The stays for the Northeast and South Regions for females (including deliveries) ages 15-44 years discharged from hospitals with 500 beds or more were both 5.1 days.

CONCLUSION

Analysis of average length of stay indicates the following:

- Only two characteristics—age and hospital size—are relatively unaffected by interaction with other characteristics. In general, older patients in larger hospitals had the longest stays regardless of other characteristics.
- Color and hospital ownership are influenced by hospital size; marital status differences are influenced by sex, age, and number of diagnoses and surgeries; and sex differences vary with age and bed size.
- Regional differences generally are smallest in the age group under 15 years discharged from medium-sized hospitals, and greatest in the age group over 64 years discharged with a single-listed diagnosis from small hospitals.
- Regional differences in length of stay can to some extent be explained by dif-

ferences in hospital size and ownership. The Northeast Region is characterized by large voluntary hospitals, compared with the West Region where hospitals are

characteristically smaller and composed of a higher percent of proprietary hospitals.

REFERENCES

¹National Center for Health Statistics: Development of the design of the NCHS Hospital Discharge Survey. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 39. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1970.

²National Center for Health Statistics: Development and maintenance of a national inventory of hospitals and institutions. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 1-No. 3. Public Health Service. Washington. U.S. Government Printing Office, Feb. 1965.

³National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. 2 Vols. PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967 and 1968.

⁴National Center for Health Statistics: Utilization of short-stay hospitals, summary of nonmedical statistics, United States, 1965. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 13-No. 2. Public Health Service. Washington. U.S. Government Printing Office, Aug. 1967.

⁵National Center for Health Statistics: Utilization of short-stay hospitals by characteristics of discharged patients, United States, 1965. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 13-No. 3. Public Health Service. Washington. U.S. Government Printing Office, Dec. 1967.



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Table 1. Average length of stay and number of patients discharged from short-stay hospitals with a first-listed diagnosis, by sex, color, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Color and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>Total</u>	Average length of stay in days			Number of patients discharged in thousands		
All ages.....	7.3	7.8	7.0	35,902	14,385	21,518
Under 15 years.....	4.2	4.3	4.1	3,775	2,137	1,638
15-44 years.....	5.3	6.3	4.9	15,180	4,553	10,627
45-64 years.....	8.5	8.6	8.4	8,604	4,042	4,562
65 years and over.....	11.1	10.8	11.3	8,344	3,653	4,690
<u>White</u>						
All ages.....	7.3	7.7	7.1	27,342	11,115	16,226
Under 15 years.....	4.1	4.2	4.1	2,802	1,575	1,227
15-44 years.....	5.3	6.2	4.9	11,055	3,429	7,626
45-64 years.....	8.4	8.4	8.4	6,797	3,199	3,598
65 years and over.....	11.0	10.7	11.2	6,688	2,912	3,776
<u>All other</u>						
All ages.....	7.6	8.9	6.8	3,963	1,459	2,504
Under 15 years.....	5.2	5.4	4.8	497	293	204
15-44 years.....	5.7	7.5	5.1	2,155	553	1,603
45-64 years.....	10.6	11.5	9.7	741	348	393
65 years and over.....	12.6	12.4	12.9	569	266	303
<u>Color not stated</u>						
All ages.....	7.0	7.4	6.8	4,598	1,810	2,788
Under 15 years.....	3.6	3.7	3.5	477	269	207
15-44 years.....	5.1	5.9	4.7	1,969	571	1,398
45-64 years.....	8.0	8.0	8.0	1,066	495	571
65 years and over.....	11.1	10.5	11.5	1,086	475	611

Table 2. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed diagnosis, by sex, color, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Color and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>Total</u>	Average length of stay in days			Number of patients discharged in thousands		
All ages	5.4	5.9	5.1	18,627	7,025	11,602
Under 15 years.....	3.7	3.9	3.6	2,474	1,404	1,070
15-44 years	4.5	5.4	4.1	10,208	2,822	7,386
45-64 years	6.9	6.9	7.0	3,652	1,765	1,886
65 years and over	8.7	8.2	9.1	2,293	1,034	1,260
<u>White</u>						
All ages.....	5.4	5.9	5.1	13,960	5,379	8,581
Under 15 years.....	3.7	3.8	3.6	1,838	1,039	800
15-44 years	4.5	5.4	4.1	7,415	2,135	5,280
45-64 years	6.9	6.8	7.0	2,886	1,395	1,491
65 years and over	8.6	8.1	9.1	1,821	810	1,011
<u>All other</u>						
All ages.....	5.4	6.6	4.7	2,188	727	1,461
Under 15 years.....	4.5	4.9	4.1	329	194	135
15-14 years.....	4.6	6.3	4.1	1,428	323	1,105
45-64 years	7.7	8.1	7.3	283	136	147
65 years and over	10.3	10.1	10.4	147	74	74
<u>Color not stated</u>						
All ages.....	5.1	5.6	4.8	2,479	919	1,560
Under 15 years.....	3.3	3.4	3.1	307	172	135
15-44 years	4.3	5.1	4.0	1,365	363	1,001
45-64 years	6.6	6.7	6.5	482	234	249
65 years and over	8.2	7.8	8.5	325	150	176

Table 3. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed surgery, by sex, color, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Color and age	Both sexes	Male	Female	Both sexes	Male	Female
Total	Average length of stay in days			Number of patients discharged in thousands		
All ages	6.6	7.2	6.2	10,227	4,093	6,133
Under 15 years.....	3.7	3.8	3.4	1,202	682	520
15-44 years	4.7	5.6	4.4	4,847	1,441	3,406
45-64 years	8.0	8.4	7.7	2,350	1,115	1,235
65 years and over	11.7	11.1	12.2	1,827	855	972
White						
All ages.....	6.7	7.3	6.3	7,739	3,153	4,587
Under 15 years.....	3.6	3.8	3.3	899	502	396
15-44 years	4.8	5.6	4.4	3,540	1,096	2,444
45-64 years	7.9	8.1	7.7	1,859	882	977
65 years and over	11.7	11.3	12.0	1,442	673	769
All other						
All ages.....	6.9	8.2	6.2	1,093	388	705
Under 15 years.....	4.7	4.5	5.2	139	87	52
15-44 years	5.0	6.5	4.6	654	151	502
45-64 years	11.1	12.3	10.0	180	87	94
65 years and over	13.7	12.1	15.4	121	63	58
Color not stated						
All ages.....	6.1	6.4	5.8	1,394	553	841
Under 15 years.....	3.0	3.1	2.9	165	93	72
15-44 years	4.4	5.0	4.1	654	194	460
45-64 years	7.1	7.5	6.8	310	147	164
65 years and over	10.8	9.9	11.5	265	119	146

Table 4. Average length of stay and number of patients discharged from short-stay hospitals with a first-listed diagnosis, by sex, bed size of hospital, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Bed size of hospital and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All sizes</u>	Average length of stay in days			Number of patients discharged in thousands		
All ages.....	7.3	7.8	7.0	35,902	14,385	21,518
Under 15 years.....	4.2	4.3	4.1	3,775	2,137	1,638
15-44 years.....	5.3	6.3	4.9	15,180	4,553	10,627
45-64 years.....	8.5	8.6	8.4	8,604	4,042	4,562
65 years and over.....	11.1	10.8	11.3	8,344	3,653	4,690
<u>6-99 beds</u>						
All ages.....	6.0	6.1	6.0	7,126	2,871	4,255
Under 15 years.....	3.2	3.2	3.2	678	361	317
15-44 years.....	4.4	4.7	4.2	2,869	931	1,938
45-64 years.....	6.5	6.4	6.5	1,678	772	906
65 years and over.....	9.1	8.6	9.4	1,901	807	1,093
<u>100-199 beds</u>						
All ages.....	6.8	7.2	6.5	6,097	2,375	3,722
Under 15 years.....	3.9	3.9	3.8	690	388	302
15-44 years.....	4.7	5.8	4.3	2,591	730	1,861
45-64 years.....	8.0	8.1	7.9	1,370	634	736
65 years and over.....	10.6	10.0	11.1	1,447	624	823
<u>200-299 beds</u>						
All ages.....	7.3	7.8	7.0	5,556	2,224	3,332
Under 15 years.....	4.1	4.2	3.8	623	355	268
15-44 years.....	5.2	6.1	4.8	2,334	688	1,646
45-64 years.....	8.5	8.5	8.6	1,259	594	664
65 years and over.....	11.6	11.3	11.8	1,340	587	754
<u>300-499 beds</u>						
All ages.....	7.7	8.2	7.4	9,761	3,931	5,830
Under 15 years.....	4.2	4.2	4.1	1,012	594	418
15-44 years.....	5.6	6.6	5.1	4,127	1,223	2,905
45-64 years.....	9.1	9.1	9.0	2,459	1,161	1,298
65 years and over.....	12.0	11.8	12.2	2,163	953	1,209
<u>500 beds or more</u>						
All ages.....	8.4	9.3	7.8	7,362	2,984	4,378
Under 15 years.....	5.6	5.8	5.3	772	440	333
15-44 years.....	6.4	8.0	5.8	3,258	981	2,277
45-64 years.....	10.0	10.3	9.7	1,838	881	957
65 years and over.....	12.4	12.3	12.5	1,493	682	811

