

VITAL & HEALTH STATISTICS

Patterns of Ambulatory Care in Office Visits to General Surgeons: The National Ambulatory Medical Care Survey United States, January 1980– December 1981

Data on the characteristics of office visits to general surgeons by ambulatory patients are presented. Individual profiles are detailed for physicians in solo and group practices, for those in the four major geographic regions, and in metropolitan and nonmetropolitan areas. Information on the medical and surgical care provided by different age groups of physicians is provided. The condition of patients is described according to their demographic characteristics using such descriptors as patients' reasons for visit and diagnoses rendered by physicians. Patient management is described in terms of diagnostic services, nonmedication and medication therapy, duration and disposition of the visit. Comparisons are made between 1975 and 1980–81 data on general surgeons, and between general surgeons and other surgical specialists.

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Series 13, No. 79**

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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

Patterns of Ambulatory Care in Office Visits to General Surgeons: The National Ambulatory Medical Care Survey

by Beulah K. Cypress, Ph.D., Division of Health Care Statistics

Introduction

Purpose and background

National estimates of the use of ambulatory medical care services provided by nonfederally employed office-based general surgeons in the conterminous United States during the calendar years 1980–81 are presented in this report. Patterns of medical care are based solely on the provision of health services in the offices of general surgeons. Thus they do not include physicians' visits to patients in hospitals, procedures performed in hospitals or other facilities, or "ambulatory surgery" not performed in the office.

This report is the fourth in a series of reports based on the visit characteristics of various medical and surgical specialties. Previous publications highlighted the visit characteristics of general and family practice, pediatrics, and obstetrics and gynecology.¹⁻³ The data were gathered by the National Center for Health Statistics by means of the National Ambulatory Medical Care Survey, a sample survey of physicians' office visits conducted annually through 1981 by the Division of Health Care Statistics. Data collection and processing for the 1980 and 1981 National Ambulatory Medical Care Surveys were the responsibility of the National Opinion Research Center at the University of Chicago. Sample selection was accomplished with the assistance of the American Medical Association and the American Osteopathic Association.

A brief report on 1975 estimates of visits to general surgeons was published in *Advance Data From Vital and Health Statistics*, No. 23.⁴ However, because the reason for visit coding system was revised in 1977 and the *Ninth Revision of the International Classification of Diseases* was introduced for coding diagnoses in 1979, data from that report may not be strictly comparable to the data in this report.

Detailed information on the background and methodology of the survey was published in *Vital and Health Statistics*, Series 2, No. 61.⁵ A description of the 1980 and 1981 surveys, including statistical design, data collection and processing, and estimation procedures, may be found in appendix I of this report. Technical details regarding reliability of estimates are also given in appendix I. Definitions of terms used in the survey are provided in appendix II. Facsimiles of survey instruments appear in appendix III. Prior to data presentation the scope of the survey and limitations of the data are described briefly to assist the reader in interpreting the estimates.

Scope of the survey

The basic sampling unit for the National Ambulatory Medical Care Survey (NAMCS) is the physician-patient encounter or visit. The current scope of NAMCS includes all office visits within the conterminous United States made by ambulatory patients to nonfederally employed, office-based physicians as classified by the American Medical Association or the American Osteopathic Association. The NAMCS physician universe excludes anesthesiologists, pathologists, and radiologists, and physicians principally engaged in teaching, research, or administration. Telephone contacts and visits conducted outside the physician's office also are excluded.

Source and limitations of the data

The data in this report are based on information obtained from a patient encounter form, the Patient Record (see appendix III), for a sample of visits provided by a national probability sample of office-based physicians. The combined samples for the 1980 and 1981 NAMCS included 5,805 physicians, 1,124 of whom were ineligible because they were out of scope at the time of the survey. Of 4,681 eligible physicians, 3,676 (78.5 percent) participated (see appendix I). There were 521 general surgeons in the sample of whom 75 were out of scope. Of 446 eligible general surgeons, 331 participated (74.2 percent).

Sample physicians listed all office visits during a randomly assigned 7-day reporting period. During the 2-year period, information was recorded on Patient Records for a systematic random sample of 89,447 visits including 5,388 visits to general surgeons.

The 1980 and 1981 NAMCS were conducted in identical fashion using the same instruments, definitions, and procedures. The 2 years of data were combined to provide more reliable estimates. The reader should, therefore, note that estimates of number of visits and drug mentions contained in this report are for a 2-year period, but ratios and rates represent average annual estimates.

The information in this report is derived from a complex sample survey, and the appendixes should be reviewed to insure a proper understanding and interpretation of the statistical estimates presented. Because the statistics are based on a sample of office visits rather than on all visits, they are subject to

sampling errors. Therefore, particular attention should be paid to the section "Reliability of estimates." Charts on relative standard errors and instructions for their use are also given.

Visits by specialty

The percent distribution of 1980–81 office visits, according to medical and surgical specialty, is illustrated in figure 1. There were an estimated 61 million office visits to general surgeons during the 2-year period. They constituted about 5 percent of the visits to all physicians. General surgeons, ophthalmologists, and orthopedic surgeons accounted for similar proportions of visits, following obstetrics and gynecology, which led all other surgical specialties in the number of visits. It is generally acknowledged that the physician's office is less likely to be the customary setting of clinical activity for the surgical specialist than for the medical specialist. Thus, it is not surprising that in terms of visits to all specialties general surgery, ophthalmology, and orthopedic surgery ranked fifth. However, it has been reported that 49 percent of all patient encounters by general surgeons were in the hospital, compared with 14 percent of those by general practitioners, and 24 percent of those by obstetrician-gynecologists.⁶⁻⁸

Overview of visit characteristics

In this report separate patterns of ambulatory care are presented for solo and other types of practice, four geographic regions, four age groups of physicians, and patient sex and age

groups. Patterns are also described for visits that fall into different visit status categories. A general description of visits to general surgeons has not been published since the first brief report;⁴ therefore, an overview of the characteristics of visits, regardless of controlling variables, is offered first. These statistics are shown in the first column of table 1. The percents referred to in the text as "NAMCS average" are proportions based on visits to all specialties in 1980–81 and are derived from unpublished data.

Proportions of visits by female patients (56 percent) exceeded those by males. This proportion of visits by females was less than the NAMCS average of 60 percent, but the dominance of visits to general surgeons by females was similar to the female-to-male ratio observed in visits to physicians in most medical specialties and in some surgical specialties. Data on other surgical specialties are discussed in the section of this report "Comparison with other surgical specialties."

About half of the visits to general surgeons were made by patients 45 years of age and over, compared with the NAMCS average of 41 percent for such patients. Female patients seen by general surgeons were older than male patients were. The median age of the females visiting was 46.6 years, compared with the male median visit age of 40.8 years. The median visit age for all NAMCS visits was 36.4 years for each sex.

About 64 percent of the visits were made by patients the physician had seen before returning for care of continuing problems, a proportion close to the average for such patients. However, the proportion of new patients (19 percent) exceeded the NAMCS average of 14 percent. This was probably due to the

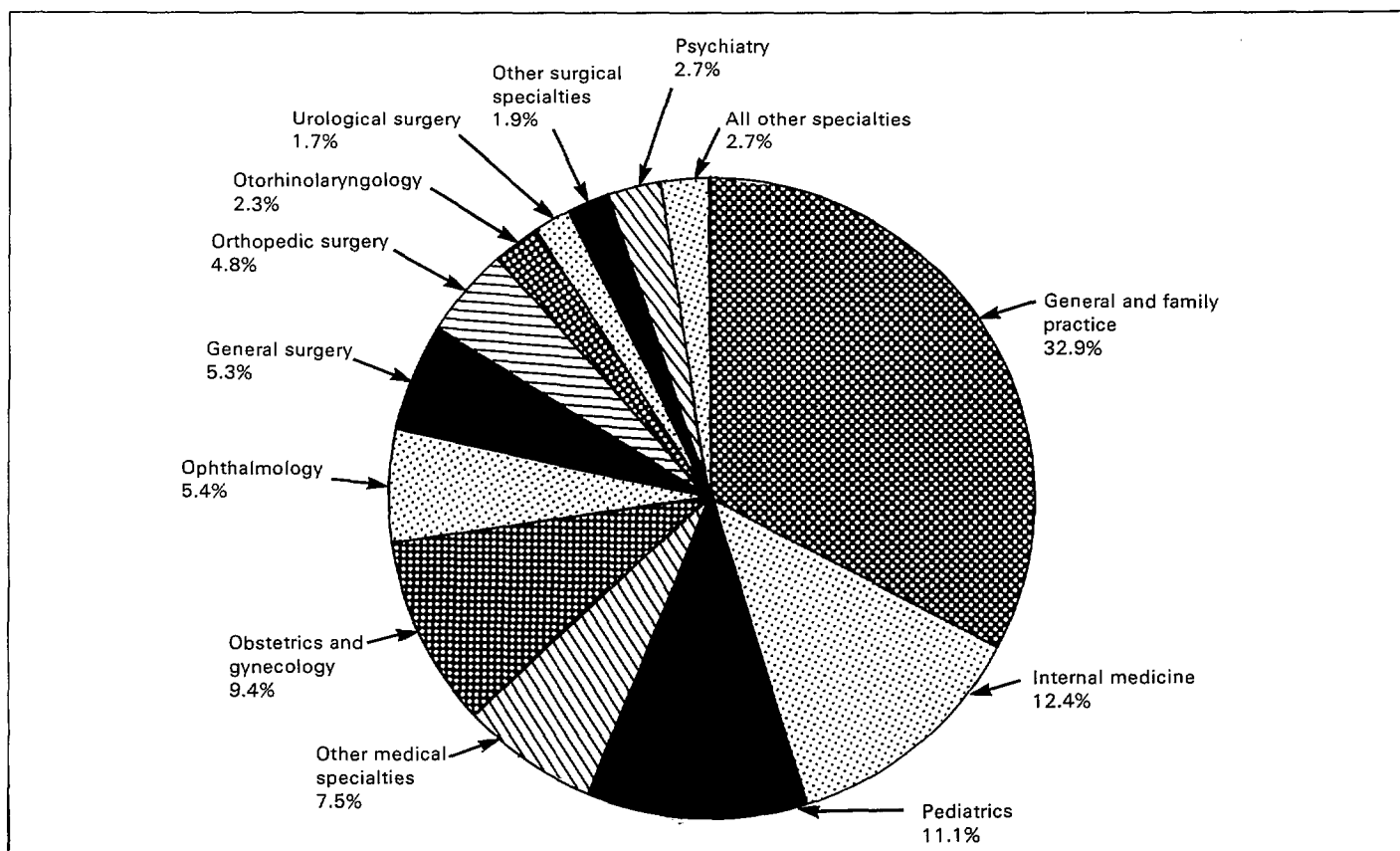


Figure 1. Percent distribution of office visits by specialty: United States, January 1980–December 1981

higher than average referral rate of 10 percent, compared with 4 percent for all physicians.

As expected, the major reason for visit to general surgeons was more likely to be postsurgery or postinjury (34 percent) than it was for the average physician (9 percent). On the other hand, the proportion of reasons assigned to the diagnostic, screening, and preventive module of the NAMCS reason for visit classification (RVC) was lower than average (7 percent, compared with 19 percent overall). In NAMCS, patients' reasons for visit, expressed as closely as possible in the patient's own words, are recorded by the physician in item 6 of the Patient Record. The reason given by the patient, which in the physician's judgment is most responsible for the visit, is the first-listed or principal reason for the visit. Reasons for visit are coded and grouped in eight modules according to a classification system that is detailed in *A reason for visit classification for ambulatory care (RVC)*.⁹

Clinical laboratory tests (9 percent) and blood pressure checks (25 percent) were used for diagnosis by general surgeons in less than average proportions, but X-rays (8 percent) were ordered or provided in proportionately the same number of visits as in those by the average physician. However, candidates for elective surgery, who are often referred by another physician, sometimes bring their X-rays with them when visiting the surgeon.

Office surgery was performed in 16 percent of the visits, exceeding the NAMCS average of 7 percent for the same type of treatment. For the purpose of NAMCS, office surgery is defined broadly. It includes such procedures as incision and excision as well as suture of wounds, and reduction of fractures among others. (See appendix II.)

General surgeons ordered or prescribed one or more drugs in only 38 percent of visits in contrast to the 62 percent aver-

age for all physicians. When drugs were mentioned, they were likely to prescribe central nervous system drugs proportionately more often than other classes (see appendix IV) of drugs (25 percent, table 2). This proportion also exceeded the NAMCS average of 16 percent for the same class of drugs.

Principal (first-listed) diagnoses rendered by general surgeons were coded according to the *Ninth Revision of the International Classification of Diseases, Clinical Modification*.¹⁰ In general surgical office practice these diagnoses covered a wide range of the classification system (table 1). The largest category was diseases of the digestive system (13 percent). Inguinal and other hernia, cholelithiasis, and intestinal disorders accounted for about half of this category. The distribution of visits by diagnostic groups indicates that 53 percent of the visits were for conditions related to six body systems (circulatory, respiratory, digestive, genitourinary, skin, and musculoskeletal), 9 percent were for neoplasms, and 12 percent for injuries. This spectrum of diagnoses suggests the diversity of surgery likely to be performed by general surgeons.

About half of the average general surgeon's visits lasted 10 minutes or less. The mean duration of visits was 13.9 minutes, which is close to the mean duration of visits to general and family practitioners (13.5 minutes).

The higher than average proportion of visits that culminated in the patient's admission to a hospital reflects the clinical nature of the surgeon's practice (8 percent, compared with the NAMCS average of 2 percent). However, considering that in 56 percent of the general surgeon's visits patients were instructed to return at a specified time, and that proportionately as many patients return to the general surgeon for continuing care as they do to the average physician, it is apparent that followup care is as common in the office of the general surgeon as it is in that of the average medical or surgical specialist.

Physician and practice characteristics

Type of practice

Patterns of care are shown in table 1 for visits to physicians categorized as engaged in solo or other types of practice. Other types of practice include partnership, group, or any other organizational arrangements made for the provision of health care to ambulatory patients by physicians in an office setting. Visits to general surgeons in solo practice (table A, 52 percent) exceeded those to physicians in other types of practice (48 percent). This was most evident in the Northeast Region where 63 percent of visits were to physicians practicing alone. Physicians in solo practice in the South Region also had proportionately more visits than physicians in nonsolo practices did. The opposite was true in the West Region where visits to solo practices (41 percent) were less likely than those to multiple practice organizations (59 percent). Proportions of visits to general surgeons in metropolitan and nonmetropolitan areas did not differ significantly by type of practice.

Proportions of visits to physicians by type of practice vary among specialists. For general and family practitioners solo practice visits were proportionately higher than the NAMCS average of 55 percent, while for obstetrician-gynecologists (45 percent), pediatricians (38 percent), and general surgeons (52 percent), they were lower than average. The trend toward group practice projected by the American Medical Association is apparently growing at a different rate depending on the

Table A. Number and percent distribution of office visits to general surgeons by type of practice, according to location of physician's practice: United States, January 1980–December 1981

Geographic region and area	Number of visits in thousands	Type of practice		
		Total	Solo	Other ¹
		Percent distribution		
All office visits	61,013	100.0	51.9	48.1
Geographic region				
Northeast	15,034	100.0	63.1	36.9
North Central	15,379	100.0	47.1	52.9
South	18,001	100.0	54.2	45.8
West	12,598	100.0	41.0	59.0
Area				
Metropolitan	43,568	100.0	51.8	48.2
Nonmetropolitan	17,445	100.0	52.2	47.8

¹Includes partnership, group, and other types of practice.

specialty involved.¹¹ A contrast between the 1975 and 1980–81 data for general surgeons, including type of practice, is shown in a later section of this report.

Different patterns of care emerged from some of the statistics in table 1. Data on other specialists have shown that patterns of care are often correlated with the sex or age of the patients the physician is most likely to see. However, sex and age distributions were similar for general surgeons regardless of the type of practice. For these physicians, the patterns were more likely to be related to the status of the problem than to the demographic characteristics of the patients. Patients the physician had seen before accounted for over 80 percent of visits to general surgeons regardless of type of practice, but these returning patients were more likely to present new problems (21 percent) when visiting solo practitioners than when the physician was in a multiple practice (12 percent).

Solo practitioners also had proportionately more visits for acute problems (35 percent) than other physicians did (27 percent). Because new problems also tend to be acute problems, these findings are consistent.

