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Office Visits to Orthopedic Surgeons, National Ambulatory Medical Care Survey: United States, 1980-81

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Introduction

This report presents statistics on the 55.5 million ambulatory visits made to orthopedic surgeons during the years 1980-81. The data were collected by means of the National Ambulatory Medical Care Survey (NAMCS), a sample survey of private office-based physicians in the United States, excluding Alaska and Hawaii. NAMCS was conducted annually from 1973 through 1981 and periodically thereafter. Data were again collected in 1985. An earlier report¹ on orthopedic surgeons covered the years 1975-76. This report serves as an update of that earlier report, comparing the data between these two different points in time, and including summary data on the use of medications not available in the earlier report.

Because the estimates presented in this report are based on a sample rather than on the entire universe of office visits, they are subject to sampling variability. A brief description of the sample design and sampling errors is provided in the "Technical notes" at the end of the report. Definitions of key terms used in the survey are also provided. The figure is a facsimile of the 1980-81 NAMCS Patient Record used by participating physicians to record information about their office visits. The Patient Record can be a useful reference as survey findings are reviewed.

¹National Center for Health Statistics, H. Koch: Office visits to orthopedic surgeons, National Ambulatory Medical Care Survey, United States, 1975-76. *Advance Data From Vital and Health Statistics*. No. 33. DHEW Pub. No. (PHS) 78-1250. Public Health Service. Hyattsville, Md., July 18, 1978.

Data highlights

During 1980-81 there were an estimated 55,470,000 visits made to the offices of orthopedic surgeons. Of the 13 most frequently visited specialties, orthopedic surgeons ranked seventh, just behind general surgeons (table 1).

In 1980-81 an estimated 69 percent of the visits to orthopedic surgeons were made to physicians in multiple-member practice arrangements, a proportion that substantially exceeded the average of 45 percent in overall office-based practice (table 2). Notably, the specialties of pediatrics and urology had similarly high proportions of visits to physicians in partnership or group practice.

Table 1. Number of office visits to the 13 most frequently visited specialties, by type of specialty and rank order: United States, 1980-81

Rank	Type of specialty	Number of visits in thousands
1	General and family practice	381,710
2	Internal medicine	144,172
3	Pediatrics	128,762
4	Obstetrics and gynecology	109,035
5	Ophthalmology	62,485
6	General surgery	61,013
7	Orthopedic surgery	55,470
8	Dermatology	51,262
9	Psychiatry	31,810
10	Otolaryngology	26,151
11	Urology	19,470
12	Cardiovascular diseases	14,781
13	Neurology	6,379

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.

Department of Health, Education, and Welfare
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Statistics

