

Surgical Operations in Short-Stay Hospitals

UNITED STATES-1973

Statistics are presented on the number and rate of inpatients with surgery discharged from non-Federal short-stay hospitals and the types of surgical operations performed. The data for this report are based on information abstracted by means of the Hospital Discharge Survey from a national sample of the hospital records for discharged inpatients. Estimates of the number of patients with surgery and of operations, grouped by surgical classes and categories, are shown by the demographic characteristics of the operated patients and by geographic region and size of hospital. The number and average length of stay is shown for first-listed operations by age and sex.

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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.

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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-----	*

SURGICAL OPERATIONS IN SHORT-STAY HOSPITALS

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INTRODUCTION

This report, based on data collected by the Hospital Discharge Survey (HDS), presents estimates of the number of inpatients with surgery discharged from non-Federal short-stay hospitals during 1973 and measurements of the volume of surgical operations or procedures performed. This survey of short-stay hospital utilization has been conducted by the National Center for Health Statistics (NCHS) continuously since the beginning of 1965.

Data for the survey are abstracted from medical records of discharges selected from a sample of short-stay hospitals located in the 50 States and the District of Columbia. The sample for 1973 included about 225,000 medical records for inpatients discharged from 424 hospitals that participated in the survey. Data for newborn infants are excluded from this report. See appendix I for a description of the sample design, data collection procedures, and the estimation process. A detailed report on the design of the HDS has been published.¹

Demographic, diagnostic, and surgical data are abstracted from the medical record face sheet for each patient in the sample. A maximum of five diagnoses and three operations are coded for each medical record. Coding of the medical data is done according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*² (ICDA), with some modifications. Included with surgery are biopsies, exploratory laparotomies, and certain other diagnostic procedures. Excluded from the definition of surgery are certain obstetrical procedures,

diagnostic endoscopy and radiography, and certain other nonsurgical procedures.

Familiarity with the definition of surgery as used in this report is important for interpreting the data and for making comparisons with statistics on surgery which are available from other data collection sources. The HDS modifications of the ICDA section on Surgical Operations, Diagnostic and Other Therapeutic Procedures are described in appendix I under "Data Collection and Processing." Definitions of the terms used in this study relating to hospitalization and characteristics of inpatients and hospitals are presented in appendix II.

The data for patients with surgery and the volume of all-listed operations (a maximum of three operations coded for each medical record) are shown in this report by age, sex, and color of inpatients, and by the geographic regions and bed sizes of hospitals where the medical care was provided. The data presented on surgery are grouped by the broad surgical classes of the ICDA and by surgical categories which represent more detailed information on specific operations or groups of operations. The surgery performed in short-stay hospitals is measured by frequencies, percent distributions, and rates of surgery in the civilian noninstitutionalized population. In addition, for the first-listed operations on the medical record face sheets, estimates of the number of operations and average lengths of stay are provided for each surgical class and category by age and sex.

Data from the HDS on short-stay hospital utilization by surgical operations have been published in previous reports for 1965, 1968,

1971, and 1972.³⁻⁶ Information on diseases and injuries diagnosed for patients discharged from short-stay hospitals has been published for each year from 1965 to 1972, with the exception of 1969 and 1970.⁷⁻¹¹

Another program of NCHS, the Health Interview Survey (HIS), also collects information on hospitalization. The estimates provided by HIS are generally smaller for number of discharges and longer for average lengths of stay than HDS because of differences in collection procedures, population sampled, and definitions. Data from HIS are published by NCHS in Series 10 of *Vital and Health Statistics* reports.

DISCHARGES WITH SURGERY

One or more surgical procedures were performed for an estimated 13.3 million, or 41.3 percent, of the 32.1 million inpatients discharged from non-Federal short-stay hospitals during 1973 (table A). Patients with surgery included 5.2 million males and 8.1 million females. There were 18.4 million surgical operations performed for the 13.3 million patients with surgery, or an average of 1.4 operations per patient. Males accounted for 6.9 million operations and females 11.5 million. (Table 1.)

Table A. Number and rate of inpatients discharged from short-stay hospitals with and without surgery and percent with surgery, by age and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Sex and age	Number of discharges in thousands			Percent of dis- charges with surgery	Discharge rate per 1,000 population		
	Total	Without surgery	With surgery		Total	Without surgery	With surgery
<u>Total</u> ¹							
All ages-----	32,125	18,859	13,266	41.3	156.1	91.6	64.4
Under 15 years-----	3,933	2,073	1,861	47.3	70.8	37.3	33.5
15-44 years-----	13,482	7,445	6,037	44.8	154.4	85.2	69.1
45-64 years-----	7,772	4,483	3,290	42.3	182.3	105.1	77.1
65 years and over-----	6,937	4,858	2,079	30.0	341.8	239.4	102.4
<u>Male</u>							
All ages-----	12,835	7,667	5,168	40.3	129.2	77.2	52.0
Under 15 years-----	2,231	1,182	1,048	47.0	78.8	41.8	37.0
15-44 years-----	3,873	2,122	1,751	45.2	91.7	50.2	41.4
45-64 years-----	3,637	2,247	1,390	38.2	179.1	110.6	68.5
65 years and over-----	3,094	2,116	978	31.6	367.0	251.0	116.0
<u>Female</u>							
All ages-----	19,266	11,175	8,091	42.0	180.9	104.9	76.0
Under 15 years-----	1,700	889	811	47.7	62.4	32.6	29.8
15-44 years-----	9,598	5,314	4,283	44.6	212.9	117.9	95.0
45-64 years-----	4,131	2,233	1,898	45.9	185.0	100.0	85.0
65 years and over-----	3,837	2,739	1,099	28.6	323.5	230.9	92.6

¹Includes data for sex not stated.

Age and Sex

The estimated number of inpatients with surgery per 1,000 persons in the civilian noninstitutionalized population increased consistently with age from 33.5 for under 15 years of age to 102.4 for those 65 years and over (table A). This pattern of surgery by age was also exhibited for males, but for females the rate of discharges with surgery was highest for the age group 15-44 years.

There was less of an increase with age in the discharge rates for patients with surgery than without surgery. Rates of discharges with surgery were about three times higher for the oldest (65 years and over) than the youngest (under age

15) age groups for both males and females, but for inpatients without surgery the increases in the rates were sixfold for males and sevenfold for females. When compared with the young ages, older patients accounted for larger proportions of the population hospitalized for chronic illnesses such as heart disease, cerebrovascular disease, diabetes, emphysema, and osteoarthritis which are not generally treatable by surgery (data from tabulations).

Of the estimated 13.3 million inpatients with surgery, 9.2 million patients or 69.6 percent had one operation, 2.9 million patients or 22.0 percent had two operations, and 1.1 million patients or 8.5 percent had three operations (table B). The

Table B. Number and percent distribution of inpatients discharged from short-stay hospitals with surgery by number of operations, according to age and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Sex and age	All discharges with surgery	Number of operations			All discharges with surgery	Number of operations		
		One	Two	Three		One	Two	Three
<u>Total</u> ¹	Number of discharges in thousands				Percent distribution			
All ages-----	13,266	9,230	2,912	1,124	100.0	69.6	22.0	8.5
Under 15 years-----	1,861	1,447	362	52	100.0	77.8	19.4	2.8
15-44 years-----	6,037	4,190	1,310	537	100.0	69.4	21.7	8.9
45-64 years-----	3,290	2,118	807	365	100.0	64.4	24.5	11.1
65 years and over-----	2,079	1,474	434	171	100.0	70.9	20.9	8.2
<u>Male</u>								
All ages-----	5,168	3,746	1,076	346	100.0	72.5	20.8	6.7
Under 15 years-----	1,048	792	224	32	100.0	75.6	21.4	3.1
15-44 years-----	1,751	1,282	342	127	100.0	73.2	19.5	7.3
45-64 years-----	1,390	987	292	111	100.0	71.0	21.0	8.0
65 years and over-----	978	684	218	76	100.0	69.9	22.3	7.7
<u>Female</u>								
All ages-----	8,091	5,479	1,835	777	100.0	67.7	22.7	9.6
Under 15 years-----	811	654	138	20	100.0	80.6	17.0	2.4
15-44 years-----	4,283	2,907	968	409	100.0	67.9	22.6	9.5
45-64 years-----	1,898	1,130	515	253	100.0	59.5	27.1	13.3
65 years and over-----	1,099	788	215	95	100.0	71.8	19.6	8.7

¹Includes data for sex not stated.

Table C. Number of inpatients discharged from short-stay hospitals with and without surgery and percent with surgery, according to color: United States, 1973

[Excludes newborn infants and Federal hospitals]

Color	Number of discharges in thousands			Percent of discharges with surgery
	Total	Without surgery	With surgery	
Total-----	32,125	18,859	13,266	41.3
White-----	24,402	14,309	10,092	41.4
All other-----	3,619	2,228	1,391	38.4
Color not stated-----	4,105	2,322	1,783	43.4

proportion of operated patients with multiple operations was smallest for under age 15 (22.2 percent) and largest for the age group 45-64 (35.6 percent). The percent of males with multiple operations ranged from 24.4 percent for under age 15 to 30.1 percent for age 65 years and over and for females the range was from 19.4 percent for under age 15 to 40.5 percent for the age group 45-64 years.

Color

Inpatients are presented in this report by the color groups "white" and "all other." Of the 32.1 million inpatients discharged from short-stay hospitals during 1973, an estimated 24.4 million

patients were identified on the medical records as white and 3.6 million as all other color groups (table C). Color was not stated for 4.1 million, or about 12.8 percent of the patients hospitalized. In view of the large number of patients for whom color was not stated, surgery rates were not computed and caution should be used in drawing conclusions from the data by color.

The proportions of the patients discharged with surgery by color were 41.4 percent for white and 38.4 percent for all other patients (table C). The percent distributions of discharges with surgery by the number of operations per patient were about the same for patients identified as white and all other (table D).

Table D. Number and percent distribution of inpatients discharged from short-stay hospitals with surgery by number of operations, according to color: United States, 1973

[Excludes newborn infants and Federal hospitals]

Color	All discharges with surgery	Number of operations			All discharges with surgery	Number of operations		
		One	Two	Three		One	Two	Three
Total-----	13,266	9,230	2,912	1,124	100.0	Percent distribution		
						69.6	22.0	8.5
White-----	10,092	6,995	2,231	866	100.0	69.3	22.1	8.6
All other-----	1,391	993	286	112	100.0	71.4	20.6	8.0
Color not stated-----	1,783	1,242	395	146	100.0	69.7	22.2	8.2

Geographic Region

The number of inpatients with a surgical procedure discharged from short-stay hospitals during 1973 varied by geographic region from an estimated 2.3 million in the West Region to 4.2 million in the North Central Region (table E). These differences in number of operations are due principally to variations among the regions in the number of persons in the civilian noninstitutionalized population and partially to variations in the surgery rates. Populations ranged from 35.6 million in the West Region to 64.5 million in the South Region (appendix I, table II), and the number of patients discharged with surgery per 1,000 population ranged from 55.7 in the South Region to 73.1 in the North Central Region. The North Central Region with a higher rate of patients with surgery than the South ranked first and the South Region ranked second in number of operated patients, although the population size of the South Region was larger than that of the North Central Region.

The proportions of patients with or without surgery during episodes of hospitalization fluctuated by region. Operated patients as a percent of all patients discharged ranged from a low of 36.3 percent in the South Region to a high of 45.4 percent in the West Region.

Variations were small among the regions

in the percent distributions of the estimated number of discharges with surgery by the number of operations per patient (table F). In every region about 70 percent of the patients had one surgical operation or procedure and approximately 30 percent had multiple operations during an episode of hospitalization.

Size of Hospital

Surgery was reported for higher proportions of the patients discharged from the larger than the smaller hospitals (table G). The percent of patients with surgery increased from 29.0 percent in hospitals with 6-99 beds to 47.6 percent in hospitals with 500 beds or more. It is likely that larger hospitals account for higher proportions of patients with surgery because they are more apt to have the specialized personnel, equipment, and facilities required for performing complex surgery.

There were small differences in the percent distributions of patients with surgery by number of operations per patient in hospitals of various size groups (table F). As was shown previously for the other variables discussed, differences were relatively small in the distributions of surgical operations per patient by color and geographic region, but varied considerably by sex and age.

Table E. Number and rate of inpatients discharged from short-stay hospitals with and without surgery and percent with surgery, by geographic region: United States, 1973

[Excludes newborn infants and Federal hospitals]

Geographic region	Number of discharges in thousands			Percent of discharges with surgery	Discharge rate per 1,000 population		
	Total	Without surgery	With surgery		Total	Without surgery	With surgery
Total-----	32,125	18,859	13,266	41.3	156.1	91.6	64.4
Northeast-----	7,208	3,972	3,237	44.9	147.3	81.2	66.1
North Central-----	9,975	5,824	4,151	41.6	175.7	102.6	73.1
South-----	9,905	6,311	3,594	36.3	153.6	97.8	55.7
West-----	5,036	2,752	2,284	45.4	141.4	77.3	64.1

Table F. Number and percent distribution of inpatients discharged from short-stay hospitals with surgery by number of operations, according to geographic region and bed size of hospital: United States, 1973

[Excludes newborn infants and Federal hospitals]

Geographic region and bed size of hospital	All discharges with surgery	Number of operations			All discharges with surgery	Number of operations		
		One	Two	Three		One	Two	Three
	Number of discharges in thousands				Percent distribution			
Total-----	13,266	9,230	2,912	1,124	100.0	69.6	22.0	8.5
<u>Geographic region</u>								
Northeast-----	3,237	2,250	712	275	100.0	69.5	22.0	8.5
North Central-----	4,151	2,874	924	354	100.0	69.2	22.3	8.5
South-----	3,594	2,499	777	319	100.0	69.5	21.6	8.9
West-----	2,284	1,607	500	177	100.0	70.4	21.9	7.7
<u>Bed size of hospital</u>								
6-99 beds-----	1,917	1,364	384	169	100.0	71.2	20.0	8.8
100-199 beds-----	2,102	1,479	454	169	100.0	70.4	21.6	8.0
200-299 beds-----	2,459	1,689	552	218	100.0	68.7	22.5	8.9
300-499 beds-----	3,842	2,625	894	323	100.0	68.3	23.3	8.4
500 beds or more-----	2,946	2,073	628	244	100.0	70.4	21.3	8.3

Table G. Number of inpatients discharged from short-stay hospitals with and without surgery and percent with surgery, according to bed size of hospital: United States, 1973

[Excludes newborn infants and Federal hospitals]

Bed size of hospital	Number of discharges in thousands			Percent of discharges with surgery
	Total	Without surgery	With surgery	
Total-----	32,125	18,859	13,266	41.3
6-99 beds-----	6,604	4,687	1,917	29.0
100-199 beds-----	5,485	3,383	2,102	38.3
200-299 beds-----	5,625	3,166	2,459	43.7
300-499 beds-----	8,228	4,386	3,842	46.7
500 beds or more-----	6,183	3,237	2,946	47.6

SURGICAL OPERATIONS BY PATIENT AND HOSPITAL CHARACTERISTICS

Almost half (47.0 percent) of the surgical operations performed in short-stay hospitals during 1973 were related to the specialties of gynecological surgery (19.4 percent), abdominal surgery (14.9 percent), and orthopedic surgery (12.8 percent). About 37.6 percent of the surgical operations were for males and 62.3 percent for females. Gynecological surgery accounted for a major proportion of the difference in the volume of surgery by sex.

The estimates of surgical operations reported for inpatients discharged from short-stay hospitals are grouped in the detailed tables of this report by the surgical classes or specialties of the ICDA. The surgical operations and the ICDA codes comprising each class are presented in the detailed tables by categories which represent single surgical procedures which occur in large frequencies or groups of associated surgical operations. Unpublished data are available from HDS for most of the surgical codes listed in the ICDA for which the estimates are large enough to meet the standards of reliability.

The surgical categories of surgical operations and procedures with the largest frequencies are presented for the variables age, sex, color, geographic region, and bed size of hospitals in text tables H-O. Residual categories of operations are excluded. The text tables on surgery by age are cross-tabulated by sex. Similar cross-tabulations are not shown in the detailed tables.

Surgery by Age and Sex

An estimated 18.4 million operations were performed during 1973 for the 13.3 million inpatients with surgery (table 1). The corresponding rate was 89.5 operations per 1,000 persons in the civilian noninstitutionalized population (rates in tables are shown as per 100,000 population to accommodate small estimates). There were 6.9 million operations for males and 11.5 million for females. The rates of operations were 69.8 and 107.8 per 1,000 population, respectively, or about 54 percent higher for females than for males. Sex-specific surgical

procedures for females accounted for 4,830,000 operations compared with 682,000 sex-specific operations for males (data from tabulations). Exclusive of the sex-specific operations, the rates per 1,000 population were about the same for males (63.0) and for females (62.4).

As shown for all patients, surgical operations by sex were also clustered into a few of the 17 ICDA surgical classes. Over half (52 percent) of the operations for males were in the specialties abdominal, orthopedic, and urological surgery; for females over half (53 percent) of the operations were in the specialties gynecological, abdominal, and orthopedic surgery. The annual rates of surgery for the ICDA surgical classes by sex are shown in figure 1.

The number and rate for surgical operations reported most frequently during 1973 are shown in table H by surgical category and sex. Diagnostic dilation and curettage of uterus was the most frequently reported surgical procedure. This procedure accounted for 934,000 operations and an annual rate of 4.5 operations per 1,000 persons in the civilian noninstitutionalized population. The rate was 8.8 based on the female population. Other leading surgical procedures were biopsy, tonsillectomy with or without adenoidectomy, hysterectomy, and repair of inguinal hernia. The rates for these operations per 1,000 population were 4.5, 4.3, 3.4, and 2.6, respectively.

The operations for males with the largest frequencies were repair of inguinal hernia (464,000 operations), tonsillectomy with or without adenoidectomy (398,000 operations), and biopsy (300,000 operations). The corresponding rates per 1,000 males were 4.7, 4.0, and 3.0, respectively. For females the operations with the largest frequencies were diagnostic dilation and curettage of uterus (934,000 operations), hysterectomy (690,000 operations), and biopsy (618,000 operations). The corresponding rates per 1,000 females were 8.8, 6.5, and 5.8, respectively.

There were large variations by sex for many non-sex-specific surgical operations (table 1). The rates for males were larger than for females by about eight times for repair of inguinal hernia, by about three times for meatotomy, and by two times for lung lobectomy or pneumonectomy. Patients with breast surgery were predominantly females (94 percent). Other non-

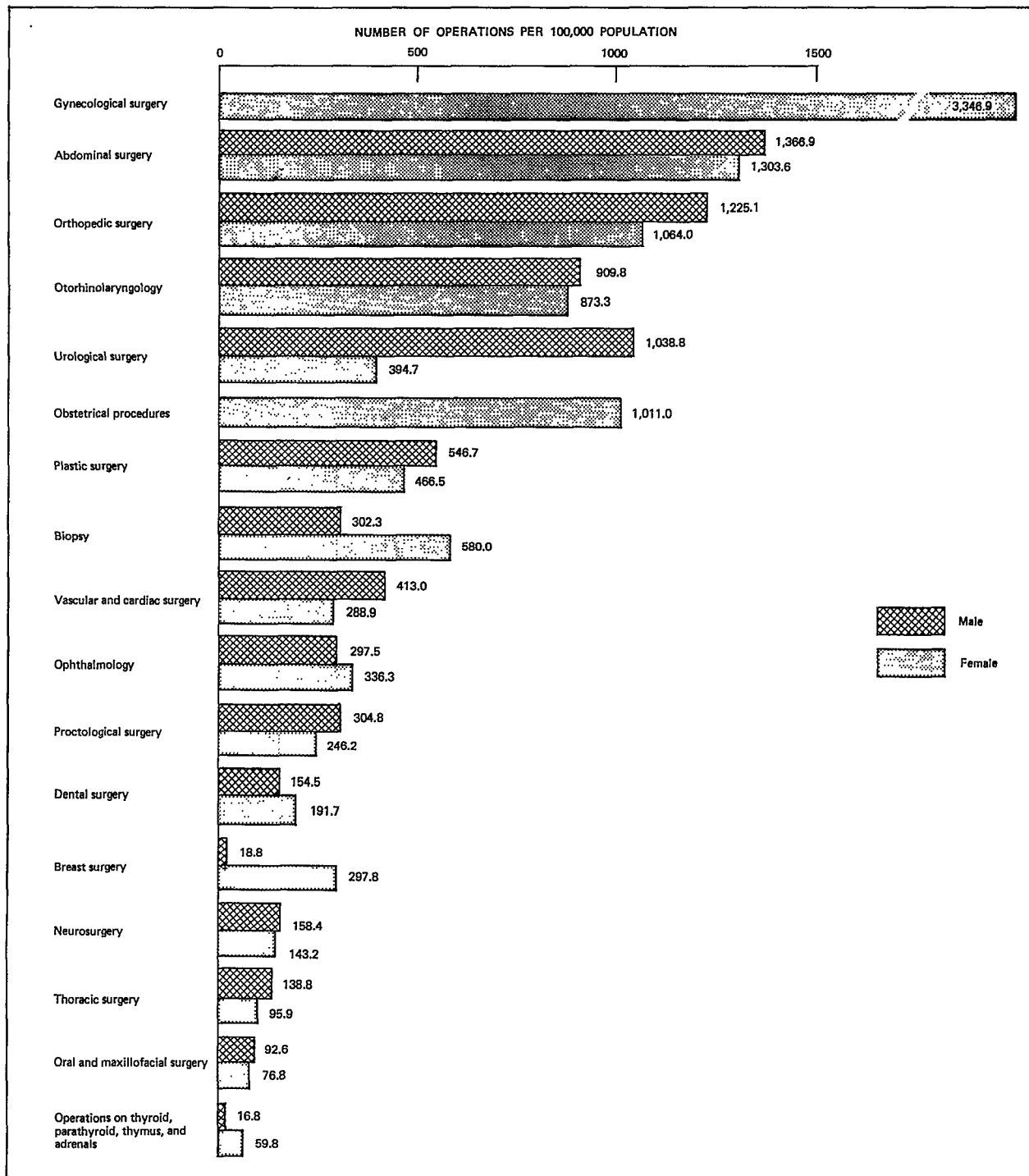


Figure 1. Annual rate of all-listed operations for inpatients discharged from short-stay hospitals, excluding newborn infants, by surgical class and sex: United States, 1973

Table H. Number and rate of all-listed operations for inpatients of all ages discharged from short-stay hospitals, by selected surgical categories and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical category and ICDA codes	Number of operations in thousands			Rate of operations per 100,000 population		
	Both sexes ¹	Male	Female	Both sexes ¹	Male	Female
All operations ² -----	18,426	6,936	11,480	8,951.8	6,984.7	10,776.5
Dilation and curettage of uterus, diagnostic-----70.3	934	...	934	453.8	...	876.8
Biopsy-----Al-A2	919	300	618	446.6	302.3	580.0
Tonsillectomy with or without adenoidectomy-----21.1-21.2	884	398	486	429.6	400.9	455.9
Hysterectomy-----69.1-69.5	690	...	690	335.2	...	647.7
Repair of inguinal hernia-----38.2-38.3	525	464	61	255.3	467.1	57.5
Excision of lesion of skin and subcutaneous tissue---92.1-92.2	455	205	250	221.2	206.3	234.7
Oophorectomy; salpingo-oophorectomy-67.2-67.5	425	...	425	206.5	...	399.1
Cholecystectomy-----43.5	411	94	318	199.8	94.4	298.1
Appendectomy ³ -----41.1	339	175	163	164.5	176.7	153.0
Closed reduction of fracture without fixation-----82.0	321	174	147	156.0	174.8	138.1
Operations on muscles, tendons, fascia, and bursa-----88-89	307	169	138	149.1	169.9	129.8
Ligation and division of fallopian tubes (bilateral)-----68.5	299	...	299	145.5	...	281.1
Reduction of fracture with fixation-----82.2	284	119	164	137.9	120.0	154.4
Extraction of lens-----14.4-14.6	279	116	162	135.6	116.8	152.3
Dilation and curettage after delivery or abortion-----78.1	273	...	273	132.6	...	256.2
Prostatectomy-----58.1-58.3	249	249	...	120.8	250.4	...
Cesarean section-----77	246	...	246	119.6	...	231.1
Dilation of urethra-----57.5	227	82	145	110.4	82.4	136.0
Hemorrhoidectomy-----51.3	218	111	107	106.0	111.8	100.5
Plastic repair of cystocele and/or rectocele-----71.4	204	...	204	99.3	...	191.8

¹Includes data for sex not stated.