Only 27 percent of visits to solo practices were postsurgery or postinjury, compared with 41 percent to other types of practice. Patients who receive this type of care are clearly treated for old problems. Thus, solo practice, with its higher proportion of new problem visits, may be expected to have proportionately fewer patients visiting following surgery or injury. New problem visits are usually made by patients with symptomatic reasons for visit (as opposed to old problem visits where treatment or followup care may be involved). Patients presented symptoms as their reasons for visit in 53 percent of visits to physicians in solo practice in contrast to 43 percent of those to other types of practice. At the same time, reasons in the treatment module were proportionately more numerous for multiple practices (27 percent) than they were for solo practices (20 percent).

Statistically significant differences based on some diagnostic services rendered by solo and other practice physicians were also observed. Solo practitioners used the general history and/or examination (24 percent) proportionately more often than physicians in multiple practice did (12 percent), and the latter used the limited history and/or examination (69 percent) proportionately more often than the former (62 percent). Blood pressure checks were also given proportionately more often by solo practitioners (30 percent) than by other physicians (19 percent). These statistics also correlate with the status of the prob-

lem because comprehensive examinations tend to be related to visits for new problems.

Physicians in multiple practice were likely to see proportionately more patients with injuries (15 percent) than were physicians in solo practice where 10 percent of visits were for injuries. In view of the broad definition of office surgery used in NAMCS it is likely to be indicated when injuries are present. The group with the greater proportion of visits for injuries (multiple practice) also had the greater proportion of visits with office surgery (18 percent, compared with 13 percent for solo practice).

While drug therapy was not a major treatment used by general surgeons, those in solo practice were more likely to order or prescribe medication than those in other practice organizations were. Drugs were included in 46 percent of visits to solo physicians, compared with 29 percent of those to other physicians. The number of drug mentions, percent of drug visits, and drug rates are detailed in table B. Except for the higher proportion of drug visits (a visit in which one or more drugs were prescribed) associated with solo practice, differences in drug rates were not statistically significant. In 26 percent of solo practice visits a single drug was prescribed (table 1), with a smaller proportion of visits that included two (13 percent). A single drug (18 percent) was also more likely than two or more when patients visited physicians in other types of practice.

The duration of visits was also consistent with the clinical patterns shown thus far. Relatively short visits (less than 11 minutes) constituted only 44 percent of solo practice visits, compared with 53 percent of those to other types of practice. Unlike solo practices, multiple practices were characterized by patients with old problems where data are readily available from previous visits, and where limited rather than general examinations are likely to be conducted. Thus, visits tend to be shorter.

Location of practice

The characteristics of visits are proportionately distributed for each of four geographic regions, and for metropolitan and nonmetropolitan areas in table 1. Clear patterns did not emerge from the analysis by location, possibly due to sampling variability. However, there were some differences. Patients were more likely to be 45 years of age and over in the Northeast and West Regions than in the North Central and South. Likewise, visits were proportionately higher for older patients in metropolitan areas than in nonmetropolitan areas. Visits for neoplasms were also proportionately greater in metropolitan areas than in nonmetropolitan areas.

Proportions of visits that included office surgery were similar regardless of the location of the physician's practice. Patients in metropolitan areas were more likely to be admitted to a hospital than those in nonmetropolitan areas were. This may be due to the larger proportion of patients over 44 years of age in metropolitan areas, because the hospital discharge rate for patients 45 years of age and over is considerably higher than that of younger patients.¹²

Age of physician

As mentioned previously, general surgeons are not likely to spend as much time in their offices as medical specialists are. They averaged 38 visits per physician per week with little variation due to age (table C). The average visit lasted about 14 minutes for all general surgeons.

Visit characteristics are outlined in table 3, and proportions of visits are distributed according to age groups of physicians. The majority of visits (32.2 million or 54 percent) were to physicians 45-64 years of age. This is close to the NAMCS average of 51 percent for this age group. The 22.4 million visits

Table B. Number of office visits to general surgeons, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by type and location of physician's practice: United States, January 1980-December 1981

Type and location of practice	Office visits			Drug mentions	Drug mention rate ²	Drug intensity rate ³
	All visits	Drug visits ¹				
Type of practice	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	Rate per drug visit
All types of practice	61,013	23,178	38.0	38,060	0.62	1.64
Solo	31,657	14,628	46.2	24,644	0.78	1.68
Other ⁴	29,356	8,550	29.1	13,415	0.46	1.57
Geographic region						
Northeast	15,034	4,669	31.1	6,542	0.44	1.40
North Central	15,379	6,305	41.0	11,054	0.72	1.75
South	18,001	7,604	42.2	13,234	0.74	1.74
West	12,598	4,600	36.5	7,230	0.57	1.57
Area						
Metropolitan	43,568	15,675	36.0	24,553	0.56	1.57
Nonmetropolitan	17,445	7,502	43.0	13,506	0.77	1.80

¹A visit in which one or more drugs were prescribed.

²Drug mentions divided by number of visits.

³Drug mentions divided by number of drug visits.

⁴Includes partnership, group, and other types of practice.

Table C. Average number of office visits per week and mean duration of visits to general surgeons, by age of physician: United States, January 1980–December 1981

Age of physician ¹	Average number of visits per physician per week	Mean duration of visit in minutes
All ages	38.0	13.9
Under 45 years	38.7	14.0
45–54 years	41.1	13.4
55–64 years	37.2	14.0
65 years and over	30.9	14.9

¹Does not include doctors of osteopathy.

shown for physicians under 45 years of age consisted chiefly of visits to those aged 35–44 years (20.9 million). There was a small number of visits (about 802,000 in the 2-year period) to doctors of osteopathy who identified their specialty as general surgeon. Because the age of these physicians was not available, such visits are not included in tables 3 and 4, or tables C and D.

Physicians 55 years of age and over saw proportionately more female patients, and proportionately more patients 45 years of age and over than younger physicians did. The tendency of older patients to visit older physicians has also been observed in data on other specialties, especially where return visits are relatively frequent. This suggests that patients use the same physician as a regular source of care. Thus, it is not surprising that physicians 65 years of age and over treated patients with routine chronic problems in 31 percent of their visits, compared with about 18 percent by those under 65 years of age. Where the major reason for visit was postsurgery or post-injury, physicians under 45 years of age had the proportionately highest number of visits (37 percent). This reflects the proportionately higher number of injury diagnoses made by physicians under 55 years than by those 55 years of age and over. However, differences among proportions of other diagnostic groups were not statistically significant.

Drug therapy rates according to physician age groups are shown in table D. Differences were not statistically significant and proportions of drug visits were lower than average for all

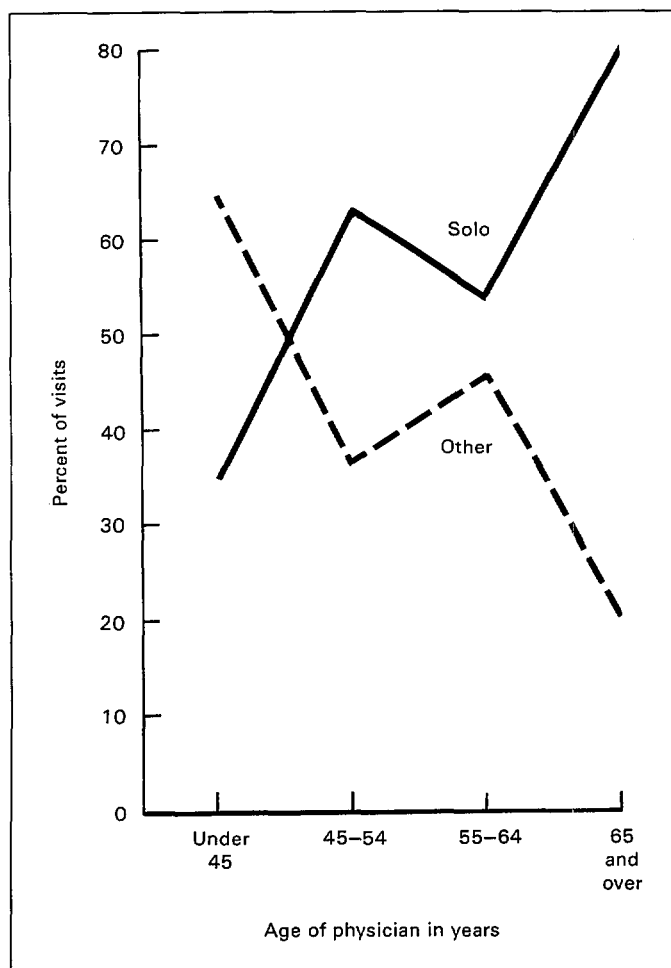


Figure 2. Percent distribution of office visits to general surgeons by type of practice, according to age of physician: United States, January 1980–December 1981

age groups of general surgeons. Central nervous system drugs was the largest therapeutic class prescribed by general surgeons in all age groups except for those under 45 years where anti-infectives accounted for about the same proportion of mentions as central nervous system drugs did (table 4).

Table D. Number of office visits to general surgeons, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by age of physician: United States, January 1980–December 1981

Age of physician ¹	Office visits			Drug mentions Number in thousands	Drug mention rate ³ Rate per visit	Drug intensity rate ⁴ Rate per drug visit
	All visits Number in thousands	Drug Visits ²				
		Number in thousands	Percent			
All ages	60,211	22,909	38.0	37,568	0.62	1.64
Under 45 years	22,411	7,441	33.2	12,629	0.56	1.70
45–54 years	15,924	7,187	45.1	12,160	0.76	1.69
55–64 years	16,327	5,915	36.2	8,666	0.53	1.47
65 years and over	5,548	2,366	42.6	4,112	0.74	1.74

¹Does not include doctors of osteopathy.

²A visit in which one or more drugs were prescribed.

³Drug mentions divided by number of visits.

⁴Drug mentions divided by number of drug visits.

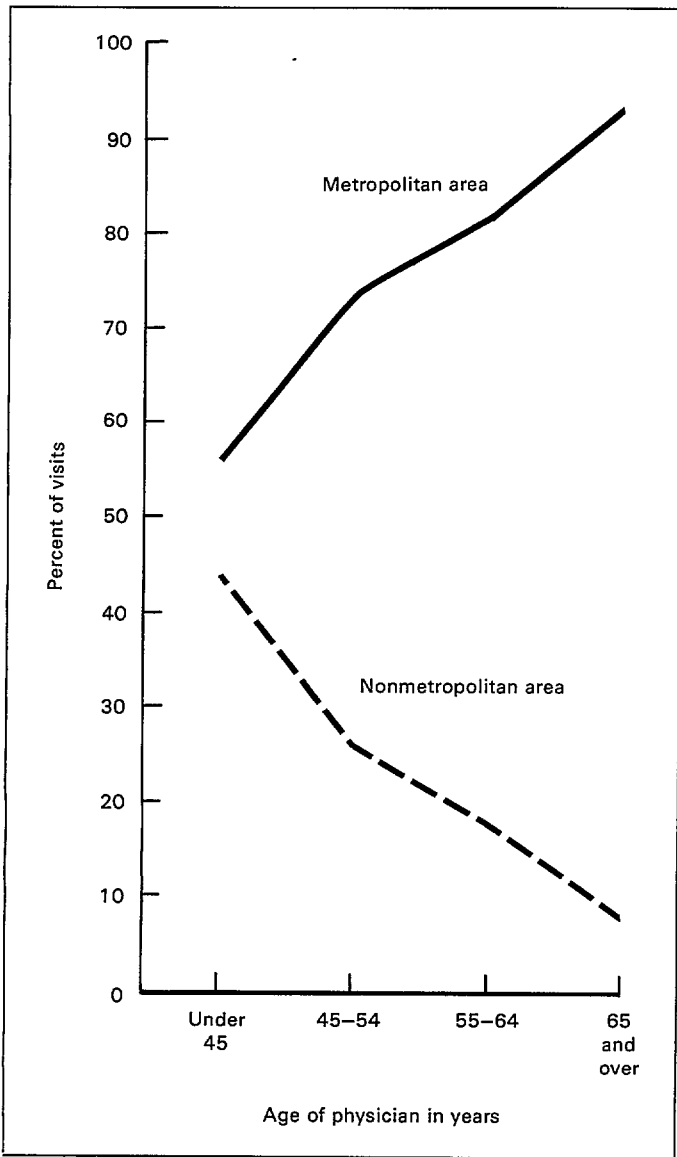


Figure 3. Percent distribution of office visits to general surgeons by location of practice, according to age of physician: United States, January 1980–December 1981

The tendency of recent medical school graduates to enter multiple, rather than solo, practice is illustrated by the opposing curves in figure 2. The highest proportion of visits to general surgeons in solo practice is at age group 65 years and over, while the highest proportion of visits to those in multiple practice is at the age group under 45 years. These findings are consistent with those of other specialties.

The tendency of newly practicing physicians to locate their offices in nonmetropolitan areas may be inferred from the visit curves in figure 3. As the age of the physician increases, the proportion of visits to general surgeons in nonmetropolitan areas decreases. Conversely, proportions of visits in metropolitan areas increase with the advancing age group of the physician. This phenomenon may reflect the establishment of the National Health Service Corps, a Federal program enacted to encourage physicians to locate in medically underserved areas. These areas, designated as Health Manpower Shortage Areas, were chiefly in nonmetropolitan areas.¹³

Patient characteristics

Age and sex

Statistics on the demographic characteristics of patients treated by general surgeons are shown in table 5. About 80 percent of the visits were made by patients 25 years of age and over. However, 84 percent of visits by female patients were in

this age group, compared with 76 percent of those by males. Visit rates increased with increasing age group regardless of the patient's sex (figure 4). This is typical of all NAMCS visits. However, women 25–64 years of age visited at a higher rate than men in the same age group did. For children under 15 years of age the higher visit rate was that of males, while the

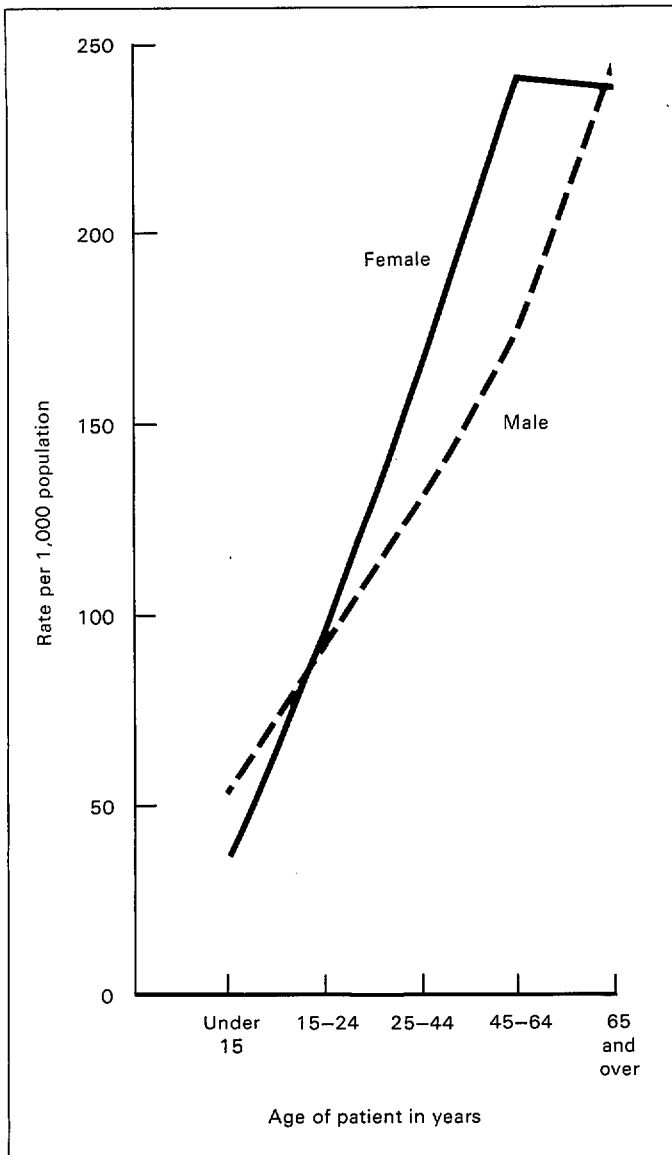


Figure 4. Average annual rate of office visits to general surgeons by sex and age of patient: United States, January 1980–December 1981

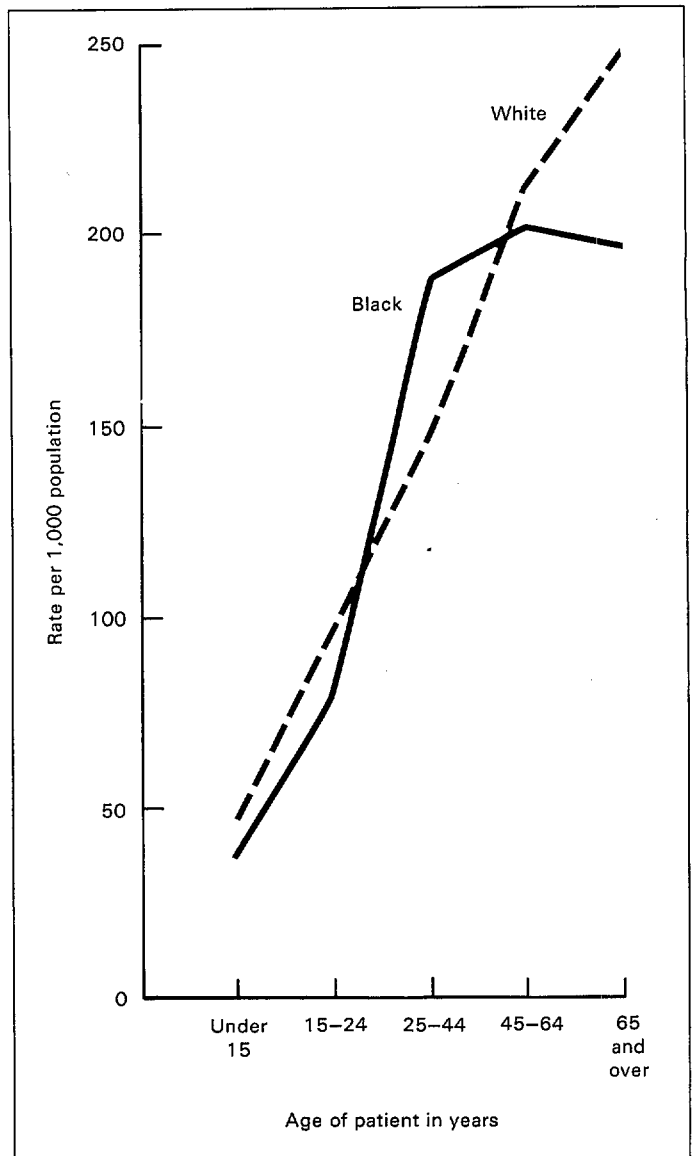


Figure 5. Average annual rate of office visits to general surgeons by race and age of patient: United States, January 1980–December 1981

visit rate was approximately the same for females and males aged 15–24 years.

