

Highlights of Osteopathic Office Practice, National Ambulatory Medical Care Survey, 1985

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Introduction

In this report, the findings of the National Ambulatory Medical Care Survey (NAMCS) are used to describe the ambulatory care provided in the offices of osteopathic physicians over the period from March 1985 through February 1986. The National Center for Health Statistics, which periodically conducts the survey, obtains the NAMCS data base from a sample of non-Federal physicians selected from the doctors of medicine and osteopathy who are primarily engaged in office-based practice throughout the coterminous United States. Anesthesiologists, radiologists, and pathologists are not included in the sample. Further excluded are telephone contacts (including prescription refills) and all nonoffice visits to patients. General findings from the 1985 survey have been published.¹

Osteopathic medicine—background facts

(Based on information supplied by the American Osteopathic Association.)

- Osteopathic physicians are licensed for the full practice of medicine and surgery in all 50 States and the District of Columbia.
- Osteopathic medicine uses all accepted methods of preventing, diagnosing, and treating illness and injury, including the appropriate use of drugs and surgery.
- Central to the philosophy and practice of osteopathic medicine is the musculoskeletal system and its importance to a patient's total well-being. Doctors of osteopathy (D.O.'s) are especially trained in the use of palpatory

techniques to diagnose underlying problems and in manipulative therapy as an aid to correcting structural problems such as poor posture, slight dislocations, and limited mobility.

- At the time the 1985 NAMCS sample was selected, about 21,000 D.O.'s were professionally active in the United States, two-thirds of them in office-based practice. (A universe of 11,776 physicians was identified as falling within the NAMCS scope.) Strong concentrations were found in Michigan, Pennsylvania, Ohio, New Jersey, Florida, Texas, and Missouri. About 86 percent of D.O.'s were primary care physicians, predominantly in general or family practice. The remaining 14 percent were certified in 18 other medical or surgical specialties, notably anesthesiology, emergency medicine, general surgery, osteopathic manipulative treatment, orthopedic surgery, psychiatry, and radiology.

Data base

The data base for this report is the estimated 35.9 million office visits made over the year-long period to osteopathic physicians within the NAMCS scope and the 43.0 million drug mentions associated with these visits. The following tables offer statistical detail about salient features of osteopathic office care. In most of the tables, D.O. care is contrasted with overall office care and with the specific portion of that care provided by doctors of medicine (M.D.'s) in general or family practice.

Table 1 — Specialty and type of practice

Table 2 — Patients' most frequent reasons for visiting the D.O.

Table 3 — Diagnostic procedures

Table 4 — Most frequent principal diagnoses

Table 5 — Major diagnostic groups

Table 6 — Patient age and sex

Table 7 — Patient race and ethnicity

¹National Center for Health Statistics, T. McLemore and J. DeLozier: 1985 Summary, National Ambulatory Medical Care Survey. *Advance Data From Vital and Health Statistics*. No. 128, DHHS Pub. No. (PHS) 87-1250. Public Health Service, Hyattsville, Md., Jan. 23, 1987.

Table 8 — Referral status and prior visit status
 Table 9 — Drug utilization indicators
 Table 10 — Specific drugs most frequently utilized
 Table 11 — Drug utilization by drug class
 Table 12 — Nonmedication therapy
 Table 13 — Disposition
 Table 14 — Duration

Because the estimates presented in this report are based on a sample rather than on the entire universe of office visits or drug mentions, the data are subject to sampling variability. The technical notes at the end of the report, along with supplying a brief description of the sample design, provide guidelines to judge the precision of the estimates.

Data highlights

From March 1985 through February 1986, an estimated 35,872,000 visits were made to the offices of osteopathic physicians, comprising about 6 percent of the 636,386,000 office visits made to all physicians within the NAMCS scope.

Physician characteristics

The findings in table 1 reinforce the emphatic preference, noted earlier, that D.O.'s show for primary care in general and for general or family practice in particular, a preference that is compatible with their avowed concern for holistic medicine. D.O.'s in general practice arrangements accounted for nearly 8 of every 10 office visits. Thus, they contrast sharply with M.D.'s, among whom general or family physicians accounted for fewer than 3 of every 10 visits.

Visit distribution by type of practice indicates the D.O.'s tendency to favor solo practice over the multiple-member forms (table 1). The tendency, however, is not a pronounced one. There is evidence that osteopathic physicians, like their counterparts among the M.D.'s, are being increasingly drawn to multiple-member arrangements, especially to partnerships and small-group practices. Indeed, according to the NAMCS findings for all office-based physicians, the visit share claimed by solo practitioners declined from 60 percent in 1975 to 51 percent in the current survey.

Patients' reasons for visiting the D.O.

Table 2 offers a ranked listing of the 20 most frequent reasons that patients gave for visiting the osteopathic physician, contrasting them with a similar listing for M.D. general or family physicians (M.D. GFP's). The data illustrate the following salient features of osteopathic office care.

