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# Vital and Health Statistics

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## Advance Data From Vital and Health Statistics: Numbers 31–40

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No. 4

Data in this report from health and demographic surveys present statistics by age and other variables on ambulatory medical care; sociodemographic and health characteristics of persons by private health insurance coverage and type of plan; an overview of nursing home characteristics; contraceptive utilization; and contraceptive utilization among widowed, divorced, and separated women. Estimates are based on the civilian noninstitutionalized population of the United States. These reports were originally published in 1978.

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## **National Center for Health Statistics**

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David L. Larson, *Assistant Director, Atlanta*

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service | Number 31 ■ July 14, 1978

## Office Visits To Ophthalmologists: National Ambulatory Medical Care Survey, United States, 1976<sup>1</sup>

Using data from the National Ambulatory Medical Care Survey (NAMCS), this report describes an estimated 29.3 million visits made to the offices of ophthalmologists in 1976. The NAMCS is a sample survey designed to explore the provision and utilization of ambulatory care in the physician's office—the setting where most Americans seek health care. The survey is conducted yearly throughout the coterminous United States by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics. The survey sample is selected from doctors of medicine and osteopathy who are primarily engaged in office-based, patient-care practice. In its current scope, NAMCS excludes physicians practicing in Alaska and Hawaii; physicians whose specialty is anesthesiology, pathology, or radiology; physicians in Federal service.

Because the estimates presented in this report are based on a sample rather than the entire universe of office-based, patient-care physicians, they are subject to sampling variability. See "Technical Notes" at the end of this publication for an explanation and for guidelines in judging the relative precision of estimates presented in this report. The directions offered there also provide the basis for judging the statistical significance of difference between estimates that the reader may desire to compare.

<sup>1</sup>This report was prepared by Hugo Koch and Trena Ezzati, Division of Health Resources Utilization Statistics.

### DATA HIGHLIGHTS

The listing that follows shows the prominent position occupied by ophthalmologists in the provision of office-based ambulatory care. With their 29.3 million visits in 1976, they were exceeded only by the primary care and/or more generalized practitioners. Among the office-based specialties characterized by a more focused, functional specialization, ophthalmology led all others in visit volume (table 1).

Compared with the entire universe of office-based physicians, ophthalmologists showed a greater-than-average tendency to practice in metropolitan areas and in multiple-member practice arrangements (table 2).

Table 1. Number of visits to office-based specialists, by type of specialty: United States, January-December 1976

Specialty	Number of Visits in thousands
General and family practice .....	225,637
Internal medicine.....	68,249
Pediatrics .....	60,400
Obstetrics and gynecology .....	48,994
General surgery.....	35,967
<i>Ophthalmology</i> .....	29,302
Orthopedic surgery .....	27,837
Psychiatry .....	15,811
Dermatology.....	21,627
Otolaryngology.....	10,837
Urology .....	9,896
Cardiovascular disease.....	5,961
Neurology.....	1,752

Table 2. Number and percent distribution of office visits to ophthalmologists and percent distribution of office visits to all specialists, by characteristics of the physician: United States, January-December 1976

Physician characteristic	Visits to ophthalmologists		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits .....	29,302	100.0	100.0
<u>Location of practice</u>			
Metropolitan area <sup>2</sup> .....	23,684	80.8	73.6
Nonmetropolitan area .....	5,618	19.2	26.4
<u>Type of practice</u>			
Solo.....	16,528	56.4	60.2
Other.....	12,775	43.6	39.8

<sup>1</sup>Based on an estimated 588,300,170 visits made to all office-based physicians in 1976.

<sup>2</sup>Location within a standard metropolitan statistical area (SMSA). SMSA's do not reflect 1974 adjustments.

A clear majority (59 percent) of visits to ophthalmologists were made by patients aged 45 years and over. Females made 3 visits for every 2 visits made by males, a ratio that differs little from the average tendency found in all office-based practice (table 3).

Data about prior-visit status reveal that the average office-based ophthalmologist dealt chiefly with patients that the physician had seen before. These returning patients accounted for an estimated 72 percent of all visits. The 28 percent of visits made by new patients, though a decided minority of all visits, still was twice as great as the comparable proportion found in overall office-based practice (table 3). *New problem encounters* (i.e., any problem presented by a new patient or a new problem presented by an old patient) accounted for about 38 percent of all visits. The remaining visits (i.e., old problems presented by old patients) represent a rough estimate of the average number of return visits made during the year for any given new problem. Thus, for the typical new problem presented in 1976, there was an average of 1.6 return visits in the course of the year, a return-visit rate that agrees closely with the average

return-visit rate for all office-based physicians (1.7).

Table 4 presents data on the principal diagnoses most frequently rendered by the ophthalmologist. The "principal" diagnosis was the first-listed diagnosis on a survey form that permitted up to three diagnostic entries. Diagnostic terms and codes are those established by the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States, 1968* (ICDA). It may be of interest to note that among the three-digit diagnostic categories the largest single proportion of visits (28 percent) were devoted to the diagnosis and/or correction of refractive errors.

Table 5 points out the uniquely intense degree of diagnostic activity that characterizes ophthalmological office practice. Including the testing procedures classified under "other" services, every visit entailed an average of at least 1.4 examinations or tests. The 18 percent of visits that resulted in the ophthalmologist's ordering or providing drugs for the patient were slightly less than one-half the frequency with which drug therapy was employed in overall office-based practice (in 43 percent of visits).

Table 3. Number and percent distribution of office visits to ophthalmologists and percent distribution of office visits to all specialists, by characteristics of the patient: United States, January-December 1976

Patient characteristic	Visits to ophthalmologists		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits .....	29,302	100.0	100.0
<u>Age</u>			
Under 15 years .....	3,225	11.0	18.7
15-24 years.....	3,320	11.3	15.0
25-44 years.....	5,510	18.8	25.7
45-64 years.....	8,764	29.9	24.6
65 years and over .....	8,483	29.0	16.0
<u>Sex</u>			
Female .....	17,259	58.9	60.3
Male .....	12,043	41.1	39.7
<u>Prior-visit status</u>			
New patient.....	8,099	27.6	14.2
Old patient, new problem.....	2,954	10.1	23.0
Old patient, old problem.....	18,250	62.3	62.8

<sup>1</sup>Based on an estimated 588,300,170 visits made to all office-based physicians in 1976.

Table 4. Number and percent of office visits to ophthalmologists, by principal morbidity-related diagnoses<sup>1</sup> most commonly rendered by the physician: United States, January-December 1976

Principal diagnosis most commonly rendered by the ophthalmologist and ICDA codes	Number of visits in thousands	Percent of visits
Diseases of the nervous system and sense organs .....320-389	22,121	75.5
Inflammatory diseases of the eye.....360-369	3,396	11.6
Conjunctivitis and ophthalmia.....360	1,504	5.1
Other diseases and conditions of the eye ..... 370-379	18,361	62.7
Refractive errors.....370	8,143	27.8
Myopia .....370.0	2,604	8.9
Hyperopia.....370.1	937	3.2
Presbyopia.....370.2	1,307	4.5
Astigmatism.....370.3	1,277	4.4
Strabismus.....373	964	3.3
Cataract.....374	2,220	7.6
Glaucoma.....375	2,490	8.5
Other diseases of retina and optic nerve.....377	1,207	4.1
Other diseases of eye .....378	3,064	10.5
.....378.7	1,268	4.3
Accidents, poisonings, and violence .....800-899	1,079	3.7

<sup>1</sup>The term "morbidity-related" applies to a diagnosis that was associated with a pathological condition (ICDA codes 000-999), as opposed to a visit that was primarily associated with a routine examination or with a special condition such as surgical aftercare or prenatal care.

Table 5. Number and percent of office visits to ophthalmologists by selected diagnostic and therapeutic services ordered or provided: United States, January-December 1976

Selected service provided	Number of visits in thousands	Percent of visits
<b>Diagnostic services:</b>		
Examination (may include visual acuity test).....	17,445	59.5
Visual acuity test .....	21,451	73.2
Blood pressure check .....	781	2.7
<b>Therapeutic services:</b>		
Drug prescribed.....	5,306	18.1
Office surgery .....	1,284	4.4
Medical counseling.....	1,622	5.5
Other services.....	11,378	38.8

The survey form was too general in design to elicit many findings or procedures that were uniquely ophthalmological in character. This accounts for the relatively large proportion of visits (39 percent) for which the services provided were classified as "other." Along with sophisticated tests and treatments unique to ophthalmological practice, these other services presumably included the more routine activities such as prescribing low-vision aids, fitting contact lenses, and orthoptic training.

Data on seriousness (table 6) express the ophthalmologist's judgment as to the extent of impairment that might result if no care were available for the given problem. The data reveal that the average visit to the ophthalmologist does not center on the treatment of problems

Table 6. Number and percent distribution of office visits to ophthalmologists and percent distribution of office visits to all specialists, by selected visit characteristics: United States, January-December 1976

Selected visit characteristic	Visits to ophthalmologists		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits .....	29,302	100.0	100.0
<u>Seriousness of problem</u>			
Serious and very serious .....	6,347	21.7	19.5
Slightly serious .....	7,171	24.5	32.3
Not serious .....	15,785	53.9	48.2
<u>Disposition (selected actions)</u>			
No followup .....	4,211	14.4	11.5
Return at specified time .....	16,936	57.8	61.4
Return if needed .....	7,147	24.4	21.5
Referred to other physician or agency.....	450	1.5	2.8
Admit to hospital .....	579	2.0	2.1
<u>Duration</u>			
0 minute (no face-to-face encounter with physician) .....	*309	*1.1	2.3
1-5 minutes .....	2,733	9.3	14.1
6-10 minutes .....	6,443	22.0	31.8
11-15 minutes .....	8,897	30.4	26.4
16-30 minutes .....	9,865	33.7	20.0
31 minutes or more .....	1,056	3.6	5.4

<sup>1</sup>Based on an estimated 588,300,170 visits made to all office-based physicians in 1976.



that are "serious to very serious" in prognosis, since only about one-fifth of all visits were assigned this evaluation. The majority of visits—slightly more than one-half—were given a "not serious" evaluation, probably reflecting in part the substantial proportion of ophthalmological office practice devoted to the diagnosis and correction of refractive errors.

Some form of scheduled return visit was the disposition that most frequently ended a visit to the ophthalmologist's office (table 6). The non-serious character of most ophthalmological

office practice is reflected in the low frequency of hospital admission (1 of every 50 visits).

Slightly more than two-thirds (68 percent) of visits to ophthalmologists involved a doctor-patient contact that exceeded 10 minutes in duration (table 6). In overall office-based practice, about 52 percent of these contacts exceeded 10 minutes. A typical face-to-face encounter with the ophthalmologist probably lasted 17-20 minutes, as compared with the roughly estimated 15 minutes found for the average encounter in all office-based practice.

#### 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-----	*

## TECHNICAL NOTES

**SOURCE OF DATA:** Data presented in this report were obtained during 1976 through the National Ambulatory Medical Care Survey (NAMCS). The target population of NAMCS encompasses office visits within the coterminous United States made to physicians who are principally engaged in office practice.

**SAMPLE DESIGN:** The 1976 NAMCS utilized a multistage probability design that involved samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within practices. Within the 87 PSU's composing the first stage of selection, a sample of approximately 3,000 physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. Sampled physicians, randomly assigned to 1 of the 52 weeks in the survey year, were requested to complete Patient Records (brief encounter forms) for a systematic random sample of office visits taking place within their practice during the assigned reporting period. (A facsimile of the Patient Record used is shown in a previous issue of *Advance Data From Vital and Health Statistics*, No. 30, July 13, 1978. Additional data concerning physician practice characteristics such as primary specialty and type of practice were obtained during an induction interview.

A complete description of the survey's background and development has been published in Series 2, No. 61, of *Vital and Health Statistics*, DHEW Pub. No. (HRA) 76-1335, Health Resources Administration, Washington, U.S. Government Printing Office, Apr. 1974.

**SAMPLING ERRORS:** Since the estimates for this report are based on a sample rather than the entire universe, they are subject to sampling variability. The standard error is primarily a measure of sampling variability. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the estimate. Relative standard errors of selected aggregate statistics are shown in table I. The standard errors appropriate for the estimated percent of office visits are shown in table II.

**ROUNDING:** Aggregate estimates of office visits presented in the tables are rounded to the near-

Table I. Approximate relative standard errors of estimated numbers of office visits

Estimate in thousands	Relative standard error in percentages points
500.....	30.1
1,000.....	21.4
2,000.....	15.3
5,000.....	10.0
10,000.....	7.5
30,000.....	5.1
100,000.....	4.0
550,000.....	3.5

*Example of use of table:* An aggregate of 80,000,000 has a relative standard error of 4.3 percent or a standard error of 3,440,000 (4.3 percent of 80,000,000).

Table II. Approximate standard errors of percents for estimated numbers of office visits

Base of percent (number of visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
1,000.....	2.1	4.6	6.3	8.5	9.7	10.6
3,000.....	1.2	2.7	3.7	4.9	5.6	6.1
5,000.....	0.9	2.1	2.8	3.8	4.3	4.7
10,000.....	0.7	1.5	2.0	2.7	3.1	3.3
50,000.....	0.3	0.7	0.9	1.2	1.4	1.5
100,000.....	0.2	0.5	0.6	0.8	1.0	1.1
500,000.....	0.1	0.2	0.3	0.4	0.4	0.5

*Example of use of table:* An estimate of 30 percent based on an aggregate of 75,000,000 has a standard error of 1.2 percent. The relative standard error of 30 percent is 4.0 percent (1.2 percent ÷ 30 percent).

est thousand. The rates and percents, however, were calculated on the basis of original, unrounded figures. Due to rounding of percents, the sum of percentages may not equal 100.0.

**DEFINITIONS:** An *ambulatory patient* is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

An *office* is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and

professional services rendered there generally resides with the individual physician rather than an institution.

A *visit* is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's supervision for the purpose of seeking care and rendering health services.

A *physician* is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) cur-

rently in practice who spends time in caring for ambulatory patients at an office location. Excluded from NAMCS are physicians practicing in Alaska and Hawaii; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service | Number 32 ■ August 22, 1978

## Sociodemographic and Health Characteristics of Persons by Private Health Insurance Coverage and Type of Plan: United States, 1975<sup>1</sup>

During 1975 the Health Interview Survey (HIS) questionnaire included a supplement on health insurance coverage, with special emphasis on whether persons covered by private plans were members of prepaid group practice plans (hereafter "prepaid group"). Members of prepaid group plans were defined as including both those who belonged to plans classified as health maintenance organizations (HMO) and those who belonged to other prepaid group practice plans.

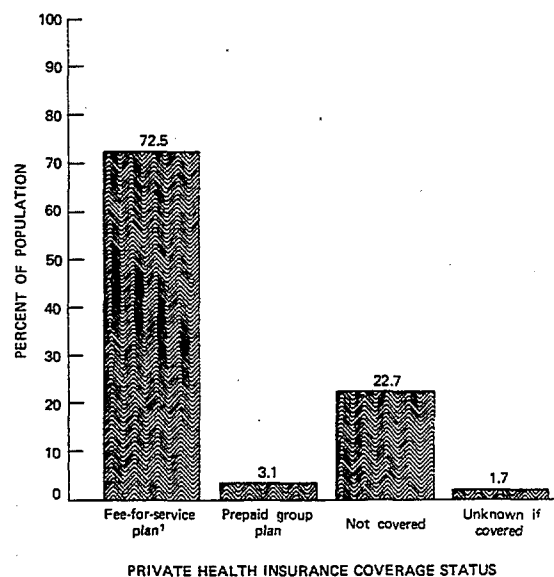
A facsimile of the questionnaire used in this survey may be found in Series 10, Number 115, of *Vital and Health Statistics*.<sup>2</sup> The estimates produced from these data refer to the civilian noninstitutionalized population of the United States. All estimates presented in this report are shown by private insurance coverage status (covered, not covered, and unknown whether covered), and among those covered, by whether they are covered only by a prepaid group plan, a fee-for-service plan, or by a combination of the two. The descriptive terms refer to the method of reimbursement to the doctor. Thus fee-for-service plans include the Blue-type plans and indemnity plans in which the doctor receives only a payment specific to the service performed. Data presented here do not include Medicare coverage or use of or eligibility for

Medicaid benefits. Also excluded are the following types of plans: those limited to dread diseases, to income maintenance, and to accidents; veterans' benefits and medical care of military dependents; and those covering dental care only.

### Health Insurance Coverage Status by Selected Sociodemographic Characteristics

Figure 1 and table 1 show the total civilian noninstitutionalized population by private health insurance coverage status. As may be

Figure 1. PERCENT OF PERSONS BY PRIVATE HEALTH INSURANCE COVERAGE STATUS: UNITED STATES, 1975



<sup>1</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid group plans.

<sup>1</sup>This report was prepared by Jai Choi and Peter Ries, Division of Health Interview Statistics.

<sup>2</sup>National Center for Health Statistics: Current estimates from the Health Interview Survey, United States, 1975. *Vital and Health Statistics*. Series 10-No. 115. DHEW Pub. No. (HRA) 77-1543. Health Resources Administration. Washington. U.S. Government Printing Office, Mar. 1977.

Table 1. Number of persons by private health insurance coverage status and selected characteristics:

United States, 1975

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are shown in the Technical Notes]

Selected characteristic	All persons	Coverage status						Unknown if covered
		All types of coverage	Prepaid plan			Fee-for-service only <sup>1</sup>	Not covered	
			All prepaid	Prepaid only	Prepaid supplemented by fee-for-service			
Number in thousands								
All persons-----	209,065	158,085	6,532	4,622	1,910	151,552	47,433	3,547
<u>Age</u>								
0-64 years-----	187,777	144,795	6,124	4,351	1,774	138,671	39,792	3,190
Under 17 years-----	61,945	45,090	2,010	1,457	553	43,079	15,647	1,268
17-44 years-----	82,738	64,224	2,664	1,929	735	61,561	17,155	1,358
45-64 years-----	43,094	35,481	1,451	965	486	34,031	6,989	623
65 years and over-----	21,287	13,290	408	271	137	12,882	7,641	357
<u>Sex</u>								
Male-----	100,865	77,231	3,234	2,311	923	73,997	21,925	1,709
Female-----	108,199	80,853	3,298	2,311	987	77,555	25,508	1,838
<u>Race</u>								
White-----	181,874	143,028	5,310	3,771	1,539	137,718	36,058	2,788
Black-----	24,396	13,125	1,047	693	354	12,078	10,557	713
Other-----	2,795	1,932	175	158	*17	1,756	817	46
<u>Place of residence</u>								
SMSA-----	143,654	111,111	5,948	4,181	1,767	105,163	30,015	2,529
Central city-----	61,562	43,646	2,930	2,068	861	40,717	16,710	1,205
Outside central city-----	82,093	67,464	3,018	2,113	905	64,446	13,305	1,324
Outside SMSA-----	65,410	46,974	585	441	144	46,389	17,418	1,018
Nonfarm-----	58,700	42,201	543	405	137	41,659	15,604	895
Farm-----	6,710	4,773	42	35	*6	4,731	1,814	124
<u>Geographic region</u>								
Northeast-----	49,086	38,790	2,148	900	1,247	36,642	9,442	854
North Central-----	55,892	46,148	763	641	122	45,385	9,030	714
South-----	66,854	46,650	359	284	75	46,291	18,880	1,324
West-----	37,233	26,497	3,263	2,796	466	23,234	10,081	655
<u>Education of head of family<sup>2</sup></u>								
Elementary school (0-8 years)-----	41,977	24,000	647	497	150	23,353	17,156	821
High school (9-11 years)-----	34,544	23,443	881	592	289	22,562	10,589	512
High school graduate (12 years)-----	68,238	55,126	2,021	1,431	590	53,105	12,091	1,021
College (13-15 years)-----	28,612	23,827	1,241	889	352	22,585	4,339	446
College graduate (16 years or over)-----	32,807	30,015	1,675	1,178	497	28,340	2,370	422
<u>Family income<sup>2</sup></u>								
Under \$3,000-----	14,676	5,351	171	144	*27	5,180	9,014	311
\$3,000-\$4,999-----	17,074	7,530	241	200	41	7,289	9,197	348
\$5,000-\$9,999-----	45,273	30,561	962	757	205	29,600	14,014	698
\$10,000-\$14,999-----	47,103	40,470	1,689	1,276	413	38,780	5,960	674
\$15,000-\$24,999-----	48,872	44,290	2,211	1,419	792	42,080	4,015	567
\$25,000 and over-----	20,996	19,395	978	594	384	18,417	1,382	219

<sup>1</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid plans.<sup>2</sup>Excludes unknown status.

noted, only 3.1 percent of the population (6.5 million persons) were reported to belong to prepaid group plans. About 72.5 percent of the population (151.6 million persons) were covered by fee-for-service type plans only. No private

health insurance coverage of the types included was reported for 22.7 percent of the population (47.4 million persons). No data on coverage status were obtained for 1.7 percent of the population.

Table 2. Percent of persons by private health insurance coverage status and selected characteristics:  
United States, 1975

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are shown in the Technical Notes]

Selected characteristic	All persons	Coverage status						
		All types of coverage	Prepaid plan			Fee-for-service only <sup>1</sup>	Not covered	Unknown if covered
			All prepaid	Prepaid only	Prepaid supplemented by fee-for-service			
Percent of persons								
All persons-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Age</u>								
0-64 years-----	89.8	91.6	93.8	94.1	92.9	91.5	83.9	89.9
Under 17 years-----	29.6	28.5	30.8	31.5	29.0	28.4	33.0	34.1
17-44 years-----	39.6	40.6	40.8	41.7	38.5	40.6	36.2	38.3
45-64 years-----	20.6	22.4	22.2	20.9	25.4	22.5	14.7	17.6
65 years and over-----	10.2	8.4	6.2	5.9	7.2	8.5	16.1	10.1
<u>Sex</u>								
Male-----	48.2	48.9	49.5	50.0	48.3	48.8	46.2	48.2
Female-----	51.8	51.1	50.5	50.0	51.7	51.2	53.8	51.8
<u>Race</u>								
White-----	87.0	90.5	81.3	81.6	80.6	90.9	76.0	78.6
Black-----	11.7	8.3	16.0	15.0	18.5	8.0	22.3	20.1
Other-----	1.3	1.2	2.7	3.4	*0.9	1.2	1.7	1.3
<u>Place of residence</u>								
SMSA-----	68.7	70.3	91.1	90.5	92.5	69.4	63.3	71.3
Central city-----	29.4	27.6	44.9	44.7	45.1	26.9	35.2	34.0
Outside central city-----	39.3	42.7	46.2	45.7	47.4	42.5	28.1	37.3
Outside SMSA-----	31.3	29.7	8.9	9.5	7.5	30.6	36.7	28.7
Nonfarm-----	28.1	26.7	8.3	8.8	7.2	27.5	32.9	25.2
Farm-----	3.2	3.0	0.6	0.8	*0.3	3.1	3.8	3.5
<u>Geographic region</u>								
Northeast-----	23.5	24.5	32.9	19.5	65.3	24.2	19.9	24.1
North Central-----	26.7	29.2	11.7	13.9	6.4	29.9	19.0	20.1
South-----	32.0	29.5	5.5	6.1	3.9	30.5	39.8	37.3
West-----	17.8	16.8	50.0	60.5	24.4	15.3	21.3	18.5
<u>Education of head of family<sup>2</sup></u>								
Elementary school (0-8 years)-----	20.1	15.2	9.9	10.8	7.9	15.4	36.2	23.1
High school (9-11 years)-----	16.5	14.8	13.5	12.8	15.1	14.9	22.3	14.4
High school graduate (12 years)-----	32.6	34.9	30.9	31.0	30.9	35.0	25.5	28.8
College (13-15 years)-----	13.7	15.1	19.0	19.2	18.4	14.9	9.1	12.6
College graduate (16 years or over)-----	15.7	19.0	25.6	25.5	26.0	18.7	5.0	11.9
<u>Family income<sup>2</sup></u>								
Under \$3,000-----	7.0	3.4	2.6	3.1	*1.4	3.4	19.0	8.8
\$3,000-\$4,999-----	8.2	4.8	3.7	4.3	2.1	4.8	19.4	9.8
\$5,000-\$9,999-----	21.7	19.3	14.7	16.4	10.7	19.5	29.5	19.7
\$10,000-\$14,999-----	22.5	25.6	25.9	27.6	21.6	25.6	12.6	19.0
\$15,000-\$24,999-----	23.4	28.0	33.8	30.7	41.5	27.8	8.5	16.0
\$25,000 and over-----	10.0	12.3	15.0	12.9	20.1	12.2	2.9	6.2

<sup>1</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid plans.

<sup>2</sup>Excludes unknown status.

Table 2 shows selected characteristics of persons by health insurance coverage status. Series 10, Numbers 66 and 117, present this type of data in terms of health insurance coverage status

only. This report will emphasize the characteristics of those covered by the two major alternative types of private health insurance.

Focusing on those in prepaid group plans

Table 3. Number and percent distribution of persons by private health insurance coverage and selected characteristics: United States, 1975

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are shown in the Technical Notes]

Selected characteristic	Coverage status			
	Prepaid plan		Fee-for-service <sup>1</sup>	
	Number in thousands	Percent distribution	Number in thousands	Percent distribution
All persons-----	6,532	100.0	151,552	100.0
<b>Race<sup>2</sup></b>				
White-----	5,310	81.3	137,718	90.9
Black-----	1,047	16.0	12,078	8.0
<b>Place of residence</b>				
SMSA:				
Central city-----	2,930	44.9	40,717	26.9
Outside central city-----	3,018	46.2	64,446	42.5
Outside SMSA-----	585	9.0	46,390	30.6
<b>Geographic region</b>				
Northeast-----	2,148	32.9	36,642	24.2
North Central-----	763	11.7	45,385	29.9
South-----	359	5.5	46,291	30.5
West-----	3,263	50.0	23,234	15.3
<b>Education of head of family<sup>3</sup></b>				
Less than high school--	1,528	23.4	45,915	30.3
High school-----	2,021	30.9	53,105	35.0
More than high school--	2,916	44.6	50,925	33.6
<b>Family income<sup>3</sup></b>				
Under \$10,000-----	1,374	21.0	42,069	27.8
\$10,000-\$14,999-----	1,689	25.9	38,780	25.6
\$15,000 and over-----	3,189	48.8	60,497	39.9

<sup>1</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid plans.

<sup>2</sup>Excludes persons of other races.

<sup>3</sup>Excludes unknown status.

(including those whose prepaid plans are supplemented with fee-for-service type plans) and those in fee-for-service type plans only, it may be noted that varying levels of differences and similarities are associated with each of the sociodemographic variables (table 3). Thus the patterns of membership are similar by age and sex (table 2). However, there are wide variations in terms of race, place of residence, geographic region, education of head of family, and family income. Data show that the prepaid group membership is proportionately higher among blacks, within central cities, in the Northeast and especially in the West Region of the country, among families where the heads have higher levels of education, and among families with higher incomes.

## Health-Related Characteristics by Health Insurance Coverage Status

Table 4 shows the numbers and rates for several selected health-related characteristics by health insurance coverage status. The rates shown are crude rates which have *not* been adjusted to take into account any of the sociodemographic differences among the various coverage-status groups described in the previous section. Since any differences or similarities in rates among the coverage-status groups may merely be a reflection of sociodemographic differences among the group's members, it would not be legitimate, based on these data alone, to attribute the differences or similarities in the rates solely to the type of insurance coverage.

Given this limitation, the rates may be compared in a purely descriptive manner, without any implied inferences regarding causation. As may be noted, the percent of persons with limitation of activity due to chronic conditions is similar in prepaid group and fee-for-service plans (12.2 percent and 12.0 percent, respectively); the rates for restricted-activity and bed-disability days, doctor visits, and hospital discharges associated with surgical treatment are higher for those in prepaid group plans. Among persons in prepaid group plans, the rates are lower for short-stay hospital discharges per 100 persons and days per short-stay hospital discharge.

## Ambulatory Care and Hospitalizations by Type of Health Insurance Coverage

A great deal of interest has centered on whether participation in prepaid group plans would tend to lead to a greater use of ambulatory care services and to a reduced use of hospital services. This reduced use might be reflected in a lower rate of hospitalization and/or shorter periods of stay in the hospital. The crude rates for those covered by the two types of plans suggest this pattern of proportionately more doctor visits and less hospitalizations for those covered by prepaid group plans. However, these differences may merely reflect the differing sociodemographic composition of the population covered by these two types of plans. Comparing the specific rates for the various sociodemographic categories serves

Table 4. Number and rate of persons by private health insurance coverage status and selected health characteristics: United States, 1975.

