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Office Visits to Cardiovascular Specialists, National Ambulatory Medical Care Survey: United States, 1975-76[1]

Using data from the National Ambulatory Medical Care Survey (NAMCS), this report describes an estimated 13,517,000 visits made to the offices of cardiovascular specialists 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 annually 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 the 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. The directions offered there also provide the basis for judging the statistical significance of differences between estimates.

[1]This report was prepared by Hugo Koch, Division of Health Resources Utilization Statistics.

DATA HIGHLIGHTS

With their estimated 13,517,000 office visits in the 2-year span 1975-76, cardiovascular specialists were among the 13 specialists who figured most prominently in the provision of office-based ambulatory care (see table 1).

Visit distributions in table 2 show an emphatic preference for the metropolitan practice locations, and indicate a slight preference for solo practice over multiple-member practice arrangements. In this choice of location and type of practice, visits to cardiovascular special-

Table 1. Number of visits to office-based specialists, by type of specialty: United States, 1975-76

Specialty	Number of visits in thousands
General and family practice	460,297
Internal medicine	130,367
Pediatrics	107,085
Obstetrics and gynecology	97,070
General surgery	77,259
Ophthalmology	53,959
Orthopedic surgery	47,152
Dermatology	35,721
Psychiatry	30,616
Otolaryngology	27,192
Urology	20,728
Cardiovascular disease	13,517
Neurology	3,784

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

Physician characteristic	Number of visits to cardiovascular specialists in thousands	Visits to—	
		Cardiovascular specialists	All specialists[1]
		Percent distribution	
All visits	13,517	100.0	100.0
Location of practice			
Metropolitan area[2]	12,690	93.9	73.3
Nonmetropolitan area	827	6.1	26.7
Type of practice			
Solo	7,064	52.3	60.0
Other	6,453	47.7	40.0

[1]Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.
[2]Location within a standard metropolitan statistical area (SMSA). Composition of SMSA's does not reflect 1974 adjustments.

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

Patient characteristic	Number of visits to cardiovascular specialists in thousands	Visits to—	
		Cardiovascular specialists	All specialists[1]
		Percent distribution	
All visits	13,517	100.0	100.0
Age			
Under 25 years	550	4.1	33.2
25-44 years	1,783	13.2	25.5
45-64 years	5,730	42.4	25.1
65 years and over	5,453	40.3	16.2
Sex			
Female	6,766	50.1	60.4
Male	6,751	49.9	39.6
Prior visit status			
New patient	1,547	11.5	14.6
Old patient, new problem	1,903	14.1	23.2
Old patient, old problem	10,067	74.5	62.3

[1]Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

ists agree with the average findings for all visits to office-based practitioners.

It is evident from the visit-age distributions in table 3 that cardiovascular problems become increasingly manifest with advancing age. Four of every 5 visits were made by patients 45 years old and over. The median visit-age (calculated from visit distributions rather than the individual patients who made the visits) was 59 years, exceeding by 22 years the median visit age of 37 years characteristic of overall office-based practice.

Visits to cardiovascular specialists were about equally divided between male and female patients, making cardiovascular disease one of the few office-based specialties where visits by males equalled or exceeded visits by females. The other notable exceptions were pediatrics, urology, and orthopedic surgery.

Underscoring the chronic nature of much cardiovascular disease is the finding that three-fourths of the visits to cardiovascular specialists were made by persons who were already established patients of the doctor and who were returning with old problems (table 3, *prior visit status*). For the 3,450,000 visits at which a *new problem* was presented (i.e., the 1,547,000 visits by new patients plus the 1,903,000 visits by old patients with new problems), there were 10,067,000 return visits, an average of 2.9 return visits per new problem per year. This return visit rate substantially exceeded the average of 1.6 return visits per year common in overall office-based practice; indeed, among the most visited specialists, it was exceeded only by the rate for office-based psychiatrists.