- The generalist nature of D.O. care is demonstrated by the sheer diversity of the reasons that motivated patients to seek that care, and by the fact that 16 of the 20 reasons are shared by D.O.'s with their M.D. counterparts in general or family practice.
- The D.O.'s special concern for the musculoskeletal system is evident in the finding that back symptoms led the list in table 2 and that back and neck symptoms alone

motivated about 1 of every 10 visits to the osteopathic physician.

- The presence on the top-20 list of general, pre-natal, and well-baby examinations, along with such specific procedures as "pap smear" and "blood pressure test" bears partial witness to the D.O.'s involvement with the preventive and screening functions of health care.

Diagnostic procedures

Table 3 supplies data on the diagnostic or screening procedures that D.O.'s provided or ordered in the course of their office visits. At 65 percent of the visits, D.O.'s used one or more of these probative mechanisms. Most of the procedures were understandably applied at that 40 percent of visits where the patient presented a new problem, and the physician needed to forge a chain of clinical evidence that would assess the presenting symptoms and produce an appropriate diagnosis. At other visits, the procedures were used to monitor the course of a known morbidity or—largely at nonillness visits—to act as preventive or screening mechanisms. The exact extent of this monitoring or preventive activity is impossible to quantify.

The data in table 3 invite the following comments:

- M.D. GFP's somewhat exceeded D.O.'s in their total utilization of the diagnostic mechanisms and in their use of most of the specific procedures. One exception lay in the D.O.'s specialized use of palpatory diagnostics.
- In view of an above-average involvement with musculoskeletal disease and injury (see table 5), the D.O.'s reliance on x ray procedures ("other radiology") seems conservative. Apparently, the use of palpatory techniques reduced the need for x ray in many cases.

Diagnoses

The clinical core of osteopathic office practice lies in the formal diagnoses that D.O.'s render. Tables 4 and 5 describe this core, table 4 by listing the 20 principal (first-listed) diagnoses most frequently assigned at D.O. office visits, and table 5 by gathering these specific diagnoses into their diagnostic classes.

- In both tables, the broad range and diversity of the diagnoses further underscore the generalized nature of osteopathic office care.
- A comparison between D.O.'s and M.D. GFP's (table 5) shows a marked similarity between the two in the clinical content of their office care.
- Predictably, D.O.'s exceeded the overall norm and the norm for M.D. GFP's in their treatment of injuries and of musculoskeletal disease. About one of every four principal diagnoses was assigned to these diagnostic classes.
- Visits for nonillness care ("supplemental classification") were relatively fewer for D.O.'s than they were for office-based physicians in general or for M.D. GFP's in particular; obversely, it may be said that osteopathic office care tends to be somewhat more illness-oriented than the office care to which it is compared in table 5.

Patient characteristics

Again accenting the generalist nature of their office practice, D.O.'s treated patients of all ages (table 6). Visits by female patients outnumbered visits by males in a ratio of 6 to 4, a disproportion also typical of office practice in general and of M.D. GFP practice in particular. Between D.O. and M.D. GFP practice, however, significant differences in visit volume were apparent among two patient groups along the age continuum. Visits by oldest patients (65 years and over) were relatively less frequent among D.O. practitioners; visits by patients from the 25th through the 44th year were relatively more frequent. These findings are compatible with the fact that D.O.'s focus to a greater extent on the treatment of musculoskeletal injuries, problems that are generally most troublesome in the 25-44 age interval.

Though the difference was a modest one, D.O.'s reported a fraction of visits by black patients that exceeded both the comparable proportion found in all office practice and that found among M.D. GFP's (table 7). To some extent, the difference may be explained by the D.O.'s special focus on musculoskeletal disease and injury, problems that were proportionately more troublesome among black office patients. The infrequent presence of Hispanic patients in the office of the osteopathic physician probably has more to do with the geographic concentrations of D.O. practitioners than with any clinical considerations.

New patients accounted for 12 percent of the visits to osteopathic physicians (table 8). Of these new-patient visits, about 1 of every 5 was a referral by another physician. The remainder resulted either from voluntary walk-in or by referral from a source other than a fellow physician.

By far the greater body of D.O. visits (88 percent) were made by continuing patients, testimony to a very stable practice base. Indeed, referral to more specialized colleagues occurred at only 4 percent of D.O. visits (see table 13).

Not only did the D.O.'s office practice chiefly involve encounters with continuing patients, the largest proportion of visits (60 percent) required the management of continuing problems as well (table 8). Many of these continuing problems, of course, were chronic diseases of the musculoskeletal system. The D.O.'s involvement with new problems, although it occurred at a considerable 40 percent of visits, was less than that of M.D. GFP's, who encountered a new problem at roughly every other one of their visits.

Drug therapy

The importance of drug therapy in osteopathic office practice is made graphically evident in figure 1. An estimated 68 percent of all visits were "drug visits"—that is, visits at which one or more drugs were prescribed or provided. Furthermore, at a sharply prominent 72 percent of these 24.4 million drug visits, drug therapy was the *only* form of treatment used.