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are shown in the Technical Notes]

Selected health characteristic	All persons	Coverage status						
		All types of coverage	Prepaid plan			Fee-for-service only <sup>1</sup>	Not covered	Unknown if covered
			All prepaid	Prepaid only	Prepaid supplemented by fee-for-service			
Number in thousands								
All persons-----	209,065	158,085	6,532	4,622	1,910	151,552	47,433	3,547
Persons with limitation of activity-----	29,900	18,978	795	579	215	18,183	10,464	458
Restricted-activity days-----	3,733,892	3,444,928	124,184	90,098	34,087	2,320,744	1,231,078	57,886
Bed-disability days-----	1,371,418	885,323	41,015	27,855	13,160	844,308	464,835	21,260
Short-stay hospital days for discharges <sup>2</sup> -----	235,607	160,804	4,852	3,570	1,282	155,952	71,815	2,988
Short-stay hospital discharges <sup>2</sup> -----	29,474	21,438	733	547	186	20,705	7,641	395
Short-stay hospital discharges with surgical operation <sup>2</sup> -----	16,071	12,176	492	354	138	11,684	3,706	189
Doctor visits <sup>2</sup> -----	1,056,094	793,985	38,248	26,531	11,717	755,737	245,673	16,436
Rate								
Percent of persons with limitation of activity-----	14.3	12.0	12.2	12.5	11.3	12.0	22.1	12.9
Restricted-activity days per person per year-----	17.9	15.5	19.0	19.5	17.8	15.3	26.0	16.3
Bed-disability days per person per year-----	6.6	5.6	3.3	6.0	6.9	5.6	9.8	6.0
Short-stay hospital days per discharge <sup>2</sup> -----	8.0	7.5	6.6	6.5	6.9	7.5	9.4	7.6
Short-stay hospital discharges per 100 persons <sup>2</sup> -----	14.1	13.6	11.2	11.8	9.7	13.7	16.1	11.1
Percent of discharges surgically treated <sup>2</sup> -----	54.5	56.8	67.1	64.7	74.2	56.4	48.5	47.8
Doctor visits per person per year <sup>2</sup> -----	5.1	5.0	5.9	5.7	6.1	5.0	5.2	4.6

<sup>1</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid plans.

<sup>2</sup>Unknown if subscribers of a plan used the facility of that plan.

to minimize the confounding influence of the differences in the composition of the two populations.

Table 5 shows the specific rates for doctor visits, and table 6 shows the specific rates for length of stay per hospital discharge. For doctor visits, the specific rates almost invariably show a pattern of greater use by those in prepaid group plans. Regarding the average length of stay per discharge from a short-stay hospital, the specific rates tend to be lower for those in prepaid group plans. However, this relationship does not hold for all of the subgroupings shown in table 6.

Among families at the intermediate level of income and education, the average length of stay per discharge for those in prepaid group plans is as great as or greater than that for those in fee-for-service plans.

A report containing a more extensive and detailed presentation of these data is in preparation. Copies of tabulations to be used in the forthcoming report are available upon request. To receive these copies, contact the Division of Health Interview Statistics, National Center for Health Statistics.



Table 5. Number of doctor visits<sup>1</sup> per person per year by private health insurance coverage status and selected characteristics: United States, 1975  
 [Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are shown in the Technical Notes]

Selected characteristic	All persons	Coverage status						
		All types of coverage	Prepaid plan <sup>1</sup>			Fee-for-service only <sup>2</sup>	Not covered	Unknown if covered
			All prepaid	Prepaid only	Prepaid supplemented by fee-for-service			
Number of doctor visits per person								
All persons-----	5.1	5.0	5.9	5.7	6.1	5.0	5.2	4.6
<u>Age</u>								
Under 17 years-----	4.2	4.2	4.7	4.4	5.4	4.2	4.3	3.7
17-64 years-----	5.2	5.1	6.1	6.3	5.7	5.1	5.4	5.0
65 years and over-----	6.6	6.9	9.1	6.9	13.3	6.9	6.1	5.7
<u>Sex</u>								
Male-----	4.3	4.3	5.1	4.8	5.6	4.3	4.2	4.0
Female-----	5.7	5.7	6.6	6.6	6.7	5.6	6.0	5.2
<u>Race</u>								
White-----	5.1	5.1	6.0	6.0	6.0	5.1	5.2	4.8
All other-----	4.7	4.4	5.3	4.7	6.7	4.3	5.1	4.2
<u>Place of residence</u>								
All SMSA's-----	5.3	5.2	5.9	5.8	6.2	5.2	5.6	5.0
Outside SMSA:								
Nonfarm-----	4.6	4.6	5.0	5.0	*5.1	4.6	4.6	4.1
Farm-----	3.8	3.9	*3.1	*3.7	*	3.9	3.7	*1.1
<u>Geographic region</u>								
Northeast-----	5.3	5.2	5.4	4.1	6.2	5.2	6.0	4.9
North Central-----	4.7	4.7	5.2	5.1	*5.8	4.7	4.9	3.9
South-----	4.6	4.7	7.9	7.4	*9.7	4.7	4.4	5.4
West-----	5.9	5.9	6.2	6.2	5.9	5.9	6.1	3.5
<u>Education of head of family</u>								
Elementary school (0-8 years)-----	4.9	4.7	6.9	6.5	8.3	4.7	5.1	4.3
High school (9-11 years)-----	4.9	4.7	6.1	5.0	8.4	4.7	5.3	5.2
High school graduate (12 years)-----	4.9	4.9	5.0	5.2	4.4	4.9	5.1	5.0
College (13-15 years)-----	5.5	5.4	6.1	6.2	5.9	5.4	6.0	5.7
College graduate (16 years and over)-----	5.4	5.5	6.0	6.0	6.0	5.5	4.8	4.5
<u>Family income</u>								
Under \$3,000-----	6.4	6.7	9.9	11.1	*3.4	6.6	6.3	4.2
\$3,000-\$4,999-----	5.6	5.5	9.3	8.3	*14.1	5.4	5.7	7.8
\$5,000-\$9,999-----	5.2	5.3	6.1	5.6	7.9	5.3	4.9	4.4
\$10,000-\$14,999-----	4.8	4.8	6.1	6.0	6.6	4.7	4.7	5.5
\$15,000-\$24,999-----	4.9	4.9	4.7	4.7	4.7	4.9	4.9	5.0
\$25,000 and over-----	4.9	5.0	6.0	5.6	6.5	5.0	3.6	*3.1

<sup>1</sup>May include utilization not covered by prepaid plan.

<sup>2</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid plans.

#### 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 (more than 30 percent relative standard error)----- \*

Table 6. Number of short-stay hospital days<sup>1</sup> per discharge by private health insurance coverage status and selected characteristics: United States, 1975

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are shown in the Technical Notes]

Selected characteristic	All persons	Coverage status						
		All types of coverage	Prepaid plan <sup>1</sup>			Fee-for-service only <sup>2</sup>	Not covered	Unknown if covered
			All prepaid	Prepaid only	Prepaid supplemented by fee-for-service			
Number of hospital days per discharge								
All persons-----	8.0	7.5	6.6	6.5	6.9	7.5	9.4	7.6
<u>Age</u>								
Under 17 years-----	5.5	4.8	*5.0	*4.4	*8.4	4.8	7.5	*3.2
17-64 years-----	7.4	7.2	6.1	6.0	*6.2	7.2	8.4	6.7
65 years and over-----	12.0	11.4	*11.7	*12.2	*10.9	11.4	13.1	*15.8
<u>Sex</u>								
Male-----	8.9	8.0	6.2	6.0	*7.5	8.1	11.4	8.2
Female-----	7.4	7.2	6.8	6.8	6.8	7.2	8.0	7.2
<u>Race</u>								
White-----	7.9	7.4	7.0	6.8	7.5	7.4	9.4	7.9
Black-----	9.2	8.9	*5.5	*5.9	*4.4	9.2	9.6	*6.7
Other-----	5.4	*4.2	*3.5	*3.5	*-	*4.4	*7.4	*-
<u>Place of residence</u>								
SMSA-----	8.2	7.8	6.5	6.4	*6.9	7.8	9.6	7.7
Central city-----	8.9	8.6	7.1	7.1	*7.4	8.7	9.6	7.2
Outside central city-----	7.7	7.2	5.8	5.6	*6.3	7.3	9.7	8.2
Outside SMSA-----	7.6	7.0	*7.3	*7.6	*7.0	7.0	9.0	*7.0
Nonfarm-----	7.6	7.0	*7.3	*7.6	*7.0	7.0	9.1	*7.2
Farm-----	6.9	6.7	*-	*-	*-	6.7	8.0	*2.3
<u>Geographic region</u>								
Northeast-----	9.7	9.1	8.0	*9.9	*6.3	9.1	11.4	*9.4
North Central-----	8.1	7.7	*7.0	*6.8	*8.2	7.7	10.2	*5.3
South-----	7.5	7.0	*8.8	*8.2	*11.8	7.0	8.7	7.8
West-----	6.6	6.0	5.5	5.2	*7.1	6.1	7.7	*7.2
<u>Education of head of family</u>								
Elementary school (0-8 years)-----	9.8	9.1	*5.7	*5.6	*6.1	9.2	10.8	*8.3
High school (9-11 years)-----	8.2	7.9	*7.2	*7.9	*3.8	7.9	8.7	*6.5
High school graduate (12 years)-----	7.1	6.8	7.8	7.3	*9.1	6.8	8.2	*7.1
College (13-15 years)-----	7.3	7.0	*7.3	*6.9	*8.7	7.0	8.6	*10.9
College graduate (16 years and over)-----	6.9	6.9	*5.1	*5.1	*5.1	6.9	7.5	*4.7
<u>Family income</u>								
Under \$3,000-----	10.3	11.5	*6.6	*6.6	*8.0	11.8	9.6	*13.9
\$3,000-\$4,999-----	10.3	10.2	*8.8	*8.7	*12.3	10.3	10.3	*10.0
\$5,000-\$9,999-----	8.0	7.8	8.6	*9.4	*5.0	7.8	8.4	8.0
\$10,000-\$14,999-----	7.0	6.6	5.5	*4.3	*8.2	6.6	10.1	*6.7
\$15,000-\$24,999-----	6.4	6.3	6.4	*6.6	*5.9	6.2	8.0	*5.9
\$25,000 and over-----	7.4	7.3	*5.9	*5.1	*6.9	7.3	9.3	*3.1

<sup>1</sup>May include utilization not covered by prepaid plans.

<sup>2</sup>Excludes the 1,910,000 persons with fee-for-service plans who also belong to prepaid plans.

### TECHNICAL NOTES

The data presented in this report were obtained from household interviews in the Health Interview Survey. These interviews were conducted throughout 1975 in a probability

sample of the civilian noninstitutionalized population of the United States. During that year approximately 116,000 persons living in about 40,000 households were included in the sample.

The health maintenance organization questions were asked of each household member.

Because the estimates shown are based on a sample of the population rather than on the entire population, they are subject to sampling error. Standard errors appropriate for the estimates of the number of persons are shown in table I; standard errors appropriate for percentages are shown in table II.

Table I. Standard errors of estimates of aggregates

Size of estimate in thousands	Standard error in thousands
35.....	11
70.....	15
100.....	18
300.....	31
500.....	40
700.....	48
1,000.....	57
5,000.....	125
10,000.....	174
20,000.....	237
30,000.....	278

Table II. Standard errors, expressed in percentage points, of estimated percentages

Base of percentage in thousands	Estimated percentages				
	2 or 98	5 or 95	10 or 90	20 or 80	50
70.....	3.0	4.7	6.5	8.6	10.8
100.....	2.5	3.9	5.4	7.2	9.0
300.....	1.5	2.3	3.1	4.2	5.2
500.....	1.1	1.8	2.4	3.2	4.0
700.....	1.0	1.5	2.0	2.7	3.4
1,000.....	0.8	1.2	1.7	2.3	2.9
5,000.....	0.4	0.6	0.8	1.0	1.3
10,000.....	0.3	0.4	0.5	0.7	0.9
20,000.....	0.2	0.3	0.4	0.5	0.6
30,000.....	0.1	0.2	0.3	0.4	0.5

For a more detailed discussion of the limitations and qualifications of data collected in the Health Interview Survey and for the size of sampling errors of the estimates on disability days, physician visits, and other rates, see Series 10, No. 100, of *Vital and Health Statistics*.

# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service

Number 33

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## Office Visits to Orthopedic Surgeons, National Ambulatory Medical Care Survey: United States, 1975-1976<sup>1</sup>

Using data from the National Ambulatory Medical Care Survey (NAMCS), this report describes an estimated 47,152,000 visits made to the offices of orthopedic surgeons over the 2-year span from January 1975 through December 1976. NAMCS is a sample survey designed to explore the provision and utilization of ambulatory care in the physician's office, the setting where most Americans seek health care. The survey is conducted yearly throughout the coterminous United States by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics. The survey sample is selected from doctors of medicine and osteopathy who are principally engaged in office-based, patient-care practice. Excluded from the sample are an indeterminate number of physicians who render some office-based ambulatory care but whose patient-care activities are secondary to another primary role such as teaching, research, or administration. Also excluded from the NAMCS scope are physicians who are hospital based; those whose specialty is anesthesiology, pathology, or radiology; and physicians in Federal Service.

Because the estimates presented in this report are based on a sample rather than on the entire universe of office-based, patient-care physicians, they are subject to sampling variability. See the Technical Notes for an explanation and for guidelines in judging the relative precision of estimates presented in this report.

<sup>1</sup>This report was prepared by Hugo Koch, Division of Health Resources Utilization Statistics.

The directions offered there also provide the basis for judging the statistical significance of differences between estimates.

### DATA HIGHLIGHTS

With an estimated 47,152,000 office visits during the 2-year span 1975-76, orthopedic surgeons occupied a position of middle prominence in the provision of office-based ambulatory care. This is evident from the listing in table 1.

Understandably heading the list are the five primary care and/or more generalized practitioners. Among the other office-based providers of ambulatory care—those generally characterized by a more focused clinical specialization—orthopedic surgeons were second only to ophthalmologists in volume of visits.

Table 1. Number of office visits to the 13 most visited specialists, by type of specialty and rank order: United States, 1975-76

Rank	Type of specialty	Number of visits in thousands
1	General and family practice .....	460,297
2	Internal medicine .....	130,367
3	Pediatrics .....	107,085
4	Obstetrics and gynecology .....	97,070
5	General surgery .....	77,259
6	Ophthalmology .....	53,969
7	Orthopedic surgery .....	47,152
8	Dermatology .....	35,721
9	Psychiatry .....	30,616
10	Otolaryngology .....	27,192
11	Urology .....	20,728
12	Cardiovascular disease .....	13,517
13	Neurology .....	3,784

Compared with the entire universe of office-based physicians, orthopedic surgeons reversed the overall preference for solo over multiple-member practice (table 2); more than one-half of visits to orthopedic surgeons (55 percent) were made to physicians in multiple-member practice arrangements.

Table 2. Number and percent distribution of office visits to orthopedic surgeons, and percent distribution of office visits to all specialists, by characteristics of physician: United States, 1975-76

Physician characteristic	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits.....	47,152	100.0	100.0
<u>Location of practice</u>			
Metropolitan area <sup>2</sup> .....	36,585	77.6	73.3
Nonmetropolitan area.....	10,567	22.4	26.7
<u>Type of practice</u>			
Solo.....	21,401	45.4	60.0
Other.....	25,751	54.6	40.0

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

<sup>2</sup>Location within a standard metropolitan statistical area (SMSA). Composition of SMSA's does not reflect 1974 adjustment.

A majority of visits to orthopedic surgeons (58 percent) were made by patients in the age group 25-64 years (table 3). Median age for visits was about 35 years.

An estimated 53 percent of visits to orthopedic surgeons were made by male patients (table 3), a proportion that substantially exceeded the average proportion of male visits found in overall office-based practice (40 percent). Indeed, orthopedic surgery is one of the few specialties where visits by males equaled or exceeded visits by females; the other notable examples were pediatrics, urology, and cardiovascular disease.

The 23 percent of visits to orthopedic surgeons made by new patients is relatively high

Table 3. Number and percent distribution of office visits to orthopedic surgeons, and percent distribution of office visits to all specialists, by characteristics of the patient: United States, 1975-76

Patient characteristic	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits.....	47,152	100.0	100.0
<u>Age</u>			
Under 15 years.....	7,747	16.4	18.1
15-24 years.....	7,663	16.3	15.1
25-44 years.....	14,313	30.4	25.5
45-64 years.....	12,911	27.4	25.1
65 years and over.....	4,519	9.6	16.2
<u>Sex</u>			
Female.....	22,248	47.2	60.4
Male.....	24,904	52.8	39.6
<u>Prior visit status</u>			
New patient.....	10,620	22.5	14.6
Old patient, new problem.....	3,258	6.9	23.2
Old patient, old problem.....	33,274	70.6	62.3

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

NOTE: Figures may not add to totals due to rounding.

compared with the average 15 percent found in overall office-based practice (table 3). Contributing in large degree to this increased presence of new patients is the finding that 7.1 percent of all visits to orthopedic surgeons were referrals from other physicians or agencies—i.e., almost one-third of the visits by new patients were referred visits. This referral rate is considerably larger than the average rate of 2.6 percent found for all office-based physicians; indeed, it is exceeded by only two other most visited specialties—urology and neurology.

For every visit at which a new problem was presented to the orthopedic surgeon (i.e., any visit by a new patient or a visit by an old patient with a new problem) there were an average of 2.4 return visits per year, a return-visit rate that

Table 4. Number, percent, and cumulative percent of office visits to orthopedic surgeons, by the 10 principal diagnoses most commonly rendered by the orthopedic surgeon: United States, 1975-76

Principal diagnosis and ICDA code	Visits to orthopedic surgeons		
	Number in thousands	Percent	Cumulative percent
Medical and surgical aftercare..... Y10	8,925	18.9	18.9
Synovitis, bursitis, and tenosynovitis..... 731	3,179	6.7	25.6
Sprains, strains of other and unspecified parts of back ..... 847	2,364	5.0	30.6
Osteoarthritis and allied conditions..... 713	1,989	4.2	34.8
Displacement of intervertebral disc..... 725	1,829	3.9	38.7
Sprains, strains of sacroiliac region..... 846	1,663	3.5	42.2
Fracture of radius and ulna..... 813	1,358	2.9	45.1
Dislocation of knee..... 836	1,064	2.3	47.4
Other diseases of musculoskeletal system, other deformities..... 738	1,061	2.3	49.7
Vertebrogenic pain syndrome..... 728	1,031	2.2	51.9

substantially exceeded the average of 1.6 return visits found in overall office practice.<sup>2</sup>

Some problem of the musculoskeletal system (e.g., pain, swelling, injury, etc.) was the reason most frequently given by patients for visiting the orthopedic surgeon. The largest proportion of these complaints or symptoms centered on the hip and lower extremity (reported in 28 percent of visits); second in order of frequency were problems of the shoulder and upper extremity (reported in 25 percent of visits); next in frequency were back problems (reported in 20 percent of visits); and finally were complaints about problems with the face and neck (reported in 13 percent of visits).

Table 4 presents data on the principal diagnoses frequently rendered by the orthopedic surgeon. The principal diagnosis was the first-listed diagnosis on a survey form that permitted up to three diagnostic entries. Diagnostic terms and codes are those established by the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States, 1968* (ICDA). Two major diagnostic groups accounted for two-thirds of all the principal diagnoses made by the orthopedic surgeon; these were "Accidents, . . . , and violence" (36 percent of all diagnoses) and "Diseases of the musculoskeletal system and connective tissue" (30 percent).

<sup>2</sup>To obtain this return-visit rate, divide all visits classified as "old patient, old problem" by visits representing new-problem encounters (i.e., visits by "new patient" plus visits by "old patient, new problem").

To establish or, more typically, to confirm and limit a diagnosis, orthopedic surgeons placed chief reliance on two diagnostic procedures—the limited examination and the X-ray (table 5). In keeping with the nature of their specialty, they used X-ray about five times more frequently than the average office-based physician. In

Table 5. Number and percent of office visits to orthopedic surgeons, and percent of visits to all specialists, by selected diagnostic and therapeutic services ordered or provided: United States, 1975-76

Selected services ordered or provided	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent of visits	Percent of visits <sup>1</sup>
<u>Diagnostic service</u>			
Limited history and examination.....	26,019	55.2	51.6
General history and examination.....	5,142	10.9	16.3
Clinical laboratory test.....	745	1.6	22.8
X-ray.....	17,096	36.3	7.6
Blood pressure check..	690	1.5	33.2
<u>Therapeutic service</u>			
Drug prescribed.....	8,030	17.0	43.6
Injection.....	2,998	6.4	13.1
Office surgery.....	6,748	14.3	6.9
Physiotherapy.....	4,477	9.5	2.6
Medical counseling.....	7,766	16.5	13.0

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

Table 6. Number and percent distribution of office visits to orthopedic surgeons, and percent distribution of office visits to all specialists, by characteristics of the visit: United States, 1975-76

Visit characteristic	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits.....	47,152	100.0	100.0
<u>Seriousness of problem</u>			
Serious and very serious.....	11,203	23.8	19.2
Slightly serious.....	18,137	38.5	32.3
Not serious.....	17,813	37.8	48.5
<u>Disposition (selected actions)</u>			
No followup.....	4,969	10.5	12.3
Return at specified time.....	31,261	66.3	60.2
Return if needed.....	7,695	16.3	21.9
Referred to other physician or agency..	1,064	2.3	2.8
Admit to hospital.....	1,646	3.5	2.1
<u>Duration</u>			
0 minutes (no face-to-face contact with physician).....	517	1.1	1.8
1-5 minutes.....	7,801	16.6	15.1
6-10 minutes.....	13,672	29.0	31.5
11-15 minutes.....	11,650	24.7	26.6
16-30 minutes.....	11,132	23.6	19.5
31 minutes or more....	2,378	5.0	5.5

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

NOTE: Figures may not add to totals due to rounding.

further contrast with the average experience, orthopedic surgeons made relatively less use of drugs and injections and relatively more of manipulative and surgical forms of treatment (e.g., physiotherapy and such surgical procedures as wound suture, fracture reduction, and the application or removal of supportive materials for fractures and sprains).

Table 6 presents data on the severity of the patient problems presented to the orthopedic surgeon. These data express the doctor's judgment of the extent of impairment that might result if no care were available. In keeping with the average tendency among office-based practitioners, orthopedic surgeons judged most of their patients' problems (3 of every 4) to range from slightly serious to not serious in prognosis.

Data on disposition (table 6) show that scheduled followup—directed after 2 of every 3 visits—is the rule with office-based orthopedic surgeons as it is with all office-based practitioners. Admission to the hospital, though somewhat more common in the office-based practice of the orthopedic surgeon than it is in overall office-based practice, is still a rare event (3.5 percent of visits).

The duration of visit (the portion of an office visit that involves face-to-face contact between patient and orthopedic surgeon) was under 16 minutes for about 70 percent of office visits (table 6). Agreeing closely with the finding for all office-based practitioners, the average face-to-face encounter between patient and orthopedic surgeon was probably about 15 minutes in duration.

TECHNICAL NOTES

**SOURCE OF DATA:** The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1975 and 1976. The target population of NAMCS encompasses office visits within the coterminous United States made by ambulatory patients to physicians not in Federal Service who are principally engaged in office practice and not in the specialties of anesthesiology, pathology, or radiology.

**SAMPLE DESIGN:** NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within practices. Each year a sample of practicing physicians is selected from master files maintained by the American Medical Association and the American Osteopathic Association. (This sample included 136 orthopedic surgeons in 1975 and 140 in 1976.) These physicians are requested to complete Patient Records (brief encounter forms) for a systematic random sample of office visits taking place within their practice during a randomly assigned weekly reporting period. A facsimile of the Patient Record used during 1975-76 is shown in a previous issue of *Advance Data From Vital and Health Statistics*, No. 12, October 12, 1977. Characteristics of the physician's practice, such as primary specialty and type of practice, are obtained during an induction interview. A detailed description of the NAMCS design and procedures has been published in Series 13-No. 33, *Vital and Health Statistics*, DHEW Pub. No. (PHS) 78-1784, Public Health Service, Washington, U.S. Government Printing Office, Dec. 1977.

**SAMPLING ERRORS:** Because the estimates for this report are based on a sample rather than on the entire universe, they are subject to sampling variability. The standard error is primarily a measure of sampling variability. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the estimate. Relative standard errors of selected aggregate statistics are shown in table I. The standard errors appropriate for estimated percentages of visits are shown in table II.

Table I. Approximate relative standard errors of estimated number of office visits: United States, 1975-76

Estimated number of office visits in thousands	Relative standard error in percent
600 .....	30.2
1,000 .....	23.5
2,000 .....	16.7
4,000 .....	12.0
10,000 .....	8.0
40,000 .....	4.8
200,000 .....	3.4
1,000,000 .....	3.1

*Example of use of table:* An aggregate estimate of 25,000,000 visits has a relative standard error of 6.4 percent or a standard error of 1,600,000 visits (6.4 percent of 25,000,000).

Table II. Approximate standard errors of percentages of estimated number of office visits: United States, 1975-76

Base of percent (number of visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
600 .....	3.0	6.5	9.0	12.0	13.8	15.0
1,000 .....	2.3	5.1	7.0	9.3	10.7	11.6
2,000 .....	1.6	3.6	4.9	6.6	7.5	8.2
4,000 .....	1.2	2.5	3.5	4.7	5.3	5.8
10,000 .....	0.7	1.6	2.2	2.9	3.4	3.7
40,000 .....	0.4	0.8	1.1	1.5	1.7	1.8
200,000 .....	0.2	0.4	0.5	0.7	0.8	0.8
1,000,000 .....	0.1	0.2	0.2	0.3	0.3	0.4

*Example of use of table:* An estimate of 20 percent based on an aggregate estimate of 80,000,000 visits has a standard error of 1.3 percent. The relative standard error of 20 percent is 6.5 percent (1.3 percent ÷ 20 percent).

**DEFINITIONS:** An *ambulatory patient* is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution.

An *office* is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician, rather than an institution.

A *visit* is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's super-



vision for the purpose of seeking care and rendering health services.

A *physician* is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital

based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

**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-----	*
Data suppressed to comply with confidentiality requirements-----	#

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service | Number 34 ■ August 30, 1978

## Office Visits to Otolaryngologists: National Ambulatory Medical Care Survey, United States: 1975-76<sup>1</sup>

Based on data from the National Ambulatory Medical Care Survey (NAMCS), this report describes an estimated 27,192,000 visits made to the offices of otolaryngologists over the 2-year span from January 1975 through December 1976. NAMCS is a sample survey designed to explore the provision and utilization of ambulatory care in the physician's office—the setting where most Americans seek health care. The survey is conducted yearly throughout the coterminous United States by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics. The survey sample is selected from doctors of medicine and osteopathy who are principally engaged in office-based, patient-care practice. Excluded from the sample are an indeterminate number of physicians who render some office-based ambulatory care but whose patient-care activities are secondary to another primary role such as teaching, research, or administration. Also excluded from the NAMCS scope are physicians who are hospital based; those whose specialty is anesthesiology, pathology, or radiology; and physicians in Federal Service.

Because the estimates presented in this report are based on a sample rather than on the entire universe of office-based physicians, they are subject to sampling variability. See the Technical Notes for an explanation and for guidelines in judging the relative precision of the estimates. The directions offered there also provide the basis for judging the statistical signif-

icance of differences between estimates that the reader may desire to compare.

### DATA HIGHLIGHTS

With an estimated 27,192,000 office visits during the 2-year span 1975-76, otolaryngologists were among the 13 specialists who figured most prominently in the provision of office-based ambulatory care (see table 1).

Compared with the entire universe of office-based physicians, otolaryngologists reversed the overall preference for solo over multiple-member practice (table 2); well over one-half (61 percent) of visits to otolaryngologists were made to those in multiple-member practice arrangements.

Table 1. Number of office visits to the 13 most visited specialists, by type of specialty in rank order: United States, 1975-76

Rank	Type of specialty	Number of visits in thousands
1	General and family practice.....	460,297
2	Internal medicine.....	130,367
3	Pediatrics.....	107,085
4	Obstetrics and gynecology.....	97,070
5	General surgery.....	77,259
6	Ophthalmology.....	53,959
7	Orthopedic surgery.....	47,152
8	Dermatology.....	35,721
9	Psychiatry.....	30,616
10	Otolaryngology.....	27,192
11	Urology.....	20,728
12	Cardiovascular disease.....	13,517
13	Neurology.....	3,784

<sup>1</sup>This report was prepared by Hugo Koch, Division of Health Resources Utilization Statistics.

Table 2. Number and percent distribution of office visits to otolaryngologists, and percent distribution of office visits to all specialists by physician characteristics: United States, 1975-76

Physician characteristic	Visits to otolaryngologists		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits.....	27,192	100.0	100.0
<u>Location of practice</u>			
Metropolitan area <sup>2</sup> ..	20,502	75.4	73.3
Nonmetropolitan area.....	6,691	24.6	26.7
<u>Type of practice</u>			
Solo .....	10,524	38.7	60.0
Other.....	16,668	61.3	40.0

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

<sup>2</sup>Location within a standard metropolitan statistical area (SMSA). Composition of SMSA's does not reflect 1974 adjustments.

Though otolaryngologists treated patients of all ages, the median visit age of 35 years which typified their office-based practice was not substantially different from the median visit age of 37 years characteristic of overall office-based practice. However, among otolaryngologists, there did appear to be a relatively greater concentration of visits (22 percent) by patients under 15 years of age (table 3).

Almost one-half (47 percent) of visits to otolaryngologists were made by male patients, a proportion that somewhat exceeded that found in overall office-based practice (table 3).

The 31 percent of visits to otolaryngologists made by new patients is about twice the comparable proportion found on the average among all office-based practitioners (*prior-visit status*, table 3). Indeed, among the most-visited specialists (listed in table 1), only neurologists exceeded otolaryngologists in this proportion. Contributing in part to this increased presence of new patients is the finding that 5.8 percent of visits to otolaryngologists were referrals, a referral rate that more than doubled the average rate of 2.6 percent common to overall office-based practice. For the 10,907,000 visits at

Table 3. Number and percent distribution of office visits to otolaryngologists, and percent distribution of office visits to all specialists, by patient characteristics: United States, 1975-76

Patient characteristic	Visits to otolaryngologists		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits.....	27,192	100.0	100.0
<u>Age</u>			
Under 15 years.....	5,967	22.0	18.1
15-24 years.....	3,458	12.7	15.1
25-44 years.....	7,434	27.3	25.5
45-64 years.....	6,623	24.4	25.1
65 years and over....	3,710	13.6	16.2
<u>Sex</u>			
Female.....	14,412	53.0	60.4
Male.....	12,781	47.0	39.6
<u>Prior-visit status</u>			
New patient.....	8,471	31.2	14.6
Old patient, new problem.....	2,436	9.0	23.2
Old patient, old problem.....	16,285	59.9	62.3

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

which a new problem was presented to the otolaryngologist (i.e., 8,471,000 visits by new patients plus 2,436,000 visits by old patients with new problems), there were 16,285,000 return visits, an average of 1.5 return visits per new problem per year, a return-visit rate that did not differ substantially from the average of 1.6 return visits found in overall office practice.