Age, race, and ethnicity

Black patients accounted for about 11 percent of the visits to general surgeons, which is close to the NAMCS average of 10 percent of visits to all physicians by black patients. The median age of black patients visiting general surgeons was 38.6 years, compared with 45.8 years for white patients. Differences between visit rates of white and black patients were not statistically significant for any age group. The tendency of visit rates to increase with the advancing age group of the patient was similar for patients of both races (figure 5).

Only 2.8 million of the 61.0 million visits to general surgeons were by Hispanic patients, but they accounted for the same proportion of visits to general surgeons as they did for visits to all physicians (5 percent). The proportionate distributions of visits by age group were similar for Hispanic and non-Hispanic patients. However, Hispanic patients visited general surgeons at a lower rate (about 97 visits per 1,000 persons in the population) than non-Hispanic patients did (140 per 1,000). The non-Hispanic visit rate was about 44 percent higher than the Hispanic visit rate. A similar difference was observed in visits to all physicians. Differences among the rates of age groups were not statistically significant, which was probably due to the large sampling error associated with the small number of visits by Hispanic patients.

Patient condition and management

Data on the condition of the patient are provided in tables 6–11. Table 6 includes prior visit status, major reason for visit, and principal reason for visit according to the sex and age of the patient. In tables 7–8 the most frequent principal reasons for visit are listed. Diagnostic categories and the most frequent principal diagnoses are shown in tables 9–11.

Patient management is described by the diagnostic services and nonmedication therapy ordered or provided, drugs ordered or prescribed, duration of the visit, and disposition of the visit in tables 12–14. In these tables the sex and age of the patient are used as control variables.

Sex of the patient

For both sexes at least 81 percent of visits were return visits to the same physician, but new patients were more likely to be male (23 percent) than female (17 percent). The ratio of return visits to initial visits was about 5 to 1 for females' visits and about 3 to 1 for males' visits. Female patients were more likely to visit for chronic problems (32 percent) than were males (26 percent), while postsurgery or postinjury was more likely to be the major reason when male patients visited (37 percent, compared with 31 percent for females). As may be expected in the office of the general surgeon, postoperative visit was the leading principal reason for patients' visits (16 percent for both sexes). For male patients, hernia of abdominal cavity occupied the second place among principal reasons (5 percent), while lump or mass of breast ranked second for females (5 percent).

The list of principal diagnoses frequently recorded by general surgeons reflects the complaints, problems, or symptoms likely to be presented by patients of each sex. Females' diagnoses were more likely than males' diagnoses to be associated with the diagnostic categories neoplasms and diseases of the genitourinary system; males were more likely to have diseases of the digestive system, diseases of the skin and subcutaneous tissue, or injuries. The diagnoses followup examination following surgery, disorders of breast, and inguinal hernia accounted for 14 percent of all visits. As may be expected, disorders of breast ranked first (9 percent) in females' visits; in visits by males, inguinal hernia (7 percent) led all other diagnoses.

The list of principal diagnoses rendered during office visits offers some insight into the types of procedures likely to be used by general surgeons when patients were hospitalized. Diagnoses with the potential for inpatient surgery included malignant neoplasms of female breast, inguinal hernia, hemor-

rhoids, varicose veins of lower extremities, hernia of abdominal cavity, and cholelithiasis.

Except for a proportionately higher number of blood pressure checks made for female patients (27 percent) than for male patients (21 percent), the proportions of the various diagnostic services included in the NAMCS Patient Record were similar for females and males. However, nonmedication therapy varied by the patient's sex. Males were more likely to have office surgery and physiotherapy than females were; females were more likely to be given diet or medical counseling. The greater likelihood of physiotherapy and office surgery during visits by male patients may be related to the fact that males tend to visit for conditions that can be cured by physiotherapy or office surgery, such as injuries or skin problems, more often than female patients do. Office surgery is a more common form of therapy in the surgeon's practice than in the medical specialist's, but surgical procedures are not coded in NAMCS. Therefore, there is no direct method of determining which procedures the office surgery comprised. However, the reason for visit classification system includes some detail on anatomical sites that may suggest the location or kind of surgery performed. The reason for visit also indicates the patient's motivation for the visit. Only those visits that included office surgery are shown in table E. As expected, in about 30 percent of the 9.5 million visits that included office surgery the reason was "postoperative

Table E. Number of office visits to general surgeons that included office surgery and percent, by selected principal reasons for visit and sex of the patient: United States, January 1980–December 1981

Principal reason for visit and RVC code ¹	Sex of patient		
	Both sexes	Female	Male
	Number in thousands		
All office visits	9,450	4,653	4,797
	Percent		
Lump or mass of female breast. . . S805	4.8	9.7	
Skin lesion, infections of skin, skin moles, warts, or other growths of skin S840–S855, S865	18.7	16.4	21.0
Symptoms referable to the musculo-skeletal system S1900–S1960	8.3	*8.0	*8.6
Injuries. J030–J815	12.4	*5.7	18.9
Postoperative visit ² T205	15.4	18.6	12.3
Suture—insertion, removal T555	14.2	16.0	12.5

¹Based on *A reason for visit classification for ambulatory care (RVC)*.⁹

²Includes postoperative suture removal.

visit” or “suture-insertion, removal.” This provides little information about the site or the procedure other than that sutures were used. However, four reason groups were more commonly listed than others were. In 10 percent of the 4.7 million visits by females a lump or mass of the breast was listed. In 16 percent the reasons were related to the skin. Of the 4.8 million visits by men, 21 percent were attributed to skin problems and 19 percent to injuries. Visits with surgery for injuries were proportionately greater for males than for females.

Visits in which one or more drugs were utilized were equally uncommon in visits by female and male patients, and drug rates did not differ significantly (table F). Central nervous system drugs accounted for the largest proportion of drug mentions (25 percent) when both female and male patients visited. This is not surprising in view of the large number of preoperative and postoperative patients seen by general surgeons. In the aggregate the proportions of this therapeutic category were similar for both sexes. However, a more detailed analysis of the central nervous system group revealed statistically significant differences when certain kinds of central nervous system drugs were used (table G). Analgesics and antipyretics accounted for a larger proportion of drugs mentioned during visits by male patients than during those by females (19 percent, compared with 13 percent). Motrin, tylenol with codeine, darvocet-N, and aspirin were the most frequently mentioned analgesics in visits by both sexes. Mentions of psychotherapeutic agents and respiratory and cerebral stimulants were proportionately higher for females than for males. Although as a group the difference in proportions of anti-anxiety agents, sedatives, and hypnotics by sex was not statistically significant, it is noteworthy that valium, a member of this group, was the leading drug mentioned during visits by females but not during those of males. Drug therapy is, by its nature, highly correlated with patients’ diag-

Table G. Number of drug mentions in office visits to general surgeons and percent, by selected central nervous system categories and sex of patient: United States, January 1980–December 1981

Central nervous system category ¹	Sex of patient		
	Both sexes	Female	Male
Number in thousands			
All drug mentions	38,060	23,046	15,014
Percent			
Analgesics and antipyretics	15.3	13.2	18.6
Psychotherapeutic agents	1.4	2.0	*0.6
Respiratory and cerebral stimulants	2.9	4.1	*1.0
Anti-anxiety agents, sedatives, and hypnotics	4.9	5.5	4.0

¹Based on the classification system of the American Hospital Formulary Service (see appendix IV).

noses. It may be that an anti-anxiety agent, such as valium, is more likely to be indicated when hormonal imbalances, such as those following female surgery, occur.

There was little or no variation in the duration of visits by the sex of the patient. Admission to the hospital was not more likely for one sex than for the other. However, the principal diagnosis related to the hospital admission differed by sex of the patient. The principal diagnoses most frequently recorded in visits when patients were admitted to a hospital are shown in table H. Neoplasms, diseases of the circulatory system, diseases of the digestive system, diseases of the genitourinary system, and diseases of the skin and subcutaneous tissue accounted for about 77 percent of such visits regardless of the patient’s sex.

Table F. Number of office visits to general surgeons, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by sex, age, and visit status: United States, January 1980–December 1981

Sex, age, and visit status	Office visits			Drug mentions	Drug mention rate ²	Drug intensity rate ³
	All visits	Drug visits ¹				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	Rate per drug visit
Sex						
Both sexes	61,013	23,178	38.0	38,060	0.62	1.64
Female	34,373	13,470	39.2	23,046	0.67	1.71
Male	26,640	9,707	36.4	15,014	0.56	1.55
Age						
Under 15 years	4,508	1,304	28.9	2,062	0.46	1.58
15–24 years	7,613	2,782	36.6	4,044	0.53	1.45
25–44 years	18,622	7,637	41.0	11,647	0.63	1.53
45–64 years	18,420	6,820	37.0	11,571	0.63	1.70
65 years and over	11,850	4,633	39.1	8,737	0.74	1.89
Visit status						
New patient	11,769	3,645	31.0	5,943	0.50	1.63
Old patient, new problem	10,264	6,072	59.2	9,766	0.95	1.61
Old patient, old problem	38,980	13,460	34.5	22,350	0.57	1.66

¹A visit in which one or more drugs were prescribed.

²Drug mentions divided by number of visits.

³Drug mentions divided by number of drug visits.

Table H. Number and percent distribution of office visits to general surgeons with a disposition admit to hospital by principal diagnosis category, according to sex of patient: United States, January 1980–December 1981

Principal diagnosis category and ICD-9-CM code ¹	Sex of patient		
	Both sexes	Female	Male
	Number in thousands		
All diagnoses	4,950	2,675	2,275
	Percent distribution		
Total	100.0	100.0	100.0
Neoplasms. 140–239	16.1	17.8	*14.1
Diseases of the circulatory system 390–459	14.5	*15.1	*13.7
Diseases of the digestive system ² 520–579	26.7	20.4	34.0
Diseases of the genitourinary system ³ 580–629	11.2	16.1	*5.6
Diseases of the skin and subcutaneous tissue 680–709	*8.4	*7.3	*9.7
All other diagnoses residual	23.1	23.3	22.9

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

²Includes 542,000 visits for inguinal hernia (550).

³Includes 354,000* visits for disorders of breast (610–611).

Varicose veins and hemorrhoids were preeminent among the circulatory conditions for both sexes. Inguinal hernia was the largest component of the digestive group for males. Disorders of the breast represented the majority of visits in the genitourinary diseases category for females.

Age of the patient

The high correlation with patient age of certain variables used to describe visits in NAMCS has been demonstrated in almost all reports. It has been shown that as the patients age, proportions of visits by patients the physician has seen before, returning for care of continuing problems, increase. Likewise, patients visiting for chronic problems increase. The data on visits to general surgeons reflect these same tendencies. For the two oldest groups (45–64 years of age and 65 years and over), 68 and 75 percent, respectively, of their visits were return visits, compared with 53 and 60 percent of visits by patients 15–24 and 25–44 years, respectively (figure 6).

The conditions treated by general surgeons also varied with the patient's age group. The proportion of visits for neoplasms increased from a low of 2 percent for children under 15 years of age to a high of 17 percent for those 65 years of age and over. Proportions of visits for diseases of the circulatory system increased similarly. Diseases of the digestive system were more likely to be diagnosed for patients over 44 years of age than for those younger. A reverse trend was observed for visits caused by injuries, which decreased from a proportion of 20 percent of visits by patients 15–24 years of age to 7 percent of those by the oldest group.

Unlike the average results in NAMCS where percents of drug visits increased with age, percents of drug visits to general

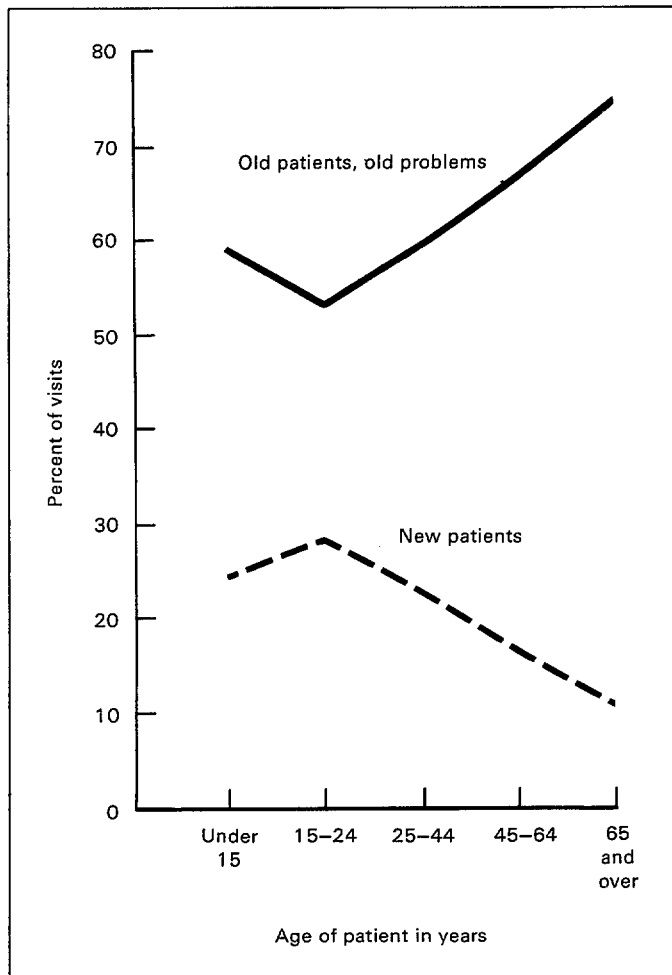


Figure 6. Percent of office visits to general surgeons by prior visit status and age of patient: United States, January 1980–December 1981

surgeons did not vary appreciably by age. Patients 45 years of age and over were more likely to have diuretics or cardiovascular drugs prescribed than younger patients were, which may be expected in view of the diagnoses usually made for older patients. On the other hand, the use of anti-infective agents tended to decrease with advancing age.

The age group with the largest proportion of relatively short visits (less than 11 minutes) was under 15 years old (64 percent, compared with 52 percent for age group 15–24 years, 48 percent for patients 25–44 years, and 45 percent for those older).