A No. 003939

PATIENT RECORD NATIONAL AMBULATORY MEDICAL CARE SURVEY				
1. DATE OF VISIT _____ / _____ / _____ <small>Month Day Year</small>				
2. DATE OF BIRTH _____ / _____ / _____ <small>Month Day Year</small>	3. SEX 1 <input type="checkbox"/> FEMALE 2 <input type="checkbox"/> MALE	4. COLOR OR RACE 1 <input type="checkbox"/> WHITE 2 <input type="checkbox"/> BLACK 3 <input type="checkbox"/> ASIAN/PACIFIC ISLANDER 4 <input type="checkbox"/> AMERICAN INDIAN/ALASKAN NATIVE	5. ETHNICITY 1 <input type="checkbox"/> HISPANIC ORIGIN 2 <input type="checkbox"/> NOT HISPANIC	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. MAJOR REASON FOR THIS VISIT. <i>[Check one]</i> 1 <input type="checkbox"/> ACUTE PROBLEM 2 <input type="checkbox"/> CHRONIC PROBLEM, ROUTINE 3 <input type="checkbox"/> CHRONIC PROBLEM, FLAREUP 4 <input type="checkbox"/> POST SURGERY/POST INJURY 5 <input type="checkbox"/> NON-ILLNESS CARE (ROUTINE PRENATAL, GENERAL EXAM, WELL BABY, ETC.)	8. DIAGNOSTIC SERVICES THIS VISIT <i>[Check all ordered or provided]</i> 1 <input type="checkbox"/> NONE 2 <input type="checkbox"/> LIMITED HISTORY/EXAM 3 <input type="checkbox"/> GENERAL HISTORY/EXAM 4 <input type="checkbox"/> PAP TEST 5 <input type="checkbox"/> CLINICAL LAB TEST 6 <input type="checkbox"/> X RAY 7 <input type="checkbox"/> BLOOD PRESSURE CHECK 8 <input type="checkbox"/> EKG 9 <input type="checkbox"/> VISION TEST 10 <input type="checkbox"/> ENDOSCOPY 11 <input type="checkbox"/> MENTAL STATUS EXAM 12 <input type="checkbox"/> OTHER <i>(Specify)</i> _____		9. PHYSICIAN'S DIAGNOSES a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a. _____ b. OTHER SIGNIFICANT CURRENT DIAGNOSES _____	
10. HAVE YOU SEEN PATIENT BEFORE? 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO ↓ IF YES, FOR THE CONDITION IN ITEM 9a? 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO	11. MEDICATION THERAPY THIS VISIT <input type="checkbox"/> NONE <i>[Using brand or generic names, record all new and continued medications ordered, injected, administered, or otherwise provided at this visit. Include immunizing and desensitizing agents]</i> a. FOR PRINCIPAL DIAGNOSES IN ITEM 9a. 1. _____ 2. _____ 3. _____ 4. _____ b. FOR ALL OTHER REASONS. 1. _____ 2. _____ 3. _____ 4. _____			
12. NON-MEDICATION THERAPY <i>[Check all services ordered or provided this visit]</i> 1 <input type="checkbox"/> NONE 2 <input type="checkbox"/> PHYSIOTHERAPY 3 <input type="checkbox"/> OFFICE SURGERY 4 <input type="checkbox"/> FAMILY PLANNING 5 <input type="checkbox"/> PSYCHOTHERAPY/THERAPEUTIC LISTENING 6 <input type="checkbox"/> DIET COUNSELING 7 <input type="checkbox"/> FAMILY/SOCIAL COUNSELING 8 <input type="checkbox"/> MEDICAL COUNSELING 9 <input type="checkbox"/> OTHER <i>(Specify)</i> _____		13. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN? 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO	14. DISPOSITION THIS VISIT <i>[Check all that apply]</i> 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 6 <input type="checkbox"/> RETURNED TO REFERRING PHYSICIAN 7 <input type="checkbox"/> ADMIT TO HOSPITAL 8 <input type="checkbox"/> OTHER <i>(Specify)</i> _____	
				15. DURATION OF THIS VISIT <i>[Time actually spent with physician]</i> _____ Minutes

Figure. 1980-81 National Ambulatory Medical Care Survey Patient Record form

Table 2. Number and percent distribution of office visits to orthopedic surgeons, and percent distribution of office visits to all specialists, by location and type of practice: United States, 1980-81

Location and type of practice	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution ¹
All visits	55,470	100.0	100.0
Location of practice			
Metropolitan area ²	46,530	83.9	76.0
Nonmetropolitan area	8,940	16.1	24.0
Type of practice			
Solo	17,220	31.0	54.8
Other	38,250	69.0	45.3

¹Based on an estimated 1,160,922,000 visits made to all office-based physicians in 1980-81.

²Location within a standard metropolitan statistical area (SMSA). Composition of SMSA's does not reflect 1979 adjustment.

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, 1980-81

Patient characteristic	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent distribution	Percent distribution ¹
All visits	55,470	100.0	100.0
Age			
Under 15 years	6,619	11.9	18.6
15-24 years	8,802	15.9	13.9
25-44 years	17,536	31.6	26.7
45-64 years	14,997	27.0	22.9
65 years and over	7,516	13.6	17.9
Sex			
Female	26,057	47.0	60.3
Male	29,413	53.0	39.7
Prior visit status			
New patient	12,239	22.1	14.4
Old patient, new problem	3,922	7.1	22.3
Old patient, old problem	39,309	70.9	63.4
Referred by another physician			
Yes	6,071	10.9	4.4
No	49,399	89.1	95.6

¹Based on an estimated 1,160,922,000 visits made to all office-based physicians in 1980-81.

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

The majority of visits to orthopedic surgeons (59 percent) were made by patients in the age groups 25-44 years and 45-64 years (table 3). The median age of patients was 38 years. The age distribution of patients visiting orthopedic surgeons more closely parallels that of neurologists than that of the other most frequently visited specialties; that is, the proportions of patients in each of the age groups in table 3 were similar for both specialties. Table 4 contains a ranking of the median age of patients for all of the most frequently visited specialties. The distribution of visits to orthopedic surgeons by sex revealed that 53 percent of the visits were made by males, a proportion that exceeded the average proportion of male visits in overall office-based practice (40 percent). Orthopedic surgery was one of three specialties where visits by males exceeded visits by females; the other two specialties were pediatrics and urology.