Table 4 shows the 10 complaints or symptoms that most frequently prompted a visit to the otolaryngologist. The terms and codes applied to these symptoms or complaints are those developed for use in the NAMCS.<sup>2</sup>

<sup>2</sup>National Center for Health Statistics: The National Ambulatory Medical Care Survey: Symptom classification, United States. *Vital and Health Statistics*. Series 2-No. 63. DHEW Pub. No. (HRA) 74-1337. Health Resources Administration, Washington, U.S. Government Printing Office, May 1974.

Table 4. Number, percent, and cumulative percent of office visits to otolaryngologists, by the 10 most common complaints or symptoms presented by patients, classified by NAMCS codes and ranked by frequency of visits: United States, 1975-76

Rank	Complaint or symptom and NAMCS code	Number of visits in thousands	Percent of visits	Cumulative percent
1	Earache..... 735	2,853	10.5	10.5
2	Hearing dysfunctions other than deafness..... 731	2,339	8.6	19.1
3	Ear symptoms n.e.c. (e.g., foreign body in ear, itching, swelling, or mass)..... 740	2,195	8.1	27.2
4	Sore throat..... 520	2,018	7.4	34.6
5	Nasal congestion..... 301	1,624	6.0	40.6
6	Pain, swelling, injury of face and neck region..... 410	1,028	3.8	44.4
7	Plugged feeling in ear..... 737	1,010	3.7	48.1
8	Headache..... 056	723	2.7	50.8
9	Sinus problems..... 304	717	2.6	53.4
10	Vertigo..... 069	660	2.4	55.8

The complaints that patients presented to office-based otolaryngologists signaled conditions of illness or injury that were about equally divided between acute problems, defined for NAMCS use as conditions having an onset within 3 months of the visit, and chronic problems, defined as preexisting conditions having an onset of 3 months or more before the visit. (In overall office-practice, visits for acute problems outnumbered those for chronic problems by a ratio of about 1.2 to 1.) Only urologists and dermatologists exceeded otolaryngologists in the proportion of visits classified as "chronic problem, flare-up," that is, sudden exacerbation of a preexisting chronic condition. An estimated 19 percent of the otolaryngologist's visits fell into this category. The overall average for office-based practice was about 11 percent.

Table 5 presents data on the 10 principal diagnoses most frequently rendered by the office-based otolaryngologist. The *principal* diagnosis was the first-listed diagnosis on a survey form that permitted up to three diagnostic entries. Table 6 classifies all principal diagnoses made by otolaryngologists by major diagnostic groups. Diagnostic classes and codes are those established by the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States, 1968 (ICDA)*.<sup>3</sup>

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

Table 5. Number, percent, and cumulative percent of office visits to otolaryngologists, by the 10 principal diagnoses most frequently rendered by the physicians in rank order: United States, 1975-76

Rank	Principal diagnosis and ICDA code	Number of visits in thousands	Percent of visits	Cumulative percent
1	Otitis media.....381	3,518	12.9	12.9
2	Medical and surgical aftercare.....Y10	2,394	8.8	21.7
3	Other diseases of ear and mastoid process..... 387	2,038	7.5	29.2
4	Otitis externa.....380	1,787	6.6	35.8
5	Hay fever.....507	1,637	6.0	41.8
6	Deafness, other than deaf mutism.....389	1,276	4.7	46.5
7	Chronic sinusitis.....503	1,122	4.1	50.6
8	Hypertrophy of tonsils and adenoids.....500	999	3.7	54.3
9	Chronic pharyngitis and nasopharyngitis.....502	851	3.1	57.4
10	Other diseases of respiratory system.....508	768	2.8	60.2

Table 6. Number and percent distribution of office visits to otolaryngologists, by major diagnostic group: United States, 1975-76

Major diagnostic group and ICDA codes	Number of visits in thousands	Percent distribution
All diagnostic groups.....	27,192	100.0
Infective and parasitic diseases..... 000-136	504	1.9
Diseases of the nervous system and sense organs..... 320-389	10,497	38.6
Diseases of the respiratory system..... 460-519	8,716	32.1
Diseases of the digestive system..... 520-577	588	2.2
Diseases of the skin and subcutaneous tissue..... 680-709	479	1.8
Symptoms and ill-defined conditions..... 780-796	1,782	6.6
Accidents, poisonings, and violence..... 800-999	469	1.7
Special conditions and examinations without sickness..Y00-Y13	2,692	9.9
Residual.....	1,466	5.2

To establish a diagnosis, office-based otolaryngologists relied chiefly on a limited history and examination (table 7), that is, one focused on the body sites specific to their professional perspective and concerned primarily with the patient's chief complaint (e.g., earache or sore throat). Use of laboratory tests and blood pressure checks was minimal compared with the average use of these diagnostic procedures in overall office-based practice. Drug therapy was the treatment most frequently provided by otolaryngologists, who used it in about 48 percent of visits, a proportion that roughly paralleled its use by the average office-based physician. The use of minor surgical procedures in the office of the otolaryngologist (in about 12 percent of visits) substantially exceeded the average use of office surgery in overall office practice (table 7).

Table 8 offers data on the severity of the problems that patients presented to the otolaryngologist, expressing the doctor's judgment of the extent of impairment that might result if no care were available. Closely paralleling the

Table 7. Number and percent of office visits to otolaryngologists, and percent of office visits to all specialists, by diagnostic and therapeutic services provided: United States, 1975-76

Diagnostic and therapeutic services provided	Visits to otolaryngologists		Visits to all specialists
	Number of visits in thousands	Percent	Percent <sup>1</sup>
No services provided.....	1,337	4.9	2.5
Diagnostic services:			
Limited history or examination.....	15,166	55.8	51.6
General history or examination.....	2,994	11.0	16.3
Clinical lab test.....	762	2.8	22.8
X-ray.....	1,636	6.0	7.6
Blood pressure check.....	496	1.8	33.2
Hearing test.....	3,548	13.1	1.3
Vision test.....	782	2.9	5.0
Therapeutic services:			
Drug prescribed.....	12,955	47.6	43.6
Injection.....	2,428	8.9	13.1
Immunization or desensitization.....	627	2.3	4.9
Office surgery.....	3,150	11.6	6.9
Medical counseling.....	2,871	10.6	13.0
Other services provided.....	1,754	6.5	5.6

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

Table 8. Number and percent distribution of office visits to otolaryngologists, and percent of office visits to all specialists, by selected visit characteristics: United States, 1975-76

Visit characteristic	Visits to otolaryngologists		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution <sup>1</sup>
All visits.....	27,192	100.0	100.0
<u>Serious of problem</u>			
Serious and very serious .....	4,934	18.2	19.2
Slightly serious.....	10,286	37.8	32.3
Not serious.....	11,972	44.0	48.5
<u>Disposition (selected actions)</u>			
No followup.....	3,913	14.4	12.3
Return at specified time.....	13,661	50.2	60.2
Return if needed.....	7,225	26.6	21.9
Telephone followup.....	682	2.5	3.5
Referred to other physician or agency.....	*458	*1.7	2.8
Admit to hospital.....	1,170	4.3	2.1
<u>Duration of visit</u>			
0 minute (no face-to-face encounter with physician).....	*434	*1.6	1.8
1-5 minutes.....	3,796	14.0	15.1
6-10 minutes.....	10,222	37.6	31.5
11-15 minutes.....	6,377	23.5	26.6
16-30 minutes.....	5,735	21.1	19.5
31 minutes or more.....	630	2.3	5.5

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

average tendency among all office-based practitioners, otolaryngologists judged most of their patients' problems (about 4 of every 5) to range from slightly serious to not serious in prognosis.

Otolaryngologists ended 1 of every 2 visits by scheduling a return visit at a specified time—their single, most frequent form of disposition (table 8). In their reliance on specific followup they were in accord with the general tendency found in all office-based practice, though they used this disposition action with a frequency which was substantially less than average, tending to apply with a greater-than-average frequency the nonspecific direction "return if

needed." The nonserious nature of most of the otolaryngologists' office practice is reflected in the small proportion of visits that resulted in hospital admission. It is noteworthy, however, that this relatively small admission rate was still more than double the average rate of hospital admission found in all office-based practice.

Three-fourths of visits to otolaryngologists involved a doctor-patient contact that was under 15 minutes in duration, the average contact probably lasting about 14 minutes—not substantially different from the average finding for all office-based practitioners (15 minutes).

## TECHNICAL NOTES

**SOURCE OF DATA.** The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1975 and 1976. The target population of the NAMCS encompasses office visits made within the coterminous United States by ambulatory patients to physicians not in Federal Service who are principally engaged in office practice, and not in the specialties of anesthesiology, pathology, or radiology. The National Opinion Research Center, under contract to the National Center for Health Statistics, was the organization responsible for the survey's field operation.

**SAMPLE DESIGN.** The NAMCS utilizes a multi-stage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within practices. Each year a sample of practicing physicians is selected from master files maintained by the American Medical Association and the American Osteopathic Association. (For the 2-year period 1975-76, a total of 149 otolaryngologists were included in the Sample. They achieved a response rate of 83 percent.) Characteristics of the physician's practice, such as primary specialty and type of practice, are obtained during an induction interview.

The physicians are requested to complete Patient Records (brief encounter forms) for a systematic random sample of office visits during a randomly assigned weekly reporting period.<sup>4</sup> (In the 2-year period 1975-76, sampled otolaryngologists completed a total of 2,786 Patient Records.) A detailed description of the NAMCS design and procedures has been presented in the publication "The National Ambulatory Medical Care Survey: 1975 Summary."<sup>5</sup>

**SAMPLING ERRORS.** Because the estimates for this report are based on a sample rather than on the entire universe, they are subject to sampling variability. The standard error is primarily a

<sup>4</sup>A facsimile of the Patient Record appears as Figure I.

<sup>5</sup>National Center for Health Statistics: The National Ambulatory Medical Care Survey: 1975 Summary, United States, January-December 1975. *Vital and Health Statistics*. Series 13-No. 33, DHEW Pub. (PHS) 78-1784. Washington. U.S. Government Printing Office, Dec. 1977.

measure of sampling variability. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the estimate. Relative standard errors of selected aggregate statistics are shown in table I. The standard errors appropriate for estimated percentages of visits are shown in table II.

**DEFINITIONS.** An *ambulatory patient* is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution.

An *office* is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and

Table I. Approximate relative standard error of estimated number of office visits: United States, 1975-76

Estimated number of office visits in thousands	Relative standard error in percent
600.....	30.2
1,000.....	23.5
2,000.....	16.7
4,000.....	12.0
10,000.....	8.0
40,000.....	4.8
200,000.....	3.4
1,000,000.....	3.1

*Example of use of table:* An aggregate estimate of 25,000,000 visits has a relative standard error of 6.4 percent or a standard error of 1,600,000 visits (6.4 percent of 25,000,000).

Table II. Approximate standard errors of percentages of estimated number of office visits: United States, 1975-76

Base of percentage number of visits in thousands	Estimated percentage					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
600.....	3.0	6.5	9.0	12.0	13.8	15.0
1,000.....	2.3	5.1	7.0	9.3	10.7	11.6
2,000.....	1.6	3.6	4.9	6.6	7.5	8.2
4,000.....	1.2	2.5	3.5	4.7	5.3	5.8
10,000.....	0.7	1.6	2.2	2.9	3.4	3.7
40,000.....	0.4	0.8	1.1	1.5	1.7	1.8
200,000.....	0.2	0.4	0.5	0.7	0.8	0.8
1,000,000.....	0.1	0.2	0.2	0.3	0.3	0.4

*Example of use of table:* An estimate of 20 percent based on an aggregate estimate of 80,000,000 visits has a standard error of 1.3 percent. The relative standard error of 20 percent is 6.5 percent (1.3 percent ÷ 20 percent).



professional services rendered there generally resides with the individual physician, rather than an institution.

A *visit* is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's supervision for the purpose of seeking care and rendering health services.

A *physician* is a duly licensed doctor of medicine (MD) or doctor of osteopathy (DO) cur-

rently in office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, and radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

Figure I. PATIENT RECORD

<p><b>ASSURANCE OF CONFIDENTIALITY</b>— All information which would permit identification of an individual, a practice, or 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.</p>		<p><b>BN#</b></p>
<p><b>PATIENT RECORD</b> NATIONAL AMBULATORY MEDICAL CARE SURVEY</p>		
<p><b>1. DATE OF VISIT</b> Mo / Day / Yr</p>		
<p><b>2. DATE OF BIRTH</b> Mo / Day / Yr</p>	<p><b>4. COLOR OR RACE</b></p> <p><input type="checkbox"/> 1 WHITE</p> <p><input type="checkbox"/> 2 NEGRO/BLACK</p> <p><input type="checkbox"/> 3 OTHER</p> <p><input type="checkbox"/> 4 UNKNOWN</p>	<p><b>5. PATIENT'S PRINCIPAL PROBLEM(S) COMPLAINT(S), OR SYMPTOM(S) THIS VISIT</b> (In patient's own words)</p> <p>a. MOST IMPORTANT _____</p> <p>b. OTHER _____</p>
<p><b>3. SEX</b></p> <p><input type="checkbox"/> 1 FEMALE</p> <p><input type="checkbox"/> 2 MALE</p>	<p><b>6. SERIOUSNESS OF PROBLEM IN ITEM 5a</b> (Check one)</p> <p><input type="checkbox"/> 1 VERY SERIOUS</p> <p><input type="checkbox"/> 2 SERIOUS</p> <p><input type="checkbox"/> 3 SLIGHTLY SERIOUS</p> <p><input type="checkbox"/> 4 NOT SERIOUS</p>	<p><b>7. HAVE YOU EVER SEEN THIS PATIENT BEFORE?</b></p> <p><input type="checkbox"/> 1 YES    <input type="checkbox"/> 2 NO</p> <p>If YES, for the problem indicated in ITEM 5a?</p> <p><input type="checkbox"/> 1 YES    <input type="checkbox"/> 2 NO</p>
<p><b>8. MAJOR REASON(S) FOR THIS VISIT</b> (Check all major reasons)</p> <p><input type="checkbox"/> 01 ACUTE PROBLEM</p> <p><input type="checkbox"/> 02 ACUTE PROBLEM, FOLLOW-UP</p> <p><input type="checkbox"/> 03 CHRONIC PROBLEM, ROUTINE</p> <p><input type="checkbox"/> 04 CHRONIC PROBLEM, FLARE-UP</p> <p><input type="checkbox"/> 05 PRENATAL CARE</p> <p><input type="checkbox"/> 06 POSTNATAL CARE</p> <p><input type="checkbox"/> 07 POSTOPERATIVE CARE</p> <p>_____ (Operative procedure)</p>		<p><b>9. PHYSICIAN'S PRINCIPAL DIAGNOSIS THIS VISIT</b></p> <p>a. DIAGNOSIS ASSOCIATED WITH ITEM 5a ENTRY</p> <p>_____</p> <p>_____</p> <p>b. OTHER SIGNIFICANT CURRENT DIAGNOSES (In order of importance)</p> <p>_____</p> <p>_____</p>
<p><b>10. DIAGNOSTIC/THERAPEUTIC SERVICES ORDERED/PROVIDED THIS VISIT</b> (Check all that apply)</p> <p><input type="checkbox"/> 01 NONE</p> <p><input type="checkbox"/> 02 LIMITED HISTORY/EXAM</p> <p><input type="checkbox"/> 03 GENERAL HISTORY/EXAM</p> <p><input type="checkbox"/> 04 CLINICAL LAB. TEST</p> <p><input type="checkbox"/> 05 BLOOD PRESSURE CHECK</p> <p><input type="checkbox"/> 06 EKG</p> <p><input type="checkbox"/> 07 HEARING TEST</p> <p><input type="checkbox"/> 08 VISION TEST</p> <p><input type="checkbox"/> 09 ENDOSCOPY</p> <p><input type="checkbox"/> 10 OFFICE SURGERY</p>		<p><b>11. DISPOSITION THIS VISIT</b> (Check all that apply)</p> <p><input type="checkbox"/> 1 NO FOLLOW-UP PLANNED</p> <p><input type="checkbox"/> 2 RETURN AT SPECIFIED TIME</p> <p><input type="checkbox"/> 3 RETURN IF NEEDED, P.R.N.</p> <p><input type="checkbox"/> 4 TELEPHONE FOLLOW-UP PLANNED</p> <p><input type="checkbox"/> 5 REFERRED TO OTHER PHYSICIAN/AGENCY</p> <p><input type="checkbox"/> 6 RETURNED TO REFERRING PHYSICIAN</p> <p><input type="checkbox"/> 7 ADMIT TO HOSPITAL</p> <p><input type="checkbox"/> 8 OTHER (Specify) _____</p>
		<p><b>12. DURATION OF THIS VISIT</b> (Time actually spent with physician)</p> <p>_____ MINUTES</p>
<p>HRA-34-3    DEPARTMENT OF HEALTH, EDUCATION AND WELFARE    O.M.B. #68-572106 REV. 8-74    PUBLIC HEALTH SERVICE    EXPIRATION DATE 12/31/75 HEALTH RESOURCES ADMINISTRATION NATIONAL CENTER FOR HEALTH STATISTICS</p>		

**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-----	*

# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • Public Health Service | Number 35 • September 6, 1978

## An Overview of Nursing Home Characteristics: Provisional Data from the 1977 National Nursing Home Survey<sup>1</sup>

This report presents provisional statistics on an estimated 18,300 nursing homes in the coterminous United States. The data are from the 1977 National Nursing Home Survey (NNHS). This nationwide sample survey of nursing homes—their residents, their discharges, and their staff—was conducted by the National Center for Health Statistics from May through December 1977. The survey is the second in an ongoing NNHS system. The first survey was conducted between August 1973 and April 1974. The estimates presented here are provisional, since they are based on a subsample of about 340 of the 1,700 facilities in the national survey.

Nursing homes included in the survey were those classified by the 1973 Master Facility Inventory (MFI) as nursing care homes, personal care homes (with and without nursing), and domiciliary care homes as well as all nursing homes opened for business between the time the 1973 MFI was conducted and December 1976.<sup>2</sup> This represents a broadening of the scope of coverage over that of the 1973-74 NNHS. The earlier survey excluded facilities providing only personal care or domiciliary care. Since the impact of including these facilities in the 1977 NNHS is expected to be small (they comprised

only about 2 percent of all nursing homes in the 1973 MFI and housed only about 1 percent of the beds and residents), no special adjustments are made in this report when comparing data from the 1977 NNHS with the 1973-74 NNHS. Provisional estimates of the characteristics of residents and discharges are presented in Advance Data Number 29.<sup>3</sup>

The focus of this report is facility characteristics with the estimates presented by type of ownership, certification status, facility bed size, and geographic region. Estimates of the number of facilities, beds, residents, full-time equivalent employees, and the average monthly charge are based on 1977 data and reflect the situation on any day during the survey period. Estimates of the annual occupancy rate, median duration of stay, admissions, discharges, resident days, and cost per resident day are for 1976. In most cases they reflect the calendar year, although for the latter two types of estimates fiscal year data were acceptable.

The sample design for the 1977 NNHS was a stratified two-stage probability sample. The first stage was a selection of facilities and the second stage was a selection of residents, discharges, and staff from the sample facilities. Data on the characteristics of the facility were collected by interviewing the administrator. Data on costs were obtained from the facility's accountant,

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<sup>1</sup>This report was prepared by Mark R. Meiners, formerly with the Division of Health Resources Utilization Statistics.

<sup>2</sup>National Center for Health Statistics: Inpatient health facilities as reported from the 1973 MFI Survey, by A. Sirrocco. *Vital and Health Statistics*, Series 14-No. 16. DHEW Pub. No. (HRA) 76-1811. Health Resources Administration, Washington, U.S. Government Printing Office, May 1976.

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<sup>3</sup>National Center for Health Statistics: A comparison of nursing home residents and discharges from the 1977 National Home Survey: United States, by E. Hing and A. Zappolo, *Advance Data from Vital and Health Statistics*, Number 29, DHEW Pub. No. (PHS) 78-1250. Public Health Service, Hyattsville, Md., May 17, 1978.

who completed the questionnaire and returned it by mail. Data for a sample of residents on the facility's roster at the time of the survey were collected by interviewing the nurse most familiar with the care provided to the resident. When necessary, the nurse referred to the resident's medical record. Data for a sample of discharges in 1976 were also collected by interviewing the nurse most familiar with the medical record of the discharged resident. Data on a sample of employees were collected by leaving a questionnaire for the sampled person to complete and to return by mail.

Since all the estimates are based on a sample of nursing homes rather than on a complete enumeration, they are subject to sampling variability. Information on sampling variability is presented in the Technical Notes.

## FACILITY CHARACTERISTICS

For the period May to December 1977, the provisional national estimates indicated some 18,300 nursing homes had a total of 1,383,600 beds and served 1,287,400 residents (table 1). Proprietary ownership continued to be dominant in the nursing home segment of the health care delivery system with an estimated 74 percent of the facilities operated for profit. Although the nonprofit and Government nursing homes comprised only about 26 percent of the facilities, their greater capacity (average size 97 beds compared to 68 beds for proprietary facilities) enabled them to serve as a partial offset to the difference in the number of residents served. About 34 percent of all residents were served by

Table 1. Provisional number and percent distribution of nursing homes, beds, and residents, by selected nursing home characteristics: United States, 1977

Nursing home characteristics	Nursing homes		Beds		Residents	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
All nursing homes.....	18,300	100.0	1,383,600	100.0	1,287,400	100.0
<u>Ownership</u>						
Proprietary.....	13,600	74.3	926,100	66.9	851,700	66.2
Nonprofit and Government.....	4,700	25.7	457,600	33.1	435,700	33.8
<u>Certification</u>						
Skilled nursing facility.....	3,600	19.9	271,700	19.6	252,100	19.6
Skilled nursing and intermediate care facility.....	3,900	21.1	484,300	35.0	462,200	35.9
Intermediate care facility.....	6,200	33.7	455,700	32.9	414,300	32.2
Not certified.....	4,600	25.3	171,900	12.4	158,800	12.3
<u>Bed size</u>						
Less than 50 beds.....	7,800	42.5	205,700	14.9	193,500	15.0
50-99 beds.....	5,200	28.5	376,600	27.2	353,000	27.4
100-199 beds.....	4,600	24.9	590,600	42.7	547,400	42.5
200 beds or more.....	*	*	210,800	15.2	193,500	15.0
<u>Geographic region</u>						
Northeast.....	4,300	23.4	302,100	21.8	274,600	21.3
North Central.....	5,800	31.8	472,300	34.1	446,700	34.7
South.....	4,200	22.9	404,000	29.2	377,800	29.3
West.....	4,000	21.9	205,300	14.8	188,300	14.6

NOTE: Figures may not add to totals due to rounding.

nursing homes operated under nonprofit or Government auspices.

Nursing homes can also be classified according to their certification status. Facilities in the 1977 NNHS were comprised of

- Those certified as skilled nursing facilities (SNF's) by Medicare (Title XVIII of the Social Security Act).
- Those certified as SNF's by Medicaid (Title XIX of the Social Security Act).
- Those certified as intermediate care facilities (ICF's) by Medicaid (Title XIX of the Social Security Act), and
- Those not certified by either program.

The SNF regulations were identical under Medicare and Medicaid and nursing homes could be certified under both these programs. Furthermore, nursing homes that were certified could be certified under both the SNF and ICF regulations.

About 75 percent of the nursing homes in the 1977 NNHS were certified either as SNF's, ICF's or both. The largest share of the certified facilities (45 percent) were certified only as ICF's. Facilities certified as both an SNF and an ICF were larger (124 beds per facility) than the other facilities. They comprised about 21 percent of all the nursing homes but housed about 35 percent of the beds and 36 percent of the residents. Nursing homes which were not certified by Medicare or Medicaid were generally small, averaging about 37 beds per facility. These facilities comprised about 25 percent of all nursing homes but housed only about 12 percent of the beds and residents.

The distribution of facilities, beds, and residents by bed size and geographic region is also presented in table 1.

### Employees

The employee data in this report are presented in terms of full-time equivalent (FTE) employees. Thirty-five hours of part-time employees' work are conventionally taken as equivalent to one full-time employee. Part-time employees were converted to FTE employees by dividing the number of hours worked by 35. By using the number of FTE employees rather than

total employees, the variation between facilities in the proportion of part-time staff is held constant. The procedures used to estimate the number of FTE employees differed slightly from those used in the previous NNHS in that the 1977 estimates are based on a *sample* of employees from each sample facility while the 1973-74 estimates are based on *all* staff in each sample facility. Although the effect on the estimate is not expected to be great, this caveat of the data should be recognized.

The employee survey covered individuals employed full-time, part-time, or under contract who provided direct or health-related services to nursing home residents. This group consists of nursing, administrative, medical, and therapeutic personnel. Clerical, food service, housekeeping, and maintenance personnel as well as any other employee not performing nursing, administrative, medical or therapeutic functions were not surveyed.

In 1977 there were an estimated 624,600 FTE employees providing direct or health related services to nursing home residents (table 2). This was about 45 employees per 100 beds. The majority of this group (66 percent) were employed as nurses' aides. An additional 13 percent were licensed practical nurses; 11 percent were administrative, medical, or therapeutic personnel; and 10 percent were registered nurses.

Differences in staffing patterns are most noticeable on the basis of certification status. Nursing homes certified by Medicare or Medicaid to provide skilled nursing care had significantly more employees per 100 beds than the other types of facilities. The SNF-only group had about 59 FTE employees per 100 beds to provide health-related services and the SNF and ICF group had about 48 FTE employees per 100 beds. In contrast, nursing homes certified only as ICF's had about 38 employees per 100 beds and the nursing homes not certified had about 35 employees per 100 beds.

### Utilization

The most important single measure of nursing home utilization from the standpoint of nursing home administrators is probably the occupancy rate. In 1976 the Nation's nursing homes used about 90 percent of their available bed

capacity to provide an estimated 440,195,000 days of care (table 3). Although this does not represent a statistically significant change from the 87 percent occupancy rate of 1972, the number of days of care provided during 1976 increased by about 19 percent. Also during 1976 an estimated 1,112,000 residents (81 per 100 beds) were admitted for care and 973,000 (71 per 100 beds) were discharged. Most of these people (74 percent) were discharged alive to either a private or semiprivate residence or, more commonly, to another health facility. (See Ad-

vance Data Number 29 for more detailed estimates of the characteristics of discharges.)

Caution is recommended when comparing estimates of admission with estimates of discharges from the 1977 NNHS, since the procedures for collecting these statistics differed. The number of admissions in 1976 was determined by directly asking the administrator for this information. Estimates of the number of discharges and their characteristics were made from a sample of the patients formally discharged from the nursing home during 1976. The survey

Table 2. Provisional number and rate per 100 beds of nursing home full-time equivalent (FTE) employees, by occupational categories and selected nursing home characteristics: United States, 1977

Nursing home characteristics	All FTE employees <sup>1</sup>		Occupational category of employee									
			Administrative, medical, and therapeutic		Nursing							
					Total		Registered nurse		Licensed practical nurse		Nurses' aide	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	
All employees <sup>2</sup> .....	624,600	45.1	68,400	4.9	556,200	40.2	60,700	4.4	82,700	6.0	412,800	29.8
<u>Ownership</u>												
Proprietary .....	395,700	42.7	39,100	4.2	356,600	38.5	34,300	3.7	54,600	5.9	267,700	28.9
Nonprofit and Government .....	228,900	50.0	29,300	6.4	199,600	43.6	26,400	5.8	28,200	6.2	145,100	31.7
<u>Certification</u>												
Skilled nursing facility .....	158,900	58.5	17,000	6.3	141,900	52.2	21,000	7.7	19,600	7.2	101,300	37.3
Skilled nursing and intermediate care facility .....	233,900	48.3	21,500	4.4	212,300	43.8	25,200	5.2	28,800	5.9	158,400	32.7
Intermediate care facility .....	172,600	37.9	20,600	4.5	152,000	33.4	9,700	2.1	26,700	5.9	115,600	25.4
Not certified .....	59,300	34.5	9,300	5.4	50,000	29.1	4,800	2.8	7,600	4.4	37,600	21.9
<u>Bed size</u>												
Less than 50 beds .....	103,100	50.1	18,200	8.9	84,800	41.3	9,400	4.6	14,200	6.9	61,200	29.7
50-99 beds .....	173,000	45.9	17,200	4.6	155,800	41.2	15,300	4.1	21,400	5.7	119,000	31.6
100-199 beds .....	262,800	44.5	24,200	4.1	238,600	40.4	25,400	4.3	36,500	6.2	176,700	29.9
200 or more beds .....	85,700	40.7	8,800	*	77,000	36.5	10,500	5.0	10,500	5.0	55,900	26.5
<u>Geographic region</u>												
Northeast .....	153,300	50.7	17,800	5.9	135,500	44.8	21,800	7.2	20,800	6.9	92,900	30.7
North Central .....	220,300	46.6	24,300	5.1	196,000	41.5	19,100	4.0	24,200	5.1	152,700	32.3
South .....	159,600	39.5	15,100	3.7	144,600	35.8	9,200	2.3	27,100	6.7	108,200	26.8
West .....	91,400	44.5	11,300	5.5	80,200	39.1	10,500	5.1	10,500	5.1	59,100	28.8

<sup>1</sup> 35 hours of part-time employees' work is considered equivalent to one full-time employee. Part-time employees were converted to full-time equivalent employees by dividing the number of hours worked per week by 35.