The proportionate increase by age in patients scheduled for return visits is consistent with the statistics on visit status in which older patients made proportionately more return visits than younger patients did. Visits that culminated in admission to a hospital did not vary significantly by age. This appears to be inconsistent with data reported from the National Hospital Discharge Survey in which discharge rates increased with age.¹² However, NAMCS data on general surgeons simply underscore the probability that the outcome of a visit to a general surgeon's office is likely to be surgery related, regardless of the patient's age.

Reason for visit and diagnostic services

The diagnostic services ordered or provided by general surgeons when patients visited for certain reasons are shown in table 15. Except in the case of nonillness care, which was the major reason for visit in a relatively small share of all visits, the limited history and/or examination was the most used service. However, general examinations, blood pressure checks, and clinical laboratory tests were more commonly performed during visits for nonillness care than during those for other reasons. As expected, patients who visited because of injuries were more likely to have X-rays (31 percent) than patients who visited for other reasons were.

Principal diagnosis and therapy, duration

Seven principal diagnosis groups that together accounted for 67 percent of the office visits to general surgeons are shown in table 16. Management of patients with these conditions is described in terms of nonmedication therapy, duration, and disposition of the visit.

Office surgery was the foremost therapy used for neoplasms (25 percent), diseases of the skin (39 percent), and injuries (26 percent). Physiotherapy was also proportionately frequent when injuries were present (17 percent). Medical counseling was provided in from 16 to 25 percent of visits for the conditions shown in table 16.

The mean duration of visits did not depart appreciably from the average of 13.9 minutes for any of the seven diagnostic categories (table J). The small differences can be attributed to sampling variability.

Prior visit status

About 19 percent of the visits to general surgeons were made by new patients, 17 percent by old patients with new problems, and 64 percent by old patients with old problems. The pattern of ambulatory care provided to each of these groups by general surgeons may be abstracted from the data in table 17. New patients were more likely to be male (51 percent) than were old patients (42 percent). New patients were younger

than returning patients were. About 63 percent of new patients were under 45 years of age, compared with 53 percent of old patients with new problems and 45 percent of old patients with old problems. When general surgeons encountered patients with new problems, the principal reasons for visit expressed by these patients were likely to be symptoms or complaints. Not surprisingly, the major reason for visit when patients presented old problems was more likely than when new ones were presented to be routine chronic problems (figure 7), or postsurgery or postinjury. The distribution of visits by principal diagnosis did not vary appreciably among the three groups.

Similar to NAMCS data on most specialists, the general surgeon's workup for new patients was more intense than it was for returning patients. General history and/or examination, X-ray, and endoscopy were ordered or provided proportionately more frequently for new patients than for returning patients. As a result, 39 percent of new patient visits took 16 minutes or

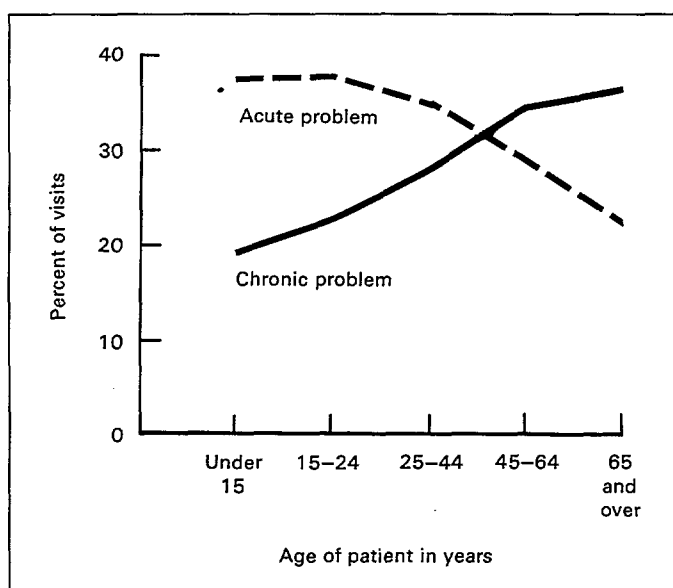


Figure 7. Percent of office visits to general surgeons by chronicity of problem and age of patient: United States, January 1980–December 1981

Table J. Mean duration of office visits to general surgeons by selected principal diagnosis category and prior visit status: United States, January 1980–December 1981

Principal diagnosis category and ICD-9-CM code ¹	Prior visit status			
	All visits	New patient	Old patient, new problem	Old patient, old problem
		Mean duration in minutes		
All diagnoses.....	13.9	17.0	15.1	12.7
Neoplasms..... 140-239	14.3	15.0	17.5	13.7
Diseases of the circulatory system..... 390-459	15.0	17.4	15.4	14.3
Diseases of the digestive system..... 520-579	14.0	18.3	15.6	12.3
Diseases of the genitourinary system..... 580-629	14.2	16.0	19.0	12.4
Diseases of the skin and subcutaneous tissue..... 680-709	12.8	16.7	14.5	11.0
Diseases of the musculoskeletal system and connective tissue..... 710-739	13.6	14.5	13.9	13.1
Injury and poisoning..... 800-999	13.3	16.5	14.7	11.5

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

more, compared with 28 and 18 percent of the other two groups, respectively (table K). The mean duration of new patient visits was 17.0 minutes compared with 15.1 minutes for old patients with new problems and 12.7 minutes for those with old problems (table J). With each succeeding NAMCS report on physician specialty it becomes increasingly evident that physicians tend to provide more in-depth examinations to new patients, and to spend more time with them than with other patients.

New patients were more likely to be admitted to a hospital (19 percent) than were either old patients with new problems (8 percent), or old patients with old problems (5 percent). Also, return visits were not scheduled as frequently for new patients (42 percent) as for old patients (63 percent). These statistics support the prevailing idea that the typical flow of contact with general surgeons follows a pattern of initial consultation for examination and preparation, hospital admission or office surgery, and office followup.

Table K. Percent of office visits to general surgeons by duration of visit and prior visit status: United States, January 1980–December 1981

Prior visit status	Duration	
	Less than 11 minutes	More than 15 minutes
	Percent of visits	
New patient	33.1	38.9
Old patient, new problem	40.9	28.3
Old patient, old problem	54.5	17.8

Table L. Number and percent distribution of office visits to general surgeons by referral status of patient, according to prior visit status: United States, January 1980–December 1981

Prior visit status	Number in thousands	Referral status		
		Total	Referred by another physician	Not referred by another physician
New patient	11,769	100.0	45.5	54.5
Old patient, new problem	10,264	100.0	7.6	92.4
Old patient, old problem	38,980	100.0		100.0

About 46 percent of the 11.8 million new patients were referred to general surgeons by other physicians (table L). The patterns of care were similar for referred and nonreferred new patients with a few exceptions. Thirty percent of referred patients were 25–44 years of age, compared with 41 percent of nonreferred patients; but 17 percent of referred patients were 65 years of age or over, compared with only 6 percent of those nonreferred (data not shown). Referred patients were more likely than nonreferred patients were to visit for neoplasms and diseases of the digestive system. Nonreferred patients made proportionately more visits for injuries. Proportions of such diagnostic services as general examination, clinical laboratory test, X-ray, and blood pressure check were higher for the nonreferred group. However, referred patients were more likely to be admitted to a hospital where they were probably examined and tested prior to surgery.

Conclusion

Comparison with other surgical specialties

There were 355.9 million visits to surgical specialists in 1980–81. This number constituted about 31 percent of the visits to all office-based physicians, and it comprised the visits to 10 different surgical specialties. While the focus of this report is ambulatory care provided by general surgeons, it is instructive to examine the pattern of such care from the perspective of care provided by other specialists with whom general surgeons may share some kinds of clinical activity. Data on visits to general surgeons and the nine other surgical specialists represented by office visits in NAMCS are shown in table 18.

A greater tendency toward solo practice for some specialties than for general surgery is suggested by the higher proportions of such visits to colon and rectal surgeons, ophthalmologists, otorhinolaryngologists, and plastic surgeons where at least 60 percent of the visits were to solo physicians, compared with 52 percent to general surgeons. On the other hand, neurological surgeons, obstetrician-gynecologists, orthopedic surgeons, thoracic surgeons, and urological surgeons had higher proportions of visits to group physicians than general surgeons did. Although most visits to general surgeons were in metropolitan areas (71 percent), other surgeons had proportionately more visits in the same type of location than general surgeons did. The proportions of visits to other surgeons in metropolitan areas ranged from 82 to 100 percent.

The distributions of visits by sex of the patient were predictable, with almost all visits to obstetrician-gynecologists made by females, and 66 percent of visits to urological surgeons made by males. The sex distributions of visits to other surgeons were similar to that of general surgeons. Age distribution tended to be related to the specialized care provided by the physician. For example, 81 percent of the visits to thoracic surgeons were made by patients 45 years of age and over, while 39 percent of visits to otorhinolaryngologists were by patients under 15 years of age. The distribution of visits to general surgeons by age group was not as skewed as that of other surgeons.

Neurological surgeons (19 percent), otorhinolaryngologists (14 percent), thoracic surgeons (14 percent), and urological surgeons (13 percent) had higher proportions of referred patients than general surgeons did. Referrals to colon and rectal surgeons and to orthopedic surgeons were proportionately similar to those of general surgeons, but as may be expected, referrals to obstetrician-gynecologists and ophthalmologists were lower.

Probably the most telling statistics insofar as the practice

of the general surgeon is concerned is the distribution of visits by diagnosis. Predictably, large proportions of visits for certain diagnoses occurred in the specialties where practices were restricted to the alleviation of such problems, but for general surgeons proportions of visits by diagnosis were more widely dispersed. About 65 percent of the visits to colon and rectal surgeons involved diseases of the circulatory system or diseases of the digestive system. General surgeons saw such conditions in 23 percent of their visits. Obstetrician-gynecologists treated diseases of the genitourinary system in 19 percent of visits, compared with 9 percent in those of general surgeons. Diseases of the musculoskeletal system or injuries accounted for 83 percent of visits to orthopedic surgeons, and 18 percent of those to general surgeons. Plastic surgeons treated patients with neoplasms in 15 percent of their visits; general surgeons treated similar problems in 9 percent. Plastic surgeons also treated patients with diseases of the skin and subcutaneous tissue in 19 percent of visits, while the same category accounted for 8 percent of the general surgeon's caseload. Thus, two-thirds of the visits to general surgeons included seven diagnostic categories, while in at least four other specialties only one or two of the same seven categories were the major focus of practice.

Office surgery was more likely to be performed in the offices of plastic surgeons than in those of general or other surgeons. Surgical procedures were used in the office setting in about the same proportions of visits to general surgeons, colon and rectal surgeons, orthopedic surgeons, otorhinolaryngologists, and urological surgeons.

The proportions of visits with a disposition admit to hospital did not vary appreciably among surgical specialties. However, when all visits that culminated in hospital admission are considered (26.8 million), the largest share (19 percent) was attributed to general surgeons (figure 8).

Comparison with 1975 data

As a proportion of all physician visits, visits to general surgeons decreased from 7 percent in 1975 to an average of 5 percent in 1980–81. There were 14 visits per 100 persons in the population in 1980–81, compared with 20 in 1975 (table M). Visits to general surgeons in solo practice decreased from 64 percent in 1975 to 52 percent in 1980–81. This is consistent with the general trend observed for many other specialties.

There was a statistically significant increase in the proportion of visits by male patients in 1980–81, which may ac-

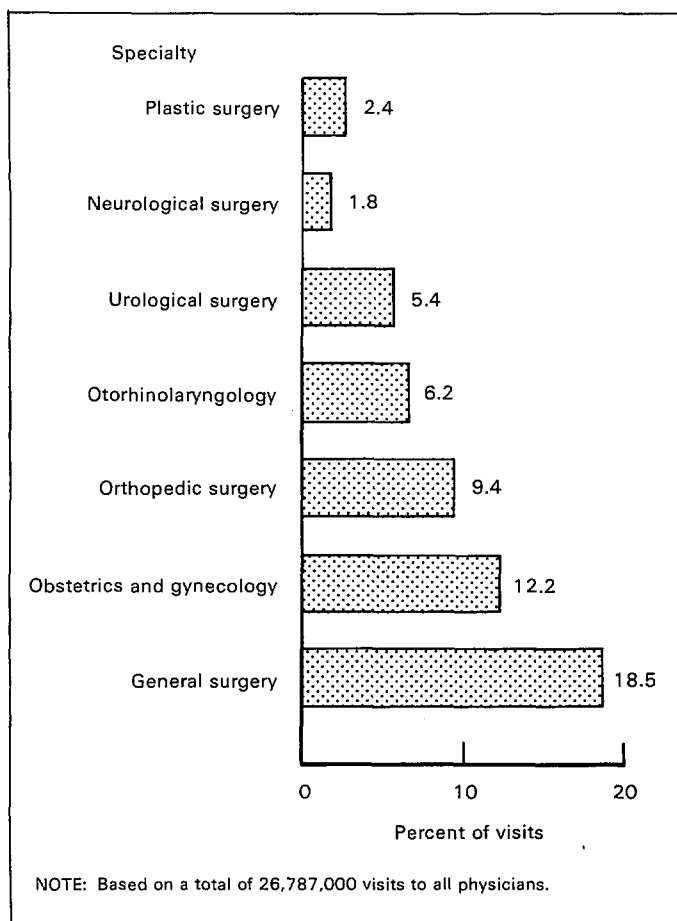


Figure 8. Percent of all office visits with a disposition admit to hospital by selected surgical specialties: United States, January 1980–December 1981

count for the increase in the diagnostic categories found to be more closely associated with visits by males than with visits by females. Diseases of the digestive system rose from 9 to 13 percent; diseases of the skin and subcutaneous tissue, from 6 to 8 percent; and injuries, from 10 to 12 percent. Visits in these categories were more likely for male patients than for female patients.

Usually in NAMCS, an increase in the proportion of one type of medical examination (limited or general) is accompanied by a decrease in the other. It is noteworthy that in visits to general surgeons both types of examination increased since 1975. The small decrease in office surgery was not statistically significant, and other services were proportionately similar for the two points in time that were examined.

In 1980–81, 19 percent of the average general surgeon's visits were made by new patients, compared with 16 percent in 1975. This may account for the increased frequency of examinations. It also may explain the change in the duration of visits from the earlier period to the more recent one. Relatively short visits (less than 11 minutes) accounted for 56 percent of physician-patient encounters in 1975. This proportion was 48 percent in 1980–81. Simultaneously, relatively long visits (more than 15 minutes) increased from 18 percent in 1975 to 24 percent in 1980–81. It has been shown that visits by new

Table M. Number of office visits per 100 persons per year to general surgeons and percent of visits, by selected characteristics: United States, 1975 and 1980–81

Characteristic	1975	1980–81
Number		
Visits per 100 persons per year	20	14
Percent		
Percent of all physician visits	7.3	5.3
Type of practice		
Solo	63.5	51.9
Other ¹	36.5	48.1
Location of practice		
Metropolitan area	72.2	71.0
Nonmetropolitan area	27.8	29.0
Sex of patient		
Female	60.3	56.3
Male	39.7	43.7
Age of patient		
Under 25 years	19.5	19.9
25–44 years	28.7	30.5
45–64 years	34.0	30.2
65 years and over	17.8	19.4
Prior visit status		
New patient	15.8	19.3
Old patient, new problem	19.1	16.8
Old patient, old problem	65.1	63.9
Principal diagnosis		
Neoplasms	7.6	9.4
Diseases of the circulatory system	8.8	9.9
Diseases of the respiratory system	6.1	6.5
Diseases of the digestive system	9.2	13.3
Diseases of the genitourinary system	7.8	8.9
Diseases of the skin and subcutaneous tissue	6.0	8.4
Diseases of the musculoskeletal system and connective tissue	4.0	5.6
Injury and poisoning ²	9.7	12.2
Diagnostic services and nonmedication therapy		
Limited history and/or examination	46.6	65.6
General history and/or examination	11.0	18.1
Clinical laboratory test	11.8	8.5
X-ray	7.3	7.9
Office surgery	16.6	15.5
Duration of visit		
Less than 11 minutes	55.6	48.0
More than 15 minutes	18.4	23.6
Disposition		
Admit to hospital	5.8	8.1
Return at specified time	61.6	55.9

¹Includes partnership, group, and other types of practice.

²In 1975 this category was "Accidents, poisonings, and violence."

patients are more time-consuming, on the average, than are visits by other patients, and an increase in the proportion of new patient visits to general surgeons may have been the reason for the longer visit duration.

The proportion of visits that culminated in the patient's admission to a hospital increased from 6 to 8 percent over the

two periods, and proportionately fewer patients were scheduled for return visits.