Table 4 shows the clinical content of cardiovascular office practice. The chronic circulatory ailments clearly dominate. Two of them, chronic ischemic heart disease and essential benign

Table 4. Percent distribution of office visits to cardiovascular specialists by principal (first-listed) diagnoses rendered by the physician classified by ICDA category: United States, 1975-76

Principal diagnosis and ICDA code[1]	Percent distribution
All principal diagnoses	[2]100.0
Diseases of the circulatory system 390-458	51.1
Other diagnoses	48.9
Diseases of the respiratory system 460-519	7.5
Special conditions and examinations without sickness Y00-Y13	5.8
Symptoms and ill-defined conditions 780-796	5.7
Diseases of the musculosketal system 710-738	5.0
Endocrine, nutritional, and metabolic diseases 240-279	5.0
Diseases of the digestive system 520-577	4.5
Other conditions	15.4
Diseases of the circulatory system 390-458	100.0
Chronic ischemic heart disease 412	37.0
Essential benign hypertension 401	21.2
Symptomatic heart disease 427	12.9
Other ischemic heart diseases 410,411,413	7.8
Chronic rheumatic heart disease 393-398	7.0
Other diseases of the circulatory system Residual	14.1

[1]Based on *Eighth Revision International Classification of Disease, Adapted for Use in the United States* (ICDA).
[2]Based on 13,517,000 principal diagnoses.

Table 5. Number and percent of office visits to cardiovascular specialists, and percent of office visits to all specialists, by selected diagnositic and therapeutic services provided: United States, 1975-76

Diagnostic and therapeutic services	Number of visits to cardio-vascular specialists in thousands	Visits to—	
		Cardio-vascular specialists	All specialists[1]
Diagnostic service		Percent	
Limited history and/or examination	7,827	57.9	51.6
General history and/or examination	2,838	21.0	16.3
Clinical laboratory test	3,614	26.7	22.8
X-ray	2,241	16.6	7.6
Blood pressure check	9,679	71.6	33.2
EKG	5,189	38.4	3.3
Therapeutic service			
Drug prescribed	5,725	42.4	43.6
Injection	899	6.7	13.1
Counseling	2,095	15.5	13.0

[1]Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

hypertension, account for about 58 percent of the 6.9 million visits where cardiovascular morbidity was the principal (first listed) diagnosis. The vital screening function performed by the cardiovascular specialist is apparent in the substantial number of visits that resulted in the identification of a disorder other than a circulatory disease; e.g., the 1,000,000 visits diagnosed as respiratory disease and the 1,270,000 diagnoses which were about equally divided between diseases of the digestive system and endocrine, nutritional, and metabolic diseases.

Table 5 points up the unique intensity of diagnostic activity that is required in cardiovascular office practice: on the one hand, to screen cardiovascular symptoms (for example, chest pain), from similar symptoms that arise from other disorders; on the other hand, to monitor the usually prolonged course of a circulatory disease once the diagnosis is clearly established.

Data on the seriousness of problems presented to the cardiovascular specialist predictably place a substantial proportion of problems (35 percent) in the serious-to-very-serious category, almost twice the proportion assigned this degree of severity in overall office-based practice (table 6).

Directly reflecting the chronic nature as well as the actual or potential severity of most of the problems presented to them, cardiovascular specialists ended 3 of every 4 visits by scheduling a return visit at a specified time (table 6, *disposition*). On the other hand, there is also evidence of a patient mobility which is greater than average. Due in large part to the intensive diagnostic screening discussed above, about 8 percent of visits to the cardiovascular specialist ended either in return to a referring physician or in referral to another physician or agency.

Data on duration of visit (table 6) indicate that the average face-to-face encounter between patient and cardiovascular specialist probably lasted about 22 minutes, substantially exceeding the 15-minute average calculated in overall office-based practice.

