

**VITAL and HEALTH STATISTICS**

DATA FROM THE NATIONAL HEALTH SURVEY

utilization of

# Short-Stay Hospitals

Summary of Nonmedical Statistics

United States - 1965

Statistics are presented on the utilization of short-stay hospitals based on data abstracted by the Hospital Discharge Survey from hospital records for a national sample of discharged patients. Discharges, days of care, and average length of stay are distributed by each of the following variables: age, sex, marital status, color, and discharge status of the patient; and ownership, size, and geographic area of the hospital. Bed occupancy rates are distributed by selected characteristics of the hospital.

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Washington, D. C.

August 1967

U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
John W. Gardner  
Secretary

Public Health Service  
William H. Stewart  
Surgeon General

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### COOPERATION OF THE BUREAU OF THE CENSUS

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.

# PREFACE

This is the second in the series of reports from the National Center for Health Statistics presenting results from the Hospital Discharge Survey. The first report<sup>1</sup> was based on discharges occurring during the 3-month period of October-December 1964; it was essentially a by-product of a pilot study which was conducted primarily to test and develop procedures for the Hospital Discharge Survey. This is, however, the first report in this series based on discharges occurring over an entire calendar year, and it is expected that subsequent reports in this series will be based on a full calendar year.

It is appropriate at this time to acknowledge the assistance of several organizations that have contributed to the development and implementation of the Hospital Discharge Survey. The Board of Trustees of the American Hospital Association endorsed the Hospital Discharge Survey. Dr. Edwin Crosby, its Executive Director, and his staff provided constructive consultation during the formative stages of planning the survey and directly aided in implementing the survey by contacting hospitals and urging them to cooperate

with the National Center for Health Statistics. The Department of Biostatistics in the School of Public Health at the University of Pittsburgh conducted a pretest which demonstrated the feasibility of the Hospital Discharge Survey. Dr. Donovan Thompson and Dr. Isidore Altman were directors of the project, and they were ably assisted by Mrs. Ann Brown.

Under contractual arrangement, the Bureau of the Census acts as the Center's field agents in the Hospital Discharge Survey. The Bureau's Demographic Surveys and Field Divisions arranged for inducting hospitals into the survey and for assisting in the continuing collection of statistical data from these hospitals.

Also to be acknowledged are the administrators, medical record librarians, and other persons on the staffs of the hospitals that participated in the survey during 1965. The Center nominally paid for the assistance provided by these hospitals. However, it is the dedication of the hospitals' staffs and their generosity in contributing time to projects pertaining to the health of the Nation that accounts for their overwhelming cooperation in this survey.

These acknowledgments are not complete by any means because there have been many other agencies and persons within and outside the Federal Government that contributed their efforts and advice to the survey.

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<sup>1</sup>National Center for Health Statistics: Patients discharged from short-stay hospitals, United States, October-December 1964. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 13-No. 1. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1966.

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*IN THIS REPORT, summary statistics are presented on the utilization of short-stay hospitals in the United States during 1965. These statistics, collected in the Hospital Discharge Survey, are based on information abstracted from hospital records for a national sample of patients discharged from short-stay hospitals.*

*An estimated 29 million patients were discharged from short-stay hospitals, excluding military and Veterans Administration hospitals, during 1965. These patients received over 228 million days of care, representing an average hospital stay of 7.8 days. The estimated rates of hospital utilization were 153 discharges and 1,203 days of care per 1,000 civilian, noninstitutional population. The utilization of short-stay hospitals varied by age, sex, color, and marital status of the patient and by whether the patient was discharged alive. There was also variation in these rates by geographic region.*

*The bed occupancy rate in short-stay hospitals was about 78 percent. There was variation in this rate and in the average length of stay by size, ownership, and geographic area of the hospital.*

#### SYMBOLS

Data not available-----	---
Category not applicable-----	...
Quantity zero-----	-
Quantity more than 0 but less than 0.05-----	0.0
Figure does not meet standards of reliability or precision-----	*

# UTILIZATION OF SHORT-STAY HOSPITALS

## SUMMARY OF NONMEDICAL STATISTICS

Monroe G. Sirken, *Division of Health Records Statistics*

### INTRODUCTION

This report presents summary-type statistics on hospital utilization during 1965 according to characteristics of discharged patients and to characteristics of the participating hospitals. Subsequent reports in this series will present more detailed statistics on hospital utilization during 1965.

For several years, the National Center for Health Statistics has published reports<sup>2</sup> on utilization of short-stay hospitals based on information collected in the Health Interview Survey. There are, however, basic differences in the types of hospital utilization statistics available from the Health Interview Survey and those from the Hospital Discharge Survey. The Health Interview Survey collects statistics for selected characteristics of discharged patients (namely, socioeconomic variables) which are not collected in the Hospital Discharge Survey. On the other hand, the Hospital Discharge Survey collects detailed medical statistics by diagnoses and surgical procedures and operations that are not

collected in the Health Interview Survey. Also, there are differences in the population covered and in data-collection techniques which result in substantial, but largely reconcilable, differences in the estimates of hospital utilization derived from both surveys. An explanation of the difference between the two surveys in the estimated annual number of discharges during 1965 and a reconciliation of these differences is presented in Appendix II.

### SELECTED FINDINGS

It is estimated that about 29 million patients were discharged from short-stay hospitals, excluding military and Veterans Administration hospitals, during 1965. These patients received over 228 million days of care, which represents an average length of stay of 7.8 days. The estimated rates of hospital utilization were 153 discharges and 1,203 days of care for 1,000 persons.

The utilization of short-stay hospitals varies with the characteristics of the patients.

Rates of hospital utilization were lowest for children of ages 1-14 years. Persons 65 years and over had higher rates than those of any other age group. In general, the rates of discharge and days of care, as well as the average length of stay, increased with advancing age for persons 15 years and older. The number of discharges per 1,000 persons 15-34 years of age is conspicuously high because of the large number of women in this age

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<sup>2</sup>For the most recent report on hospital utilization based on findings of the Health Interview Survey, see National Center for Health Statistics, "Hospital Discharges and Length of Stay, Short-Stay Hospitals, United States, July 1963-June 1964," *Vital and Health Statistics*, PHS Pub. No. 1000-Series 10-No. 30, Public Health Service, Washington, U.S. Government Printing Office, June 1966.

group who were hospitalized for delivery and for conditions of pregnancy, childbirth, and the puerperium.

The large number of admissions for delivery and conditions of pregnancy, childbirth, and the puerperium affects the hospital utilization statistics by sex and by marital status. Thus, the number of discharges per 1,000 persons was more than 40 percent larger for women than for men. The average length of stay, however, was higher for males (8.4 days) than for females (7.5 days). The discharge rate was about one-third larger for married than for unmarried persons, but the average length of stay was greater for unmarried persons.

The utilization of short-stay hospitals also varies with the characteristics of hospitals.

The average duration of stay was about 6 days in proprietary hospitals and about 8 days in voluntary hospitals and in government-owned (excluding military and Veterans Administration) hospitals. The bed occupancy rate was higher for voluntary hospitals (82 percent) than for government and proprietary hospitals (69 percent).

The average length of stay of the patient increased with the size of the hospitals, ranging from about 6.7 days for hospitals with fewer than 200 beds to 12.6 days for hospitals with 1,000 beds or more. The bed occupancy rate was highest for hospitals of 200-499 beds and lower for the smaller and the larger hospitals.