Table 4. Ranking of the median age of patients for the 13 most frequently visited specialties: United States: 1980-81

Physician specialty	Median age of patients in years
Cardiovascular diseases	62
Internal medicine	57
Urological surgery	56
Ophthalmology	56
General surgery	44
Neurology	44
General and family practice	39
Orthopedic surgery	38
Psychiatry	36
All specialties	36
Otolaryngology	33
Dermatology	30
Obstetrics and gynecology	28
Pediatrics	3

Table 5. Number, percent, and cumulative percent of office visits to orthopedic surgeons, by the 25 most frequent principal reasons for visit: United States, January 1980–December 1981

Principal reason for visit and RVC code ^{1,2}		Number in thousands	Percent of visits ³	Cumulative percent of visits
1. Knee symptoms	S925	6,821	12.3	12.3
2. Back symptoms	S905	4,114	7.4	19.7
3. Postoperative visit	T205	3,051	5.5	25.2
4. Foot and toe symptoms	S935	3,036	5.5	30.7
5. Low-back symptoms	S910	2,758	5.0	35.7
6. Progress visit, not elsewhere classified	T800	2,682	4.8	40.5
7. Shoulder symptoms	S940	2,652	4.8	45.3
8. Neck symptoms	S900	2,071	3.7	49.0
9. Hand and finger symptoms	S960	1,919	3.5	52.5
10. Ankle symptoms	S930	1,605	2.9	55.4
11. Wrist symptoms	S955	1,589	2.9	58.3
12. Leg symptoms	S920	1,569	2.8	61.1
13. Hip symptoms	S915	1,489	2.7	63.8
14. Cast splint—application, removal	T540	1,227	2.2	66.0
15. Elbow symptoms	S950	1,085	2.0	68.0
16. Fracture of leg	J020	965	1.7	69.7
17. Fracture or dislocation of arm	J035	960	1.7	71.4
18. Arm symptoms	S945	938	1.7	73.1
19. Pain and related symptoms, generalized, site unspecified	S060	884	1.6	74.7
20. Knee injury, type unspecified	J535	766	1.4	76.1
21. Fracture, other and unspecified	J050	706	1.3	77.4
22. Hand and finger(s) injury, type unspecified	J570	663	1.2	78.6
23. Musculoskeletal deformities	S975	631	1.1	79.7
24. Fracture or dislocation of wrist	J040	527	0.9	80.6
25. Other musculoskeletal or connective tissue disease	D910	512	0.9	81.5

¹Based on "A Reason for Visit Classification for Ambulatory Care" (RVC).²The 'S' codes refer to symptoms such as pain, swelling, headache, and chills. These symptoms exclude sprains, fractures, cuts, burns, and other injuries.³Based on a total of 55,470,119 visits.

The 25 reasons most frequently given by patients for visiting the orthopedic surgeon are shown in table 5. The two most frequent complaints—knee and back problems—accounted for 20 percent of all visits to orthopedic surgeons. Of a more general nature, symptoms referable to the musculoskeletal system (RVC codes S900–S999) accounted for 15 of the top 25 reasons. (Reasons for visit are coded and grouped in eight modules according to a classification system that is described in "A Reason for Visit Classification for Ambulatory Care" (RVC)).²

The 30 most frequent principal diagnoses rendered by orthopedic surgeons are shown in table 6. Excluding a followup exam after surgery and certain congenital deformities, all the diagnoses listed in the table are contained in two major classes:

1. Diseases of the musculoskeletal system and connective tissue (ICD–9–CM codes 710–739).
2. Injury and poisoning (ICD–9–CM codes 800–999).

In addition to most of the diagnoses in table 6, these two classes accounted for 84 percent of all the diagnoses rendered by orthopedic surgeons. (Diagnostic terms and codes were derived from the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM)).³

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

³U.S. Public Health Service and Health Care Financing Administration: *International Classification of Diseases, 9th Revision, Clinical Modification*. DHHS Pub. No. (PHS) 80–1260. Public Health Service. Washington, U.S. Government Printing Office, Sept. 1980.

