

Headache as the Reason for Office Visits, National Ambulatory Medical Care Survey: United States, 1977-78

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Headache was the principal cause of an estimated 18,341,923 visits to office-based physicians during 1977-78. Headache was the seventh most frequent symptomatic reason for visits given by patients.

The estimates in this report are based on data collected in the National Ambulatory Medical Care Survey (NAMCS), a probability sample survey conducted yearly by the Division of Health Care Statistics of the National Center for Health Statistics. Since the estimates presented in this report are based on a sample rather than on the entire universe of office-based physicians, the data are subject to sampling variability. The Technical Notes at the end of this report provide a brief explanation of sampling errors and guidelines for judging the precision of the estimates presented. A more detailed description of the sample design and additional definitions of certain terms used in NAMCS have been published elsewhere.¹

Figure 1 is a facsimile of the 1977-78 Patient Record used by participating physicians to record information about office visits. The patient's complaint, symptom, or other reason for the visit, expressed as nearly as possible in the patient's own words, is recorded by the physician in item 6. The *principal* reason (listed first in this item) is the one that in the physician's judgment was most responsible for the patient making the visit. Data on principal reason were classified and coded according to a reason for visit classification system presented in another report.² Since 1977 was the first year that this classification system was used, caution should be exercised in comparing data presented in this report with those of prior years.

¹National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1977 summary: United States, January-December 1977, by T. Ezzati and T. McLemore. *Vital and Health Statistics*. Series 13-No. 44. DHEW Pub. No. (PHS) 80-1795. Public Health Service, Washington, U.S. Government Printing Office, Apr. 1980.

²National Center for Health Statistics: A reason for visit classification for ambulatory care, by D. Schneider, L. Appleton, and T. McLemore. *Vital Health Statistics*. Series 2-No. 78. DHEW Pub. No. (PHS) 79-1352. U.S. Government Printing Office, Feb. 1979.

Data highlights

Table 1 provides the age and sex of patients who visited office-based physicians for medical care related to headache. The average annual rate of these visits increased with the advancing age group of the patients. Females over 15 years of age tended to visit more frequently for headache problems than males did. Visit rates for female patients over 44 years of age were about twice as high as those for their male counterparts.

Headache accounted for about the same proportion of total visits regardless of the geographic location of

Table 1. Number, percent distribution, and average annual rate of office visits with headache as the principal reason for visit by sex and age of patient: United States, 1977-78

Sex and age	Number of visits in thousands	Percent distribution	Average annual visit rate per 1,000 persons
Both sexes			
All ages	18,342	100.0	43.2
Under 15 years	1,793	9.8	17.6
15-24 years	2,486	13.6	31.4
25-44 years	5,996	32.7	53.8
45-64 years	5,196	28.3	60.2
65 years and over	2,871	15.7	63.9
Female			
All ages	12,148	66.2	55.4
Under 15 years	787	4.3	15.8
15-24 years	1,645	9.0	40.8
25-44 years	3,858	21.0	67.0
45-64 years	3,699	20.2	82.0
65 years and over	2,159	11.8	81.8
Male			
All ages	6,194	33.8	30.3
Under 15 years	1,006	5.5	19.4
15-24 years	841	4.6	21.7
25-44 years	2,138	11.7	39.7
45-64 years	1,496	8.2	36.3
65 years and over	713	3.9	38.4

