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Office Visits To Ophthalmologists: National Ambulatory Medical Care Survey, United States, 1976¹

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.

¹This 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
Ophthalmology	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 ¹
All visits	29,302	100.0	100.0
<u>Location of practice</u>			
Metropolitan area ²	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

¹Based on an estimated 588,300,170 visits made to all office-based physicians in 1976.²Location 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 ¹
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

¹Based 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 diagnoses¹ 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 organs320-389	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
Myopia370.0	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
Glaucoma375	2,490	8.5
Other diseases of retina and optic nerve.....377	1,207	4.1
Other diseases of eye378	3,064	10.5
.....378.7	1,268	4.3
Accidents, poisonings, and violence800-899	1,079	3.7

¹The 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
Diagnostic services:		
Examination (may include visual acuity test).....	17,445	59.5
Visual acuity test	21,451	73.2
Blood pressure check	781	2.7
Therapeutic services:		
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 ¹
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

¹Based 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 percentage 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.) currently

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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