In the frequency and intensity of their drug utilization, D.O.'s exceeded the general norm for office-based practitioners (table 9). This noteworthy reliance on drug therapy, how-

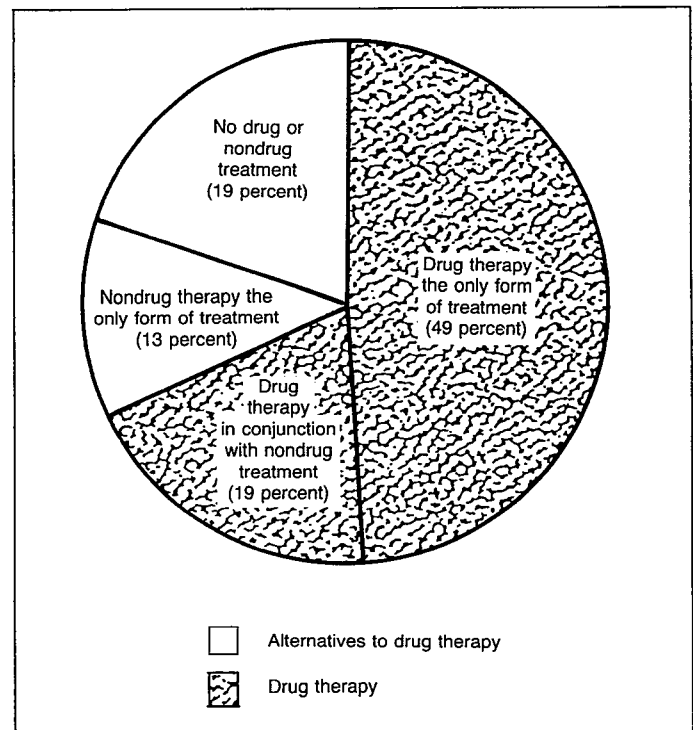


Figure 1. Percent distribution of office visits to osteopathic physicians by treatment modality: United States, 1985

ever, was not unique to osteopathic medicine as a profession. Rather it is a feature of primary care practice in general and of general practice in particular.² As the indicators in table 9 reveal, it was matched and even somewhat exceeded by the M.D. in general or family practice.

Tables 10 and 11 show the range and diversity of the drugs utilized in osteopathic office practice, table 10 by a ranked listing of the 25 generic families that were most frequently mentioned, and table 11 by classifying the 43 million drug mentions according to the therapeutic effect that each was intended to produce. Most of the drugs prescribed or provided by office-based D.O.'s could be grouped into four therapeutic classes: antibiotics, cardiovascular-renal drugs, analgesics, and respiratory agents. Together these classes accounted for 51 percent of the D.O.'s drug mentions. Between the D.O. and M.D. GFP, there was fairly close agreement in the utilization of the drug classes (table 11). When they differed significantly, as with the use of cardiovascular drugs, the disparity could usually be explained by a reference to the diagnostic correlates shown in table 5. It is arresting to note, then, that the D.O.'s use of analgesics did not exceed their use by the M.D. GFP. After all, D.O.'s were more focally involved with injuries and musculoskeletal disease, conditions which, according to past NAMCS studies, were among the most likely to be associated with symptomatic

²National Center for Health Statistics, H. Koch and D. Knapp: Highlights of Drug Utilization in Office Practice, National Ambulatory Medical Care Survey, 1985. *Advance Data From Vital and Health Statistics*. No. 134. DHHS Pub. No. (PHS) 87-1250. Public Health Service, Hyattsville, Md., May 19, 1987.

pain.^{3,4} Apparently, although to an unknown extent, the use of manipulative therapy reduced the perceived need for pain medication.

Nondrug therapy

In sheer volume, the role of nondrug therapy in osteopathic office practice is by no means as imposing as that played by drug therapy. This is apparent from figure 1, which shows that nondrug procedures were provided or ordered during 32 percent of D.O. visits, more than one-half of which also involved drug therapy. Predictably, manipulative therapy was the nondrug procedure most favored by the D.O. (table 12). Except for this specialized emphasis, there was little significant difference between D.O.'s and M.D. GFP's in their utilization of nondrug therapy.

Disposition

In their disposition instructions at the end of the office visit, D.O.'s and M.D. GFP's agreed in the limited extent to which they relied on telephone followup, referred patients to colleagues, or admitted them to the hospital (table 13). The notable difference between the two professional groups lay in the degree of specificity used in arranging future personal contact with the patient. Probably because of a greater need to provide closely monitored maintenance therapy, especially for chronic, musculoskeletal problems, D.O.'s tended to schedule specific followup visits more frequently than M.D. GFP's did. The relatively greater use by M.D. GFP's of the more tentative "return if needed" probably signaled the management of more cases of acute, short-term morbidity,

with which the physician was helped substantially by the self-restorative capacities of the body.

Duration

Measured by face-to-face contact between physician and patient, the average visit to the office of the D.O. lasted between 13 and 14 minutes (table 14). Thus, D.O. visits were somewhat shorter than office visits in general or visits to M.D. GFP's in particular. Probably this was due in part to the D.O.'s less intensive use of certain diagnostic procedures (table 3).