Because the orthopedic surgeon deals mainly with sprains, strains, and fractures, it follows that the diagnostic services provided would be directly related. The logical course of treatment for a sprain, strain, or fracture would be a physical examination followed by an x ray, if warranted. This is generally what is revealed in table 7. A limited history and/or exam was conducted in 69 percent of the visits to orthopedic surgeons, and an x ray was taken in 39 percent of the visits. The latter proportion is more than 5 times greater than the average proportion of 7.5 percent of the visits in overall office-based practice where an x ray is taken.

Two diagnostic services that are rarely provided in the offices of orthopedic surgeons are clinical lab tests and blood pressure checks, which are provided in 2 percent and 3 percent of the visits, respectively. In overall office-based practice, clinical lab tests are provided in 22 percent of the visits, and blood pressure is checked in 34 percent of the visits. The lower proportion of these services provided by orthopedic surgeons reflects the types of problems presented to these specialists which simply do not require the rendering of such services.

Of the nonmedication therapy services provided, physiotherapy and office surgery were provided more by orthopedic surgeons than by most other specialties. Physiotherapy was provided in 22 percent of the visits to orthopedic surgeons, a proportion not only higher than the proportion for any other specialty, but 4 times higher than the average proportion of 5 percent for all office-based practice. Office surgery was provided in 12 percent of the visits to orthopedic surgeons, and this proportion was surpassed only by general surgeons (15 percent) and dermatologists (35 percent).

Table 6. Number, percent, and cumulative percent of office visits to orthopedic surgeons, by the 30 most frequent principal diagnoses: United States, January 1980–December 1981

Principal diagnosis and ICD-9-CM code ¹	Number in thousands		Percent of visits ²	Cumulative percent of visits
1. Peripheral enthesopathies and allied syndromes	726	2,829	5.1	5.1
2. Sprains and strains of other and unspecified parts of back	847	2,484	4.5	9.6
3. Fracture of radius and ulna	813	2,462	4.4	14.0
4. Other disorders of synovium, tendon, and bursa	727	2,295	4.1	18.1
5. Intervertebral disc disorders	722	2,234	4.0	22.1
6. Followup examination, following surgery	V67.0	2,217	4.0	26.1
7. Osteoarthritis and allied disorders	715	2,195	4.0	30.1
8. Other and unspecified disorders of back	724	1,740	3.1	33.2
9. Dislocation of knee	836	1,685	3.0	36.2
10. Sprains and strains of ankle and foot	845	1,394	2.5	38.7
11. Fracture of ankle	824	1,374	2.5	41.2
12. Internal derangement of knee	717	1,358	2.4	43.6
13. Sprains and strains of knee and leg	844	1,251	2.3	45.9
14. Sprains and strains of sacroiliac region	846	1,199	2.2	48.1
15. Fracture of humerus	812	1,110	2.0	50.1
16. Other and unspecified disorders of joint	719	1,090	2.0	52.1
17. Fracture of one or more phalanges of hand	816	906	1.6	53.7
18. Fracture of carpal bone(s)	814	904	1.6	55.3
19. Other and unspecified arthropathies	716	858	1.5	56.8
20. Spondylosis and allied disorders	721	850	1.5	58.3
21. Fracture of tibia and fibula	823	832	1.5	59.8
22. Other acquired deformities of limbs	736	809	1.5	61.3
23. Fracture of one or more tarsal and metatarsal bones	825	750	1.4	62.7
24. Other disorders of soft tissues	729	681	1.2	63.9
25. Fracture of vertebral column without mention of spinal cord injury	805	624	1.1	65.0
26. Other derangement of joint	718	611	1.1	66.1
27. Certain congenital musculoskeletal deformities	754	577	1.0	67.1
28. Curvature of spine	737	572	1.0	68.1
29. Sprains and strains of shoulder and upper arm	840	540	1.0	69.1
30. Fracture of metacarpal bone(s)	815	531	1.0	70.1

¹Based on *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.
²Based on a total of 55,470,119 visits.