Symbols

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

Figure 1. NATIONAL AMBULATORY MEDICAL CARE SURVEY PATIENT RECORD FORM: 1977-78

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.						A 033012	
1. DATE OF VISIT Mo/Day/Yr		PATIENT RECORD NATIONAL AMBULATORY MEDICAL CARE SURVEY					
2. DATE OF BIRTH Mo/Day/Yr	3. SEX <input type="checkbox"/> FEMALE <input type="checkbox"/> MALE	4. COLOR OR RACE <input type="checkbox"/> WHITE <input type="checkbox"/> NEGRO/BLACK <input type="checkbox"/> OTHER <input type="checkbox"/> UNKNOWN	5. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN? <input type="checkbox"/> YES <input type="checkbox"/> NO	6. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT <i>(In patient's own words)</i> a. MOST IMPORTANT _____ b. OTHER _____			
7. TIME SINCE ONSET OF COMPLAINT/SYMPTOM IN ITEM 6a <i>(Check one)</i> <input type="checkbox"/> LESS THAN 1 DAY <input type="checkbox"/> 1-6 DAYS <input type="checkbox"/> 1-3 WEEKS <input type="checkbox"/> 1-3 MONTHS <input type="checkbox"/> MORE THAN 3 MONTHS <input type="checkbox"/> NOT APPLICABLE	8. PHYSICIAN'S DIAGNOSES a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a _____ b. OTHER SIGNIFICANT CURRENT DIAGNOSES _____ _____			9. HAVE YOU SEEN PATIENT BEFORE? <input type="checkbox"/> YES <input type="checkbox"/> NO ↓ IF YES, FOR THE CONDITION IN ITEM 8a? <input type="checkbox"/> YES <input type="checkbox"/> NO	10. SERIOUSNESS OF CONDITION IN ITEM 8a <i>(Check one)</i> <input type="checkbox"/> VERY SERIOUS <input type="checkbox"/> SERIOUS <input type="checkbox"/> SLIGHTLY SERIOUS <input type="checkbox"/> NOT SERIOUS		
11. DIAGNOSTIC SERVICES THIS VISIT <i>(Check all ordered or provided)</i> <input type="checkbox"/> NONE <input type="checkbox"/> LIMITED EXAM/HISTORY <input type="checkbox"/> GENERAL EXAM/HISTORY <input type="checkbox"/> PAP TEST <input type="checkbox"/> CLINICAL LAB TEST <input type="checkbox"/> X-RAY <input type="checkbox"/> EKG <input type="checkbox"/> VISION TEST <input type="checkbox"/> ENDOSCOPY <input type="checkbox"/> BLOOD PRESSURE CHECK <input type="checkbox"/> OTHER <i>(Specify)</i> _____	12. THERAPEUTIC SERVICES THIS VISIT <i>(Check all ordered or provided)</i> <input type="checkbox"/> NONE <input type="checkbox"/> IMMUNIZATION/DESENSITIZATION <input type="checkbox"/> DRUGS (PRESCRIPTION/NONPRESCRIPTION) <input type="checkbox"/> DIET COUNSELING <input type="checkbox"/> FAMILY PLANNING <input type="checkbox"/> MEDICAL COUNSELING <input type="checkbox"/> PHYSIOTHERAPY <input type="checkbox"/> OFFICE SURGERY <input type="checkbox"/> PSYCHOTHERAPY/THERAPEUTIC LISTENING <input type="checkbox"/> OTHER <i>(Specify)</i> _____			13. DISPOSITION THIS VISIT <i>(Check all that apply)</i> <input type="checkbox"/> NO FOLLOW-UP PLANNED <input type="checkbox"/> RETURN AT SPECIFIED TIME <input type="checkbox"/> RETURN IF NEEDED, P.R.N. <input type="checkbox"/> TELEPHONE FOLLOW-UP PLANNED <input type="checkbox"/> REFERRED TO OTHER PHYSICIAN <input type="checkbox"/> RETURNED TO REFERRING PHYSICIAN <input type="checkbox"/> ADMIT TO HOSPITAL <input type="checkbox"/> OTHER <i>(Specify)</i> _____		14. DURATION OF THIS VISIT <i>(Time actually spent with physician)</i> _____ MINUTES	

Table 2. Number of office visits and number, percent, and average annual rate of office visits with headache as the principal reason for visit, by location of physician's practice: United States, 1977-78

Location of practice	Number in thousands		Percent	Average annual visit rate per 1,000 persons
	All visits	Visits for headache		
Geographic region				
Northeast	271,440	4,580	1.7	47.1
North Central	291,571	4,404	1.5	38.6
South	355,754	5,613	1.6	40.6
West	235,785	3,745	1.6	50.5
Type of area				
Metropolitan	865,549	13,479	1.6	46.5
Nonmetropolitan	289,001	4,863	1.7	36.3

the physician's practice (table 2). However, visit rates varied, indicating higher utilization rates in the Northeast and West Regions than in the North Central and South, and in metropolitan than in nonmetropolitan areas.

The specialists most commonly visited by patients presenting headache as the reason for visit are shown in table 3. Eighteen percent of visits to neurologists were made by patients with a principal complaint of headache. Other specialists treated headache patients in 1 or 2 percent of their visits.