Conclusion

Although office-based D.O.'s gave ample evidence of their prominent concern with the musculoskeletal system, this concern did not appear to dominate their office practice. The closest counterpart to osteopathic office care was found in the care provided in the offices of M.D.'s in general or family practice. Most D.O.'s in office practice were best characterized as generalists who brought the added dimension of a specialized philosophy and training to the conduct of their professional tasks.

³National Center for Health Statistics, D. Knapp and H. Koch: The Management of New Pain in Office-based Ambulatory Care, National Ambulatory Medical Care Survey. *Advance Data From Vital and Health Statistics*. No. 97. DHHS Pub. No. (PHS) 84-1250. Public Health Service. Hyattsville, Md., June 13, 1984.

⁴National Center for Health Statistics, H. Koch: The Management of Chronic Pain in Office-based Ambulatory Care, National Ambulatory Medical Care Survey. *Advance Data From Vital and Health Statistics*. No. 123. DHHS Pub. No. (PHS) 86-1250. Public Health Service, Hyattsville, Md., Aug. 29, 1986.

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 standards of reliability or precision
#	Figure suppressed to comply with confidentiality requirements

Table 1. Percent distribution of office visits to doctors of osteopathy and doctors of medicine by physician specialty and type of practice: United States, 1985

<i>Physician specialty and type of practice</i>	<i>Doctors of osteopathy</i>	<i>Doctors of medicine</i>
All visits	100.0	100.0
Specialty		
Primary care specialties	89.0	60.7
General or family practice	78.1	27.6
Internal medicine	3.8	12.0
Pediatrics	4.0	11.9
Obstetrics and gynecology	3.1	9.2
All other specialties	11.0	39.3
Type of practice		
Solo	52.6	50.8
Multiple member	47.4	49.3

Table 2. Percent and cumulative percent of the 20 most frequent reasons that patients gave for visiting doctors of osteopathy (D.O.'s) and doctors of medicine in general or family practice (M.D. GFP's) (in rank order): United States, 1985

Patients' most frequent reasons for visiting the D.O.			Patients' most frequent reasons for visiting the M.D. GFP		
Rank	Percent	Cumulative percent	Rank	Percent	Cumulative percent
	100.0	46.0		100.0	44.0
All visits [35,872,000]			All visits [165,987,000]		
1 Back symptoms [upper and lower]	6.6	6.6	1 Symptoms referable to throat	4.5	4.5
2 Symptoms referable to throat	4.5	11.1	2 General medical examination	4.4	8.9
3 General medical examination	3.7	14.8	3 Cough	3.5	12.4
4 Neck symptoms	3.2	18.0	4 Back symptoms [upper and lower]	3.3	15.7
5 Cough	2.8	20.8	5 Blood pressure test	3.1	18.8
6 Prenatal examination, routine	2.4	23.2	6 Prenatal examination, routine	2.8	21.6
7 Blood pressure test	2.3	25.5	7 Head cold, upper respiratory infection	2.6	24.2
8 Head cold, upper respiratory infection	2.1	27.6	8 Earache	2.2	26.4
9 Headache	2.0	29.6	9 Headache	2.1	28.5
10 Hypertension, established diagnosis	1.9	31.5	10 Hypertension, established diagnosis	2.0	30.5
11 Skin rash	1.8	33.3	11 Skin rash	1.8	32.3
12 Chest pain	1.6	34.9	12 Abdominal pain	1.6	33.9
13 Abdominal pain	1.5	36.4	13 Fever	1.5	35.4
14 Pap smear	1.4	37.8	14 Chest pain	1.4	36.8
15 Earache	1.4	39.2	15 Well baby examination	1.3	38.1
16 Well baby examination	1.4	40.6	16 Vertigo	1.3	39.4
17 Knee symptoms	1.4	42.0	17 Diabetes, established diagnosis	1.2	40.6
18 Fever	1.3	43.3	18 Progress visit, not otherwise specified	1.1	41.7
19 Progress visit, not otherwise specified	1.2	44.5	19 Leg symptoms	1.1	42.8
20 Shoulder symptoms	1.1	45.6	20 Allergy medication	1.0	43.8

Table 3. Percent of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by diagnostic procedures ordered or provided: United States, 1985

Diagnostic procedure ordered or provided	All physicians	D.O.'s	M.D. GFP's
	Percent of visits		
None	36.1	34.5	30.8
Breast examination	6.8	3.7	5.2
Pelvic examination	8.6	5.7	6.3
Rectal examination	5.4	2.3	4.7
Visual acuity	6.4	1.9	1.9
Urinalysis	13.8	9.9	16.2
Hematology	9.3	6.5	10.0
Blood chemistry	6.9	8.1	7.9
Pap test	4.5	3.5	3.7
Other lab test	8.4	7.4	8.2
Blood pressure test	38.6	46.6	52.7
Electrocardiogram	3.2	2.5	3.1
Chest x ray	2.8	2.6	3.2
Other radiology	5.9	4.9	5.3
Ultrasound	0.9	1.5	0.5
Other	10.7	9.5	7.2

¹Includes palpatory diagnostics.