Table 7. Number and percent of office visits to orthopedic surgeons, and percent of visits to all specialists, by selected diagnostic services and nonmedication therapy: United States, 1980–81

Selected diagnostic services and nonmedication therapy	Visits to orthopedic surgeons		Visits to all specialists
	Number in thousands	Percent	Percent ¹
Diagnostic service			
Limited history and examination	38,136	68.8	64.4
General history and examination	5,880	10.6	15.5
Clinical laboratory test	1,128	2.0	21.9
X ray	21,651	39.0	7.5
Blood pressure check	1,617	2.9	34.2
Nonmedication therapy ²			
None	27,386	49.4	53.8
Physiotherapy	12,004	21.6	4.8
Office surgery	6,632	12.0	7.4
Medical counseling	9,192	16.6	23.0

¹Based on an estimated 1,160,922,000 visits made to all office-based physicians in 1980–81.
²Percentages will not add to 100.0 because more than 1 service or therapy may have been rendered during a visit.

As expected, postsurgery or postinjury was the major reason for 41 percent of the visits to orthopedic surgeons compared with 9 percent of the visits in overall office-based practice (table 8). General surgery, with 34 percent, was the only other specialty to have a higher proportion of visits for postsurgery or postinjury than for chronic problems.

“Disposition of visit” refers to the physician’s advice at the end of the visit. For 83 percent of the visits to orthopedic surgeons, patients were advised to return either “at a specified

time” or “if needed.” This proportion was the same for physicians in overall office-based practice. Admitting patients to the hospital is a relatively rare occurrence in office-based practice, occurring in 2 percent of the visits. Orthopedic surgeons, however, admitted patients to the hospital in 5 percent of their visits, which may be a reflection of their seeing more injuries than most physicians.

A mean visit to an orthopedic surgeon lasted 14 minutes compared with 15 minutes in overall office-based practice.

Table 8. 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, 1980-81

<i>Visit characteristic</i>	<i>Visits to orthopedic surgeons</i>		<i>Visits to all specialists</i>
	<i>Number in thousands</i>	<i>Percent distribution</i>	<i>Percent distribution¹</i>
All visits	55,470	100.0	100.0
<i>Major reason for visit</i>			
Acute problem	14,685	26.5	36.4
Chronic problem, routine	10,895	19.6	28.1
Chronic problem, flareup	5,873	10.6	9.2
Postsurgery or postinjury	22,792	41.1	8.8
Nonillness care	1,225	2.2	17.6
<i>Disposition</i>			
No followup planned	5,066	9.1	11.5
Return at specified time	36,071	65.0	60.7
Return if needed	10,042	18.1	22.7
Referred to other physician	994	1.8	2.6
Admit to hospital	2,506	4.5	2.3
<i>Duration</i>			
Zero minutes ²	468	0.8	2.6
1-5 minutes	11,035	19.9	12.6
6-10 minutes	16,418	29.6	30.1
11-15 minutes	13,988	25.2	27.8
16-30 minutes	11,936	21.5	20.8
31 minutes or more	1,626	2.9	6.1

¹Based on an estimated 1,160,922,000 visits made to all office-based physicians in 1980-81.²No face-to-face contact with physician.**Table 9. Number and percent of drug mentions and office visits to orthopedic surgeons, and percent of drug mentions and office visits to all specialists, by selected therapeutic categories and number of medications provided: United States, 1980-81**

<i>Therapeutic category and number of medications¹</i>	<i>Orthopedic surgeons</i>		<i>All specialists</i>
	<i>Number in thousands</i>	<i>Percent</i>	<i>Percent</i>
Drug mentions	22,477	---	---
<i>Therapeutic category</i>			
Anti-infective agents	925	4.1	15.8
Autonomic drugs	1,224	5.5	3.7
Central nervous system drugs	13,587	60.5	16.2
Analgesics and antipyretics	12,071	53.7	8.8
Sedatives and hypnotics	1,115	5.0	3.6
Hormones and synthetic drugs	2,414	10.7	8.3
Skin and mucous membrane preparations	2,117	9.4	7.8
Office visits	55,470	---	---
<i>Number of medications</i>			
None	39,794	71.7	38.2
1	10,792	19.5	30.9
2	3,333	6.0	17.7
3 or more	1,551	2.8	13.2

¹Based on the pharmacologic-therapeutic classification of the American Society of Hospital Pharmacists; selected categories reproduced with the permission of the Society.

The median duration of visits to orthopedic surgeons was about 10 minutes, and for all physicians the median duration was 15 minutes.

The number of medications shown in table 9 refers to the frequency of drugs ordered or provided during office visits and includes new as well as continued medications. Orthopedic surgeons, with 22.5 million drug mentions, ranked ninth among the top specialties in the number of drug mentions

in 1980-81; however, they ranked first in the proportion of visits in which no drugs or medications were used. In 72 percent of the visits to orthopedic surgeons, no drugs or medications were ordered or provided, and in 20 percent of the visits only one drug was used.