Hospital care

The data collected by means of the NAMCS are generalizable only to the universe of office-based physicians, and patterns of care apply only to the care provided in the office setting. However, half of the encounters with patients by general surgeons are with hospitalized patients, and the pattern is somewhat incomplete without some mention of these encounters.

The National Hospital Discharge Survey provides extensive national data on surgical procedures in short-stay hospitals, but information on the surgeons who perform the surgery is not available.¹² A list of the leading surgical procedures performed in hospitals by general surgeons in 1978 was included in the *General Surgery Practice Report* of the Division of Research in Medical Education of the University of California School of Medicine.⁶ Although the authors stated that the sample was small (723 encounters) and the weighted number of procedures relatively unreliable, the results contribute a nominal dimension to the pattern of hospital care. Among the procedures listed were repair of hernia, operations on the skin, operations on biliary tract, and breast surgery. However, there was no information regarding the proportions of all such operations according to surgical specialty or the proportions attributable to general surgeons.

A study conducted in 1970 by the American College of Surgeons and the American Surgical Association addressed the question of the percent of operative procedures performed by different surgical specialists.¹⁴ There are no more recent, comparable data. In that study, data for four "areas" were reported but not averaged. Based on one of these "areas," it was found that general surgeons were the responsible surgeons for (among other operative procedures) 83 percent of inguinal hernia operations, 28 percent of abdominal hysterectomies, 60 percent of local excisions of skin, 87 percent of cholecystectomies, 7 percent of tonsillectomies, 84 percent of appendectomies, 86 percent of partial mastectomies, 85 percent of hemorrhoidectomies, and 90 percent of excision and ligation of varicose veins. The reader will recognize that many of these operations are closely associated with the diagnoses commonly rendered in the general surgeon's office practice. By contrast, otorhinolaryngologists performed 78 percent of tonsillectomies; obstetrician-gynecologists, 64 percent of abdominal hysterectomies; and urologists, 85 percent of prostatectomies.

NAMCS data on the association of first-listed and second-listed diagnoses are a bridge between characteristics of office visits to general surgeons and the kinds of inpatient surgery

Table N. Number of office visits to general surgeons with a second-listed diagnosis followup examination after surgery and percent, by first-listed diagnosis: United States, January 1980–December 1981

<i>First-listed diagnosis and ICD-9-CM code¹</i>	<i>Second-listed diagnosis followup examination after surgery</i>
	Number in thousands
All visits	6,360
	Percent
Neoplasms 140-239	19.8
Malignant neoplasms 140-208	13.4
Benign neoplasms 210-229	*5.1
Diseases of the circulatory system 390-459	9.3
Diseases of the veins 454-455	*5.5
Diseases of the digestive system 520-579	32.7
Inguinal hernia 550	9.5
Other hernia of abdominal cavity without mention of obstruction or gangrene 553	7.6
Cholelithiasis or other disorders of gall bladder 574-575	*4.6
Diseases of the genitourinary system 580-629	11.0
Benign mammary dysplasias or other disorders of breast 610-611	8.9
Diseases of the skin and subcutaneous tissue 680-709	12.9

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

performed. There were 6.4 million visits with a second-listed diagnosis of followup examination following surgery. In these cases, the first-listed, or principal, diagnosis is usually the condition that required surgery. It can be seen in table N that 33 percent of followup visits showed a first-listed diagnosis in the category diseases of the digestive system. Inguinal hernia, other hernia of abdominal cavity, and cholelithiasis were responsible for the majority of such visits. Another 20 percent of surgery followup visits was due to neoplasms, with the largest share (13 percent) because of malignancy. Benign mammary dysplasias or other disorders of breast accounted for 9 percent of these visits, and an additional 2 percent were due to diseases of the genitourinary system other than breast. Diseases of the circulatory system (chiefly diseases of veins) were the principal diagnoses in 9 percent of the visits, and diseases of skin and subcutaneous tissue in 13 percent. The aforementioned diagnoses were present in a total of 86 percent of the visits in which followup examination following surgery was listed.

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Table 1. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to type and location of physician's practice: United States, January 1980–December 1981

Characteristic	All types of practice	Type of practice		Geographic region				Area	
		Solo	Other ¹	Northeast	North Central	South	West	Metro-politan	Non-metro-politan
Number in thousands									
All visits	61,013	31,657	29,356	15,034	15,379	18,001	12,598	43,568	17,445
Percent distribution									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex of patient									
Female	56.3	57.8	54.8	54.1	56.6	57.0	57.7	57.3	54.1
Male	43.7	42.2	45.3	45.9	43.4	43.0	42.3	42.8	45.9
Age of patient									
Under 15 years	7.4	7.8	7.0	6.4	8.1	8.2	6.6	6.8	8.9
15–24 years	12.5	12.9	12.0	12.3	14.5	13.2	9.2	11.1	15.9
25–44 years	30.5	31.5	29.5	26.5	30.6	33.4	31.1	30.5	30.7
45–64 years	30.2	28.7	31.8	34.2	29.5	27.2	30.6	31.5	26.9
65 years and over	19.4	19.1	19.8	20.6	17.4	18.1	22.4	20.2	17.6
Prior visit status									
New patient	19.3	17.7	21.1	20.2	18.9	19.6	18.3	19.4	19.1
Old patient, new problem	16.8	21.4	11.9	12.8	19.5	14.9	21.2	16.2	18.3
Old patient, old problem	63.9	61.0	67.0	67.0	61.7	65.6	60.5	64.4	62.6
Referral status									
Referred by another physician	10.1	8.7	11.5	11.1	10.7	8.2	10.6	10.8	8.2
Not referred by another physician	90.0	91.3	88.5	88.9	89.3	91.8	89.4	89.2	91.8
Major reason for visit									
Acute problem	31.1	34.9	27.0	27.6	29.0	31.9	36.6	32.1	28.6
Chronic problem, routine	18.3	18.9	17.7	19.6	16.9	19.6	16.6	17.7	19.7
Chronic problem, flareup	11.3	11.8	10.9	11.3	12.0	12.2	9.2	10.8	12.7
Postsurgery or postinjury	33.7	27.1	40.8	36.9	34.3	31.1	32.9	34.2	32.5
Nonillness care	5.6	7.3	3.7	4.6	7.8	5.2	4.7	5.2	6.5
Principal reason for visit and RVC code ²									
Symptom module S001–S999	48.5	53.4	43.3	51.4	44.6	48.4	50.2	47.9	50.1
Disease module D001–D999	11.5	11.7	11.3	12.3	13.3	10.5	9.6	12.4	9.3
Diagnostic, screening, and preventive module X100–X599	6.5	7.0	5.9	5.3	6.9	7.0	6.6	6.4	6.6
Treatment module T100–T899	23.4	19.8	27.4	22.4	24.1	21.9	26.1	23.1	24.3
Injuries and adverse effects module J001–J999	7.6	5.2	10.2	6.1	7.9	9.9	5.9	7.6	7.6
Test results module R100–R700	*0.5	*0.7	*0.3	*0.3	*1.6	-	*0.1	*0.6	*0.2
Administrative module A100–A140	1.1	1.7	*0.5	*1.4	*1.1	*1.4	*0.6	1.1	1.3
Other ³	0.9	*0.5	*1.1	*0.9	*0.4	*0.5	*0.8	*0.7	*0.5
Diagnostic service ⁴									
None	6.9	6.8	7.0	9.0	7.6	5.1	6.4	7.1	6.6
Limited history and/or examination	65.6	62.4	69.1	65.5	65.8	65.1	66.3	65.0	67.2
General history and/or examination	18.1	23.5	12.2	20.2	14.0	24.4	11.3	18.3	17.4
Pap test	1.1	*1.2	*0.9	*0.5	*1.2	*1.2	*1.4	*1.0	*1.2
Clinical laboratory test	8.5	9.4	7.6	4.4	8.9	9.1	12.2	8.6	8.3
X-ray	7.9	6.1	9.8	7.7	8.9	7.6	7.3	7.5	8.9
Blood pressure check	24.6	30.0	18.7	13.4	25.6	26.4	34.1	25.6	22.1
Electrocardiogram	1.1	*1.2	*1.1	*0.6	*1.5	*0.8	*1.9	1.3	*0.7
Vision test	1.1	*0.9	*1.3	3.4	*0.0	*0.4	*0.4	1.2	*0.6
Endoscopy	2.4	1.7	3.1	3.3	*2.0	*2.1	*2.1	3.0	*0.9
Other	2.8	2.7	3.0	*2.5	3.0	*1.4	5.1	3.1	*2.1

See footnotes at end of table.

Table 1. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to type and location of physician's practice: United States, January 1980–December 1981—Con.

Characteristic	All types of practice	Type of practice		Geographic region				Area	
		Solo	Other ¹	Northeast	North Central	South	West	Metro-politan	Non-metro-politan
Nonmedication therapy ⁴		Percent distribution							
None.....	56.4	59.2	53.4	59.8	54.7	58.7	51.1	56.2	57.0
Physiotherapy.....	4.0	3.0	5.1	4.5	3.9	4.7	*2.6	4.1	3.8
Office surgery.....	15.5	13.2	18.0	15.1	14.5	15.8	16.7	15.5	15.5
Therapeutic listening.....	1.1	*0.6	1.6	*1.6	*0.7	*0.4	*2.0	1.2	*1.0
Diet counseling.....	4.5	6.4	2.4	6.8	3.6	3.6	4.0	5.2	2.7
Medical counseling.....	20.3	19.8	20.7	16.3	22.2	18.2	25.7	20.2	20.3
Other.....	3.3	2.8	3.9	3.0	3.5	2.8	4.3	3.4	3.1
Number of medications									
None.....	62.0	53.8	70.9	68.9	59.0	57.8	63.5	64.0	57.0
1.....	21.8	25.8	17.6	20.6	22.7	22.5	21.3	22.4	20.4
2.....	10.3	12.6	7.8	8.7	9.7	11.8	10.8	9.0	13.4
3 or more.....	5.9	7.9	3.7	*1.7	8.7	8.0	4.3	4.6	9.1
Principal diagnosis and ICD-9-CM code ⁵									
Infectious and parasitic diseases 000-139	1.6	1.7	1.6	*1.3	*1.5	*2.0	*1.7	1.7	*1.5
Neoplasms 140-239	9.4	7.7	11.2	10.5	8.8	6.6	12.7	10.7	6.3
Endocrine, nutritional and metabolic diseases, and immunity disorders. 240-279	3.6	4.5	2.7	5.4	3.9	2.9	*2.1	4.1	*2.5
Mental disorders 290-319	1.2	2.0	*0.4	*0.4	*1.5	*1.8	*1.2	1.2	*1.2
Diseases of the nervous system and sense organs 320-389	1.9	2.0	1.8	*2.1	*2.4	*1.8	*1.1	1.8	*2.2
Diseases of the circulatory system. 390-459	9.9	11.7	8.0	11.4	10.2	8.6	9.5	10.4	8.6
Diseases of the respiratory system. 460-519	6.5	9.6	3.1	2.8	6.8	6.8	9.9	5.2	9.5
Diseases of the digestive system 520-579	13.3	13.4	13.1	14.9	11.2	13.1	14.0	14.4	10.4
Diseases of the genitourinary system. 580-629	8.9	8.1	9.7	6.9	9.7	10.1	8.4	9.2	8.1
Diseases of the skin and subcutaneous tissue 680-709	8.4	7.8	9.0	9.9	8.8	8.4	5.9	8.5	8.0
Diseases of the musculoskeletal system and connective tissue. 710-739	5.6	5.7	5.4	6.0	6.5	4.7	5.1	4.7	7.6
Symptoms, signs, and ill-defined conditions 780-799	3.9	3.8	3.9	2.7	3.3	5.4	3.8	3.9	3.9
Injury and poisoning 800-999	12.2	9.9	14.6	11.2	11.8	14.7	10.0	11.4	14.0
Supplementary classification V01-V82	11.7	10.0	13.6	12.6	11.7	11.1	11.7	10.7	14.3
All other diagnoses.....	1.1	*1.1	*1.0	*1.1	*1.0	*0.8	*1.6	1.1	*1.1
Unknown diagnoses.....	1.1	*1.1	*0.9	*0.6	*0.9	*1.3	*1.3	1.1	*0.8
Duration of visit									
0 minutes ⁶	0.8	*0.5	*1.0	*0.7	*0.9	*0.5	*1.2	*0.7	*0.9
1-5 minutes.....	14.5	10.4	19.0	17.3	17.2	13.7	9.1	12.5	19.7
6-10 minutes.....	33.5	33.3	33.8	31.3	40.5	31.0	31.4	32.6	35.9
11-15 minutes.....	27.5	30.5	24.3	27.9	26.1	27.5	28.8	28.9	24.1
16-30 minutes.....	21.6	23.2	19.9	21.8	14.0	24.3	26.8	23.0	18.2
31 minutes or longer.....	2.0	1.9	2.1	*1.0	*1.4	3.1	*2.6	2.4	*1.3
Disposition of visit ⁷									
No followup planned.....	12.3	13.0	11.6	8.8	19.2	11.8	9.0	11.9	13.5
Return at specified time.....	55.9	52.3	59.8	58.2	52.1	55.9	57.7	57.0	53.2
Return if needed.....	20.0	22.5	17.3	20.6	16.8	21.9	20.5	17.0	27.5
Telephone followup planned.....	1.6	2.3	*0.9	*2.2	*1.1	*1.2	*2.2	1.8	*1.1
Referred to other physician.....	3.5	2.7	4.4	3.5	4.5	*2.4	3.9	3.9	2.5
Returned to referring physician.....	1.6	*1.2	2.1	*1.8	1.5	*0.9	*2.5	1.9	*0.8
Admit to hospital.....	8.1	7.6	8.7	9.5	7.8	7.7	7.4	9.1	5.8
Other.....	*0.3	*0.2	*0.3	*0.4	*0.1	*0.3	*0.3	*0.3	*0.1

¹Includes partnership, group, and other types of practice.

²Based on *A reason for visit classification for ambulatory care (RVCL)*.⁹

³Includes blanks; problems, complaints not elsewhere classified; entries of "none"; and illegible entries.

⁴Percents will not total 100.0 because more than 1 service or therapy may have been rendered during a visit.

⁵Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

⁶Represents visits in which there was no face-to-face encounter between patient and physician.

⁷Percents will not total 100.0 because more than 1 disposition was possible.

Table 2. Number and percent distribution of drug mentions in office visits to general surgeons by therapeutic category, according to type and location of physician's practice: United States, January 1980–December 1981

Therapeutic category ¹	All types of practice	Type of practice		Geographic region				Area	
		Solo	Other ²	Northeast	North Central	South	West	Metro-politan	Non-metro-politan
Number in thousands									
All categories.....	38,060	24,644	13,415	6,542	11,054	13,234	7,230	24,553	13,506
Percent distribution									
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Antihistamine drugs.....	4.9	5.4	3.9	*1.8	5.1	5.2	6.7	3.9	6.7
Anti-infective agents.....	17.7	20.1	13.3	16.9	11.0	22.5	20.0	15.2	22.3
Autonomic drugs.....	4.3	3.8	5.4	*4.6	4.0	4.9	*3.7	4.5	4.0
Cardiovascular drugs.....	6.5	6.9	5.7	7.5	9.4	4.6	*4.9	6.0	7.5
Central nervous system drugs.....	24.9	23.1	28.3	26.2	24.5	28.6	17.7	26.9	21.4
Electrolytic, caloric, and water balance.....	5.7	5.8	5.6	*4.0	9.8	3.7	*4.8	6.1	5.1
Expectorants and cough preparations.....	3.1	3.9	*1.8	*2.9	*0.9	3.6	*5.7	3.0	3.3
Eye, ear, nose and throat preparations.....	2.3	1.7	3.4	*5.5	*1.4	*1.8	*1.6	2.6	*1.7
Gastrointestinal drugs.....	6.3	6.4	6.2	*6.1	5.7	6.1	7.9	6.8	5.4
Hormones and synthetic substitutes.....	7.5	7.0	8.4	*4.9	12.0	4.7	8.0	7.3	7.8
Skin and mucous membrane preparations.....	7.4	6.7	8.6	11.8	5.2	5.9	9.4	8.2	6.0
Vitamins.....	3.3	3.0	3.7	*0.4	5.5	*3.0	*2.9	2.7	4.4
Other, unclassified, or undetermined.....	6.1	6.3	5.8	7.6	5.5	5.6	6.7	7.0	4.5

¹Based on the classification system of the American Hospital Formulary Service (see appendix IV).