Table 5. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed diagnosis, by sex, bed size of hospital, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Bed size of hospital and age	Both sexes		Male		Female	
	Both sexes	Male	Female	Both sexes	Male	Female
<u>All sizes</u>						
	Average length of stay in days			Number of patients discharged in thousands		
All ages	5.4	5.9	5.1	18,627	7,025	11,602
Under 15 years.....	3.7	3.9	3.6	2,474	1,404	1,070
15-44 years	4.5	5.4	4.1	10,208	2,822	7,386
45-64 years	6.9	6.9	7.0	3,652	1,765	1,886
65 years and over	8.7	8.2	9.1	2,293	1,034	1,260
<u>6-99 beds</u>						
All ages.....	4.5	4.8	4.3	3,555	1,396	2,159
Under 15 years.....	3.0	3.0	3.0	465	256	209
15-44 years	3.8	4.2	3.6	1,906	591	1,314
45-64 years	5.5	5.5	5.4	689	326	363
65 years and over	7.3	7.2	7.3	496	223	272
<u>100-199 beds</u>						
All ages.....	5.0	5.5	4.7	3,116	1,107	2,008
Under 15 years.....	3.5	3.6	3.4	448	250	199
15-44 years	4.0	5.1	3.7	1,750	440	1,310
45-64 years	6.9	6.6	7.1	559	263	296
65 years and over	8.4	7.8	8.9	359	155	204
<u>200-299 beds</u>						
All ages.....	5.2	5.7	4.9	2,853	1,074	1,779
Under 15 years.....	3.6	3.9	3.3	409	233	176
15-44 years	4.3	5.3	3.9	1,562	426	1,136
45-64 years	6.8	6.7	6.8	533	259	274
65 years and over	8.6	8.1	9.0	349	156	193
<u>300-499 beds</u>						
All ages.....	5.6	6.1	5.3	5,109	1,930	3,179
Under 15 years.....	3.7	3.7	3.7	663	388	275
15-44 years	4.7	5.7	4.3	2,808	765	2,043
45-64 years	7.2	7.2	7.2	1,039	505	534
65 years and over	9.2	8.6	9.7	599	271	327
<u>500 beds or more</u>						
All ages.....	6.3	7.1	5.8	3,995	1,518	2,477
Under 15 years.....	4.8	5.2	4.4	488	278	211
15-44 years	5.3	6.7	4.7	2,183	599	1,583
45-64 years	7.9	7.9	7.9	831	412	419
65 years and over	9.7	9.0	10.4	492	229	263

Table 6. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed surgery, by sex, bed size of hospital, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Bed size of hospital and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All sizes</u>	Average length of stay in days			Number of patients discharged in thousands		
All ages.....	6.6	7.2	6.2	10,227	4,093	6,133
Under 15 years.....	3.7	3.8	3.4	1,202	682	520
15-44 years.....	4.7	5.6	4.4	4,847	1,441	3,406
45-64 years.....	8.0	8.4	7.7	2,350	1,115	1,235
65 years and over.....	11.7	11.1	12.2	1,827	855	972
<u>6-99 beds</u>						
All ages.....	5.2	5.3	5.1	1,338	505	832
Under 15 years.....	2.6	2.6	2.5	188	108	80
15-44 years.....	3.9	4.1	3.8	678	193	485
45-64 years.....	6.5	6.8	6.2	263	113	151
65 years and over.....	10.1	9.1	10.9	208	92	116
<u>100-199 beds</u>						
All ages.....	5.7	6.3	5.3	1,680	630	1,050
Under 15 years.....	3.2	3.2	3.1	199	108	92
15-44 years.....	4.0	4.9	3.7	843	223	620
45-64 years.....	7.1	7.5	6.8	337	158	179
65 years and over.....	10.5	9.9	11.1	300	141	160
<u>200-299 beds</u>						
All ages.....	6.6	6.9	6.4	1,662	683	979
Under 15 years.....	3.5	3.7	3.3	202	111	91
15-44 years.....	4.6	5.3	4.3	775	243	532
45-64 years.....	8.0	7.9	8.1	376	182	194
65 years and over.....	11.9	10.8	12.8	310	147	163
<u>300-499 beds</u>						
All ages.....	7.0	7.6	6.6	3,079	1,255	1,824
Under 15 years.....	3.5	3.5	3.4	343	196	146
15-44 years.....	5.0	6.0	4.5	1,410	437	973
45-64 years.....	8.2	8.5	8.0	752	359	393
65 years and over.....	12.3	11.9	12.7	575	263	312
<u>500 beds or more</u>						
All ages.....	7.6	8.5	6.9	2,468	1,020	1,448
Under 15 years.....	5.1	5.4	4.6	270	159	111
15-44 years.....	5.6	6.8	5.1	1,142	345	797
45-64 years.....	9.0	9.5	8.5	622	303	318
65 years and over.....	12.3	12.2	12.4	434	212	222

Table 7. Average length of stay and number of patients discharged from short-stay hospitals with a first-listed diagnosis, by sex, type of ownership of hospital, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Type of ownership and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All types</u>						
	Average length of stay in days			Number of discharged patients in thousands		
All ages	7.3	7.8	7.0	35,902	14,385	21,518
Under 15 years.....	4.2	4.3	4.1	3,775	2,137	1,638
15-44 years	5.3	6.3	4.9	15,180	4,553	10,627
45-64 years	8.5	8.6	8.4	8,604	4,042	4,562
65 years and over.....	11.1	10.8	11.3	8,344	3,653	4,690
<u>Voluntary nonprofit</u>						
All ages.....	7.5	8.0	7.2	25,236	10,022	15,214
Under 15 years.....	4.2	4.3	4.1	2,627	1,501	1,126
15-44 years	5.4	6.3	5.0	10,520	3,045	7,475
45-64 years	8.8	8.9	8.7	6,136	2,870	3,267
65 years and over.....	11.6	11.2	11.9	5,953	2,607	3,346
<u>Government</u>						
All ages.....	6.7	7.4	6.3	7,469	3,041	4,429
Under 15 years.....	4.4	4.6	4.3	886	492	394
15-44 years	5.2	6.6	4.6	3,351	1,041	2,310
45-64 years	8.0	8.0	8.0	1,613	776	838
65 years and over.....	9.8	9.7	9.9	1,619	732	887
<u>Proprietary</u>						
All ages.....	6.8	6.9	6.8	3,197	1,322	1,875
Under 15 years.....	3.4	3.3	3.5	263	145	118
15-44 years	5.2	5.7	5.0	1,308	467	842
45-64 years	7.4	7.5	7.3	854	396	458
65 years and over.....	10.1	9.8	10.2	771	314	458

Table 8. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed diagnosis, by sex, type of ownership of hospital, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Type of ownership and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All types</u>						
	Average length of stay in days			Number of discharged patients in thousands		
All ages	5.4	5.9	5.1	18,627	7,025	11,602
Under 15 years.....	3.7	3.9	3.6	2,474	1,404	1,070
15-44 years	4.5	5.4	4.1	10,208	2,822	7,386
45-64 years	6.9	6.9	7.0	3,652	1,765	1,886
65 years and over	8.7	8.2	9.1	2,293	1,034	1,260
<u>Voluntary nonprofit</u>						
All ages.....	5.5	6.0	5.2	13,139	4,895	8,244
Under 15 years.....	3.8	3.9	3.7	1,723	980	743
15-44 years	4.5	5.4	4.1	7,123	1,891	5,232
45-64 years	7.1	7.1	7.1	2,635	1,273	1,362
65 years and over	8.9	8.3	9.3	1,658	751	907
<u>Government</u>						
All ages.....	5.1	5.8	4.7	3,971	1,500	2,470
Under 15 years.....	3.8	4.1	3.5	573	324	249
15-44 years	4.4	5.8	3.9	2,288	649	1,639
45-64 years	6.5	6.2	6.7	673	327	346
65 years and over	8.3	7.9	8.6	437	200	237
<u>Proprietary</u>						
All ages.....	5.2	5.5	5.1	1,517	629	888
Under 15 years.....	3.0	3.1	3.0	179	101	78
15-44 years	4.5	5.0	4.2	797	281	516
45-64 years	6.6	6.7	6.4	343	165	178
65 years and over	8.0	7.5	8.3	198	82	115

Table 9. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed surgery, by sex, type of ownership of hospital, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Type of ownership and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All types</u>						
	Average length of stay in days			Number of discharged patients in thousands		
All ages	6.6	7.2	6.2	10,227	4,093	6,133
Under 15 years.....	3.7	3.8	3.4	1,202	682	520
15-44 years	4.7	5.6	4.4	4,847	1,441	3,406
45-64 years	8.0	8.4	7.7	2,350	1,115	1,235
65 years and over.....	11.7	11.1	12.2	1,827	855	972
<u>Voluntary nonprofit</u>						
All ages.....	6.7	7.3	6.4	7,590	3,034	4,556
Under 15 years.....	3.6	3.8	3.4	851	477	374
15-44 years	4.7	5.5	4.4	3,523	1,038	2,485
45-64 years	8.1	8.5	7.8	1,796	855	941
65 years and over.....	11.8	11.2	12.4	1,419	664	755
<u>Government</u>						
All ages.....	6.5	7.4	5.9	1,843	728	1,114
Under 15 years.....	4.0	4.2	3.8	258	151	107
15-44 years	5.0	6.7	4.3	943	274	669
45-64 years	8.5	8.6	8.3	361	170	191
65 years and over.....	11.4	11.1	11.6	280	134	147
<u>Proprietary</u>						
All ages.....	5.6	5.9	5.4	794	330	463
Under 15 years.....	2.6	2.5	2.8	93	54	39
15-44 years	4.2	4.6	3.9	381	128	252
45-64 years	6.5	6.8	6.2	193	91	102
65 years and over.....	10.7	10.4	10.9	128	58	70