²Includes data for surgery not shown in table.

³Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

Table J. Number and rate of biopsies performed for inpatients discharged from short-stay hospitals, by body site and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Biopsy and ICDA codes	Number of biopsies in thousands			Rate of biopsies per 100,000 population		
	Both sexes ¹	Male	Female	Both sexes ¹	Male	Female
All biopsies-----A1-A2	919	300	618	446.6	302.3	580.0
Biopsy of breast-----A2.3	186	5	181	90.4	4.7	169.8
Biopsy of internal female genital organs-----A2.5	177	...	177	86.1	...	166.4
Biopsy of biliary tract, spleen, and pancreas-----A1.9	94	45	48	45.6	45.7	45.2
Biopsy of bone-----A2.7	90	42	48	43.6	41.8	45.0
Other biopsy of circulatory and lymphatic systems-----A2.6	68	34	33	32.8	34.7	31.1
Biopsy of thorax-----A1.6	61	37	24	29.8	37.4	22.6
Biopsy of stomach and intestines---A1.8	57	30	27	27.5	30.1	25.2
Biopsy of male genital organs-----A2.2	33	33	...	15.8	32.8	...
Biopsy of mouth and throat-----A1.4	31	20	11	15.0	20.0	10.3
Biopsy of skin and subcutaneous tissue-----A2.9	29	15	15	14.2	14.8	13.8
Biopsy of urinary tract-----A2.1	25	13	12	12.1	12.8	11.5
Other biopsy of musculoskeletal system-----A2.8	19	9	10	9.1	9.1	9.1
Other biopsies-----Residual	50	18	32	24.5	18.4	30.1

¹Includes data for sex not stated.

sex-specific operations with higher rates for females than for males were thyroidectomy by about five times, cholecystectomy by about three times, and excision and ligation of varicose veins by about three times. There were also many non-sex-specific surgical procedures such as operations on valves of heart, nephrectomy, and hemorrhoidectomy for which surgical rates were about the same for males and females.

More than twice as many biopsies were performed in short-stay hospitals for females (618,000 biopsies) than for males (300,000 biopsies) during 1973. The number and rate of biopsies reported are shown in table J by body site and sex. By body site, about two-fifths of all the biopsies were of the breast (20.2 percent) and of internal female genital organs (19.3 percent). For female patients, almost three-fifths (58.0 percent) of the biopsies were for these two body sites.

The age group 15-44 years accounted for 8.4 million surgical operations, or about 46 percent of all the operations performed in short-stay hospitals in 1973 (table 2). However, the number of operations per 1,000 persons in the civilian noninstitutionalized population increased consistently for each older age group from 41.9 for under 15 years of age to 140.7 for age 65 years and over (table 3). This pattern, however, varied considerably among the surgical categories. For example, the rates of operations increased with age for extraction of lens, cholecystectomy, and prostatectomy, but decreased with age for resection and recession of eye muscle, myringotomy, and tonsillectomy with adenoidectomy. As would be expected, almost all surgery concerned with childbearing such as the obstetrical procedures and bilateral ligation and division of fallopian tubes were reported for women in the age group 15-44 years. Surgical rates

for operations such as hemorrhoidectomy and diagnostic dilation and curettage of uterus were lower for the youngest and oldest age groups, but the rates were highest in these age groups for urethral meatotomy and closed reduction of fracture without fixation.

The numbers and rates for operations with large frequencies are presented by age and sex in tables K-N. The surgical categories shown in these tables were selected by frequency from detailed tables 2 and 3.

Age group under 15 years.—Tonsillectomy with or without adenoidectomy was the leading surgical category for patients under age 15. These procedures accounted for an estimated 647,000 operations, or over a fourth (27.8 percent) of all operations for patients under age 15 (table K). The corresponding rate was 11.6 per 1,000 population. Other leading surgical categories in this age group were myringotomy, repair of inguinal hernia, closed reduction of fracture without fixation, and appendectomy. The

Table K. Number and rate of all-listed operations for inpatients under 15 years of age discharged from short-stay hospitals, by selected surgical categories and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical category and ICDA codes	Number of operations in thousands			Rate of operations per 100,000 population		
	Both sexes ¹	Male	Female	Both sexes ¹	Male	Female
All operations, under 15 years of age ² -----	2,326	1,337	988	4,185.8	4,720.6	3,626.0
Tonsillectomy with or without adenoidectomy-----21.1-21.2	647	317	330	1,164.9	1,119.3	1,212.2
Myringotomy-----17.0	198	116	82	356.2	408.1	301.9
Repair of inguinal hernia-38.2-38.3	117	101	15	210.4	358.1	56.1
Closed reduction of fracture without fixation-----82.0	103	67	36	185.8	236.7	132.2
Appendectomy ³ -----41.1	103	59	44	185.3	207.4	162.4
Adenoidectomy without tonsillectomy-----21.3	61	35	26	110.1	124.7	94.9
Resection and recession of eye muscle-----10.5-10.6	58	27	31	105.2	97.1	113.5
Dilation of urethra-----57.5	58	8	50	105.1	29.5	183.7
Circumcision-----61.2	53	53	...	94.6	185.7	...
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	52	29	23	93.4	100.7	85.0
Operations on muscles, tendons, fascia, and bursa-----88-89	46	29	17	82.4	102.9	61.2
Excision of hydrocele and hematocele-----59.1	34	34	...	60.7	119.2	...
Suture of skin or mucous membrane-----92.5	30	20	10	54.6	70.1	38.4
Meatotomy (urethral)-----57.1	28	24	5	50.8	83.1	17.3
Incision of skin and subcutaneous tissue-----92.0	24	15	9	43.2	53.2	32.8

¹Includes data for sex not stated.

²Includes data for surgery not shown in table.

³Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

rates for these operations were 3.6, 2.1, 1.9, and 1.9, respectively. The five leading surgical categories represented about half (50.2 percent) of all the operations reported for this age group.

The rate of operations for males under age 15 was 47.2 per 1,000 population, or about 30 percent higher than the rate of 36.2 for females. Of the leading operations for patients under 15 years of age the largest differences in surgical rates by sex were for repair of inguinal hernia with a rate of 3.6 for males compared

with 0.6 for females and for dilation of urethra with a rate of 0.3 for males compared with 1.8 for females.

Age group 15-44 years.—The estimated surgical rate for persons aged 15-44 years was 96.4 operations per 1,000 population (table L). The rate for women was 134.6 compared with 55.6 for men, or almost two and a half times higher. Surgery in this age group was dominated by the sex-specific specialties of gynecological and obstetrical procedures (table 2). These spe-

Table L. Number and rate of all-listed operations for inpatients 15-44 years of age discharged from short-stay hospitals, by selected surgical categories and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical category and ICDA codes	Number of operations in thousands			Rate of operations per 100,000 population		
	Both sexes ¹	Male	Female	Both sexes ¹	Male	Female
All operations, 15-44 years of age ² -----	8,420	2,347	6,069	9,640.1	5,555.7	13,459.4
Dilation and curettage of uterus, diagnostic-----70.3	595	...	595	681.5	...	1,320.2
Hysterectomy-----69.1-69.5	415	...	415	474.7	...	919.5
Biopsy-----A1-A2	321	63	259	368.0	148.0	574.0
Ligation and division of fallopian tubes (bilateral)-----68.5	295	...	295	337.9	...	654.5
Dilation and curettage after delivery or abortion-----78.1	269	...	269	308.2	...	597.0
Cesarean section-----77	244	...	244	279.9	...	542.2
Oophorectomy; salpingo- oophorectomy-----67.2-67.5	239	...	239	273.6	...	530.0
Tonsillectomy with or without adenoidectomy-----21.1-21.2	232	80	152	266.1	188.4	337.7
Appendectomy ³ -----41.1	191	94	97	219.2	223.3	215.3
Excision of lesion of skin and subcutaneous tissue---92.1-92.2	182	74	108	208.2	174.9	239.0
Repair of obstetrical laceration-----78.2-78.3	180	...	180	205.8	...	398.6
Operations on muscles, tendons, fascia, and bursa-----88-89	156	90	65	178.3	214.2	144.6
Cholecystectomy-----43.5	154	18	136	176.4	43.0	301.5
Repair of inguinal hernia-----38.2-38.3	126	112	14	143.8	264.1	31.0
Suture of skin and mucous membrane-----92.5	119	86	32	135.9	204.2	71.7

¹Includes data for sex not stated.

²Includes data for surgery not shown in table.

³Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

cialties accounted for two-fifths (41.1 percent) of all operations for this age group and for more than half (57.1 percent) of the surgery for women. By excluding the 3.5 million gynecological and obstetrical procedures from this comparison, the surgical rates were about the same for males and females.

Seven of the 15 surgical categories of operations with the largest frequencies listed in table L for patients aged 15-44 years were in the gynecological and obstetrical specialties. The leading operations for women and the rates per 1,000 women aged 15-44 years were diagnostic dilation and curettage of uterus (13.2), hysterectomy (9.2), and bilateral ligation and di-

vision of fallopian tubes (6.5). For men, the surgery rates were highest for repair of inguinal hernia (2.6); appendectomy (2.2); and operations on muscles, tendons, fascia, and bursa (2.1). The three leading non-sex-specific operations for this age group and their rates were biopsy (3.7), tonsillectomy with or without adenoidectomy (2.7), and appendectomy (2.2). For biopsy and tonsillectomy the surgical rates were substantially higher for females than for males, and for appendectomy the rates were approximately the same for both sexes.

Age group 45-64 years.—Surgery for patients aged 45-64 years was performed at a rate of 113.2 operations per 1,000 population (table M).

Table M. Number and rate of all-listed operations for inpatients 45-64 years of age discharged from short-stay hospitals, by selected surgical categories and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical category and ICDA codes	Number of operations in thousands			Rate of operations per 100,000 population		
	Both sexes ¹	Male	Female	Both sexes ¹	Male	Female
All operations, 45-64 years of age ² -----	4,826	1,904	2,920	11,317.1	9,377.1	13,074.8
Biopsy-----A1-A2	338	115	222	793.0	567.3	995.5
Dilation and curettage of uterus, diagnostic-----70.3	296	...	296	694.2	...	1,325.6
Hysterectomy-----69.1-69.5	243	...	243	568.9	...	1,086.2
Repair of inguinal hernia-----38.2-38.3	179	160	18	419.7	789.8	82.4
Oophorectomy; salpingo- oophorectomy-----67.2-67.5	165	...	165	386.0	...	737.0
Cholecystectomy-----43.5	159	44	114	371.8	218.6	511.2
Excision of lesion of skin and subcutaneous tissue--92.1-92.2	146	65	81	342.8	322.0	361.8
Plastic repair of cystocele and/or rectocele-----71.4	93	...	93	217.0	...	414.3
Hemorrhoidectomy-----51.3	90	47	43	210.8	229.8	192.8
Operations on muscles, tendons, fuscia, and bursa-----88-89	82	40	42	192.7	197.7	188.1
Extraction of lens----14.4-14.6	78	39	40	184.1	190.8	177.4
Prostatectomy-----58.1-58.3	71	71	...	166.1	348.7	...
Partial mastectomy-----65.2	61	*	60	143.9	*	268.0
Excision of intervertebral cartilage (prolapsed disk)-----86.4	61	35	26	143.3	172.0	117.2
Excision of bone, partial--80.4	58	19	39	136.1	94.4	174.0

¹Includes data for sex not stated.

²Includes data for surgery not shown in table.

Table N. Number and rate of all-listed operations for inpatients age 65 years and over discharged from short-stay hospitals, by selected surgical categories and sex: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical category and ICDA codes	Number of operations in thousands			Rate of operations per 100,000 population		
	Both sexes ¹	Male	Female	Both sexes ¹	Male	Female
All operations, 65 years of age and over ² -----	2,855	1,348	1,504	14,067.1	15,986.3	12,677.8
Biopsy-----A1-A2	229	106	122	1,127.1	1,254.3	1,031.9
Extraction of lens-----14.4-14.6	189	71	117	929.8	843.3	985.9
Prostatectomy-----58.1-58.3	175	175	...	862.3	2,075.5	...
Reduction of fracture with fixation-----82.2	140	28	112	687.7	326.5	943.4
Repair of inguinal hernia-----38.2-38.3	104	90	14	512.3	1,072.1	114.5
Cholecystectomy-----43.5	97	31	66	479.3	365.5	560.2
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	75	37	38	371.7	439.1	323.0
Resection of small intestine or colon-----47.4-47.6	64	25	39	315.1	291.5	330.9
Local excision and destruction of lesion of bladder-----56.1-56.2	60	43	17	294.2	511.6	139.7
Closed reduction of fracture without fixation-----82.0	59	10	49	289.7	119.3	409.3
Dilation of urethra-----57.5	52	32	20	254.1	374.9	166.5
Dilation and curettage of uterus, diagnostic----70.3	40	...	40	195.5	...	334.5
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	34	16	19	168.1	185.2	156.0
Plastic repair of cystocele and/or rectocele-----71.4	33	...	33	163.7	...	280.0
Hysterectomy-----69.1-69.5	31	...	31	152.3	...	260.6

¹Includes data for sex not stated.

²Includes data for surgery not shown in table.

By sex, the rates were 93.8 for men and 130.7 for women. Gynecological surgery, which accounted for 974,000 operations in this age group, contributed to the large differences in the rates by sex (table 2). Gynecological operations represented about a fifth (20.2 percent) of all

operations for all patients aged 45-64 and about a third (33.4 percent) of all operations for females.

Four of the 10 leading surgical operations for the 45-64 year age group were classified with gynecology. The leading surgical procedure

was biopsy which accounted for 338,000 operations and a rate of 7.9 operations per 1,000 population. Other leading surgical operations and their rates were diagnostic dilation and curettage of uterus (6.9), hysterectomy (5.7), repair of inguinal hernia (4.2), and oophorectomy and salpingo-oophorectomy (3.9). As was observed for the other age groups, some non-sex-specific operations have a greater impact on one sex than the other. For females in the age group 45-64 years the surgery rate for biopsy was almost double the rate for males and for cholecystectomy 2½ times higher. On the other hand, for males the rate for repair of inguinal hernia was over 9½ times higher than for females and the rate for excision of intervertebral cartilage was almost 1½ times higher than for females.

Age group 65 years and over.—An estimated 2,855,000 operations were performed for inpatients age 65 years and over discharged from short-stay hospitals during 1973 (table 2). The corresponding rate was 140.7 operations per 1,000 persons age 65 years and over in the civilian noninstitutionalized population (table 3). The rate for the oldest age group was more than three times that of the youngest age group.

The leading surgical categories for patients 65 years and over and the corresponding rates per 1,000 population by sex are presented in table N. The surgical rates were 159.9 for men and 126.8 for women. Surgical rates for males were higher than for females in the age groups under 15 and 65 years and over. The surgical categories with the highest rates were biopsy (11.3), extraction of lens (9.3), prostatectomy (8.6), reduction of fracture with fixation (6.9), and repair of inguinal hernia (5.1). Over two-thirds of all patients with prostatectomy and extraction of lens operations were age 65 years and over. The rates for 12 of the 15 leading surgical categories for the elderly in table N were substantially higher than for any other age group (table 3). The exceptions were the categories for diagnostic dilation and curettage of uterus, plastic repair of cystocele and/or rectocele, and hysterectomy.

Rates for the surgical categories varied considerably by sex. For persons 65 years and over, men had substantially higher surgical rates than women for repair of inguinal hernia, local excision and destruction of lesion of bladder,

and excision of lesion of skin and subcutaneous tissue. In contrast, for women 65 years and over the surgical rates were higher than for men for closed reduction of fracture without fixation, reduction of fracture with fixation, and cholecystectomy.

Surgery by Color

The number and percent distribution of all-listed operations for inpatients discharged from short-stay hospitals in 1973 are shown in table 4 according to color. Surgery rates were not computed because color was not identified on 12.8 percent of the medical records in the sample which accounted for 13.4 percent of the discharges with operations.

The surgical classes with the largest frequencies for both white and all other patients were gynecological, abdominal, orthopedic, and urological surgery, but not in the same order. In addition, otorhinolaryngology ranked fourth for white patients and obstetrical procedures ranked third for all other patients. Measured by the percentage of the number of operations in each class to all operations, the largest percent difference by color was for obstetrical procedures, 5.0 percent for white patients compared with 12.2 percent for all others. Other surgical specialties with large differences in these percentages by color were otorhinolaryngology which accounted for 10.0 percent of all operations for white patients and 6.3 percent for all other patients and vascular and cardiac surgery which accounted for 4.2 percent of the operations for white and 2.8 percent for all other patients.

The detailed surgical categories with the largest frequencies for both white and all other patients were biopsy, diagnostic dilation and curettage of uterus, tonsillectomy with or without adenoidectomy, and hysterectomy. These four surgical categories accounted for almost one out of five of all operations performed for white (18.5 percent) and all other (18.7 percent) patients. Ranked fifth in frequency were inguinal hernia for white patients and dilation and curettage after delivery or abortion for all other patients.

Variations by color are evident in the proportions which surgical categories represented

of all operations. For example, white patients had larger percentages of all operations for extraction of lens, myringotomy, and cholecystectomy than all other patients. However, for white patients the percentages were smaller than for all other patients operated for bilateral ligation and division of fallopian tubes, cesarean section, and dilation and curettage after delivery or abortion.

Surgery by Geographic Region

The surgical rates for all operations by region were lowest in the South and West Regions and were highest in the North Central and Northeast Regions. The estimated number of operations per 1,000 population ranged from 77.6 in the South Region to 101.9 in the North Central Region, or about 1.3 times larger (table 6). Patients with

Table 0. Rate of all-listed operations for inpatients discharged from short-stay hospitals, by selected surgical categories and geographic region: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical category and ICDA codes	United States	Geographic region			
		North-east	North Central	South	West
All operations ¹ -----	8,951.8	9,191.3	10,185.6	7,764.0	8,807.3
Dilation and curettage of uterus					
diagnostic-----70.3	453.8	586.1	546.5	335.9	337.5
Biopsy-----A1-A2	446.6	535.7	519.2	334.7	411.2
Tonsillectomy with or without					
adenoidectomy-----21.1-21.2	429.6	346.0	530.2	375.4	482.4
Hysterectomy-----69.1-69.5	335.2	275.9	333.5	370.9	354.8
Repair of inguinal hernia-----38.2-38.3	255.3	302.2	276.6	198.1	260.2
Excision of lesion of skin and					
subcutaneous tissue-----92.1-92.2	221.2	220.5	233.1	226.6	193.6
Oophorectomy; salpingo-					
oophorectomy-----67.2-67.5	206.5	210.4	207.2	208.0	197.5
Cholecystectomy-----43.5	199.8	229.7	219.5	178.9	165.4
Appendectomy ² -----41.1	164.5	145.1	183.9	163.8	161.5
Closed reduction of fracture without					
fixation-----82.0	156.0	141.3	182.6	140.5	161.9
Operations on muscles, tendons,					
fascia, and bursa-----88-89	149.1	143.4	160.5	132.0	169.8
Ligation and division of fallopian					
tubes (bilateral)-----68.5	145.5	173.9	137.6	150.5	110.1
Reduction of fracture with					
fixation-----82.2	137.9	115.3	159.8	127.8	152.6
Extraction of lens-----14.4-14.6	135.6	143.7	154.1	112.3	137.1
Dilation and curettage after delivery					
or abortion-----78.1	132.6	149.7	142.2	133.9	91.5
Prostatectomy-----58.1-58.3	120.8	146.0	142.6	90.6	106.2
Cesarean section-----77	119.6	129.3	108.2	128.9	107.6
Dilation of urethra-----57.5	110.4	97.4	161.6	100.9	63.6
Hemorrhoidectomy-----51.3	106.0	98.3	116.4	111.8	89.5
Plastic repair of cystocele and/or					
rectocele-----71.4	99.3	85.1	110.1	90.5	117.2

¹Includes data for surgery not shown in table.

²Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

surgery in the United States and in each geographic region had an average of 1.4 surgical operations during their hospitalization. These statistics were obtained by comparing the number of surgical operations (table 5) with the number of discharges with surgery (table E).

The leading surgical classes in terms of frequency of operations were gynecological surgery, abdominal surgery, orthopedic surgery, otorhinolaryngology, and urological surgery. These were also the leading specialties in all the geographic regions. Gynecological surgery accounted for one in six operations in the West Region and one in five in the other regions.