<sup>2</sup> Includes only employees providing direct health-related services to residents.

NOTE: Figures may not add to totals due to rounding.

of discharges represents an addition to the earlier NNHS design and provides the information necessary to determine the duration of a completed nursing home stay. For those discharged in 1976, the median duration of stay was 84 days or 12 weeks.

Nursing home utilization patterns are particularly influenced by certification status. The regulations distinguishing SNF care and ICF care followed different models. SNF care is oriented to rehabilitation (the medical model adapted to a less intensive need for services than is present in hospitals). ICF care is oriented to main-

tenance (the health care related service model with emphasis on personal rather than medical care).

The effect of this difference on duration of stay and patient turnover rates is significant. Nursing homes certified only as SNF's had a substantially shorter median duration of stay (39 days) than did nursing homes certified only as ICF's (181 days). In addition, nursing homes certified only as SNF's had 133 admissions and about 116 discharges per 100 beds, while nursing homes certified only as ICF's had about 59 admissions and 54 discharges per 100 beds.

Table 3. Selected provisional measures of nursing home utilization, by selected nursing home characteristics: United States, 1976

Nursing home characteristics	Resident days in thousands	Annual occupancy rate <sup>1</sup>	Median duration of stay in days	Admissions		Discharges				
				Number in thousands	Rate per 100 beds	Total		Live		
						Number in thousands	Rate per 100 beds	Number in thousands	Rate per 100 beds	Percent of total
Total .....	440,195	89.6	84	1,112	81.4	973	71.2	722	52.9	74.2
<u>Ownership</u>										
Proprietary .....	293,071	90.2	89	778	85.2	686	75.1	508	55.7	74.1
Nonprofit and Government .....	147,124	88.6	65	334	73.7	287	63.4	214	47.3	74.6
<u>Certification</u>										
Skilled nursing facility .....	87,419	91.3	39	357	133.0	310	115.7	247	92.2	79.8
Skilled nursing and intermediate care facility .....	158,452	90.1	83	400	83.2	335	69.7	237	49.3	70.7
Intermediate care facility .....	138,541	88.1	181	260	58.5	240	53.8	173	38.7	72.1
Not certified .....	55,783	89.7	94	*	*	*	51.5	*	*	*
<u>Bed size</u>										
Less than 50 beds .....	65,194	90.5	65	140	68.1	134	65.2	*	*	*
50-99 beds .....	127,146	93.6	73	283	76.1	252	67.7	179	48.2	71.2
100-199 beds .....	181,411	86.8	72	532	92.2	449	77.9	333	57.8	74.2
200 beds or more .....	66,443	89.6	188	157	74.4	137	65.0	*	*	*
<u>Geographic region</u>										
Northeast .....	99,972	88.6	86	237	78.5	204	67.7	145	47.9	70.7
North Central .....	152,361	91.9	116	313	66.9	271	58.0	193	41.2	71.1
South .....	121,956	87.8	96	290	74.2	252	64.4	172	44.1	68.5
West .....	65,906	89.5	43	272	132.6	246	119.7	213	103.6	86.5

<sup>1</sup>  $\Sigma$  Aggregate number of days of care provided to residents in 1976 x 100

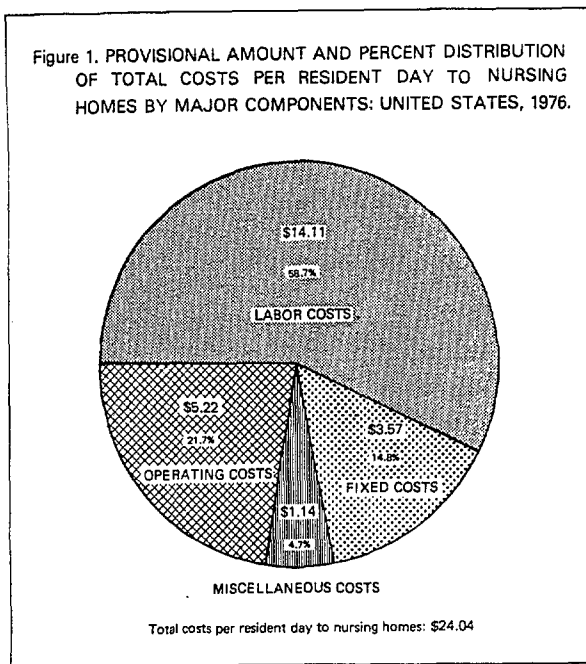
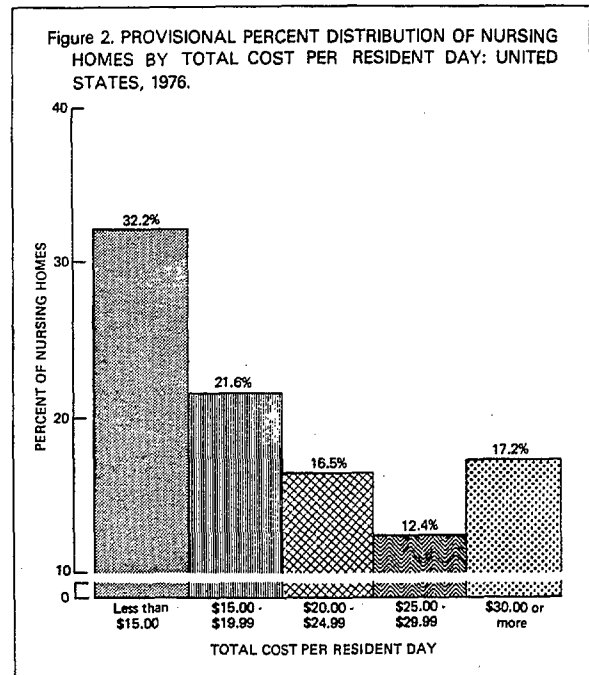
$\Sigma$  Estimated number of beds in 1976 x 366

NOTE: Figures may not add to totals due to rounding.

**Cost of Providing Care**

In 1976 the Nation's nursing homes spent an estimated \$10.6 billion providing services to their residents. This amounted to a cost per resident day of \$24.04, the majority (59 percent) of which went for labor costs (figure 1). Operating, fixed, and miscellaneous costs accounted for an additional 22 percent, 15 percent, and 5 percent of the total, respectively. Although the total cost per resident day for all nursing homes was \$24.04, only about 30 percent of the facilities had an average cost of \$25.00 or more (figure 2). Another 32 percent of the facilities had an average cost of less than \$15.00 per resident day.

The procedures for collecting the cost data in the 1977 NNHS differed somewhat from those used in the 1973-74 NNHS. In the earlier survey the Expense Questionnaire was only given to those facilities in business for 2 years or more; in the current survey all facilities received the Expense Questionnaire. The effect of this change on the cost per resident day estimates is minimal, however, since the 1976 total cost per resident day for nursing homes in business 2 years or more was \$23.86. Therefore there is little problem with direct comparisons between the estimates for 1972 and 1976. Dur-



ing this period the average cost to nursing homes of providing care increased 45-46 percent, a rate exceeding the general inflation rate of 36 percent indicated by the U.S. Bureau of Labor Statistics' Consumer Price Index. However, it is in line with the 46-percent increase in the hospital service charges component of that index. The basic patterns of variability in average total cost by ownership, certification, size, and region found in the previous NNHS are substantiated by the 1976 data. Total cost per resident day tends to be highest in nonprofit and Government facilities, in facilities certified only as SNF's, in facilities with 200 beds or more, and in facilities located in the Northeast (table 4).

Presented along with the cost data in table 4 is some information, not collected in the previous NNHS, concerning the distribution of resident days of care among the alternative certification programs. These data highlight the substantial involvement of the Medicaid program in the financing of nursing home care. About 60 percent of all the days of care provided in 1976 were financed either totally or partially by the Medicaid program (22.5 percent under the SNF regulations and 37.2 percent under the ICF regulations). These data, along with the national



Table 4. Provisional total cost per resident day to nursing homes, number, and percent distribution of resident days by type of certification, according to selected nursing home characteristics: United States, 1976

Nursing home characteristics	Total cost per resident day	Resident days in thousands	Resident days by type of certification				
			Total	Skilled nursing facility		Medicaid intermediate care facility	Not certified
				Medicare	Medicaid		
All nursing homes .....	\$24.04	440,195	100.0	2.4	22.5	37.2	38.0
<u>Ownership</u>							
Proprietary.....	22.32	293,071	100.0	*	23.5	37.8	37.0
Nonprofit and Government.....	27.52	147,124	100.0	*	20.5	36.0	39.8
<u>Certification</u>							
Skilled nursing facility .....	33.80	87,419	100.0	*	56.7	...	38.9
Skilled nursing and intermediate care facility...	25.75	158,452	100.0	*	32.7	36.7	26.5
Intermediate care facility .....	19.44	138,541	100.0	...	...	72.1	27.9
Not certified .....	15.59	55,783	100.0	...	...	...	100.0
<u>Bed size</u>							
Less than 50 beds.....	21.58	65,194	100.0	*	*	34.0	52.4
50-99 beds .....	22.18	127,146	100.0	*	16.0	40.5	42.1
100-199 beds .....	23.64	181,411	100.0	*	26.0	36.3	35.5
200 beds or more.....	31.08	66,443	100.0	*	35.0	36.3	*
<u>Geographic region</u>							
Northeast.....	36.17	99,972	100.0	*	31.4	30.4	33.1
North Central.....	19.30	152,361	100.0	*	16.4	41.2	40.8
South .....	19.37	121,956	100.0	*	*	49.3	35.0
West .....	25.68	65,906	100.0	*	37.3	*	44.2

NOTE: Figures may not add to totals due to rounding.

health expenditure estimates from the Social Security Administration, indicate that in 1976 the Medicaid program spent approximately \$20.41 per resident day on nursing home care while the Medicare program spent approximately \$28.87.<sup>4</sup> Although the resident days of care not financed by either Medicaid or Medicare are in the minority, they do represent a substantial proportion (38 percent) of all days. At least a fourth of all the days of care provided in the certified nursing homes were not financed by Medicaid or Medicare. For facilities

certified only as SNF's the proportion was about 39 percent.

**Charges for care**

Facility-related information concerning the charges made to residents for their care is presented in table 5. In 1977 the average total monthly charge was estimated to be \$669. About 11 percent of the residents had monthly charges of less than \$400 and about 25 percent were charged \$800 or more per month. One of the most noticeable differences in these data is that the average charge to residents in nonprofit and Government nursing homes (\$722) appears to be higher than the average charge to residents

<sup>4</sup>Gibson, R. M. and Mueller, M. S.: National Health Expenditures, Fiscal Year 1976. *Social Security Bulletin*, HEW Pub. No. (SSA) 77-11700. April 1977.

in proprietary nursing homes (\$641). Although the provisional standard errors of these estimates are such that the difference is not statistically significant, the data do imply a different relationship than was found in the 1973-74 NNHS. In the earlier survey, residents in proprietary facilities had higher monthly charges, on the average, than those in the nonprofit and Government facilities. The change is likely to be related to the fact that the disparity in costs between the profit group and the nonprofit and Govern-

ment group has widened and the decreasing impact of donations and subsidies has necessitated more reliance on user charges by nonprofit and Government nursing homes. The data on charges also show that it continues to be substantially more costly for residents using nursing homes in the Northeast than in any other area of the country. The average monthly charge for residents in Northeastern nursing homes was \$864 compared to an average of \$614 to \$643 in the other regions.

Table 5. Provisional average total monthly charges for care in nursing homes, number of residents, and percent distribution of residents by monthly charge intervals, according to selected nursing home characteristics: United States, 1977

Nursing home characteristics	Average total charge <sup>1</sup>	Number of residents	Monthly charges					
			Total	No charge or unknown	\$0-\$399	\$400-\$599	\$600-\$799	\$800 or more
			Percent distribution of residents					
All residents .....	\$669	1,287,400	100.0	3.1	11.2	31.4	29.5	24.7
<u>Ownership</u>								
Proprietary .....	641	851,700	100.0	*	11.5	34.4	31.2	20.4
Nonprofit and Government .....	722	435,700	100.0	*	10.5	25.7	26.2	33.3
<u>Certification</u>								
Skilled nursing facility .....	852	252,100	100.0	*	*	14.0	31.0	46.6
Skilled nursing and intermediate care facility .....	752	462,200	100.0	*	*	21.7	39.0	32.9
Intermediate care facility .....	565	414,300	100.0	*	8.6	55.2	24.5	9.2
Not certified .....	409	158,800	100.0	*	44.3	25.5	12.8	*
<u>Bed size</u>								
Less than 50 beds .....	593	193,500	100.0	*	30.5	23.7	22.4	21.5
50-99 beds .....	628	353,000	100.0	*	9.9	39.8	31.4	15.9
100-199 beds .....	689	547,400	100.0	*	6.8	31.5	31.2	27.7
200 beds or more .....	764	193,500	100.0	*	*	23.8	28.7	35.5
<u>Geographic region</u>								
Northeast .....	864	274,600	100.0	*	*	14.1	20.3	56.3
North Central .....	614	446,700	100.0	*	13.6	35.8	31.0	18.6
South .....	603	377,800	100.0	*	*	47.3	25.4	14.1
West .....	643	188,300	100.0	*	19.1	14.5	47.8	*

<sup>1</sup>Includes life-care residents and no-charge residents but excludes the residents for whom the charge was not known.

NOTE: Figures may not add to totals due to rounding.

TECHNICAL NOTES

Since the statistics presented in this report are based on a sample, they will differ somewhat from figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and procedures. The standard error is primarily a measure of the variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. The standard error also reflects part of the measurement error, but it does not measure any systematic biases in the data. The chances are about 95 out of 100 that an estimate from the sample differs from the value which would be obtained from a complete census by less than twice the standard error.

Rather than present specific errors for a particular statistic, the provisional approximate relative standard errors and standard errors for a wide variety of estimates have been provided. Provisional estimates of relative standard errors for the estimated numbers of admissions, beds, residents, discharges, total FTE employees, ad-

ministrative, medical, and therapeutic FTE employees, RN FTE employees, LPN FTE employees, nurses' aide FTE employees, and facilities are presented in figure I. Provisional relative standard errors for resident days are presented in figure II, provisional standard errors for average cost per resident day are presented in table I, and provisional standard errors for average monthly charges are presented in table II.

The relative standard error of an estimate is the standard error of the estimate divided by the estimate itself and is expressed as a percentage of the estimate. In this report, an asterisk is shown for any estimate with more than a 25-percent relative standard error. Because of the relationship between the relative standard error and the estimate, the standard error of an estimate can be found by multiplying the estimate by its relative standard error. For example, curve B of figure I shows the relative standard error for beds. Table 1 gives the total number of beds in all facilities with less than 50 beds as 205,700.

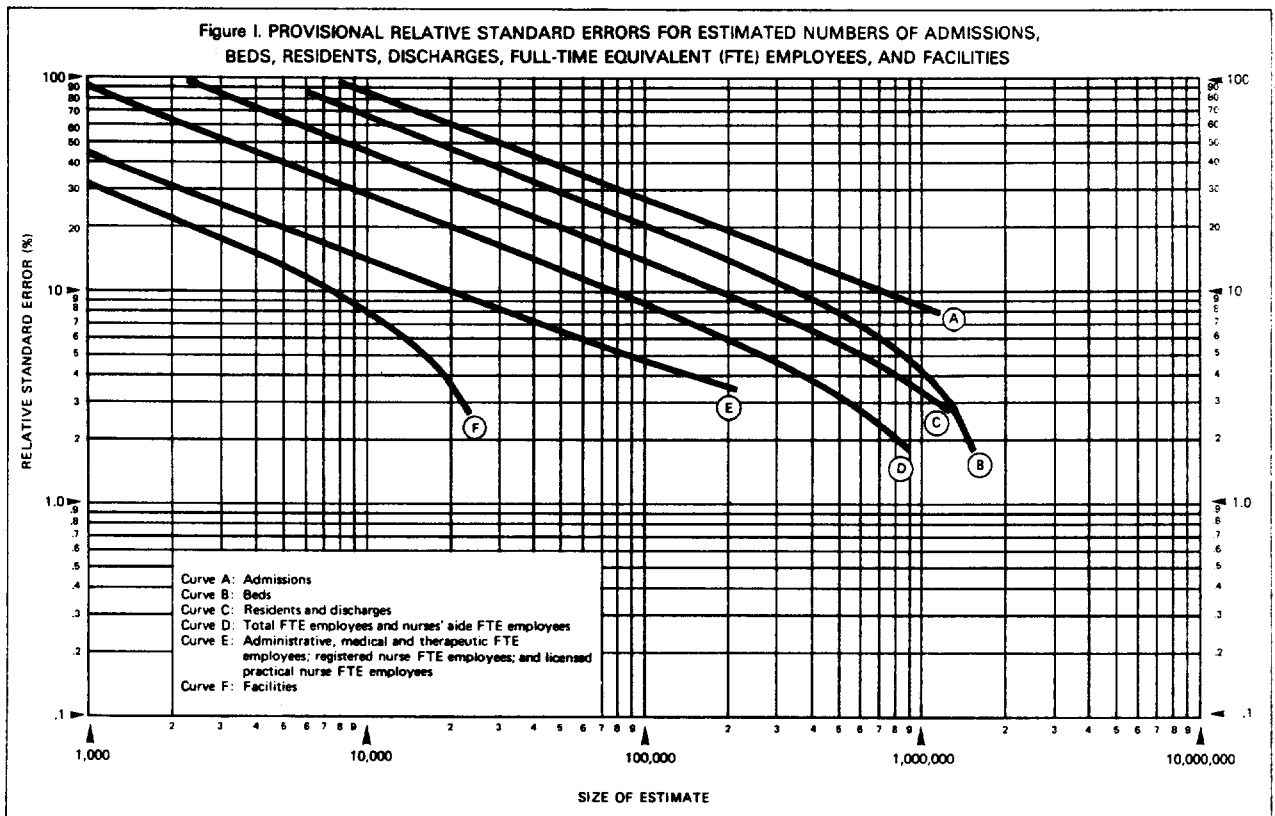


Table I. Provisional standard errors of percentages for average cost per resident day

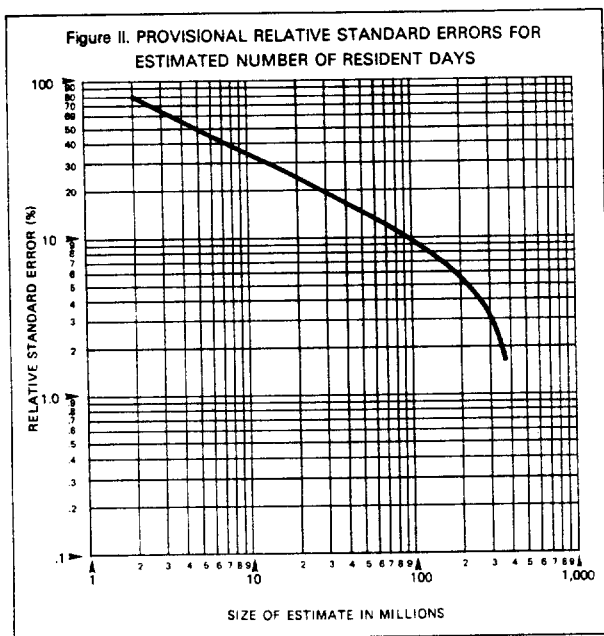
Resident days (base of ratio)	Average cost per resident day							
	\$1.00	\$4.00	\$8.00	\$12.00	\$16.00	\$20.00	\$30.00	\$40.00
	Standard error in dollars							
50,000,000.....	*0.59	*1.11	1.35	1.79	2.20	2.62	2.84	3.38
60,000,000.....	*0.54	*1.01	1.23	1.62	1.99	2.36	2.55	3.04
70,000,000.....	*0.50	0.93	1.14	1.49	1.82	2.16	2.33	2.77
80,000,000.....	*0.46	0.87	1.06	1.38	1.68	1.99	2.15	2.55
90,000,000.....	*0.44	0.82	0.99	1.29	1.57	1.85	1.99	2.37
100,000,000.....	*0.42	0.78	0.94	1.21	1.47	1.73	1.86	2.20
200,000,000.....	*0.30	0.54	0.64	0.78	0.91	1.02	1.09	1.25
300,000,000.....	0.25	0.44	0.51	0.58	0.62	0.64	0.64	0.69
350,000,000.....	0.23	0.41	0.47	0.52	0.52	0.48	0.45	*0.46

The relative standard error corresponding to this estimate on curve B of figure I is approximately 14.0 percent. The standard error is 205,700 (.14) = 28,798.

Approximate standard error of ratios such as full-time equivalent employees per 100 beds can be calculated as in the following example: Suppose the standard error ( $\sigma_R$ ) for the ratio of total FTE employees per 100 beds is desired for nursing homes with less than 50 beds. In table 2 the total FTE employees per 100 beds for

Table II. Provisional standard errors of average monthly charges

Number of residents or discharges (base of ratio)	Average monthly charge						
	\$400	\$500	\$600	\$700	\$800	\$900	\$1,000
	Standard error in dollars						
90,000.....	84	100	116	131	147	162	178
100,000.....	80	95	110	124	139	154	168
200,000.....	56	67	77	88	98	109	119
400,000.....	40	47	55	62	69	76	84
600,000.....	32	38	44	50	56	62	68
800,000.....	28	33	38	43	49	54	59
1,000,000.....	25	30	34	39	43	48	52
1,200,000.....	23	27	31	35	39	43	48



homes with less than 50 beds is 50.1 which is equal to a total of 103,100 FTE employees divided by 205,700 beds times 100. The relative standard error of 103,100 total FTE employees is (from figure I, curve D) approximately 8.7 percent, and the relative standard error of 205,700 beds (from figure I, curve B) is approximately 14.0 percent. The square root of the sum of the squares of these two relative standard errors minus their covariance provides an approximation for the relative standard error of the ratio. In other words, if  $V_X$  is the relative standard error of number of total FTE employees,  $V_Y$  is the relative standard error of number of beds,  $r$  is the sample correlation coefficient between total FTE employees and beds (conservatively estimated to be 0.5) and  $V_R$  is

The relative standard error of the ratio  $R'=X'/Y'$ :

$$\begin{aligned}
 V_{R'}^2 &= V_{X'}^2 + V_{Y'}^2 - 2rV_{X'}V_{Y'} \\
 &= (.087)^2 + (.140)^2 - 1.00(.087 \times .140) \\
 &= .0076 + .0196 - .0122 = .0150 \\
 V_{R'} &= \sqrt{.0150} = .1225
 \end{aligned}$$

The approximate standard error of the ratio of total FTE employees per 100 beds may now be obtained by multiplying the relative standard error by the ratio as done below:

$$\sigma_{R'} = R' \times V_{R'} = 50.1 \times .1225 = 6.14$$

The sample correlation coefficient ( $r$ ) for calculating the standard error estimates of the ratios presented in this report is assumed to be zero except in the case of full-time equivalent employees per 100 beds, occupancy rate, and cost per resident day ratio estimates where the correlation coefficient used was .5.

The Z-test with a 0.05 level of significance was used to test all comparisons mentioned in this report. Since all observed differences were not tested, lack of comment in the text does not mean that the difference was not statistically significant.

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-----	*

# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service | Number 36 ■ August 18, 1978

## Contraceptive Utilization in the United States: 1973 and 1976<sup>1</sup>

### INTRODUCTION

The data presented in this report are the latest nationwide statistics on contraceptive utilization from the 1976 and 1973 National Surveys of Family Growth conducted by the National Center for Health Statistics. The data were collected by means of personal interviews with a multistage probability sample of women 15-44 years of age in the noninstitutionalized population of the conterminous United States. Women were eligible for inclusion in the sample if they were currently or previously married or were never married but had offspring presently living in the household.

The interview focused on the respondents' marital and pregnancy histories, their use of contraception and the planning status of each pregnancy, their intentions regarding number and spacing of future births, their use of maternal care and family planning services, and on a broad range of social and economic characteristics. Between June 1973 and February 1974, 3,856 black women and 5,941 women of other races were interviewed for Cycle I. Between January and September of 1976, 2,946 black women and 5,665 women of other races were interviewed for Cycle II. Further discussion of the survey design, definition of terms, and sampling variability are in the Technical Notes.

### CONTRACEPTIVE STATUS FOR CURRENTLY MARRIED WOMEN

From the 1960's through the early 1970's, there was increased use of highly effective contraceptive methods by married couples in the

United States.<sup>2,3</sup> Tables 1, 2, and 3 present preliminary data from 1976 and data from 1973 representing the contraceptive status of currently married women all ages 15-44 years, ages 15-29 years, and ages 30-44, respectively. The data show that reliance on nonsurgical methods of contraception has decreased while surgical sterilization has increased.

In 1976, 30.2 percent of couples with wives aged 15-44 years were considered sterile (table 1). This represents a more than 6 percentage point increase from 1973 and is due primarily to a dramatic increase in surgical sterilization among white couples. There was a corresponding net decrease from 1973 in the other categories, most notably a decline of almost 5 percentage points in the proportion using nonsurgical methods of contraception. However, about the same percent of women at risk of an unplanned pregnancy (those not sterile, pregnant, post partum, or seeking pregnancy) were using a method in 1976 as were in 1973, 86.3 percent and 85.9 percent, respectively.

Of the remaining (69.8 percent) currently married women, 48.6 percent were contracepting using methods other than sterilization; 13.4 percent were pregnant, post partum, or seeking pregnancy; and 7.7 percent were classified as other nonusers of contraception, that is, neither sterile nor "pregnant, post partum, or seeking pregnancy."

<sup>2</sup>National Center for Health Statistics: Contraceptive utilization among currently married women 15-44 years of age: United States, 1973, by Kathleen Ford. *Monthly Vital Statistics Report*, Vol. 25-No. 7, Supp. DHEW Pub. No. (PHS) 75-1120. Public Health Service. Rockville, Md. Oct. 4, 1976.

<sup>3</sup>Westoff, C. F. and Jones, E. F.: Contraception and Sterilization in the United States, 1965-1975. *Fam. Plann. Perspect.* 9 (4): 153-157, 1977.

<sup>1</sup>This report was prepared by Kathleen Ford, Ph.D., Division of Vital Statistics.

Table 1. Number of currently married women aged 15-44 and percent distribution by contraceptive status, according to race and Hispanic origin: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black		Hispanic origin <sup>2</sup>	
	1976	1973	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>3</sup>							
All women.....	27,185	26,646	24,518	24,249	2,144	2,081	1,673	1,676
	Percent distribution							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	<u>Sterile couples</u>							
All sterile couples.....	30.2	23.8	31.0	24.0	24.3	22.7	20.5	21.6
Nonsurgical.....	1.9	0.9	1.9	0.8	2.6	1.9	1.5	*0.7
Surgical.....	28.3	22.9	29.1	23.1	21.7	20.8	19.0	20.9
Noncontraceptive.....	9.0	6.5	9.0	6.6	8.8	6.2	7.8	5.2
Female.....	8.2	6.3	8.2	6.3	8.7	6.1	7.0	5.2
Male.....	0.8	0.2	0.8	0.3	0.0	0.0	*0.9	-
Contraceptive.....	19.3	16.4	20.1	16.5	12.9	14.6	11.2	15.7
Female.....	9.6	8.6	9.6	8.2	11.0	13.6	7.0	10.7
Male.....	9.7	7.8	10.5	8.4	1.9	1.0	4.2	5.0
	<u>Fecund couples</u>							
Nonconceptors:								
Pregnant, post partum, seeking pregnancy.....	13.4	14.2	12.8	14.2	16.6	14.0	20.8	18.9
Other nonusers.....	7.7	8.7	7.2	7.8	13.5	17.9	10.5	9.7
Contraceptors:								
All methods.....	48.6	53.2	49.0	54.0	45.4	45.3	48.1	49.8
Oral contraceptive pill.....	22.3	25.1	22.5	25.1	22.0	26.3	20.7	22.9
Intrauterine device.....	6.1	6.7	6.1	6.6	6.1	7.6	10.4	8.7
Diaphragm.....	2.9	2.4	3.0	2.5	1.8	1.2	2.4	*1.8
Condom.....	7.2	9.4	7.4	9.9	4.5	3.2	6.1	7.0
Foam.....	3.0	3.5	2.9	3.5	3.8	3.0	3.5	*1.8
Rhythm.....	3.4	2.8	3.5	2.9	1.4	0.7	3.1	2.1
Withdrawal.....	2.0	1.5	2.0	1.6	1.8	0.4	*1.1	2.2
Douche.....	0.7	0.6	0.5	0.5	2.7	1.8	*0.1	*0.6
Other.....	0.9	1.3	0.9	1.3	1.2	1.0	*0.5	2.7

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>Women of Hispanic origin are included in the figures for white and black women if they were identified as such by the interviewer.