The discharge rate was about 10 percent lower in the Northeast and the West than in the South and North Central Regions, but the average length of stay was lower in the South and the West than in the other two regions. The bed occupancy rate was about 10 percent lower in the West than in the other regions.

## SOURCES AND LIMITATIONS OF DATA

This report presents summary findings on hospital utilization by characteristics of hospitals and of patients discharged during the calendar year 1965. All short-stay hospitals, excluding military and Veterans Administration hospitals, and hospital departments of long-term and custodial institutions, are within the scope of the survey. All discharges from these hospitals except

well-newborn infants are within the scope of the survey. The mother's discharge is within scope, but the infant's discharge is counted only if it is not a well-newborn infant.

The principal source of information in the survey is the hospital's file of existing patient medical records. In the hospitals participating in the survey, statistical information pertaining to the characteristics of a sample of discharged patients and their hospitalization is recorded on abstract forms which are shipped to the National Center for Health Statistics for processing. A copy of the front side of this abstract form covering the nonmedical data presented in this report is shown in figure 1. The reverse side of the form is used to record discharge diagnoses and surgical operations and procedures. Appendix I of this report describes in greater detail the data-collection and data-processing procedures used in this survey.

In general, the data recorded on the abstract form and presented in this report are limited to key items of information about the discharged patient and his hospitalization that are generally available from the "face sheet" of the patient's medical record. Information on the characteristics of the hospital is available from the Master Facility Inventory of Hospitals and Institutions.<sup>3</sup>

The survey uses a 2-stage sample design. In the first stage, a stratified sample of 315 hospitals was selected from the approximately 7,000 short-stay hospitals in the United States, excluding military and Veterans Administration hospitals, contained in the Master Facility Inventory of Hospitals and Institutions. In the second stage of the sample design, a systematic sample of discharges was selected within the sample hospitals. The sample was selected from the patients listed on the daily discharge listing sheet—a current record of discharges which is maintained by nearly all hospitals. A more detailed description of the sample design is given in Appendix I.

Since the estimates presented in this report are based on a subsample of about 100,000 discharges from about 300 hospitals participating in the survey, rather than on all discharges (about

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<sup>3</sup>National 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.





29 million) from all in-scope hospitals (about 7,000), they are subject to sampling error. Estimates of the sampling error of several types of hospital utilization statistics presented in this report are discussed in the section "Reliability of Estimates" in Appendix I.

In addition to sampling errors, the statistics are subject to measurement errors. These include errors due to hospital nonresponse, missing abstracts, information incompletely or inaccurately reported on the abstract forms, and processing errors. The extent of missing data and an explanation of the adjustments and imputations that were used to compensate for them are also discussed in Appendix I.

Appendix III contains definitions of terms relating to hospitalization, such as "hospital" and "discharge," as well as definitions of demographic terms used in this report. Since many of these terms have specialized meanings in the Hospital Discharge Survey, familiarity with these definitions will aid in the interpretation of the data.

## LENGTH OF STAY

There were about 29 million discharges from short-stay hospitals during 1965. These discharges are distributed by duration of stay in table 1. The cumulative percent distribution of discharges by duration of stay is shown in figure 2.

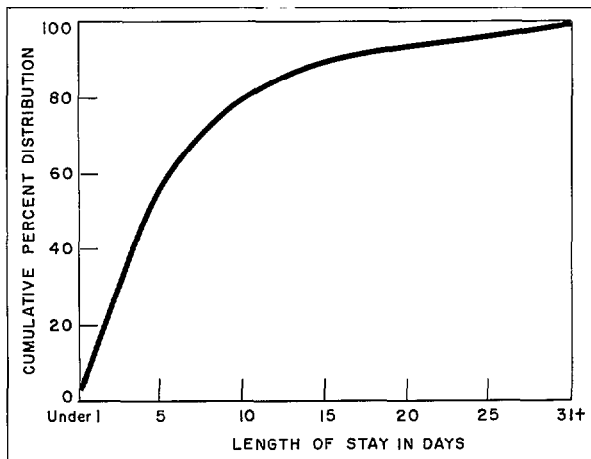


Figure 2. Cumulative percent distribution of hospital episodes for patients discharged from short-stay hospitals, by length of stay.

Table 1. Number, and percent and cumulative percent distributions, of discharges, by length of stay: United States, 1965

[Discharges from noninstitutional short-stay hospitals excluding Veterans Administration and military hospitals]

Length of stay	Number in thousands	Percent distribution	Cumulative percent distribution
Total-	29,120	100.0	100.0
Under 1 day-	620	2.1	2.1
1 day-----	2,423	8.3	10.5
2 days-----	3,883	13.3	23.8
3 days-----	3,727	12.8	36.6
4 days-----	3,307	11.4	47.9
5 days-----	2,769	9.5	57.4
6 days-----	1,945	6.7	64.1
7 days-----	1,540	5.3	69.4
8 days-----	1,329	4.6	74.0
9 days-----	1,051	3.6	77.6
10 days-----	873	3.0	80.6
11 days-----	723	2.5	83.1
12 days-----	577	2.0	85.1
13 days-----	497	1.7	86.8
14 days-----	433	1.5	88.2
15 days-----	358	1.2	89.5
16 days-----	291	1.0	90.5
17 days-----	246	0.8	91.3
18 days-----	226	0.8	92.1
19 days-----	218	0.7	92.8
20 days-----	198	0.7	93.5
21 days-----	178	0.6	94.1
22 days-----	133	0.5	94.6
23 days-----	119	0.4	95.0
24 days-----	116	0.4	95.4
25 days-----	108	0.4	95.8
26 days-----	96	0.3	96.1
27 days-----	77	0.3	96.4
28 days-----	81	0.3	96.6
29 days-----	72	0.2	96.9
30 days-----	71	0.2	97.1
31+ days-----	835	2.9	100.0

About 2 percent of the discharges occurred on the day of admission and over 10 percent of the patients were discharged by the day following admission. The median length of stay was between

4 and 5 days and about two-thirds of the discharges occurred within 1 week of admission, about 90 percent occurred within 15 days, and about 97 percent, within 1 month.

## UTILIZATION BY PATIENT CHARACTERISTICS

The 29 million discharges during 1965 used about 228 million hospital days of care. This represents an average length of stay of 7.8 days. The estimated rates of hospital utilization in 1965 were 153 discharges and 1,203 days of care per 1,000 persons. For every 100,000 persons, 330 hospital beds were used daily. In other words, on the average day during 1965, 330 out of every 100,000 civilian, noninstitutionalized persons were in short-stay hospitals. National estimates of the number of discharges, days of care, and average length of stay by selected characteristics of the patients are presented in table 2. Annual rates of hospital utilization are presented in table 3.

### Age

In general, hospital utilization rates were higher for persons 65 years of age and over and for infants under 1 year of age. The utilization rates were 227 discharges and 1,931 days of care, respectively, per 1,000 infants under 1 year of age. The rate would, of course, be much higher if well-newborn infants were included in the survey (see definition of well-newborn in Appendix III). The rates per 1,000 persons 65 years of age and older were 264 discharges and 3,444 days of care. Children in the age group 1-14 years had the lowest utilization rates. At ages 15 years and older, the number of days of care per 1,000 persons and the average length of stay increased with advancing age (fig. 3). The number of discharges per 1,000 persons 15-34 years of age was conspicuously high relative to the rates for persons in the succeeding age groups. The irregularity is caused by the large number of women in the age groups 15-34 years who were hospitalized for delivery and for conditions of pregnancy, childbirth, and the puerperium. The rates of discharge and days of care increased sharply at the

older ages. Thus, the discharge rates for persons 75 years and older were over 50 percent larger and the days of care rates over 100 percent greater than the respective rates for persons 55-74 years of age.