The NAMCS drug data are classified into several therapeutic categories, but most of the 22.5 million drug mentions of orthopedic surgeons can be classified into five categories.

By far the largest single proportion (54 percent) of these drug mentions are analgesics, a finding that is not unexpected when one considers that the treatment of musculoskeletal pain forms such a large part of the orthopedic surgeon's practice. The findings that follow show that no other specialist challenges the orthopedic surgeon in this intensity of prescribing or ordering analgesics.

<i>Specialty</i>	<i>Analgesics as a percent of all drug mentions</i>
Orthopedic surgery	54
General surgery	15
Neurology	15
General and family practice	10
Internal medicine	10
Other specialties	less than 10

Comparing 1975–76 data with 1980–81 data

There was an increase of 8.3 million visits to orthopedic surgeons from 1975–76 to 1980–81, but among the most frequently visited specialties providing ambulatory care, orthopedic surgeons ranked seventh in both time periods. The number of visits to orthopedic surgeons per 100 persons increased slightly from 11.3 in 1975–76 to 12.6 in 1980–81 (table 10).

The proportion of visits to orthopedic surgeons in multiple-member practice arrangements increased substantially from 55 percent in 1975–76 to 69 percent in 1980–81. Orthopedic surgeons in metropolitan areas experienced a slight increase in the proportion of visits, but the distribution of visits by sex remained unchanged, with males still accounting for 53 percent of the visits. The increase in visits by persons 65 years and over created an upward swing in the median age of patients from 35 to 38 years.

The proportion of visits for diseases of the musculoskeletal system increased from 30 to 38 percent; for injuries and poisonings, the proportion of visits increased from 36 to 45 percent. This proportional increase in visits for problems such as sprains, strains, and fractures was naturally accompanied by a corresponding increase in the respective treatment or services provided, such as limited medical examinations. The proportion of visits in which a limited medical examination was performed increased substantially after 1975, from 55 to 69 percent.

The average duration of visit remained about the same, as did the proportion of visits that culminated in the patient's admission to a hospital or in the patient's being scheduled for return visits.

Table 10. Number of office visits per 100 persons per year to orthopedic surgeons and percent of visits, by selected characteristics: United States, 1975-76 and 1980-81

<i>Characteristic</i>	<i>1975-76¹</i>	<i>1980-81²</i>
		Number
Total visits in thousands	47,152	55,470
Visits per 100 persons per year	11.3	12.6
Median age of patients in years	35	38
Average duration of visit in minutes	15	14
		Percent
Percent of all physician visits	4.1	4.8
Type of practice		
Solo	45.4	31.0
Other ³	54.6	69.0
Location of practice		
Metropolitan area	77.6	83.9
Nonmetropolitan area	22.4	16.1
Sex of patient		
Female	47.2	47.0
Male	52.8	53.0
Age of patient		
Under 25 years	32.7	27.8
25-44 years	30.4	31.6
45-64 years	27.4	27.0
65 years and over	9.6	13.6
Prior visit status		
New patient	22.5	22.1
Old patient, new problem	6.9	7.1
Old patient, old problem	70.6	70.9
Principal diagnosis		
Neoplasms	*0.7	*0.6
Diseases of the circulatory system	1.1	*0.5
Diseases of the respiratory system	*0.9	*0.2
Diseases of the digestive system	*0.6	*0.1
Diseases of the genitourinary system	*0.4	*0.1
Diseases of the skin and subcutaneous tissue	*1.0	1.1
Diseases of the musculoskeletal system and connective tissue	29.6	37.5
Injury and poisoning ⁴	36.3	45.0
Diagnostic services and nonmedication therapy		
Limited history and/or examination	55.2	68.8
General history and/or examination	10.9	10.6
Clinical laboratory test	1.6	2.0
X ray	36.3	39.0
Office surgery	14.3	12.0
Duration of visit		
Less than 11 minutes	46.7	⁵ 50.3
More than 15 minutes	28.6	24.5
Disposition		
Admit to hospital	3.5	4.5
Return at specified time	66.3	65.0
Return if needed	16.3	18.1
No followup planned	10.5	9.1

¹Based on an estimated 1,155,900,000 visits.²Based on an estimated 1,160,922,000 visits.³Includes partnership, group, and other types of practice.⁴In 1975 this category was "Accidents, poisonings, and violence."⁵Includes zero minutes.