<sup>3</sup>In the 1973 figures, estimates of the number of women included cases for which contraceptive status was not ascertained but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

According to preliminary data for 1976, changes since 1973 in the distribution of women among categories of contraceptive status were largely in the same direction in the age groups 15-29 years (table 2) and 30-44 years (table 3). Both groups experienced a net increase in the percent sterile and a net decrease in the percent using a method other than sterilization. The net

increase for women 15-29 years of age was approximately 2 percentage points. The net increase was approximately 10 percentage points for women 30-44 years of age, and the net decrease was approximately 6 percentage points. The proportions of women at risk of an unplanned pregnancy who were using a contraceptive method were practically unchanged

within age groups for the 3 years—for women 15-29 years of age, 91.9 percent in 1973 and 91.3 percent in 1976; for women 30-44 years of age, 80.3 percent in 1973 and 80.7 percent in 1976.

The women in the younger age group who were not using a contraceptive method were more likely to be pregnant, post partum, or seeking pregnancy; the older women were more likely to be sterile. The total avoidance of contraception (other nonusers) was greater among older women, resulting in a higher percent of older women unprotected against an unplanned pregnancy. However, it is likely that other factors such as lower fecundity and less frequent intercourse reduce the risk of pregnancy.

The percent of wives 30-44 years who were pregnant, post partum, or seeking pregnancy increased about 4 percentage points from 1973 among black wives but did not change among white wives. Most of this increase was due to black wives reporting that they were seeking pregnancy.

In 1976 as in 1973, black wives were more likely than white wives to fall into the category "other nonusers," although the gap between the two groups decreased from 10.1 percentage points in 1973 to 6.3 percentage points in 1976.

The large increase in the percent sterile among couples with wives 30 years or older is due almost entirely to the increase among white couples. The percent sterile among the black couples, wife 30 and over, remained essentially constant at about 35 percent in the 2 years, while the percent sterile for white couples in this age group increased about 10 percentage points to 46.8 percent in 1976. Among couples, wife 15-29, the percent sterile increased about the same amount in both racial groups (2.5 and 2.7 percentage points among white and black couples, respectively), remaining slightly higher among white couples (11.8 percent) than among black couples (10.9 percent).

The net effect of all these changes, in terms of exposure to unplanned pregnancy, is a lessening of differences between the two racial groups. In both years, the proportion of women at risk of an unplanned pregnancy who were using a contraceptive method was higher for white women than for black women, but this percent increased for black women between 1973 and

1976 and remained stable for white women. About 87 percent of white women at risk of an unplanned pregnancy were using a method in 1973 and 1976, and the percent of black women at risk of an unplanned pregnancy who were using a method rose 5.4 percentage points to 77.1 percent in 1976. Parallel trends can be observed for the younger and older age groups.

### Sterility

In the 30.2 percent of couples in which one spouse was sterile, only 1.9 percent were not surgically sterile as shown in table 1. Of the remaining 28.3 percent who were surgically sterilized, 9.0 percent reported this to be for non-contraceptive reasons and 19.3 percent reported this to be at least partly for contraceptive reasons.

Although the nonsurgically sterile accounted for only 1.9 percent of sterile couples in 1976, this was double that proportion for 1973. The frequencies are too small for reliable detailed study but may reflect better diagnosis of infertility problems.

The surgically sterile accounted for nearly all of the sterile couples, and the increase of 5.4 percentage points in this group from 1973 to 1976 accounted for most of the 27-percent increase in overall sterility between these years.

For white couples with women of all ages combined, the percent surgically sterile increase 6 percentage points from 23.1 percent in 1973 to 29.1 percent in 1976. In contrast to this, very little change occurred in the percent of surgically sterile black couples, 20.8 percent in 1973 to 21.7 percent in 1976.

For couples where the wife was under age 30, (table 2) the level and trend of surgical sterilization was similar for white and black couples. The percent of white couples, wife 15-29 years, who were surgically sterile increased 2.0 percentage points to 10.8 percent in 1976. The corresponding figure for black couples rose 1.1 percentage points to 9.2 percent in 1976.

Among the white couples, wife aged 30-44 (table 3) the increase, in surgical sterilization in the 3 years between the surveys was most dramatic. There was an increase of almost 10 percentage points from 35.0 in 1973 to 44.2 percent in 1976. In contrast to this, the percent



Table 2. Number of currently married women aged 15-29 and percent distribution by contraceptive status, according to race and Hispanic origin: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black		Hispanic Origin <sup>2</sup>	
	1976	1973	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>3</sup>							
All women.....	12,292	12,040	11,063	10,963	978	964	810	770
	Percent distribution							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Sterile couples</u>								
All sterile couples.....	11.6	9.2	11.8	9.3	10.9	8.2	*5.7	10.6
Nonsurgical.....	1.0	*0.5	1.0	0.5	1.6	*0.1	-	-
Surgical.....	10.6	8.7	10.8	8.8	9.2	8.1	*5.7	10.6
Noncontraceptive.....	2.2	*0.8	2.2	*0.8	3.8	*1.4	*0.8	-
Female.....	1.9	*0.7	1.8	*0.7	3.8	*1.4	*0.8	-
Male.....	*0.3	*0.1	*0.4	*0.1	-	-	-	-
Contraceptive.....	8.3	7.9	8.6	8.0	5.4	6.7	*4.9	10.6
Female.....	4.4	4.1	4.3	4.0	5.3	6.2	*2.8	*7.1
Male.....	3.9	3.7	4.3	4.0	*0.2	*0.4	*2.1	*3.6
<u>Fecund couples</u>								
Nonconceptor:								
Pregnant, post partum, seeking pregnancy.....	22.5	23.0	22.0	23.0	24.3	22.8	31.7	26.1
Other nonusers.....	5.7	5.5	5.2	4.9	9.7	12.0	*4.2	*6.2
Conceptor:								
All methods.....	60.2	62.3	61.0	62.7	55.1	57.0	58.4	57.0
Oral contraceptive pill.....	35.1	37.6	35.4	37.4	33.8	40.7	31.2	33.0
Intrauterine device.....	6.9	8.4	7.0	8.4	5.4	8.4	10.9	10.8
Diaphragm.....	2.7	1.7	2.9	1.8	*0.8	*0.8	*2.3	*1.3
Condom.....	6.5	7.0	6.7	7.4	5.0	*1.9	*6.8	*4.9
Foam.....	3.3	3.6	3.4	3.8	3.0	2.2	*3.4	*1.2
Rhythm.....	2.6	1.4	2.6	1.4	*1.9	*1.0	*2.0	*1.1
Withdrawal.....	1.7	1.0	1.7	1.1	*1.6	*0.3	*1.5	*2.6
Douche.....	*0.4	*0.3	*0.3	*0.2	2.4	*1.3	-	*0.7
Other.....	*0.9	1.1	*0.9	1.2	*1.0	*0.3	*0.3	*1.4

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>Women of Hispanic origin are included in the figures for white and black women if they were identified as such by the interviewer.

<sup>3</sup>In the 1973 figures, estimates of the number of women included cases for which contraceptive status was not ascertained but was inputted. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

of surgically sterile black couples, wife aged 30-44, was stable at about 32 percent both in 1973 and 1976 and was 12 percentage points below that for white couples in 1976.

The percent of sterilizing operations performed on the male partners remained at about

38 percent for white couples over the 3 years but was very small for black couples both in 1973 and 1976.

The majority of sterilizing operations were reported as contraceptive in intent (table 1). The proportion of couples who reported a sterilizing

Table 3. Number of currently married women aged 30-44 and percent distribution by contraceptive status, according to race and Hispanic origin: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black		Hispanic origin <sup>2</sup>	
	1976	1973	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>3</sup>							
All women.....	14,892	14,606	13,454	13,286	1,167	1,117	862	906
	Percent distribution							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Sterile couples</u>								
All sterile couples.....	45.7	36.0	46.8	36.1	35.6	35.2	34.5	30.9
Nonsurgical.....	2.6	1.3	2.6	1.1	3.4	3.4	*3.0	1.3
Surgical.....	43.0	34.6	44.2	35.0	32.2	31.8	31.5	29.6
Noncontraceptive.....	14.6	11.3	14.6	11.4	13.0	10.3	14.4	9.6
Female.....	13.5	10.9	13.4	11.0	12.9	10.2	12.7	9.6
Male.....	1.1	*0.4	1.2	*0.4	*0.1	*0.1	*1.7	
Contraceptive.....	28.4	23.4	29.6	23.6	19.2	21.5	17.1	20.0
Female.....	14.0	12.2	14.0	11.6	15.9	20.0	10.9	13.8
Male.....	14.5	11.1	15.5	12.0	3.4	*1.5	*6.1	*6.2
<u>Fecund couples</u>								
Noncontraceptors:								
Pregnant, post partum, seeking pregnancy.....	5.9	7.0	5.3	6.9	10.2	6.4	10.6	12.8
Other nonusers.....	9.3	11.3	8.8	10.2	16.8	23.1	16.5	12.5
Contraceptors:								
All methods.....	39.1	45.7	39.1	46.8	37.4	35.3	38.4	43.7
Oral contraceptive pill .....	11.8	14.8	11.9	14.9	12.2	13.8	11.0	14.4
Intrauterine device.....	5.4	5.2	5.3	5.2	6.6	7.0	9.8	*6.9
Diaphragm.....	3.1	2.9	3.1	3.1	2.5	*1.6	*2.6	*2.2
Condom.....	7.7	11.4	8.0	12.0	4.1	4.3	*5.5	8.7
Foam.....	2.8	3.4	2.6	3.3	4.5	3.7	*3.6	*2.3
Rhythm.....	4.0	3.9	4.2	4.1	*1.0	*0.5	*4.2	*2.9
Withdrawal.....	2.3	1.8	2.3	2.0	2.0	*0.5	*0.8	*1.9
Douche.....	*0.9	*0.8	*0.8	*0.7	3.0	2.2	*0.2	*0.5
Other.....	*0.9	1.4	*0.9	1.5	*1.4	*1.5	*0.6	*3.7

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>Women of Hispanic origin are included in the figures for white and black women if they were identified as such by the interviewer.

<sup>3</sup>In 1973 figures, estimates of the number of women included cases for which contraceptive status was not ascertained but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

operation performed for noncontraceptive reasons, however, increased 2.5 percentage points from 1973 to 9.0 percent in 1976. The proportion of couples who reported a sterilizing operation for contraceptive reasons increased 2.9 percentage points to 19.3 percent in 1976.

Sterilizing operations were classified as contraceptive or noncontraceptive according to a question regarding the contraceptive intent of the operation. The wording of this question differed for the 2 data years. This wording change affected response to the question, in

most cases, lowering the percent of operations reported as contraceptive in 1976 relative to 1973. If the assumption is made that the percent of women having a surgical sterilization operation solely for medical (noncontraceptive) reasons should not change for the two surveys, then the percent of total women contraceptively sterile would be 2 to 3 percent higher in 1976 if the 1973 figures are taken as the standard. Conversely, if the percent of surgical sterilization for noncontraceptive reasons in 1976 is taken as the standard, the percent contraceptively sterile would be 2 to 3 percent lower in 1973. The motivation behind a sterilizing operation is a complex topic which is presently being studied. A more detailed report on contraceptive practices in the United States will examine this topic more closely.

### Oral Contraceptive Pill

The increase in the use of oral contraceptives observed from the 1960's through 1973 has come to a halt. However, for couples in which

one partner was not sterile, no other method comes close to it in popularity.

The percent of married women aged 15-44 using the oral contraceptive pill in 1976 was 22.3 percent compared with 25.1 percent in 1973 (table 1). Although this represents a net decrease of almost 3 percentage points, the percent of contraceptors using the pill remained relatively stable, 46 percent for 1976 and 47 percent for 1973 (table 4).

Among the younger wives (15-29 years) in the sample, a 2-3 percentage point decline from about 37 percent to about 35 percent occurred among the total sampled and white women (table 2). A larger decline, about 8 percentage points, occurred among the young black wives from 40.7 percent in 1973 to 33.8 percent in 1976. As a share of all contraceptive method use other than sterilization for wives under 30, this represents about a 2 percentage point decline from about 60 to about 58 percent for white women and total women (table 5) and a 10 percentage point decline from 71.4 percent in 1973 to 61.4 percent in 1976 for black women.

Table 4. Number of currently married women aged 15-44 using contraceptives other than sterilization and percent distribution by method of contraception, according to race and Hispanic origin: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black		Hispanic origin <sup>2</sup>	
	1976	1973	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>3</sup>							
All women.....	13,225	14,183	12,005	13,094	975	944	804	835
	Percent distribution							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Oral contraceptive pill.....	46.0	47.2	45.9	46.5	48.5	57.9	43.2	46.0
Intrauterine device.....	12.5	12.5	12.4	12.3	13.4	16.9	21.5	17.4
Diaphragm.....	6.0	4.5	6.2	4.7	3.9	2.7	*5.1	*3.6
Condom.....	14.8	17.6	15.1	18.4	9.9	7.1	12.8	14.0
Withdrawal.....	4.2	2.8	4.2	2.9	4.0	*0.9	*7.3	*3.6
Foam.....	6.2	6.5	6.0	6.5	8.4	6.7	*6.5	*4.2
Rhythm.....	6.9	5.3	7.1	5.4	3.1	*1.7	*2.4	*4.5
Douche.....	1.5	1.1	1.1	*0.9	6.0	4.0	*0.2	*1.2
Other.....	1.9	2.4	1.9	2.5	2.7	2.1	*1.0	*5.3

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>Women of Hispanic origin are included in the figures for white and black women if they were identified as such by the interviewer.

<sup>3</sup>In 1973 figures, estimates of the number of women included cases for which contraceptive status was not ascertained but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

Table 5. Number of currently married women aged 15-29 using contraceptives other than sterilization and percent distribution by method of contraception, according to race and Hispanic origin: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black		Hispanic origin <sup>2</sup>	
	1976	1973	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>3</sup>							
All women.....	7,405	7,501	6,744	6,879	538	549	474	439
	Percent distribution							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Oral contraceptive pill.....	58.3	60.4	58.0	59.6	61.4	71.4	53.3	57.9
Intrauterine device.....	11.5	13.5	11.5	13.4	*9.8	14.7	18.7	18.9
Diaphragm.....	4.5	2.8	4.8	2.9	*1.5	*1.4	*3.9	*2.2
Condom.....	10.9	11.2	11.0	11.8	*9.1	*3.4	*11.7	*8.7
Withdrawal.....	2.8	1.6	2.9	1.7	*2.9	*0.5	*5.8	*2.2
Foam.....	5.5	5.8	5.5	6.0	*5.4	*3.9	*3.4	*1.9
Rhythm.....	4.3	2.3	4.3	2.3	*3.4	*1.8	*2.6	*4.6
Douche.....	*0.7	*0.5	*0.4	*0.3	*4.4	*2.3	-	*1.2
Other.....	1.5	1.8	1.4	1.9	*1.9	*0.6	*0.6	*2.4

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>Women of Hispanic origin are included in the figures for white and black women if they were identified as such by the interviewer.

<sup>3</sup>In 1973 figures, estimates of the number of women included cases for which contraceptive status was not ascertained but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

For those wives ages 30-44, pill use declined about 3 percentage points from about 15 percent in 1973 to 12 percent in 1976 for white women and total women (table 3). Pill use among older black women declined from 13.8 percent to 12.2 percent.

As a proportion of contraceptive method use other than sterilization for older women, pill use declined only about 2 percentage points for white women and total women from about 32 to about 30 percent (table 6). Among older black women, however, the share of contraceptive use other than sterilization for the pill declined about 7 percentage points from 39.2 percent to 32.6 percent.

### Intrauterine Device

Although it is a highly effective method, the intrauterine device (IUD) remained much lower in popularity than the pill. In 1973, 6.7 percent of wives 15-44 years of age were using the IUD, and in 1976 about the same proportion, 6.1 percent, were using this method (table 1). The share of method use other than sterilization for the IUD remained at 12.5 percent for both years

(table 4). This method became less popular among black wives 15-29 years of age over the 3-year period, 8.4 percent used the IUD in 1973 and 5.4 percent in 1976 (table 2).

### Condom

Between 1973 and 1976, use of the condom declined about 2 percentage points reducing its portion of contraceptive use other than sterilization from 17.6 percent to 14.8 percent (table 4). This small decline is present in the white and total groups but some increase in condom use is present among black couples in which the wife is under age 30 (1.9 percent in 1973 and 5.0 percent in 1976) (table 2).

### Other Methods

Use of all methods other than the pill, IUD, or condom continued to be very small. Any increase or decrease in the use of individual methods should be interpreted with caution because of the small number of sample cases involved. As shown in table 1, there was little difference between the 2 years in the percent

Table 6. Number of currently married women aged 30-44 using contraceptives other than sterilization and percent distribution by method of contraception, according to race and Hispanic origin: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black		Hispanic origin <sup>2</sup>	
	1976	1973	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>3</sup>							
All women.....	5,819	6,682	5,260	6,215	436	394	331	396
	Percent distribution							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Oral contraceptive pill.....	30.3	32.4	30.4	31.9	32.6	39.2	28.6	33.0
Intrauterine device.....	13.8	11.5	13.6	11.1	17.1	19.9	25.6	15.8
Diaphragm.....	7.9	6.4	8.0	6.6	*6.8	*4.5	*6.8	*5.1
Condom.....	19.8	24.8	20.4	25.7	*10.9	*12.1	*14.4	20.0
Withdrawal.....	6.0	4.0	5.9	4.2	*5.3	*1.5	*9.4	*5.2
Foam.....	7.1	7.4	6.6	7.1	*12.1	*10.6	*10.9	*6.7
Rhythm.....	10.2	8.6	10.7	8.8	*2.7	*1.4	*2.1	*4.3
Douche.....	2.4	1.8	2.0	1.5	*8.0	*6.4	*0.6	*1.3
Other.....	2.4	3.1	2.3	3.1	*3.8	*4.3	*1.6	*8.6

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>Women of Hispanic origin are included in the figures for white and black women if they were identified as such by the interviewer.

<sup>3</sup>In 1973 figures, estimates of the number of women included cases for which contraceptive status was not ascertained but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

using methods other than the pill, IUD, and condom among white couples (12.4 percent in 1973 compared with 13.0 percent in 1976). However, the percent of black wives using other methods increased from 8.2 percent in 1973 to 12.8 percent in 1976.

### Hispanic Origin

The large increase in surgical sterilization observed between 1973 and 1976 among the white couples in the sample was not present among couples of Hispanic origin. Among couples with wives reporting Hispanic origin, 21.6 percent were surgically sterile in 1973 compared with 20.5 percent in 1976 (table 1). For 1973 and

1976, about one quarter of the male partners among these couples were sterile.

Use of contraceptives by Hispanic couples declined from 22.9 percent in 1973 to 20.7 percent in 1976 (table 1). The IUD was more popular among women of Hispanic origin than all other women in 1973 and in 1976. In 1976, 10.4 percent of wives of Hispanic origin were using an IUD, and in 1973, 8.7 percent of wives of Hispanic origin were using an IUD.

Of those women of Hispanic origin exposed to risk of an unplanned pregnancy (not sterile, pregnant, post partum, or seeking pregnancy), 82.1 percent were using a contraceptive method in 1976, compared with 83.7 percent in 1973.

## TECHNICAL NOTES

### The Survey Design

The National Survey of Family Growth (NSFG) is designed to provide data on fertility, family planning, and related aspects of maternal and child health. Field work for Cycle I was carried out by the National Opinion Research

Center between June 1973 and February 1974. Field work for Cycle II was carried out by Westat, Inc., between January and September of 1976.

A multistage probability sample of women in the noninstitutionalized population of the conterminous United States was used in both

cycles. Each time, approximately 33,000 households were screened to identify the sample of women who would be eligible for NSFG, i.e., women between the ages of 15 to 44 years, inclusive, who were currently married or previously married or who were never married but had offspring presently living in the household. In households with more than one eligible woman, a random procedure was used to select only one to be interviewed. Since the interviews were always conducted with the sample person, the term "respondent" is used as synonymous with sample person. For Cycle I, interviews were completed with 3,856 black women and 5,941 women of other races. For Cycle II, interviews were completed with 2,946 black women and 5,665 women of other races. A detailed description of the sample design for Cycle I is presented in "National Survey of Family Growth, Cycle I: Sample Design, Estimation Procedures, and Variance Estimation," Series 2, Number 76, in the *Vital and Health Statistics* series. A similar report is in preparation for Cycle II.

The interview was focused on the respondent's marital and pregnancy histories, on the use of contraception and the planning status of each pregnancy, on the respondent's intentions regarding the number and spacing of future births, on maternal and family planning services, and on a broad range of social and economic characteristics. While the interviews varied greatly in the time required for their completion, they averaged about 70 minutes for Cycle I and about 58 minutes for Cycle II.

Quality control procedures were applied at all stages of the survey. These included a verification of listing completeness with unlisted dwelling units being brought into the sample, a preliminary field review of completed questionnaires for possible missing data or inaccurate administration, a 10-percent sample recheck of all households to be screened in the survey, observation of interviews in the field, and an independent recoding of a 5-percent subsample of completed interviews.

### Reliability of Estimates

Since the statistics presented in this report are based on a sample, they may differ some-

what from the figures that would have been obtained if a complete census had been taken using the same questionnaires, instructions, interviewing personnel, and field procedures. This chance difference between sample results and a complete count is referred to as sampling error. In addition, the results are also subject to non-sampling error due to respondent misreporting, data processing mistakes, and nonresponse. It is very difficult, if not impossible, to obtain accurate measures of nonsampling errors. These types of error were kept to a minimum by the quality control procedures and other methods incorporated into the survey design and administration.

Sampling error, or the extent to which samples may differ by chance from a complete count, is measured by a statistic called the standard error of estimate. Approximate standard errors for estimated numbers and percentages from Cycle I are shown in tables I and II for the total and white populations and in tables III and IV for the black population. Provisional estimates for standard errors for Cycle II for total and white women can be obtained by multiplying the standard errors for these women from Cycle I by a factor of 1.1. Similarly, provisional estimates of standard errors for Cycle II for black women can be obtained by multiplying the standard errors for these women from Cycle I by a factor of 1.2.

The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the differences between the sample estimate and a

Table I. Approximate standard errors for estimated numbers for white and total women: 1973 National Survey of Family Growth

Size of estimate	Relative standard error	Standard error
50,000.....	30.0	15,000
100,000.....	21.2	21,000
200,000.....	15.0	30,000
500,000.....	9.5	47,000
1,000,000.....	6.7	67,000
2,000,000.....	4.8	95,000
5,000,000.....	3.0	151,000
10,000,000.....	2.2	216,000
20,000,000.....	1.5	311,000

Table II. Approximate standard errors for estimated percentages expressed in percentage points for white and total women: 1973 National Survey of Family Growth.

Base of percentage	Estimated percentage						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
100,000.....	3.0	4.6	6.4	8.5	9.7	10.4	10.6
500,000.....	1.3	2.1	2.8	3.8	4.3	4.6	4.7
1,000,000.....	0.9	1.5	2.0	2.7	3.1	3.3	3.3
3,000,000.....	0.5	0.8	1.2	1.5	1.8	1.9	1.9
5,000,000.....	0.4	0.6	0.9	1.2	1.4	1.5	1.5
7,000,000.....	0.3	0.5	0.8	1.0	1.2	1.2	1.3
10,000,000.....	0.3	0.5	0.6	0.8	1.0	1.0	1.1

Table III. Approximate standard errors for estimated numbers for black women: 1973 National Survey of Family Growth

Size of estimate	Relative standard error	Standard error
25,000.....	25.3	6,000
50,000.....	17.9	9,000
100,000.....	12.7	13,000
150,000.....	10.3	16,000
250,000.....	8.0	20,000
350,000.....	6.8	24,000
500,000.....	5.7	28,000
750,000.....	4.7	35,000
1,000,000.....	4.0	40,000

Table IV. Approximate standard errors for estimated percentages expressed in percentage points for black women: 1973 National Survey of Family Growth

Base of percentage	Estimated percentage						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
5,000.....	7.9	12.3	17.0	22.6	25.9	27.7	28.3
10,000.....	5.6	8.7	12.0	16.0	18.3	19.6	20.0
50,000.....	2.5	3.9	5.4	7.1	8.2	8.8	8.9
100,000.....	1.8	2.7	3.8	5.1	5.8	6.2	6.3
300,000.....	1.0	1.6	2.2	2.9	3.3	3.6	3.6
500,000.....	0.8	1.2	1.7	2.3	2.6	2.8	2.8
700,000.....	0.7	1.0	1.4	1.9	2.2	2.3	2.4
1,000,000.....	0.6	0.9	1.2	1.6	1.8	2.0	2.0

standard error. The relative standard error is the ratio of the standard error to the statistic being estimated. In this report, numbers and percentages which have a standard error that is more than 25 percent of the estimate itself are considered "unreliable." They are marked with an asterisk to caution the user but may be combined to make other types of comparisons of greater precision.

In this report, terms such as "similar" and "the same" mean that any observed difference between two estimates being compared is not statistically significant. Similarly, terms such as "greater," "less," "larger," and "smaller" indicate that the observed differences are statistically significant. The normal deviate test with a .05 level of significance was used to test all comparisons which are discussed in the text. A statistically significant difference is one large enough that in repeated samples of the same size and type as this one such a large difference would be expected to be found in less than 5 percent of the samples. Lack of comment in the text between any two statistics does *not* mean the differences was tested and found not to be significant.

Adjustment for nonsampling error due to nonresponse was made in two ways. Nonrespondent cases, as distinct from missing data items, were imputed by weighting for nonresponse within each PSU, stratum, and age-race category. In the 1973 survey, codes for missing items were imputed using a "hot deck" procedure. In the 1976 survey, imputation for missing data items has not been performed and the figures in the tables are based only on those interviews where enough information was obtained from the respondent to determine contraceptive status. As a result, in the 1976 figures, about 1,061,000 women out of an estimated 31,847,000 total ever-married women are not represented.

## DEFINITIONS OF TERMS

### Sterile Couples

*Sterile.*—A woman (or couple) was classified as sterile if she reported that it was impossible for her to have a baby.

*Nonsurgical.*—A woman (or couple) was classified as nonsurgically sterile if she reported

that it was impossible for her to have a baby for any reason other than a sterilizing operation. Reported nonsurgical reasons for sterility included menopause and sterility due to accident, illness, or congenital causes.

*Surgical.*—A woman (or couple) was classified as surgically sterile if she or her husband were completely sterile due to an operation.

Since sterilizing operations are very frequently obtained exclusively or partly as methods of contraception, i.e., because of their complete effectiveness against conception rather than for purely therapeutic reasons, they have been further classified as contraceptive and non-contraceptive. In Cycle I, a sterilizing operation was contraceptive if the respondent answered "yes" to the question "Was the operation done at least partly so that you would not have any more children?" Since the avoidance of more children (conceptions) could itself be for therapeutic reasons, the question was reworded in Cycle II to "Was one reason for the operation because you had all the children you wanted?" This change in wording was expected to yield a lower percent of operations reported for contraceptive reasons than would have been reported previously. As a result, the percents of couples with contraceptive and noncontraceptive sterilization shown in this report are not completely comparable between the two surveys. Also, there is evidence that sterilizing operations classified as noncontraceptive may include some that actually were at least partly contraceptive in intent. The percent classified as contraceptive should therefore be regarded as a minimum estimate. Because of these limitations on the data, sterilizations for contraceptive reasons are reported with other causes or sterility and not, as formerly, with other methods of contraception.

#### **Fecund Couples—Noncontraceptors**

*Pregnant.*—A woman (or couple) was classified as pregnant if she replied affirmatively to the question "Are you pregnant now?" or for those in doubt, "Do you think you probably are pregnant or not?" A woman who reported that the onset of her last menstrual period was within the 30 days prior to the interview was automatically considered not pregnant.

*Seeking pregnancy.*—A woman (or couple) was classified as seeking pregnancy if she re-

ported she was not using a method at the time of interview because she wanted to become pregnant.

*Post partum.*—A woman (or couple) was classified as post partum if she reported she was not currently using a method, was not seeking a pregnancy, and her last pregnancy had terminated within 2 months before the date she was interviewed.

*Other nonusers.*—Women (or couples) who reported they were currently using no contraceptive method and could not be classified in any of the preceding categories of noncontraceptors were classified here. Among these are women who were indifferent to the chances of pregnancy, had a very low risk of pregnancy due to some fecundity impairment, or objected to contraceptive methods for personal or religious reasons. Women who used the douche following intercourse, but who did not report this as a method of contraception, were also classified here although such douching practice is known to have a very modest contraceptive effect when done very soon after intercourse.

#### **Fecund Couples — Contraceptors**

*Method users.*—A woman (or couple) who reported use of a contraceptive method other than a surgical sterilization at the date of interview was classified according to the specific method used. Methods used by extremely small proportions of the population such as jelly, cream suppositories, or abstinence, not in combination with any other methods, were grouped in the category "Other." Where more than one method was reported in current use, the method generally considered the most effective was used for classification purposes.

#### **Demographic Terms**

*Age.*—In this report, age is classified by the age of the respondent at her last birthday before the date of interview.

*Race.*—Classification by race, based on interviewer observation, was reported as black, white, or other. Race refers to the race of the woman interviewed.

*Hispanic origin.*—A respondent was classified as being of Hispanic origin if she reported her origin or descent as Mexicano, Chicano, Mex-



ican American, Puerto Rican, Cuban, or other Spanish.

In tables where data are presented for women according to race and Hispanic origin, women of Hispanic origin are included in the statistics for white and black women if they were identified as such by the interviewer.

*Marital status.*—Persons are classified by marital status as married, widowed, divorced, separated, or never married or as informally married, such as living with a partner or common-law spouse. Persons who are temporarily separated for reasons other than marital discord, such as vacation, illness, or Armed Forces, are classified as married. Divorced persons are those whose most recent marriage has been legally dissolved and who are free to remarry. Women with an annulled marriage, while having the legal status of never having been married, are classified together with divorced women. The cate-

gory “separated” includes those who are legally or informally separated for their most recent spouse due to marital discord. The “never married” include those who have never had a formal marriage and do not consider themselves in any of the preceding categories. However, in NSFG, only single women with offspring living in the household are included and separately classified.