### Sex

About three-fifths of the discharges from short-stay hospitals were women. The utilization rates are substantially higher for females than for males because they include hospitalizations for delivery and related diagnoses. The discharge rates were 124 and 181, respectively, per 1,000 males and 1,000 females. Excluding discharges associated with deliveries and related diagnoses for females would substantially reduce the sex difference in the discharge rate. The rates for days of care were 1,038 and 1,354 per 1,000 males and females, respectively. The average length of stay, however, was higher for males—about 8.4 days compared with 7.5 days for females.

### Marital Status

Of the patients 15 years of age and older discharged from short-stay hospitals, about 73 percent were reported as married, about 25 percent were reported not married, and for nearly 3 percent, marital status was not reported. The discharge rate was higher for married persons (200 per 1,000 population) than for unmarried persons (147 per 1,000 population), but the average length of stay was higher for unmarried persons (10.4 days) than for married persons (7.6 days). The net effect is that the annual rate of hospital utilization in terms of days of care was about the same for those reported as married and not married, or about 1,520 days per 1,000 persons.

### Color

It is difficult to interpret the statistics on hospital utilization by color of discharged patients because color was not reported for about 12 percent of the discharges. For this reason, utili-

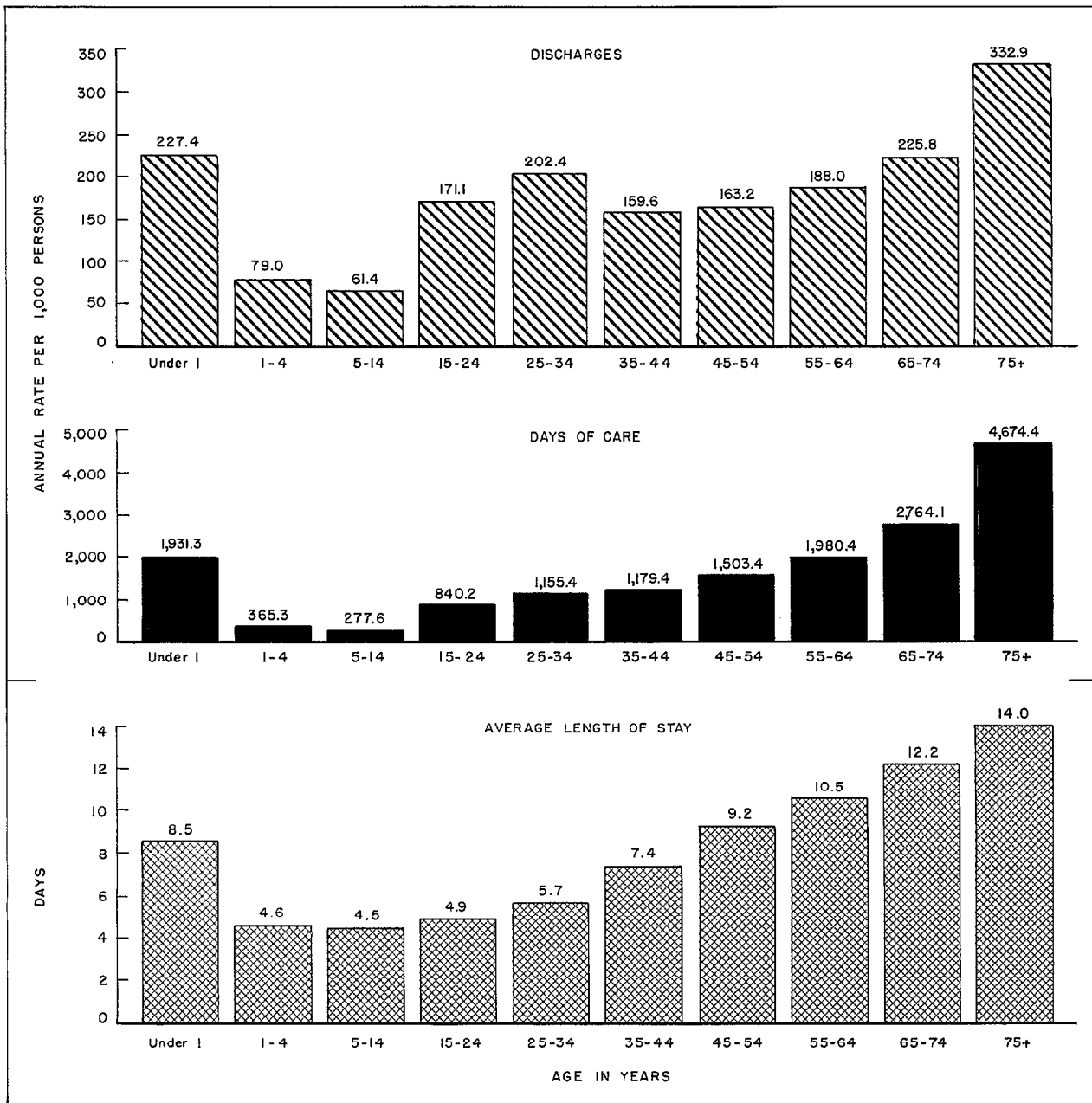


Figure 3. Annual rates of discharges and days of care per 1,000 persons, and average length of stay of patients discharged from short-stay hospitals, by age.

zation rates are not presented separately for white and for nonwhite persons. The available statistics indicate that the average duration of stay was slightly greater for nonwhite than for white persons.

### Discharge Status

About 3 percent of the patients discharged from short-stay hospitals during 1965 died while in the hospital. The average length of stay of

patients discharged dead was about 15 days or about twice the average length of stay of patients who were discharged alive.

## UTILIZATION BY HOSPITAL CHARACTERISTICS

Variation in hospital utilization among different types of hospitals is discussed in this section. Three characteristics of hospitals are considered: type of ownership, size, and geographic area. The statistics are presented in tables 3-5 and in figures 4 and 5.

### Ownership

More than 70 percent of the days of care in short-stay hospitals was provided by voluntary

hospitals. Government hospitals (excluding military and Veterans Administration hospitals) provided about 20 percent of the days of care, and proprietary hospitals less than 10 percent of the care. The average duration of stay was about 6 days in proprietary hospitals and about 8 days in voluntary and government-owned hospitals (fig. 4).

The bed occupancy rate was 82 percent for voluntary hospitals, which was significantly higher than the rate in other hospitals. In government and proprietary hospitals, the percent of beds occupied was 69 percent.