Table 10. Average length of stay for patients discharged from short-stay hospitals with a first-listed diagnosis, by color, marital status, age, geographic region, and bed size of hospital: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region and bed size of hospital	Total	Color			Total ¹	Married				Unmarried ²			
		White	All other	Not stated		15 years and over	15-44 years	45-64 years	65 years and over	15 years and over	15-44 years	45-64 years	65 years and over
Average length of stay in days													
All regions													
All sizes.....	7.3	7.3	7.6	7.0	7.7	7.1	5.1	8.2	10.3	8.7	5.8	9.6	11.9
6-99 beds.....	6.0	6.0	6.0	5.9	6.3	5.7	4.3	6.2	8.2	7.3	4.6	7.3	9.9
100-499 beds.....	7.4	7.4	7.5	6.8	7.8	7.1	5.0	8.3	10.6	8.8	5.7	9.7	12.4
500 beds or more.....	8.4	8.4	8.5	8.7	8.8	8.3	6.1	9.6	11.8	9.5	7.0	11.1	12.9
Northeast													
All sizes.....	8.6	8.6	9.1	8.7	9.1	8.2	5.5	9.3	12.4	10.4	6.3	11.5	14.6
6-99 beds.....	7.6	7.4	11.3	8.2	7.9	7.0	5.1	7.6	10.4	9.4	6.3	9.3	12.9
100-499 beds.....	8.5	8.5	8.4	8.2	8.9	8.1	5.4	9.2	12.1	10.4	6.0	11.2	14.6
500 beds or more.....	9.8	9.7	9.9	10.5	10.2	9.6	6.3	11.1	14.8	10.9	7.4	14.3	15.8
North Central													
All sizes.....	7.5	7.6	8.1	7.1	7.9	7.4	5.4	8.6	10.4	8.8	6.2	10.0	11.8
6-99 beds.....	6.1	6.2	7.5	5.2	6.4	5.9	4.4	6.5	8.0	7.3	5.0	7.5	9.1
100-499 beds.....	7.4	7.6	8.1	7.0	7.9	7.3	5.3	8.5	10.8	8.9	6.0	10.3	12.3
500 beds or more.....	8.4	8.4	8.1	8.4	8.7	8.3	6.3	9.7	11.3	9.5	7.1	10.5	12.8
South													
All sizes.....	6.9	6.8	6.9	7.4	7.2	6.7	4.8	7.8	9.9	8.1	5.4	8.9	10.8
6-99 beds.....	6.0	6.0	5.8	6.7	6.3	5.8	4.3	6.2	8.4	7.2	4.4	6.7	9.7
100-499 beds.....	6.8	6.7	7.0	7.8	7.2	6.7	4.7	8.1	10.3	8.2	5.2	9.1	11.2
500 beds or more.....	8.1	8.2	8.0	7.3	8.4	8.0	6.0	9.1	11.3	9.1	6.7	11.1	11.9
West													
All sizes.....	6.0	6.1	6.7	5.1	6.3	5.8	4.3	6.6	8.1	7.0	5.0	7.4	9.9
6-99 beds.....	4.9	5.1	4.4	3.3	5.2	4.7	3.7	5.0	6.6	6.1	3.6	6.7	9.6
100-499 beds.....	6.3	6.5	7.0	5.3	6.5	6.2	4.4	7.1	8.5	7.2	5.3	7.6	10.0
500 beds or more.....	6.9	6.8	7.8	6.6	7.0	6.7	5.0	7.6	9.6	7.3	6.1	7.0	9.9

¹Includes patients for whom marital status was not stated.
²Includes single, separated, divorced, and widowed persons.

Table 11. Average length of stay and number of patients discharged with a first-listed diagnosis, by type of ownership of hospital, geographic region, age, sex, marital status, and sex and marital status: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region, age, sex, marital status, and sex and marital status	Voluntary nonprofit	Government	Proprietary	Voluntary nonprofit	Government	Proprietary
ALL REGIONS	Average length of stay in days			Number of discharged patients in thousands		
<u>Age</u>						
All ages.....	7.5	6.7	6.8	25,236	7,469	3,197
All ages, 15 years and over.....	7.9	7.0	7.1	22,609	6,584	2,934
15-24 years.....	4.7	4.5	4.4	3,908	1,417	414
25-44 years.....	5.8	5.7	5.6	6,612	1,934	8,941
45-64 years.....	8.8	8.0	7.4	6,136	1,613	8,540
65 years and over.....	11.6	9.8	10.1	5,953	1,619	7,715
<u>Sex, all ages</u>						
Male.....	8.0	7.4	6.9	10,022	3,041	1,322
Female.....	7.2	6.3	6.8	15,214	4,429	1,875
<u>Marital status, 15 years and over¹</u>						
Married.....	7.3	6.4	6.7	13,917	3,704	1,748
Unmarried.....	9.0	8.0	7.8	7,694	2,397	1,077
<u>Marital status and sex, 15 years and over¹</u>						
Married males.....	8.6	7.5	7.4	5,638	1,513	782
Married females.....	6.4	5.6	6.2	8,278	2,190	966
Unmarried males.....	8.8	8.6	7.4	2,504	840	352
Unmarried females.....	9.1	7.6	7.9	5,190	1,556	725
NORTHEAST REGION						
<u>Age</u>						
All ages.....	8.5	9.4	---	6,749	579	---
All ages, 15 years and over.....	9.0	9.9	---	6,091	519	---
15-24 years.....	4.9	6.3	---	962	106	---
25-44 years.....	6.0	7.2	---	1,714	189	---
45-64 years.....	9.7	12.1	---	1,710	126	---
65 years and over.....	13.4	16.0	---	1,705	99	---
<u>Sex, all ages</u>						
Male.....	9.1	10.6	---	2,714	258	---
Female.....	8.1	8.4	---	4,034	322	---
<u>Marital status, 15 years and over¹</u>						
Married.....	8.1	8.4	---	3,593	212	---
Unmarried.....	10.3	11.0	---	2,230	238	---
<u>Marital status and sex, 15 years and over¹</u>						
Married males.....	9.7	10.6	---	1,487	89	---
Married females.....	6.9	6.8	---	2,108	123	---
Unmarried males.....	9.9	12.0	---	752	98	---
Unmarried females.....	10.4	10.4	---	1,478	139	---

¹Does not include marital status "Not stated."

Table 11. Average length of stay and number of patients discharged with a first-listed diagnosis, by type of ownership of hospital, geographic region, age, sex, marital status, and sex and marital status: United States, 1977—Con.

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region, age, sex, marital status, and sex and marital status	Voluntary nonprofit	Government	Proprietary	Voluntary nonprofit	Government	Proprietary
<u>NORTH CENTRAL REGION</u>						
<u>Age</u>			Average length of stay in days			
<u>Number of discharged patients in thousands</u>						
All ages.....	7.7	6.7	---	8,931	1,850	---
All ages, 15 years and over.....	8.1	7.0	---	7,905	1,627	---
15-24 years.....	5.0	4.7	---	1,477	329	---
25-44 years.....	6.2	5.7	---	2,312	423	---
45-64 years.....	9.1	7.7	---	2,174	406	---
65 years and over.....	11.7	9.0	---	1,942	470	---
<u>Sex, all ages</u>						
Male.....	8.1	7.1	---	3,611	754	---
Female.....	7.4	6.4	---	5,320	1,096	---
<u>Marital status, 15 years and over¹</u>						
Married.....	7.6	6.5	---	4,826	961	---
Unmarried.....	9.0	7.8	---	2,703	590	---
<u>Marital status and sex, 15 years and over¹</u>						
Married males.....	8.8	7.4	---	1,981	399	---
Married females.....	6.8	5.8	---	2,846	562	---
Unmarried males.....	8.9	7.9	---	886	207	---
Unmarried females.....	9.0	7.7	---	1,816	383	---
<u>SOUTH REGION</u>						
<u>Age</u>			Average length of stay in days			
<u>Number of discharged patients in thousands</u>						
All ages.....	7.1	6.5	---	6,118	3,675	---
All ages, 15 years and over.....	7.4	6.9	---	5,471	3,217	---
15-24 years.....	4.3	4.2	---	966	685	---
25-44 years.....	5.4	5.5	---	1,683	941	---
45-64 years.....	8.4	7.8	---	1,393	798	---
65 years and over.....	10.8	10.0	---	1,428	794	---
<u>Sex, all ages</u>						
Male.....	7.6	7.1	---	2,292	1,472	---
Female.....	6.8	6.1	---	3,826	2,202	---
<u>Marital status, 15 years and over¹</u>						
Married.....	6.8	6.3	---	3,553	1,885	---
Unmarried.....	8.4	7.8	---	1,738	1,153	---
<u>Marital status and sex, 15 years and over¹</u>						
Married males.....	8.2	7.4	---	1,342	784	---
Married females.....	6.0	5.6	---	2,210	1,101	---
Unmarried males.....	8.0	8.4	---	529	372	---
Unmarried females.....	8.6	7.5	---	1,209	781	---

¹Does not include marital status "Not stated."

