

Characteristics of Physician Visits for Back Symptoms: A National Perspective

BEULAH K. CYPRESS, PhD

Abstract: There are no national data on the extent of back problems in the population of the United States, but it is known that back symptoms is the second leading symptomatic reason expressed by patients for visiting physicians. To provide insight into the scope of this problem, data from the National Ambulatory Medical Care Surveys of 1977 and 1978 were examined using the sex of the patient and the physician's degree (MD or DO) as control variables, and typical encounter characteristics as dependent variables. Males 45–64 years of age had the highest

visit rate, and visit rates for men 15–64 years of age were higher than those of women the same age. Common diagnoses were sprains and strains, arthritis and rheumatism, displacement of intervertebral disc, and diseases of urinary tract, with men more likely than women to have injuries. DOs were more likely to treat accidental injuries than were MDs. It is recommended that differential diagnosis be taken into account before studying sex differences in complaints. (*Am J Public Health* 1983; 73:389–395.)

Introduction

Backache is acknowledged to be a very common problem, but there are no firm national statistics on its prevalence. At the national level, household interview data from the National Health Interview Survey (NHIS) are collected in terms of "conditions", usually couched in terms of diagnoses or impairments. Respondents report such conditions as sprains or strains of back, displaced intervertebral disc, or impairments of back or spine. About 17 million people reported one of these conditions.* An additional 26 million reported having arthritis, in which back pain may have been involved, although it was not reported in that manner.¹ These estimates do not include persons with undiagnosed back symptoms, however, nor those whose back problems have a different etiology. In other words, from the point of view of how many people there are with back symptoms (pain, ache, etc.) no one figure exists.

It is known that back discomfort is the second leading symptomatic reason expressed by patients of all ages for visiting office-based physicians. Data on patients' motivation for seeking medical care which were collected in the National Ambulatory Medical Care Surveys (NAMCS) in

1977 and 1978 revealed that for women 35–64 years of age and men 25–64 years of age it was the first ranking symptomatic reason for their visits.^{2,3} Back symptoms accounted for over 32 million visits or about 3 per cent of all physician visits during the two-year period. These visit data suggest that the prevalence of back symptoms must indeed be very high. Because they were obtained from a national probability sample, NAMCS data also provide the opportunity to draw a clinical portrait of persons with back symptoms on a broad national basis and thus dispel or lend credence to conjecture regarding this common problem. In addition, they include many components of the physician-patient encounter.

A retrospective analysis of the 32 million visits for back symptoms estimated in NAMCS was undertaken to provide the existing parameters of the utilization of office-based physicians by patients with back symptoms, but not necessarily to formulate and test hypotheses. However, hypotheses are often implicit when comparisons are made.

Methodology

NAMCS is a sample survey conducted annually in the conterminous United States by the National Center for Health Statistics (NCHS). During 1977 and 1978, two samples totaling 6,007 physicians were selected from master files maintained by the American Medical Association and the American Opteopathic Association. In 1977–78, 98,335 patient record forms were completed by physicians participating in NAMCS. Extrapolating from weighted data, a total of approximately 1.2 billion visits were estimated for the two-year period. Back symptoms was the principal reason for visit shown on 2,794 records, or a weighted total of 32,151,455 visits, consisting of 16,330,205 visits by female patients and 15,821,250 visits by males. Distributed by the

*Unpublished data, 1978 National Health Interview Survey, conducted by the National Center for Health Statistics.

Address reprint requests to Beulah K. Cypress, PhD, Health Statistician, Ambulatory Care Statistics Branch, Division of Health Care Statistics, National Center for Health Statistics, Room 2-43, 3700 East-West Highway, Hyattsville, MD 20782. This paper, submitted to the *Journal* December 11, 1981, was revised and accepted for publication July 2, 1982.

TABLE 1—Number of Office Visits by Selected Physician Characteristics, and Per Cent and Rank of Visits for Back Symptoms in the Physician's Practice: United States, 1977-78