Table 4. Percent and cumulative percent of the 20 principal diagnoses most frequently rendered at visits to doctors of osteopathy (D.O.'s) (in rank order): United States, 1985

Rank	Most common principal diagnoses and ICD-9-CM codes ¹	D.O.'s	
		Number of visits in thousands	
	All principal diagnoses	35,872	35,872
		Percent	Cumulative percent
	All principal diagnoses	100.0	40.0
1	Essential hypertension	401	6.0
2	Acute upper respiratory infections of multiple or unspecified sites	465	3.7
3	Sprains and strains of other and unspecified parts of back	847	3.2
4	General medical examination	V70	2.4
5	Diabetes mellitus	250	2.4
6	Acute pharyngitis	462	2.4
7	Normal pregnancy	V22	2.2
8	Suppurative and unspecified otitis media	382	2.1
9	Sprains and strains of sacroiliac region	846	1.9
10	Health supervision of infant or child	V20	1.5
11	Other disorders of soft tissues	729	1.4
12	Bronchitis, not specified as acute or chronic	490	1.4
13	Osteoarthritis and allied disorders	715	1.3
14	Other and unspecified disorders of back	724	1.3
15	Chronic sinusitis	473	1.3
16	Neurotic disorders	300	1.2
17	Other noninfectious gastroenteritis and colitis	558	1.2
18	Certain adverse effects not elsewhere classified ²	995	1.2
19	Nonallopathic lesions, not elsewhere classified	739	1.1
20	Allergic rhinitis	477	1.0

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* [ICD-9-CM].
²Primarily allergy, unspecified.

Table 5. Percent distribution of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by principal diagnoses (in major diagnostic groups): United States, 1985

Principal diagnosis and ICD-9-CM code ¹ [in major diagnostic groups]	All physicians	D.O.'s	M.D. GFP's
	Number of visits in thousands		
Total	636,386	35,872	165,987
	Percent distribution		
Total	100.0	100.0	100.0
Infectious and parasitic diseases	001-139	3.9	3.8
Neoplasms	140-239	3.1	1.9
Endocrine, nutritional and metabolic diseases, and immunity disorders	240-279	3.5	5.2
Mental disorders	290-319	4.1	2.8
Diseases of the nervous system and sense organs	320-389	11.0	6.1
Diseases of the circulatory system	390-459	8.8	9.8
Diseases of the respiratory system	460-519	12.1	15.9
Diseases of the digestive system	520-579	4.3	4.7
Diseases of the genitourinary system	580-629	6.1	4.6
Diseases of the skin and subcutaneous tissue	680-709	5.7	4.2
Diseases of the musculoskeletal system and connective tissue	710-739	7.1	11.2
Symptoms, signs, and ill-defined conditions	780-799	3.5	3.1
Injury and poisoning	800-999	8.3	13.1
Supplemental classification ²	V01-V82	15.3	10.7
Other or unknown		3.1	2.8

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* [ICD-9-CM].
²Chiefly non-illness care.

Table 6. Percent distribution of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by age and sex of patient: United States, 1985

<i>Patient characteristic</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
Number of visits in thousands			
Total	636,386	35,872	165,987
Percent distribution			
Total	100.0	100.0	100.0
Age			
Under 15 years	18.7	15.2	15.6
15-24 years	11.6	13.5	13.5
25-44 years	27.6	31.6	28.4
45-64 years	21.6	22.7	22.5
65 years and over	20.5	17.0	20.0
Mean patient age	39.6 years	39.0 years	40.3 years
SEX AND AGE			
Female			
All ages	60.9	60.2	60.7
Under 15 years	9.1	7.7	7.7
15-24 years	7.7	8.3	8.6
25-44 years	18.6	19.4	18.3
45-64 years	12.9	14.2	13.7
65 years and over	12.5	10.6	12.4
Male			
All ages	39.1	39.8	39.3
Under 15 years	9.5	7.5	7.9
15-24 years	3.9	5.2	4.9
25-44 years	9.0	12.2	10.1
45-64 years	8.7	8.5	8.8
65 years and over	8.0	6.4	7.6

Table 7. Percent distribution of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by race and ethnicity of patient: United States, 1985

<i>Patient characteristic</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
Number of visits in thousands			
Total	636,386	35,872	165,987
Percent distribution			
Total	100.0	100.0	100.0
Race			
White	90.0	87.8	88.7
Black	8.2	11.7	8.9
Other ¹	1.8	*0.5	2.4
Ethnicity			
Hispanic	6.4	2.9	6.9
Non-Hispanic	93.6	97.1	93.1

¹Asian, Pacific islander, American Indian, Alaskan native.