Regional variations in surgical rates by surgical class were largest for dental surgery which ranged from 0.5 procedures per 1,000 population in the West Region to 2.6 in the Northeast Region, or about 5.8 times higher. For all other surgical classes, the highest rate for a region compared with the lowest rate was within the range of 1.2 to 1.8 times larger.

The five leading surgical categories in 1973 for inpatients of all short-stay hospitals in the United States were diagnostic dilation and curettage of uterus, biopsy, tonsillectomy with or without adenoidectomy, hysterectomy, and repair of inguinal hernia (table O). These were also the leading operations in each geographic region

except the South, but not in the same order. In the South Region excision of lesion of skin and subcutaneous tissue ranked fifth and repair of inguinal hernia ranked seventh.

There were variations among the regions in the estimated rates for the surgical categories. For example, of the leading surgical categories shown in table O, the smallest difference in the rates per 1,000 population was for oophorectomy and salpingo-oophorectomy for which the range was from 2.0 in the West to 2.1 in the Northeast. The largest difference was for diagnostic dilation and curettage of the uterus for which the range was from 3.4 in the South to 5.9 in the Northeast, or 1.7 times larger.

Surgery by Bed Size of Hospital

The estimated number of all-listed operations in each surgical class and category is shown in table 7 by bed size of hospital where the surgery occurred. A percent distribution of these data is presented in table 8.

The smaller hospitals had smaller proportions of the total operations performed than of the total discharges and the larger hospitals had greater proportions of the operations than of the discharges (table P). This is also true when discharges are related to persons with surgery.

Table P. Number and percent distribution of inpatients discharged from short-stay hospitals, inpatients with surgery, and all-listed operations, according to bed size of hospital: United States, 1973

[Excludes newborn infants and Federal hospitals]

Bed size of hospital	Total discharges	Discharges with surgery	All-listed operations	Total discharges	Discharges with surgery	All-listed operations
	Number in thousands			Percent distribution		
Total-----	32,125	13,266	18,426	100.0	100.0	100.0
6-99 beds-----	6,604	1,917	2,640	20.6	14.5	14.3
100-199 beds-----	5,485	2,102	2,893	17.1	15.8	15.7
200-299 beds-----	5,625	2,459	3,447	17.5	18.5	18.7
300-499 beds-----	8,228	3,842	5,383	25.6	29.0	29.2
500 beds or more-----	6,183	2,946	4,062	19.2	22.2	22.0

Table Q. Percent distribution of all-listed operations for inpatients discharged from short-stay hospitals by surgical class, according to bed size of hospital: United States, 1973

[Excludes newborn infants and Federal hospitals]

Surgical class and ICDA codes	All sizes	6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 beds or more
	Percent distribution					
All operations-----	100.0	100.0	100.0	100.0	100.0	100.0
Neurosurgery-----01-05	1.7	1.5	0.8	1.4	1.8	2.5
Ophthalmology-----06-14	3.6	2.5	3.1	3.5	3.8	4.2
Otorhinolaryngology-----16-21	10.0	10.7	9.3	11.3	10.5	8.1
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	0.4	0.3	0.4	0.4	0.5	0.5
Vascular and cardiac surgery-----24-30	3.9	1.3	1.7	3.6	4.0	7.2
Thoracic surgery-----32-35	1.3	0.7	0.8	1.3	1.4	1.8
Abdominal surgery-----38-48	14.9	17.4	16.4	14.8	13.9	13.6
Proctological surgery-----50-52	3.1	3.0	3.1	3.6	3.2	2.4
Urological surgery-----54-61	7.9	5.8	8.9	9.0	7.9	7.6
Breast surgery-----65	1.8	1.7	2.0	2.1	1.9	1.5
Gynecological surgery-----67-72	19.4	19.4	23.6	18.6	19.1	17.2
Obstetrical procedures-----74-78	5.8	4.6	6.6	4.9	5.4	7.5
Orthopedic surgery-----80-90	12.8	17.1	10.5	12.7	12.6	11.8
Plastic surgery-----92-94	5.6	8.8	5.1	5.2	5.2	5.0
Oral and maxillofacial surgery-----95-98	0.9	0.5	0.7	0.9	1.1	1.2
Dental surgery-----99	1.9	0.9	2.4	2.1	2.3	1.8
Biopsy-----A1-A2	5.0	3.7	4.3	4.8	5.3	6.0

Hospitals with fewer than 300 beds had 55.2 percent of the total discharges in 1973 and only 48.7 percent of the operations compared with hospitals of 300 beds or more which had only 44.8 percent of the discharges and 51.2 percent of the operations.

The leading surgical classes in hospitals of all bed size groups were gynecological surgery, abdominal surgery, orthopedic surgery, and otorhinolaryngology (table 7). Urological surgery ranked among the five leading surgical specialties in all hospitals except those with 6-99 beds, where plastic surgery ranked fifth and urological surgery sixth.

Surgical operations were highly clustered in the five leading surgical classes, which accounted for about two-thirds (65 percent) of all the operations reported. However, there was greater dispersion of the operations among the surgical classes in the larger than in the smaller hospitals.

Thus, the percentage which operations in the five leading specialties represented of all operations decreased from 73 percent in hospitals with 6-99 beds to 58 percent in hospitals with 500 beds or more. Offsetting these differences in the leading surgical classes by bed size of hospital, some specialties accounted for greater proportions of the total operations in the larger than the smaller hospitals. Ophthalmology increased consistently with bed size of hospital from 2.5 percent of all operations in hospitals with 6-99 beds to 4.2 percent in hospitals with 500 beds or more, vascular and cardiac surgery from 1.3 percent to 7.2 percent, thoracic surgery from 0.7 percent to 1.8 percent, oral and maxillofacial surgery from 0.5 percent to 1.2 percent, and biopsy from 3.7 percent to 6.0 percent (table Q). For other specialties such as otorhinolaryngology and proctological surgery definitive patterns of change were not evident by bed size of hospital.

Operations performed in 1973 were almost equally distributed between hospitals with fewer than 300 beds (48.7 percent) and hospitals with 300 beds or more (51.3 percent). However, the distributions of operations by surgical categories, the most detailed grouping of operations in this report, varied considerably between the smaller and larger hospitals.

Hospitals with fewer than 300 beds accounted for most of the following surgical operations: repair and plastic operations on joints of foot and toes (77.1 percent), suture of skin or mucous membrane (63.9 percent), appendectomy (63.7 percent), trachelectomy (62.2 percent), and closed reduction of fracture without fixation (60.3 percent). Hospitals with 300 beds or more accounted for most of the following surgical operations: reattachment of retina (87.9 percent), operations on valves of heart (87.8 percent), arthroplasty of hip (74.1 percent), nephrectomy (64.9 percent), and typanoplasty (64.9 percent). The proportions of total operations performed in small and large hospitals varied slightly for the surgical categories diagnostic dilation and curettage of uterus, hysterectomy, and oophorectomy and salpingo-oophorectomy.

FIRST-LISTED OPERATIONS AND AVERAGE LENGTH OF STAY

The number of first-listed operations (the only operation or the first-listed of multiple operations) and average lengths of stay are shown in table 9 by surgical category and sex in tables 10 and 11. Average length of stay was computed for the operations and surgical procedures listed first on the face sheets of the medical records.

First-listed operations accounted for 13.3 million, or 72.0 percent, of the estimated 18.4 million operations performed during 1973. However, there were large variations in the percentages which first-listed operations represented of the all-listed operations (maximum of three operations coded for each medical record) by surgical category. These variations are evident when data in table 9 on number of first-

listed operations are compared with the data in table 1 on number of all-listed operations.

The proportion of first-listed operations to all-listed operations by surgical class ranged from 59.4 percent for gynecological surgery and 60.2 percent for biopsy to 93.7 percent for obstetrical procedures and 88.3 percent for operations on thyroid, parathyroid, thymus, and adrenals. For the more detailed surgical categories, some operations were almost always listed first and others were most frequently listed second or third on the face sheets of the medical records. First-listed operations accounted for 98 to 99 percent for the operations for extraction of lens, tonsillectomy with or without adenoidectomy, and cesarian section. In contrast, for oophorectomy and salpingo-oophorectomy the proportion first-listed was only 13.9 percent; for local excision of other lesions of uterus, cervix, and supporting structures 20.3 percent; and for colporrhaphy 27.9 percent.

Average length of stay was longer for patients discharged from short-stay hospitals with surgery than without surgery for all age groups and by sex, except for under 15 years of age (table R). For the youngest age group, average length of stay for all patients and by sex was shorter for discharges with surgery than without surgery, primarily because about two-fifths (43.0 percent) of the patients with surgery had a first-listed operation in the otorhinolaryngology specialty, for which the average length of stay was only 2.1 days.

Average length of stay for patients discharged with surgery was longer by age and sex for patients with multiple surgical operations performed than for patients with single operations. As shown in table B, 22.2 percent of the patients under age 15 had multiple operations compared with a high of 35.6 percent for age group 45-64.

The average lengths of stay for patients with surgery increased with age for all patients and by sex. For patients without surgery this pattern of longer average stays with advancing age was also evident for all patients and for males. However, for females without surgery average length of stay for under 15 years of age (5.2 days) was about the same as for ages 15-44 (5.0 days). Average length of stay was

Table R. Average length of stay for inpatients discharged from short-stay hospitals with and without surgery, by number of operations, sex, and age: United States, 1973

[Excludes newborn infants and Federal hospitals]

Sex and age	Total discharges	Total discharges without surgery	Discharges with surgery			
			Total	One operation	Two operations	Three operations
<u>Total</u> ¹	Average length of stay in days					
All ages-----	7.8	7.6	7.9	7.0	9.1	12.8
Under 15 years-----	4.5	5.0	4.0	3.8	4.1	9.3
15-44 years-----	5.7	5.4	6.0	5.2	7.1	9.8
45-64 years-----	9.1	8.7	9.7	8.7	10.7	13.8
65 years and over-----	12.1	11.2	14.3	12.8	16.6	21.4
<u>Male</u>						
All ages-----	8.3	8.0	8.7	7.4	10.3	17.0
Under 15 years-----	4.5	4.9	4.0	3.8	4.1	8.3
15-44 years-----	6.8	6.6	7.1	6.0	8.2	15.0
45-64 years-----	9.3	8.4	10.7	9.3	12.6	17.5
65 years and over-----	11.6	10.6	13.7	11.7	16.7	23.3
<u>Female</u>						
All ages-----	7.4	7.4	7.5	6.7	8.5	11.0
Under 15 years-----	4.6	5.2	4.0	3.8	4.0	11.0
15-44 years-----	5.2	5.0	5.5	4.8	6.7	8.2
45-64 years-----	9.0	8.9	9.1	8.1	9.6	12.2
65 years and over-----	12.5	11.6	14.8	13.8	16.6	19.8

¹Includes data for sex not stated.

shorter for women aged 15-44 without surgery than with surgery, primarily because of the large number of patients with first-listed diagnoses of uncomplicated deliveries which required short hospital stays but were not counted as operations in this report.

The average short-stay hospital stays by surgical class of first-listed operation ranged from 3.1 days for otorhinolaryngology to 15.0 days for neurosurgery. By the more detailed

surgical categories, average length of stay ranged from about 2 days to over 20 days. First-listed surgical categories which accounted for short average lengths of stay during 1973 include adenoidectomy without tonsillectomy (1.7 days), tonsillectomy with adenoidectomy (2.1 days), tonsillectomy without adenoidectomy (2.3 days), myringotomy (2.3 days), and dilation and curettage after delivery or abortion (2.4 days). Average lengths of stay were long for patients

whose first-listed operations were ileostomy, colostomy, and other enterostomy (25.1 days); emergency tracheotomy or tracheostomy (24.4 days); arthroplasty of hip (22.8 days); operations on valves of heart (22.2 days); and resection of

small intestine or colon (20.8 days). There were variations in average length of stay for the surgical categories by sex (table 9) and especially by age (table 11), which with few exceptions was longer for each older age group.



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Table 1. Number and rate of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and sex: United States, 1973

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

Surgical category and ICDA codes	Total ¹	Male	Female	Total ¹	Male	Female
	Number of all-listed operations in thousands			Rate of all-listed operations per 100,000 population		
All operations-----	18,426	6,936	11,480	8,951.8	6,984.7	10,776.5
Neurosurgery-----01-05	310	157	152	150.5	158.4	143.2
Ophthalmology-----06-14	655	295	358	318.3	297.5	336.3
Resection and recession of eye muscle-----10.5-10.6	82	37	46	40.0	37.0	42.9
Reattachment of retina-----13.4-13.5	33	21	13	16.2	20.7	12.0
Extraction of lens-----14.4-14.6	279	116	162	135.6	116.8	152.3
Other eye surgery-----Residual	260	122	138	126.5	123.0	129.2
Otorhinolaryngology-----16-21	1,835	903	930	891.4	909.8	873.3
Myringotomy-----17.0	215	122	92	104.3	122.8	86.8
Stapedectomy with ossicular reconstruction-----17.4	30	11	19	14.8	11.1	18.2
Tympanoplasty-----17.6-17.7	53	24	29	25.6	24.4	26.8
Excision of lesion of nose-----19.0	47	30	17	23.0	30.3	16.1
Section of nasal septum-----19.1	76	32	45	37.2	31.9	41.9
Tracheotomy or tracheostomy, emergency-----20.5	42	29	13	20.6	29.5	12.3
Tonsillectomy without adenoidectomy-----21.1	247	87	159	119.8	87.9	149.2
Tonsillectomy with adenoidectomy-----21.2	638	311	327	309.9	313.1	306.7
Adenoidectomy without tonsillectomy-----21.3	63	36	27	30.6	36.4	25.1
Other operations on ears, nose, and throat-----Residual	424	221	203	205.8	222.5	190.1
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	80	17	64	39.1	16.8	59.8
Thyroidectomy-----22.1-22.2	64	10	54	31.3	10.4	50.8
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	16	6	10	7.8	6.4	9.0
Vascular and cardiac surgery-----24-30	718	410	308	348.9	413.0	288.9
Incision of peripheral vessels-----24.0	26	16	10	12.7	16.1	9.6
Excision and ligation of varicose veins-----24.4	98	24	74	47.8	24.1	69.8
Incision and excision of lymphatic structure-----25.0-25.2	63	31	32	30.6	31.0	30.1
Operations on valves of heart-----29.2-29.4	22	10	12	10.5	10.0	11.0
Other vascular and cardiac surgery-----Residual	509	330	179	247.4	331.8	168.4
Thoracic surgery-----32-35	240	138	102	116.7	138.8	95.9
Lung lobectomy-----34.2-34.4	29	19	10	14.1	19.6	9.0
Other thoracic surgery-----Residual	211	118	93	102.6	119.2	86.9
Abdominal surgery-----38-48	2,747	1,357	1,389	1,334.5	1,366.9	1,303.6
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	30	12	18	14.4	12.1	16.6
Repair of inguinal hernia-----38.2-38.3	525	464	61	255.3	467.1	57.5
Appendectomy-----41.1	339	175	163	164.5	176.7	153.0
Cholecystectomy-----43.5	411	94	318	199.8	94.4	298.1
Splenectomy-----45.1	31	16	15	15.0	16.3	13.8
Gastric resection, partial or complete-----46.2-46.3	64	39	25	31.0	39.4	23.2
Vagotomy-----46.8	60	40	20	29.1	40.3	18.7
Resection of small intestine or colon-----47.4-47.6	146	65	81	71.0	65.5	76.1
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	71	37	34	34.5	37.2	32.1
Other abdominal surgery-----Residual	1,070	415	655	519.8	418.0	614.5
Proctological surgery-----50-52	565	303	262	274.5	304.8	246.2
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	140	76	65	68.1	76.1	60.7
Hemorrhoidectomy-----51.3	218	111	107	106.0	111.8	100.5
Other proctological surgery-----Residual	207	116	90	100.4	116.9	84.9
Urological surgery-----54-61	1,453	1,032	420	705.8	1,038.8	394.7
Nephrotomy and pyelotomy-----54.0-54.1	28	15	12	13.5	15.6	11.6
Nephrectomy-----54.4-54.5	32	15	18	15.8	15.0	16.5
Passage of catheter to kidney-----55.7	74	43	31	36.2	43.2	29.5
Local excision and destruction of lesion of bladder-----56.1-56.2	101	67	34	49.0	67.6	31.7
Removal of calculus and drainage of bladder without incision-----56.8	25	18	7	12.0	17.9	6.5
Meatotomy (urethral)-----57.1	54	40	14	26.1	39.9	13.1
Excision or destruction of lesion of urethra-----57.2	25	7	18	12.1	6.6	17.1
Dilation of urethra-----57.5	227	82	145	110.4	82.4	136.0
Prostatectomy-----58.1-58.3	249	249	...	120.8	250.4	...
Excision of hydrocele and hematocele-----59.1	72	72	...	34.9	72.3	...
Orchiopexy-----59.7	26	26	...	12.6	26.0	...
Vasectomy-----60.1	60	60	...	29.2	60.6	...
Circumcision-----61.2	99	99	...	47.9	99.4	...
Other urological surgery-----Residual	382	240	141	185.4	242.0	132.7

See footnotes at end of table.

Table 1. Number and rate of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and sex: United States, 1973—Con.

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

Surgical category and ICDA codes	Total ¹	Male	Female	Total ¹	Male	Female
	Number of all-listed operations in thousands			Rate of all-listed operations per 100,000 population		
Breast surgery-----65	336	19	317	163.2	18.8	297.8
Partial mastectomy-----65.2	194	4	190	94.2	3.7	178.5
Complete and radical mastectomy-----65.3-65.6	96	7	89	46.6	7.5	83.2
Other breast surgery-----Residual	46	8	39	22.4	7.6	36.2
Gynecological surgery-----67-72	3,565	...	3,565	1,732.2	...	3,346.9
Local excision or destruction of lesion of ovary-----67.1	74	...	74	36.1	...	69.7
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	425	...	425	206.5	...	399.1
Ligation and division of fallopian tubes (bilateral)-----68.5	299	...	299	145.5	...	281.1
Hysterectomy-----69.1-69.5	690	...	690	335.2	...	647.7
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	116	...	116	56.2	...	108.7
Dilation and curettage of uterus, diagnostic-----70.3	934	...	934	453.8	...	876.8
Trachelectomy-----70.4	127	...	127	61.5	...	118.7
Colporrhaphy-----71.3	41	...	41	20.0	...	38.6
Plastic repair of cystocele and/or rectocele-----71.4	204	...	204	99.3	...	191.8
Other gynecological surgery-----Residual	655	...	655	318.2	...	614.7
Obstetrical procedures ³ -----74-78	1,077	...	1,077	523.2	...	1,011.0
Cesarean section-----77	246	...	246	119.6	...	231.1
Dilation and curettage after delivery or abortion-----78.1	273	...	273	132.6	...	256.2
Repair of laceration-----78.2-78.3	182	...	182	88.2	...	170.4
Other obstetrical procedures-----Residual	376	...	376	182.9	...	353.3
Orthopedic surgery-----80-90	2,351	1,217	1,133	1,142.3	1,225.1	1,064.0
Excision of bone, partial-----80.4	157	64	93	76.3	64.0	87.7
Closed reduction of fracture without fixation-----82.0	321	174	147	156.0	174.8	138.1
Open reduction of fracture without fixation-----82.1	74	45	29	35.8	45.6	26.8
Reduction of fracture with fixation-----82.2	284	119	164	137.9	120.0	154.4
Excision of intervertebral cartilage (prolapsed disk)-----86.4	147	86	61	71.4	86.3	57.5
Arthroplasty of hip-----87.0	53	22	31	25.7	21.9	29.2
Repair and plastic operations on joints of foot and toes-----87.2	120	17	102	58.1	17.4	96.1
Spinal fusion-----87.4	49	28	21	24.0	28.6	19.6
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	29	14	15	14.0	14.0	14.0
Closed reduction of dislocation of joint-----87.7	32	19	13	15.3	18.8	12.1
Operations on muscles, tendons, fascia, and bursa-----88-89	307	169	138	149.1	169.9	129.8
Other orthopedic surgery-----Residual	779	461	318	378.7	463.8	298.8
Plastic surgery-----92-94	1,041	543	497	505.8	546.7	466.5
Incision of skin and subcutaneous tissue-----92.0	114	68	45	55.3	68.9	42.6
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	455	205	250	221.2	206.3	234.7
Suture of skin or mucous membrane-----92.5	195	136	59	94.8	136.5	55.6
Plastic operations on lip and mouth-----93.1	15	11	4	7.3	10.7	4.1
Skin graft except lip and mouth-----93.2-93.6	136	85	50	65.9	85.8	47.2
Other plastic surgery-----Residual	126	38	88	61.2	38.5	82.3
Oral and maxillofacial surgery-----95-98	174	92	82	84.5	92.6	76.8
Dental surgery-----99	358	153	204	174.1	154.5	191.7
Extraction of tooth, forceps extraction-----99.3	134	60	73	65.1	60.9	68.5
Surgical removal of tooth-----99.4	126	44	82	61.2	43.9	77.4
Alveoloplasty-----99.7	48	24	24	23.5	24.3	22.7
Other dental surgery-----Residual	50	25	25	24.3	25.4	23.1
Biopsy-----A1-A2	919	300	618	446.6	302.3	580.0

¹Includes data for inpatients discharged with sex not stated.

²Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

³Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 2. Number of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and age: United States, 1973

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

Surgical category and ICDA codes	All ages	Under 15 years	15-44 years	45-64 years	65 years and over
	Number of all-listed operations in thousands				
All operations-----	18,426	2,326	8,420	4,826	2,855
Neurosurgery-----01-05	310	28	111	117	54
Ophthalmology-----06-14	655	113	103	173	266
Resection and recession of eye muscle-----10.5-10.6	82	58	19	3	*
Reattachment of retina-----13.4-13.5	33	*	7	14	12
Extraction of lens-----14.4-14.6	279	*	10	78	189
Other eye surgery-----Residual	260	52	67	77	64
Ototohinolaryngology-----16-21	1,835	995	596	174	69
Myringotomy-----17.0	215	198	11	4	*
Stapedectomy with ossicular reconstruction-----17.4	30	*	12	15	*
Tympanoplasty-----17.6-17.7	53	15	22	12	4
Excision of lesion of nose-----19.0	47	3	15	19	10
Section of nasal septum-----19.1	76	*	59	13	*
Tracheotomy or tracheostomy, emergency-----20.5	42	3	10	18	12
Tonsillectomy without adenoidectomy-----21.1	247	52	191	3	*
Tonsillectomy with adenoidectomy-----21.2	638	596	41	*	*
Adenoidectomy without tonsillectomy-----21.3	63	61	*	-	-
Other operations on ears, nose, and throat-----Residual	424	65	233	89	37
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	80	4	36	31	10
Thyroidectomy-----22.1-22.2	64	*	30	25	8
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	16	3	5	6	*
Vascular and cardiac surgery-----24-30	718	48	169	334	168
Incision of peripheral vessels-----24.0	26	*	5	10	10
Excision and ligation of varicose veins-----24.4	98	*	44	46	8
Incision and excision of lymphatic structure-----25.0-25.2	63	6	22	22	14
Operations on valves of heart-----29.2-29.4	22	*	7	11	*
Other vascular and cardiac surgery-----Residual	509	39	91	245	134
Thoracic surgery-----32-35	240	16	69	88	66
Lung lobectomy-----34.2-34.4	29	*	6	14	9
Other thoracic surgery-----Residual	211	16	64	74	58
Abdominal surgery-----38-48	2,747	316	936	855	641
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	30	*	6	15	9
Repair of inguinal hernia-----38.2-38.3	525	117	126	179	104
Appendectomy-----41.1	339	103	191	32	13
Cholecystectomy-----43.5	411	*	154	159	97
Splenectomy-----45.1	31	4	15	8	4
Gastric resection, partial or complete-----46.2-46.3	64	*	15	31	17
Vagotomy-----46.8	60	*	20	27	13
Resection of small intestine or colon-----47.4-47.6	146	5	28	49	64
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	71	*	12	23	34
Other abdominal surgery-----Residual	1,070	83	369	332	286
Proctological surgery-----50-52	565	10	298	193	65
Local excision and destruction of lesion of rectum and anus-----50.2, 51.2	140	*	66	51	21
Hemorrhoidectomy-----51.3	218	*	108	90	20
Other proctological surgery-----Residual	207	7	124	52	25
Urological surgery-----54-61	1,453	247	349	384	473
Nephrotomy and pyelotomy-----54.0-54.1	28	*	9	11	7
Nephrectomy-----54.4-54.5	32	*	10	11	9
Passage of catheter to kidney-----55.7	74	4	28	29	14
Local excision and destruction of lesion of bladder-----56.1-56.2	101	*	11	28	60
Removal of calculus and drainage of bladder without incision-----56.8	25	*	4	7	11
Meatotomy (urethral)-----57.1	54	28	10	7	9
Excision or destruction of lesion of urethra-----57.2	25	*	11	8	6
Dilation of urethra-----57.5	227	58	64	53	52
Prostatectomy-----58.1-58.3	249	*	*	71	175
Excision of hydrocele and hematocele-----59.1	72	34	12	16	10
Orchiopexy-----59.7	26	21	5	*	*
Vasectomy-----60.1	60	*	20	17	23
Circumcision-----61.2	99	53	33	8	5
Other urological surgery-----Residual	382	43	129	116	93

See footnotes at end of table.

Table 2. Number of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and age: United States, 1973—Con.

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

Surgical category and ICDA codes	All ages	Under 15 years	15-44 years	45-64 years	65 years and over
	Number of all-listed operations in thousands				
Breast surgery-----65	336	5	166	118	47
Partial mastectomy-----65.2	194	*	116	61	14
Complete and radical mastectomy-----65.3-65.6	96	*	17	47	31
Other breast surgery-----Residual	46	*	33	10	*
Gynecological surgery-----67-72	3,565	22	2,402	974	168
Local excision or destruction of lesion of ovary-----67.1	74	*	61	7	4
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	425	*	239	165	20
Ligation and division of fallopian tubes (bilateral)-----68.5	299	*	295	4	*
Hysterectomy-----69.1-69.5	690	*	415	243	31
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	116	*	68	40	7
Dilation and curettage of uterus, diagnostic-----70.3	934	3	595	296	40
Trachelectomy-----70.4	127	*	91	28	7
Colporrhaphy-----71.3	41	*	24	13	4
Plastic repair of cystocele and/or rectocele-----71.4	204	*	78	93	33
Other gynecological surgery-----Residual	655	11	536	86	22
Obstetrical procedures ² -----74-78	1,077	11	1,061	5	-
Cesarean section-----77	246	*	244	*	-
Dilation and curettage after delivery or abortion-----78.1	273	*	269	*	-
Repair of laceration-----78.2-78.3	182	*	180	*	-
Other obstetrical procedures-----Residual	376	7	368	*	-
Orthopedic surgery-----80-90	2,351	270	1,020	646	416
Excision of bone, partial-----80.4	157	11	71	58	16
Closed reduction of fracture without fixation-----82.0	321	103	103	56	59
Open reduction of fracture without fixation-----82.1	74	11	34	16	12
Reduction of fracture with fixation-----82.2	284	15	79	51	140
Excision of intervertebral cartilage (prolapsed disk)-----86.4	147	*	80	61	6
Arthroplasty of hip-----87.0	53	*	4	20	28
Repair and plastic operations on joints of foot and toes-----87.2	120	*	44	58	15
Spinal fusion-----87.4	49	*	26	19	*
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	29	4	11	12	*
Closed reduction of dislocation of joint-----87.7	32	7	15	5	5
Operations on muscles, tendons, fascia, and bursa-----88-89	307	46	156	82	23
Other orthopedic surgery-----Residual	779	67	398	207	109
Plastic surgery-----92-94	1,041	150	470	279	142
Incision of skin and subcutaneous tissue-----92.0	114	24	50	25	15
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	455	52	182	146	75
Suture of skin or mucous membrane-----92.5	195	30	119	28	18
Plastic operations on lip and mouth-----93.1	15	8	4	*	*
Skin graft except lip and mouth-----93.2-93.6	136	19	63	34	20
Other plastic surgery-----Residual	126	17	53	44	12
Oral and maxillofacial surgery-----95-98	174	24	84	45	22
Dental surgery-----99	358	36	229	73	20
Extraction of tooth, forceps extraction-----99.3	134	12	81	31	10
Surgical removal of tooth-----99.4	126	7	100	15	4
Alveoloplasty-----99.7	48	*	25	18	5
Other dental surgery-----Residual	50	16	23	10	*
Biopsy-----A1-A2	919	31	321	338	229

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 3. Rates of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and age: United States, 1973

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

Surgical category and ICDA codes	All ages	Under 15 years	15-44 years	45-64 years	65 years and over
	Rate of all-listed operations per 100,000 population				
All operations-----	8,951.8	4,185.8	9,640.1	11,317.1	14,067.1
Neurosurgery-----01-05	150.5	50.3	126.9	274.7	265.3
Ophthalmology-----06-14	318.3	203.3	118.5	405.9	1,309.0
Resection and recession of eye muscle-----10.5-10.6	40.0	105.2	22.2	8.0	*
Reattachment of retina-----13.4-13.5	16.2	*	7.7	32.4	56.8
Extraction of lens-----14.4-14.6	135.6	*	12.0	184.1	929.8
Other eye surgery-----Residual	126.5	93.4	76.6	181.4	316.6
Otorhinolaryngology-----16-21	891.4	1,791.5	682.8	408.7	339.4
Myringotomy-----17.0	104.3	356.2	12.6	10.1	*
Stapedectomy with ossicular reconstruction-----17.4	14.8	*	14.1	35.6	*
Tympanoplasty-----17.6-17.7	25.6	26.3	25.3	28.8	18.5
Excision of lesion of nose-----19.0	23.0	6.0	16.7	44.4	51.6
Section of nasal septum-----19.1	37.2	*	68.0	31.3	*
Tracheotomy or tracheostomy, emergency-----20.5	20.6	6.1	11.2	41.4	57.0
Tonsillectomy without adenoidectomy-----21.1	119.8	92.8	218.8	7.5	*
Tonsillectomy with adenoidectomy-----21.2	309.9	1,072.0	47.3	*	*
Adenoidectomy without tonsillectomy-----21.3	30.6	110.1	*	-	-
Other operations on ears, nose, and throat-----Residual	205.8	117.0	266.6	208.2	182.3
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	39.1	6.7	40.9	73.2	48.2
Thyroidectomy-----22.1-22.2	31.3	*	34.8	59.6	39.5
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	7.8	5.5	6.1	13.6	*
Vascular and cardiac surgery-----24-30	348.9	86.8	193.2	782.2	826.4
Incision of peripheral vessels-----24.0	12.7	*	5.7	23.4	50.3
Excision and ligation of varicose veins-----24.4	47.8	*	50.2	108.0	37.8
Incision and excision of lymphatic structure-----25.0-25.2	30.6	11.1	24.7	50.6	66.9
Operations on valves of heart-----29.2-29.4	10.5	*	8.2	24.9	*
Other vascular and cardiac surgery-----Residual	247.4	69.9	104.4	575.4	659.9
Thoracic surgery-----32-35	116.7	29.3	79.4	207.0	327.2
Lung lobectomy-----34.2-34.4	14.1	*	6.4	33.1	43.7
Other thoracic surgery-----Residual	102.6	28.6	73.0	173.9	283.4
Abdominal surgery-----38-48	1,334.5	569.1	1,071.1	2,003.9	3,157.2
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	14.4	*	6.4	34.7	43.4
Repair of inguinal hernia-----38.2-38.3	255.3	210.4	143.8	419.7	512.3
Appendectomy-----41.1	164.5	185.3	219.2	74.3	61.7
Cholecystectomy-----43.5	199.8	*	176.4	371.8	479.3
Splenectomy-----45.1	15.0	7.3	17.1	19.0	18.6
Gastric resection, partial or complete-----46.2-46.3	31.0	*	17.2	73.3	85.2
Vagotomy-----46.8	29.1	*	22.9	62.2	64.5
Resection of small intestine or colon-----47.4-47.6	71.0	8.6	32.4	115.4	315.1
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	34.5	*	13.6	55.0	168.1
Other abdominal surgery-----Residual	519.8	149.8	422.2	778.6	1,408.8
Proctological surgery-----50-52	274.5	17.2	340.9	451.8	320.4
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	68.1	*	75.8	119.4	102.2
Hemorrhoidectomy-----51.3	106.0	*	123.6	210.8	97.2
Other proctological surgery-----Residual	100.4	11.9	141.5	121.7	121.0
Urological surgery-----54-61	705.8	445.3	399.6	900.2	2,328.7
Nephrotomy and pyelotomy-----54.0-54.1	13.5	*	10.7	25.1	33.5
Nephrectomy-----54.4-54.5	15.8	*	11.6	26.5	43.6
Passage of catheter to kidney-----55.7	36.2	6.4	32.6	67.2	68.0
Local excision and destruction of lesion of bladder-----56.1-56.2	49.0	*	12.8	66.4	294.2
Removal of calculus and drainage of bladder without incision-----56.8	12.0	*	4.8	17.4	55.8
Meatotomy (urethral)-----57.1	26.1	50.8	11.0	16.6	43.7
Excision or destruction of lesion of urethra-----57.2	12.1	*	12.1	18.2	30.5
Dilatation of urethra-----57.5	110.4	105.1	73.3	124.8	254.1
Prostatectomy-----58.1-58.3	120.8	*	*	166.1	862.3
Excision of hydrocele and hematocele-----59.1	34.9	60.7	13.9	37.8	48.5
Orchiopexy-----59.7	12.6	37.4	5.3	*	*
Vasectomy-----60.1	29.2	*	23.0	40.7	111.5
Circumcision-----61.2	47.9	94.6	37.8	19.8	23.1
Other urological surgery-----Residual	185.4	76.9	148.2	272.7	459.2

See footnotes at end of table.

Table 3. Rates of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and age: United States, 1973—Con.

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

Surgical category and ICDA codes	All ages	Under 15 years	15-44 years	45-64 years	65 years and over
Breast surgery-----65	163.2	9.4	190.3	276.5	229.8
Partial mastectomy-----65.2	94.2	*	132.6	143.9	69.9
Complete and radical mastectomy-----65.3-65.6	46.6	*	20.0	109.4	150.6
Other breast surgery-----Residual	22.4	*	37.7	23.1	*
Gynecological surgery-----67-72	1,732.2	39.4	2,750.0	2,284.2	826.1
Local excision or destruction of lesion of ovary-----67.1	36.1	*	70.3	16.5	17.8
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	206.5	*	273.6	386.0	98.4
Ligation and division of fallopian tubes (bilateral)-----68.5	145.5	*	337.9	8.9	*
Hysterectomy-----69.1-69.5	335.2	*	474.7	568.9	152.3
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	56.2	*	78.0	93.6	34.7
Dilation and curettage of uterus, diagnostic-----70.3	453.8	5.6	681.5	694.2	195.5
Trachelectomy-----70.4	61.5	*	104.2	66.2	35.2
Colporrhaphy-----71.3	20.0	*	27.1	30.5	19.4
Plastic repair of cystocele and/or rectocele-----71.4	99.3	*	89.2	217.0	163.7
Other gynecological surgery-----Residual	318.2	19.2	613.5	202.4	108.5
Obstetrical procedures ² -----74-78	523.2	19.7	1,214.8	10.9	-
Cesarean section-----77	119.6	*	279.9	*	-
Dilation and curettage after delivery or abortion-----78.1	132.6	*	308.2	*	-
Repair of laceration-----78.2-78.3	88.2	*	205.8	*	-
Other obstetrical procedures-----Residual	182.9	12.4	421.0	*	-
Orthopedic surgery-----80-90	1,142.3	486.1	1,167.6	1,513.9	2,049.7
Excision of bone, partial-----80.4	76.3	20.7	81.4	136.1	80.4
Closed reduction of fracture without fixation-----82.0	156.0	185.8	117.8	131.9	289.7
Open reduction of fracture without fixation-----82.1	35.8	19.5	39.4	38.2	60.5
Reduction of fracture with fixation-----82.2	137.9	26.4	90.4	119.0	687.7
Excision of intervertebral cartilage (prolapsed disk)-----86.4	71.4	*	91.3	143.3	28.0
Arthroplasty of hip-----87.0	25.7	*	4.5	46.7	138.2
Repair and plastic operations on joints of foot and toes-----87.2	58.1	*	50.1	135.6	74.9
Spinal fusion-----87.4	24.0	*	29.9	45.3	*
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	14.0	6.5	12.2	28.4	*
Closed reduction of dislocation of joint-----87.7	15.3	11.7	17.1	12.4	23.9
Operations on muscles, tendons, fascia, and bursa-----88-89	149.1	82.4	178.3	192.7	114.7
Other orthopedic surgery-----Residual	378.7	120.0	455.3	484.3	535.2
Plastic surgery-----92-94	505.8	269.3	538.1	654.6	701.0
Incision of skin and subcutaneous tissue-----92.0	55.3	43.2	56.8	59.2	73.9
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	221.2	93.4	208.2	342.8	371.7
Suture of skin or mucous membrane-----92.5	94.8	54.6	135.9	65.9	88.4
Plastic operations on lip and mouth-----93.1	7.3	14.9	4.7	*	*
Skin graft except lip and mouth-----93.2-93.6	65.9	33.5	72.0	79.1	100.9
Other plastic surgery-----Residual	61.2	29.7	60.5	104.3	59.9
Oral and maxillofacial surgery-----95-98	84.5	42.5	95.9	104.5	108.7
Dental surgery-----99	174.1	64.0	262.1	172.1	101.0
Extraction of tooth, forceps extraction-----99.3	65.1	21.2	92.8	72.0	51.5
Surgical removal of tooth-----99.4	61.2	12.6	115.0	34.6	19.0
Alveoloplasty-----99.7	23.5	*	28.4	42.7	23.1
Other dental surgery-----Residual	24.3	29.0	25.9	22.8	*
Biopsy-----A1-A2	446.6	55.9	368.0	793.0	1,127.1

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.
²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 4. Number and percent distribution of all-listed operations for inpatients discharged from short-stay hospitals by surgical category, according to color: United States, 1973

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

Surgical category and ICDA codes	Total ¹	Color stated		Total ¹	Color stated		
		White	All other		White	All other	
		Number of all-listed operations in thousands			Percent distribution		
All operations-----	18,426	14,056	1,900	100.0	100.0	100.0	
Neurosurgery-----01-05	310	240	27	1.7	1.7	1.4	
Ophthalmology-----06-14	655	494	57	3.6	3.5	3.0	
Resection and recession of eye muscle-----10.5-10.6	82	61	7	0.4	0.4	0.4	
Reattachment of retina-----13.4-13.5	33	28	*	0.2	0.2	*	
Extraction of lens-----14.4-14.6	279	217	17	1.5	1.5	0.9	
Other eye surgery-----Residual	260	188	32	1.4	1.3	1.7	
Otorhinolaryngology-----16-21	1,835	1,409	121	10.0	10.0	6.3	
Myringotomy-----17.0	215	160	8	1.2	1.1	0.4	
Stapedectomy with ossicular reconstruction-----17.4	30	25	*	0.2	0.2	*	
Tympanoplasty-----17.6-17.7	53	41	*	0.3	0.3	*	
Excision of lesion of nose-----19.0	47	40	*	0.3	0.3	*	
Section of nasal septum-----19.1	76	68	*	0.4	0.5	*	
Tracheotomy or tracheostomy, emergency-----20.5	42	32	6	0.2	0.2	0.3	
Tonsillectomy without adenoidectomy-----21.1	247	178	26	1.3	1.3	1.4	
Tonsillectomy with adenoidectomy-----21.2	638	493	43	3.5	3.5	2.3	
Adenoidectomy without tonsillectomy-----21.3	63	45	3	0.3	0.3	0.2	
Other operations on ears, nose, and throat-----Residual	424	327	30	2.3	2.3	1.6	
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	80	59	12	0.4	0.4	0.6	
Thyroidectomy-----22.1-22.2	64	46	10	0.3	0.3	0.5	
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	16	13	*	0.1	0.1	*	
Vascular and cardiac surgery-----24-30	718	588	53	3.9	4.2	2.8	
Incision of peripheral vessels-----24.0	26	20	*	0.1	0.1	*	
Excision and ligation of varicose veins-----24.4	98	79	4	0.5	0.6	0.2	
Incision and excision of lymphatic structure-----25.0-25.2	63	49	5	0.3	0.4	0.2	
Operations on valves of heart-----29.2-29.4	22	19	*	0.1	0.1	*	
Other vascular and cardiac surgery-----Residual	509	421	42	2.8	3.0	2.2	
Thoracic surgery-----32-35	240	185	31	1.3	1.3	1.6	
Lung lobectomy-----34.2-34.4	29	23	3	0.2	0.2	0.2	
Other thoracic surgery-----Residual	211	162	27	1.1	1.2	1.4	
Abdominal surgery-----38-48	2,747	2,126	277	14.9	15.1	14.6	
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	30	25	*	0.2	0.2	*	
Repair of inguinal hernia-----38.2-38.3	525	414	47	2.9	2.9	2.5	
Appendectomy ² -----41.1	339	264	29	1.8	1.9	1.5	
Cholecystectomy-----43.5	411	329	26	2.2	2.3	1.4	
Splenectomy-----45.1	31	27	*	0.2	0.2	*	
Gastric resection, partial or complete-----46.2-46.3	64	49	6	0.3	0.3	0.3	
Vagotomy-----46.8	60	45	7	0.3	0.3	0.4	
Resection of small intestine or colon-----47.4-47.6	146	113	13	0.8	0.8	0.7	
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	71	55	8	0.4	0.4	0.4	
Other abdominal surgery-----Residual	1,070	805	140	5.8	5.7	7.4	
Proctological surgery-----50-52	565	440	52	3.1	3.1	2.7	
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	140	109	12	0.8	0.8	0.6	
Hemorrhoidectomy-----51.3	218	170	19	1.2	1.2	1.0	
Other proctological surgery-----Residual	207	160	21	1.1	1.1	1.1	
Urological surgery-----54-61	1,453	1,104	141	7.9	7.9	7.4	
Nephrotomy and pyelotomy-----54.0-54.1	28	22	*	0.2	0.2	*	
Nephrectomy-----54.4-54.5	32	24	4	0.2	0.2	0.2	
Passage of catheter to kidney-----55.7	74	58	3	0.4	0.4	0.2	
Local excision and destruction of lesion of bladder-----56.1-56.2	101	82	5	0.5	0.6	0.2	
Removal of calculus and drainage of bladder without incision-----56.8	25	19	*	0.1	0.1	*	
Meatotomy (urethral)-----57.1	54	41	6	0.3	0.3	0.3	
Excision or destruction of lesion of urethra-----57.2	25	19	*	0.1	0.1	*	
Dilation of urethra-----57.5	227	178	18	1.2	1.3	1.0	
Prostatectomy-----58.1-58.3	249	193	19	1.3	1.4	1.0	
Excision of hydrocele and hematocele-----59.1	72	53	7	0.4	0.4	0.3	
Orchiopexy-----59.7	26	20	3	0.1	0.1	0.2	
Vasectomy-----60.1	60	51	*	0.3	0.4	*	
Circumcision-----61.2	99	54	34	0.5	0.4	1.8	
Other urological surgery-----Residual	382	292	33	2.1	2.1	1.7	

See footnotes at end of table.

Table 4. Number and percent distribution of all-listed operations for inpatients discharged from short-stay hospitals by surgical category, according to color: United States, 1973--Con.