### Size

The average length of stay increased with the size of the hospital (fig. 4). For hospitals with fewer than 200 beds, the average length of stay

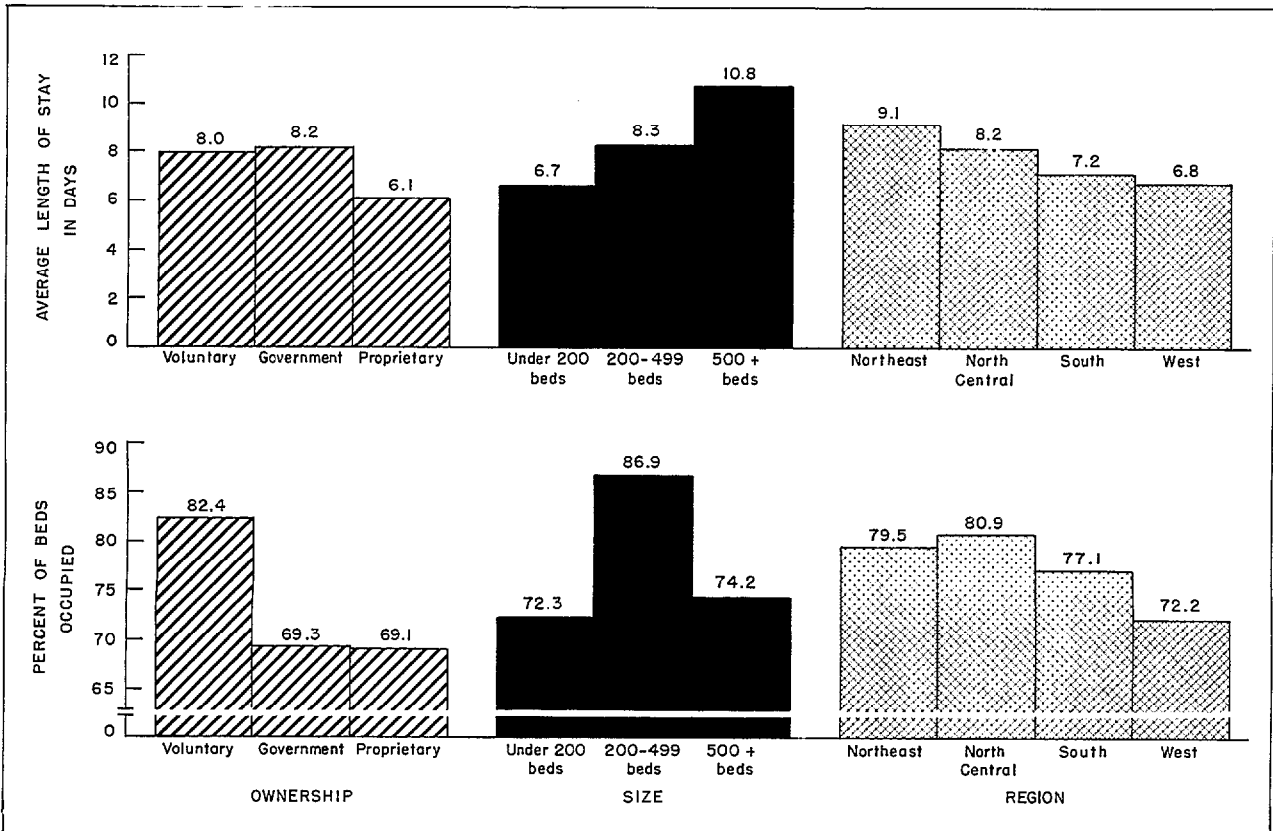


Figure 4. Average length of stay and percent of beds occupied, by type of ownership, size, and geographic region of short-stay hospitals.

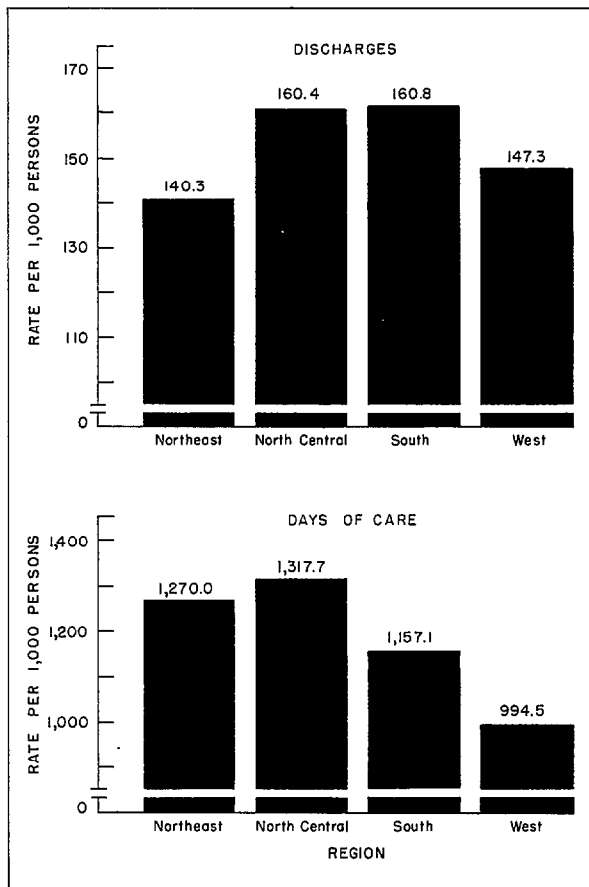


Figure 5. Annual rate of discharges and days of care per 1,000 persons in short-stay hospitals, by geographic region.

was 6.7 days; for hospitals with 200-499 beds, it was 8.3 days; for hospitals with 500-999 beds, 10.4 days; and for hospitals with 1,000 beds or more, 12.6 days.

The bed occupancy rate was highest (87 percent) for the hospitals with 200-499 beds. The rate was about 79 percent for hospitals with 500-999 beds and about 76 percent for hospitals with 50-199 beds. The rate was lowest (about 60 percent) for the smallest hospitals, those with fewer than 50 beds, and for the largest hospitals, those with more than 1,000 beds.

### Region

The discharge rate was about 10 percent lower in the Northeast and West than in the South and North Central Regions (fig. 5). However, there was considerable variation in the discharge rate among the geographic divisions within the West, South, and Northeast Regions. The average length of stay was highest in the Northeast (about 9 days) and lowest in the West and in the South (about 7 days).

Seventy-two percent of the hospital beds were occupied in the West as compared with roughly 80 percent of the hospital beds in other regions of the country.

Table 2. Number and percent distribution of discharges and days of care, and average length of stay, by patient characteristics: United States, 1965

[Discharges from noninstitutional short-stay hospitals excluding Veterans Administration and military hospitals]

Characteristic	Discharges		Days of care		Average length of stay in days
	Number in thousands	Percent distribution	Number in thousands	Percent distribution	
Total-----	29,120	100.0	228,398	100.0	7.8
<u>Age</u>					
Under 1 year-----	877	3.0	7,445	3.3	8.5
1-4 years-----	1,309	4.5	6,050	2.6	4.6
5-14 years-----	2,415	8.3	10,915	4.8	4.5
15-24 years-----	4,948	17.0	24,294	10.6	4.9
25-34 years-----	4,332	14.9	24,726	10.8	5.7
35-44 years-----	3,806	13.1	28,122	12.3	7.4
45-54 years-----	3,545	12.2	32,662	14.3	9.2
55-64 years-----	3,145	10.8	33,129	14.5	10.5
65-74 years-----	2,537	8.7	31,049	13.6	12.2
75 years and over-----	2,065	7.1	28,986	12.7	14.0
Not stated-----	142	0.5	1,019	0.4	7.2
<u>Sex</u>					
Male-----	11,361	39.0	95,514	41.8	8.4
Female-----	17,709	60.8	132,405	58.0	7.5
Not stated-----	50	0.2	478	0.2	9.5
<u>Color</u>					
White-----	23,016	79.0	178,803	78.3	7.8
Nonwhite-----	2,598	8.9	23,130	10.1	8.9
Not stated-----	3,506	12.0	26,464	11.6	7.5
<u>Marital status<sup>1</sup></u>					
Married-----	17,712	72.7	134,876	66.5	7.6
Not married-----	6,066	24.9	62,872	31.0	10.4
Not stated-----	600	2.5	5,220	2.6	8.7
<u>Discharge status</u>					
Alive-----	28,266	97.1	216,050	94.6	7.6
Dead-----	818	2.8	12,056	5.3	14.7
Not stated-----	35	0.1	292	0.1	8.2

<sup>1</sup>Includes only patients 15 years of age and older.