#### 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-----	*

# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

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## Office Visits to Dermatologists: National Ambulatory Medical Care Survey, United States, 1975-76<sup>1</sup>

This report presents data on office visits to dermatologists practicing in the coterminous United States. The data presented were collected during 1975 and 1976 by means of the National Ambulatory Medical Care Survey (NAMCS), a continuous survey designed to explore the provision and utilization of ambulatory medical care in physicians' offices and conducted by the National Center for Health Statistics. The survey sample of physicians was selected from non-federally employed doctors of medicine and osteopathy who are primarily engaged in office-based patient-care practice. It excludes physicians practicing in Alaska and Hawaii and physicians whose specialty is anesthesiology, pathology, or radiology.

The estimates are based on information obtained from the "Patient Record" (figure 1), an encounter form used by participating physicians to record selected information about their office visits. A brief description of the sample design and an explanation of sampling errors associated with the estimates may be found in the "Technical Notes" of this report. A more detailed description of the sample design used in NAMCS has been presented in an earlier report.<sup>2</sup>

### DATA HIGHLIGHTS

During the 24-month period of January 1975 through December 1976 an estimated 35.7 million visits were made to office-based physicians specializing in dermatology (table 1). This represents 3.1 percent of the estimated 1.2 billion ambulatory visits to physicians' offices during this period.

Of the estimated 35.7 million visits to dermatologists from January 1975 through December 1976, approximately two-thirds (67 percent) were made to physicians engaged in solo practice (table 2). This exceeded the proportion of visits made to all physicians in solo practice (60 percent). Table 2 also shows that visits to dermatologists located in metropolitan areas (86 percent) exceeded the proportion to those practicing in nonmetropolitan areas (14 percent).

The data in table 3 show that the proportion of visits to dermatologists made by females (60 percent) exceeded the proportion made by males (40 percent). This distribution by sex is the same for visits to all office-based physicians. The distribution of visits to dermatologists (table 3) by age of patient shows that approximately 40 percent of the visits were made by persons under 25 years of age. The visit rate per 100 persons per year varied from a low of 3.6 for persons under 15 years to a high of 13.7 for persons aged 15-24 years. It may be noted from table 3 that the proportion of visits by black persons to dermatologists (5 percent) was less than the proportion made by black persons to all physicians (8 percent).

<sup>1</sup>This report was prepared by Trena Ezzati, Division of Health Resources Utilization Statistics.

<sup>2</sup>National Center for Health Statistics: The National Ambulatory Medical Care Survey: 1975 summary, United States, January-December 1975, by H. Koch and T. McLemore. *Vital and Health Statistics*. Series 13-No. 33. DHEW Pub. No. (PHS) 78-1784. Public Health Service, Washington. U.S. Government Printing Office, Jan. 1978.

Figure 1. PATIENT RECORD

1. DATE OF VISIT		PATIENT RECORD			7. HAVE YOU EVER SEEN THIS PATIENT BEFORE?				
Mo / Day / Yr		NATIONAL AMBULATORY MEDICAL CARE SURVEY			<input type="checkbox"/> YES <input type="checkbox"/> NO If YES, for the problem indicated in ITEM 5a? <input type="checkbox"/> YES <input type="checkbox"/> NO				
2. DATE OF BIRTH		4. COLOR OR RACE	5. PATIENT'S PRINCIPAL PROBLEM(S) COMPLAINT(S), OR SYMPTOM(S) THIS VISIT		6. SERIOUSNESS OF PROBLEM IN ITEM 5a				
Mo / Day / Yr		<input type="checkbox"/> 1 WHITE <input type="checkbox"/> 2 NEGRO/BLACK <input type="checkbox"/> 3 OTHER <input type="checkbox"/> 4 UNKNOWN	(In patient's own words) a MOST IMPORTANT _____ b OTHER _____		(Check one) <input type="checkbox"/> 1 VERY SERIOUS <input type="checkbox"/> 2 SERIOUS <input type="checkbox"/> 3 SLIGHTLY SERIOUS <input type="checkbox"/> 4 NOT SERIOUS				
3. SEX		8. MAJOR REASON(S) FOR THIS VISIT		9. PHYSICIAN'S PRINCIPAL DIAGNOSIS THIS VISIT					
<input type="checkbox"/> 1 FEMALE <input type="checkbox"/> 2 MALE		(Check all major reasons) <input type="checkbox"/> 1 ACUTE PROBLEM <input type="checkbox"/> 2 ACUTE PROBLEM, FOLLOW-UP <input type="checkbox"/> 3 CHRONIC PROBLEM, ROUTINE <input type="checkbox"/> 4 CHRONIC PROBLEM FLARE-UP <input type="checkbox"/> 5 PRENATAL CARE <input type="checkbox"/> 6 POSTNATAL CARE <input type="checkbox"/> 7 POSTOPERATIVE CARE (Operative procedure) _____		a. DIAGNOSIS ASSOCIATED WITH ITEM 5a ENTRY _____ b. OTHER SIGNIFICANT CURRENT DIAGNOSES (In order of importance) _____					
10. DIAGNOSTIC/THERAPEUTIC SERVICES ORDERED/PROVIDED THIS VISIT		11. DISPOSITION THIS VISIT		12. DURATION OF THIS VISIT					
(Check all that apply) 01 <input type="checkbox"/> NONE 02 <input type="checkbox"/> LIMITED HISTORY/EXAM 03 <input type="checkbox"/> GENERAL HISTORY/EXAM 04 <input type="checkbox"/> CLINICAL LAB. TEST 05 <input type="checkbox"/> BLOOD PRESSURE CHECK 06 <input type="checkbox"/> EKG 07 <input type="checkbox"/> HEARING TEST 08 <input type="checkbox"/> VISION TEST 09 <input type="checkbox"/> ENDOSCOPY 10 <input type="checkbox"/> OFFICE SURGERY		(Check all that apply) 11 <input type="checkbox"/> DRUG PRESCRIBED 12 <input type="checkbox"/> X-RAY 13 <input type="checkbox"/> INJECTION 14 <input type="checkbox"/> IMMUNIZATION/DESENSITIZATION 15 <input type="checkbox"/> PHYSIOTHERAPY 16 <input type="checkbox"/> MEDICAL COUNSELING 17 <input type="checkbox"/> PSYCHOTHERAPY/THERAPEUTIC LISTENING 18 <input type="checkbox"/> OTHER (Specify) _____		(Check all that apply) <input type="checkbox"/> 1 NO FOLLOW-UP PLANNED <input type="checkbox"/> 2 RETURN AT SPECIFIED TIME <input type="checkbox"/> 3 RETURN IF NEEDED, P.R.N. <input type="checkbox"/> 4 TELEPHONE FOLLOW-UP PLANNED <input type="checkbox"/> 5 REFERRED TO OTHER PHYSICIAN/AGENCY <input type="checkbox"/> 6 RETURNED TO REFERRING PHYSICIAN <input type="checkbox"/> 7 ADMIT TO HOSPITAL <input type="checkbox"/> 8 OTHER (Specify) _____			(Time actually spent with physician) _____ MINUTES		

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Data concerning the patient's prior visit status (table 3) show that 74 percent of the visits to dermatologists were made by old returning patients and 26 percent by new patients. Furthermore, the percent of visits by new patients to dermatologists (26 percent) was proportionately higher than such visits to all physicians (15 percent).

Table 4 presents the most common patient problems, complaints, or symptoms presented to the dermatologist. The patients' problems, complaints, or symptoms are coded according to a special classification developed for use in

NAMCS.<sup>3</sup> The nine problems, complaints, or symptoms presented in table 4 accounted for 84 percent of all problems presented to the dermatologist. Visits for acne (24 percent) out-

<sup>3</sup>National Center for Health Statistics: The National Ambulatory Medical Care Survey: symptom classification, United States, by S. Meads and T. McLemore. *Vital and Health Statistics*. Series 2-No. 63. DHEW Pub. No. (HRA) 74-1337. Health Resources Administration, Washington. U.S. Government Printing Office, May 1974.

numbered visits to the dermatologist for any other problem.

Information on the physician's judgment of the seriousness of the patient's problem, complaint, or symptom (in terms of the extent of impairment that might result if care were not available) is presented in table 5. Compared with visits to all physicians, the percent of visits to dermatologists for "not serious" problems was proportionately higher (55 percent compared with 49 percent), and the percent for "serious or very serious" was proportionately lower (12 percent compared with 19 percent).

Tables 6 and 7 present information on the principal diagnosis associated with office visits to dermatologists. In table 6 the diagnostic data are grouped by the classes used in the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA)*.<sup>4</sup> As might be predicted, the majority (63 percent) of diagnoses rendered by the dermatologist fell into the category of diseases of the skin and subcutaneous tissue. An additional 17 percent of the visits were for infective and parasitic diseases. Table 7 provides a listing of the 11 specific diagnoses most commonly rendered by the dermatologist. These 11 diagnoses accounted

for approximately 72 percent of all diagnoses rendered by the dermatologist.

Information in table 8 shows that the most frequent diagnostic service ordered or provided by the dermatologist was the limited examination (48 percent). This percentage did not differ statistically from the corresponding statistic for all physicians (52 percent). The two therapeutic services most frequently ordered or provided by the dermatologist were drugs prescribed (55 percent) and office surgery (31 percent). The percentages for these two services were both higher than the overall percentages for all physicians (44 and 7 percent, respectively).

Data on disposition (table 8) show that less than 1 in 10 (9 percent) of the visits required no followup and that approximately two-thirds of the visits were scheduled for followup.

Duration of the visit represents the amount of time spent by the patient in face-to-face contact with the physician. From table 8 it may be noted that over one-half (58 percent) of the visits to dermatologists took less than 11 minutes. The mean duration of visits for office visits to dermatologists was approximately 12 minutes. This was significantly less than the estimated mean duration of 15 minutes for all physicians.

<sup>4</sup>National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

Table 1. Number and percent distribution of office visits by physician specialty: United States, 1975-76

Physician specialty	Number of visits in thousands	Percent distribution
All specialties .....	1,155,900	100.0
General and family practice .....	460,297	39.8
Internal medicine .....	130,367	11.3
Pediatrics .....	107,085	9.3
Obstetrics and gynecology .....	97,070	8.4
General surgery .....	77,259	6.7
Orthopedic surgery .....	47,152	4.1
Dermatology .....	35,721	3.1
All other .....	200,949	17.4

Table 2. Number and percent distribution of office visits to dermatologists and percent distribution of office visits to all specialists by type and location of physician's practice: United States, 1975-76

Type and location of physician's practice	Visits to dermatologists		Visits to all specialists
	Number in thousands	Percent distribution	
All visits .....	35,721	100.0	100.0
<b>Type of practice</b>			
Solo .....	23,902	66.9	60.0
Partner .....	3,189	8.9	17.1
Group .....	8,630	24.2	22.9
<b>Location of practice</b>			
Metropolitan .....	30,588	85.6	73.3
Nonmetropolitan .....	5,133	14.4	26.7

Table 3. Number, percent distribution, and rate per year of office visits to dermatologists and percent distribution of office visits to all specialists by patient's age, sex, race, and prior visit status: United States, 1975-76

Patient characteristic	Visits to dermatologists			Visits to all specialists
	Number in thousands	Percent distribution	Number per 100 persons per year	Percent distribution
All visits .....	35,721	100.0	8.6	100.0
<u>Age</u>				
Under 15 years .....	3,792	10.6	3.6	18.1
15-24 years.....	10,583	29.6	13.7	15.1
25-44 years.....	8,954	25.1	8.5	25.5
45-64 years.....	7,881	22.1	9.2	25.1
65 years and over .....	4,511	12.6	10.5	16.2
<u>Sex</u>				
Female .....	21,369	59.8	9.9	60.4
Male .....	14,352	40.2	7.1	39.6
<u>Race</u>				
White.....	33,576	94.0	9.3	89.9
Black.....	1,813	5.1	3.9	7.8
Other.....	*332	0.9		2.3
<u>Prior visit status</u>				
New patient.....	9,229	25.8	-	14.6
Old patient:				
New problem.....	4,214	11.8	-	23.2
Old problem.....	22,279	62.4	-	62.3

Table 4. Number, percent, and cumulative percent of office visits to dermatologists by the 9 most common patient problems, complaints, or symptoms: United States, 1975-76

Rank	9 most common patient problems, complaints, or symptoms and NAMCS codes <sup>1</sup>	Number of visits in thousands	Percent of visits <sup>2</sup>	Cumulative percent of visits
1	Acne .....100	8,431	23.6	23.6
2	Allergic skin reactions .....112	5,712	16.0	39.6
3	Other specific symptoms referable to skin.....120	3,930	11.0	50.6
4	Swelling or mass of skin .....115	3,497	9.8	60.4
5	Warts.....111	3,002	8.4	68.8
6	Skin irritations not elsewhere classified.....113	2,118	5.9	74.7
7	Discoloration or pigmentation .....104	1,871	5.2	79.9
8	Skin moles .....109	818	2.3	82.2
9	Surgical aftercare .....986	640	1.8	84.0

<sup>1</sup>Symptom titles and code numbers are based on a symptom classification developed for use in NAMCS.<sup>2</sup>Based on an estimated 35,721,000 visits.

Table 5. Number and percent distribution of office visits to dermatologists and percent distribution of office visits to all specialists by degree of seriousness of patient's problem: United States, 1975-76

Degree of seriousness	Visits to dermatologists		Visits to all specialists
	Number in thousands	Percent distribution	
All visits.....	35,721	100.0	100.0
Serious or very serious	4,152	11.6	19.2
Slightly serious .....	11,869	33.2	32.3
Not serious .....	19,701	55.2	48.5

NOTE: Numbers may not add to totals due to rounding.

Table 6. Number and percent distribution of office visits to dermatologists by major ICDA diagnostic groups: United States, 1975-76

Major ICDA diagnostic group and ICDA code <sup>1</sup>	Number of visits in thousands	Percent of visits
All visits.....	35,721	100.0
Infective and parasitic diseases .....000-136	5,898	16.5
Neoplasms .....140-239	3,743	10.5
Diseases of the respiratory system .....460-519	*553	1.6
Diseases of the skin and subcutaneous tissue .....680-709	22,546	63.1
Symptoms and ill-defined conditions.....780-796	*566	1.6
All other diagnoses .....	2,415	6.8

<sup>1</sup>Diagnostic groups and codes are based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*.

Table 7. Number, percent, and cumulative percent of office visits to dermatologists by 11 most common principal diagnoses: United States, 1975-76

Rank	11 most common principal diagnoses and ICDA codes <sup>1</sup>	Number of visits in thousands	Percent of visits <sup>2</sup>	Cumulative percent of visits
1	Diseases of sebaceous glands .....706	9,598	26.9	26.9
2	Other eczema and dermatitis.....692	3,701	10.4	37.3
3	Other viral diseases.....079	3,098	8.7	46.0
4	Other hypertrophic and atrophic conditions of skin .....701	1,965	5.5	51.5
5	Other malignant neoplasm .....173	1,737	4.9	56.4
6	Psoriasis and similar disorders .....696	1,372	3.8	60.2
7	Benign neoplasm of skin .....216	1,198	3.4	63.6
8	Pruitus and related conditions.....698	820	2.3	65.9
9	Dermatophytosis.....110	782	2.2	68.1
10	Seborrheic dermatitis.....690	743	2.1	70.2
11	Other diseases of skin.....709	727	2.0	72.2

<sup>1</sup>Diagnostic categories and codes are based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*.

<sup>2</sup>Based on an estimated 35,721,000 visits.

Table 8. Number and percent of office visits to dermatologists and percent of office visits to all specialists by services ordered or provided, and disposition and duration of visit: United States, 1975-76

Service ordered or provided and disposition and duration of visit	Visits to dermatologists		Visits to all specialists
	Number in thousands	Percent of visits	
<u>Service ordered or provided</u>			
No service.....	1,234	3.5	2.5
Diagnostic service (selected services):			
Limited history and/or examination.....	17,108	47.9	51.6
General history and/or examination.....	1,493	4.2	16.3
Clinical laboratory test.....	1,755	4.9	22.8
X-ray.....	*336	0.9	7.5
Blood pressure check.....	*377	1.1	33.2
Therapeutic service (selected services):			
Drug prescribed.....	19,625	54.9	43.6
Injection.....	2,095	5.9	13.1
Immunization and/or desensitization.....	892	2.5	4.9
Office surgery.....	11,128	31.2	6.9
Physiotherapy.....	2,321	6.5	2.6
Medical counseling.....	4,874	13.6	13.0
<u>Disposition of visit (selected actions)</u>			
No followup.....	3,359	9.4	12.3
Return at a specified time.....	23,812	66.7	60.2
Return if needed.....	7,397	20.7	21.9
Telephone followup.....	838	2.4	3.5
Referred to other physician, agency.....	*346	1.0	2.8
<u>Duration of visit</u>			
0 minutes <sup>1</sup> .....	1,058	3.0	1.8
1-5 minutes.....	6,160	17.3	15.1
6-10 minutes.....	14,481	40.5	31.5
11-15 minutes.....	9,876	27.7	26.6
16-30 minutes.....	3,899	10.9	19.5
31 minutes or more.....	*248	0.7	5.5

<sup>1</sup>Represents no face-to-face contact between the patient and the physician.

#### 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.....	*

**TECHNICAL NOTES**

**SOURCE OF DATA:** The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1975 and 1976. The target population of NAMCS encompasses office visits within the conterminous United States made by ambulatory patients to non-Federal physicians who are principally engaged in office practice and not in the specialties of anesthesiology, pathology or radiology. The National Opinion Research Center, under contract to the National Center for Health Statistics, was the organization responsible for the survey's field operations and data processing.

**SAMPLE DESIGN:** NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within practices. Each year a sample of practicing physicians is selected from masterfiles maintained by the American Medical Association and American Osteopathic Association. The 1975 and 1976 NAMCS samples included 110 dermatologists, of whom 8 were found not eligible for participation at the time of the survey. Of the 102 dermatologists who were eligible for participation in NAMCS, 81 (79.4 percent) participated in the survey. The sample physicians are requested to complete Patient Records<sup>5</sup> (brief encounter forms) for a systematic random sample of office visits taking place within their practice during a randomly assigned weekly reporting period. The number of Patient Records completed by sample dermatologists was 2,665 for the 2-year period.

Characteristics of the physician's practice such as primary specialty and type of practice are obtained during an induction interview.

**SAMPLING ERRORS:** Since the estimates for this report are based on a sample rather than the entire universe, they are subject to sampling variability. The standard error is primarily a measure of sampling variability. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the esti-

mate. Relative standard errors of selected aggregate statistics are shown in table I. The standard errors appropriate for estimated percentages of visits are shown in table II.

**Table I. Approximate relative standard errors of estimated numbers of office visits, NAMCS, 1975-76**

Estimated number of office visits in thousands	Relative standard error in percent
600.....	30.2
1,000.....	23.5
2,000.....	16.7
4,000.....	12.0
10,000.....	8.0
40,000.....	4.8
200,000.....	3.4
1,000,000.....	3.1

*Example of use of table:* An aggregate estimate of 25,000,000 visits has a relative standard error of 6.4 percent or a standard error of 1,600,000 visits (6.4 percent of 25,000,000).

**Table II. Approximate standard errors of percentages of estimated numbers of office visits, NAMCS, 1975-76**

Base of percentage (number of visits in thousands)	Estimated percentage					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
600.....	3.0	6.5	9.0	12.0	13.8	15.0
1,000.....	2.3	5.1	7.0	9.3	10.7	11.6
2,000.....	1.6	3.6	4.9	6.6	7.5	8.2
4,000.....	1.2	2.5	3.5	4.7	5.3	5.8
10,000.....	0.7	1.6	2.2	2.9	3.4	3.7
40,000.....	0.4	0.8	1.1	1.5	1.7	1.8
200,000.....	0.2	0.4	0.5	0.7	0.8	0.8
1,000,000.....	0.1	0.2	0.2	0.3	0.3	0.4

*Example of use of table:* An estimate of 20 percent based on an aggregate estimate of 80,000,000 visits has a standard error of 1.3 percent. The relative standard error of 20 percent is 6.5 percent (1.3 percent ÷ 20 percent).

**DEFINITIONS:** An *ambulatory patient* is an individual presenting himself or herself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

An *office* is a place that the physician identifies as a location for his or her ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

<sup>5</sup>See figure 1.



A *visit* is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's supervision for the purpose of seeking care and rendering health services.

A *physician* is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in office-based practice who spends time in caring for ambulatory patients. Excluded

from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • Public Health Service | Number 38 • August 25, 1978

## OFFICE VISITS TO PSYCHIATRISTS: NATIONAL AMBULATORY MEDICAL CARE SURVEY, UNITED STATES, 1975-76<sup>1</sup>

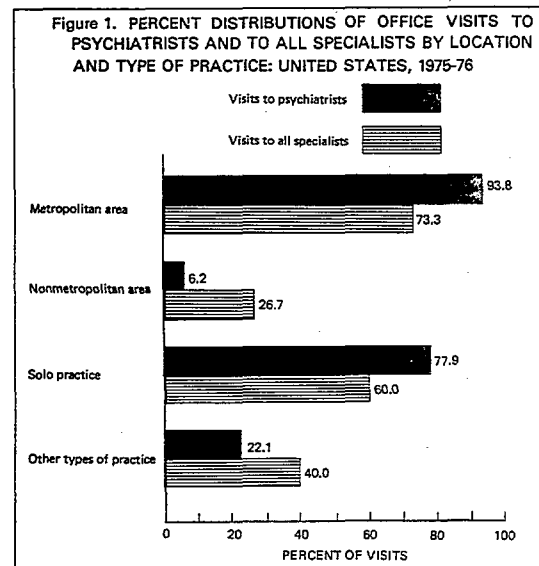
During combined calendar years 1975 and 1976 psychiatrists' offices were the settings for 30.6 million ambulatory care visits by patients who presented a broad spectrum of emotional, ideational, and behavioral problems.

The data were obtained during the National Ambulatory Medical Care Survey (NAMCS), a sample survey conducted by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics. The estimates in this report are based on information recorded by participating psychiatrists on brief encounter forms (see Technical Notes) during sampled office encounters. A brief description of the sample design and an explanation of the sampling errors associated with selected aggregate statistics can be found in the Technical Notes of this report.

Most visits to psychiatrists were to offices located in metropolitan areas (94 percent); this was a higher proportion than that for all specialists (figure 1).

The proportion of visits to psychiatrists engaged in solo practice (78 percent) exceeded those to other types of arrangements. In this respect office based psychiatric practice also differed from the average of 60 percent for all specialists.

Reflecting the continuous nature of psychiatric care, 9 of 10 visits were made by patients the physician had seen before and who returned for care of a problem the physician had treated



previously (figure 2). The ratio of return visits to new problem visits was higher for psychiatrists than for any other specialty. New problem visits included initial visits and those made by patients known to the physician but presenting a new problem. For each new problem visit to a psychiatrist there were 8.6 "old" problem visits in contrast to an old to new ratio of 1.6 for all specialists.

Of the 2.1 million *new* patients seen by psychiatrists, 30 percent were referred by another physician or agency.

Distributions of visits by patient age, sex, and race are shown in table 1. The majority of visits included patients between the ages of 25 and 44 years. The visit rate was also higher for this age range than for any other group. Patients 65 years and over comprised the smallest group visiting. For each 100 persons of that age in the

<sup>1</sup>This report was prepared by Beulah K. Cypress, Ph.D., Division of Health Resources Utilization Statistics.

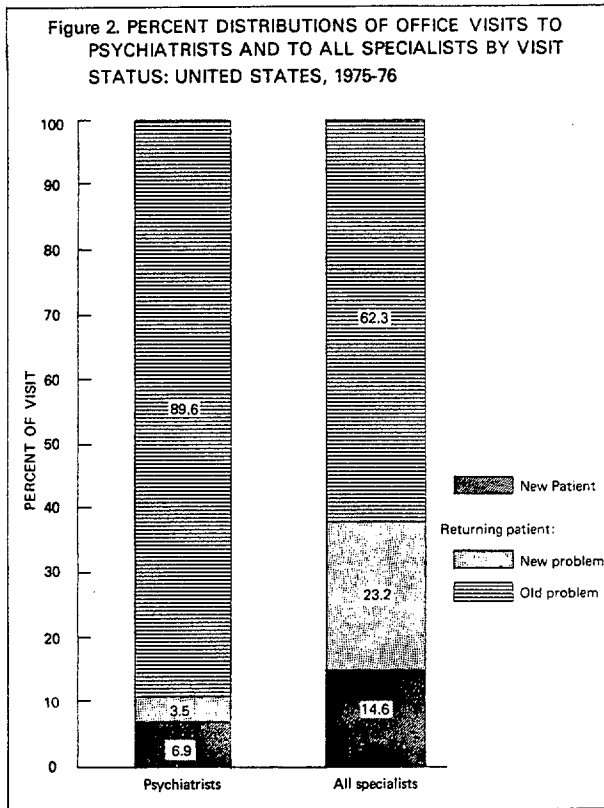


Table 1. Number, percent distribution, and rate of office visits to psychiatrists by patient age, sex, and race: United States, 1975-76

Age, sex, and race	Number of visits in thousands	Percent distribution	Visit rate per 100 in population
All visits.....	30,616	100.0	7.3
<b>Age</b>			
Under 15 years .....	2,632	8.6	2.5
15-24 years .....	4,662	15.2	6.0
25-34 years .....	9,109	29.8	15.0
35-44 years .....	7,053	23.0	15.8
45-54 years .....	4,294	14.0	9.2
55-64 years .....	1,934	6.3	4.9
65 years and over.....	933	3.0	2.2
<b>Sex</b>			
Female.....	18,406	60.1	8.5
Male.....	12,210	39.9	6.1
<b>Race</b>			
White .....	29,319	95.8	8.1
Black and other races.....	1,297	4.2	2.4

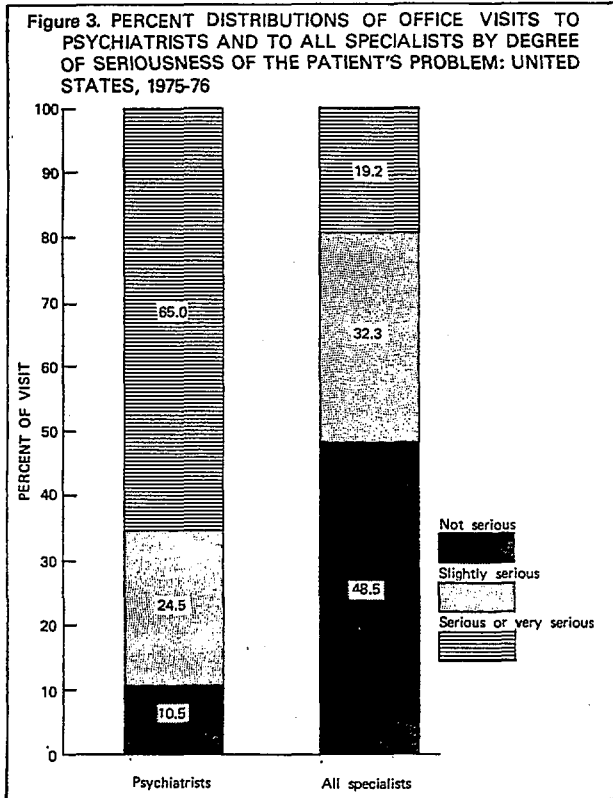
population only two visits were made to psychiatrists' offices, whereas there were about 15 visits for each 100 persons aged 25-44 years. Females visited at a significantly higher rate than did males. Members of the white race clearly outnumbered other persons in visits with the visit rate for the former group about three times the rate of the latter group. The distribution of mental disorders among different races, or the total pattern of psychiatric care by race, should not be inferred from these data. First, disease incidence and prevalence cannot be equated with visits for a disease; and second, care may be obtained from facilities other than physicians' offices. For example, in 1975 members of black and all other races utilized outpatient departments of hospitals and free-standing psychiatric clinics, settings not presently included in NAMCS, at a higher rate than did white persons.<sup>2</sup>

Seriousness of the patient's problem was evaluated by the psychiatrist using the criterion of the extent of impairment that might result if no care were available. On a four-point scale ranging from not serious to very serious, psychiatrists judged 65 percent of their visiting patients to be serious or very serious. Only 11 percent were considered not serious in contrast to the finding of about 49 percent for all specialists (figure 3).

Patients' problems were more often diagnosed in the nonpsychotic group of mental disorders (79.5 percent) than in the psychotic (20.5 percent). Despite a broad array of symptoms and complaints presented by visiting patients, 84 percent of the visits were diagnosed by psychiatrists in only seven diagnostic classes (table 2). Primary diagnoses listed on the Patient Record by participating physicians were classified according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA).<sup>3</sup> Another

<sup>2</sup>Division of Biometry and Epidemiology, National Institute of Mental Health. Unpublished data from the National Reporting Program of the National Institute of Mental Health.

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



taxonomy of mental disorders, the *Diagnostic and Statistical Manual of Mental Disorders, Second Edition (DSM-II)*, which is also used by the mental health community, is compatible with ICDA at the three-digit level of specificity, which is used in this report.<sup>4</sup> DSM-II includes a

<sup>4</sup>American Psychiatric Association Committee on Nomenclature and Statistics: *Diagnostic and Statistical Manual of Mental Disorders, 2d ed.* American Psychiatric Association, Washington, D.C. 1968.

glossary of operational definitions of terms which the nonmedical reader may find useful.