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

Surgical category and ICDA codes	Total ¹	Color stated		Total ¹	Color stated	
		White	All other		White	All other
		Number of all-listed operations in thousands		Percent distribution		
Breast surgery-----65	336	260	31	1.8	1.9	1.6
Partial mastectomy-----65.2	194	147	20	1.1	1.0	1.0
Complete and radical mastectomy-----65.3-65.6	96	76	6	0.5	0.5	0.3
Other breast surgery-----Residual	46	37	5	0.3	0.3	0.3
Gynecological surgery-----67-72	3,565	2,672	410	19.4	19.0	21.6
Local excision or destruction of lesion of ovary-----67.1	74	56	6	0.4	0.4	0.3
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	425	324	47	2.3	2.3	2.4
Ligation and division of fallopian tubes (bilateral)-----68.5	299	217	47	1.6	1.5	2.5
Hysterectomy-----69.1-69.5	690	526	71	3.7	3.7	3.7
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	116	91	11	0.6	0.6	0.6
Dilation and curettage of uterus, diagnostic-----70.3	934	703	104	5.1	5.0	5.5
Trachelectomy-----70.4	127	95	17	0.7	0.7	0.9
Colporrhaphy-----71.3	41	31	4	0.2	0.2	0.2
Plastic repair of cystocele and/or rectocele-----71.4	204	167	5	1.1	1.2	0.3
Other gynecological surgery-----Residual	655	463	98	3.6	3.3	5.1
Obstetrical procedures ³ -----74-78	1,077	708	232	5.8	5.0	12.2
Caesarean section-----77	246	172	46	1.3	1.2	2.4
Dilation and curettage after delivery or abortion-----78.1	273	187	48	1.5	1.3	2.5
Repair of laceration-----78.2-78.3	182	120	41	1.0	0.9	2.1
Other obstetrical procedures-----Residual	376	230	97	2.0	1.6	5.1
Orthopedic surgery-----80-90	2,351	1,845	195	12.8	13.1	10.3
Excision of bone, partial-----80.4	157	126	12	0.9	0.9	0.6
Closed reduction of fracture without fixation-----82.0	321	257	24	1.7	1.8	1.3
Open reduction of fracture without fixation-----82.1	74	57	8	0.4	0.4	0.4
Reduction of fracture with fixation-----82.2	284	230	19	1.5	1.6	1.0
Excision of intervertebral cartilage (prolapsed disk)-----86.4	147	115	10	0.8	0.8	0.5
Arthroplasty of hip-----87.0	53	44	*	0.3	0.3	*
Repair and plastic operations on joints of foot and toes-----87.2	120	97	10	0.6	0.7	0.5
Spinal fusion-----87.4	49	39	4	0.3	0.3	0.2
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	29	23	3	0.2	0.2	0.2
Closed reduction of dislocation of joint-----87.7	32	25	*	0.2	0.2	*
Operations on muscles, tendons, fascia, and bursa-----88-89	307	231	36	1.7	1.6	1.9
Other orthopedic surgery-----Residual	779	603	63	4.2	4.3	3.3
Plastic surgery-----92-94	1,041	821	101	5.6	5.8	5.3
Incision of skin and subcutaneous tissue-----92.0	114	84	19	0.6	0.6	1.0
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	455	365	34	2.5	2.6	1.8
Suture of skin or mucous membrane-----92.5	195	150	20	1.1	1.1	1.1
Plastic operations on lip and mouth-----93.1	15	12	*	0.1	0.1	*
Skin graft except lip and mouth-----93.2-93.6	136	104	18	0.7	0.7	0.9
Other plastic surgery-----Residual	126	106	8	0.7	0.8	0.4
Oral and maxillofacial surgery-----95-98	174	128	25	0.9	0.9	1.3
Dental surgery-----99	358	274	26	1.9	2.0	1.4
Extraction of tooth, forceps extraction-----99.3	134	99	11	0.7	0.7	0.6
Surgical removal of tooth-----99.4	126	99	6	0.7	0.7	0.3
Alveoloplasty-----99.7	48	39	4	0.3	0.3	0.2
Other dental surgery-----Residual	50	37	5	0.3	0.3	0.3
Biopsy-----A1-A2	919	703	111	5.0	5.0	5.8

¹Includes data for inpatients discharged with color not stated.

²Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

³Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 5. Number of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and geographic region: United States, 1973

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

Surgical category and ICDA codes	United States	Geographic region			
		Northeast	North Central	South	West
Number of all-listed operations in thousands					
All operations-----	18,426	4,498	5,783	5,008	3,138
Neurosurgery-----01-05	310	64	84	88	74
Ophthalmology-----06-14	655	152	218	156	129
Resection and recession of eye muscle-----10.5-10.6	82	19	28	16	19
Reattachment of retina-----13.4-13.5	33	8	14	6	6
Extraction of lens-----14.4-14.6	279	70	87	72	49
Other eye surgery-----Residual	260	55	88	62	55
Otorhinolaryngology-----16-21	1,835	393	666	427	349
Myringotomy-----17.0	215	44	83	43	45
Stapedectomy with ossicular reconstruction-----17.4	30	10	12	*	6
Tympanoplasty-----17.6-17.7	53	11	19	12	11
Excision of lesion of nose-----19.0	47	11	17	9	10
Section of nasal septum-----19.1	76	26	32	8	10
Tracheotomy or tracheostomy, emergency-----20.5	42	10	11	12	9
Tonsillectomy without adenoidectomy-----21.1	247	45	82	66	54
Tonsillectomy with adenoidectomy-----21.2	638	124	219	176	118
Adenoidectomy without tonsillectomy-----21.3	63	14	28	12	10
Other operations on ears, nose, and throat-----Residual	424	97	165	85	77
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	80	21	23	24	13
Thyroidectomy-----22.1-22.2	64	17	19	19	11
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	16	4	5	5	*
Vascular and cardiac surgery-----24-30	718	165	242	177	134
Incision of peripheral vessels-----24.0	26	6	9	7	5
Excision and ligation of varicose veins-----24.4	98	33	31	18	16
Incision, and excision of lymphatic structure-----25.0-25.2	63	14	24	15	10
Operations on valves of heart-----29.2-29.4	22	5	6	5	5
Other vascular and cardiac surgery-----Residual	509	108	173	132	97
Thoracic surgery-----32-35	240	57	64	72	48
Lung lobectomy-----34.2-34.4	29	6	7	8	8
Other thoracic surgery-----Residual	211	51	57	63	41
Abdominal surgery-----38-48	2,747	684	831	777	455
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	30	5	8	10	7
Repair of inguinal hernia-----38.2-38.3	525	148	157	128	93
Appendectomy-----41.1	339	71	104	106	58
Cholecystectomy-----43.5	411	112	125	115	59
Splenectomy-----45.1	31	7	10	8	6
Gastric resection, partial or complete-----46.2-46.3	64	19	17	16	12
Vagotomy-----46.8	60	12	16	17	14
Resection of small intestine or colon-----47.4-47.6	146	41	47	32	26
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	71	21	24	15	11
Other abdominal surgery-----Residual	1,070	248	323	330	169
Proctological surgery-----50-52	565	147	170	163	86
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	140	36	46	39	20
Hemorrhoidectomy-----51.3	218	48	66	72	32
Other proctological surgery-----Residual	207	63	58	52	34
Urological surgery-----54-61	1,453	357	478	409	209
Nephrotomy and pyelotomy-----54.0-54.1	28	7	8	7	6
Nephrectomy-----54.4-54.5	32	8	11	10	4
Passage of catheter to kidney-----55.7	74	22	25	19	8
Local excision and destruction of lesion of bladder-----56.1-56.2	101	29	36	23	13
Removal of calculus and drainage of bladder without incision-----56.8	25	6	9	6	4
Meatotomy (urethral)-----57.1	54	8	19	21	6
Excision or destruction of lesion or urethra-----57.2	25	4	9	8	*
Dilation of urethra-----57.5	227	48	92	65	23
Prostatectomy-----58.1-58.3	249	71	81	58	38
Excision of hydrocele and hematocele-----59.1	72	19	24	18	11
Orchiopexy-----59.7	26	8	7	7	4
Vasectomy-----60.1	60	16	17	19	9
Circumcision-----61.2	99	21	23	40	15
Other urological surgery-----Residual	382	90	117	108	66

See footnotes at end of table.

Table 5. Number of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and geographic region: United States, 1973—Con.

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

Surgical category and ICDA codes	United States	Geographic region			
		Northeast	North Central	South	West
		Number of all-listed operations in thousands			
Breast surgery-----65	336	95	101	90	50
Partial mastectomy-----65.2	194	55	56	55	28
Complete and radical mastectomy-----65.3-65.6	96	29	30	23	14
Other breast surgery-----Residual	46	11	16	11	8
Gynecological surgery-----67-72	3,565	910	1,088	1,033	535
Local excision or destruction of lesion of ovary-----67.1	74	19	23	20	11
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	425	103	118	134	70
Ligation and division of fallopian tubes (bilateral)-----68.5	299	85	78	97	39
Hysterectomy-----69.1-69.5	690	135	189	239	126
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	116	42	35	29	10
Dilation and curettage of uterus, diagnostic-----70.3	934	287	310	217	120
Trachelectomy-----70.4	127	22	44	39	22
Colporrhaphy-----71.3	41	7	11	16	8
Plastic repair of cystocele and/or rectocele-----71.4	204	42	63	58	42
Other gynecological surgery-----Residual	655	168	217	183	87
Obstetrical procedures ² -----74-78	1,077	311	278	300	187
Cesarean section-----77	246	63	61	83	38
Dilation and curettage after delivery or abortion-----78.1	273	73	81	86	33
Repair of laceration-----78.2-78.3	182	32	54	60	36
Other obstetrical procedures-----Residual	376	143	83	71	81
Orthopedic surgery-----80-90	2,351	481	741	630	499
Excision of bone, partial-----80.4	157	27	38	47	45
Closed reduction of fracture without fixation-----82.0	321	69	104	91	58
Open reduction of fracture without fixation-----82.1	74	18	27	18	12
Reduction of fracture with fixation-----82.2	284	56	91	82	54
Excision of intervertebral cartilage (prolapsed disk)-----86.4	147	30	44	43	31
Arthroplasty of hip-----87.0	53	10	20	10	13
Repair and plastic operations on joints of foot and toes-----87.2	120	12	29	36	43
Spinal fusion-----87.4	49	7	16	14	12
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	29	6	10	8	5
Closed reduction of dislocation of joint-----87.7	32	7	10	9	5
Operations on muscles, tendons, fascia, and bursa-----88-89	307	70	91	85	60
Other orthopedic surgery-----Residual	779	167	262	189	162
Plastic surgery-----92-94	1,041	231	313	316	180
Incision of skin and subcutaneous tissue-----92.0	114	26	32	33	22
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	455	108	132	146	69
Suture of skin or mucous membrane-----92.5	195	40	60	58	37
Plastic operations on lip and mouth-----93.1	15	4	4	4	*
Skin graft except lip and mouth-----93.2-93.6	136	30	40	41	25
Other plastic surgery-----Residual	126	22	45	34	24
Oral and maxillofacial surgery-----95-98	174	40	57	51	26
Dental surgery-----99	358	129	132	81	16
Extraction of tooth, forceps extraction-----99.3	134	50	43	36	5
Surgical removal of tooth-----99.4	126	49	49	24	4
Alveoloplasty-----99.7	48	18	19	9	*
Other dental surgery-----Residual	50	12	21	12	5
Biopsy-----A1-A2	919	262	295	216	147

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 6. Rates of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and geographic region: United States, 1973

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

Surgical category and ICDA codes	United States	Geographic region			
		Northeast	North Central	South	West
	Rate of all-listed operations per 100,000 population				
All operations-----	8,951.8	9,191.3	10,185.6	7,764.0	8,807.3
Neurosurgery-----01-05	150.5	130.7	147.3	136.1	208.9
Ophthalmology-----06-14	318.3	309.9	384.2	242.3	362.2
Resection and recession of eye muscle-----10.5-10.6	40.0	38.7	49.8	24.3	54.7
Reattachment of retina-----13.4-13.5	16.2	15.4	25.0	9.0	16.0
Extraction of lens-----14.4-14.6	135.6	143.7	154.1	112.3	137.1
Other eye surgery-----Residual	126.5	112.0	155.4	96.7	154.4
Otorhinolaryngology-----16-21	891.4	802.6	1,173.9	661.6	979.5
Myringotomy-----17.0	104.3	89.5	145.4	67.1	126.2
Stapedectomy with ossicular reconstruction-----17.4	14.8	20.3	20.9	*	15.5
Tympanoplasty-----17.6-17.7	25.6	22.3	33.7	18.6	30.1
Excision of lesion of nose-----19.0	23.0	23.3	29.9	13.8	28.3
Section of nasal septum-----19.1	37.2	53.8	56.1	12.9	27.9
Tracheotomy or tracheostomy, emergency-----20.5	20.6	20.7	19.1	19.1	25.4
Tonsillectomy without adenoidectomy-----21.1	119.8	92.7	143.6	102.4	150.5
Tonsillectomy with adenoidectomy-----21.2	309.9	253.4	386.6	273.0	331.9
Adenoidectomy without tonsillectomy-----21.3	30.6	28.9	48.6	17.9	27.4
Other operations on ears, nose, and throat-----Residual	205.8	197.7	290.1	132.0	216.4
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	39.1	43.1	40.8	36.5	35.4
Thyroidectomy-----22.1-22.2	31.3	34.3	32.6	28.9	29.5
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	7.8	8.9	8.2	7.6	*
Vascular and cardiac surgery-----24-30	348.9	338.1	426.9	273.9	375.4
Incision of peripheral vessels-----24.0	12.7	11.4	15.2	10.4	14.5
Excision and ligation of varicose veins-----24.4	47.8	67.2	54.6	28.5	45.0
Incision and excision of lymphatic structure-----25.0-25.2	30.6	28.1	41.4	24.0	28.5
Operations on valves of heart-----29.2-29.4	10.5	10.6	11.4	7.1	15.1
Other vascular and cardiac surgery-----Residual	247.4	220.8	304.2	203.9	272.3
Thoracic surgery-----32-35	116.7	115.9	112.2	111.1	135.4
Lung lobectomy-----34.2-34.4	14.1	11.7	12.6	13.1	21.6
Other thoracic surgery-----Residual	102.6	104.2	99.6	98.0	113.7
Abdominal surgery-----38-48	1,334.5	1,397.4	1,464.0	1,204.0	1,278.2
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	14.4	9.8	14.3	15.0	20.0
Repair of inguinal hernia-----38.2-38.3	255.3	302.2	276.6	198.1	260.2
Appendectomy ¹ -----41.1	164.5	145.1	183.9	163.8	161.5
Cholecystectomy-----43.5	199.8	229.7	219.5	178.9	165.4
Splenectomy-----45.1	15.0	14.4	16.8	12.4	17.5
Gastric resection, partial or complete-----46.2-46.3	31.0	38.6	29.8	24.2	35.1
Vagotomy-----46.8	29.1	25.4	28.2	26.6	40.2
Resection of small intestine or colon-----47.4-47.6	71.0	83.7	82.6	49.5	74.2
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	34.5	42.3	42.4	23.8	30.8
Other abdominal surgery-----Residual	519.8	506.3	569.7	511.7	473.3
Proctological surgery-----50-52	274.5	299.4	299.1	252.8	240.4
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	68.1	72.9	80.3	60.2	56.6
Hemorrhoidectomy-----51.3	106.0	98.3	116.4	111.8	89.5
Other proctological surgery-----Residual	100.4	128.2	102.3	80.9	94.3
Urological surgery-----54-61	705.8	729.4	842.3	633.5	587.0
Nephrotomy and pyelotomy-----54.0-54.1	13.5	14.0	14.7	11.0	15.5
Nephrectomy-----54.4-54.5	15.8	16.8	19.4	14.8	10.4
Passage of catheter to kidney-----55.7	36.2	45.6	44.7	29.0	22.6
Local excision and destruction of lesion of bladder-----56.1-56.2	49.0	59.4	63.2	35.9	35.9
Removal of calculus and drainage of bladder without incision-----56.8	12.0	12.1	15.6	9.4	10.8
Meatotomy (urethral)-----57.1	26.1	15.7	33.3	32.1	18.1
Excision or destruction of lesion of urethra-----57.2	12.1	8.2	16.6	12.5	*
Dilation of urethra-----57.5	110.4	97.4	161.6	100.9	63.6
Prostatectomy-----58.1-58.3	120.8	146.0	142.6	90.6	106.2
Excision of hydrocele and hematocele-----59.1	34.9	39.8	42.5	27.2	29.9
Orchiopexy-----59.7	12.6	16.5	11.8	10.3	12.5
Vasectomy-----60.1	29.2	32.1	29.5	29.4	24.6
Circumcision-----61.2	47.9	42.7	40.1	62.3	41.8
Other urological surgery-----Residual	185.4	183.2	206.7	168.2	185.8

See footnotes at end of table.

Table 6. Rates of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and geographic region: United States, 1973—Con.

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

Surgical category and ICDA codes	United States	Geographic region			
		Northeast	North Central	South	West
		Rate of all-listed operations per 100,000 population			
Breast surgery-----65	163.2	194.1	178.5	139.0	140.4
Partial mastectomy-----65.2	94.2	112.8	97.9	85.6	78.2
Complete and radical mastectomy-----65.3-65.6	46.6	58.5	52.5	36.0	40.3
Other breast surgery-----Residual	22.4	22.8	28.2	17.3	21.9
Gynecological surgery-----67-72	1,732.2	1,859.0	1,915.6	1,601.5	1,502.2
Local excision or destruction of lesion of ovary-----67.1	36.1	39.3	41.0	31.5	32.0
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	206.5	210.4	207.2	208.0	197.5
Ligation and division of fallopian tubes (bilateral)-----68.5	145.5	173.9	173.6	150.5	110.1
Hysterectomy-----69.1-69.5	335.2	275.9	333.5	370.9	354.8
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	56.2	85.3	62.0	44.6	28.3
Dilation and curettage of uterus, diagnostic-----70.3	453.8	586.1	546.5	335.9	337.5
Trachelectomy-----70.4	61.5	45.8	77.1	60.1	60.5
Colporrhaphy-----71.3	20.0	13.5	18.9	25.1	21.2
Plastic repair of cystocele and/or rectocele-----71.4	99.3	85.1	110.1	90.5	117.2
Other gynecological surgery-----Residual	318.2	343.7	381.7	284.3	243.1
Obstetrical procedures ² -----74-78	523.2	635.3	490.5	465.5	526.0
Cesarean section-----77	119.6	129.3	108.2	128.9	107.6
Dilation and curettage after delivery or abortion-----78.1	132.6	149.7	142.2	133.9	91.5
Repair of laceration-----78.2-78.3	88.2	65.0	94.7	93.3	100.3
Other obstetrical procedures-----Residual	182.9	291.2	145.5	109.4	226.5
Orthopedic surgery-----80-90	1,142.3	982.5	1,305.6	977.4	1,400.3
Excision of bone, partial-----80.4	76.3	55.7	66.4	73.3	125.5
Closed reduction of fracture without fixation-----82.0	156.0	141.3	182.6	140.5	161.9
Open reduction of fracture without fixation-----82.1	35.8	36.3	47.0	27.7	32.4
Reduction of fracture with fixation-----82.2	137.9	115.3	159.8	127.8	152.6
Excision of intervertebral cartilage (prolapsed disk)-----86.4	71.4	60.5	77.7	65.9	86.0
Arthroplasty of hip-----87.0	25.7	20.7	35.7	15.4	35.3
Repair and plastic operations on joints of foot and toes-----87.2	58.1	25.3	51.2	55.1	119.7
Spinal fusion-----87.4	24.0	15.0	28.3	21.8	33.3
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	14.0	12.4	17.0	11.9	14.9
Closed reduction of dislocation of joint-----87.7	15.3	15.0	18.3	13.5	14.4
Operations on muscles, tendons, fascia, and bursa-----88-89	149.1	143.4	160.5	132.0	169.8
Other orthopedic surgery-----Residual	378.7	341.6	461.0	292.5	454.4
Plastic surgery-----92-94	505.8	472.7	552.2	489.6	506.5
Incision of skin and subcutaneous tissue-----92.0	55.3	53.9	56.8	50.7	63.1
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	221.2	220.5	233.1	226.6	193.6
Suture of skin or mucous membrane-----92.5	94.8	81.9	105.0	89.9	104.9
Plastic operations on lip and mouth-----93.1	7.3	9.1	7.5	6.1	*
Skin graft except lip and mouth-----93.2-93.6	65.9	61.5	70.4	63.1	70.1
Other plastic surgery-----Residual	61.2	45.8	79.3	53.2	68.0
Oral and maxillofacial surgery-----95-98	84.5	82.7	100.5	78.5	72.6
Dental surgery-----99	174.1	262.8	232.8	126.0	45.7
Extraction of tooth, forceps extraction-----99.3	65.1	101.5	76.2	55.9	13.9
Surgical removal of tooth-----99.4	61.2	100.7	86.6	37.1	10.3
Alveoloplasty-----99.7	23.5	36.2	33.4	14.1	*
Other dental surgery-----Residual	24.3	24.5	36.6	18.9	14.0
Biopsy-----A1-A2	446.6	535.7	519.2	334.7	411.2

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 7. Number of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and bed size of hospital: United States, 1973

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

Surgical category and ICDA codes	All sizes	Bed size of hospital				
		6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 beds or more
Number of all-listed operations in thousands						
All operations-----	18,426	2,640	2,893	3,447	5,383	4,062
Neurosurgery-----01-05	310	40	24	47	99	100
Ophthalmology-----06-14	655	67	91	121	203	173
Resection and recession of eye muscle-----10.5-10.6	82	9	13	17	24	20
Reattachment of retina-----13.4-13.5	33	*	*	*	10	19
Extraction of lens-----14.4-14.6	279	21	40	54	95	69
Other eye surgery-----Residual	260	37	36	48	74	64
Otorhinolaryngology-----16-21	1,835	283	268	388	567	328
Myringotomy-----17.0	215	16	28	49	79	43
Stapedectomy with ossicular reconstruction-----17.4	30	*	7	6	8	9
Tympanoplasty-----17.6-17.7	53	*	5	12	19	15
Excision of lesion of nose-----19.0	47	7	5	9	19	8
Section of nasal septum-----19.1	76	15	14	11	21	17
Tracheotomy or tracheostomy, emergency-----20.5	42	*	*	9	13	16
Tonsillectomy without adenoidectomy-----21.1	247	52	40	52	68	34
Tonsillectomy with adenoidectomy-----21.2	638	132	107	145	180	73
Adenoidectomy without tonsillectomy-----21.3	63	*	9	12	23	15
Other operations on ears, nose, and throat-----Residual	424	54	49	84	138	100
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	80	8	13	13	26	21
Thyroidectomy-----22.1-22.2	64	7	11	12	20	15
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	16	*	*	*	6	6
Vascular and cardiac surgery-----24-30	718	35	51	124	215	294
Incision of peripheral vessels-----24.0	26	*	*	5	9	7
Excision and ligation of varicose veins-----24.4	98	13	16	15	36	19
Incision and excision of lymphatic structure-----25.0-25.2	63	7	7	13	17	19
Operations on valves of heart-----29.2-29.4	22	-	-	*	6	13
Other vascular and cardiac surgery-----Residual	509	12	25	89	147	235
Thoracic surgery-----32-35	240	19	23	45	78	75
Lung lobectomy-----34.2-34.4	29	*	*	6	10	10
Other thoracic surgery-----Residual	211	18	21	39	68	65
Abdominal surgery-----38-48	2,747	460	475	510	748	554
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	30	6	4	5	6	8
Repair of inguinal hernia-----38.2-38.3	525	97	86	99	155	89
Appendectomy ¹ -----41.1	339	82	66	68	75	48
Cholecystectomy-----43.5	411	73	75	77	114	73
Splenectomy-----45.1	31	*	*	*	11	9
Gastric resection, partial or complete-----46.2-46.3	64	7	11	12	19	15
Vagotomy-----46.8	60	10	13	9	14	15
Resection of small intestine or colon-----47.4-47.6	146	16	21	26	48	35
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	71	7	10	13	23	20
Other abdominal surgery-----Residual	1,070	160	186	198	284	243
Proctological surgery-----50-52	565	79	91	124	172	99
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	140	18	20	32	43	27
Hemorrhoidectomy-----51.3	218	37	40	44	62	36
Other proctological surgery-----Residual	207	24	31	48	68	37
Urological surgery-----54-61	1,453	152	257	309	427	307
Nephrotomy and pyelotomy-----54.0-54.1	28	*	4	4	10	7
Nephrectomy-----54.4-54.5	32	*	4	6	10	11
Passage of catheter to kidney-----55.7	74	6	12	17	23	17
Local excision and destruction of lesion of bladder-----56.1-56.2	101	7	16	22	33	23
Removal of calculus and drainage of bladder without incision-----56.8	25	*	4	6	7	5
Meatotomy (urethral)-----57.1	54	5	11	10	19	8
Excision or destruction of lesion of urethra-----57.2	25	*	*	7	7	4
Dilation of urethra-----57.5	227	19	42	61	65	41
Prostatectomy-----58.1-58.3	249	20	42	52	75	60
Excision of hydrocele and hematocele-----59.1	72	10	14	13	20	14
Orchiopexy-----59.7	26	4	*	6	7	5
Vasectomy-----60.1	60	10	11	14	16	10
Circumcision-----61.2	99	20	20	16	27	16
Other urological surgery-----Residual	382	43	69	74	109	85

See footnotes at end of table.