Table 3. Annual population estimates, rates of discharges and days of care, and daily usage rates of hospital beds, by patient characteristics: United States, 1965

[Discharges from noninstitutional short-stay hospitals excluding Veterans Administration and military hospitals]

Characteristic	Population size in thousands <sup>1</sup>	Rate per 1,000 population		Daily use of hospital beds per 100,000 population <sup>2</sup>
		Discharges	Days of care	
Total <sup>3</sup> -----	189,787	153.4	1,203.4	329.7
<u>Age</u>				
Under 1 year-----	3,855	227.4	1,931.3	529.1
1-4 years-----	16,564	79.0	365.3	100.1
5-14 years-----	39,322	61.4	277.6	76.1
15-24 years-----	28,914	171.1	840.2	230.2
25-34 years-----	21,400	202.4	1,155.4	316.5
35-44 years-----	23,845	159.6	1,179.4	323.1
45-54 years-----	21,725	163.2	1,503.4	411.9
55-64 years-----	16,728	188.0	1,980.4	542.6
65-74 years-----	11,233	225.8	2,764.1	757.3
75 years and over-----	6,201	332.9	4,674.4	1,280.7
<u>Sex</u>				
Male-----	91,989	123.5	1,038.3	284.5
Female-----	97,798	181.1	1,353.9	370.9
<u>Marital status<sup>4</sup></u>				
Married-----	88,696	199.7	1,520.7	416.6
Not married-----	41,349	146.7	1,520.5	416.6
<u>Geographic area</u>				
Northeast-----	46,812	140.3	1,270.0	348.0
New England-----	10,908	145.0	1,161.2	318.1
Middle Atlantic-----	35,904	138.9	1,303.1	357.0
North Central-----	53,305	160.4	1,317.7	361.1
East North Central-----	37,721	140.6	1,198.7	328.4
West North Central-----	15,584	208.4	1,606.0	440.0
South-----	58,599	160.8	1,157.1	317.0
South Atlantic-----	27,878	149.9	1,111.1	304.4
East South Central-----	12,594	109.7	944.7	258.8
West South Central-----	18,127	213.0	1,375.3	376.8
West-----	31,071	147.3	994.5	272.5
Mountain-----	7,517	242.1	1,593.5	436.6
Pacific-----	23,554	117.1	803.3	220.1

<sup>1</sup>Unpublished estimates of the U.S. civilian, noninstitutional population as of July 1, 1965, provided by the Bureau of the Census.

<sup>2</sup>Aggregate number of days of care in year x 100,000

Number of days in year x population at risk

<sup>3</sup>Includes discharges for which age, sex, and marital status were unknown.

<sup>4</sup>Includes only persons 15 years of age and older. For 0.5 percent of all discharges of all ages, age was not stated.



Table 4. Number and percent distribution of discharges and days of care, and average length of stay, by hospital characteristics: United States, 1965

[Discharges from noninstitutional short-stay hospitals excluding Veterans Administration and military hospitals]

Characteristic	Discharges		Days of care		Average length of stay in days
	Number in thousands	Percent distribution	Number in thousands	Percent distribution	
Total-----	29,120	100.0	228,398	100.0	7.8
<u>Ownership</u>					
Voluntary-----	20,478	70.3	163,213	71.5	8.0
Church-----	8,195	28.1	63,251	27.7	7.7
Other-----	12,282	42.2	99,962	43.8	8.1
Federal, State, and local government-----	5,829	20.0	47,884	21.0	8.2
Proprietary-----	2,814	9.7	17,300	7.6	6.1
<u>Size</u>					
6-49 beds-----	2,327	8.0	15,505	6.8	6.7
50-99 beds-----	4,976	17.1	32,660	14.3	6.6
100-199 beds-----	6,796	23.3	46,196	20.2	6.8
200-299 beds-----	5,441	18.7	44,406	19.4	8.2
300-499 beds-----	5,921	20.3	50,087	21.9	8.5
500-999 beds-----	2,944	10.1	30,513	13.4	10.4
1,000 beds or more-----	715	2.5	9,030	4.0	12.6
<u>Geographic area</u>					
Northeast-----	6,569	22.6	59,453	26.0	9.1
New England-----	1,582	5.4	12,667	5.5	8.0
Middle Atlantic-----	4,987	17.1	46,786	20.5	9.4
North Central-----	8,553	29.4	70,242	30.8	8.2
East North Central-----	5,305	18.2	45,214	19.8	8.5
West North Central-----	3,248	11.2	25,028	11.0	7.7
South-----	9,422	32.4	67,803	29.7	7.2
South Atlantic-----	4,178	14.3	30,975	13.6	7.4
East South Central-----	1,382	4.7	11,897	5.2	8.6
West South Central-----	3,862	13.3	24,930	10.9	6.5
West-----	4,577	15.7	30,900	13.5	6.8
Mountain-----	1,820	6.2	11,978	5.2	6.6
Pacific-----	2,757	9.5	18,922	8.3	6.9

Table 5. Number and percent distribution of hospital beds, percent of beds occupied, and daily usage rates of beds, by hospital characteristics: United States, 1965

[Discharges from noninstitutional short-stay hospitals excluding Veterans Administration and military hospitals.]

Characteristic	Beds		Percent of beds occupied <sup>1</sup>	Daily use of hospital beds per 100,000 population <sup>2</sup>
	Number in thousands	Percent distribution		
Total-----	801	100.0	78.1	329.7
<u>Ownership</u>				
Voluntary-----	543	67.8	82.4	235.6
Church-----	211	26.4	82.1	91.3
Other-----	332	41.4	82.5	144.3
Federal, State, and local government-----	189	23.7	69.3	69.1
Proprietary-----	69	8.6	69.1	25.0
<u>Size</u>				
6-49 beds-----	73	9.1	58.2	22.4
50-99 beds-----	117	14.7	76.2	47.1
100-199 beds-----	167	20.8	75.9	66.7
200-299 beds-----	144	18.0	84.2	64.1
300-499 beds-----	153	19.1	89.5	72.3
500-999 beds-----	106	13.2	79.1	44.0
1,000 beds or more-----	40	5.0	61.3	13.0
<u>Geographic area</u>				
Northeast-----	205	25.6	79.5	348.0
New England-----	46	5.7	75.9	318.1
Middle Atlantic-----	159	19.9	80.5	357.0
North Central-----	238	29.7	80.9	361.1
East North Central-----	150	18.8	82.4	328.4
West North Central-----	87	10.9	78.4	440.0
South-----	241	30.1	77.1	317.0
South Atlantic-----	104	13.0	81.7	304.4
East South Central-----	49	6.1	66.5	258.8
West South Central-----	88	11.0	77.6	376.8
West-----	117	14.6	72.2	272.5
Mountain-----	42	5.2	78.3	436.6
Pacific-----	75	9.4	68.9	220.1

<sup>1</sup>Aggregate number of days of care in year

Number of hospital beds x 365

<sup>2</sup>Aggregate number of days of care in year x 100,000

Number of days in year x population of risk

## APPENDIX I

### TECHNICAL NOTES ON METHODS

#### Background of This Report

This is the second report in a series of statistical reports analyzing data collected in the Hospital Discharge Survey. It is based on information abstracted from the hospital medical records of a sample of discharges occurring during 1965, and it represents the first full year of data available from the Hospital Discharge Survey.