Table 8. Percent distribution of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by referral status and prior visit status: United States, 1985

<i>Visit characteristic</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
Number of visits in thousands			
Total	636,386	35,872	165,987
Percent distribution			
Total	100.0	100.0	100.0
Referral status			
Referred by another physician	5.6	2.5	1.7
Not referred by another physician	94.4	97.5	98.3
Prior visit status			
New patient	16.9	12.1	14.7
Old patient	83.1	87.9	85.3
New problem	22.7	27.7	33.1
Old problem	60.4	60.2	52.2

Table 9. Percent of office visits with at least 1 drug mention; percent of visits with multiple drug mentions; and Drug Utilization Index, by selected physician groups: United States, 1985

<i>Physician group</i>	<i>Percent of office visits with 1 or more drug mentions</i>	<i>Percent of office visits with 2 or more drug mentions</i>	<i>Drug Utilization Index¹</i>
All physicians	61.2	27.7	89
Doctors of osteopathy	68.1	32.8	101
M.D.'s in general or family practice	72.7	33.6	106

¹A composite indicator of the frequency and intensity of drug utilization, formed by adding the percent of visits with one or more drug mentions to the percent of visits with multiple drug mentions and rounding to the nearest whole integer.

Table 10. The 25 drugs most frequently prescribed or provided in the office practice of doctors of osteopathy, by their generic ingredients, number of mentions, rank, and therapeutic use: United States, 1985

<i>Rank</i>	<i>Generic ingredient</i>	<i>Number of mentions in thousands¹</i>	<i>Therapeutic use</i>
	All drugs	63,094	
1	Hydrochlorothiazide	1,670	Diuretic, antihypertensive
2	Acetaminophen	1,646	Analgesic, antipyretic
3	Erythromycin	1,385	Antibiotic
4	Codeine	1,334	Analgesic, antitussive
5	Phenylpropanolamine	1,324	Sympathomimetic
6	Chlorpheniramine	1,302	Antihistaminic
7	Amoxicillin	1,297	Antibiotic
8	Phenylephrine	1,251	Sympathomimetic
9	Aspirin	1,043	Analgesic, antipyretic, anti-inflammatory
10	Pseudoephedrine	1,004	Sympathomimetic
11	Cephalexin	706	Antibiotic
12	Caffeine	692	Stimulant
13	Ibuprofen	682	Nonsteroidal anti-inflammatory agent
14	Ampicillin	678	Antibiotic
15	Theophylline	659	Bronchodilator
16	Guaifenesin	575	Expectorant
17	Penicillin V potassium	555	Antibiotic
18	Methylprednisolone	541	Steroidal anti-inflammatory agent
19	Promethazine	520	Antihistaminic
20	Naproxen	513	Nonsteroidal anti-inflammatory agent
21	Atropine	478	Anticholinergic
22	Triamterene	467	Diuretic, antihypertensive
23	Digoxin	466	Cardiotonic
24	Neomycin	462	Antibiotic
25	Sulfamethoxazole	452	Antibiotic

¹Combines mentions as the generic form of single-ingredient drugs with its mentions as an ingredient of combination drugs. Vitamins, minerals, and vaccines are omitted.

Table 11. Percent distribution of drug mentions by all physicians, by doctors of osteopathy (D.O.'s), and by doctors of medicine in general or family practice (M.D. GFP's), by drug class: United States, 1985

<i>Drug class¹</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
Number of drug mentions in thousands			
Total	693,355	43,002	214,281
Percent distribution			
Total	100.0	100.0	100.0
Systemic anti-infective agents	14.7	17.8	18.1
Antibiotics	12.3	15.8	15.8
Autonomic drugs	3.7	6.1	3.9
Anticholinergic agents	1.2	1.9	1.3
Sympathomimetic [adrenergic] agents	1.4	2.1	1.1
Skeletal muscle relaxants	0.9	2.0	1.3
Cardiovascular drugs	11.6	8.4	11.4
Cardiac drugs	4.6	2.7	3.9
Antihypertensive agents	4.2	3.6	5.3
Vasodilating agents	2.6	2.0	2.1
Analgesics and antipyretics	9.8	11.6	11.2
Nonsteroidal anti-inflammatory agents	6.2	7.3	7.1
Psychotropic drugs	6.0	5.7	5.5
Anxiolytics, sedatives, and hypnotics	3.3	3.5	3.3
Antidepressants	1.7	1.2	1.4
Electrolytic, caloric, and water balance	7.4	7.2	8.8
Diuretics	5.0	5.0	6.1
Replacement solutions	1.9	1.4	2.0
Antihistamines, antitussives, expectorants, and mucolytic agents	6.9	10.1	8.4
Eye, ear, nose, and throat preparations	4.4	1.8	1.6
Gastrointestinal drugs	3.8	3.2	4.3
Hormones and synthetic substances	7.6	6.9	7.7
Systemic corticosteroids	2.5	2.4	2.5
Estrogens	1.0	0.9	0.9
Antidiabetic agents	1.3	1.6	2.2
Serums, toxoids, and vaccines	3.0	2.4	2.1
Skin and mucuous membrane agents	6.0	4.5	4.3
Smooth muscle relaxants	1.7	1.8	1.4
Vitamins	2.7	3.5	2.3
Other or undetermined	10.7	9.0	9.0

¹Based on American Hospital Formulary Service Classification System, *Drug Product Information File*, The American Druggist Blue Book Data Center, San Bruno, California, 1985.