Physician Characteristic	All Reasons for Visits (in thousands)	Back Symptoms	
		Per Cent	Rank
All visits	1,154,550	2.8	2
Specialty			
General and family practice	433,936	3.5	2
Internal medicine	133,291	2.9	2
General surgery	69,223	2.6	3
Obstetrics and gynecology	104,412	0.5	15
Orthopedic surgery	42,985	15.6	1
Cardiovascular diseases	13,113	1.2	12
Urological surgery	21,531	2.7	7
Neurology	5,109	2.6	10
Neurosurgery	5,427	18.9	1
Occupational medicine	1,791	12.6	1
Physician Degree			
MD	1,094,778	2.3	3
DO	59,773	11.0	1

physician's degree there were 25,595,695 visits to Doctors of Medicine (MD) and 6,555,760 visits to Doctors of Osteopathy (DO). Due to the nature of the sampling design, only the weighted data, which were used in this study, are valid. Visit estimates are for a two-year period but ratios, rates, and per cent distributions shown in this report represent average annual estimates. Detailed information regarding survey design and methodology, instruments, definitions, and estimates of sampling variability has been published by NCHS.⁴

The significance of the difference between two percentages was tested using the t-test with a critical value of 1.96 (.05 level of significance) according to the following formula:

$$t = \frac{p_x - p_y}{(s^2 p_x + s^2 p_y)^{1/2}}$$

Since NAMCS is based on a complex sampling design, standard errors cannot be developed according to formulas

based on the assumption of simple random sampling. The half-sample replication procedure was used to calculate standard errors of estimates in the survey.^{5,6} Approximate standard errors of percentages based on the 1977-78 aggregate estimates were calculated by the following formula:

$$SE_{(p)} = \sqrt{\frac{30.676864 \times p \times (1-p)}{X/1,000}}$$

A preliminary examination of the data revealed that two contrasts likely to be of general interest accounted for much of the variance among the other variables: physician degree and sex of patient. These were used as control variables. Other potential control variables were patient age and physician specialty since they also contributed to the variance among visits for back symptoms (Tables 1 and 2). Bivariate distributions of these and other variables were not feasible,

TABLE 2—Per Cent Distributions of Office Visits for Back Symptoms by Age, and Average Annual Visit Rate by Age and Sex of Patient: United States, 1977-78

Age	Per Cent Distribution				Annual Rate Per 1,000 Population	
	All Reasons for Visit	Back Symptoms			Female	Male
		All Physicians	MD	DO		
All ages	100.0	100.0	100.0	100.0	75	77
Less than 15 years	18.4	2.1	2.2	1.8	10	4
15-24 years	14.9	12.3	12.8	10.2	48	52
25-44 years	26.0	34.0	34.4	32.4	90	107
45-64 years	24.6	35.9	34.2	42.5	127	141
65 years and over	16.1	15.6	16.3	13.0	114	109

TABLE 3—Number and Per Cent Distribution of New Problem Visits for All Reasons for Visit, and for Back Symptoms by Time since Onset of Complaint, Problem Status, and Return Visit Rate According to Sex of Patient and Physician Degree: United States, 1977–78

Selected Characteristics	All Reasons for Visit	Back Symptoms			
		Female	Male	MD	DO
		Per Cent Distribution			
	100.0	100.0	100.0	100.0	100.0
Time since onset of new problem					
Less than 1 week	52.0	47.7	44.9	45.6	51.0
1–3 weeks	16.6	21.3	23.0	20.8	29.0
1–3 months	12.7	12.0	12.5	13.1	7.3
More than 3 months	15.6	18.5	18.7	19.8	12.1
Not applicable	3.1	0.6	0.9	0.7	0.6
Problem status					
New problem	39.8	42.5	36.9	42.1	30.7
Return visit	60.2	57.5	63.1	57.9	69.3
Return visit rate	1.5	1.4	1.7	1.4	2.3

however, because the cells were too small for good reliability.**

The dependent variables were typical encounter characteristics of ambulatory care: physician specialty, time since onset of new complaint, return visit rate for the same problem, seriousness of the problem, services ordered or provided, and most frequently listed principal and second- or third-listed diagnoses. Data on these variables are routinely collected on the NAMCS Patient Record.

Results

About 61 per cent of patients with back symptoms were treated by primary care physicians; 28 per cent were seen by orthopedic, general, or urological surgeons.†† Orthopedic surgeons, neurosurgeons, and specialists in occupational medicine treated proportionately more patients presenting with back symptoms than other specialists did. The DO's proportion of visits for back symptoms was close to five times that of the average MD, as Table 1 shows.

Considering that internists, and general and family practitioners have a much broader range of medical practice than the three specialists mentioned above, it is noteworthy that back symptoms ranked second among presenting complaints in their case-loads. Patients 25–64 years of age, followed by those 65 years of age and over, constituted the

largest proportion of visits for back symptoms. About 70 per cent of patients visiting for back problems were in the 25–64 age group compared to 51 per cent in the same age group in the general population of visits. Male patients 45–64 years of age had the highest visit rate, and visit rates were higher for men 15–64 years of age than for their female counterparts. Distributions of visits by age were similar for MDs and DOs.