This report presents summary statistics on hospital utilization during 1965 as related to characteristics of discharged patients and of hospitals providing the care. Reports are being prepared to present more detailed information on hospital utilization during 1965 by characteristics of patient and hospital. Reports relating utilization to diagnoses and surgical operations and procedures are being planned also.

#### Statistical Design of the Hospital

##### Discharge Survey

*Scope of the survey.*—The scope of the Hospital Discharge Survey encompasses patients discharged from noninstitutional hospitals having six beds or more for inpatient use, located in the 50 States and the District of Columbia, and having an average length of stay of less than 30 days.

Well-newborn infants are out-of-scope of the survey. Newborn infants are in-scope only if at least one of the following conditions has been specified in the medical record.

1. Immaturity or prematurity
2. Any disease, condition, syndrome, disorder, injury, malformation, or birth defect
3. Any operation or surgical procedure other than routine circumcision
4. Birth occurred under nonsterile conditions

*Sampling frame and size of sample.*—The sampling frame for hospitals in the Hospital Discharge Survey is the Master Facility Inventory of Hospitals and Institutions (MFI). A detailed description of how the MFI was developed, its content, plans for maintaining it, and procedures for assessing the completeness of its coverage has been published. (See footnote 3, p. 2.)

The universe for the Hospital Discharge Survey consisted of 6,965 hospitals, excluding military and Veterans Administration hospitals, contained in the MFI in 1963. The distributions of short-stay hospitals by size and region in the universe (MFI), and in the sample of the Hospital Discharge Survey are shown in table I. Some of the sample hospitals participated in the survey during all of 1965, whereas other hospitals participated for only 6 months because they were not inducted into the survey until the latter half of 1965. Hospitals participating for 12 months and for 6 months are distributed separately in table I.

The sample of hospitals for 1965 as originally drawn consisted of 315 hospitals. Of these hospitals, 8 refused to participate; 5 did not submit any abstracts during the year; and 6 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. (See Appendix III for the definition of hospital used in the Hospital Discharge Survey.) Thus, there were 296 in-scope participating hospitals in the survey during 1965.

All hospitals of 1,000 beds or more in the universe (excluding VA and military hospitals) were selected with certainty in the sample. All hospitals of fewer than 1,000 beds were stratified, with the primary strata being the 24 size-by-region classes, as 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 ownership and geographic division. Sample hospitals were drawn with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals.

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

In nearly all hospitals, the daily listing sheet of discharges was the frame from which the subsamples

Table I. Distribution of short-stay hospitals in the universe (MFI) and in the Hospital Discharge Survey sample by size, geographic region, and number of months of participation in the survey: Hospital Discharge Survey, 1965

[Noninstitutional short-stay hospitals excluding Veterans Administration and military hospitals]

Size of hospital and number of months of participation in survey	Region				
	All regions	North-east	North Central	South	West
<u>All sizes</u>					
Universe-----	6,965	1,107	1,979	2,620	1,259
Total sample-----	315	85	93	91	46
6 months participation-----	150	38	46	44	22
12 months participation-----	165	47	47	47	24
<u>6-49 beds</u>					
Universe-----	3,113	199	830	1,438	646
Total sample-----	39	5	11	15	8
6 months participation-----	20	2	6	8	4
12 months participation-----	19	3	5	7	4
<u>50-99 beds</u>					
Universe-----	1,623	288	442	587	306
Total sample-----	44	8	12	16	8
6 months participation-----	22	4	6	8	4
12 months participation-----	22	4	6	8	4
<u>100-199 beds</u>					
Universe-----	1,144	277	378	332	157
Total sample-----	63	16	20	19	8
6 months participation-----	32	8	10	10	4
12 months participation-----	31	8	10	9	4
<u>200-299 beds</u>					
Universe-----	552	182	151	134	85
Total sample-----	55	19	16	12	8
6 months participation-----	28	10	8	6	4
12 months participation-----	27	9	8	6	4
<u>300-499 beds</u>					
Universe-----	386	110	129	96	51
Total sample-----	59	16	19	16	8
6 months participation-----	30	8	10	8	4
12 months participation-----	29	8	9	8	4
<u>500-999 beds</u>					
Universe-----	129	42	46	28	13
Total sample-----	37	12	12	8	5
6 months participation-----	18	6	6	4	2
12 months participation-----	19	6	6	4	3
<u>1,000 beds and over</u>					
Universe-----	18	9	3	5	1
Total sample-----	18	9	3	5	1
6 months participation-----	-	-	-	-	-
12 months participation-----	18	9	3	5	1

of discharges were selected within the sample hospitals. The sample discharges were selected by random technique, usually on the basis of the terminal digit (s) of the patient's 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.*—Depending on the study procedure agreed on with the hospital administrator, the sample selection and the recording of information from the hospital records to the abstract form were performed either by the hospital staff or by representatives of the National Center for Health Statistics, or by both. In more than three-quarters of the hospitals, this work was performed by a member of the hospital staff in the medical records department. In nearly all the remaining hospitals, the work was performed by the Census Bureau, acting for the Center.

Two versions of the abstract form were used: an optical mark page reader form (see fig. 1) and a conventional form. During 1965, all survey hospitals except one used the mark page form. Both forms contained identical information, but their formats differed and they were processed somewhat differently. The preparation of a punchcard was not required for the mark page abstract form because the coded information was converted directly to computer tape by an optical mark page reader machine. The coded information on the conventional abstract form was reproduced on a punchcard, which was then converted to computer tape.

*Data processing.*—Shipments of completed abstract forms for each sample hospital were transmitted to the Center for processing. Every shipment of abstracts was reviewed; each abstract form was edited; and, as necessary, problems were referred to the hospitals for clarification and correction.

*Estimation.*—Statistics produced by the Hospital Discharge Survey are derived by a complex estimating procedure. The basic unit of estimation is the sample patient abstract. The estimating procedure used to produce essentially unbiased national estimates in the HDS has three principal components: (1) inflation by reciprocals of the probabilities of sample selection, (2) adjustment for nonresponse, and (3) ratio adjustments to fixed totals. Each is described briefly below:

#### 1. Inflation by reciprocals of the sampling probabilities

The statistical data for the sample of discharged patients reported by each of the hospitals participating in the survey are inflated by the reciprocal of their probabilities of selection. Since the survey utilizes a two-stage sample design there are two probabilities: (a) the probability of selecting the sample hospitals, and (b) the prob-

ability of selecting the discharged patient within the sample hospital.

#### 2. Nonresponse adjustment

##### (a) Hospital nonresponse adjustment:

Among the 309 in-scope hospitals selected in the sample, 13 did not respond for any of the sample months of the calendar year 1965, and 4 hospitals responded for at least one sample month. Imputation for nonresponding hospitals was carried out within each of the 28 size-by-region strata (see table I) for each calendar month. The adjustment is made by a multiplier ratio, the numerator of which is the number of beds in the sample hospitals as recorded in the Master Facility Inventory and the denominator of which is the number of beds in those sample hospitals responding for that month. This adjustment has the effect of imputing to the nonresponding hospitals the information from the responding hospitals.