Table 11. Average length of stay and number of patients discharged with a first-listed diagnosis, by type of ownership of hospital, geographic region, age, sex, marital status, and sex and marital status: United States, 1977—Con.

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region, age, sex, marital status, and sex and marital status	Voluntary nonprofit	Government	Proprietary	Voluntary nonprofit	Government	Proprietary
WEST REGION	Average length of stay in days			Number of discharged patients in thousands		
<u>Age</u>						
All ages.....	6.1	6.1	---	3,437	1,365	---
All ages, 15 years and over.....	6.4	6.2	---	3,141	1,220	---
15-24 years.....	3.7	4.5	---	503	298	---
25-44 years.....	4.8	5.3	---	903	381	---
45-64 years.....	6.8	7.3	---	859	284	---
65 years and over.....	9.1	8.4	---	877	257	---
<u>Sex, all ages</u>						
Male.....	6.5	7.0	---	1,405	556	---
Female.....	5.9	5.4	---	2,033	809	---
<u>Marital status, 15 years and over¹</u>						
Married.....	5.9	5.7	---	1,943	646	---
Unmarried.....	7.2	7.0	---	1,024	415	---
<u>Marital status and sex, 15 years and over¹</u>						
Married males.....	6.8	6.8	---	827	241	---
Married females.....	5.2	5.0	---	1,115	405	---
Unmarried males.....	7.3	8.0	---	337	162	---
Unmarried females.....	7.2	6.3	---	686	253	---

¹Does not include marital status "Not stated."

Table 12. Average length of stay for patients discharged from short-stay hospitals with a single-listed diagnosis, by color, marital status, age, geographic region, and bed size of hospital: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region and bed size of hospital	Total	Color			Total ¹	Married				Unmarried ²			
		White	All other	Not stated		15 years and over	15-44 years	45-64 years	65 years and over	15 years and over	15-44 years	45-64 years	65 years and over
Average length of stay in days													
<u>All regions</u>													
All sizes.....	5.4	5.4	5.4	5.1	5.6	5.3	4.2	6.7	7.8	6.3	4.9	7.8	9.7
6-99 beds.....	4.5	4.5	4.7	4.4	4.7	4.4	3.7	5.3	6.7	5.2	4.0	6.2	8.0
100-499 beds.....	5.3	5.4	5.2	5.0	5.6	5.3	4.2	6.8	7.8	6.3	4.8	7.9	9.9
500 beds or more.....	6.3	6.4	6.0	6.4	6.5	6.2	5.0	7.7	8.9	7.0	5.7	8.7	10.6
<u>Northeast</u>													
All sizes.....	6.1	6.1	6.4	6.1	6.4	6.0	4.6	7.6	9.5	7.2	5.4	9.1	12.1
6-99 beds.....	5.9	5.6	10.5	6.0	6.2	5.2	4.3	6.3	7.7	7.7	5.9	7.7	13.8
100-499 beds.....	6.0	6.1	5.9	5.7	6.3	5.9	4.5	7.6	9.3	7.2	5.1	9.2	12.1
500 beds or more.....	6.7	6.6	6.7	7.1	6.9	6.7	5.1	8.1	11.1	7.2	5.9	9.9	11.0
<u>North Central</u>													
All sizes.....	5.6	5.7	5.8	5.2	5.9	5.6	4.6	7.1	7.8	6.5	5.2	8.4	9.6
6-99 beds.....	4.5	4.6	6.2	4.1	4.7	4.5	3.7	5.3	6.4	5.2	3.9	6.2	7.2
100-499 beds.....	5.4	5.5	5.8	5.1	5.8	5.4	4.5	6.9	7.6	6.4	5.1	8.8	9.4
500 beds or more.....	6.5	6.6	5.9	6.4	6.7	6.4	5.1	8.1	8.8	7.4	6.0	8.6	11.5
<u>South</u>													
All sizes.....	5.1	5.1	4.9	5.6	5.3	5.0	4.1	6.4	7.8	5.9	4.6	7.4	8.8
6-99 beds.....	4.5	4.5	4.3	5.1	4.7	4.6	3.7	5.3	7.4	5.0	3.8	5.7	7.7
100-499 beds.....	5.0	4.9	4.8	5.7	5.2	4.9	3.9	6.6	7.8	6.0	4.5	7.3	9.3
500 beds or more.....	6.2	6.4	5.7	5.7	6.3	6.0	5.0	7.4	8.4	6.9	5.7	9.0	9.8
<u>West</u>													
All sizes.....	4.4	4.6	4.4	3.9	4.6	4.4	3.5	5.5	6.0	5.0	4.0	5.8	7.8
6-99 beds.....	3.7	3.8	3.4	2.7	3.8	3.7	3.1	4.5	5.2	3.9	3.2	5.5	5.9
100-499 beds.....	4.6	4.8	4.5	4.0	4.8	4.6	3.7	5.8	6.2	5.2	4.2	5.9	8.0
500 beds or more.....	5.3	5.3	4.8	5.4	5.4	5.1	4.0	6.4	6.8	5.7	4.4	5.9	9.5

¹Includes patients for whom marital status was not stated.

²Includes single, separated, divorced, and widowed persons.

Table 13. Average length of stay for patients discharged from short-stay hospitals with a single-listed surgery, by color, marital status, age, geographic region, and bed size of hospital: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region and bed size of hospital	Total	Color			Total ¹	Married				Unmarried ²			
		White	All other	Not stated		15 years and over	15-44 years	45-64 years	65 years and over	15 years and over	15-44 years	45-64 years	65 years and over
Average length of stay in days													
All regions													
All sizes.....	6.6	6.7	6.9	6.1	7.0	6.6	4.7	7.7	10.6	7.7	4.8	9.3	13.0
6-99 beds.....	5.2	5.2	5.6	4.7	5.6	5.2	4.0	6.0	8.4	6.3	3.7	7.8	12.2
100-499 beds.....	6.5	6.7	6.5	6.0	7.0	6.5	4.6	7.6	10.5	7.7	4.6	9.1	13.2
500 beds or more.....	7.6	7.6	8.0	6.9	7.9	7.6	5.5	8.6	11.8	8.3	5.7	10.1	12.9
Northeast													
All sizes.....	7.6	7.7	8.1	7.0	8.1	7.6	5.0	8.5	12.8	8.8	5.1	10.8	14.9
6-99 beds.....	5.9	5.9	7.9	6.0	6.3	5.3	3.9	5.9	10.7	8.1	4.1	11.7	13.5
100-499 beds.....	7.6	7.6	7.7	7.0	8.0	7.5	5.0	8.6	12.3	8.9	4.9	10.2	15.3
500 beds or more.....	8.3	8.4	8.7	7.3	8.6	8.5	5.6	9.0	15.6	8.7	5.8	12.5	13.6
North Central													
All sizes.....	6.7	6.7	6.8	6.4	7.1	6.8	5.0	7.9	10.4	7.5	4.7	9.2	12.6
6-99 beds.....	5.5	5.5	6.4	5.2	6.0	5.5	4.1	6.4	8.9	6.6	3.7	7.3	12.1
100-499 beds.....	6.4	6.5	5.9	6.3	6.9	6.5	4.7	7.6	10.2	7.4	4.4	9.5	12.6
500 beds or more.....	7.5	7.5	7.4	7.0	7.8	7.7	5.7	8.8	11.2	8.0	5.6	9.3	12.7
South													
All sizes.....	6.5	6.3	7.0	6.5	6.8	6.3	4.6	7.5	10.7	7.9	4.9	9.6	13.0
6-99 beds.....	5.5	5.5	5.6	5.0	6.0	5.6	4.1	6.8	9.4	6.7	4.0	7.0	13.0
100-499 beds.....	6.2	6.0	6.7	7.1	6.6	6.0	4.4	7.2	10.9	7.8	4.7	9.3	12.9
500 beds or more.....	7.6	7.6	8.3	6.1	7.9	7.5	5.5	8.6	11.1	8.7	5.8	11.0	13.2
West													
All sizes.....	5.5	5.8	5.5	4.6	5.8	5.6	4.2	6.3	8.0	6.2	4.3	7.1	10.5
6-99 beds.....	4.3	4.4	4.9	2.6	4.6	4.5	3.8	4.9	6.2	4.7	3.1	7.4	9.7
100-499 beds.....	5.8	6.2	5.3	4.7	6.0	5.8	4.2	6.6	8.4	6.5	4.4	7.1	10.6
500 beds or more.....	6.5	6.4	7.3	7.6	6.7	6.1	4.6	6.8	8.7	7.2	6.0	6.4	10.6

¹Includes patients for whom marital status was not stated.
²Includes single, separated, divorced, and widowed persons.