A diagnosis of neurosis was clearly the foremost clinical determination made by psychiatrists, accounting for 42-percent of all visits. Personality disorders (about 14 percent) increased the total to more than half of all visits. Two psychotic states, schizophrenia (11 percent) and affective psychosis (about 5 percent) were among the highest ranking illnesses.

The group of visits which were coded in the symptoms and ill-defined conditions ICDA class of senility and ill-defined diseases (790-796) were chiefly listed as depression (790.2). Apparently the physician indicated that these visits were not of psychotic or psychoneurotic origin, which are usually assigned to mental disorders (290-315).

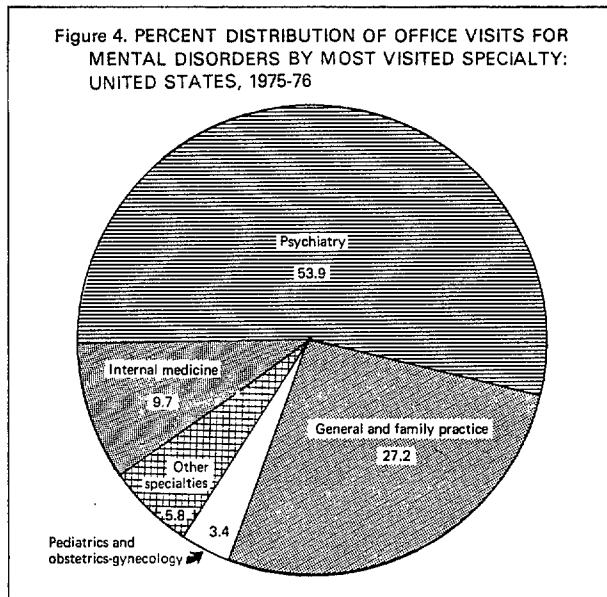
An examination of the characteristics of psychiatric office practice is largely a study of treatment of mental disorders in the setting of ambulatory office care. While not all patients with mental problems visited psychiatrists' offices in preference to other physicians, almost all visits to psychiatrists involved mental ailments, as previously shown. Of the 48.5 million visits to all specialists for mental disorders during 1975-76, 54 percent, or 26.2 million, were to office based psychiatrists. As illustrated in figure 4, visits to other specialists were mainly diagnosed as neuroses. Psychiatrists had the major portions of visits for the psychotic problems schizophrenia (92 percent) and affective psychoses (73 percent). Visits by patients requiring guidance for transient and situational disturbances also occurred more frequently in

**Table 2. Number, percent, and cumulative percent of office visits to psychiatrists by 7 most common principal diagnoses classified by ICDA code in rank order of number of visits: United States, 1975-76**

Rank	Principal diagnosis and ICDA code <sup>1</sup>	Number of visits in thousands	Percent of visits	Cumulative percent
1	Neuroses .....300	12,824	41.9	41.9
2	Personality disorders.....301	4,117	13.5	55.4
3	Schizophrenia .....295	3,445	11.3	66.7
4	Transient and situational disturbances.....307	2,188	7.2	73.9
5	Affective psychoses.....296	1,404	4.6	78.5
6	Nervousness and debility (depression).....790	1,115	3.6	82.1
7	Medical or special examination .....Y00	570	1.9	84.0

<sup>1</sup>Diagnostic groupings and codes are based on the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States.*

Figure 4. PERCENT DISTRIBUTION OF OFFICE VISITS FOR MENTAL DISORDERS BY MOST VISITED SPECIALTY: UNITED STATES, 1975-76



psychiatrists' offices than in those of other specialists (table 3).

The Patient Record used in NAMCS was developed as a general purpose data collection instrument for the purpose of capturing the most pertinent information about ambulatory office care visits. The practice of psychiatry, unique in its diagnostic and therapeutic procedures, cannot be as succinctly characterized by the NAMCS data as can some other specialties. The types of diagnostic procedures described on the Patient Record were not heavily utilized during visits to psychiatrists as table 4 shows. Only from about 3 to 9 percent of visits included the usual medical procedures. However,

Table 3. Number of office visits to all specialists and percent of office visits to psychiatrists, by selected diagnoses classified by ICDA codes: United States, 1975-76

Diagnosis and ICDA code <sup>1</sup>	Number of visits to all specialists in thousands	Percent of visits to psychiatrists
Schizophrenia.....295	3,764	91.5
Affective psychoses.....296	1,923	73.0
Neuroses .....300	25,698	49.9
Transient and situational disturbances.....307	2,913	75.1
Nervousness and debility (depression) .....790	6,132	18.2

<sup>1</sup>Diagnostic groups and codes are based on the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*.

Table 4. Number and percent of office visits to psychiatrists, by selected diagnostic and therapeutic services ordered or provided: United States, 1975-76

Diagnostic or therapeutic service	Number of visits in thousands	Percent of visits
Limited history and examination.....	2,745	9.0
General examination.....	1,263	4.1
Clinical lab test.....	751	2.5
Blood pressure check.....	1,639	5.4
Drug prescribed.....	7,732	25.3
Injection or immunization.....	814	2.7
Counseling.....	1,597	5.2
Psychotherapy.....	26,337	86.0

since NAMCS did not provide separately for diagnostic procedures more common to psychiatry such as electroencephalograph and psychological testing, there is no way to estimate the scope of diagnostic activity. Many of these techniques are embedded in the single NAMCS category, "psychotherapy." Unable to select a more specific category, psychiatrists checked this term for 86 percent of their visits. The definition of "psychotherapy" as used in NAMCS, shown in the Technical Notes, covers a wide variety of techniques, some diagnostic and some therapeutic. Therefore it is not possible to determine whether the 86 percent includes diagnostic, therapeutic, or other types of services.

As with diagnostic services, data regarding certain therapeutic techniques such as psychoanalysis, sociological services, hypnotherapy, group therapy, or shock therapy were not available through NAMCS. Drugs were administered or prescribed for about 25 percent of visits which was less than the average proportion of 44 percent of visits to all specialists. Drug therapy was selected more often for the psychotic diagnoses, schizophrenia and affective psychoses, than for the nonpsychotic diagnoses, personality disorders and neuroses.

Highly correlating with the proportion of return visits, 89 percent of psychiatrists' visits resulted in the instruction to return at a specified time. In only 4 percent of visits was no followup planned. The disposition of very few visits was admittance to a hospital.

In view of the importance of direct physician-patient communication during psychiatric visits, it is not unexpected that the average dura-

Table 5. Number and percent distribution of office visits to psychiatrists by duration of visit: United States, 1975-76

Duration of visit	Number of visits in thousands	Percent distribution
All visits.....	30,616	100.0
0-5 minutes.....	759	2.5
6-10 minutes.....	892	2.9
11-15 minutes.....	1,197	3.9
16-30 minutes.....	5,434	17.8
31-60 minutes.....	21,181	69.2
61 minutes or more.....	1,153	3.8

tion of psychiatric encounters exceeded that of other physicians. The mean contact duration was 15.3 minutes ( $\pm 0.2$ ) for all physician visits and 46.9 minutes ( $\pm 1.85$ ) for psychiatrists' visits. According to the data listed in table 5 over 69 percent of visits to psychiatrists lasted from 31 to 60 minutes. Only 4 percent were more than 60 minutes long, and 9 percent consumed less than 16 minutes.

TECHNICAL NOTES

**SOURCE OF DATA:** The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1975 and 1976. The target population of NAMCS encompasses office visits within the conterminous United States made by ambulatory patients to physicians who are principally engaged in office practice. The National Opinion Research Center, under contract to NCHS, was the organization responsible for the survey's field operation.

**SAMPLE DESIGN:** NAMCS utilized a multi-stage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within practices. Each year a sample of practicing physicians is selected from master files maintained by the American Medical Association and the American Osteopathic Association. The 1975-76 sample included 468 psychiatrists with a response rate of 88 percent for the 2 years. These physicians are requested to complete Patient Records<sup>5</sup> for a systematic random sample of office visits taking place within their practice during a randomly assigned weekly reporting period. Participating psychiatrists completed 7,462 Patient Records during the 2 year period. Characteristics of the physician's practice, such as primary specialty and type of practice, are obtained during an induction interview. A de-

tailed description of the NAMCS design and procedures may be found in Series 13, Number 33, of *Vital and Health Statistics*.

**SAMPLING ERRORS:** Since the estimates for this report are based on a sample rather than the entire universe, they are subject to sampling variability. The relative standard error of an estimate is primarily a measure of sampling variability. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the estimate. Relative standard errors of selected aggregate statistics are shown in table I. The standard errors appropriate for the estimated percentages of office visits are shown in table II.

Table I. Approximate relative standard error of estimated numbers of office visits, NAMCS 1975-76

Estimate in thousands	Relative standard error in percentage points
600.....	30.2
1,000.....	23.5
2,000.....	16.7
4,000.....	12.0
10,000.....	8.0
40,000.....	4.8
200,000.....	3.4
1,000,000.....	3.1

*Example of use of table:* An aggregate estimate of 25,000,000 visits has a relative standard error of 6.4 percent or a standard error of 1,600,000 visits (6.4 percent of 25,000,000).

<sup>5</sup> See figure I.

Table II. Approximate standard errors of percentages for estimated numbers of office visits, NAMCS 1975-76

Base of percentage (number of visits in thousands)	Estimated percentage					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
600.....	3.0	6.5	9.0	12.0	13.8	15.0
1,000.....	2.3	5.1	7.0	9.3	10.7	11.6
2,000.....	1.6	3.6	4.9	6.6	7.5	8.2
4,000.....	1.2	2.5	3.5	4.7	5.3	5.8
10,000.....	0.7	1.6	2.2	2.9	3.4	3.7
40,000.....	0.4	0.8	1.1	1.5	1.7	1.8
200,000.....	0.2	0.4	0.5	0.7	0.8	0.8
1,000,000.....	0.1	0.2	0.2	0.3	0.3	0.4

Example of use of table: An estimate of 20 percent based on an aggregate estimate of 80,000,000 visits has a standard error of 1.3 percent. The relative standard error of 20 percent is 6.5 (1.3 percent ÷ 20 percent).

**ROUNDING:** Aggregate estimates of office visits presented in the tables are rounded to the nearest thousand. The rates and percents, however, were calculated on the basis of original, unrounded figures. Due to rounding of percents, the sum of percentages may not equal 100.0 percent.

**DEFINITIONS:** An *ambulatory patient* is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

An *office* is a place that the physician identifies as a location for his ambulatory patients. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

Figure I. PATIENT RECORD

ASSURANCE OF CONFIDENTIALITY—All information which would permit identification of an individual, a practice, or 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.

BN#

### PATIENT RECORD

#### NATIONAL AMBULATORY MEDICAL CARE SURVEY

**1. DATE OF VISIT**  
Mo / Day / Yr

**2. DATE OF BIRTH**  
Mo / Day / Yr

**3. SEX**  
 FEMALE  
 MALE

**4. COLOR OR RACE**  
 WHITE  
 NEGRO/BLACK  
 OTHER  
 UNKNOWN

**5. PATIENT'S PRINCIPAL PROBLEM(S) COMPLAINT(S), OR SYMPTOM(S) THIS VISIT**  
*(In patient's own words)*  
 a. MOST IMPORTANT \_\_\_\_\_  
 b. OTHER \_\_\_\_\_

**6. SERIOUSNESS OF PROBLEM IN ITEM 5a**  
*(Check one)*  
 VERY SERIOUS  
 SERIOUS  
 SLIGHTLY SERIOUS  
 NOT SERIOUS

**7. HAVE YOU EVER SEEN THIS PATIENT BEFORE?**  
 YES     NO  
*If YES, for the problem indicated in ITEM 5a?*  
 YES     NO

**8. MAJOR REASON(S) FOR THIS VISIT** *(Check all major reasons)*

<input type="checkbox"/> ACUTE PROBLEM	<input type="checkbox"/> WELL ADULT/CHILD EXAM
<input type="checkbox"/> ACUTE PROBLEM, FOLLOW-UP	<input type="checkbox"/> FAMILY PLANNING
<input type="checkbox"/> CHRONIC PROBLEM, ROUTINE	<input type="checkbox"/> COUNSELING/ADVICE
<input type="checkbox"/> CHRONIC PROBLEM, FLARE-UP	<input type="checkbox"/> IMMUNIZATION
<input type="checkbox"/> PRENATAL CARE	<input type="checkbox"/> REFERRED BY OTHER PHYS/AGENCY
<input type="checkbox"/> POSTNATAL CARE	<input type="checkbox"/> ADMINISTRATIVE PURPOSE
<input type="checkbox"/> POSTOPERATIVE CARE	<input type="checkbox"/> OTHER <i>(Specify)</i> _____

*(Operative procedure)* \_\_\_\_\_

**9. PHYSICIAN'S PRINCIPAL DIAGNOSIS THIS VISIT**

a. DIAGNOSIS ASSOCIATED WITH ITEM 5a ENTRY  
 \_\_\_\_\_  
 \_\_\_\_\_

b. OTHER SIGNIFICANT CURRENT DIAGNOSES  
*(In order of importance)*  
 \_\_\_\_\_  
 \_\_\_\_\_

**10. DIAGNOSTIC/THERAPEUTIC SERVICES ORDERED/PROVIDED THIS VISIT** *(Check all that apply)*

<input type="checkbox"/> NONE	<input type="checkbox"/> DRUG PRESCRIBED
<input type="checkbox"/> LIMITED HISTORY/EXAM	<input type="checkbox"/> X-RAY
<input type="checkbox"/> GENERAL HISTORY/EXAM	<input type="checkbox"/> INJECTION
<input type="checkbox"/> CLINICAL LAB. TEST	<input type="checkbox"/> IMMUNIZATION/DESENSITIZATION
<input type="checkbox"/> BLOOD PRESSURE CHECK	<input type="checkbox"/> PHYSIOTHERAPY
<input type="checkbox"/> EKG	<input type="checkbox"/> MEDICAL COUNSELING
<input type="checkbox"/> HEARING TEST	<input type="checkbox"/> PSYCHOTHERAPY/THERAPEUTIC LISTENING
<input type="checkbox"/> VISION TEST	<input type="checkbox"/> OTHER <i>(Specify)</i> _____
<input type="checkbox"/> ENDOSCOPY	
<input type="checkbox"/> OFFICE SURGERY	

**11. DISPOSITION THIS VISIT**  
*(Check all that apply)*

NO FOLLOW-UP PLANNED

RETURN AT SPECIFIED TIME

RETURN IF NEEDED, P.R.N.

TELEPHONE FOLLOW-UP PLANNED

REFERRED TO OTHER PHYSICIAN/AGENCY

RETURNED TO REFERRING PHYSICIAN

ADMIT TO HOSPITAL

OTHER *(Specify)* \_\_\_\_\_

**12. DURATION OF THIS VISIT** *(Time actually spent with physician)*

\_\_\_\_\_ MINUTES

HRA-34-3  
REV. 8-74

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

O.M.B. #68-572106  
EXPIRATION DATE 12/31/75

A *visit* is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's supervision for the purpose of seeking care and rendering health services.

A *physician* is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in practice who spends time in caring for ambulatory patients at an office location. Excluded from NAMCS are physicians who specialize in anesthesiology, pathology, radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution;

and physicians who spend no time seeing ambulatory patients.

*Medical counseling*: Instructions and recommendations regarding any health problem, including advice or counsel about diet, change of habit, or behavior. Physicians are instructed to check this category only if the medical counseling is a *significant* part of the treatment.

*Psychotherapy/therapeutic listening*: All treatments designed to produce a mental or emotional response through suggestion, persuasion, reeducation, reassurance, or support, including psychological counseling, hypnosis, psychoanalysis, and transactional therapy.

#### 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-----	*



# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service | Number 39 ■ September 7, 1978

## Office Visits to Urologists, National Ambulatory Medical Care Survey: United States, 1975-76<sup>1</sup>

Using data from the National Ambulatory Medical Care Survey (NAMCS), this report describes an estimated 20,728,000 visits made to the offices of urologists over the 2-year span from January 1975 through December 1976. NAMCS is a sample survey designed to explore the provision and utilization of ambulatory care in the physician's office—the setting where most Americans seek health care. The survey is conducted yearly throughout the coterminous United States by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics. The survey sample is selected from doctors of medicine and osteopathy who are principally engaged in office-based, patient-care practice. Excluded from the sample are an indeterminate number of physicians who render some office-based ambulatory care but whose patient-care activities are secondary to another primary role such as teaching, research, or administration. Also excluded from the NAMCS scope are physicians who are hospital based; those whose specialty is anesthesiology, pathology, or radiology; and physicians in Federal service.

Since the estimates presented in this report are based on a sample rather than the entire universe of office-based, patient-care physicians, they are subject to sampling variability. Technical Notes, which follow this text, explain this and present guidelines for judging the relative precision of estimates in this publication. The directions offered there also provide the basis

<sup>1</sup>This report was prepared by Hugo Koch, Division of Health Resources Utilization Statistics.

for judging the statistical significance of differences between estimates.

### DATA HIGHLIGHTS

With their estimated 20,728,000 office visits in the 2-year span 1975-76, urologists were among the 13 types of specialists who figured most prominently in the provision of office-based ambulatory care (table 1).

Compared with the entire universe of office-based physicians, the overall preference for solo practices over multiple-member was reversed for urologists (table 2); more than half of the visits (57 percent) were made to physicians in multiple-member arrangements, a preference

Table 1. Number of office visits to the 13 most-visited specialists, by type of specialty in rank order: United States, 1975-76

Rank	Type of specialty	Number of visits in thousands
1	General and family practice.....	460,297
2	Internal medicine.....	130,367
3	Pediatrics.....	107,085
4	Obstetrics and gynecology.....	97,070
5	General surgery.....	77,259
6	Ophthalmology.....	53,959
7	Orthopedic surgery.....	47,152
8	Dermatology.....	35,721
9	Psychiatry.....	30,616
10	Otolaryngology.....	27,192
11	Urology.....	20,728
12	Cardiovascular disease.....	13,517
13	Neurology.....	3,784

Table 2. Number and percent distribution of office visits to urologists and percent distribution of office visits to all specialists by location and type of practice: United States, 1975-76

Location and type of practice	Number of visits to urologists in thousands	Visits to—	
		Urologists	All specialists
All visits.....	20,728	100.0	<sup>1</sup> 100.0
Percent distribution			
<u>Location of practice</u>			
Metropolitan area <sup>2</sup> .....	16,871	81.4	73.3
Nonmetropolitan area.....	3,857	18.6	26.7
<u>Type of practice</u>			
Solo.....	8,887	42.9	60.0
Other.....	11,841	57.1	40.0

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

<sup>2</sup>Within a standard metropolitan statistical area (SMSA). Composition of SMSA's does not reflect 1974 adjustments.

shared by four others among the most-visited specialists: pediatricians, obstetricians and gynecologists, orthopedic surgeons, and otolaryngologists.

A majority (60 percent) of visits to urologists were made by patients over 44 years of age (table 3). The median visit age (i.e., the age calculated from the distribution of visits rather than individual patients) was about 47 years, exceeding by 10 years the national median of 37 years calculated from visits to all office-based physicians. An estimated 60 percent of visits to urologists were made by male patients (table 3), a proportion that substantially exceeded the average proportion of male visits found in overall office-based practice (40 percent). Indeed, urology is one of the few specialties where visits by males equaled or exceeded visits by females, the other notable exceptions being pediatrics, orthopedic surgery, and cardiovascular disease.

The 19.8 percent of visits to urologists made by new patients is relatively high compared with the corresponding 14.6 percent found in overall office-based practice (table 3). Contributing in a large degree to this increased presence of new patients is the finding that 2 of

Table 3. Number and percent distribution of office visits to urologists and percent distribution of office visits to all specialists by selected characteristics of the patient: United States, 1975-76

Patient characteristic	Number of visits to urologists in thousands	Visits to—	
		Urologists	All specialists
All visits.....	20,728	100.0	<sup>1</sup> 100.0
Percent distribution			
<u>Age</u>			
Under 15 years.....	1,504	7.3	18.1
15-24 years.....	1,539	7.4	15.1
25-44 years.....	5,228	25.2	25.5
45-64 years.....	6,587	31.8	25.1
65 years and over.....	5,870	28.3	16.2
<u>Sex</u>			
Female.....	8,404	40.5	60.4
Male.....	12,324	59.5	39.6
<u>Prior visit status</u>			
New patient.....	4,109	19.8	14.6
Old patient:			
New problem.....	1,670	8.1	23.2
Old problem.....	14,949	72.1	62.3

<sup>1</sup>Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

every 5 of these visits by new patients were referrals from other physicians or agencies. This referral rate (8.4 percent of all the urologists' visits) is more than triple the average rate of 2.6 percent found for all office-based physicians. It is exceeded by only one other of the most-visited specialties—neurology. For the 5,779,000 visits at which a new problem was presented to the urologist (i.e., the 4,109,000 visits by new patients plus the 1,670,000 visits by old patients with new problems), there were 14,949,000 return visits, an average of 2.6 return visits per new problem per year, a rate considerably higher than the average of 1.6 return visits found in overall office practice. Indeed, it was exceeded by only two others among the most-visited specialties—psychiatry and cardiovascular disease.

Ten complaints or symptoms accounted for 3 of every 5 visits to the urologist (table 4). The

Table 4. Number, percent, and cumulative percent of office visits to urologists, by the 10 most common complaints or symptoms expressed by patients classified by NAMCS code and ranked by number of visits: United States, 1975-76

Rank	Most common complaint or symptom and NAMCS code <sup>1</sup>	Visits to urologists		
		Number in thousands	Percent	Cumulative percent
1	Symptoms referable to urinary tract NEC <sup>2</sup> (includes bladder trouble, passed stones).....620	2,541	12.3	12.3
2	Painful urination.....604	2,211	10.7	23.0
3	Frequency and nocturia.....601	1,936	9.3	32.3
4	Symptoms referable to the male reproductive system other than male infertility, psychosexual problems, and pain, swelling, or mass of male genital system.....640	1,159	5.6	37.9
5	Pain, swelling or mass of male genital system.....631	1,147	5.5	43.4
6	Abdominal pain.....540	830	4.0	47.4
7	Urine abnormalities and abnormal constituents.....600	805	3.9	51.3
8	Other urinary dysfunction (includes hesitancy, large volume, slowing of stream).....610	714	3.4	54.7
9	Incontinence of urine.....602	657	3.2	57.9
10	Pain, swelling, injury of back region.....415	565	2.7	60.6

<sup>1</sup>Based on a symptom classification developed for use in NAMCS.

<sup>2</sup>Not elsewhere classified.

terms and codes applied to these complaints or symptoms come from a symptom classification developed for use in the National Ambulatory Medical Care Survey.<sup>2</sup>

Of the complaints that patients presented to urologists, the majority (about 60 percent) signaled chronic conditions, i.e., preexisting conditions with an onset of 3 months or more before the visit. Although most of the visits for chronic conditions reflected a routine (maintenance) type of care, a relatively large proportion (two-fifths) were caused by a flareup of the condition, bringing to the urologist's office practice much the same aspect of clinical immediacy found among specialties such as general practice and pediatrics, where the emphasis is on acute morbidity—conditions with more recent onset and a more demanding and felt need for speedy attention.

Table 5 presents data on the 10 principal diagnoses most frequently rendered by the

office-based urologist. The principal diagnosis was the first-listed diagnosis on a survey form that permits up to three diagnostic entries.

Table 6 classifies all principal diagnoses made by urologists into major diagnostic groups. Diagnostic classes and codes are those established by the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA)*. One diagnostic finding distinctive to the urologist's office practice is the relatively high frequency of neoplasms encountered there. Among the most-visited specialists (table 1), this frequency is exceeded by only two other specialists—dermatologists and general surgeons.

To establish a diagnosis, office-based urologists—like most of their office-based counterparts—placed focal reliance on the limited history and examination (table 7), one limited to the body sites and systems specific to their scope of specialization, and concerned primarily with the patient's chief complaint, painful urination, frequency, nocturia, and so forth. Urologists used laboratory tests about 3 times as often as the average office-based specialist, and their use of endoscopy (in 8.3 percent of visits) exceeded the use of these procedures by any of the 12 other most-visited specialists. Perhaps meriting attention is the relatively infrequent

<sup>2</sup>National Center for Health Statistics: The National Ambulatory Medical Care Survey, Symptom Classification, by Sue Meads and Thomas McLemore. *Vital and Health Statistics*. Series 2-No. 63. DHEW Pub. No. (HRA) 74-1337. Health Resources Administration. Washington. U.S. Government Printing Office, May 1974.

Table 5. Number, percent, and cumulative percent of office visits to urologists, by 10 principal diagnoses most frequently rendered classified by ICDA category and ranked by number of visits: United States, 1975-76

Rank	Most frequent diagnosis and ICDA code <sup>1</sup>	Visits to urologists		
		Number in thousands	Percent	Cumulative percent
1	Cystitis.....595	2,247	10.8	10.8
2	Stricture of urethra.....598	2,075	10.0	20.8
3	Medical and surgical aftercare.....Y10	2,044	9.9	30.7
4	Prostatitis.....601	1,927	9.3	40.0
5	Hyperplasia of prostate.....600	1,217	5.9	45.9
6	Other diseases of urinary tract (includes infection NEC <sup>2</sup> ; urinary fistula; urethral caruncle, diverticulitis, diverticulosis, false passage, rupture; male urethrocele.....599,599.0-599.9	1,200	5.8	51.7
7	Urethritis (nonvenereal).....597	947	4.6	56.3
8	Malignant neoplasm of prostate.....185	720	3.5	59.8
9	Symptoms and ill-defined conditions; symptoms referable to genitourinary system, e.g., pain, urinary system; retention and incontinence of urine; frequency of micturition; polyuria and oliguria; priapism and pain, genital organs.....786,786.0-786.7	705	3.4	63.2
10	Calculus of kidney and ureter.....592	608	2.9	66.1

<sup>1</sup>Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA)*.  
<sup>2</sup>Not elsewhere classified.

number of occasions (about 14 percent of visits) at which a blood pressure reading was taken.

Drug therapy was the treatment most frequently provided by urologists (table 7); they used it in about 40 percent of visits, a proportion that was roughly paralleled in overall office-based practice. Their use of surgical procedures in the office (in about 19 percent of visits) substantially exceeded the average frequency of office surgery among all specialists.<sup>3</sup>

Table 8 presents data on the severity of the problems that patients presented to the urologist, expressing the doctor's judgment of the extent of impairment that might result if no care were available. In close parallel to the average tendency among all office-based practitioners, urologists judged most of their patients' problems (4 of every 5) to range from slightly serious to not serious in prognosis.

Directly reflecting the chronic nature of

<sup>3</sup>In the National Ambulatory Medical Care Survey, *office surgery* is defined as "any surgical procedure performed in the office this visit, including suture of wounds, reduction of fractures, application/removal of casts, incision and draining of abscesses, application of supportive materials for fractures and sprains, and all irrigations, aspirations, dilatations, and excisions."

most problems presented to them, urologists ended 7 of every 10 visits by scheduling a return visit at a specified time (table 8). The 7.1 percent of visits that ended in hospital admission

Table 6. Number and percent distribution of office visits to urologists by principal diagnoses classified by major ICDA group: United States, 1975-76

Principal diagnosis and ICDA codes <sup>1</sup>	Visits to urologists	
	Number in thousands	Percent distribution
All principal diagnoses.....	20,728	100.0
Neoplasms.....140-239	1,329	6.4
Diseases of the genitourinary system.....580-629	12,639	61.0
Symptoms and ill-defined conditions.....780-796	1,813	8.8
Special conditions and examinations without sickness (chiefly, surgical aftercare).....Y00-Y13	2,754	13.3
Other diagnoses classified chiefly in groups Accidents, poisonings, and violence and Infective and parasitic diseases.....Residual	2,193	10.5

<sup>1</sup>Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA)*.

Table 7. Number and percent of office visits to urologists and percent of office visits to all specialists, by type of service provided: United States, 1975-76

Type of service provided	Number of visits to urologists in thousands	Visits to—	
		Urologists	All specialists <sup>1</sup>
<u>Diagnostic service</u>			
Limited history and examination.....	10,972	52.9	51.6
General history and examination.....	2,758	13.3	16.3
Clinical laboratory test....	13,849	66.8	22.8
X-ray.....	1,819	8.8	7.6
Blood pressure check.....	2,797	13.5	33.2
Endoscopy.....	1,727	8.3	1.2
<u>Therapeutic service</u>			
Drug prescribed.....	8,361	40.3	43.6
Injection.....	552	2.7	13.1
Office surgery.....	3,921	18.9	6.9
Medical counseling.....	1,991	9.6	13.0
Other services.....	962	4.6	5.6

<sup>1</sup> Percents based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

more than tripled the proportion (2.1 percent) common in overall office-based practice. Indeed, it was the highest rate of hospital admission among all the 13 most-visited specialties.

Data on duration of visit (table 8) reveal that the average face-to-face encounter between patient and office-based urologist lasted slightly more than 15 minutes; it did not differ substantially from the 15-minute average calculated for all office-based specialists.