²Includes partnership, group, and other types of practice.

Table 3. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to age of physician: United States, January 1980–December 1981

Characteristic	Age of physician ¹				
	All ages	Under 45 years	45–54 years	55–64 years	65 years and over
	Number in thousands				
All visits.....	60,211	22,411	15,924	16,327	5,548
	Percent distribution				
Total.....	100.0	100.0	100.0	100.0	100.0
Sex of patient					
Female.....	56.3	55.5	50.2	60.1	66.3
Male.....	43.7	44.5	49.8	40.0	33.7
Age of patient					
Under 15 years.....	7.3	7.2	8.3	7.9	*3.6
15–24 years.....	12.5	13.6	14.3	10.1	9.8
25–44 years.....	30.5	31.3	30.6	30.8	26.1
45–64 years.....	30.2	28.8	28.5	32.2	35.2
65 years and over.....	19.5	19.1	18.4	19.1	25.4
Prior visit status					
New patient.....	19.1	20.5	21.5	15.2	18.2
Old patient, new problem.....	16.9	13.4	21.5	18.6	12.6
Old patient, old problem.....	64.0	66.1	57.0	66.2	69.2
Referral status					
Referred by another physician.....	10.0	11.1	9.3	9.3	9.3
Not referred by another physician.....	90.1	88.9	90.7	90.7	90.7
Major reason for visit					
Acute problem.....	31.0	26.9	34.6	33.6	28.8
Chronic problem, routine.....	18.4	17.8	17.5	16.1	30.7
Chronic problem, flareup.....	11.3	13.3	10.3	11.1	*7.0
Postsurgery or postinjury.....	33.7	37.2	30.0	34.2	29.2
Nonillness care.....	5.6	4.9	7.6	5.0	*4.2
Principal reason for visit and RVC code ²					
Symptom module..... S001–S999	48.5	47.1	49.2	48.7	51.5
Disease module..... D001–D999	11.5	9.9	11.3	13.2	13.3
Diagnostic, screening, and preventive module..... X100–X599	6.4	6.7	6.0	6.6	*6.4
Treatment module..... T100–T899	23.4	26.0	20.6	22.7	23.1
Injuries and adverse effects module..... J001–J999	7.7	8.2	10.1	6.2	*3.5
Test results module..... R100–R700	*0.5	*0.1	*0.2	*1.0	*1.3
Administrative module..... A100–A140	1.2	*0.8	*2.1	*1.0	*0.5
Other ³	0.8	*1.2	*0.5	*0.6	*0.4
Diagnostic service ⁴					
None.....	6.8	4.0	7.3	8.5	11.0
Limited history and/or examination.....	65.8	70.5	59.2	68.3	58.7
General history and/or examination.....	18.0	14.9	24.1	16.1	18.6
Pap test.....	1.1	*0.7	*1.1	*1.3	*1.8
Clinical laboratory test.....	8.4	8.7	7.7	7.9	10.4
X-ray.....	7.9	8.4	8.0	7.3	*7.0
Blood pressure check.....	24.7	20.5	31.9	20.6	32.5
Electrocardiogram.....	1.1	*0.8	*1.6	*1.2	*0.7
Vision test.....	1.0	*1.6	*1.2	*0.2	*0.2
Endoscopy.....	2.4	2.4	*2.3	*2.4	*3.0
Other.....	2.9	*2.0	5.1	*2.0	*2.7
Nonmedication therapy ⁴					
None.....	56.6	60.5	51.6	59.2	47.6
Physiotherapy.....	4.1	3.6	5.4	4.1	*2.0
Office surgery.....	15.4	13.8	15.2	16.3	20.2
Therapeutic listening.....	1.1	*1.9	*0.3	*0.7	*1.5
Diet counseling.....	4.4	2.9	5.1	3.1	12.6
Medical counseling.....	20.1	19.2	22.6	16.6	27.0
Other.....	3.4	3.9	3.5	2.8	*2.5

See footnotes at end of table.

Table 3. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to age of physician: United States, January 1980–December 1981—Con.

Characteristic	Age of physician ¹				
	All ages	Under 45 years	45–54 years	55–64 years	65 years and over
Number of medications					
None	62.0	66.8	54.9	63.8	57.4
1	22.0	17.7	24.0	24.5	25.6
2	10.2	9.4	13.7	8.2	8.8
3 or more	6.0	6.1	7.5	3.5	8.3
Principal diagnosis and ICD-9–CM code ⁵					
Infectious and parasitic diseases 000–139	1.6	2.2	*0.8	*1.4	*2.4
Neoplasms 140–239	9.4	9.7	6.1	10.5	14.0
Endocrine, nutritional and metabolic diseases, and immunity disorders 240–279	3.6	2.1	3.4	3.5	10.4
Mental disorders 290–319	1.2	*1.0	*1.8	*1.2	*0.5
Diseases of the nervous system and sense organs 320–389	1.9	2.2	*2.7	*1.0	*1.1
Diseases of the circulatory system 390–459	9.9	9.7	9.2	9.9	13.3
Diseases of the respiratory system 460–519	6.4	7.5	6.5	5.4	*3.9
Diseases of the digestive system 520–579	13.3	11.7	13.5	14.9	14.4
Diseases of the genitourinary system 580–629	8.7	10.0	6.2	8.9	9.6
Diseases of the skin and subcutaneous tissue 680–709	8.4	8.2	8.5	9.3	*6.3
Diseases of the musculoskeletal system and connective tissue 710–739	5.6	5.4	6.8	5.2	*4.2
Symptoms, signs, and ill-defined conditions 780–799	3.9	4.2	2.8	4.7	*3.1
Injury and poisoning 800–999	12.3	13.0	17.1	8.8	*6.4
Supplementary classification V01–V82	11.8	11.4	12.6	12.2	9.5
All other diagnoses residual	1.1	*1.3	*1.1	*1.0	*0.7
Unknown diagnoses	1.1	*0.5	*1.0	*2.1	*0.4
Duration of visit					
0 minutes ⁶	*0.7	*1.1	*0.5	*0.5	*0.3
1–5 minutes	14.7	14.1	16.6	14.8	11.3
6–10 minutes	33.7	34.9	31.7	34.4	32.1
11–15 minutes	27.5	25.5	30.3	26.9	28.9
16–30 minutes	21.5	22.1	19.2	21.7	24.8
31 minutes or longer	2.0	2.3	*1.6	*1.9	*2.6
Disposition of visit ⁷					
No followup planned	12.4	11.4	11.3	15.8	9.0
Return at specified time	56.0	54.2	56.5	54.9	64.8
Return if needed	19.9	22.2	23.9	15.4	12.5
Telephone followup planned	1.6	*1.1	*1.8	*2.0	*1.6
Referred to other physician	3.5	3.7	3.4	3.0	*4.1
Returned to referring physician	1.5	2.1	*1.3	*0.9	*1.7
Admit to hospital	8.1	8.1	6.6	9.3	8.7
Other	*0.3	*0.4	*0.3	*0.2	-
Type of practice					
Solo	51.9	35.1	63.5	54.0	80.0
Other ⁸	48.1	64.9	36.5	46.0	20.0
Geographic region					
Northeast	24.6	22.3	26.2	22.8	34.3
North Central	25.1	23.0	27.0	23.0	33.9
South	29.8	32.1	24.9	36.4	15.5
West	20.6	22.7	21.9	17.8	16.4
Area					
Metropolitan	71.0	56.0	73.6	81.9	92.6
Nonmetropolitan	29.0	44.1	26.4	18.1	7.5

¹Does not include doctors of osteopathy.

²Based on *A reason for visit classification for ambulatory care (RVC)*.⁹

³Includes blanks; problems, complaints not elsewhere classified; entries of "none"; and illegible entries.

⁴Percents will not total 100.0 because more than 1 service or therapy may have been rendered during a visit.

⁵Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

⁶Represents visits in which there was no face-to-face encounter between patient and physician.

⁷Percents will not total 100.0 because more than 1 disposition was possible.

⁸Includes partnership, group, and other types of practice.

Table 4. Number and percent distribution of drug mentions in office visits to general surgeons by therapeutic category, according to age of physician: United States, January 1980–December 1981

Therapeutic category ¹	Age of physician ²				
	All ages	Under 45 years	45–54 years	55–64 years	65 years and over
Number in thousands					
All categories	37,568	12,629	12,160	8,666	4,112
Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0
Antihistamine drugs	4.8	7.3	4.6	*2.3	*3.3
Anti-infective agents	17.6	22.5	14.1	18.9	*9.6
Autonomic drugs	4.4	3.9	5.8	*3.3	*3.8
Cardiovascular drugs	6.5	5.0	6.8	7.6	*7.7
Central nervous system drugs	25.2	20.7	31.0	23.6	25.4
Electrolytic, caloric, and water balance.	5.7	4.9	4.9	8.2	*5.3
Expectorants and cough preparations	3.0	3.8	*2.9	*3.0	*0.8
Eye, ear, nose and throat preparations	2.3	*2.6	*1.9	*2.1	*3.3
Gastrointestinal drugs	6.3	4.9	7.0	6.1	*8.5
Hormones and synthetic substitutes.	7.5	7.9	7.3	5.7	10.6
Skin and mucous membrane preparations	7.4	7.2	6.2	8.6	*9.1
Vitamins	3.3	4.1	*2.6	*1.3	*7.0
Other, unclassified, or undetermined	6.1	5.2	5.0	9.4	*5.6

¹Based on the classification system of the American Hospital Formulary Service (see appendix IV).

²Does not include doctors of osteopathy.

Table 5. Number, percent distribution, and average annual rate of office visits to general surgeons by age of patient, according to sex, race, and ethnicity: United States, January 1980–December 1981

Age of patient	Both sexes	Sex		Race		Ethnicity	
		Female	Male	White	Black	Hispanic	Non-Hispanic
Number in thousands							
All ages	161,013	34,373	26,640	53,932	6,495	2,828	58,185
Percent distribution							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 15 years	7.4	5.1	10.4	7.1	8.5	*7.8	7.4
15–24 years	12.5	11.3	14.0	12.4	13.1	*13.5	12.4
25–44 years	30.5	31.0	29.9	29.4	40.2	34.0	30.4
45–64 years	30.2	32.5	27.2	30.7	25.9	33.1	30.1
65 years and over	19.4	20.2	18.5	20.3	12.4	*11.6	19.8
Visit rate per 1,000 population							
All ages	137.0	149.1	124.0	141.1	124.4	97.3	139.5
Under 15 years	44.3	35.0	53.3	46.1	36.3	*23.7	46.1
15–24 years	93.5	94.0	93.0	97.4	78.1	*60.2	95.1
25–44 years	148.6	165.6	130.6	147.0	189.9	119.0	152.0
45–64 years	209.5	241.5	174.0	212.6	202.9	239.1	207.0
65 years and over	241.7	239.6	244.7	247.5	196.9	*232.3	243.7

¹Includes races other than white or black not shown as separate categories.

Table 6. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to sex and age of patient: United States, January 1980–December 1981

Characteristic	Both sexes	Sex		Age of patient				
		Female	Male	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over
Number in thousands								
All visits.....	61,013	34,373	26,640	4,508	7,613	18,622	18,420	11,850
Percent distribution								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Prior visit status								
New patient.....	19.3	16.8	22.5	24.6	28.1	22.6	16.6	10.6
Old patient, new problem	16.8	17.2	16.4	16.0	18.6	17.6	16.7	14.9
Old patient, old problem	63.9	66.0	61.1	59.4	53.3	59.8	66.7	74.5
Referral status								
Referred by another physician.....	10.1	8.9	11.5	14.1	11.7	9.6	9.0	9.8
Not referred by another physician.....	90.0	91.1	88.5	85.9	88.3	90.4	91.0	90.2
Major reason for visit								
Acute problem	31.1	31.3	30.8	37.5	37.6	35.1	28.5	22.2
Chronic problem, routine	18.3	20.5	15.4	13.5	13.2	17.6	19.0	23.3
Chronic problem, flareup	11.3	11.8	10.8	*5.7	9.3	10.5	13.3	13.0
Postsurgery or postinjury	33.7	31.2	36.9	39.6	32.5	29.0	35.5	36.9
Nonillness care.....	5.6	5.2	6.0	*3.7	7.4	7.8	3.7	4.5
Principal reason for visit and RVC code ¹								
Symptom module..... S001–S999	48.5	51.4	44.9	42.1	49.4	52.4	48.4	44.6
Disease module..... D001–D999	11.5	9.7	13.7	14.7	9.5	10.5	11.9	12.5
Diagnostic, screening, and preventive module..... X100–X599	6.5	7.7	4.9	3.7	*4.5	7.1	6.2	8.4
Treatment module..... T100–T899	23.4	24.3	22.4	27.9	18.4	18.5	25.4	29.7
Injuries and adverse effects module..... J001–J999	7.6	4.8	11.2	9.8	14.5	8.9	5.8	*3.2
Test results module..... R100–R700	0.5	*0.7	*0.2	*0.2	*0.3	*0.2	*0.9	*0.7
Administrative module..... A100–A140	1.1	*0.7	1.7	*1.0	*2.8	1.9	*0.5	-
Other ²	0.0	*0.7	*1.0	*0.6	*0.6	0.5	*0.9	*0.9

¹Based on *A reason for visit classification for ambulatory care* (RVC).⁹

²Includes blanks; problems, complaints, not elsewhere classified; entries of "none"; and illegible entries.

Table 7. Number, percent, and cumulative percent of office visits to general surgeons, by the 36 most frequent principal reasons for visit: United States, January 1980–December 1981

<i>Principal reason for visit and RVC code¹</i>	<i>Number in thousands</i>	<i>Percent of visits²</i>	<i>Cumulative percent of visits</i>	
Postoperative visit	T205	9,728	15.9	15.9
Lump or mass of breast	S805	1,887	3.1	19.0
Abdominal pain, cramps, spasms	S550	1,727	2.8	21.8
Skin lesion	S865	1,723	2.8	24.6
Suture—insertion, removal	T555	1,497	2.5	27.1
Hernia of abdominal cavity	D660	1,479	2.4	29.5
Progress visit, not otherwise specified	T800	1,428	2.3	31.8
Leg symptoms	S920	1,385	2.3	34.1
General medical examination	X100	1,377	2.3	36.4
Symptoms referable to anus-rectum	S605	1,056	1.7	38.1
Back symptoms	S905	1,021	1.7	39.8
Symptoms referable to throat	S455	995	1.6	41.4
Breast examination	X220	885	1.5	42.9
Foot and toe symptoms	S935	850	1.4	44.3
Weight gain	S040	841	1.4	45.7
Pain, site not referable to a specific body system	S055	752	1.2	46.9
Other growths of skin	S855	678	1.1	48.0
Cough	S440	666	1.1	49.1
Headache, pain in head	S210	655	1.1	50.2
Neck symptoms	S900	652	1.1	51.3
Head cold, upper respiratory infection (coryza)	S445	584	1.0	52.3
Carbuncle, furuncle, boil, cellulitis, abscess, not elsewhere classified	D800	566	0.9	53.2
Chest pain and related symptoms, not referable to body system	S050	565	0.9	54.1
Hand and finger symptoms	S960	533	0.9	55.0
Hemorrhoids	D545	530	0.9	55.9
Counseling, not otherwise specified	T605	471	0.8	56.7
Hypertension	D510	468	0.8	57.5
Arm symptoms	S945	467	0.8	58.3
Tiredness, exhaustion	S015	459	0.8	59.1
Blood pressure test	X320	*440	*0.7	*59.8
Swelling of skin	S875	*437	*0.7	*60.5
Symptoms of skin moles	S845	*434	*0.7	*61.2
Warts, not otherwise specified	S850	*417	*0.7	*61.9
Fractures and dislocations, upper extremity	J225	*412	*0.7	*62.6
Low back symptoms	S910	*406	*0.7	*63.3
Other diseases of skin	D825	*403	*0.7	*64.0

¹Based on *A reason for visit classification for ambulatory care (RVC)*.⁹

²Based on a total of 61,012,704 visits.