Table 14. Average length of stay and number of patients discharged from short-stay hospitals with a first-listed diagnosis, by sex, geographic region, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region and age	Both sexes	Male	Female	Both sexes	Male	Female
	Average length of stay in days			Number of patients discharged in thousands		
<u>All regions</u>						
All ages	7.3	7.8	7.0	35,902	14,385	21,518
Under 15 years.....	4.2	4.3	4.1	3,775	2,137	1,638
15-44 years	5.3	6.3	4.9	15,180	4,553	10,627
45-64 years	8.5	8.6	8.4	8,604	4,042	4,562
65 years and over	11.1	10.8	11.3	8,344	3,653	4,690
<u>Northeast</u>						
All ages.....	8.6	9.2	8.2	7,811	3,191	4,620
Under 15 years.....	4.5	4.6	4.4	739	432	307
15-44 years	5.8	7.2	5.2	3,182	973	2,209
45-64 years	9.9	10.1	9.7	1,982	954	1,028
65 years and over	13.6	13.2	14.0	1,908	832	1,076
<u>North Central</u>						
All ages.....	7.5	7.9	7.2	10,835	4,392	6,443
Under 15 years.....	4.3	4.4	4.1	1,251	714	537
15-44 years	5.7	6.7	5.3	4,567	1,395	3,172
45-64 years	8.9	8.9	8.8	2,594	1,220	1,374
65 years and over	11.2	10.8	11.5	2,424	1,063	1,360
<u>South</u>						
All ages.....	6.9	7.3	6.6	11,290	4,366	6,924
Under 15 years.....	4.1	4.2	4.0	1,214	667	547
15-44 years	5.0	5.8	4.7	4,843	1,389	3,454
45-64 years	8.0	8.2	7.9	2,573	1,182	1,391
65 years and over	10.4	10.2	10.5	2,660	1,128	1,532
<u>West</u>						
All ages.....	6.0	6.5	5.7	5,966	2,435	3,531
Under 15 years.....	3.7	3.8	3.7	571	324	247
15-44 years	4.6	5.5	4.2	2,588	796	1,792
45-64 years	6.8	6.7	6.9	1,455	686	769
65 years and over	8.9	8.8	9.0	1,352	629	723

Table 15. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed diagnosis, by sex, geographic region, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All regions</u>	Average length of stay in days			Number of patients discharged in thousands		
All ages	5.4	5.9	5.1	18,627	7,025	11,602
Under 15 years.....	3.7	3.9	3.6	2,474	1,404	1,070
15-44 years	4.5	5.4	4.1	10,208	2,822	7,386
45-64 years	6.9	6.9	7.0	3,652	1,765	1,886
65 years and over.....	8.7	8.2	9.1	2,293	1,034	1,260
<u>Northeast</u>						
All ages.....	6.1	6.8	5.7	4,004	1,531	2,473
Under 15 years.....	4.0	4.0	3.9	506	297	209
15-44 years	4.9	6.2	4.4	2,186	611	1,574
45-64 years	7.9	7.9	7.9	837	411	425
65 years and over.....	10.9	10.4	11.2	476	211	264
<u>North Central</u>						
All ages.....	5.6	6.1	5.3	5,657	2,170	3,486
Under 15 years.....	3.8	4.0	3.6	819	459	360
15-44 years	4.8	5.9	4.4	3,031	848	2,183
45-64 years	7.3	7.2	7.5	1,110	548	563
65 years and over.....	8.7	8.0	9.3	696	316	380
<u>South</u>						
All ages.....	5.1	5.6	4.8	5,802	2,119	3,683
Under 15 years.....	3.7	3.9	3.6	783	439	344
15-44 years	4.3	5.0	4.0	3,245	870	2,376
45-64 years	6.6	6.6	6.6	1,069	498	571
65 years and over.....	8.3	8.0	8.6	705	312	393
<u>West</u>						
All ages.....	4.4	4.9	4.2	3,165	1,204	1,960
Under 15 years.....	3.2	3.4	3.0	366	209	157
15-44 years	3.7	4.5	3.4	1,746	493	1,253
45-64 years	5.6	5.7	5.5	636	308	328
65 years and over.....	6.7	6.2	7.2	418	195	223

Table 16. Average length of stay and number of patients discharged from short-stay hospitals with a single-listed surgery, by sex, geographic region, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Region and age	Both sexes	Male	Female	Both sexes	Male	Female
<u>All regions</u>	Average length of stay in days			Number of patients discharged in thousands		
All ages	6.6	7.2	6.2	10,227	4,093	6,133
Under 15 years.....	3.7	3.8	3.4	1,202	682	520
15-44 years	4.7	5.6	4.4	4,847	1,441	3,406
45-64 years	8.0	8.4	7.7	2,350	1,115	1,235
65 years and over	11.7	11.1	12.2	1,827	855	972
<u>Northeast</u>						
All ages.....	7.6	8.4	7.1	2,329	938	1,392
Under 15 years.....	3.8	3.8	3.8	238	139	99
15-44 years	5.1	6.2	4.6	1,071	311	760
45-64 years	9.1	9.4	8.8	564	271	294
65 years and over	13.9	13.2	14.5	456	216	240
<u>North Central</u>						
All ages.....	6.7	7.2	6.3	3,128	1,268	1,860
Under 15 years.....	3.7	4.1	3.3	399	220	179
15-44 years	4.9	5.6	4.5	1,441	448	994
45-64 years	8.2	8.6	7.8	736	351	386
65 years and over	11.5	10.8	12.0	552	250	302
<u>South</u>						
All ages.....	6.5	7.2	6.0	2,853	1,088	1,765
Under 15 years.....	3.8	3.9	3.6	355	205	151
15-44 years	4.7	5.5	4.4	1,429	384	1,045
45-64 years	8.0	8.6	7.5	595	281	314
65 years and over	11.8	11.6	12.0	473	219	255
<u>West</u>						
All ages.....	5.5	5.9	5.3	1,916	800	1,116
Under 15 years.....	3.2	3.2	3.2	210	118	92
15-44 years	4.3	5.2	3.8	905	297	607
45-64 years	6.5	6.4	6.7	454	213	241
65 years and over	9.0	8.5	9.5	347	171	176

Table 17. Average length of stay for patients discharged from short-stay hospitals with a first-listed diagnosis, by geographic region, bed size of hospital, sex, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Sex and age	All regions	Northeast			North Central			South			West		
		6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more
Both sexes		Average length of stay in days											
All ages.....	7.3	7.6	8.5	9.8	6.1	7.4	8.4	6.0	6.8	8.1	4.9	6.3	6.9
Under 15 years.....	4.2	3.2	4.3	6.0	3.4	4.0	5.4	3.3	4.0	5.6	2.8	3.8	5.6
15-44 years.....	5.3	5.6	5.6	6.8	4.6	5.5	6.6	4.3	4.8	6.3	3.7	4.8	5.4
45-64 years.....	8.5	8.1	9.7	12.0	6.7	8.9	9.8	6.4	8.3	9.6	5.4	7.2	7.7
65 years and over.....	11.1	11.8	13.5	15.5	8.5	11.6	12.1	9.1	10.8	11.7	7.8	9.1	9.8
Male													
All ages.....	7.8	7.7	9.0	11.3	6.3	7.8	9.0	6.0	7.4	9.1	5.0	6.8	7.5
Under 15 years.....	4.3	2.9	4.2	6.5	3.4	4.2	5.5	3.2	4.1	5.9	3.0	3.9	5.2
15-44 years.....	6.3	6.3	6.8	9.0	5.2	6.5	8.0	4.4	5.7	7.7	3.9	5.9	6.8
45-64 years.....	8.6	7.9	9.9	12.5	6.9	8.7	10.2	6.3	8.5	9.9	4.9	7.2	7.5
65 years and over.....	10.8	11.8	12.7	15.8	8.0	11.3	11.2	8.6	10.6	12.0	7.7	9.0	9.8
Female including deliveries													
All ages.....	7.0	7.5	8.2	8.8	6.0	7.2	8.0	6.1	6.5	7.5	4.9	5.9	6.4
Under 15 years.....	4.1	3.5	4.3	5.2	3.4	3.8	5.2	3.4	3.9	5.2	2.5	3.7	6.1
15-44 years.....	4.9	5.1	5.1	5.9	4.3	5.1	6.0	4.3	4.5	5.7	3.6	4.3	4.8
45-64 years.....	8.4	8.3	9.4	11.6	6.5	9.0	9.5	6.4	8.2	9.4	5.8	7.3	7.8
65 years and over.....	11.3	11.8	14.1	15.2	9.0	11.7	12.7	9.5	10.9	11.4	7.9	9.3	9.7
Female excluding deliveries													
All ages.....	7.6	8.0	8.8	9.5	6.3	7.7	8.7	6.5	7.1	8.3	5.3	6.5	7.2
Under 15 years.....	4.1	3.5	4.3	5.2	3.4	3.8	5.2	3.4	3.9	5.2	2.5	3.7	6.1
15-44 years.....	5.4	5.5	5.4	6.2	4.5	5.5	6.8	4.8	5.0	6.6	4.0	4.9	5.8
45-64 years.....	8.4	8.3	9.4	11.6	6.5	9.1	9.5	6.4	8.2	9.4	5.8	7.3	7.8
65 years and over.....	11.3	11.8	14.1	15.2	9.0	11.7	12.7	9.5	10.9	11.4	7.9	9.3	9.7