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

Visit characteristic	Number of visits to cardiovascular specialists in thousands	Visits to—	
		Cardiovascular specialists	All specialists[1]
		Percent distribution	
All visits	13,517	100.0	100.0
Seriousness of problem			
Serious and very serious	4,763	35.2	19.2
Slightly serious	5,187	38.4	32.3
Not serious	3,567	26.4	48.5
Disposition (selected actions)			
No followup	650	4.8	12.3
Return at specified time	10,253	75.9	60.2
Return if needed	2,084	15.4	21.9
Telephone followup	580	4.3	3.5
Referred to other physician/agency	478	3.5	2.8
Returned to referring physician	615	4.6	0.9
Admit to hospital	*267	*2.0	2.1
Duration of physician-patient encounter			
0 minutes (no face-to-face encounter with physician	*204	*1.5	1.8
1-5 minutes	*290	*2.2	15.1
6-10 minutes	2,467	18.3	31.5
11-15 minutes	3,879	28.7	26.6
16-30 minutes	4,735	35.0	19.5
31 minutes or more	1,942	14.4	5.5

[1] Based on an estimated 1,155,900,000 visits made to all office-based physicians in 1975 and 1976.

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 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: 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. (For the 2 year period 1975-76, a total of 152 cardiovascular specialists were included in the sample. They achieved a response rate of 73 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[2] (brief encounter forms) for a systematic random sample of office visits during a randomly assigned weekly reporting period. (In the 2-year period 1975-76, sampled cardiovascular specialists completed a total of 1,730 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."[3]

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 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).

[2] A facsimile of the Patient Record appears as figure I.

[3] 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. No. (PHS) 78-1784. Washington. U.S. Government Printing Office, Dec. 1977.

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 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.

Figure 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
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ NEGRO/BLACK
3 ☐ OTHER
4 ☐ 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*)
1 ☐ VERY SERIOUS
2 ☐ SERIOUS
3 ☐ SLIGHTLY SERIOUS
4 ☐ NOT SERIOUS

7. HAVE YOU EVER SEEN THIS PATIENT BEFORE?
1 ☐ YES 2 ☐ NO
If YES, for the problem indicated in ITEM 5a?
1 ☐ YES 2 ☐ NO

8. MAJOR REASON(S) FOR THIS VISIT (*Check all major reasons*)
☐ ACUTE PROBLEM
☐ ACUTE PROBLEM, FOLLOW-UP
☐ CHRONIC PROBLEM, ROUTINE
☐ CHRONIC PROBLEM, FLARE-UP
☐ PRENATAL CARE
☐ POSTNATAL CARE
☐ POSTOPERATIVE CARE → _____ (*Operative procedure*)
☐ WELL ADULT/CHILD EXAM
☐ FAMILY PLANNING
☐ COUNSELING/ADVICE
☐ IMMUNIZATION
☐ REFERRED BY OTHER PHYS/AGENCY
☐ ADMINISTRATIVE PURPOSE
☐ OTHER (*Specify*) _____

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*)
01 ☐ NONE
02 ☐ LIMITED HISTORY/EXAM
03 ☐ GENERAL HISTORY/EXAM
04 ☐ CLINICAL LAB. TEST
05 ☐ BLOOD PRESSURE CHECK
06 ☐ EKG
07 ☐ HEARING TEST
08 ☐ VISION TEST
09 ☐ ENDOSCOPY
10 ☐ OFFICE SURGERY
11 ☐ DRUG PRESCRIBED
12 ☐ X-RAY
13 ☐ INJECTION
14 ☐ IMMUNIZATION/DESENSITIZATION
15 ☐ PHYSIOTHERAPY
16 ☐ MEDICAL COUNSELING
17 ☐ PSYCHOTHERAPY/THERAPEUTIC LISTENING
18 ☐ OTHER (*Specify*) _____

11. DISPOSITION THIS VISIT (*Check all that apply*)
1 ☐ NO FOLLOW-UP PLANNED
2 ☐ RETURN AT SPECIFIED TIME
3 ☐ RETURN IF NEEDED, P.R.N.
4 ☐ TELEPHONE FOLLOW-UP PLANNED
5 ☐ REFERRED TO OTHER PHYSICIAN/AGENCY
6 ☐ RETURNED TO REFERRING PHYSICIAN
7 ☐ ADMIT TO HOSPITAL
8 ☐ OTHER (*Specify*) _____

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

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PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
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SYMBOLS

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