Table 12. Percent of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by nonmedication therapy ordered or provided: United States, 1985

<i>Nonmedication therapy ordered or provided</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
Percent of visits			
None	68.9	67.8	72.2
Physiotherapy	4.2	¹ 12.9	4.1
Ambulatory surgery	6.6	5.0	5.5
Psychotherapy	3.4	1.5	1.1
Family planning	1.9	1.7	1.6
Diet counseling	6.5	7.2	9.1
Other counseling	9.3	5.8	8.5
Other	3.0	1.8	1.1

¹Chiefly techniques of osteopathic manipulative therapy.

Table 13. Percent of office visits to all physicians, to doctors of osteopathy (D.O.'s), and to doctors of medicine in general or family practice (M.D. GFP's), by disposition of the visits: United States, 1985

<i>Disposition</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
	Percent of visits		
No followup planned	9.8	11.4	12.3
Return at specified time	61.5	57.9	50.0
Return if needed	22.9	24.2	32.3
Telephone followup planned	4.0	3.4	3.7
Referred to other physician	3.2	4.3	4.2
Admit to hospital	1.6	*0.7	0.9
Other	1.3	1.1	0.5

Table 14. Percent distribution of drug mentions by all physicians, by doctors of osteopathy (D.O.'s), and by doctors of medicine in general or family practice (M.D. GFP's), by duration of visit: United States, 1985

<i>Duration</i>	<i>All physicians</i>	<i>D.O.'s</i>	<i>M.D. GFP's</i>
	Percent distribution		
Total	100.0	100.0	100.0
0 minutes ¹	2.3	2.4	3.2
1-5 minutes	10.3	10.4	8.7
6-10 minutes	28.5	33.8	33.9
11-15 minutes	30.0	31.7	31.5
16-30 minutes	22.7	19.3	20.0
31 minutes and longer	6.3	2.4	2.6
Mean duration of visit ²	16.1 minutes	13.5 minutes	14.6 minutes

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

²Excludes '0 minutes' visits.

Technical notes

Source of data and sample design

The information presented in this report is based on data collected by means of the National Ambulatory Medical Care Survey (NAMCS) from March 1985 through February 1986. The target universe of NAMCS includes office visits made within the coterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice, but not in the specialties of anesthesiology, pathology, or radiology. Telephone contacts and nonoffice visits are excluded.

The NAMCS utilizes a multistage probability sample design that involves samples of Primary Sampling Units (PSU's), physician practices within PSU's, and patient visits within physician's practices. Physician specialty was used as a stratification variable. For 1985, a sample of 5,032 nonfederal, office-based physicians was selected from master files maintained by the American Medical Association and American Osteopathic Association. Of the 4,104 in scope physicians, 70 percent responded to the 1985 NAMCS.

For the 1985 study, doctors of osteopathy (D.O.'s) were included as a separate sampling strata. From this strata 511 osteopathic physicians were selected, 427 were in scope, and 294 responded to the study, a response rate of 69 percent. The 1985 NAMCS sample design was different from that used in earlier NAMCS cycles where doctors of osteopathy were sampled along with doctors of medicine according to their proportional distribution in nine major specialty groups. The increase in physician sample size and the modification

of the sample design in 1985 had the effect of improving reliability of survey estimates relative to earlier data years.

Sample physicians were asked to complete Patient Records (figure I) for a systematic random sample of office visits taking place during a randomly assigned one-week reporting period. Responding physicians completed 71,594 Patient Records. Of these Patient Records, 7,375 were completed by responding D.O.'s. 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 NCHS, was responsible for the survey's data collection and processing operations.

Sampling errors

The standard error is primarily 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 aggregate estimates based on all specialties have been published. Approximate relative standard errors for aggregate estimates of visits to D.O.'s and to M.D. general and family practitioners are shown in table I. Approximate relative standard errors for aggregate estimates of drug mentions for D.O.'s and for M.D. general and family practitioners are shown in table II.

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 and Human Services
Public Health Service
National Center for Health Statistics

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PATIENT RECORD NATIONAL AMBULATORY MEDICAL CARE SURVEY

1. DATE OF VISIT
 _____/_____/_____
 Month Day Year

2. DATE OF BIRTH
 _____/_____/_____
 Month Day Year

3. SEX
 1 FEMALE
 2 MALE

4. COLOR OR RACE
 1 WHITE
 2 BLACK
 3 ASIAN/PACIFIC ISLANDER
 4 AMERICAN INDIAN/ALASKAN NATIVE

5. ETHNICITY
 1 HISPANIC ORIGIN
 2 NOT HISPANIC

6. EXPECTED SOURCE(S) OF PAYMENT
 [Check all that apply]
 1 SELF-PAY 4 BLUE CROSS/BLUE SHIELD 7 NO CHARGE
 2 MEDICARE 5 OTHER COMMERCIAL INSURANCE 8 OTHER [Specify]
 3 MEDICAID 6 HMO/PRE-PAID PLAN

7. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN?
 1 YES 2 NO

8. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT [In patient's own words]
 a MOST IMPORTANT

 b OTHER

9. GLUCOSE TESTS THIS VISIT
 [Check all ordered or provided]
 1 NONE
 2 BLOOD
 3 URINE
 4 ORAL

10. OTHER DIAGNOSTIC SERVICES THIS VISIT
 [Check all ordered or provided]
 1 NONE 6 URINALYSIS 11 BLOOD PRESSURE CHECK
 2 BREAST EXAM 7 HEMATOLOGY 12 EKG
 3 PELVIC EXAM 8 BLOOD CHEMISTRY 13 CHEST X-RAY
 4 RECTAL EXAM 9 PAP TEST 14 OTHER RADIOLOGY
 5 VISUAL ACUITY 10 OTHER LAB TEST 15 ULTRASOUND
 16 OTHER SERVICE [Specify] _____

11. PHYSICIAN'S DIAGNOSES
 a PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 8a

 b OTHER SIGNIFICANT CURRENT DIAGNOSES

12. HAVE YOU SEEN PATIENT BEFORE?
 1 YES 2 NO
 IF YES, FOR THE CONDITION IN ITEM 11a?
 1 YES 2 NO

13. NON-MEDICATION THERAPY
 [Check all services ordered or provided this visit]
 1 NONE 5 PSYCHOTHERAPY 9 CORRECTIVE LENSES
 2 PHYSIOTHERAPY 6 FAMILY PLANNING 10 OTHER [Specify] _____
 3 AMBULATORY SURGERY 7 DIET COUNSELING
 4 RADIATION THERAPY 8 OTHER COUNSELING

14. MEDICATION THERAPY [Record all new or continued medications ordered or provided at this visit. Use the same brand name or generic name entered on any Rx or office medical record.]
 IF NONE, CHECK HERE

	a NEW MEDICATION?		b FOR DX IN ITEM 11a?	
	YES	NO	YES	NO
1 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>
2 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>
3 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>
4 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>
5 _____	1 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>

15. DISPOSITION THIS VISIT
 [Check all that apply]
 1 NO FOLLOW-UP PLANNED
 2 RETURN AT SPECIFIED TIME
 3 RETURN IF NEEDED PRN
 4 TELEPHONE FOLLOW-UP PLANNED
 5 REFERRED TO OTHER PHYSICIAN
 6 RETURNED TO REFERRING PHYSICIAN
 7 ADMIT TO HOSPITAL
 8 OTHER [Specify] _____

16. DURATION OF THIS VISIT
 [Time actually spent with physician]

 Minutes

Figure I. Patient Record Form

Table I. Approximate relative standard errors of estimated numbers of office visits to doctors of osteopathy and to M.D. general and family practitioners: NAMCS, 1985

Estimated number of office visits in thousands	Relative standard error in percent
200	39.3
500	25.5
1,000	18.8
2,000	14.4
5,000	10.8
10,000	9.4
20,000	8.5
50,000	8.0
100,000	7.8
150,000	7.7

Example of use of table: An aggregate estimate of 7,500,000 visits to doctors of osteopathy has a relative standard error of 10.1 percent, or a standard error of 757,500 visits (10.1 percent of 7,500,000).

Table II. Approximate relative standard errors of estimated numbers of drug mentions based on visits to doctors of osteopathy and to M.D. general and family practitioners: NAMCS, 1985

Estimated number of drug mentions in thousands	Relative standard error in percent
200	44.2
500	28.7
1,000	21.1
2,000	16.0
5,000	12.0
10,000	10.3
20,000	9.3
50,000	8.7
100,000	8.5
200,000	8.3

Example of use of table: An aggregate estimate of 35,000,000 drug mentions during visits to M.D. general and family practitioners has a relative standard error of 9.0 percent, or a standard error of 3,150,000 drug mentions (9.0 percent of 35,000,000).

Rounding of numbers

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

Definitions of terms

Ambulatory patient—An ambulatory patient is an individual seeking personal health services who is not 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.) who is currently in office-based practice, and whose major professional effort is devoted to caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital-based; who specialize in anesthesiology, pathology, or radiology; who are federally employed; who treat only institutionalized patients; who are employed full time by an institution, or who

either spend no time seeing ambulatory patients or whose care of ambulatory patients is secondary to another major professional function.

Office—Offices are premises identified by physicians as locations for their ambulatory practices; these customarily include consultation, examination, or treatment spaces the patients associate with a particular physician.

Visit—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 personal health services.

Drug mention—A drug mention is the physician's entry of a pharmaceutical agent prescribed or provided—by any route of administration—for prevention, diagnosis, or treatment. Generic names as well as brand-name drugs are included, as are nonprescription as well as prescription drugs. Along with all new drugs, the physician also records continued medications, if the patient was specifically instructed during the visit to continue the medication.

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