Table 7. Number of all-listed operations for inpatients discharged from short-stay hospitals, by surgical category and bed size of hospital: United States, 1973--Con.

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

Surgical category and ICDA codes	All sizes	Bed size of hospital				
		6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 beds or more
Number of all-listed operations in thousands						
Breast surgery-----65	336	44	58	71	102	62
Partial mastectomy-----65.2	194	25	36	44	60	29
Complete and radical mastectomy-----65.3-65.6	96	12	15	19	29	20
Other breast surgery-----Residual	46	7	7	8	13	12
Gynecological surgery-----67-72	3,565	512	684	640	1,030	700
Local excision or destruction of lesion of ovary-----67.1	74	13	14	16	20	12
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	425	60	82	73	127	84
Ligation and division of fallopian tubes (bilateral)-----68.5	299	44	64	42	75	73
Hysterectomy-----69.1-69.5	690	100	142	112	186	150
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	116	19	23	23	37	14
Dilation and curettage of uterus, diagnostic-----70.3	934	131	166	172	291	173
Trachelectomy-----70.4	127	23	25	31	31	17
Colporrhaphy-----71.3	41	*	10	5	11	12
Plastic repair of cystocele and/or rectocele-----71.4	204	33	38	36	58	40
Other gynecological surgery-----Residual	655	85	121	130	194	125
Obstetrical procedures ² -----74-78	1,077	121	192	169	292	303
Cesarean section-----77	246	29	46	41	64	66
Dilation and curettage after delivery or abortion-----78.1	273	40	55	48	74	55
Repair of laceration-----78.2-78.3	182	26	26	29	45	55
Other obstetrical procedures-----Residual	376	26	65	50	108	127
Orthopedic surgery-----80-90	2,351	453	303	438	678	479
Excision of bone, partial-----80.4	157	55	15	21	40	26
Closed reduction of fracture without fixation-----82.0	321	75	57	62	81	47
Open reduction of fracture without fixation-----82.1	74	11	12	17	20	14
Reduction of fracture with fixation-----82.2	284	37	45	57	85	58
Excision of intervertebral cartilage (prolapsed disk)-----86.4	147	12	15	28	50	42
Arthroplasty of hip-----87.0	53	*	5	7	19	21
Repair and plastic operations on joints of foot and toes-----87.2	120	72	7	14	17	11
Spinal fusion-----87.4	49	*	6	13	15	13
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	29	*	*	7	9	10
Closed reduction of dislocation of joint-----87.7	32	8	6	7	7	*
Operations on muscles, tendons, fascia, and bursa-----88-89	307	56	42	57	91	61
Other orthopedic surgery-----Residual	779	121	92	150	244	173
Plastic surgery-----92-94	1,041	232	148	179	279	203
Incision of skin and subcutaneous tissue-----92.0	114	23	15	21	29	27
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	455	93	76	73	131	83
Suture of skin or mucous membrane-----92.5	195	57	30	38	42	28
Plastic operations on lip and mouth-----93.1	15	*	*	*	5	4
Skin graft except lip and mouth-----93.2-93.6	136	17	14	26	43	36
Other plastic surgery-----Residual	126	41	13	18	30	24
Oral and maxillofacial surgery-----95-98	174	13	21	31	62	47
Dental surgery-----99	358	25	70	71	121	72
Extraction of tooth, forceps extraction-----99.3	134	13	30	25	40	26
Surgical removal of tooth-----99.4	126	*	22	26	46	29
Alveoloplasty-----99.7	48	*	9	13	16	7
Other dental surgery-----Residual	50	6	9	6	19	10
Biopsy-----A1-A2	919	98	126	166	284	246

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 8. Percent distribution of all-listed operations for inpatients discharged from short-stay hospitals by surgical category, according to bed size of hospital: United States, 1973

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

Surgical category and ICDA codes	All sizes	Bed size of hospital				
		6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 beds or more
		Percent distribution				
All operations-----	100.0	14.3	15.7	18.7	29.2	22.0
Neurosurgery-----01-05	100.0	12.9	7.6	15.2	31.9	32.4
Ophthalmology-----06-14	100.0	10.2	13.9	18.5	31.0	26.3
Resection and recession of eye muscle-----10.5-10.6	100.0	10.4	16.2	20.2	29.1	24.1
Reattachment of retina-----13.4-13.5	100.0	*	*	*	30.4	57.5
Extraction of lens-----14.4-14.6	100.0	7.5	14.4	19.3	34.1	24.8
Other eye surgery-----Residual	100.0	14.3	14.0	18.4	28.5	24.8
Otorhinolaryngology-----16-21	100.0	15.4	14.6	21.2	30.9	17.9
Myringotomy-----17.0	100.0	7.4	13.0	22.9	36.6	20.0
Stapedectomy with ossicular reconstruction-----17.4	100.0	*	22.3	20.0	26.4	29.5
Tympanoplasty-----17.6-17.7	100.0	*	10.3	22.0	36.4	28.5
Excision of lesion of nose-----19.0	100.0	15.7	9.9	18.6	39.5	16.3
Section of nasal septum-----19.1	100.0	19.4	18.1	13.8	27.1	21.7
Tracheotomy or tracheostomy, emergency-----20.5	100.0	*	*	20.7	30.7	36.6
Tonsillectomy without adenoidectomy-----21.1	100.0	21.2	16.3	21.0	27.6	13.8
Tonsillectomy with adenoidectomy-----21.2	100.0	20.8	16.8	22.8	28.2	11.4
Adenoidectomy without tonsillectomy-----21.3	100.0	*	14.3	19.5	36.0	24.2
Other operations on ears, nose, and throat-----Residual	100.0	12.6	11.5	19.7	32.6	23.5
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	100.0	9.6	16.1	16.3	31.7	26.3
Thyroidectomy-----22.1-22.2	100.0	10.6	16.7	18.4	30.3	24.0
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	100.0	*	*	*	37.7	35.3
Vascular and cardiac surgery-----24-30	100.0	4.8	7.0	17.3	29.9	40.9
Incision of peripheral vessels-----24.0	100.0	*	*	20.2	34.6	28.7
Excision and ligation of varicose veins-----24.4	100.0	13.0	16.4	15.1	36.2	19.3
Incision and excision of lymphatic structure-----25.0-25.2	100.0	11.1	11.8	20.5	26.9	29.7
Operations on valves of heart-----29.2-29.4	100.0	-	-	*	27.2	60.6
Other vascular and cardiac surgery-----Residual	100.0	2.4	5.0	17.4	29.0	46.2
Thoracic surgery-----32-35	100.0	8.0	9.6	18.8	32.4	31.1
Lung lobectomy-----34.2-34.4	100.0	*	*	22.3	35.0	33.0
Other thoracic surgery-----Residual	100.0	8.7	10.1	18.3	32.0	30.9
Abdominal surgery-----38-48	100.0	16.7	17.3	18.6	27.2	20.2
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	100.0	20.2	14.6	16.5	21.7	27.1
Repair of inguinal hernia-----38.2-38.3	100.0	18.4	16.4	18.9	29.4	16.9
Appendectomy-----41.1	100.0	24.1	19.6	20.0	22.2	14.1
Cholecystectomy-----43.5	100.0	17.8	18.1	18.6	27.6	17.7
Splenectomy-----45.1	100.0	*	*	17.0	34.5	30.8
Gastric resection, partial or complete-----46.2-46.3	100.0	11.5	17.7	18.2	29.1	23.4
Vagotomy-----46.8	100.0	17.0	20.9	14.5	23.1	24.6
Resection of small intestine or colon-----47.4-47.6	100.0	11.0	14.3	17.8	33.0	23.8
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	100.0	9.3	13.6	17.7	32.0	27.5
Other abdominal surgery-----Residual	100.0	15.0	17.3	18.5	26.5	22.7
Proctological surgery-----50-52	100.0	13.9	16.0	22.0	30.5	17.5
Local excision and destruction of lesion of rectum and anus-----50.2-51.2	100.0	13.1	14.2	22.9	30.8	19.0
Hemorrhoidectomy-----51.3	100.0	16.8	18.3	20.3	28.3	16.4
Other proctological surgery-----Residual	100.0	11.6	14.9	23.1	32.7	17.7
Urological surgery-----54-61	100.0	10.5	17.7	21.2	29.4	21.2
Nephrotomy and pyelotomy-----54.0-54.1	100.0	*	14.6	15.8	35.2	26.3
Nephrectomy-----54.4-54.5	100.0	*	12.6	17.2	29.6	35.4
Passage of catheter to kidney-----55.7	100.0	7.8	16.1	22.9	30.4	22.9
Local excision and destruction of lesion of bladder-----56.1-56.2	100.0	6.5	16.3	22.1	32.3	22.8
Removal of calculus and drainage of bladder without incision-----56.8	100.0	*	17.3	23.3	29.7	19.9
Meatotomy (urethral)-----57.1	100.0	9.9	20.8	18.5	35.0	15.8
Excision or destruction of lesion of urethra-----57.2	100.0	*	*	26.8	29.9	16.7
Dilation of urethra-----57.5	100.0	8.3	18.3	27.0	28.5	17.8
Prostatectomy-----58.1-58.3	100.0	7.9	16.9	21.0	30.0	24.2
Excision of hydrocele and hematocele-----59.1	100.0	14.0	19.7	18.3	28.3	19.7
Orchiopexy-----59.7	100.0	15.6	*	23.0	27.9	19.3
Vasectomy-----60.1	100.0	16.3	17.9	23.5	25.8	16.5
Circumcision-----61.2	100.0	20.2	20.1	15.8	27.5	16.4
Other urological surgery-----Residual	100.0	11.3	18.2	19.5	28.7	22.3

See footnotes at end of table.

Table 8. Percent distribution of all-listed operations for inpatients discharged from short-stay hospitals by surgical category, according to bed size of hospital: United States, 1973—Con.

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

Surgical category and ICDA codes	All sizes	Bed sizes of hospital				
		6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 beds or more
Percent distribution						
Breast surgery-----65	100.0	13.1	17.3	21.0	30.3	18.3
Partial mastectomy-----65.2	100.0	12.8	18.8	22.6	30.9	15.0
Complete and radical mastectomy-----65.3-65.6	100.0	13.0	15.7	19.9	30.5	20.8
Other breast surgery-----Residual	100.0	14.3	14.1	17.0	27.5	27.1
Gynecological surgery-----67-72	100.0	14.4	19.2	17.9	28.9	19.6
Local excision or destruction of lesion of ovary-----67.1	100.0	17.7	18.5	21.2	26.7	15.9
Oophorectomy;salpingo-oophorectomy-----67.2-67.5	100.0	14.0	19.2	17.2	29.8	19.8
Ligation and division of fallopian tubes (bilateral)-----68.5	100.0	14.8	21.5	14.2	25.1	24.4
Hysterectomy-----69.1-69.5	100.0	14.5	20.6	16.2	27.0	21.7
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	100.0	16.3	20.1	19.5	31.6	12.5
Dilation and curettage of uterus, diagnostic-----70.3	100.0	14.1	17.7	18.5	31.2	18.6
Trachelectomy-----70.4	100.0	18.2	19.4	24.7	24.7	13.0
Colporrhaphy-----71.3	100.0	*	24.4	11.3	26.9	28.5
Plastic repair of cystocele and/or rectocele-----71.4	100.0	16.2	18.5	17.6	28.2	19.4
Other gynecological surgery-----Residual	100.0	12.9	18.4	19.8	29.7	19.1
Obstetrical procedures ² -----74-78	100.0	11.2	17.8	15.7	27.1	28.2
Cesarean section-----77	100.0	11.6	18.9	16.7	26.1	26.6
Dilation and curettage after delivery or abortion-----78.1	100.0	14.8	20.1	17.7	27.3	20.1
Repair of laceration-----78.2-78.3	100.0	14.3	14.2	16.2	25.0	30.4
Other obstetrical procedures-----Residual	100.0	7.0	17.2	13.4	28.6	33.9
Orthopedic surgery-----80-90	100.0	19.2	12.9	18.6	28.8	20.4
Excision of bone, partial-----80.4	100.0	34.8	9.4	13.6	25.5	16.8
Closed reduction of fracture without fixation-----82.0	100.0	23.3	17.8	19.2	25.1	14.5
Open reduction of fracture without fixation-----82.1	100.0	14.6	16.4	22.8	27.0	19.2
Reduction of fracture with fixation-----82.2	100.0	13.2	15.9	20.2	30.1	20.6
Excision of intervertebral cartilage (prolapsed disk)-----86.4	100.0	8.1	10.1	18.9	34.3	28.6
Arthroplasty of hip-----87.0	100.0	*	9.2	13.2	35.3	38.8
Repair and plastic operations on joints of foot and toes-----87.2	100.0	60.3	5.5	11.3	13.9	9.0
Spinal fusion-----87.4	100.0	*	11.8	25.4	30.3	26.9
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	100.0	*	*	22.8	31.1	33.1
Closed reduction of dislocation of joint-----87.7	100.0	24.3	18.7	22.1	22.2	*
Operations on muscles, tendons, fascia, and bursa-----88-89	100.0	18.2	13.7	18.5	29.8	19.9
Other orthopedic surgery-----Residual	100.0	15.5	11.8	19.2	31.3	22.2
Plastic surgery-----92-94	100.0	22.3	14.3	17.1	26.8	19.5
Incision of skin and subcutaneous tissue-----92.0	100.0	19.8	13.2	18.1	25.1	23.8
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	100.0	20.4	16.6	16.1	28.8	18.2
Suture of skin or mucous membrane-----92.5	100.0	29.4	15.2	19.3	21.5	14.6
Plastic operations on lip and mouth-----93.1	100.0	*	*	*	30.5	27.1
Skin graft except lip and mouth-----93.2-93.6	100.0	12.5	10.2	18.8	31.7	26.8
Other plastic surgery-----Residual	100.0	32.3	10.2	14.6	23.8	19.1
Oral and maxillofacial surgery-----95-98	100.0	7.3	11.9	18.3	35.5	27.0
Dental surgery-----99	100.0	6.9	19.5	19.8	33.8	20.0
Extraction of tooth, forceps extraction-----99.3	100.0	9.9	22.4	18.7	29.8	19.2
Surgical removal of tooth-----99.4	100.0	*	17.1	20.7	36.7	23.0
Alveoloplasty-----99.7	100.0	*	18.4	27.4	33.3	15.0
Other dental surgery-----Residual	100.0	11.4	18.8	12.9	37.6	19.4
Biopsy-----A1-A2	100.0	10.6	13.7	18.1	30.9	26.7

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 9. Number of first-listed operations and average length of stay for inpatients discharged from short-stay hospitals, by surgical category and sex: United States, 1973

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

Surgical category and ICDA codes	Total ¹	Male	Female	Total ¹	Male	Female
	Number of first-listed operations in thousands			Average length of stay in days		
All operations-----	13,266	5,168	8,091	7.9	8.7	7.5
Neurosurgery-----01-05	220	111	108	15.0	15.7	14.2
Ophthalmology-----06-14	550	249	300	5.6	5.4	5.8
Resection and recession of eye muscle-----10.5-10.6	65	29	37	3.7	3.6	3.7
Reattachment of retina-----13.4-13.5	32	20	12	7.3	6.9	7.9
Extraction of lens-----14.4-14.6	275	114	160	6.6	6.3	6.8
Other eye surgery-----Residual	178	86	91	4.5	4.4	4.6
Otorhinolaryngology-----16-21	1,434	693	740	3.1	3.4	2.8
Myringotomy-----17.0	67	39	27	2.3	2.3	2.2
Stapedectomy with ossicular reconstruction-----17.4	27	10	17	2.9	2.9	2.8
Tympanoplasty-----17.6-17.7	39	17	22	2.8	2.7	2.8
Excision of lesion of nose-----19.0	29	19	10	3.5	3.2	3.9
Section of nasal septum-----19.1	51	25	27	4.4	3.5	5.2
Tracheotomy or tracheostomy, emergency-----20.5	27	18	9	24.4	23.1	27.1
Tonsillectomy without adenoidectomy-----21.1	244	87	157	2.3	2.3	2.4
Tonsillectomy with adenoidectomy-----21.2	629	306	323	2.1	2.2	1.9
Adenoidectomy without tonsillectomy-----21.3	50	29	22	1.7	1.7	1.6
Other operations on ears, nose, and throat-----Residual	271	146	126	4.3	4.6	3.9
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	71	14	57	7.1	7.2	7.1
Thyroidectomy-----22.1-22.2	60	9	51	6.8	7.2	6.7
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	11	5	6	8.7	7.2	9.9
Vascular and cardiac surgery-----24-30	568	319	248	11.8	12.1	11.4
Incision of peripheral vessels-----24.0	19	11	8	17.4	12.6	23.9
Excision and ligation of varicose veins-----24.4	93	23	70	7.0	8.5	6.5
Incision and excision of lymphatic structure-----25.0-25.2	38	19	19	9.4	10.9	7.8
Operations on valves of heart-----29.2-29.4	16	7	10	22.2	21.0	23.0
Other vascular and cardiac surgery-----Residual	401	259	141	12.5	12.3	12.8
Thoracic surgery-----32-35	173	99	74	13.9	14.7	12.8
Lung lobectomy-----34.2-34.4	19	12	6	19.2	19.2	19.3
Other thoracic surgery-----Residual	154	87	67	13.2	14.0	12.2
Abdominal surgery-----38-48	1,970	1,033	937	10.9	9.9	12.0
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	19	8	10	13.3	11.7	14.6
Repair of inguinal hernia-----38.2-38.3	490	436	54	6.2	6.2	6.3
Appendectomy ² -----41.1	292	166	127	6.1	6.1	6.1
Cholecystectomy-----43.5	371	82	289	12.2	14.2	11.7
Splenectomy-----45.1	17	9	7	17.9	17.1	19.1
Gastric resection, partial or complete-----46.2-46.3	42	24	17	18.5	18.3	18.7
Vagotomy-----46.8	36	22	13	16.2	16.9	14.9
Resection of small intestine or colon-----47.4-47.6	99	46	53	20.8	20.1	21.5
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	23	12	11	25.1	24.7	25.6
Other abdominal surgery-----Residual	583	227	355	13.2	13.7	12.9
Proctological surgery-----50-52	386	216	171	7.4	7.1	7.8
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	79	44	35	6.4	6.0	6.9
Hemorrhoidectomy-----51.3	169	90	79	7.3	7.2	7.5
Other proctological surgery-----Residual	139	82	57	8.1	7.7	8.6
Urological surgery-----54-61	1,007	707	300	9.4	9.7	8.5
Nephrotomy and pyelotomy-----54.0-54.1	20	11	9	14.7	14.6	14.8
Nephrectomy-----54.4-54.5	26	12	14	17.7	18.9	16.6
Passage of catheter to kidney-----55.7	62	36	26	8.8	7.7	10.4
Local excision and destruction of lesion of bladder-----56.1-56.2	73	49	24	10.4	10.5	10.2
Removal of calculus and drainage of bladder without incision-----56.8	15	11	4	17.0	18.3	13.6
Meatotomy (urethral)-----57.1	39	29	10	3.5	3.1	4.7
Excision or destruction of lesion of urethra-----57.2	16	5	11	6.1	6.1	6.0
Dilation of urethra-----57.5	196	69	127	6.5	8.3	5.6
Prostatectomy-----58.1-58.3	203	203	...	13.9	13.9	...
Excision of hydrocele and hematocele-----59.1	32	32	...	5.3	5.3	...
Orchiopexy-----59.7	18	18	...	5.1	5.1	...
Vasectomy-----60.1	22	22	...	6.3	6.3	...
Circumcision-----61.2	84	84	...	3.3	3.3	...
Other urological surgery-----Residual	200	126	74	10.4	10.4	10.4

See footnotes at end of table.

Table 9. Number of first-listed operations and average length of stay for inpatients discharged from short-stay hospitals, by surgical category and sex: United States, 1973—Con.