Table 8. Number, percent, and cumulative percent of office visits to general surgeons by sex of patient and the 15 most frequent principal reasons for visit: United States, January 1980–December 1981

<i>Sex and principal reason for visit and RVC code¹</i>	<i>Number in thousands</i>	<i>Percent of visits</i>	<i>Cumulative percent of visits</i>
Female²			
Postoperative visit T205	5,523	16.1	16.1
Lump or mass of breast S805	1,796	5.2	21.3
Abdominal pain, cramps, spasms S550	1,171	3.4	24.7
Progress visit, not otherwise specified T800	991	2.9	27.6
Breast examination X220	885	2.6	30.2
Suture—insertion, removal T555	875	2.5	32.7
Leg symptoms. S920	848	2.5	35.2
Skin lesion S865	802	2.3	37.5
Weight gain S040	736	2.1	39.6
Symptoms referable to anus-rectum S605	704	2.0	41.6
General medical examination X100	696	2.0	43.6
Symptoms referable to throat S455	653	1.9	45.5
Headache, pain in head S210	450	1.3	46.8
Back symptoms. S905	*387	*1.1	*47.9
Foot and toe symptoms S935	*368	*1.1	*49.0
Male³			
Postoperative visit T205	4,205	15.8	15.8
Hernia of abdominal cavity D660	1,293	4.9	20.7
Skin lesion S865	921	3.5	24.2
General medical examination X100	682	2.6	26.8
Back symptoms. S905	634	2.4	29.2
Suture—insertion, removal T555	622	2.3	31.5
Abdominal pain, cramps, spasms S550	557	2.1	33.6
Leg symptoms. S920	537	2.0	35.6
Other growths of skin. S855	498	1.9	37.5
Foot and toe symptoms S935	482	1.8	39.3
Progress visit, not otherwise specified T800	*437	*1.6	*40.9
Pain, site not referable to a specific body system S055	*397	*1.5	*42.4
Carbuncle, furuncle, boil, cellulitis, abscess, not elsewhere classified D800	*387	*1.5	*43.9
Fractures and dislocations, upper extremity J225	*354	*1.3	*45.2
Symptoms referable to anus-rectum S605	*352	*1.3	*46.5

¹Based on *A reason for visit classification for ambulatory care* (RVC).⁹

²Based on a total of 34,372,835 visits.

³Based on a total of 26,639,869 visits.

Table 9. Number and percent distribution of office visits to general surgeons by principal diagnosis categories, according to sex and age of patient: United States, January 1980–December 1981

Principal diagnosis category and ICD-9-CM code ¹	Sex		Age of patient				
	Female	Male	Under 15 years	15-24 years	25-44 years	45-64 years	65 years and over
Number in thousands							
All visits.	34,373	26,640	4,508	7,613	18,622	18,420	11,850
Percent distribution							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Infectious and parasitic diseases. 000-139	1.6	1.7	*2.4	*3.8	*1.8	*0.6	*1.4
Neoplasms 140-239	11.9	6.2	*1.9	*4.7	6.9	10.6	17.3
Endocrine, nutritional and metabolic diseases, and immunity disorders 240-279	4.9	2.0	*0.3	*1.9	6.0	3.4	*2.5
Mental disorders 290-319	1.4	*1.1	*1.0	*0.7	*2.3	*0.8	*0.7
Diseases of the nervous system and sense organs 320-389	1.8	2.0	*1.3	*3.1	*1.8	*2.0	*1.3
Diseases of the circulatory system 390-459	10.3	9.3	*1.0	2.1	5.6	14.5	17.7
Diseases of the respiratory system 460-519	6.6	6.3	15.5	8.6	7.2	4.2	4.0
Diseases of the digestive system 520-579	10.2	17.2	22.5	10.0	10.6	14.2	14.4
Diseases of the genitourinary system 580-629	13.6	2.8	*2.7	10.0	12.3	10.0	*3.4
Diseases of the skin and subcutaneous tissue 680-709	6.9	10.3	*6.7	12.9	7.7	8.1	7.4
Diseases of the musculoskeletal system and connective tissue 710-739	4.8	6.5	*1.6	*5.0	5.5	7.4	4.6
Symptoms, signs, and ill-defined conditions 780-799	4.1	3.6	*6.8	*2.0	3.8	3.9	4.1
Injury and poisoning 800-999	8.0	17.5	16.6	19.7	15.3	8.5	6.5
Supplementary classification V01-V82	11.7	11.7	11.3	13.6	10.9	10.8	13.4
All other diagnoses	*1.0	*1.2	6.2	*1.2	*0.6	*0.4	*0.9
Unknown diagnoses.	*1.2	*0.8	*2.3	*0.6	*1.8	*0.6	*0.3

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

Table 10. Number, percent, and cumulative percent of office visits to general surgeons, by the 30 most frequent principal diagnoses: United States, January 1980–December 1981

<i>Principal diagnosis and ICD-9-CM code¹</i>	<i>Number in thousands</i>	<i>Percent of visits²</i>	<i>Cumulative percent of visits</i>
Followup examination, following surgery V67.0	3,382	5.5	5.5
Disorders of breast 610, 611	3,380	5.5	11.0
Inguinal hernia 550	2,018	3.3	14.3
Hypertension 401	1,534	2.5	16.8
Acute upper respiratory infection of multiple or unspecified sites 465	1,477	2.4	19.2
Sebaceous cyst 706.2	1,410	2.3	21.5
Hemorrhoids 455	1,241	2.0	23.5
Malignant neoplasm of female breast 174	1,170	1.9	25.4
Other hernia of abdominal cavity without mention of obstruction or gangrene 553	1,129	1.9	27.3
Obesity and other hyperalimentation 278	1,037	1.7	29.0
Varicose veins of lower extremities 454	940	1.5	30.5
General medical examination V70	882	1.4	31.9
Other disorders of synovium, tendon, and bursa 727	694	1.1	33.0
Other cellulitis and abscess 682	665	1.1	34.1
Chronic ulcer of skin 707	654	1.1	35.2
Cholelithiasis 574	605	1.0	36.2
Sprains and strains of sacroiliac region 846	596	1.0	37.2
Other symptoms involving abdomen and pelvis 789	596	1.0	38.2
Other disorders of intestine 569	587	1.0	39.2
Other diseases due to viruses and Chlamydiae 078	523	0.9	40.1
Benign neoplasm of skin 216	522	0.9	41.0
Other and unspecified arthropathies 716	514	0.8	41.8
Other malignant neoplasm of skin 173	506	0.8	42.6
Neurotic disorders 300	477	0.8	43.4
Lipoma 214	476	0.8	44.2
Other disorders of skin and subcutaneous tissue 709	476	0.8	45.0
Attention to surgical dressings and sutures V58.3	460	0.8	45.8
Symptoms involving cardiovascular system 785	*440	*0.7	46.5
Diabetes mellitus 250	*439	*0.7	47.2
Strains and sprains of other and unspecified parts of back 847	414	*0.7	47.9

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

²Based on a total of 61,012,704 visits.

³There were an additional 6,360,000 visits in which V67.0 was the second-listed diagnosis.

Table 11. Number, percent, and cumulative percent of office visits to general surgeons, by sex of patient and the 15 most frequent principal diagnoses: United States, January 1980–December 1981

<i>Sex and principal diagnosis and ICD-9-CM code¹</i>	<i>Number in thousands</i>	<i>Percent of visits</i>	<i>Cumulative percent of visits</i>
Female ²			
Disorders of breast.	610, 611	3,188	9.3
Followup examination	V67	2,248	6.5
Malignant neoplasm of female breast.	174	1,170	3.4
Hypertension.	401	992	2.9
Acute upper respiratory infection of multiple or unspecified sites	465	917	2.7
Obesity and other hyperalimentation	278	887	2.6
Hemorrhoids	455	676	2.0
Sebaceous cyst	706.2	614	1.8
Varicose veins of lower extremities.	454	577	1.7
Other hernia of abdominal cavity without mention of obstruction or gangrene	553	477	1.4
Cholelithiasis.	574	453	1.3
Neurotic disorders	300	*352	*1.0
Other disorders of intestine	569	*338	*1.0
Other diseases of synovium, tendon, and bursa	727	*332	*1.0
Chronic ulcer of skin.	707	*321	*0.9
Male ³			
Inguinal hernia	550	1,836	6.9
Followup examination	V67	1,396	5.2
Sebaceous cyst	706.2	796	3.0
Other hernia of abdominal cavity without mention of obstruction or gangrene	553	652	2.4
General medical examination.	V70	590	2.2
Hemorrhoids	455	566	2.1
Acute upper respiratory infection of multiple or unspecified sites	465	559	2.1
*Hypertension.	401	542	2.0
Sprains and strains of sacroiliac region	846	*444	*1.7
Other cellulitis and abscess	682	*401	*1.5
Varicose veins of lower extremities.	454	*363	*1.4
Other disorders of synovium, tendon, and bursa	727	*362	*1.4
Chronic ulcer of skin.	707	*333	*1.3
Other disorders of skin and subcutaneous tissue.	709	*307	*1.2
Other symptoms involving abdomen and pelvis	789	*280	*1.1

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

²Based on a total of 34,372,835 visits.

³Based on a total of 26,639,869 visits.

Table 12. Number and percent of office visits to general surgeons, by diagnostic services, nonmedication therapy, sex, and age of patient, and percent distribution by number of medications, according to sex and age of patient: United States, January 1980–December 1981

Service or therapy	Both sexes	Sex		Age of patient				
		Female	Male	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over
Number in thousands								
All visits.....	61,013	34,373	26,640	4,508	7,613	18,622	18,420	11,850
Diagnostic service ¹								
Percent of visits								
None.....	6.9	6.6	7.3	*6.7	6.8	6.6	6.9	7.7
Limited history and/or examination.....	65.6	65.6	65.6	70.5	65.7	64.2	65.5	66.3
General history and/or examination.....	18.1	18.5	17.5	14.9	19.8	21.3	16.7	15.3
Pap test.....	1.1	1.9	-	-	*0.5	*1.6	*1.3	*0.7
Clinical laboratory test.....	8.5	9.3	7.5	*5.9	8.7	9.1	8.0	9.2
X-ray.....	7.9	7.6	8.2	*8.4	10.1	9.0	8.3	4.0
Blood pressure check.....	24.6	27.0	21.4	*5.8	21.9	26.3	25.8	28.8
Electrocardiogram.....	1.1	*1.1	*1.2	*0.3	*0.3	*1.2	*1.3	*1.6
Vision test.....	1.1	*0.7	*1.5	*0.8	*1.5	*1.3	*0.7	*1.2
Endoscopy.....	2.4	2.2	2.6	*0.6	*0.9	*1.8	3.5	*3.2
Other.....	2.8	2.8	2.9	*1.9	*1.6	3.4	2.4	3.8
Nonmedication therapy ¹								
None.....	56.4	57.9	54.5	63.6	52.9	53.0	57.2	59.9
Physiotherapy.....	4.0	2.7	5.8	*1.4	*5.1	5.5	3.9	*2.1
Office surgery.....	15.5	13.5	18.0	17.3	20.7	15.3	15.4	11.8
Therapeutic listening.....	1.1	1.5	*0.7	*0.9	*0.9	*1.0	*1.7	*0.7
Diet counseling.....	4.5	5.0	3.8	*0.9	*2.1	6.6	4.9	*3.5
Medical counseling.....	20.3	21.7	18.4	5.8	12.2	20.0	19.5	23.7
Other.....	3.3	3.3	3.3	*2.5	*2.7	5.2	2.7	*2.1
Percent distribution								
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of medications								
None.....	62.0	60.8	63.6	71.0	63.5	59.0	63.0	60.9
1.....	21.8	21.3	22.5	14.6	24.7	26.3	20.0	18.4
2.....	10.3	10.7	9.7	12.0	9.0	9.6	11.0	10.4
3 or more.....	5.9	7.2	4.3	*2.4	*2.9	5.1	6.1	10.3

¹ Percents will not total 100.0 because more than 1 service or therapy may have been rendered during a visit.

Table 13. Number and percent distribution of drug mentions in office visits to general surgeons by therapeutic category, according to sex and age of patient: United States, January 1980–December 1981

Therapeutic category ¹	Sex			Age of patient			
	Both sexes	Female	Male	Under 25 years	25–44 years	45–64 years	65 years and over
Number in thousands							
All categories	38,060	23,046	15,014	6,106	11,647	11,571	8,737
Percent distribution							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Antihistamine drugs	4.9	4.8	5.0	9.7	6.7	2.4	*2.3
Anti-infective agents	17.7	16.6	19.3	31.9	19.9	12.7	11.4
Autonomic drugs	4.3	4.2	4.5	*3.8	6.0	4.5	*2.2
Cardiovascular drugs	6.5	6.6	6.4	*0.8	*2.6	6.3	16.0
Central nervous system drugs	24.9	25.1	24.7	25.1	31.0	24.6	17.1
Electrolytic, caloric, and water balance	5.7	5.9	5.5	*1.0	*1.7	8.2	11.1
Expectorants and cough preparations	3.1	3.5	*2.6	*5.1	*3.2	4.3	*1.3
Eye, ear, nose and throat preparations	2.3	*1.6	3.4	*1.9	*2.4	*2.6	*1.9
Gastrointestinal drugs	6.3	6.2	6.5	*5.5	4.8	8.0	6.7
Hormones and synthetic substitutes	7.5	9.2	4.8	*3.6	6.5	9.3	9.0
Skin and mucous membrane preparations	7.4	6.6	8.6	*5.7	8.2	6.6	8.5
Vitamins	3.3	4.1	*1.9	*1.6	*3.1	*3.8	*4.0
Other, unclassified, or undetermined	6.1	5.6	6.8	*4.3	*3.9	6.7	8.5

¹Based on the classification system of the American Hospital Formulary Service (see appendix IV).

Table 14. Number and percent distribution of office visits to general surgeons by duration and disposition of visit, according to sex and age of patient: United States, January 1980–December 1981

Duration and disposition	Sex			Age				
	Both sexes	Female	Male	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over
Number in thousands								
All visits	61,013	34,373	26,640	4,508	7,613	18,622	18,420	11,850
Percent distribution								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Duration of visit								
0 minutes ¹	0.8	*0.8	*0.7	*0.8	*0.6	*0.6	*1.1	*0.5
1–5 minutes	14.5	14.2	15.0	21.1	17.2	13.8	14.6	11.4
6–10 minutes	33.5	33.2	33.9	42.6	34.5	34.1	30.5	33.2
11–15 minutes	27.5	28.7	26.0	21.6	25.8	26.1	28.6	31.4
16–30 minutes	21.6	21.1	22.3	12.8	20.8	23.1	22.9	21.2
31 minutes or longer	2.0	*2.0	*2.1	*1.1	*1.1	*2.3	*2.3	*2.3
Disposition of visit ²								
No followup planned	12.3	10.3	15.0	20.3	19.6	13.2	9.4	7.8
Return at specified time	55.9	57.5	53.8	39.3	49.0	52.9	58.7	66.8
Return if needed	20.0	20.3	19.6	27.0	20.5	22.1	19.2	15.2
Telephone followup planned	1.6	1.8	*1.3	*1.7	*1.8	*1.8	*1.6	*1.2
Referred to other physician	3.5	3.9	3.0	*1.3	*4.8	4.3	3.1	*3.0
Returned to referring physician	1.6	1.6	1.6	*3.5	*0.9	*1.6	*1.2	*1.9
Admit to hospital	8.1	7.8	8.5	*8.6	7.0	6.6	9.8	8.5
Other	*0.3	*0.2	*0.3	*0.5	*0.1	*0.4	*0.3	*0.2

¹Represents visits in which there was no face-to-face encounter between patient and physician.

²Percents will not total 100.0 because more than 1 disposition was possible.

Table 15. Number and percent of office visits to general surgeons, by selected diagnostic services, major reasons for visit, and selected principal reason for visit modules: United States, January 1980–December 1981

Major reason for visit and principal reason for visit module	Number of visits in thousands	Diagnostic service ¹							
		None	Limited examination and/or history	General examination and/or history	Clinical laboratory test	X-ray	Blood pressure check	Endoscopy	Other
Major reason for visit		Percent of visits							
Acute problem	18,963	3.8	62.7	24.2	11.9	11.8	25.9	3.4	7.0
Chronic problem, routine	11,165	7.3	57.8	23.9	7.6	5.6	35.8	*1.9	6.0
Chronic problem, flareup	6,918	*3.3	63.6	23.8	8.3	7.6	24.7	*6.3	6.9
Postsurgery or postinjury	20,564	10.4	78.4	4.1	3.3	6.2	13.3	*0.7	2.7
Nonillness care	3,404	10.1	34.9	37.4	24.8	*4.9	48.5	*0.6	*20.0
Principal reason for visit and RVC code ²									
Symptom module S001–S999	29,616	4.2	62.5	24.1	9.9	8.2	26.8	2.7	6.8
Disease module D001–D999	7,007	*5.8	69.5	14.8	*6.0	*3.2	22.8	*4.7	*2.8
Treatment module T100–T899	14,303	13.1	76.1	4.7	4.2	*2.8	15.9	*1.0	2.9
Injuries and adverse effects module J001–J999	4,648	*7.6	68.8	13.8	*3.3	30.6	14.6	*2.1	*4.9

¹Percents will not total 100.0 because more than 1 service may have been rendered during a visit.