Two of three patients experiencing back symptoms for the first time (new problems) saw a physician in three weeks or less after onset of the complaint. This interval was similar to that of patients visiting for all other reasons. However, a significantly larger proportion of patients visiting DOs saw the physician within three weeks (80 per cent) than those visiting MDs (66 per cent). Proportions by sex did not differ significantly. Patients tended to return to DOs for continuing care at a higher rate than to MDs.

The DOs extensive use of manipulative therapy may be a factor in the higher return visit rate since a series of treatments may be prescribed. The most patently significant statistic in Table 4 shows that 83 per cent of visits for back symptoms to DOs included physiotherapy, compared to 20 per cent of those to MDs. MDs ordered drugs for patients with back symptoms almost twice as frequently as did DOs and proportionately more often for back problems (62 per cent) than for other problems (52 per cent). Conversely, DOs prescribed drugs proportionately less frequently for back symptoms (33 per cent) than they did for all other problems (61 per cent).

MDs were more likely than were DOs to offer medical counseling when patients complained of back symptoms, but this was not true of all reasons for visit. MDs and DOs also approached diagnosis differently, MDs using clinical laboratory tests, x-rays, and general examinations in higher proportions of patient visits; MDs exceeded DOs in the number of visits with no therapeutic services while DOs exceeded MDs in the proportion with no diagnostic services. For all

**In NAMCS, estimates equal to or less than 320,000, or about 1 per cent of the total visits for back symptoms in 1977–78, had a relative standard error of about 30 per cent or more. Some of the cells in the analysis which was performed and which are less than 320,000 do not meet NCHS standards of reliability and should be interpreted with caution.

††These specialties were not excluded from the analysis because they were represented in the sample of DOs as well as in that of the MDs, although in proportionately fewer members.

TABLE 4—Number* and Per Cent Distribution of Office Visits for All Reasons and for Back Symptoms by Diagnostic and Therapeutic Services Ordered or Provided, According to Sex of Patient and Physician Degree: United States, 1977–78

Services Ordered or Provided	Back Symptoms				All Reasons	
	Female 16,330	Male 15,821	MD 25,596	DO 6,556	MD 1,094,778	DO 59,773
Diagnostic Service	%	%	%	%	%	%
None	9.3	9.8	7.9	16.0	10.7	7.8
Limited exam/history	63.4	65.1	64.0	65.4	59.0	62.0
General exam/history	20.8	19.8	22.2	13.1	21.9	20.9
Pap test	2.5	—	1.6	0.2	5.2	3.1
Clinical lab test	16.9	11.7	16.1	7.4	21.4	16.7
X-ray	17.6	21.6	22.2	9.5	8.1	7.5
EKG	2.3	1.8	2.5	0.4	3.3	2.1
Blood pressure check	35.9	24.6	28.2	38.5	33.0	45.8
Therapeutic Service						
None	11.9	12.7	15.0	1.6	19.0	11.0
Immunization/desensitization	1.6	1.1	1.3	1.4	7.3	5.2
Drugs	57.2	54.2	61.5	33.1	52.2	61.0
Diet counseling	3.3	1.0	2.4	1.5	7.0	8.9
Medical counseling	20.4	16.4	21.3	7.1	20.1	18.4
Physiotherapy	29.8	35.8	19.8	83.3	2.6	19.3
Office surgery	2.1	3.3	2.8	2.2	8.0	5.3

*In thousands

**Per cents will not total 100.0 because more than one service may have been ordered during a visit.

physicians, proportions of some diagnostic and therapeutic services varied depending on the sex of the patient.⁷

The relative distribution of most services in the presence of back symptoms was not very different from that of visits for all reasons, the major exceptions being x-rays and physiotherapy. The kinds of services selected by physicians for diagnosis and treatment were likely to be related to the underlying causes of their back problems. Therefore the diagnoses made for patients with back symptoms were examined.

The first step in the analysis of diagnostic data was to examine broad ICDA categories. The results, shown in Table 5, indicated that the three most common final diagnoses were: diseases of the musculoskeletal system; accidents, poisonings, and violence; or genitourinary diseases. Accidents constituted a larger proportion of visits to DOs than to MDs, but MDs had more visits for conditions caused by genitourinary diseases than did DOs.