Table 8. Number and percent distribution of office visits to urologists and percent distribution of office visits to all specialists by selected visit characteristics: United States, 1975-76

Visit characteristic	Number of visits to urologists in thousands	Visits to—	
		Urologists	All specialists
Percent distribution			
All visits.....	20,728	100.0	<sup>1</sup> 100.0
<u>Seriousness of problem</u>			
Serious and very serious...	4,105	19.8	19.2
Slightly serious.....	7,692	37.1	32.3
Not serious.....	8,931	43.1	48.5
<u>Disposition (selected actions)<sup>2</sup></u>			
No followup.....	766	3.7	12.3
Return at specified time...	14,600	70.4	60.2
Return if needed.....	3,603	17.4	21.9
Telephone followup.....	491	2.4	3.5
Referred to other physician or agency.....	578	2.8	2.8
Returned to referring physician.....	535	2.6	0.9
Admit to hospital.....	1,481	7.1	2.1
<u>Duration of visit<sup>3</sup></u>			
1-5 minutes.....	2,819	13.6	15.1
6-10 minutes.....	6,000	29.0	31.5
11-15 minutes.....	5,043	24.3	26.6
16-30 minutes.....	5,763	27.8	19.5
31 minutes or more.....	1,082	5.1	5.5

<sup>1</sup> Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

<sup>2</sup> Figures will not add to totals because more than one disposition was possible.

<sup>3</sup> Face-to-face encounter between physician and patient.

**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 (more than 30-percent relative standard error)----- \*

## TECHNICAL NOTES

**SOURCE OF DATA:** The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1975 and 1976. The target universe of the NAMCS is comprised of office visits made within the coterminous United States by ambulatory patients to non-Federal physicians who are principally engaged in office practice and are not in the specialties of anesthesiology, pathology, or radiology. The National Opinion Research Center, under contract to the National Center for Health Statistics, was the organization responsible for the survey's field operation.

**SAMPLE DESIGN:** The NAMCS utilizes a multi-stage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's and patient visits within practices. Each year a sample of practicing physicians is selected from master files maintained by the American Medical Association and American Osteopathic Association. (For the 2-year period 1975-76, a total of 180 urologists were included in the sample. They achieved a response rate of 85 percent.) Characteristics of the physician's practice, for example, primary specialty and type of practice, are obtained during an induction interview. The physicians are requested to complete Patient Records (brief encounter forms) for a random sample of office visits during a randomly assigned weekly reporting period.<sup>4</sup> (In the 2-year period 1975-76, sampled urologists completed a total of 2,945 Patient Records.) A detailed description of the NAMCS design and procedures has been presented in an earlier publication.<sup>5</sup>

**SAMPLING ERRORS:** Since the estimates for this report are based on a sample rather than the entire universe, they are subject to sampling vari-

ability. The standard error is primarily a measure of sampling variability. The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the estimate. Relative standard errors of selected aggregate statistics are shown in table I. The standard errors appropriate for the estimated percentages of the office visits are shown in table II.

Table I. Approximate relative standard error of estimated numbers of office visits, NAMCS 1975-76

Estimate in thousands	Relative standard error in percentage points
600 .....	30.2
1,000 .....	23.5
2,000 .....	16.7
4,000 .....	12.0
10,000 .....	8.0
40,000 .....	4.8
200,000 .....	3.4
1,000,000 .....	3.1

*Example of use of table:* An aggregate estimate of 25,000,000 visits has a relative standard error of 6.4 percent or a standard error of 1,600,000 visits (6.4 percent of 25,000,000).

Table II. Approximate standard errors of percentages for estimated numbers of office visits, NAMCS 1975-76

Base of percentage (number of visits in thousands)	Estimated percentage					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
600.....	3.0	6.5	9.0	12.0	13.8	15.0
1,000.....	2.3	5.1	7.0	9.3	10.7	11.6
2,000.....	1.6	3.6	4.9	6.6	7.5	8.2
4,000.....	1.2	2.5	3.5	4.7	5.3	5.8
10,000.....	0.7	1.6	2.2	2.9	3.4	3.7
40,000.....	0.4	0.8	1.1	1.5	1.7	1.8
200,000.....	0.2	0.4	0.5	0.7	0.8	0.8
1,000,000.....	0.1	0.2	0.2	0.3	0.3	0.4

*Example of use of table:* An estimate of 20 percent based on an aggregate estimate of 80,000,000 visits has a standard error of 1.3 percent. The relative standard error of 20 percent is 6.5 (1.3 percent ÷ 20 percent).

**ROUNDING:** Aggregate estimates of office visits presented in the tables are rounded to the nearest thousand. The rates and percents, however, were calculated on the basis of original, unrounded

<sup>4</sup>A facsimile of the Patient Record appears as figure I.

<sup>5</sup>National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1975 Summary, United States, January-December 1975, by Hugo Koch and Thomas McLemore. *Vital and Health Statistics*. Series 13-No. 33. DHEW Pub. No. (PHS) 78-1784. Public Health Service. Washington. U.S. Government Printing Office, Jan. 1978.

Figure I. PATIENT RECORD

<p><b>ASSURANCE OF CONFIDENTIALITY</b>—All information which would permit identification of an individual, a practice, or 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.</p>				<p><b>BN<sup>o</sup></b></p>
<p><b>PATIENT RECORD</b> NATIONAL AMBULATORY MEDICAL CARE SURVEY</p>				
<p><b>1. DATE OF VISIT</b> Mo / Day / Yr _____</p>				
<p><b>2. DATE OF BIRTH</b> Mo / Day / Yr _____</p>	<p><b>4. COLOR OR RACE</b></p> <p>1 <input type="checkbox"/> WHITE 2 <input type="checkbox"/> NEGRO/BLACK 3 <input type="checkbox"/> OTHER 4 <input type="checkbox"/> UNKNOWN</p>	<p><b>5. PATIENT'S PRINCIPAL PROBLEM(S) COMPLAINT(S), OR SYMPTOM(S) THIS VISIT</b> <i>(In patient's own words)</i></p> <p>a. MOST IMPORTANT _____ b. OTHER _____</p>		<p><b>6. SERIOUSNESS OF PROBLEM IN ITEM 5a</b> <i>(Check one)</i></p> <p>1 <input type="checkbox"/> VERY SERIOUS 2 <input type="checkbox"/> SERIOUS 3 <input type="checkbox"/> SLIGHTLY SERIOUS 4 <input type="checkbox"/> NOT SERIOUS</p>
<p><b>3. SEX</b></p> <p>1 <input type="checkbox"/> FEMALE 2 <input type="checkbox"/> MALE</p>	<p><b>7. HAVE YOU EVER SEEN THIS PATIENT BEFORE?</b></p> <p>1 <input type="checkbox"/> YES      2 <input type="checkbox"/> NO</p> <p style="text-align: center;">↓</p> <p><i>If YES, for the problem indicated in ITEM 5a?</i></p> <p>1 <input type="checkbox"/> YES      2 <input type="checkbox"/> NO</p>			
<p><b>8. MAJOR REASON(S) FOR THIS VISIT</b> <i>(Check all major reasons)</i></p> <p>01 <input type="checkbox"/> ACUTE PROBLEM 02 <input type="checkbox"/> ACUTE PROBLEM, FOLLOW-UP 03 <input type="checkbox"/> CHRONIC PROBLEM, ROUTINE 04 <input type="checkbox"/> CHRONIC PROBLEM, FLARE-UP 05 <input type="checkbox"/> PRENATAL CARE 06 <input type="checkbox"/> POSTNATAL CARE 07 <input type="checkbox"/> POSTOPERATIVE CARE</p> <p style="text-align: center;"><i>(Operative procedure)</i></p>			<p><b>9. PHYSICIAN'S PRINCIPAL DIAGNOSIS THIS VISIT</b></p> <p>a. DIAGNOSIS ASSOCIATED WITH ITEM 5a ENTRY</p> <p>_____</p> <p>_____</p> <p>b. OTHER SIGNIFICANT CURRENT DIAGNOSES <i>(In order of importance)</i></p> <p>_____</p> <p>_____</p>	
<p><b>10. DIAGNOSTIC/THERAPEUTIC SERVICES ORDERED/PROVIDED THIS VISIT</b> <i>(Check all that apply)</i></p> <p>01 <input type="checkbox"/> NONE 02 <input type="checkbox"/> LIMITED HISTORY/EXAM 03 <input type="checkbox"/> GENERAL HISTORY/EXAM 04 <input type="checkbox"/> CLINICAL LAB. TEST 05 <input type="checkbox"/> BLOOD PRESSURE CHECK 06 <input type="checkbox"/> EKG 07 <input type="checkbox"/> HEARING TEST 08 <input type="checkbox"/> VISION TEST 09 <input type="checkbox"/> ENDOSCOPY 10 <input type="checkbox"/> OFFICE SURGERY</p>		<p>11 <input type="checkbox"/> DRUG PRESCRIBED 12 <input type="checkbox"/> X-RAY 13 <input type="checkbox"/> INJECTION 14 <input type="checkbox"/> IMMUNIZATION/DESENSITIZATION 15 <input type="checkbox"/> PHYSIOTHERAPY 16 <input type="checkbox"/> MEDICAL COUNSELING 17 <input type="checkbox"/> PSYCHOTHERAPY/THERAPEUTIC LISTENING 18 <input type="checkbox"/> OTHER <i>(Specify)</i> _____</p>		<p><b>11. DISPOSITION THIS VISIT</b> <i>(Check all that apply)</i></p> <p>1 <input type="checkbox"/> NO FOLLOW-UP PLANNED 2 <input type="checkbox"/> RETURN AT SPECIFIED TIME 3 <input type="checkbox"/> RETURN IF NEEDED, P.R.N. 4 <input type="checkbox"/> TELEPHONE FOLLOW-UP PLANNED 5 <input type="checkbox"/> REFERRED TO OTHER PHYSICIAN/AGENCY 6 <input type="checkbox"/> RETURNED TO REFERRING PHYSICIAN 7 <input type="checkbox"/> ADMIT TO HOSPITAL 8 <input type="checkbox"/> OTHER <i>(Specify)</i> _____</p>
				<p><b>12. DURATION OF THIS VISIT</b> <i>(Time actually spent with physician)</i></p> <p>_____ MINUTES</p>
<p>HRA-34-3 REV. 8-74</p>	<p>DEPARTMENT OF HEALTH, EDUCATION AND WELFARE PUBLIC HEALTH SERVICE HEALTH RESOURCES ADMINISTRATION NATIONAL CENTER FOR HEALTH STATISTICS</p>			<p>O.M.B. #68-S72106 EXPIRATION DATE 12/31/75</p>

figures. Due to rounding of percents, the sum of percentages may not equal 100.0 percent.

**DEFINITIONS:** An *ambulatory patient* is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

An *office* is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

A *visit* is a direct personal exchange between an ambulatory patient and a physician or a staff

member working under the physician's supervision for the purpose of seeking care and rendering health services.

A *physician* is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in practice who spends time in caring for ambulatory patients at an office location. Excluded from NAMCS are physicians who specialize in anesthesiology, pathology, radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

# advancedata

FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE ■ Public Health Service | Number 40 ■ September 22, 1978

## Contraceptive Utilization Among Widowed, Divorced, and Separated Women in the United States: 1973 and 1976<sup>1</sup>

### INTRODUCTION

The data presented in this report are the latest nationwide statistics on contraceptive utilization from the 1976 and 1973 National Surveys of Family Growth conducted by the National Center for Health Statistics. The data were collected by means of personal interviews with a multistage probability sample of women 15-44 years of age in the noninstitutionalized population of the conterminous United States. Women were eligible for inclusion in the sample if they were currently or previously married or were never married but had offspring presently living in the household.

The interview focused on the respondents' marital and pregnancy histories, their use of contraception and the planning status of each pregnancy, their intentions regarding number and spacing of future births, their use of maternal care and family planning services, and on a broad range of social and economic characteristics. Between June 1973 and February 1974, 3,856 black women and 5,941 women of other races were interviewed for Cycle I. Between January and September of 1976, 2,946 black women and 5,665 women of other races were interviewed for Cycle II. Further discussion of the survey design, definition of terms, and sampling variability are in the Technical Notes.

Among the estimated 3.6 million widowed, divorced, and separated, or postmarried, women of childbearing age (15-44 years) in the United States in 1976, about 1.2 million, or one-third,

were sterile and another 1.6 million, or nearly one-half, were using some method of contraception other than surgical sterilization. These figures reflect substantial changes in a period of 3 years; in 1973 just over one-fifth of currently postmarried women in the childbearing ages were sterile and only 30 percent reported using some method of contraception. The increase in the proportion reporting use of contraception other than surgical sterilization quite likely reflects greater candor in responding to these surveys as much as any actual increase in contraceptive practice. These data are comparable with those recently published for currently married women in the United States.<sup>2</sup>

### CONTRACEPTIVE STATUS OF WIDOWED, DIVORCED, AND SEPARATED WOMEN

The frequency of sterility has increased substantially more among widowed, divorced, and separated women between 1973 and 1976 (11.4 percentage points) than among currently married women (6.4 percentage points), resulting in a greater proportion sterile among the postmarried (32.8 percent) than among the currently married (30.2 percent) in 1976.<sup>2</sup> These observations are true for both surgical and nonsurgical sterility, though the latter comparison is not statistically significant. While there were more surgical sterilizations for contraceptive than for noncontraceptive reasons among both currently

<sup>1</sup>This report was prepared by Kathleen Ford, Ph.D., Division of Vital Statistics.

<sup>2</sup>National Center for Health Statistics: "Contraceptive Utilization in the United States: 1973 and 1976," ADVANCE DATA, No. 36, August 18, 1976.



married and postmarried women, the postmarried women reported a higher proportion of noncontraceptive sterilizations and a lower proportion of contraceptive ones.

The very large decline in the proportion of noncontraceptors among postmarried women between 1973 and 1976 is anomalous (table 1). There was no statistically significant change in the proportions who were pregnant, post partum, or trying to become pregnant, and, as expected, these proportions were markedly

lower among postmarried women than among currently married women. The proportions of "other nonusers"—noncontraceptors for reasons unrelated to pregnancy—are much larger among postmarried women than among currently married women but account for virtually all of the decline in noncontraceptors among the postmarried between 1973 and 1976 (25.6 percentage points). While a major part of this decline can be attributed to the increase in sterilizations noted above, more than half of it is

Table 1. Number of widowed, divorced, and separated women aged 15-44 and percent distribution by contraceptive status, according to race: United States, 1973 and 1976

Contraceptive status	Total <sup>1</sup>		White		Black	
	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>2</sup>					
All women.....	3,601	3,601	2,516	2,546	1,031	1,028
	Percent distribution					
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
	<u>Sterile women</u>					
All sterile women.....	32.8	21.4	32.3	20.3	33.7	24.4
Nonsurgical.....	2.7	*0.5	2.3	*0.3	3.2	*0.9
Surgical.....	30.1	20.9	29.9	19.9	30.4	23.5
Noncontraceptive.....	13.7	8.4	14.0	8.6	13.6	8.2
Contraceptive.....	16.4	12.3	15.9	11.1	16.8	15.3
	<u>Fecund women</u>					
Noncontraceptors:						
Pregnant, post partum, seeking pregnancy.....	2.0	2.9	1.6	2.3	3.1	4.5
Other nonusers.....	19.7	45.3	17.7	47.4	23.7	39.2
Contraceptors:						
All methods.....	45.4	30.4	48.4	30.1	39.5	31.9
Oral contraceptive pill.....	28.0	18.1	30.8	18.6	21.3	17.2
Intrauterine device (IUD).....	9.1	7.2	9.4	7.0	8.8	7.9
Diaphragm.....	1.2	1.3	1.2	1.5	*1.3	*0.6
Condom.....	1.8	*0.9	1.9	1.1	*1.6	*0.5
Foam.....	1.4	*0.7	1.2	*0.4	*1.9	*1.6
Rhythm.....	1.2	*0.4	1.5	*0.4	*0.7	*0.4
Withdrawal.....	*0.3	*0.3	-	*0.4	*1.0	*0.0
Douche.....	1.0	*0.3	1.0	-	*1.2	*1.1
Other.....	1.4	1.2	1.3	*0.7	*1.5	2.5

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>In the 1973 figures, estimates of the number of women in thousands include cases for which contraceptive status was not ascertain but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

reflected in the increase in number of women using methods other than sterilization.

The proportion of contraceptors among the post married rose 15.0 percentage points from 1973 to 1976, reaching 45.4 percent—only 3.2 percent below the proportion of contraceptors among currently married women in that year. These figures may reflect an increase in sexual activity among the postmarried or, more plausibly, a greater candor in discussing these topics anonymously. However, there was also a change in interviewer instructions in 1976 which could have influenced these figures. A more detailed analysis of contraceptive practices which examines these possibilities will be published in series 23 of *Vital and Health Statistics*.

Among currently married women, the resort to surgical sterilization has resulted in a higher frequency of sterility among white compared with black women. However, for the post-married, sterility from both surgical and non-surgical causes is higher among black women,

though the difference diminished greatly between 1973 and 1976 because of the larger increase among white women.

Looking at contraceptors exclusive of those with contraceptive sterilizations (table 2), it is seen that use of the modern methods (pill and IUD) in both 1973 and 1976 was strikingly higher among postmarried women (83.4 and 81.6 percent in the respective years) than among currently married women (59.7 and 58.5 percent, respectively). The slight decline observed in the use of the oral contraceptive pill between 1973 and 1976 among currently married women—particularly among black women—did not appear among the post married women of either race. The distinct shift back to traditional methods observed among currently married black contraceptors between 1973 and 1976 (12.9 percentage points) also was not observed among postmarried black contraceptors (a statistically nonsignificant shift of only 2.4 percent).

Table 2. Number of widowed, divorced, and separated women aged 15-44 using contraception and percent distribution by contraceptive method according to race: United States, 1973 and 1976

Contraceptive method	Total <sup>1</sup>		White		Black	
	1976	1973	1976	1973	1976	1973
	Number in thousands <sup>2</sup>					
All contraceptors.....	1,636	1,092	1,217	763	407	328
	Percent distribution					
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Oral contraceptive pill.....	61.6	59.7	63.7	62.2	54.1	54.1
Intrauterine device (IUD).....	20.0	23.7	19.4	23.3	22.3	24.7
Diaphragm.....	2.7	4.1	2.5	5.1	3.4	*1.8
Condom.....	4.0	3.1	4.0	3.8	4.1	*1.4
Foam.....	3.0	2.4	2.4	*1.3	4.8	5.0
Rhythm.....	2.7	*1.3	3.1	*1.3	*1.8	*1.4
Withdrawal.....	*0.6	*0.9	-	*1.2	2.5	*0.2
Douche.....	2.2	*1.0	2.0	-	3.1	3.4
Other.....	3.0	3.6	2.8	*1.7	3.8	7.9

<sup>1</sup>Includes white, black, and other races.

<sup>2</sup>In the 1973 figures, estimates of the number of women in thousands include cases for which contraceptive status was not ascertained but was imputed. Only those cases in which contraceptive status was ascertained are included in the 1976 figures. See Technical Notes.

## TECHNICAL NOTES

### The Survey Design

The National Survey of Family Growth (NSFG) is designed to provide data on fertility, family planning, and related aspects of maternal and child health. Fieldwork for Cycle I was carried out by the National Opinion Research Center between June 1973 and February 1974. Fieldwork for Cycle II was carried out by Westat, Inc., between January and September of 1976.

A multistage probability sample of women in the noninstitutionalized population of the conterminous United States was used in both cycles. Each time, approximately 33,000 households were screened to identify the sample of women who would be eligible for NSFG, i.e., women between the ages of 15 to 44 years, inclusive, who were currently married or previously married or who were never married but had offspring presently living in the household. In households with more than one eligible woman, a random procedure was used to select only one to be interviewed. Since the interviews were always conducted with the sample person, the term "respondent" is used as synonymous with sample person. For Cycle I, interviews were completed with 3,856 black women and 5,941 women of other races. For Cycle II, interviews were completed with 2,946 black women and 5,665 women of other races. A detailed description of the sample design for Cycle I is presented in "National Survey of Family Growth, Cycle I: Sample Design, Estimation Procedures, and Variance Estimation," Series 2, Number 76, in the *Vital and Health Statistics* series. A similar report is in preparation for Cycle II.

The interview was focused on the respondent's marital and pregnancy histories, on the use of contraception and the planning status of each pregnancy, on the respondent's intentions regarding the number and spacing of future births, on maternal and family planning services, and on a broad range of social and economic characteristics. While the interviews varied greatly in the time required for their completion, they averaged about 70 minutes for Cycle I and about 58 minutes for Cycle II.

Quality control procedures were applied at

all stages of the survey. These included a verification of listing completeness with unlisted dwelling units being brought into the sample, a preliminary field review of completed questionnaires for possible missing data or inaccurate administration, a 10-percent sample recheck of all households to be screened in the survey, observation of interviews in the field, and an independent recoding of a 5-percent subsample of completed interviews.

### Reliability of Estimates

Since the statistics presented in this report are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaires, instructions, interviewing personnel, and field procedures. This chance difference between sample results and a complete count is referred to as sampling error. In addition, the results are also subject to non-sampling error due to respondent misreporting, data processing mistakes, and nonresponse. It is very difficult, if not impossible, to obtain accurate measures of nonsampling errors. These types of error were kept to a minimum by the quality control procedures and other methods incorporated into the survey design and administration.

Sampling error, or the extent to which samples may differ by chance from a complete count, is measured by a statistic called the standard error of estimate. Approximate standard errors for estimated numbers and percentages from Cycle I are shown in tables I and II for the total and white populations and in tables III and IV for the black population. Provisional estimates for standard errors for Cycle II for total and white women can be obtained by multiplying the standard errors for these women from Cycle I by a factor of 1.1. Similarly, provisional estimates of standard errors for Cycle II for black women can be obtained by multiplying the standard errors for these women from Cycle I by a factor of 1.2.

The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error.

Table I. Approximate standard errors for estimated numbers for white and total women: 1973 National Survey of Family Growth

Size of estimate	Relative standard error	Standard error
50,000.....	30.0	15,000
100,000.....	21.2	21,000
200,000.....	15.0	30,000
500,000.....	9.5	47,000
1,000,000.....	6.7	67,000
2,000,000.....	4.8	95,000
5,000,000.....	3.0	151,000
10,000,000.....	2.2	216,000
20,000,000.....	1.5	311,000

Table II. Approximate standard errors for estimated percentages expressed in percentage points for white and total women: 1973 National Survey of Family Growth.

Base of percentage	Estimated percentage						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
100,000.....	3.0	4.6	6.4	8.5	9.7	10.4	10.6
500,000.....	1.3	2.1	2.8	3.8	4.3	4.6	4.7
1,000,000.....	0.9	1.5	2.0	2.7	3.1	3.3	3.3
3,000,000.....	0.5	0.8	1.2	1.5	1.8	1.9	1.9
5,000,000.....	0.4	0.6	0.9	1.2	1.4	1.5	1.5
7,000,000.....	0.3	0.5	0.8	1.0	1.2	1.2	1.3
10,000,000.....	0.3	0.5	0.6	0.8	1.0	1.0	1.1

Table III. Approximate standard errors for estimated numbers for black women: 1973 National Survey for Family Growth

Size of estimate	Relative standard error	Standard error
25,000.....	25.3	6,000
50,000.....	17.9	9,000
100,000.....	12.7	13,000
150,000.....	10.3	16,000
250,000.....	8.0	20,000
350,000.....	6.8	24,000
500,000.....	5.7	28,000
750,000.....	4.7	35,000
1,000,000.....	4.0	40,000

The chances are about 95 out of 100 that the differences between the sample estimate and a complete count would be less than twice the standard error. The relative standard error is the ratio of the standard error to the statistic being

Table IV. Approximate standard errors for estimated percentages expressed in percentage points for black women: 1973 National Survey of Family Growth

Base of percentage	Estimated percentage						
	2 or 98	5 or 95	10 or 90	20 or 80	30 or 70	40 or 60	50
5,000.....	7.9	12.3	17.0	22.6	25.9	27.7	28.3
10,000.....	5.6	8.7	12.0	16.0	18.3	19.6	20.0
50,000.....	2.5	3.9	5.4	7.1	8.2	8.8	8.9
100,000.....	1.8	2.7	3.8	5.1	5.8	6.2	6.3
300,000.....	1.0	1.6	2.2	2.9	3.3	3.6	3.6
500,000.....	0.8	1.2	1.7	2.3	2.6	2.8	2.8
700,000.....	0.7	1.0	1.4	1.9	2.2	2.3	2.4
1,000,000.....	0.6	0.9	1.2	1.6	1.8	2.0	2.0

estimated. In this report, numbers and percentages which have a standard error that is more than 25 percent of the estimate itself are considered "unreliable." They are marked with an asterisk to caution the user but may be combined to make other types of comparisons of greater precision.

In this report, terms such as "similar" and "the same" mean that any observed difference between two estimates being compared is not statistically significant. Similarly, terms such as "greater," "less," "larger," and "smaller" indicate that the observed differences are statistically significant. The normal deviate test with a .05 level of significance was used to test all comparisons which are discussed in the text. A statistically significant difference is one large enough that in repeated samples of the same size and type as this one such a large difference would be expected to be found in less than 5 percent of the samples. Lack of comment in the text between any two statistics does *not* mean the difference was tested and found not to be significant.

Adjustment for nonsampling error due to nonresponse was made in two ways. Nonrespondent cases, as distinct from missing data items, were imputed by weighting for nonresponse within each primary sampling unit, stratum, and age-race category. In the 1973 survey, codes for missing items were imputed using a "hot deck" procedure. In the 1976 survey, imputation for missing data items has not been performed and the figures in the tables are based

only on those interviews where enough information was obtained from the respondent to determine contraceptive status. As a result, in the 1976 figures, about 1,061,000 women out of an estimated 31,847,000 total ever-married women are not represented.

## DEFINITIONS OF TERMS

The following definitions are applicable to all women in the survey, regardless of marital status.

### Sterile

*Sterile.*—A woman (or couple) was classified as sterile if she reported that it was impossible for her to have a baby.

*Nonsurgical.*—A woman (or couple) was classified as nonsurgically sterile if she reported that it was impossible for her to have a baby for any reason other than a sterilizing operation. Reported nonsurgical reasons for sterility included menopause and sterility due to accident, illness, or congenital causes.

*Surgical.*—A woman (or couple) was classified as surgically sterile if she or her husband were completely sterile due to an operation.

Since sterilizing operations are very frequently obtained exclusively or partly as methods of contraception, i.e., because of their complete effectiveness against conception rather than for purely therapeutic reasons, they have been further classified as contraceptive and non-contraceptive. In Cycle I, a sterilizing operation was contraceptive if the respondent answered "yes" to the question "Was the operation done at least partly so that you would not have any more children?" Since the avoidance of more children (conceptions) could itself be for therapeutic reasons, the question was reworded in Cycle II to "Was one reason for the operation because you had all the children you wanted?" This change in wording was expected to yield a lower percent of operations reported for contraceptive reasons than would have been reported previously. As a result, the percents of couples with contraceptive and noncontraceptive sterilization shown in this report are not completely comparable between the two sur-

veys. Also, there is evidence that sterilizing operations classified as noncontraceptive may include some that actually were at least partly contraceptive in intent. The percent classified as contraceptive should therefore be regarded as a minimum estimate. Because of these limitations on the data, sterilizations for contraceptive reasons are reported with other causes of sterility and not, as formerly, with other methods of contraception.

### Fecund—Noncontraceptors

*Pregnant.*—A woman (or couple) was classified as pregnant if she replied affirmatively to the question "Are you pregnant now?" or for those in doubt, "Do you think you probably are pregnant or not?" A woman who reported that the onset of her last menstrual period was within the 30 days prior to the interview was automatically considered not pregnant.

*Seeking pregnancy.*—A woman (or couple) was classified as seeking pregnancy if she reported she was not using a method at the time of interview because she wanted to become pregnant.

*Post partum.*—A woman (or couple) was classified as post partum if she reported she was not currently using a method, was not seeking a pregnancy, and her last pregnancy had terminated within 2 months before the date she was interviewed.

*Other nonusers.*—Women (or couples) who reported they were currently using no contraceptive method and could not be classified in any of the preceding categories of noncontraceptors were classified here. Among these are women who were indifferent to the chances of pregnancy, had a very low risk of pregnancy due to some fecundity impairment, or objected to contraceptive methods for personal or religious reasons. Among the widowed, divorced, and separated, infrequent intercourse or complete abstinence probably accounts for a significant proportion of nonusers. Women who used the douche following intercourse, but who did not report this as a method of contraception, were also classified here although such douching practice is known to have a very modest contraceptive effect when done very soon after intercourse.

**Fecund—Contraceptors**

*Method users.*—A woman (or couple) who reported use of a contraceptive method other than a surgical sterilization at the date of interview was classified according to the specific method used. Methods used by extremely small proportions of the population such as jelly, cream suppositories, or abstinence, not in combination with any other methods, were grouped in the category "Other." Where more than one method was reported in current use, the method generally considered the most effective was used for classification purposes.

**Demographic Terms**

*Age.*—In this report, age is classified by the age of the respondent at her last birthday before the date of interview.

*Race.*—Classification by race, based on interviewer observation, was reported as black, white, or other. Race refers to the race of the woman interviewed.

*Marital status.*—Persons are classified by marital status as married, widowed, divorced, separated, or never married or as informally married, such as living with a partner or common-law spouse. Persons who are temporarily separated for reasons other than marital discord, such as vacation, illness, or Armed Forces, are classified as married. Divorced persons are those whose most recent marriage has been legally dissolved and who are free to remarry. Women with an annulled marriage, while having the legal status of never having been married, are classified together with divorced women. The category "separated" includes those who are legally or informally separated from their most recent spouse due to marital discord. The "never married" include those who have never had a formal marriage and do not consider themselves in any of the preceding categories. However, in the NSFG, only single women with offspring living in the household are included and separately classified.

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-----	*



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Scientific and Technical Information Branch  
National Center for Health Statistics  
Centers for Disease Control  
Public Health Service  
Hyattsville, Md. 20782  
301-436-8500