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

Surgical category and ICDA codes	Total ¹			Total ¹		
	Male	Female		Male	Female	
	Number of first-listed operations in thousands			Average length of stay in days		
Breast surgery-----65	277	17	260	5.1	3.7	5.2
Partial mastectomy-----65.2	178	3	174	3.5	3.0	3.6
Complete and radical mastectomy-----65.3-65.6	66	7	59	9.7	3.7	10.4
Other breast surgery-----Residual	34	7	27	4.5	4.0	4.6
Gynecological surgery-----67-72	2,117	...	2,117	6.2	...	6.2
Local excision or destruction of lesion of ovary-----67.1	30	...	30	7.8	...	7.8
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	59	...	59	9.4	...	9.4
Ligation and division of fallopian tubes (bilateral)-----68.5	190	...	190	4.3	...	4.3
Hysterectomy-----69.1-69.5	556	...	556	9.5	...	9.5
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	24	...	24	6.6	...	6.6
Dilation and curettage of uterus, diagnostic-----70.3	812	...	812	4.1	...	4.1
Trachelectomy-----70.4	39	...	39	5.6	...	5.6
Golporrhaphy-----71.3	11	...	11	7.4	...	7.4
Plastic repair of cystocele and/or rectocele-----71.4	70	...	70	9.4	...	9.4
Other gynecological surgery-----Residual	326	...	326	5.4	...	5.4
Obstetrical procedures ³ -----74-78	1,009	...	1,009	3.9	...	3.9
Cesarean section-----77	244	...	244	7.2	...	7.2
Dilation and curettage after delivery or abortion-----78.1	263	...	263	2.4	...	2.4
Repair of laceration-----78.2-78.3	162	...	162	3.7	...	3.7
Other obstetrical procedures-----Residual	341	...	341	2.7	...	2.7
Orthopedic surgery-----80-90	1,828	939	888	10.7	9.6	12.0
Excision of bone, partial-----80.4	90	40	50	6.1	6.5	5.8
Closed reduction of fracture without fixation-----82.0	290	153	137	8.8	7.8	10.0
Open reduction of fracture without fixation-----82.1	66	40	26	12.2	11.3	13.5
Reduction of fracture with fixation-----82.2	267	107	159	18.2	14.3	20.9
Excision of intervertebral cartilage (prolapsed disk)-----86.4	143	83	60	15.3	14.5	16.4
Arthroplasty of hip-----87.0	48	20	28	22.8	20.5	24.5
Repair and plastic operations on joints of foot and toes-----87.2	98	12	86	5.6	5.3	5.6
Spinal fusion-----87.4	21	12	9	16.6	16.8	16.3
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	20	12	9	9.0	9.1	8.8
Closed reduction of dislocation of joint-----87.7	28	17	11	6.7	5.5	8.5
Operations on muscles, tendons, fascia, and bursa-----88-89	217	120	96	4.2	4.5	3.8
Other orthopedic surgery-----Residual	540	322	218	10.0	9.1	11.3
Plastic surgery-----92-94	721	391	329	7.8	7.5	8.0
Incision of skin and subcutaneous tissue-----92.0	96	58	38	8.2	7.5	9.3
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	319	153	165	6.7	6.4	6.9
Suture of skin or mucous membrane-----92.5	144	101	43	5.6	5.4	6.0
Plastic operations on lip and mouth-----93.1	10	7	*	5.3	5.2	*
Skin graft except lip and mouth-----93.2-93.6	71	45	26	20.5	18.6	23.9
Other plastic surgery-----Residual	81	27	54	4.5	3.9	4.8
Oral and maxillofacial surgery-----95-98	119	62	57	6.5	6.8	6.1
Dental surgery-----99	262	104	157	3.2	3.2	3.2
Extraction of tooth, forceps extraction-----99.3	111	49	62	3.7	4.2	3.4
Surgical removal of tooth-----99.4	120	40	80	3.0	2.5	3.2
Alveoloplasty-----99.7	3	*	*	3.4	*	*
Other dental surgery-----Residual	28	14	14	2.2	1.7	2.6
Biopsy-----A1-A2	553	213	339	10.8	12.1	10.0

¹Includes data for inpatients discharged with sex not stated.

²Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

³Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 10. Number of first-listed operations for inpatients discharged from short-stay hospitals, by surgical category and age: United States, 1973

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

Surgical category and ICDA codes	All ages	Under 15 years	15-44 years	45-64 years	65 years and over
Number of first-listed operations in thousands					
All operations-----	13,266	1,861	6,037	3,290	2,079
Neurosurgery-----01-05	220	22	76	83	39
Ophthalmology-----06-14	550	87	76	143	244
Resection and recession of eye muscle-----10.5-10.6	65	47	15	*	*
Reattachment of retina-----13.4-13.5	32	*	6	14	11
Extraction of lens-----14.4-14.6	275	*	10	77	186
Other eye surgery-----Residual	178	38	45	49	46
Otorhinolaryngology-----16-21	1,434	801	466	121	47
Myringotomy-----17.0	67	54	8	4	*
Stapedectomy with ossicular reconstruction-----17.4	27	*	10	14	*
Tympanoplasty-----17.6-17.7	39	11	16	10	*
Excision of lesion of nose-----19.0	29	*	7	12	8
Section of nasal septum-----19.1	51	*	39	10	*
Tracheotomy or tracheostomy, emergency-----20.5	27	3	6	11	6
Tonsillectomy without adenoidectomy-----21.1	244	51	190	3	*
Tonsillectomy with adenoidectomy-----21.2	629	587	40	*	*
Adenoidectomy without tonsillectomy-----21.3	50	49	*	-	-
Other operations on ears, nose, and throat-----Residual	272	42	148	57	25
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	71	4	32	27	9
Thyroidectomy-----22.1-22.2	60	*	29	23	7
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	11	3	3	4	*
Vascular and cardiac surgery-----24-30	568	40	129	265	134
Incision of peripheral vessels-----24.0	19	*	3	7	8
Excision and ligation of varicose veins-----24.4	93	*	41	44	8
Incision and excision of lymphatic structure-----25.0-25.2	38	5	12	12	9
Operations on valves of heart-----29.2-29.4	16	*	6	8	*
Other vascular and cardiac surgery-----Residual	401	33	66	194	108
Thoracic surgery-----32-35	173	13	46	64	50
Lung lobectomy-----34.2-34.4	19	*	4	9	6
Other thoracic surgery-----Residual	154	13	42	55	45
Abdominal surgery-----38-48	1,970	272	678	606	414
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	19	*	4	9	6
Repair of inguinal hernia-----38.2-38.3	490	104	120	169	97
Appendectomy-----41.1	292	98	162	24	9
Cholecystectomy-----43.5	371	*	143	144	83
Splenectomy-----45.1	17	*	10	*	*
Gastric resection, partial or complete-----46.2-46.3	42	*	9	21	11
Vagotomy-----46.8	36	-	13	16	7
Resection of small intestine or colon-----47.4-47.6	99	*	15	35	47
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	23	*	*	7	12
Other abdominal surgery-----Residual	583	63	200	178	142
Proctological surgery-----50-52	386	7	213	121	45
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	79	*	36	26	15
Hemorrhoidectomy-----51.3	169	*	84	70	14
Other proctological surgery-----Residual	139	5	93	25	16
Urological surgery-----54-61	1,007	178	242	264	323
Nephrotomy and pyelotomy-----54.0-54.1	20	*	6	8	6
Nephrectomy-----54.4-54.5	26	*	8	10	6
Passage of catheter to kidney-----55.7	62	3	25	24	10
Local excision and destruction of lesion of bladder-----56.1-56.2	73	*	7	20	45
Removal of calculus and drainage of bladder without incision-----56.8	15	*	*	5	7
Meatotomy (urethral)-----57.1	39	23	8	5	3
Excision or destruction of lesion of urethra-----57.2	16	*	7	4	4
Dilation of urethra-----57.5	196	53	55	46	42
Prostatectomy-----58.1-58.3	203	*	*	59	142
Excision of hydrocele and hematocele-----59.1	32	7	8	11	6
Orchiopexy-----59.7	18	15	3	-	-
Vasectomy-----60.1	22	-	12	6	4
Circumcision-----61.2	84	44	29	7	4
Other urological surgery-----Residual	200	28	70	60	43

See footnotes at end of table.

Table 10. Number of first-listed operations for inpatients discharged from short-stay hospitals, by surgical category and age: United States, 1973—Con.

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

Surgical category and ICDA codes	All ages	Number of first-listed operations in thousands			
		Under 15 years	15-44 years	45-64 years	65 years and over
Breast surgery-----65	277	5	147	88	37
Partial mastectomy-----65.2	178	*	107	55	13
Complete and radical mastectomy-----65.3-65.6	66	*	14	28	23
Other breast surgery-----Residual	34	*	26	5	*
Gynecological surgery-----67-72	2,117	14	1,441	564	97
Local excision or destruction of lesion of ovary-----67.1	30	*	25	*	*
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	59	*	45	10	3
Ligation and division of fallopian tubes (bilateral)-----68.5	190	*	189	*	-
Hysterectomy-----69.1-69.5	556	*	340	192	23
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	24	*	12	8	3
Dilation and curettage of uterus, diagnostic-----70.3	812	*	510	265	34
Trachelectomy-----70.4	39	-	28	7	3
Colporrhaphy-----71.3	11	*	6	3	*
Plastic repair of cystocele and/or rectocele-----71.4	70	-	16	38	16
Other gynecological surgery-----Residual	326	7	271	37	11
Obstetrical procedures ² -----74-78	1,009	9	995	4	*
Cesarean section-----77	244	*	242	*	*
Dilation and curettage after delivery or abortion-----78.1	263	*	260	*	-
Repair of laceration-----78.2-78.3	162	*	160	*	-
Other obstetrical procedures-----Residual	341	6	333	*	*
Orthopedic surgery-----80-90	1,828	223	765	485	355
Excision of bone, partial-----80.4	90	9	47	28	6
Closed reduction of fracture without fixation-----82.0	290	100	86	51	54
Open reduction of fracture without fixation-----82.1	66	10	30	15	11
Reduction of fracture with fixation-----82.2	267	13	69	48	137
Excision of intervertebral cartilage (prolapsed disk)-----86.4	143	*	78	60	6
Arthroplasty of hip-----87.0	48	*	3	19	26
Repair and plastic operations on joints of foot and toes-----87.2	98	*	34	48	13
Spinal fusion-----87.4	21	*	11	8	*
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	20	*	9	7	*
Closed reduction of dislocation of joint-----87.7	28	5	14	4	5
Operations on muscles, tendons, fascia, and bursa-----88-89	217	33	113	56	15
Other orthopedic surgery-----Residual	540	45	273	142	80
Plastic surgery-----92-94	721	122	323	175	100
Incision of skin and subcutaneous tissue-----92.0	96	22	42	19	11
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	319	45	124	94	55
Suture of skin or mucous membrane-----92.5	144	23	87	20	14
Plastic operations on lip and mouth-----93.1	10	7	*	*	*
Skin graft except lip and mouth-----93.2-93.6	71	12	33	16	10
Other plastic surgery-----Residual	81	13	34	25	9
Oral and maxillofacial surgery-----95-98	119	17	57	28	17
Dental surgery-----99	262	26	176	47	13
Extraction of tooth, forceps extraction-----99.3	111	7	69	27	8
Surgical removal of tooth-----99.4	120	7	97	13	4
Alveoloplasty-----99.7	3	-	*	*	*
Other dental surgery-----Residual	28	13	9	5	*
Biopsy-----A1-A2	553	21	173	204	155

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

Table 11. Average length of stay for inpatients discharged from short-stay hospitals, by surgical category of first-listed operation and age: United States, 1973

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

Surgical category and ICDA codes	All ages	Average length of stay in days			
		Under 15 years	15-44 years	45-64 years	65 years and over
All operations-----	7.9	4.0	6.0	9.7	14.3
Neurosurgery-----01-05	15.0	13.7	12.2	16.2	18.4
Ophthalmology-----06-14	5.6	3.2	4.7	5.8	6.6
Resection and recession of eye muscle-----10.5-10.6	3.7	3.1	5.2	*	*
Reattachment of retina-----13.4-13.5	7.3	*	7.3	7.1	7.5
Extraction of lens-----14.4-14.6	6.6	*	5.7	6.4	6.7
Other eye surgery-----Residual	4.5	3.2	4.0	4.5	6.0
Otorhinolaryngology-----16-21	3.1	2.1	3.3	6.6	8.8
Myringotomy-----17.0	2.3	2.0	2.0	5.5	*
Stapedectomy with ossicular reconstruction-----17.4	2.9	*	2.4	3.2	*
Tympanoplasty-----17.6-17.7	2.8	2.3	2.6	3.4	*
Excision of lesion of nose-----19.0	3.5	*	2.4	3.3	4.7
Section of nasal septum-----19.1	4.4	*	4.5	4.1	*
Tracheotomy or tracheostomy, emergency-----20.5	24.4	25.4	22.8	25.3	24.1
Tonsillectomy without adenoidectomy-----21.1	2.3	2.0	2.4	2.8	*
Tonsillectomy with adenoidectomy-----21.2	2.1	2.0	3.1	*	*
Adenoidectomy without tonsillectomy-----21.3	1.7	1.7	*	-	-
Other operations on ears, nose, and throat-----Residual	4.3	2.6	3.6	5.8	8.1
Operations on thyroid, parathyroid, thymus, and adrenals-----22-23	7.1	3.3	6.4	7.8	9.2
Thyroidectomy-----22.1-22.2	6.8	*	6.3	7.1	7.9
Other operations on thyroid, parathyroid, thymus, and adrenals-----Residual	8.7	3.0	7.1	12.0	*
Vascular and cardiac surgery-----24-30	11.8	8.5	8.5	11.8	15.9
Incision of peripheral vessels-----24.0	17.4	*	9.8	15.1	22.9
Excision and ligation of varicose veins-----24.4	7.0	*	5.5	7.7	11.6
Incision and excision of lymphatic structure-----25.0-25.2	9.4	5.0	6.1	11.0	14.1
Operations on valves of heart-----29.2-29.4	22.2	*	19.9	24.9	*
Other vascular and cardiac surgery-----Residual	12.5	8.8	9.8	12.2	15.7
Thoracic surgery-----32-35	13.9	8.7	10.4	15.2	16.7
Lung lobectomy-----34.2-34.4	19.2	*	14.6	20.9	19.7
Other thoracic surgery-----Residual	13.2	8.7	10.0	14.2	16.3
Abdominal surgery-----38-48	10.9	4.9	8.7	12.2	16.7
Repair of diaphragm and diaphragmatic hernia-----38.0-38.1	13.3	*	10.3	12.7	15.8
Repair of inguinal hernia-----38.2-38.3	6.2	2.6	5.3	7.2	9.1
Appendectomy-----41.1	6.1	5.8	5.7	8.4	10.7
Cholecystectomy-----43.5	12.2	*	9.8	12.1	16.8
Splenectomy-----45.1	17.9	*	16.7	*	*
Gastric resection, partial or complete-----46.2-46.3	18.5	*	18.4	16.6	22.5
Vagotomy-----46.8	16.2	-	13.9	15.1	22.5
Resection of small intestine or colon-----47.4-47.6	20.8	*	21.8	18.6	22.4
Ileostomy, colostomy, and other enterostomy-----47.7-47.9	25.1	*	*	26.3	25.0
Other abdominal surgery-----Residual	13.2	6.1	10.1	14.5	19.0
Proctological surgery-----50-52	7.4	6.6	5.8	8.2	12.8
Local excision and destruction of lesion of rectum and anus-----50.2,51.2	6.4	*	5.5	6.1	9.6
Hemorrhoidectomy-----51.3	7.3	*	6.5	7.5	11.4
Other proctological surgery-----Residual	8.1	8.1	5.4	12.3	16.8
Urological surgery-----54-61	9.4	3.8	7.1	10.2	13.4
Nephrotomy and pyelotomy-----54.0-54.1	14.7	*	13.2	13.0	19.3
Nephrectomy-----54.4-54.5	17.7	*	20.5	14.6	20.2
Passage of catheter of kidney-----55.7	8.8	6.0	7.3	10.1	10.1
Local excision and destruction of lesion of bladder-----56.1-56.2	10.4	*	9.5	9.5	10.9
Removal of calculus and drainage of bladder without incision-----56.8	17.0	*	*	15.2	18.5
Meatotomy (urethral)-----57.1	3.5	1.8	3.2	4.9	14.3
Excision or destruction of lesion of urethra-----57.2	6.1	*	4.7	6.2	8.5
Dilatation of urethra-----57.5	6.5	2.3	5.9	7.8	11.3
Prostatectomy-----58.1-58.3	13.9	*	*	12.6	14.6
Excision of hydrocele and hematocele-----59.1	5.3	3.4	4.8	5.9	7.2
Orchiopexy-----59.7	5.1	4.3	8.8	-	-
Vasectomy-----60.1	6.3	-	2.1	9.5	13.3
Circumcision-----61.2	3.3	2.9	3.2	4.2	6.4
Other urological surgery-----Residual	10.4	8.2	8.4	11.0	14.4

See footnotes at end of table.

Table 11. Average length of stay for inpatients discharged from short-stay hospitals, by surgical category of first-listed operation and age: United States, 1973—Con.

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

Surgical category and ICDA codes	All ages	Under 15 years	15-44 years	45-64 years	65 years and over
Average length of stay in days					
Breast surgery-----65	5.1	2.9	3.6	5.8	9.7
Partial mastectomy-----65.2	3.5	*	3.0	3.9	6.4
Complete and radical mastectomy-----65.3-65.6	9.7	*	6.5	9.8	11.9
Other breast surgery-----Residual	4.5	*	4.4	4.7	*
Gynecological surgery-----67-72	6.2	4.8	5.6	6.7	11.0
Local excision or destruction of lesion of ovary-----67.1	7.8	*	7.1	*	*
Oophorectomy; salpingo-oophorectomy-----67.2-67.5	9.4	*	8.7	10.8	15.6
Ligation and division of fallopian tubes (bilateral)-----68.5	4.3	*	4.3	*	-
Hysterectomy-----69.1-69.5	9.5	*	9.2	9.7	12.7
Local excision and destruction of other lesions of uterus, cervix, and supporting tissues-----70.2	6.6	*	4.7	4.9	19.4
Dilation and curettage of uterus, diagnostic-----70.3	4.1	*	3.8	4.1	7.3
Trachelectomy-----70.4	5.6	-	4.9	6.6	9.2
Colporrhaphy-----71.3	7.4	*	6.1	8.9	*
Plastic repair of cystocele and/or rectocele-----71.4	9.4	-	9.2	9.1	10.4
Other gynecological surgery-----Residual	5.4	3.6	4.9	6.4	16.2
Obstetrical procedures ² -----74-78	3.9	2.7	3.9	4.2	*
Cesarean section-----77	7.2	*	7.2	*	*
Dilation and curettage after delivery or abortion-----78.1	2.4	*	2.4	*	-
Repair of laceration-----78.2-78.3	3.7	*	3.7	*	-
Other obstetrical procedures-----Residual	2.7	1.8	2.7	*	*
Orthopedic surgery-----80-90	10.7	6.1	7.9	10.8	19.6
Excision of bone, partial-----80.4	6.1	5.2	5.6	6.6	8.5
Closed reduction of fracture without fixation-----82.0	8.8	5.3	9.1	9.3	14.3
Open reduction of fracture without fixation-----82.1	12.2	5.9	10.0	13.2	21.9
Reduction of fracture with fixation-----82.2	18.2	11.5	11.5	16.4	22.9
Excision of intervertebral cartilage (prolapsed disk)-----86.4	15.3	*	14.1	16.1	22.5
Arthroplasty of hip-----87.0	22.8	*	22.9	19.7	25.3
Repair and plastic operations on joints of foot and toes-----87.2	5.6	*	5.0	5.7	6.5
Spinal fusion-----87.4	16.6	*	15.7	14.7	*
Arthrodesis and stabilization of joints (except spine)-----87.5-87.6	9.0	*	8.3	9.0	*
Closed reduction of dislocation of joint-----87.7	6.7	5.7	5.9	3.6	12.9
Operations on muscles, tendons, fascia, and bursa-----88-89	4.2	4.3	3.7	5.0	4.6
Other orthopedic surgery-----Residual	10.0	6.9	6.7	10.9	21.4
Plastic surgery-----92-94	7.8	5.6	6.7	9.0	11.6
Incision of skin and subcutaneous tissue-----92.0	8.2	5.2	6.9	11.2	14.0
Excision of lesion of skin and subcutaneous tissue-----92.1-92.2	6.7	3.9	6.0	7.1	9.5
Suture of skin or mucous membrane-----92.5	5.6	3.6	5.1	8.1	7.7
Plastic operations on lip and mouth-----93.1	5.3	6.1	*	*	*
Skin graft except lip and mouth-----93.2-93.6	20.5	18.1	17.1	23.2	29.8
Other plastic surgery-----Residual	4.5	4.0	3.3	5.7	6.6
Oral and maxillofacial surgery-----95-98	6.5	4.4	5.7	7.2	9.7
Dental surgery-----99	3.2	1.9	2.9	4.5	6.1
Extraction of tooth, forceps extraction-----99.3	3.7	2.5	2.9	5.1	6.8
Surgical removal of tooth-----99.4	3.0	2.1	2.9	3.6	4.7
Alveoloplasty-----99.7	3.4	-	*	*	*
Other dental surgery-----Residual	2.2	1.4	2.4	3.4	*
Biopsy-----AL-A2	10.8	19.3	6.4	10.4	15.0

¹Limited to estimated number of appendectomies excluding those performed incidental to other abdominal surgery.

²Codes 75.0-75.6 and 75.9 are not used by HDS.

APPENDIX I

TECHNICAL NOTES ON METHODS

Statistical Design of the Hospital Discharge Survey

Scope of the survey.—The scope of the HDS encompasses patients discharged from noninstitutional hospitals, exclusive of military and Veterans Administration (VA) hospitals, that have six beds or more for inpatient use, are located in the 50 States and the District of Columbia, and in which the average length of stay for all patients is less than 30 days. Although all discharges of inpatients from these hospitals are within the scope of this survey, all newborn infants and discharges from Federal hospitals are excluded from this report.

Sampling frame and size of sample.—The sampling frame (universe) for hospitals in the HDS 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.¹²

The universe for the survey consisted of 6,965 short-stay hospitals, excluding military and Veterans Administration hospitals, contained in the MFI in 1963. The universe was expanded in 1969 by the addition of 442 hospitals which were added to the MFI. The distribution of the hospitals by size and geographic region in the MFI and the HDS sample for 1973 is shown in table I.

The sample of hospitals for 1973 consisted of 497 hospitals. Of these hospitals, 42 refused to participate and 31 were out of scope either because the hospital had gone out of business or because they failed to meet the definition of a short-stay hospital. Thus 424 hospitals participated in the survey during 1973. Approximately 225,000 abstracts of medical records were received from the 424 hospitals.

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 being 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 con-

trolled 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 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 was done to compensate for the fact that hospitals were selected with probabilities proportionate to their size class and to assure that the overall probability of selecting a discharge would be approximately the same in all hospitals.