The proportion of visits by males with back symptoms exceeded that of females in the accident group, but females were more likely to have genitourinary problems than were males. There were no statistically significant differences between the proportions of female and male visits in the diagnostic groups of mental disorders, nervous system disorders, or other categories of disease. These results pointed to the need for examination of the specific principal (first-listed) diagnoses most frequently found in visits for back symptoms.

The principal diagnoses listed in Table 6 accounted for 86 per cent of such visits. In contrast to other reasons for visit where diagnoses were widely dispersed, this is a relatively narrow range. Women's back symptoms were

more likely to be diagnosed diseases of the urinary tract or osteoporosis than were men's, but men were more likely to have displacement of intervertebral disc, or sprains or strains of sacroiliac region and other and unspecified parts of back. Differences between per cents of other diagnoses were not statistically significant.

Another examination of therapeutic services was undertaken controlling for the principal diagnosis, but differences by sex were not statistically significant, chiefly due to the large sampling error involved. It was assumed that the greater use of clinical laboratory tests for women was due to the higher rate of urinary conditions while greater use of x-rays and physiotherapy during men's visits was likely to be associated with the higher proportion of injuries found in men.

DOs were more likely than MDs to treat conditions classified as other diseases of spine; synovitis, tenosynovitis, and other diseases of muscle, tendon, and fascia; dislocations; and sprains and strains. MDs saw proportionately more patients with sciatica, diseases of genital organs, osteoporosis, displacement of intervertebral disc and those visiting for medical or surgical aftercare. Differences between proportions of other conditions were not statistically significant.

Two out of three records had no second diagnosis and another 15 per cent had no third. The only secondary diagnosis found proportionately more often during women's visits for back symptoms than in those for all reasons was obesity, perhaps accounting for the greater provision of diet counseling during women's visits than in men's. One sex was not more likely than the other to visit with associated psychological symptoms or to be diagnosed with neuroses.

TABLE 5—Per Cent Distribution of Office Visits for Back Symptoms by Major ICDA Diagnostic Category Assigned to the Visit, Sex of Patient, and Physician Degree: United States, 1977–78

Major Diagnostic Category and ICDA Code ¹	Both Sexes	Sex of Patient		Physician Degree		
		Female	Male	MD	DO	
Total	100.0	100.0	100.0	100.0	100.0	
Infective and Parasitic Diseases	000–136	0.4	0.5	0.3	0.5	—
Neoplasms	140–239	1.3	1.1	1.4	1.5	0.3
Endocrine, Nutritional and Metabolic Diseases	240–279	0.4	0.6	0.1	0.5	—
Mental Disorders	290–315	0.8	0.8	0.8	0.5	2.0
Diseases of the Nervous System and Sense Organs	320–389	2.1	2.0	2.2	2.0	2.6
Diseases of the Circulatory System	390–458	1.5	1.8	1.2	1.7	0.6
Diseases of the Respiratory System	460–519	0.9	0.8	1.1	1.1	0.5
Diseases of the Digestive System	520–577	0.9	1.1	0.6	0.9	0.5
Diseases of the Genitourinary System	580–629	5.5	7.1	3.8	6.4	1.8
Diseases of the Skin and Subcutaneous Tissue	680–709	0.7	0.3	1.2	0.8	0.4
Diseases of the Musculoskeletal System	710–738	38.2	40.9	35.4	38.6	36.5
Symptoms and Ill-defined Diseases	780–796	3.4	3.7	3.0	3.4	2.6
Accidents, Poisonings, and Violence	800–999	39.6	34.8	44.5	36.7	50.8
Special Conditions and Examinations without Sickness	Y00–Y13	2.4	2.1	2.7	3.0	0.1
Other		0.9	0.9	1.0	0.9	0.9
None or Unknown		1.3	1.5	0.8	1.3	0.5

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

In general, women's back problems were more likely than men's to be described not serious. However, the difference between proportions of women's and men's visits in which problems were rated as serious or very serious was not statistically significant. Therefore, this result cannot be interpreted as de facto evidence that women's problems were viewed as trivial. When analysis was controlled by diagnosis, there were no significant differences in the proportions by degree of seriousness. However, standard errors were large due to the reduction in sample size caused by partitioning.

MDs were more likely than DOs to evaluate the condition of patients with back symptoms as serious or very serious. This appeared to be a direct result of the diagnoses likely to be involved in their respective practices, but it was not possible to test this for each diagnosis, again because of the diminished sample size.