##### (b) Abstract nonresponse adjustment:

Of the 101,492 abstracts expected from responding in-scope sample hospitals, 1,105 were not received. Imputation for these missing abstracts was carried out for each sample hospital in each calendar month. The adjustment is made by dividing the number of abstracts expected for a calendar month by the number of abstracts actually received for that month. This adjustment has the effect of imputing to the 1,105 missing abstracts the information reported on the 100,387 abstracts received.

The two stages of nonresponse adjustment imputed approximately 6 percent of the discharges.

#### 3. Ratio adjustment to fixed totals

##### (a) First-stage ratio adjustment:

A first-stage ratio adjustment was included only in the estimation of patients discharged for sample hospitals in the 24 strata with fewer than 1,000 beds. The adjusting multiplier ratio is obtained by dividing the total number of MFI beds in a stratum, corrected for out-of-scope hospitals, by the number of beds estimated from the sample for that stratum.

##### (b) Second-stage ratio adjustment:

This adjustment was made for each of the responding in-scope sample hospitals for each calendar month for all statistics which were derived from two stages of estimation. The adjustment is made using a multiplier factor

obtained by dividing the total number of discharges in a month by the product of (1) the number of sample discharges in that month; and (2) the reciprocal of the within-hospital sampling fraction. The purpose of this adjustment is to correct for deviations from the expected within-hospital sample size.

#### 4. Special note

One additional differential weight was applied to discharges from hospitals in noncertainty strata. This weight was required to adjust for the fact that there were approximately twice as many hospitals in the sample during the last 6 months as during the first 6 months.

#### General Qualifications

*Abstracts rejected in the computer inspection run.*—For 1965, 100,387 abstracts were received from the 296 hospitals that participated in the survey. In a computer inspection run, approximately 6 percent of these abstracts were rejected for one or more of the following reasons: (1) poor marking on the abstract form, (2) impossible code, and (3) missing entry.

The majority of rejects were corrected by reviewing and editing the information on the abstract forms. However, where it was impossible to correct the code of a rejected item, that item was coded and tabulated as "not stated." The latter procedure applied to all items except "date of admission" and "date of discharge," which were not permitted to be coded as "not stated." In instances where these data could not be obtained from the abstract form, the monthly sample listing sheet transmitted by the sample hospital was used as an additional source of information. If the dates could not be established from the sample listing sheets, the abstract form was sent back to the hospital.

*Factors affecting interpretation of rates.*—The detailed tables show the extent to which certain personal characteristics of the discharged patient were not reported. However, in computing rates of discharge and days of care per 1,000 persons, the "not stated" cases were included in the rates for "total" but excluded from the rates for subclasses. This procedure should not alter the rates appreciably, since utilization rates were calculated only for those personal characteristics of the discharged patient for which the number of "not stated" cases represented less than 3 percent of the discharges. Rates of discharge and days of care per 1,000 persons were not computed by color since color was not stated for about 12 percent of the discharges.

*Population figures.*—The base populations used in computing the rates are unpublished estimates for the U.S. civilian, noninstitutional population as of July 1, 1965, provided by the Bureau of the Census.

These estimates are consistent with estimates of the civilian resident population published in *Current Population Reports*, Series P-25, by the Bureau of the Census but they are not to be considered official population estimates.

*Rounding of numbers.*—Estimates relating to discharges and days of care have been rounded to the nearest thousand. For this reason detailed figures within tables do not always add to totals. Percents and rates were calculated on the basis of original, unrounded figures and will not necessarily agree with rates and percents which might be calculated from rounded data.

#### Reliability of Estimates

The estimates given in this report, being based on a subsample of discharges from a sample of short-stay hospitals, may differ somewhat from the results that would have been obtained if based on all discharges from all short-stay hospitals. The standard error is a measure of sampling variability. The chances are about 68 out of 100 that the value obtained in a complete enumeration (the parameter) is contained in a confidence interval represented by plus and minus one standard error of the estimate. The chances are 95 out of 100 that the parameter is in the confidence interval bounded by two standard errors on either side of the estimate, and they are 99 out of 100 that the parameter is in the interval bounded by 2½ standard errors on either side of the estimate. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself, and is expressed in this report as a percentage of the estimate.

One of the striking attributes of probability sampling is that it permits the sample data to become the basis for estimating sampling error. Each statistic presented in this report has its own standard error and it is possible to estimate that standard error from the sample data. But these estimates of standard error are also subject to sampling error. For this reason there is some degree of uncertainty about the reliability of the calculated standard errors, especially until a period of experience has accumulated for a new survey. In tables II and III, estimated relative standard errors are presented for a selection of several types of statistics presented in this report. At a later date, additional experience and computations will yield a more comprehensive display of sampling errors.

It will be observed that two broad classes of statistics are distinguished. Table II presents relative standard errors of survey estimates of hospital utilization by selected characteristics of the patient. Table III presents relative standard errors of the survey estimates of hospital utilization by selected characteristics of the hospital. It may be observed that the rela-

Table II. Relative standard errors of the estimated number of discharges, days of care, and of the average length of stay, by selected patient characteristics: Hospital Discharge Survey, 1965

Characteristic	Discharges		Days of care		Average length of stay	
	Number in thousands	Relative standard error in percent	Number in thousands	Relative standard error in percent	Days	Relative standard error in percent
All discharges-----	<sup>1</sup> 29,120	1.6	<sup>1</sup> 228,398	1.5	<sup>1</sup> 7.8	1.1
Alive-----	28,266	1.7	216,050	1.6	7.6	1.1
Dead-----	818	4.5	12,056	5.6	14.7	2.9
Married <sup>2</sup> -----	17,712	1.9	134,876	1.8	7.6	1.2
Males-----	11,361	1.7	95,514	2.1	8.4	1.3
Age, 65 years and over-----	4,601	2.2	60,035	4.0	13.0	2.2
Age, 5-14 years-----	2,415	3.1	10,915	4.7	4.5	2.8
Age, under 1 year -----	877	4.0	7,445	5.4	8.5	3.1

<sup>1</sup>Includes discharges not stated.

<sup>2</sup>Includes only patients 15 years of age and older.

tive standard errors shown for different size classes in table III apply to the strata from which hospitals were drawn, size being that as of the date (1963) of the frame. Detailed tables show discharges classified by size of the hospital at the date (1964 or 1965) it was

inducted into the survey. Sampling errors for the latter classification will be of the same general magnitude as, but usually somewhat larger than, those shown in table III.

Table III. Relative standard errors of the estimated number of discharges, days of care, and of the average length of stay, by selected hospital characteristics: Hospital Discharge Survey, 1965

Strata	Discharges		Days of care		Average length of stay	
	Number in thousands	Relative standard error in percent	Number in thousands	Relative standard error in percent	Days	Relative standard error in percent
Total-----	29,120	1.6	228,398	1.5	7.8	1.1
<u>Region</u>						
Northeast-----	6,569	2.8	59,453	2.5	9.1	1.9
North Central-----	8,553	2.3	70,242	2.2	8.2	1.4
South-----	9,422	3.5	67,803	3.2	7.2	2.3
West-----	4,577	4.5	30,900	4.3	6.8	2.8
<u>Size</u>						
6-49 beds-----	3,386	6.4	21,884	6.1	6.5	3.1
50-99 beds-----	4,793	3.8	31,716	3.4	6.6	2.2
100-199 beds-----	7,029	3.7	48,929	3.9	7.0	1.7
200-299 beds-----	5,481	3.4	44,728	2.7	8.2	2.7
300-499 beds-----	5,334	2.8	47,285	2.8	8.9	2.5
500-999 beds-----	2,438	3.7	25,499	2.9	10.5	3.6

## APPENDIX II

### COMPARISON OF ESTIMATED NUMBER OF HOSPITAL DISCHARGES BASED ON HDS AND HIS

The most recent report on hospital utilization from the Health Interview Survey (HIS) is for the 12-month period preceding interviews conducted over the interval July 1963-June 1964. The HIS estimate for the living population was 23,800,000 discharges. According to the Hospital Discharge Survey (HDS) there were 29,120,000 discharges during 1965.