Table 18. Average length of stay for patients discharged from short-stay hospitals with a single-listed diagnosis, by geographic region, bed size of hospital, sex, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Sex and age	All regions	Northeast			North Central			South			West		
		6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more
<u>Both sexes</u>		Average length of stay in days											
All ages.....	5.4	5.9	6.0	6.7	4.5	5.4	6.5	4.5	5.0	6.2	3.7	4.6	5.3
Under 15 years.....	3.7	2.8	3.9	5.1	3.1	3.6	4.6	3.1	3.6	5.1	2.6	3.4	4.2
15-44 years.....	4.5	5.0	4.8	5.5	3.8	4.7	5.4	3.8	4.1	5.2	3.2	3.9	4.2
45-64 years.....	6.9	6.8	7.9	8.6	5.4	7.2	8.1	5.4	6.7	7.7	4.7	5.8	6.4
65 years and over.....	8.7	11.2	10.8	11.1	6.8	8.6	9.9	7.5	8.5	9.2	5.4	7.0	8.0
<u>Male</u>													
All ages.....	5.9	6.2	6.7	7.9	4.9	5.8	7.2	4.7	5.6	6.9	3.9	5.1	5.7
Under 15 years.....	3.9	2.6	3.8	5.8	3.0	3.8	4.9	3.0	3.8	5.4	2.9	3.5	4.1
15-44 years.....	5.4	5.7	6.0	7.5	4.2	5.6	7.0	4.1	5.0	6.3	3.5	4.8	5.2
45-64 years.....	6.9	6.4	8.1	8.5	5.8	6.8	8.2	5.4	6.7	7.8	4.6	5.9	6.2
65 years and over.....	8.2	12.8	10.1	10.7	7.0	8.0	8.6	7.2	8.2	9.1	5.2	6.3	7.4
<u>Female including deliveries</u>													
All ages.....	5.1	5.6	5.6	6.0	4.3	5.2	6.0	4.4	4.7	5.8	3.5	4.3	5.0
Under 15 years.....	3.6	3.2	3.9	4.1	3.2	3.4	4.3	3.2	3.4	4.7	2.3	3.2	4.5
15-44 years.....	4.1	4.5	4.3	4.7	3.6	4.3	4.8	3.6	3.8	4.8	3.1	3.5	3.8
45-64 years.....	7.0	7.4	7.8	8.6	5.2	7.6	8.1	5.4	6.8	7.7	4.7	5.6	6.7
65 years and over.....	9.1	10.0	11.3	11.5	6.7	9.1	11.1	7.8	8.8	9.2	5.7	7.5	8.7
<u>Female excluding deliveries</u>													
All ages.....	5.5	6.0	6.1	6.4	4.4	5.6	6.7	4.8	5.1	6.6	3.8	4.8	5.8
Under 15 years.....	3.6	3.2	3.9	4.1	3.2	3.4	4.3	3.2	3.4	4.7	2.3	3.2	4.5
15-44 years.....	4.4	4.8	4.4	4.9	3.6	4.5	5.4	4.1	4.1	5.7	3.3	3.9	4.5
45-64 years.....	7.0	7.4	7.8	8.7	5.2	7.6	8.1	5.4	6.8	7.7	4.7	5.6	6.7
65 years and over.....	9.1	10.0	11.3	11.5	6.7	9.1	11.1	7.8	8.8	9.2	5.7	7.5	8.7

Table 19. Average length of stay for patients discharged from short-stay hospitals with a single-listed surgery, by geographic region, bed size of hospital, sex, and age: United States, 1977

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Sex and age	All regions	Northeast			North Central			South			West		
		6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more	6-99 beds	100-499 beds	500 beds or more
<u>Both sexes</u>		Average length of stay in days											
All ages.....	6.6	5.9	7.6	8.3	5.5	6.4	7.5	5.5	6.2	7.6	4.3	5.8	6.5
Under 15 years.....	3.7	2.4	3.4	5.3	2.6	3.4	4.7	2.9	3.4	5.5	2.1	3.4	5.2
15-44 years.....	4.7	4.0	5.0	5.7	4.0	4.6	5.7	4.1	4.5	5.6	3.6	4.3	5.3
45-64 years.....	8.0	7.5	9.0	9.9	6.5	7.9	8.9	7.0	7.7	9.2	5.4	6.8	6.9
65 years and over.....	11.7	12.1	13.8	14.7	10.6	11.4	11.8	11.2	11.9	12.1	7.2	9.3	9.6
<u>Male</u>													
All ages.....	7.2	6.0	8.2	9.6	5.6	6.8	8.2	5.7	7.0	8.7	4.3	6.2	7.4
Under 15 years.....	3.8	2.5	3.3	5.7	2.8	3.8	5.0	2.7	3.6	5.8	2.4	3.2	5.0
15-44 years.....	5.6	4.1	6.0	7.4	3.9	5.4	6.6	4.1	5.4	6.8	4.0	5.3	7.0
45-64 years.....	8.4	8.5	9.3	10.1	6.8	8.2	9.6	7.8	8.2	9.8	5.0	6.6	7.4
65 years and over.....	11.1	10.0	12.9	15.2	10.1	10.7	11.2	10.2	11.5	12.5	6.4	8.8	9.3
<u>Female including deliveries</u>													
All ages.....	6.2	5.9	7.1	7.5	5.4	6.1	6.9	5.4	5.7	6.9	4.2	5.5	5.9
Under 15 years.....	3.4	2.3	3.6	4.8	2.5	3.0	4.2	3.0	3.3	4.9	1.9	3.5	5.3
15-44 years.....	4.4	3.9	4.5	5.1	4.0	4.3	5.2	4.0	4.1	5.1	3.4	3.8	4.5
45-64 years.....	7.7	6.8	8.7	9.8	6.4	7.7	8.2	6.3	7.3	8.6	5.8	6.9	6.5
65 years and over.....	12.2	13.7	14.6	14.3	11.0	11.9	12.5	11.9	12.2	11.8	8.0	9.8	9.9
<u>Female excluding deliveries</u>													
All ages.....	6.4	6.1	7.3	7.7	5.6	6.2	7.2	5.6	6.0	7.3	4.3	5.7	6.3
Under 15 years.....	3.4	2.3	3.5	4.8	2.5	3.0	4.1	3.0	3.3	4.9	1.8	3.5	5.3
15-44 years.....	4.2	3.5	4.1	4.7	3.9	4.0	5.2	4.0	4.1	5.1	3.3	3.8	4.8
45-64 years.....	7.7	6.8	8.7	9.8	6.4	7.7	8.2	6.3	7.3	8.6	5.8	6.9	6.5
65 years and over.....	12.2	13.7	14.6	14.3	11.0	11.9	12.5	11.9	12.2	11.8	8.0	9.8	9.9

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APPENDIX I

TECHNICAL NOTES ON METHODS

Statistical Design of the National Hospital Discharge Survey

Scope of the survey.—The scope of the National Hospital Discharge Survey (NHDS) encompasses patients discharged from noninstitutional hospitals, exclusive of military and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only hospitals having six beds or more for patient use and those in which the average length of stay for all patients is less than 30 days are included in the survey. Although all discharges of patients from these hospitals are within the scope of the survey, discharges of newborn infants from all hospitals are excluded from this report as well as discharges of all patients from Federal hospitals.

Sampling frame and size of sample.—The sampling frame (universe) for hospitals in the NHDS is the Master Facility Inventory of Hospitals and Institutions (MFI). A detailed description of how the MFI was developed, its contents, plans for maintaining it, and procedures for assessing the completeness of its coverage has been published.²

The universe for the survey consisted of 6,965 short-stay hospitals contained in the MFI in 1963, 442 hospitals that were added to the MFI in 1969, another 223 hospitals that were added in 1972, and 273 hospitals that were added in 1976. The distribution of the hospitals in the MFI and in the NHDS sample is shown by bed size and geographic region in table I.

The sample for 1977 consisted of 535 hospitals. Of these hospitals, 68 refused to participate

and 44 were out of scope either because the hospital had gone out of business or because it failed to meet the definition of a short-stay hospital. Thus 423 hospitals participated in the survey during 1977 and provided approximately 224,000 abstracts of medical records.

Sample design.—All hospitals with 1,000 beds or more in the universe of short-stay hospitals were selected with certainty in the sample. All hospitals with fewer than 1,000 beds were stratified, the primary strata were the 24 size-by-region classes shown in table I. Within each of these 24 primary strata, the allocation of the hospitals was made through a controlled selection technique so that hospitals in the sample would be properly distributed with regard to type of ownership and geographic region. Sample hospitals were drawn with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals.

The within-hospital sampling ratio for selecting sample discharges varied inversely with the probability of selection of the hospital. The smallest sampling fraction of discharged patients was taken in the largest hospitals, and the largest fraction was taken in the smallest hospitals. This sampling was done to compensate for the fact that hospitals were selected with probabilities proportionate to their size class and to ensure that the overall probability of selecting a discharge would be approximately the same in each size class.

In nearly all hospitals, the daily listing sheet of discharges was the frame from which the subsamples of discharges were selected within the sample hospitals. The sample discharges were selected by a random technique, usually on the basis of the terminal digit(s) of the patient's

NOTE: A list of references follows the text.