Visit duration was investigated but results were inconclusive. Most visits for back symptoms, like all NAMCS visits, took 15 minutes or less regardless of the attending physician or sex of the patient.

Finally, data on the disposition of the visit showed that instructions to patients for return visits or follow-up of back problems were close to the average of visits for all reasons. MDs made more referrals to other physicians and admitted a higher proportion of patients to hospitals than did DOs. However, the proportion of MD's back patients admitted to

a hospital did not significantly exceed their average of admissions for all reasons.

Discussion

The profile found in NAMCS of the middle-aged patient with back symptoms due to an accidental injury was similar to that drawn by Barton, *et al*, in their 1974 study of 144 outpatient charts drawn from a primary care facility.⁸ Their findings of a proportionately higher incidence of anxiety, depression, and hypertension in back patients than in the general population of patients were not supported by the present study, although the two studies agreed on the likelihood of associated obesity. (In the NAMCS study, obesity was likely to be associated only in woman's visits.) Becker and Karch studied charts of female patients 25–44 years of age and found no significant differences in the prevalence of neurotic symptoms between matched groups of patients with and without back complaints.⁹ In apparent agreement, the NAMCS study showed that neuroses as a secondary diagnosis with back symptoms was less likely than it was as a principal diagnosis during visits by women and men not necessarily complaining of back symptoms.

In evaluating the results of these studies, the large and nationally representative data base available in NAMCS is an important advantage although the omission of specific

TABLE 6—Per Cent Distribution of Office Visits for Back Symptoms by Most Frequent Principal Diagnoses According to Sex of Patient and Physician Degree: United States, 1977–78

Principal Diagnosis and ICDA Code ¹	Both Sexes	Sex of Patient		Physician Degree	
		Female	Male	MD	DC
All back symptoms (in thousands)	32,151	16,330	15,821	25,596	6,556
Sciatica	353	1.5	1.5	1.4	—
Diseases of Urinary Tract	590–599	3.6	5.4	4.2	4.2
Diseases of Male Genital Organs	600–607	1.0	—	1.3	—
Diseases of Female Genital Organs	614–628	0.8	1.7	1.0	0.3
Arthritis and Rheumatism	712–717	17.4	19.5	16.7	20.3
Osteoporosis	723.0	1.1	2.0	1.4	0.4
Displacement of Intervertebral Disc	725	7.6	5.4	9.1	1.6
Vertebrogenic Pain Syndrome	728	6.7	7.6	7.6	3.1
Other Diseases of Spine	729	2.4	2.4	1.0	7.6
Synovitis, Tenosynovitis, and other Diseases of Muscle, Tendon, and Fascia	731, 733	1.5	1.8	1.1	2.9
Curvature of Spine	735	1.0	1.6	1.2	0.3
Symptoms and Ill-defined Conditions	780–796	3.4	3.7	3.6	2.6
Fracture and Fracture Dislocation of Vertebral Column	805–806	1.0	1.3	1.2	0.2
Dislocations	839	1.8	0.8	0.7	6.1
Sprains and Strains of Sacroiliac Region and Other and Unspecified Parts of Back	846–847	32.7	28.4	30.2	42.6
Contusions and Injury	922, 927, 929, 996	1.1	1.7	1.2	0.8
Medical or Surgical Aftercare	Y10	1.7	1.1	2.1	—
Total		86.3	85.9	86.5	93.0

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

details which are usually found on patients' medical charts is a disadvantage attributed to cost constraints. Data from the 1975 NAMCS were used by Verbrugge and Steiner to assess physicians' differential treatment of men and women patients based on presenting complaints, with visits for back pain as one of the areas examined.¹⁰ They attempted to test their philosophical hypothesis using visit data from this national survey which was not designed to measure psychosocial or attitudinal variables. Their study was further invalidated because it failed to account for the effect of the complex sampling design in applying tests of statistical significance. Therefore, findings of the 1977–78 study are not comparable to those of the earlier use of NAMCS data.