On an *a priori* basis the HDS might be expected to produce the better estimate of total number of discharges from short-stay hospitals because its scope is more comprehensive—e.g., it includes stays of less than 1 night and the experience of persons not alive at the time of interview—and because the reporting is by hospital, based on written records. The HIS should be the richer source for many types of analysis, since much more demographic and sociological data on individuals can be secured in the household interview, and the survey technique provides denominators which in

turn permit the calculation of hospital utilization rates for subcategories and domains of persons.

For nearly a decade, and with a variety of techniques, including mathematical models, internal analysis, special surveys of decedents, reinterview, record-check studies, and computer microsimulation, there has been a concerted effort to evaluate the accuracy of statistics on hospital utilization based on household interview data. Much of this effort has hinged around two facts: (1) the interview survey covers only the living population and thus excludes the hospital utilization experience in the reference period of persons not living at the time of the interview; and (2) the living population does not report all of its experience because of faulty recall and other problems. A comparison of estimates of hospital utilization based on the Health Interview Survey and the Hospital Discharge Survey is difficult because the two systems necessarily use

Table IV. Reconciliation of the Health Interview Survey and the Hospital Discharge Survey with respect to the estimated number of discharges from short-stay hospitals: United States, 1965

	Discharges in thousands
A. HDS estimate-----	29,120
B. The HIS estimate (not yet published) for the living population, based on 6-month recall-----	24,220
C. Add to B:	
Persons discharged dead-----	820
Other omitted experience of decedents-----	350
Stays of less than 1 night-----	620
Adjustment to make chronological reference period of HDS coincide with HIS-----	300
Estimated "technical" admissions of well persons-----	100
Military persons in civilian hospitals, and short-stay discharges of institutional population-----	300
	2,490
D. Deduct from B:	
Discharges of civilians from military or Veterans Administration hospitals-----	930
E. Net adjusted HIS-----	25,780
F. Difference A minus E-----	3,340



different definitions, are somewhat different in scope, and cannot be exactly matched as to the calendar period covered.

In table IV, there is a reconciliation of the HIS and the HDS estimates of the number of discharges during 1965 in the following terms: the interview figures have been modified—sometimes on the basis of inadequate data—to conform to HDS definitions and scope.

The difference (line F) is 11.5 percent of the HDS estimate (line A). Consolidated evidence from the HIS evaluation studies has indicated that the interview data may reflect underreporting of about 9 percent. Since

the standard error of the estimated difference between the two sample surveys is 2 percent of total discharges, the above comparisons are reasonably consistent with one another, and indeed at the usual 95 percent confidence level the residual unexplained discrepancy is within sampling error.

It would be realistic, however, to recognize that not all questions of definition and scope have been adequately resolved. Sources of possible further problems in these areas, known but not quantified, could have led, it is believed, to additional miscounts in either survey of up to a half-million discharges.



## APPENDIX III

### DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

#### Terms Relating to Hospitalization

*Hospital.*—In this survey an establishment is a hospital if it meets all of the following conditions:

1. It maintains at least six beds for use by inpatients
2. It is licensed as a hospital by the State in which it is located if the State has a hospital licensure law
3. It provides inpatient medical care under the supervision of a duly licensed doctor of medicine or doctor of osteopathy
4. It provides nursing service 24 hours a day under the supervision of a registered nurse
5. It maintains medical records for each patient admitted and for newborn infants

*Short-stay hospital.*—A short-stay hospital is one in which the average stay is under 30 days.

*Bed.*—A bed is one set up and staffed for continuous (24-hour) use by inpatients. Beds in emergency rooms, labor rooms, postanesthesia or postoperative recovery rooms, or other such facilities, which are regularly maintained and utilized for only a portion of the patient's stay and are primarily for special procedures and not for lodging, are *not* termed (inpatient) beds. Cribs and bassinets maintained for use by other than newborn infants are considered beds.

*Patient and inpatient.*—A patient is a person admitted to a hospital who occupies a hospital bed for observation, care, diagnosis, or treatment. "Patient" and "inpatient" are used synonymously.

*Well-newborn infants.*—Well-newborn infants are those who satisfy all of the following criteria:

1. The birth was at term or was not otherwise specified and there was *no* mention of immaturity or prematurity
2. No diagnosis of any disease, condition, disorder, syndrome, injury, malformation, or defect was made by the physician attending the birth
3. No operation (other than a routine circumcision) was performed
4. The birth occurred under sterile conditions

*Discharge.*—Discharge refers to the formal release of an inpatient by a hospital. Newborn infants, however, who satisfy the criteria for well-newborn (see definition) are not counted as being discharged.

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

*Discharge rate.*—The discharge rate is the ratio of the number of discharges divided by the size of the midyear population.

*Day of care.*—This is the unit of measure denoting lodging facilities provided and services rendered to one inpatient between 2 successive days. When a patient is admitted and discharged on the same day, the period is counted as 1 day of care for purposes of calculating the average length of stay.

*Days-of-care rate.*—The days-of-care rate is the ratio of the aggregate number of days of care divided by the size of the midyear population.

*Length of stay.*—The length of stay is the number of days a patient is hospitalized exclusive of the day of discharge. When a patient is admitted and discharged in the same day, the length of stay is less than 1 day.

*Average length of stay.*—The average length of stay is the aggregate days of care divided by the number of discharges. In computing the average length of stay, a stay of less than 1 day is counted as 1 day.

*Percent of beds occupied.*—This is the ratio of the number of patient days of care divided by the number of patient days which would have been provided if every hospital bed had been occupied each day. In this report the ratio is expressed as a percent.

*Daily rate of bed usage.*—The rate of hospital bed usage is the aggregate number of days of care occurring in a specified period divided by the product of the number of days in the period and the size of the midyear population. It is a measure of hospital utilization similar to the days-of-care rate except that it is expressed as the *daily* usage per 100,000 persons rather than annual usage per 1,000 persons.

*Hospital ownership.*—Hospital ownership is a classification of hospitals according to the type of organization that controls and operates the hospital.

#### Demographic Terms

*Age.*—Age refers to the age at last birthday at time of admission to hospital. Whenever possible, information is obtained on the date of birth.

*Color.*—In this report, the population is divided into white and nonwhite persons. Mexicans and Puerto Ricans are considered white unless specifically identified as a member of a nonwhite race. The nonwhite group includes the Negro, American Indian, Asian Indian, Chinese, Japanese, Aleut, Eskimo, Hawaiian, Filipino, Korean, and Malayan races.

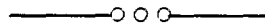
*Marital status.*—Marital status applies only to persons 15 years of age and over. "Married" includes

persons who are married or separated. "Not married" includes persons who are single, widowed, or divorced.

*United States.*—The 50 States and the District of Columbia.

*Geographic regions and divisions.*—The regions and divisions of the United States are divided as follows:

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



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