Table 3. Number of office visits and number and percent of office visits with headache as the principal reason for visit, by selected physician specialties: United States, 1977-78

Specialty	Number in thousands		Percent
	All visits	Visits for headache	
All specialties	1,154,550	18,342	1.6
General and family practice	433,936	9,528	2.2
Internal medicine	133,291	2,754	2.1
Obstetrics	114,921	905	0.8
General surgery	69,223	584	0.8
Ophthalmology	58,851	1,053	1.8
Neurology	5,109	938	18.4
Otolaryngology	32,193	802	2.5

Patients who developed a headache that was a new problem were likely to visit their physicians within 3 weeks of its onset, with over 40 percent of visits occurring in less than a week (table 4).

About half the visits for headache involved a condition evaluated by the physician as not serious in nature (table 5). There was no statistically significant difference in this proportion by sex of the patient.

The principal diagnosis made by the physician for the patient who presents headache as the chief complaint is recorded in item 8 of the Patient Record. Diagnostic codes are based on the Eighth Revision International Classification of Diseases (ICDA).³ Table 6 contains a list of the diagnoses most frequently associated with headache. Headache, as a *diagnosis*, appeared in an estimated 31 percent of such visits (ICDA codes 306, 346, and 791). An additional 14 percent were attributed to hypertension.

³National 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 4. Percent of office visits with headache as a new problem, by sex of patient and time since onset of complaint: United States, 1977-78

Time since onset of complaint	Female		Male	
	Percent			
Less than 1 week	43.9	49.3		
1-3 weeks	16.3	22.7		
1-3 months	16.1	13.6		
More than 3 months	20.5	13.7		

Table 5. Percent distribution of office visits with headache as the principal reason for visit, by seriousness of problem, according to sex of patient: United States, 1977-78

Seriousness of problem	Female		Male	
	Percent distribution			
All visits	100.0	100.0		
Not serious	51.4	47.3		
Slightly serious	35.6	38.3		
Serious or very serious	12.9	14.5		

Table 6. Number and percent distribution of office visits with headache as the principal reason for visit by principal diagnosis: United States, 1977-78

Principal diagnosis and ICDA code ¹	Number of visits in thousands	Percent distribution
All diagnoses	18,342	100.0
Neuroses 300	653	3.6
Special symptoms not elsewhere classified ² 306	1,692	9.2
Migraine 346	1,635	8.9
Refractive errors 370	500	2.7
Essential benign hypertension 401	2,494	13.6
Acute upper respiratory infection of multiple or unspecified sites 465	640	3.5
Chronic sinusitis 503	1,332	7.3
Hay fever 507	420	2.3
Headache ³ 791	2,303	12.6
Concussion 850	345	1.9
All other diagnoses residual	6,328	34.5

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

²These records coded 306.8, the ICDA category for cephalalgia, including headache of nonorganic origin and tension headache.

³Excludes headache of nonorganic origin (306.8), migraine (346), and tension headache (306.8).

Table 7. Percent of office visits with headache as the principal reason for visit, by selected diagnostic and therapeutic services ordered or provided: United States, 1977-78

Diagnostic and therapeutic services	Percent of visits
Diagnostic services	
None	6.1
Limited exam/history	62.2
General exam/history	23.9
Pap test	*1.4
Clinical lab test	16.2
X-ray	9.0
EKG	3.5
Vision test	6.3
Blood pressure check	49.2
Other	7.1
Therapeutic services	
None	12.2
Immunization/desensitization	3.1
Drugs (prescription/nonprescription)	73.8
Diet counseling	6.5
Medical counseling	21.0
Physiotherapy	4.0
Office surgery	*1.3
Psychotherapy/therapeutic listening	5.0
Other	2.6

Table 8. Percent distribution of office visits with headache as the principal reason for visit by duration and disposition of visit: United States, 1977-78

Duration and disposition	Percent distribution of visits
All visits	100.0
Duration	
0 minutes ¹	2.2
1-5 minutes	11.2
6-10 minutes	26.9
11-15 minutes	30.5
16-30 minutes	21.7
31 minutes or more	7.5
Disposition²	
No followup planned	9.4
Return at specified time	52.4
Return if needed, p. r. n.	32.7
Telephone followup planned	3.0
Referred to other physician	4.0
Return to referring physician	*1.8
Admit to hospital	*1.2
Other disposition	*0.8

¹Visits in which there was no face-to-face contact between the patient and the physician.