No evidence of differential treatment by physicians due solely to the patient's sex can be deduced from these results. The differences found in NAMCS data between medical services rendered women and men patients appear to reflect the different nature of their problems. A typical therapeutic regimen for most patients consisted of physiotherapy, drug therapy, or medical counseling, or some combination of the three. Physiotherapy was more common during men's visits; medical counseling during women's; drugs were about equally prescribed. Probably because of the higher proportion of associated obesity found among women patients, diet counseling was a likely therapeutic measure employed. It

should be noted that while NAMCS data include *types* of services rendered during physician visits, they do not address the *intensity* of the work-up. The data collection form includes a check-list of clinical services but provision is not made to indicate the number of each. For example, "x-ray" may be checked if it were performed during the visit (or ordered to be performed elsewhere) but no information about the number of sites or number of x-rays is shown. Similarly, clinical laboratory tests or drugs may be checked but there is no indication of whether it was a single or multiple test or prescription. However, the results for therapeutic services such as physiotherapy, counseling, and blood pressure measurement, each usually being a single event during a visit, are probably more valid than those which may be multiple during one visit. This argument applies to the current study as well as to that of Verbrugge and Steiner who developed a new variable by totaling certain types of diagnostic services. Such a total was meaningless, however, without knowledge of the extent of each service. A 1979 study by Armitage, *et al*, utilized chart review to evaluate the extent and content of work-up related to back pain, among other complaints.¹¹ In this case, the numerical score of the extent of the work-up did include the number of clinical tests. The most significant results reported by the authors were that men with back pain or headache received

more extensive work-ups than did women with the same complaints. In speculating on the possible reasons for these differences, the researchers suggested logically that physicians take differential risks into consideration in trying to reach a diagnosis. The results of the NAMCS study suggest that the probability of a diagnosis related to the patient's sex, as well as the presence of other diagnoses not related to back problems, should all be taken into consideration. This study revealed a chain of events linking data on back symptoms with certain diagnoses such as sciatica, urinary disease, and injuries, and finally with the needed therapy.

Another revealing profile of physician visits for back symptoms was the one obtained from studying the characteristics of such visits to the offices of MDs and DOs. On the one hand, as Koch reported in an NCHS publication describing office visits to DOs, they share many characteristics.¹² On the other hand, when the focus is on back complaints, these two types of medical practice diverge. Compared to patients visiting MDs, patients visiting DOs for diagnosis and treatment of back symptoms were more likely to be making a return visit for an injury, with physiotherapy the principal service during the visit; patients visiting MDs more typically were given the diagnosis displacement of intervertebral disc or a disease of the urinary tract, and diagnosis of their problems required more x-rays and clinical laboratory tests. Therapy given by the MD more commonly included drugs and medical counseling than that of the DO did. In the Koch analysis of 1975 NAMCS data, when all visits to DOs were considered, physiotherapy was used in 11 per cent. In the present study, focusing on back symptoms only, the comparable proportion was 83 per cent. Simultaneously, the use of drug therapy which was given in 61 per cent of the average DO's visits for all reasons, declined to 33 per cent when only back symptoms were examined. This suggests that the proportion of drug prescription in the earlier study may have been due to what Koch described as the "generalist" nature of the DO's practice, and the lower rate of drug prescription in the present study to the DO's preference for manipulative therapy, which is considered osteopathic medicine's chief point of departure from traditional medical practice.¹³ (It is acknowledged that the osteopathic philosophy of manipulative therapy includes a great deal more physiotherapy and it is not intended here to equate them.) The NAMCS view of the MD's approach to patients with back symptoms shows that they received proportionately more drugs than did patients with other problems. While it did not reach the magnitude of the DO's use, physiotherapy was employed more commonly by the MD for back complaints than for others.

In general, back problems not assigned a diagnosis were not as common as might be suspected. Only 10 per cent of the visits for back symptoms were assigned a vague symptomatic diagnosis. However, this designation accounted for 11 per cent of the average MD's visits compared to 6 per cent of the DO's. This does not imply that the MD had more difficulty reaching a diagnosis. For one thing, patients visiting DOs were more likely to be returning for continuing care than were patients of the MDs. Such patients either already had a diagnosis recorded on their charts, or the second visit

provides more data which the physician can use to evaluate the condition. The difference may also be attributable to the publicly accepted view of the DO's functional specialty.

These profiles have been drawn with broad strokes necessitated by the constraints of fielding a large national survey. Some of the detailed relationships that are possible to discern in small empirical studies had to be omitted. But the need to generalize to a large population with precision and reliability requires some statistical sacrifices. What has been extracted from the NAMCS data and reported here, while limited in scope, may be evaluated in terms of the known sampling error. While lack of statistical significance ruled out many interesting comparisons, these differences which were shown to exist were of major importance.

This study was representative of ambulatory care in physicians' offices. The picture may be somewhat different from the perspective of total ambulatory care including emergency rooms, hospital clinics, etc.

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