Table 1. Distribution of short-stay hospitals in the universe (Master Facility Inventory) and in the National Hospital Discharge Survey sample and the number of hospitals that participated in the survey, by geographic region and bed size of hospital: United States, 1977

Bed size of hospital	All regions	North-east	North Central	South	West	
<u>All sizes</u>		Number of hospitals				
Universe	7,903	1,177	2,214	3,130	1,472	
Total sample	535	132	152	170	81	
Number participating	423	113	120	125	65	
<u>6-49 beds</u>						
Universe	3,486	221	889	1,658	718	
Total sample	69	8	18	30	13	
Number participating	44	6	15	16	7	
<u>50-99 beds</u>						
Universe	1,871	299	482	721	369	
Total sample	79	14	20	31	14	
Number participating	58	10	14	23	11	
<u>100-199 beds</u>						
Universe	1,371	298	404	448	221	
Total sample	117	26	33	39	19	
Number participating	98	25	28	27	18	
<u>200-299 beds</u>						
Universe	614	193	164	160	97	
Total sample	97	31	27	24	15	
Number participating	76	26	21	17	12	
<u>300-499 beds</u>						
Universe	408	112	134	109	53	
Total sample	97	25	32	28	12	
Number participating	81	21	26	25	9	
<u>500-999 beds</u>						
Universe	135	45	48	29	13	
Total sample	58	19	19	13	7	
Number participating	49	17	13	12	7	
<u>1,000 beds or more</u>						
Universe	18	9	3	5	1	
Total sample	18	9	3	5	1	
Number participating	17	8	3	5	1	

medical record number—a number assigned when the patient was admitted to the hospital. If the hospital's daily discharge listing did not show the medical record numbers, the sample was selected by starting with a randomly selected discharge and taking every k th discharge thereafter.

Data Collection and Processing

Data collection.—Depending on the study procedure agreed on with the hospital administrator, the sample selection and the transcription of information from the hospital records to abstract forms were performed either by the hospital staff or by representatives of the National Center for Health Statistics (NCHS) or by both. In about two-thirds of the hospitals that participated in the NHDS during the year, this work was performed by the medical records department of the hospital. In the remaining hospitals, the work was performed by personnel of the U.S. Bureau of the Census acting for NCHS.

Survey hospitals used an abstract form to transcribe data from the hospital records. The abstract form provides for recording demographic data, admission and discharge dates, zip code of the patient's residence, expected sources of payment, disposition of patient at discharge, and information on discharge diagnoses and surgical operations or procedures (figure I). All discharge diagnoses and operations were listed on the abstract form 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 operations were entered on the face sheet of the medical record.

Shipments of completed abstract forms for each sample hospital were transmitted, along with sample selection control sheets, to a Census Regional Office. Every shipment of abstracts was reviewed and each abstract form was checked for completeness. Abstracts were then sent to NCHS for processing.

Medical coding and edit.—The medical information recorded on the sample patient abstracts was coded centrally by NCHS staff. A maximum of five diagnostic codes was assigned for each sample abstract; in addition, if the medical information included surgery, a maximum of three codes for surgical operations and procedures was

assigned. Following the conversion of the data on the Medical Abstract to computer tape, a final medical edit was accomplished by computer inspection runs and a review of rejected abstracts. If sex or age of patient was incompatible with the recorded medical information, priority was given to the medical information in the editing decision.

The basic system used for coding the diagnoses on the NHDS sample patient abstracts is the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*³ (ICDA).

Patient characteristics not stated.—If the age or sex of the patient was not stated on the hospital records of sample hospitals (the face sheet of patient's medical record), it was imputed by assigning the patient an age or sex consistent with the age or sex of other patients with the same diagnostic code. Color was identified as "not stated." If the dates of admission or discharge were not given and if they could not be obtained from the monthly sample listing sheet transmitted by the sample hospital, a length of stay was imputed by assigning the patient a stay characteristic of the stays of other patients of the same age. The age and sex of the patient were not stated for less than one-fourth of 1 percent of the discharges. However, color was not stated for 12.8 percent of all discharges, and, therefore, caution should be used in drawing conclusions from the data by color which are shown.

Rounded numbers.—Estimates of the numbers of inpatient discharges, discharges with surgery, and all-listed operations have been rounded to the nearest thousand for tabular presentation. For this reason, detailed figures within the tables do not always add to totals. Rates and percents were calculated on the basis of unrounded figures and will not necessarily agree with computations made from the rounded data.

Population estimates.—The population estimates used in computing rates are unpublished estimates for the U.S. civilian noninstitutionalized population on July 1 of the data year provided by the U.S. Bureau of the Census. The estimates by age and sex and by geographic region

NOTE: A list of references follows the text.

CONFIDENTIAL - All information which would permit identification of an individual or of an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to other persons or used for any other purpose.

FORM HDS-1
(12-13-70)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
NATIONAL CENTER FOR HEALTH STATISTICS

MEDICAL ABSTRACT - HOSPITAL DISCHARGE SURVEY

A. PATIENT IDENTIFICATION

1. Hospital number

2. HDS number

3. Medical Record number _____

Month Day Year

4. Date of admission ... - -

5. Date of discharge ... - -

6. Residence ZIP Code

B. PATIENT CHARACTERISTICS

7. Date of birth ... Month Day Year
 - -

8. Age (Complete only if Date of Birth not given) ... Units

1 Years
2 Months
3 Days

9. Sex (Mark one) 1 Male 2 Female 3 Not stated

10. Race or Color (Mark one) 1 White 2 Black 3 Other 4 Not stated

11. Marital Status (Mark one) 1 Married 2 Single 3 Widowed 4 Divorced 5 Separated 6 Not stated

12. Expected Source(s) of payment

Principal (Mark one) Other (Mark all that apply)

1 Self-pay

2 Workmen's Compensation

3 Medicare

4 Medicaid

5 Other government payments

6 Blue Cross

7 Other private or commercial insurance

8 No charge

9 Other (Specify) _____

10 Not stated

13. Disposition of Patient (Mark one)

1 Routine discharge/discharged home

2 Left against medical advice

3 Discharged/transferred to another facility or organization

4 Discharged/referred to organized home care service

5 Died

6 Not stated

C. DIAGNOSES

Principal: _____

Other/additional: _____

See reverse side

D. SURGICAL AND DIAGNOSTIC PROCEDURES

Principal: _____

Other/additional: _____

Date: Month Day Year
 - -

NONE See reverse side

Completed by _____ Date _____

Figure 1. Medical Abstract for the Hospital Discharge Survey

are presented in table II and are consistent with the population estimates published in *Current Population Reports*, Series P-25. However, they are not official population estimates of the Bureau of the Census.

Table II. Civilian noninstitutionalized population by sex, age, and geographic region: United States, July 1, 1977

[Population estimates consistent with Series P-25, *Current Population Reports*, U.S. Bureau of the Census]

Age and region	Both sexes	Male	Female
Population in thousands			
All ages.....	212,182	102,399	109,782
Northeast.....	48,529	23,292	25,237
North Central.....	57,055	27,796	29,259
South.....	68,278	32,694	35,584
West.....	38,319	18,617	19,702
0-14 years.....	51,481	26,260	25,220
Under 1 year.....	3,161	1,619	1,542
1-4 years.....	12,067	6,166	5,901
5-14 years.....	36,253	18,475	17,778
Northeast.....	11,081	5,662	5,419
North Central.....	13,950	7,123	6,827
South.....	17,063	8,687	8,375
West.....	9,386	4,787	4,599
15-44 years.....	95,060	46,231	48,828
15-24 years.....	39,720	19,496	20,224
25-34 years.....	32,247	15,642	16,604
35-44 years.....	23,093	11,092	12,001
Northeast.....	21,267	10,360	10,907
North Central.....	25,722	12,684	13,038
South.....	30,455	14,622	15,833
West.....	17,616	8,566	9,051
45-64 years.....	43,357	20,704	22,653
45-54 years.....	23,174	11,174	11,999
55-64 years.....	20,183	9,529	10,654
Northeast.....	10,761	5,085	5,676
North Central.....	11,387	5,490	5,896
South.....	13,536	6,394	7,142
West.....	7,674	3,735	3,938
65 years and over.....	22,284	9,204	13,080
65-74 years.....	14,278	6,205	8,072
75 years and over.....	8,007	2,999	5,008
Northeast.....	5,421	2,186	3,235
North Central.....	5,996	2,499	3,497
South.....	7,225	2,991	4,234
West.....	3,643	1,529	2,114

Reliability of Estimates

Estimation.—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.^{4,5}

Measurement errors.—As in any survey, results are subject to nonsampling or measurement errors, which include errors due to hospital nonresponse, missing abstracts, information incompletely or inaccurately recorded on abstract forms, and processing errors. Some of these errors were discussed under the previous section entitled "Patient characteristics not stated."

Sampling errors.—The standard error is primarily a measure of the variability that is attributed to using a value obtained from a sample as an estimate of a population value. In this report it also reflects part of the measurement error. The value that would have been obtained if a complete enumeration of the population had been made will be contained in an interval represented by the sample estimate plus or minus 1 standard error about 68 out of 100 times and plus or minus 2 standard errors about 95 out of 100 times.

The relative standard error is obtained by dividing the standard error by the estimate. The resulting value is multiplied by 100, which expresses the standard error as a percentage of the estimate.

The standard error of one statistic is generally different from that of another, even when the two come from the survey. To derive standard errors that would be applicable to a wide variety of statistics and that could be prepared at a moderate cost, a number of approximations are required. As a result, the figures shown in this appendix provide general relative standard errors for a wide variety of estimates rather than the specific error for a particular statistic.

NOTE: A list of references follows the text.