²Will not total 100.0 since more than one disposition was possible.

The potential presence of hypertension is reflected in the higher than average proportion of visits in which blood pressure was measured. Table 7 shows that blood pressure was checked during 49 percent of visits for headache compared with the NAMCS average of 34 percent of all visits.

Drug therapy (either prescription or nonprescription) was used in 74 percent of visits, a proportion that exceeded the average of 53 percent of all NAMCS visits. Table 7 also shows the percent of visits in which various diagnostic and therapeutic services were either ordered or provided.

Table 8 provides data on the duration and disposition of visits for headache.

Additional data on headache and other reasons for visits will be presented in more detail in a report for the *Vital and Health Statistics* series. Questions regarding this report may be directed to the Ambulatory Care Statistics Branch by calling 301-436-7132.

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 1977 and 1978. The NAMCS universe is composed of office visits made within the conterminous United States by ambulatory patients to nonfederally employed 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, is responsible for the NAMCS field operations.

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 physician practices. For 1977-78 a sample of 6,007 non-Federal, office-based physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for this period was 75.1 percent. Sampled physicians were requested to complete Patient Records (figure 1) for a systematic random sample of office visits taking place during a randomly assigned weekly reporting period. During 1977-78, 98,335 Patient Records were completed by responding physicians.

Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is sampled. 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 for aggregate statistics are shown in tables I and II. Standard errors for estimated percentages are shown in tables III and IV.

Table I. Approximate relative standard errors of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

<i>Estimated number of office visits in thousands</i>	<i>Relative standard error in percent</i>
500	24.9
1,000	17.7
2,000	12.7
5,000	8.3
10,000	6.2
20,000	4.8
50,000	3.8
200,000	3.1
1,000,000	2.9

Example of use of table: An aggregate of 15,000,000 visits has a relative standard error of 5.5 percent, or a standard error of 825,000 visits (5.5 percent of 15,000,000).

Table II. Approximate relative standard errors of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

<i>Estimated number of office visits in thousands</i>	<i>Relative standard error in percent</i>
500	27.0
1,000	19.6
2,000	14.5
5,000	10.3
10,000	8.5
20,000	7.4
50,000	6.7
100,000	6.4
400,000	6.2

Example of use of table: An aggregate of 7,500,000 visits has a relative standard error of 9.4 percent, or a standard error of 705,000 visits (9.4 percent of 7,500,000).

Definitions

Ambulatory patient.—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.

Office.—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.

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

Physician.—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.

Table IV. Approximate standard errors of percents of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

Base of percent (number of office 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						
500	2.6	5.7	7.9	10.5	12.1	13.1
1,000	1.9	4.1	5.6	7.4	8.5	9.3
2,000	1.3	2.9	3.9	5.3	6.0	6.6
5,000	0.8	1.8	2.5	3.3	3.8	4.2
10,000	0.6	1.3	1.8	2.4	2.7	2.9
20,000	0.4	0.9	1.2	1.7	1.9	2.1
50,000	0.3	0.6	0.8	1.1	1.2	1.3
100,000	0.2	0.4	0.6	0.7	0.9	0.9
400,000	0.1	0.2	0.3	0.4	0.4	0.5

Example of use of table: An estimate of 90 percent based on an aggregate of 3,500,000 visits has a standard error of 3.2 percent, or a relative standard error of 3.6 percent (3.2 percent ÷ 90 percent).

Table III. Approximate standard errors of percents of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

Base of percent (number of office 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						
500	2.5	5.4	7.4	9.9	11.4	12.4
1,000	1.7	3.8	5.3	7.0	8.0	8.8
2,000	1.2	2.7	3.7	5.0	5.7	6.2
5,000	0.8	1.7	2.3	3.1	3.6	3.9
10,000	0.6	1.2	1.7	2.2	2.5	2.8
20,000	0.4	0.9	1.2	1.6	1.8	2.0
50,000	0.2	0.5	0.7	1.0	1.1	1.2
200,000	0.1	0.3	0.4	0.5	0.6	0.6
1,000,000	0.1	0.1	0.2	0.2	0.3	0.3

Example of use of table: An estimate of 20 percent based on an aggregate of 15,000,000 visits has a standard error of 1.9 percent, or a relative standard error of 9.5 percent (1.9 percent ÷ 20 percent).

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