In nearly all the sample hospitals, the daily listing sheet of discharges was the frame from which the subsamples of discharges were selected. The sample discharges were selected by a 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 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 NCHS, or by both. In approximately 70 percent of the hospitals that participated in the HDS during 1973, this work was performed by the medical records department of the hospital. In all 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 (figure 1). The abstract form provides for recording demographic

Table I. Distribution of short-stay hospitals in the universe (MFI) and in the Hospital Discharge Survey sample, and the number of hospitals that participated in the survey, by size of hospital and geographic region: United States, 1973

Size of hospital	All regions	North-east	North Central	South	West
<u>All sizes</u>					
Universe-----	7,407	1,146	2,064	2,832	1,365
Total sample-----	407	129	146	148	74
Number participating-----	424	115	128	118	63
<u>6-49 beds</u>					
Universe-----	3,304	209	865	1,549	681
Total sample-----	64	7	18	26	13
Number participating-----	43	5	15	14	9
<u>50-99 beds</u>					
Universe-----	1,746	293	467	642	344
Total sample-----	72	13	19	27	13
Number participating-----	61	10	16	24	11
<u>100-199 beds</u>					
Universe-----	1,224	288	392	365	179
Total sample-----	103	26	31	32	14
Number participating-----	91	26	26	25	14
<u>200-299 beds</u>					
Universe-----	583	191	158	140	94
Total sample-----	89	30	26	19	14
Number participating-----	76	27	23	14	12
<u>300-499 beds</u>					
Universe-----	397	111	131	102	53
Total sample-----	93	25	30	26	12
Number participating-----	84	23	28	24	9
<u>500-999 beds</u>					
Universe-----	135	45	48	20	13
Total sample-----	58	19	19	18	7
Number participating-----	51	15	17	12	7
<u>1,000 beds or more</u>					
Universe-----	18	9	3	5	1
Total sample-----	18	9	3	5	1
Number participating-----	18	9	3	5	1

data, admission and discharge dates, discharge status, and information on discharge diagnoses and surgical operations or procedures. All discharge diagnoses and operations were listed on the abstract form in the order in which they were entered on the face sheet of the hospital medical records.

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

Medical coding and edit.—The medical information recorded on the sample patient abstracts for data

year 1973 were coded centrally by NCHS staff. A maximum of five diagnostic codes and three codes for surgical operations and procedures were assigned for each sample abstract. 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 and/or age of patient was incompatible with the recorded medical information, priority was given to the latter in the editing decision.

The basic system used for coding the medical terminology on HDS sample patient abstracts is the ICDA. However, some modifications were made to ac-

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.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration
National Center for Health Statistics
MEDICAL ABSTRACT — HOSPITAL DISCHARGE SURVEY

I. Patient Identification

1. Hospital number..... _____	4. Date of admission _____ Month Day Year
2. HDS number _____	5. Date of discharge _____ Month Day Year
3. Medical record number..... _____	

II. Patient Characteristics

1. Date of birth: _____ Month Day Year	2. Age (complete ONLY if date of birth not given): _____ Units } 1 <input type="checkbox"/> years } 2 <input type="checkbox"/> months } 3 <input type="checkbox"/> days
3. Sex: 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female	
4. Race or color: 1 <input type="checkbox"/> White 2 <input type="checkbox"/> Negro 3 <input type="checkbox"/> Other nonwhite 4 <input type="checkbox"/> "Nonwhite" 5 <input type="checkbox"/> Not stated	
5. Marital status: 1 <input type="checkbox"/> Married 2 <input type="checkbox"/> Single 3 <input type="checkbox"/> Widowed 4 <input type="checkbox"/> Divorced 5 <input type="checkbox"/> Separated 6 <input type="checkbox"/> Not stated	
6. Discharge status: 1 <input type="checkbox"/> Alive 2 <input type="checkbox"/> Dead	

III. Diagnoses and Operations

1. Final diagnoses: _____

_____ see reverse side

2. Operations: _____

_____ see reverse side

Completed by _____ Date _____

FOR NCHS USE ONLY

Diagnoses _____
Operations _____

Figure 1. Medical Abstract Form

commodate incomplete or ill-defined terminology on the source documents.

The Hospital Discharge Survey modifications of the ICDA diagnostic coding system exclude the sections Accidents, poisonings, and violence (external cause) (E800-E999) and Fetal death (Y30). The ICDA class XV, Certain Causes of Perinatal Morbidity (760-779) was modified to exclude diseases, difficult labor, and conditions of mothers of newborn infants (760-771), termination of pregnancy (773), and fetal death of unknown cause (779). Birth injury without mention of

cause (772) was changed to birth injury. Codes retained in this ICDA class are 772 and 774-778. Code 793 for observation, without need for further medical care was restated as observation and tests with negative or unspecified findings and was moved from ICDA class XVI, Symptoms and Ill-Defined Conditions to the supplementary classification section on Special Conditions Without Sickness (Y00-Y13).

The Hospital Discharge Survey modifications of the ICDA system for coding surgical operations and procedures are shown on page 49.

HDS modifications of the ICDA section Surgical Operations, Diagnostic and Other Therapeutic Procedures

<i>ICDA Code and Title</i>	<i>HDS Modification</i>
01.1-Transsphenoid surgical approach to brain stem	01.1 not used; included in 01.7-Hypophysectomy
14.4-Extraction of lens, extracapsular	-----
14.5-Extraction of lens, intracapsular	-----
-----	Add 14.6-Extraction of lens or cataract, not otherwise specified
22.6-Excision of branchial cleft cyst	22.6 not used; included in 21.6-Pharyngectomy and destruction of lesion of pharynx
30.6-Open heart technique	Redefined 30.6-Open heart surgery (with cardiopulmonary bypass) not otherwise specified
30.7-Open heart technique with cardiopulmonary bypass	30.7 not used; included in 30.6
56.7-Urethrovessical suspension	56.7 not used; included in 57.4-Repair and plastic operations on urethra
65.7-Repair or plastic operations on breast	-----
-----	Add 65.8-Augmentation mammoplasty
65.9-Other operations on breast	Redefined 65.9-Other operations on breast (includes reduction or amputative mammoplasty)
74-78-Obstetrical procedures	75.0-75.6, 75.9 not used
77.0-Cesarean section, classical	Redefined 77.0-Cesarean section, all types
-----	77.1-77.2, 77.8-77.9 not used
82-84-Reduction of fracture and fracture dislocation of bones	82.3-82.9, 83-84 not used
82.0-Closed reduction of separated upper femoral epiphysis	Redefined 82.0-Reduction (closed or not otherwise specified) of fracture in 82-84 without mention of fixation
82.1-Open reduction of separated upper femoral epiphysis with or without internal fixation	Redefined 82.1-Reduction (open) of fracture in 82-84 without mention of fixation
82.2-Closed reduction of intertrochanteric fracture	Redefined 82.2-Reduction (closed or open) of fracture in 82-84 with mention of fixation
87.0-Arthroplasty of hip without mechanical device	Redefined 87.0-Arthroplasty of hip with or without mechanical device
87.1-Arthroplasty of hip with mechanical (prosthetic) device	87.1 not used; included in 87.0
94.2-Plastic operation of nose	94.2 not used; included in 19.3-Rhinoplasty and repair of nose
94.4-Augmentation mammoplasty	94.4 not used; see code 65.8
98-Reduction of fracture and fracture-dislocation of jawbone	98.2-98.6 not used
98.0-Closed reduction, malar, zygoma and zygomatic arch	Redefined 98.0-Reduction (closed), malar, zygoma, zygomatic arch, maxilla, mandible, alveolus
98.1-Open reduction, malar, zygoma and zygomatic arch	Redefined 98.1-Reduction (open), malar, zygoma, zygomatic arch, maxilla, mandible, alveolus
A4-A5-Diagnostic endoscopy	A4-A5 not used
A8-A9-Diagnostic radiography	A8-A9 not used
R1-Radiotherapy and related therapies	R1 not used
R4-Physical medicine and rehabilitation	R4 not used
R9-Other surgical procedures	R9 not used

Presentation of Estimates

Grouping of operations.—Estimates of the number, rate, and distribution of operations by surgical class are based on the classification of operations reported on sample patient abstracts in the 3-digit detail provided by the ICDA. The groupings that are used in this report are specialties numbered 1-17 of the ICDA section Surgical Operations, Diagnostic and Other Therapeutic Procedures. The surgical categories, the most detailed groupings of surgical operations or procedures shown in this report, are subsets of the major groups or classes. In developing the tabular list of operations, an effort was made to maximize specificity of the operations consistent with clarity of characterization and with the frequency of their occurrence within the context of the HDS for 1973.

Patient characteristics "not stated."—Age and sex of patient were not stated on the hospital records of sample hospitals (the face sheet of patient's medical record) for less than one-fourth of 1 percent of the discharges. If age was not stated, it was imputed by assigning the patient an age consistent with the ages of other patients with the same diagnostic code. 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 consistent with the stays of other patients of the same age. Other missing demographic items were coded and tabulated as "not stated." Color was not stated for 12.8 percent of all discharges. For this reason, rates by color were not computed and caution should be used in drawing conclusions from the data by color. In the detailed tables presenting frequencies and rates, the totals include the not stated cases.

Rounding of numbers.—Estimates of the number of discharges, discharges with surgery, and 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, percents, and average lengths of stay presented in the report were calculated on the basis of unrounded figures and will not necessarily agree with rates and other calculations that may be calculated from the rounded data.

Population estimates.—The population estimates used in computing rates for 1973 HDS data are unpublished estimates for the U.S. civilian noninstitutionalized population as of July 1, 1973, provided by the U.S. Bureau of the Census.

The population estimates for the United States by age and sex and by geographic region, presented in table II, are consistent with the population estimates published by the U.S. Bureau of the Census in *Current Population Reports*, Series P-25. However, they are not official population estimates of the U.S. Bureau of the Census.

Table II. Civilian noninstitutionalized population used to compute rates shown in this publication, by age, sex, and geographic region: United States, July 1, 1973

Characteristic	Both sexes	Male	Female
Population in thousands ¹			
Total-----	205,836	99,307	106,529
<u>Age</u>			
Under 15 years-----	55,559	28,313	27,246
15-44 years-----	87,342	42,253	45,088
45-64 years-----	42,641	20,310	22,331
65 years and over--	20,294	8,431	11,862
<u>Geographic region</u>			
Northeast-----	48,940
North Central-----	56,772
South-----	64,499
West-----	35,625

¹These estimates of the U.S. civilian noninstitutionalized population are consistent with the population estimates published by the U.S. Bureau of the Census in *Current Population Reports*, Series P-25.

Reliability of Estimates

Estimation.—Statistics produced by HDS 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 the HDS 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.^{13,14}

Measurement errors.—As in any survey, the 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 earlier in this report. Quality control programs have been instituted to alleviate these types of errors.

Sampling errors.—The standard error is primarily a measure of variability that occurs by chance because a sample rather than the entire universe is surveyed. In this report, the standard error also reflects part of the measurement error, but does not measure any systematic biases in the data. The relative standard error of the estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.

Table III. Approximate standard error of percentages shown in this report for discharges or operations: Patient characteristics cross-classified by geographic region and bed size of hospital and for all hospitals

Number of discharges or operations (base of percentages 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-----	0.8	1.2	1.8	2.4	2.8	3.0
200-----	0.6	0.8	1.3	1.7	2.0	2.1
600-----	0.3	0.5	0.7	1.0	1.1	1.2
1,000-----	0.3	0.4	0.6	0.8	0.9	1.0
2,000-----	0.2	0.3	0.4	0.5	0.6	0.7
6,000-----	0.1	0.2	0.2	0.3	0.4	0.4
10,000-----	0.1	0.1	0.2	0.2	0.3	0.3
20,000-----	0.1	0.1	0.1	0.2	0.2	0.2
30,000-----	0.1	0.1	0.1	0.1	0.2	0.2

NOTE: Illustration of use of table III: Table 8 shows that 18.6 percent of the 411,000 cholecystectomies reported in table 7 were performed in hospitals of 200-299 beds. Linear interpolation between the values shown in table III yields an approximate standard error of 1.3 percent for an estimate of 18.6 percent with a base of 411,000.

The chances are about 68 out of 100 that the value obtained in a complete enumeration is contained in the interval represented by the estimate plus or minus one standard error of the estimate; 95 out of 100 for two standard errors; and 99 out of 100 for 2½ standard errors. Applying the illustration at the bottom of figure II, the chances are about 68 out of 100 that the value that would be obtained in a complete enumeration is contained in the interval 125,000 + 10.7 percent of 125,000 (between 111,625 and 138,375); 95 out of 100 for the interval 125,000 + 10.7 percent of 125,000 multiplied by 2; 99 out of 100 for the interval 125,000 + 10.7 percent of 125,000 multiplied by 2.5.

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

The relative standard errors (figure II) and approximate standard errors of percentages (table III) and of average lengths of stay (table IV) that have been prepared for this report are applicable to estimates of discharges and number of operations for all hospitals and by type of surgery or specific procedure

Table IV. Approximate standard errors of average lengths of stay shown in this report: Patient characteristics cross-classified by all hospitals

Number of discharges (base of average in thousands)	Average length of stay in days							
	2	6	10	14	18	22	26	30
	Standard error in days							
4-----	0.9	1.4	2.1	2.9	3.7	4.6	5.5	6.4
10-----	0.6	0.9	1.4	1.8	2.4	2.9	3.5	4.1
50-----	0.3	0.5	0.7	0.9	1.2	1.5	1.7	2.0
100-----	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6
500-----	0.1	0.3	0.4	0.6	0.7	0.9	1.1	1.2
1,000-----	0.1	0.2	0.4	0.6	0.7	0.9	1.0	1.2
5,000-----	0.1	0.2	0.4	0.5	0.7	0.8	1.0	1.2
10,000-----	0.1	0.2	0.4	0.5	0.7	0.8	1.0	1.2
20,000-----	0.1	0.2	0.4	0.5	0.7	0.8	1.0	1.1
30,000-----	0.1	0.2	0.4	0.5	0.7	0.8	1.0	1.1

NOTE: Illustration of use of table IV: Table 11 shows that the average length of stay was 14.1 days for the estimated 78,000 discharged patients age 15-44 years with surgery for excision of intervertebral cartilage (table 10). Linear interpolation between the values shown in table IV will yield an approximate standard error of 0.8 days for an estimated average length of stay of 14.1 days with a base of 78,000.

Figure II. Approximate relative standard errors of the estimated numbers of discharges or operations for inpatients discharged from all short-stay hospitals, and for discharges by geographic region and bed size of hospital

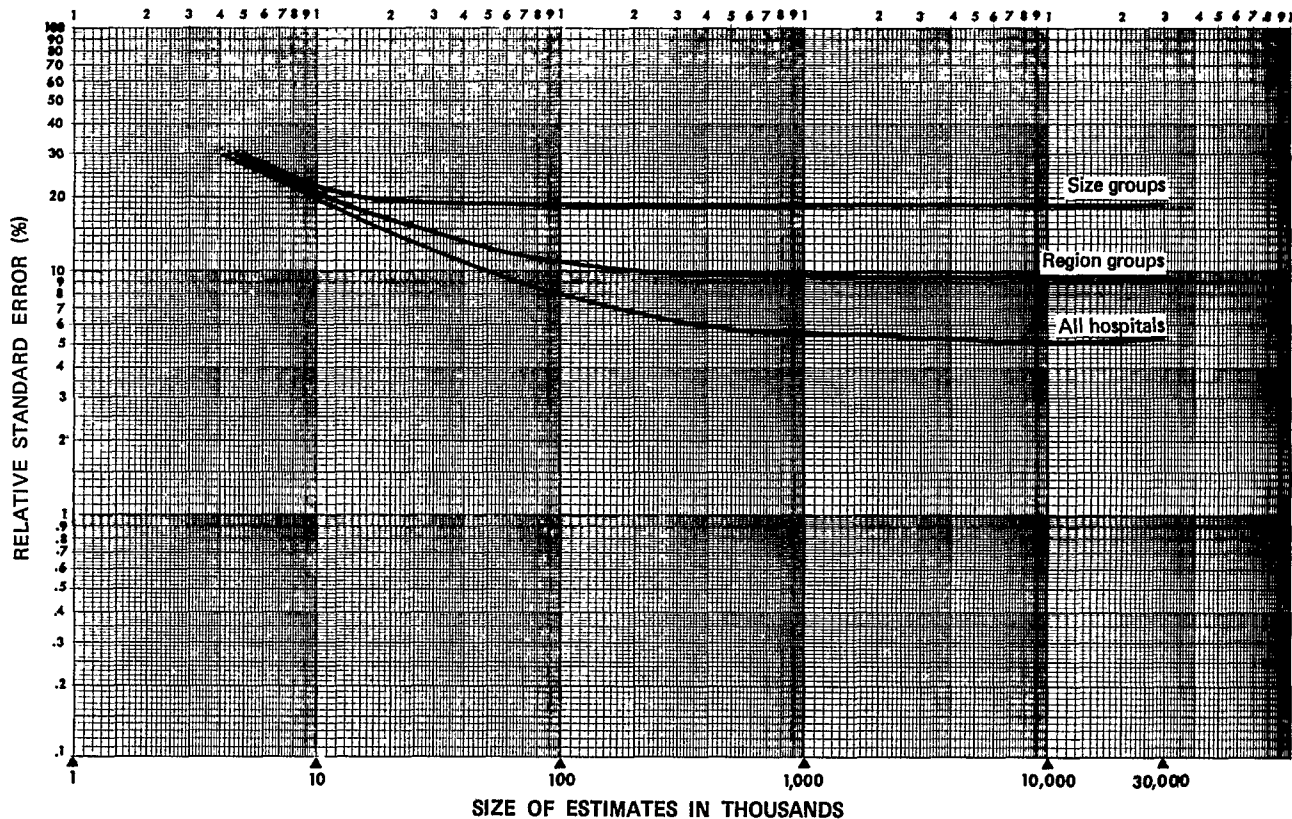


Illustration for use of figure II: As shown in table 5, an estimated 125,000 cholecystectomies were performed during 1973 for inpatient discharges from short-stay hospitals within the North Central Region. The relative standard error of the estimate as read from the curve "Region groups" is approximately 10.7 percent: the standard error of 125,000 is 13,375 (10.7 percent of 125,000).

cross-tabulated by age, sex, color, geographic region, and size of hospital. The curve in figure II to which one refers to obtain a sampling error is contingent on whether the type of estimate (for example, operations) relates to all hospitals, geographic region, or a hospital size group. The approximate standard errors of

estimated percentages in table III, when the characteristic(s) used to form the numerator of the percentage is a subclass of the denominator, and the approximate standard errors of average lengths of stay in table IV, are applicable to all percentages and all average lengths of stay presented in this report.



APPENDIX II

DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

Terms Relating to Hospitalization

Short-stay hospitals.—General and short-term special hospitals having six beds or more for inpatient use and an average (mean) length of stay of less than 30 days. Federal hospitals and hospital units of institutions are not included. The terms "hospitals" and "short-stay hospitals" are used synonymously.

Inpatient.—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 inpatients refers to the number of discharges during 1973, including multiple discharges (if any) of the same individual from one short-stay hospital or more. Newborn infants admitted by birth to the hospital from which they are discharged are excluded in this report. The terms "inpatient" and "patient" are used synonymously.

Discharge.—The formal release of an inpatient by a hospital, that is, the termination of a period of hospitalization by death or by disposition to place of residence, nursing home, or another hospital. In this report, the number of discharges from short-stay hospitals (alive or dead) is exclusive of newborn infants. The number of discharges by death is limited to hospital deaths that occurred following formal admission of the patient to the inpatient service of the short-stay hospital. The terms "discharges," "inpatient discharges," and "patients (or inpatients) discharged" are used synonymously.

Average length of stay.—The total number of inpatient days accumulated at the time of discharge by patients with surgery discharged during 1973 divided by the number of patients with surgery. A stay of less than 1 day (admission and discharge on the same calendar day) is counted as 1 day in the summation of total inpatient days. The terms "average length of stay" and "average hospital stay" are used synonymously.

Bed size of hospital.—Measured by the number of beds, cribs, and pediatric bassinets regularly maintained (set up and staffed for use) for inpatients; 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.

Terms Relating to Surgery

Discharges with surgery.—The estimated number of surgically treated patients discharged from non-Federal short-stay hospitals during 1973.

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 this survey, 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. A maximum of three 3-digit codes are assigned per sample discharge according to the ICDA and Hospital Discharge Survey directives. (See "Medical coding and edit" in appendix I for further details.) "Operations," "surgical operations," and "surgical procedures" are used synonymously.

All-listed operations.—In terms of the classification system used and the coding of not more than three operations per sample discharge, the estimated number of surgical operations and procedures performed for inpatient discharges from non-Federal short-stay hospitals during 1973. Refers to the aggregate of individually coded operations, procedures, and special treatments in code positions 1-3 exclusive of certain obstetrical procedures, diagnostic endoscopy and radiography, radiotherapy, and certain other treatments not generally considered as surgery.

First-listed operations.—The aggregate of individually coded surgical operations and procedures listed first, including single (only) and first of multiple operations listed. The number of first-listed operations is equivalent to the number of discharges with surgery.

Surgically treated patients.—Inpatients for whom at least one operation or procedure is performed during one period of hospitalization exclusive of certain obstetrical procedures, diagnostic endoscopy and

radiography, radiotherapy, and certain other treatments not generally considered as surgery.

Volume of operations.—The estimated number of all-listed operations performed for inpatient discharges from non-Federal short-stay hospitals during 1973.

Surgery rate.—The ratio of the number of all-listed operations performed during 1973 to the number of persons in the civilian noninstitutionalized population as of July 1, 1973.

Obstetrical procedures.—Certain procedures in ICDA surgery class 12. The HDS includes antepartum obstetrical operations, operations inducing or assisting delivery, cesarean section, and operations after delivery or abortion, but excludes certain routine procedures. (See "Medical coding and edit" in appendix I for further details.)

Demographic Terms

Age.—Refers to age at last birthday prior to admission to the hospital inpatient service.

The elderly.—Persons 65 years of age and over.

Color.—In this report, patients are classified into two groups, "white" and "all other," based on information available on the hospital records (face sheet of the inpatient's medical record) of sample hospitals. "White" includes Mexican and Puerto Rican unless patient is specifically identified as other than white.

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

Geographic region.—In this report, hospitals are classified by location according to the four geographic regions of the United States which correspond to those of the U.S. Bureau of the Census. The States included in each region are as follows:

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



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