Approximate relative standard errors and standard errors have been prepared for measuring the variances applicable to (1) estimates of all patient discharges, or first-listed diagnoses, for patient characteristics (e.g., age, sex, and color) and hospital characteristics (e.g., region, bed size, and ownership); and (2) estimates of discharges for single-listed diagnosis and single-listed surgery (operations) for the patient and hospital characteristics.

The selection of the appropriate relative standard error is made as follows:

1. Discharges, or first-listed diagnoses, single-listed diagnosis, and single-listed

surgery for patient characteristics: Relative standard errors of the estimated number of discharges are obtained from the curve in figure II.

2. The approximate standard error of estimated percents, when the characteristic(s) used to form the numerator of the percent is a subclass of the denominator, by patient and hospital characteristic, is presented in table III.
3. Approximate standard errors for estimates of discharges by average length of stay applicable to patient and hospital characteristics are presented in table IV.

Figure II. Approximate relative standard errors of estimated numbers of patients discharged, or of first-listed diagnoses, by selected patient and hospital characteristics

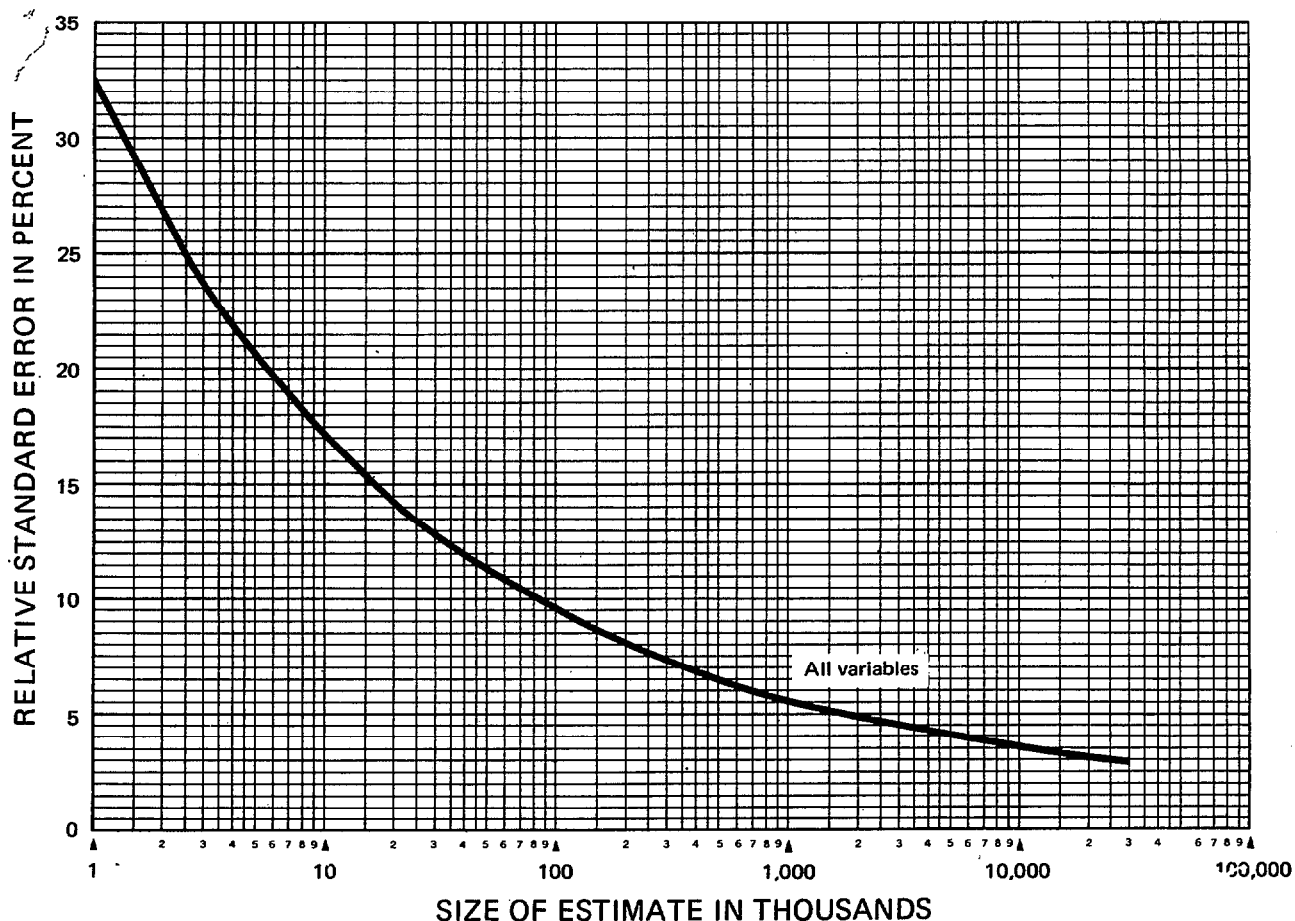


Illustration for use of figure II: As shown in table 14 in the West Region, an estimated 324,000 male patients who were under 15 years of age were discharged in 1977 from short-stay, non-Federal hospitals. The relative standard error of this estimate, as read from the curve "All variables" is approximately 7.5 percent. The standard error is approximately 24,000 (7.5 percent of 324,000).

Table III. Approximate standard errors of percents shown in this report for patient discharges: patient characteristics classified by geographic region and for all hospitals

[Standard errors for patient characteristics classified by size of hospital and geographic region by size of hospital are 1½ times and by type of ownership are 2½ times the standard errors shown in this table]

Number of discharges (base of percent in thousands)	Estimated percent					
	2 or 98	4 or 96	10 or 90	20 or 80	30 or 70	50
	Standard error expressed in percentage points					
100	1.6	2.3	3.6	4.7	5.4	5.9
200	1.2	1.6	2.5	3.4	3.8	4.2
600	0.7	0.9	1.5	1.9	2.2	2.4
1,000	0.5	0.7	1.1	1.5	1.7	1.9
2,000	0.4	0.5	0.8	1.1	1.2	1.3
6,000	0.2	0.3	0.5	0.6	0.7	0.8
10,000	0.2	0.2	0.4	0.5	0.5	0.6
20,000	0.1	0.2	0.3	0.3	0.4	0.4
40,000	0.1	0.1	0.2	0.2	0.3	0.3

Illustration of use of table III: Figure 1 shows that 30.8 percent of the 11,115,000 white male patients (table 1) discharged during 1977 from all hospitals were 15-44 years of age. Linear interpolation between the values shown in table III yields an approximate standard error of 0.5 percent for an estimate of 30.8 percent with a base of 11,115,000.

Table IV. Approximate standard errors of average lengths of stay shown in this report for patient discharges: patient characteristics cross-classified by geographic region, bed size of hospital, geographic region by bed size of hospital and for all hospitals

[Standard errors for patient characteristics classified by type of ownership are 1½ times the standard errors shown in this table]

Number of discharges (base of average in thousands)	Average length of stay in days			
	2	6	10	14
	Standard error in days			
100	0.3	0.6	0.8	1.1
200	0.2	0.5	0.7	0.9
600	0.2	0.4	0.5	0.7
1,000	0.2	0.3	0.5	0.5
2,000	0.1	0.2	0.3	0.5
6,000	0.1	0.2	0.3	0.4
10,000	0.1	0.2	0.3	0.4
20,000	0.1	0.1	0.2	0.3

Illustration of use of table IV: Table 15 shows that the average length of stay was 7.9 days for the estimated 837,000 patients age 45-64 years with a single-listed diagnosis discharged from hospitals in the Northeast Region. Linear interpolation between the values shown in table IV will yield an approximate standard error of 0.4 days for an estimated average length of stay of 7.9 days with a base of 837,000.



APPENDIX II

DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

Hospitals and Hospital Characteristics

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

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

Type of ownership of hospital.—The type of 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 State or local governments.

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 short-stay hospital or more. Infants admitted on the day of birth, directly or by transfer from another medical facility, with or without mention of a disease, disorder, or immaturity are included. All newborn infants, defined as those admitted by birth to the hospital,

are excluded. The terms “patient” and “inpatient” are used synonymously.

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.

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 diagnosis.—One or more diseases or injuries (or special conditions and examinations without sickness or tests with negative findings) that the attending physician assigns to the medical record of patients. In 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 five 3- or 4-digit codes according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*³ (ICDA), and coding modifications for use in NHDS.

First-listed diagnosis.—The coded diagnosis identified as the principal diagnosis or else listed first on the face sheet of the medical record. The

NOTE: A list of references follows the text.

number of first-listed diagnoses is equivalent to the number of discharges and includes single-listed diagnosis.

Terms Relating to Surgery

Discharges with surgery.—The estimated number of surgically treated patients discharged from non-Federal short-stay hospitals during the year.

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

Demographic Terms

Age.—Patient’s age refers to age at birthday prior to admission to the hospital inpatient service.

Color.—Patients are classified into two groups, “white” and “all other.” The all other classification includes all categories other than white. Mexican and Puerto Rican are included in the white category unless specifically identified as all other.

Geographic region.—Hospitals are classified by location in one of the four geographic regions of the United States which correspond to those used by the U.S. Bureau of the Census.

<i>Region</i>	<i>States included</i>
Northeast	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania
North Central....	Michigan, Ohio, Illinois, Indiana, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas
South	Delaware, Maryland, District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas
West	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, and Alaska



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