Technical notes

Source of data and sample design

The estimates presented in this report are based on the findings of the National Ambulatory Medical Care Survey (NAMCS), a sample survey of office-based care conducted annually from 1973 through 1981 by the National Center for Health Statistics. The target universe of NAMCS is composed of office visits made by ambulatory patients to non-Federal and noninstitutional physicians who are principally engaged in office-based, patient-care practice. Visits to physicians practicing in Alaska and Hawaii are excluded from the range of NAMCS, as are visits to anesthesiologists, pathologists, and radiologists.

NAMCS uses a multistage probability sample design that involves a step-wise sampling of primary sampling units, physician practices within primary sampling units, and patient visits within physician practices. The physician sample (5,805 for the combined years 1980 and 1981) was selected from master files maintained by the American Medical Association and the American Osteopathic Association. Those members of the sample who proved to be within the scope of the survey participated at a rate of 77.3 percent. The participation rate for orthopedic surgeons, as an individual specialty, was 84.2 percent. Responding physicians completed visit records (figure) for a systematic random sample of their office visits made during a randomly assigned weekly reporting period. Telephone contacts were excluded. During 1980 and 1981 responding physicians completed a 2-year total of 89,447 Patient Record forms on which they recorded 97,796 drug mentions. Characteristics of the physician's practice, such as primary specialty and type of practice, were obtained during an induction interview. The National Opinion Research Center, under contract to the National Center for Health Statistics, was responsible for the field operations of the survey.

Sampling errors, statistical significance, and rounding

The standard error is a measure of the sampling variability that occurs by chance because only a sample, rather than an entire universe, is surveyed. The relative standard error of an estimate is obtained by dividing the standard error by the estimate itself and is expressed as a percent of the estimate. Approximate relative standard errors of estimates based on all physician specialties are shown in table I; the errors of estimates based on an individual specialty are shown in table II.

In this report, the determination of statistical significance is based on the *t*-test with a critical value of 1.96 (0.95 level of significance). Terms relating to differences, such as "higher" or "less," indicate that the differences are statistically significant. Terms such as "similar" or "no difference" mean that no statistical significance exists between the estimates being compared. A lack of comment in a comparison between any two estimates does not mean that the difference was tested and found to be not significant.

Table I. Approximate relative standard errors for estimated numbers of office visits based on all physician specialties: National Ambulatory Medical Care Survey, 1980-81

Estimated number of office visits in thousands	Relative standard error
	Percent
150	51.6
250	40.1
400	31.7
500	28.4
1,000	20.2
2,000	14.5
5,000	9.5
10,000	7.1
20,000	5.6
50,000	4.4
100,000	3.9
500,000	3.5
1,000,000	3.4

NOTE: For example, an aggregate estimate of 35,000,000 office visits has a relative standard error of 5.0 percent or a standard error of 1,750,000 visits (5.0 percent of 35,000,000 visits).

Table II. Approximate relative standard errors for estimated numbers of office visits based on an individual physician specialty: National Ambulatory Medical Care Survey, 1980-81

Estimated number of office visits in thousands	Relative standard error
	Percent
*150	*53.8
*250	*42.0
*400	*33.3
500	29.9
1,000	21.6
2,000	15.9
5,000	11.1
10,000	9.0
20,000	7.7
50,000	6.8
100,000	6.5
500,000	6.2
1,000,000	6.2

NOTE: For example, an aggregate estimate of 7,500,000 visits has a relative standard error of 10.0 percent or a standard error of 750,000 visits (10.0 percent of 7,500,000 visits).

Estimates of office visits have been rounded to the nearest thousand. For this reason detailed figures within tables do not always add to totals. Rates and percents were calculated on the basis of original, unrounded figures and will not necessarily agree precisely with percents calculated from rounded data.

Definitions

Ambulatory patient—Ambulatory patients are individuals presenting themselves for personal health services who are neither bedridden nor currently admitted to any health care institution on the premises.

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.

Office—Offices are places that physicians identify as locations for their ambulatory practices. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than with an institution.

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

Symbols

---	Data not available
...	Category not applicable
-	Quantity zero
0.0	Quantity more than zero but less than 0.05
Z	Quantity more than zero but less than 500 where numbers are rounded to thousands
*	Figure does not meet standard of reliability or precision
#	Figure suppressed to comply with confidentiality requirements

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