²Based on "A reason for visit classification for ambulatory care (RVC)."⁹

Table 16. Number and percent of office visits to general surgeons, by selected principal diagnosis categories, nonmedication therapy, and disposition of visit, and percent distribution of office visits by duration: United States, January 1980–December 1981

Characteristic	Principal diagnosis category and ICD-9-CM code ¹						
	Neoplasms 140–239	Diseases of the circulatory system 390–459	Diseases of the digestive system 520–579	Diseases of the genitourinary system 580–629	Diseases of the skin and subcutaneous tissue 680–709	Diseases of the musculoskeletal system and connective tissue 710–739	Injury and poisoning 800–999
Number of visits		Number in thousands					
	5,734	6,025	8,083	5,412	5,098	3,385	7,421
Nonmedication therapy ²		Percent of visits					
None	54.4	59.9	64.2	62.1	44.5	53.9	41.5
Physiotherapy	*1.0	*3.2	*1.8	*0.5	*2.8	*9.8	17.4
Office surgery	24.8	8.6	5.7	11.2	39.1	*9.3	25.8
Diet counseling	*1.9	*5.7	8.2	*1.3	*0.9	*4.5	*0.6
Medical counseling	17.8	24.7	20.3	22.5	15.6	22.7	15.8
Other	5.1	*4.6	*3.7	8.6	*2.7	*3.7	*3.6
Duration		Percent distribution					
0 minutes ³	*1.2	*0.5	*0.2	*0.8	*0.2	*0.7	*0.9
1–5 minutes	12.8	*5.4	15.8	19.1	22.2	15.3	14.4
6–10 minutes	32.9	33.6	30.9	26.4	35.0	36.2	39.4
11–15 minutes	28.3	32.4	29.0	28.3	21.4	26.8	25.6
16–30 minutes	23.8	27.0	22.1	23.2	18.6	19.2	17.3
31 minutes or longer	*1.1	*1.2	*1.9	*2.3	*2.6	*1.8	*2.4
Disposition ⁴							
No followup	*7.0	*5.5	12.2	*6.2	12.6	*11.4	11.9
Return at specified time	67.5	65.6	50.6	56.2	60.1	49.7	65.6
Return if needed	8.5	13.0	16.4	21.9	17.6	29.5	21.4
Telephone followup	*1.7	*2.1	*3.0	*1.6	*1.0	*1.4	*0.2
Referred to other physician	*4.3	*1.8	*3.9	*5.6	*2.3	*5.9	*2.7
Returned to referring physician	*1.7	*1.8	*2.0	*1.5	*1.6	*1.0	*0.1
Admit to hospital	13.9	11.9	16.3	10.3	8.2	*6.1	*1.2
Other	*0.6	-	*0.6	*0.4	*1.1	-	-

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM).¹⁰

²Percents will not total 100.0 because more than 1 therapy may have been rendered during a visit.

³Represents visits in which there was no face-to-face encounter between patient and physician.

⁴Percents will not total 100.0 because more than 1 disposition was possible.

Table 17. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to prior visit status: United States, January 1980–December 1981

Characteristic	Prior visit status		
	New patient	Old patient, new problem	Old patient old problem
	Number in thousands		
All visits	11,769	10,264	38,980
	Percent distribution		
Total	100.0	100.0	100.0
Sex of patient			
Female.....	49.1	57.6	58.2
Male	51.0	42.4	41.8
Age of patient			
Under 15 years.....	9.4	7.0	6.9
15–24 years.....	18.2	13.8	10.4
25–44 years.....	35.7	32.0	28.6
45–64 years.....	26.0	30.0	31.5
65 years and over.....	10.7	17.2	22.7
Major reason for visit			
Acute problem	51.4	65.5	15.9
Chronic problem, routine.....	15.1	9.5	21.6
Chronic problem, flareup.....	12.6	10.7	11.1
Postsurgery or postinjury.....	12.2	7.9	47.0
Nonillness care.....	8.7	6.4	4.4
Principal reason for visit and RVC code ¹			
Symptom module..... S001–999	59.4	73.2	38.8
Disease module..... D001–D999	12.1	7.0	12.5
Diagnostic, screening, and preventive module..... X100–X599	5.1	5.1	7.3
Treatment module..... T100–T899	6.9	4.9	33.3
Injury and adverse effects module..... J001–J999	13.0	7.7	6.0
Test results module..... R100–R700	*0.1	*0.1	*0.7
Administrative module..... A100–A140	*3.2	*1.5	*0.4
Other ²	*0.2	*0.5	*1.0
Selected principal diagnosis category and ICD–9–CM Code ³			
Neoplasms..... 140–239	9.0	5.4	10.6
Diseases of the circulatory system..... 390–459	8.8	6.8	11.0
Diseases of the digestive system..... 520–579	15.0	9.7	13.7
Diseases of the genitourinary system..... 580–629	8.8	8.4	9.0
Diseases of the skin and subcutaneous tissue..... 680–709	8.7	9.4	8.0
Diseases of the musculoskeletal system and connective tissue..... 710–739	5.7	7.3	5.1
Injury and poisoning..... 800–999	15.2	12.4	11.2
Diagnostic service ⁴			
None.....	*3.3	*3.9	8.8
Limited history and/or examination.....	55.8	61.8	69.6
General history and/or examination.....	31.7	23.4	12.5
Clinical laboratory test.....	10.8	11.8	7.0
X-ray.....	16.9	9.3	4.8
Blood pressure check.....	21.0	33.4	23.4
Endoscopy.....	5.3	*2.4	1.5
Other.....	8.7	9.3	4.4
Nonmedication therapy			
None.....	53.9	54.5	57.7
Physiotherapy.....	3.8	*3.3	4.3
Office surgery.....	16.6	14.4	15.4
Therapeutic listening.....	*0.8	*0.6	1.4
Diet counseling.....	*3.2	*3.9	5.0
Medical counseling.....	21.6	23.8	18.9
Other.....	4.9	3.5	2.8

See footnotes at end of table.

Table 17. Number and percent distribution of office visits to general surgeons by selected visit characteristics, according to prior visit status: United States, January 1980–December 1981—Con.

Characteristic	Prior visit status		
	New patient	Old patient, new problem	Old patient old problem
Duration			
Percent distribution			
0 minutes ⁵	*0.1	*1.0	*0.9
1–5 minutes	7.9	8.5	18.1
6–10 minutes	25.2	32.4	36.4
11–15 minutes	28.0	29.8	26.8
16–30 minutes	34.1	26.1	16.7
31 minutes or longer	4.8	*2.2	1.2
Disposition ⁶			
No followup	15.3	15.0	10.7
Return at specified time	42.4	44.3	63.0
Return if needed	17.9	27.4	18.7
Telephone followup	*1.9	*2.8	1.2
Referred to other physician	4.2	5.2	2.9
Returned to referring physician	2.8	*0.5	1.5
Admit to hospital	19.0	7.8	4.9
Other	*0.9	*0.2	*0.1

¹Based on "A reason for visit classification for ambulatory care (RVC)."⁹

²Includes blanks; problems, complaints, not elsewhere classified; entries of "none"; and illegible entries.

³Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM).¹⁰

⁴Percents will not total 100.0 because more than 1 service or therapy may have been rendered during a visit.

⁵Represents visits in which there was no face-to-face encounter between patient and physician.

⁶Percents will not total 100.0 because more than 1 disposition was possible.

Table 18. Number and percent distribution of office visits by selected visit characteristics, according to surgical specialty: United States, January 1980–December 1981

Characteristic	Surgical specialty									
	General surgery	Colon and rectal surgery	Neurological surgery	Obstetrics and gynecology	Ophthalmology	Orthopedic surgery	Otorhinolaryngology	Plastic surgery	Thoracic surgery	Urological surgery
	Number in thousands									
All visits	61,013	3,329	4,550	109,035	62,485	55,470	26,151	11,104	3,273	19,470
	Percent distribution									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Type of practice										
Solo	51.9	60.5	36.1	44.1	62.8	31.0	60.5	86.3	35.7	31.2
Other	48.1	39.5	64.0	55.9	37.2	69.0	39.5	13.7	64.3	68.8
Area										
Metropolitan	71.4	90.7	95.8	81.5	81.8	83.9	88.4	86.1	100.0	83.0
Nonmetropolitan	28.6	9.3	4.3	18.5	18.3	16.1	11.6	14.0	-	17.0
Sex of patient										
Female	56.3	47.4	46.3	99.0	58.5	47.0	53.6	58.1	47.8	34.5
Male	43.7	52.6	53.7	1.1	41.5	53.0	46.4	41.9	52.1	65.5
Age of patient										
Under 25 years	19.9	*8.4	17.5	31.8	19.1	27.8	38.8	28.1	*7.7	11.2
25–44 years	30.5	31.3	34.4	56.4	18.7	31.6	26.0	36.7	*11.6	25.3
45–64 years	30.2	36.9	37.7	9.2	25.2	27.0	19.5	24.0	43.1	29.6
65 years and over	19.4	23.4	10.4	2.5	37.1	13.6	15.7	11.2	37.7	33.9
Referral status										
Referred by another physician	10.1	9.1	18.8	3.1	7.2	10.9	14.0	7.6	13.9	13.0
Not referred by another physician	90.0	90.9	81.2	96.9	92.8	89.1	86.1	92.4	86.1	87.0
Prior visit status										
New patient	19.3	16.5	27.1	11.7	25.1	22.1	32.0	15.6	19.2	20.1
Old patient, new problem	16.8	*5.6	*.51	17.5	9.1	7.1	8.0	4.2	*7.6	5.3
Old patient, old problem	63.9	78.0	67.8	70.8	65.9	70.9	60.0	80.3	73.2	74.6
Major reason for visit										
Acute problem	31.1	20.2	21.2	18.2	22.5	26.5	36.4	11.3	24.1	23.6
Chronic problem, routine	18.3	31.2	26.2	8.2	37.0	19.6	30.6	10.4	13.1	38.9
Chronic problem, flareup	11.3	18.0	13.9	4.4	4.3	10.6	16.8	4.6	7.6	16.5
Postsurgery or postinjury	33.7	26.3	37.3	7.1	12.5	41.1	14.8	63.8	52.9	16.0
Nonillness care	5.6	*4.4	*1.5	62.1	23.7	2.2	*1.4	9.9	*2.2	4.9
Principal diagnosis and ICD-9-CM code ^{1,2}										
Neoplasms 140–239	9.4	*7.0	*4.1	1.7	0.8	*0.6	2.6	14.7	*11.0	11.5
Diseases of the nervous system and sense organs 320–389	1.9	*0.4	12.4	*0.1	75.7	2.1	40.9	4.1	*0.8	*1.7
Diseases of the circulatory system 390–459	9.9	33.4	*3.2	1.3	*0.6	*0.5	*0.2	*0.6	29.8	*0.8
Diseases of the respiratory system 460–519	6.5	*0.9	*0.3	0.7	*0.4	*0.2	29.7	*1.5	*8.2	*0.3
Diseases of the digestive system 520–579	13.3	32.0	-	0.7	*0.1	*0.1	1.9	*1.6	*4.2	*0.4
Diseases of the genitourinary system 580–629	8.9	*0.4	-	19.0	*0.0	*0.1	-	5.0	*1.5	63.8
Diseases of the skin and subcutaneous tissue 680–709	8.4	*5.3	*0.4	0.5	*0.5	1.1	1.8	18.5	*4.5	*0.3
Diseases of the musculoskeletal system and connective tissue 710–739	5.6	*2.7	41.6	0.6	*0.3	37.5	*1.0	6.6	*2.9	*0.4
Injury and poisoning 800–999	12.2	*1.5	15.8	0.9	4.8	45.0	5.2	21.6	5.9	*1.3
Supplementary classification . . . V01–V82	11.7	*7.4	10.4	62.7	12.5	7.5	8.6	19.0	15.9	10.5

See footnotes at end of table.

Table 18. Number and percent distribution of office visits by selected visit characteristics, according to surgical specialty: United States, January 1980–December 1981—Con.

Characteristic	Surgical specialty									
	General surgery	Colon and rectal surgery	Neurological surgery	Obstetrics and gynecology	Ophthalmology	Orthopedic surgery	Otorhinolaryngology	Plastic surgery	Thoracic surgery	Urological surgery
Nonmedication therapy ³	Percent distribution									
Office surgery	15.5	16.1	*2.6	4.8	3.0	12.0	11.5	25.3	*9.0	15.9
Disposition ³										
Return at specified time	55.9	74.4	53.6	75.8	62.6	65.0	55.7	72.2	63.7	69.6
Admit to hospital.....	8.1	*6.1	10.4	3.0	2.1	4.5	6.3	5.8	7.9	7.5

¹Based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰

²Percents will not total 100.0 because all categories are not listed.

³Percents will not total 100.0 because all categories are not listed and more than 1 therapy or disposition was possible.

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Appendix I

Technical notes

This report is based on data collected during 1980 and 1981 in the National Ambulatory Medical Care Survey (NAMCS), an annual sample survey of office-based physicians conducted by the Division of Health Care Statistics of the National Center for Health Statistics (NCHS). The two surveys were conducted with identical instruments, definitions, and procedures. Two years of data were combined to increase the reliability of the estimates. The annual survey design and procedures are presented in the following sections.

Statistical design

Scope of the survey

The target population of NAMCS includes office visits made within the conterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office-based patient care practice, but not in the specialties of anesthesiology, pathology, or radiology. Telephone contacts and nonoffice visits are excluded from NAMCS.

Sample design

The NAMCS utilizes a three-stage survey design that involves probability samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. The first-stage sample of 87 PSU's was selected by the National Opinion Research Center (NORC) of the University of Chicago, the organization responsible for NAMCS field and data processing operations under contract to NCHS. A PSU is a county, a group of adjacent counties, or a standard metropolitan statistical area (SMSA). A modified probability-proportional-to-size procedure using separate sampling frames for SMSA's and for nonmetropolitan counties was used to select the sample PSU's. Each frame was stratified by region, size of population, and demographic characteristics of the PSU's, and was divided into sequential zones of 1 million residents; then, a random number was drawn to determine which PSU came into the sample from each zone.

The second stage consisted of a probability sample of practicing physicians, selected from the masterfiles maintained by the American Medical Association (AMA) and the American Osteopathic Association (AOA), who met the following criteria:

- Office-based, as defined by AMA and AOA.
- Principally engaged in patient care activities.

- Nonfederally employed.
- Not in the specialties of anesthesiology, pathology, clinical pathology, forensic pathology, radiology, diagnostic radiology, pediatric radiology, or therapeutic radiology.

Within each PSU, all eligible physicians were sorted by nine specialty groups: general and family medicine, internal medicine, pediatrics, other medical specialties, general surgery, obstetrics and gynecology, other surgical specialties, psychiatry, and all other specialties. Then, within each PSU, a systematic random sample of physicians was selected so that the overall probability of selecting any physician in the United States was approximately constant.

During 1980–81 the NAMCS physician sample included 5,805 physicians. Sample physicians were screened at the time of the survey to ensure that they met the aforementioned criteria; 1,124 physicians did not meet the criteria and were, therefore, ruled out of scope (ineligible) for the study. The most common reasons for being out of scope were that the physician was retired, deceased, or employed in teaching, research, or administration. Of the 4,681 in scope (eligible) physicians, 3,676 (78.5 percent) participated in the study. Of the participating physicians, 509 saw no patients during their assigned reporting period because of vacations, illnesses, or other reasons for being temporarily out of office-based practice. The physician sample size and response data by physician specialty are shown in table I.

The third stage was the selection of patient visits within the annual practices of the sample physicians. This stage involved two steps. First, the total physician sample was divided into 52 random subsamples of approximately equal size; then each subsample was randomly assigned to 1 of the 52 weeks in the survey year. Second, a systematic random sample of visits was selected by the physician during the assigned reporting week. The visit sampling rate varied for this final step from a 100 percent sample for very small practices to a 20 percent sample for very large practices. The method for determining the visit sampling rate is described later in this appendix and in the Induction Interview form in appendix III. During 1980–81, sample physicians completed 89,447 usable Patient Record forms.

Data collection and processing

Field procedures

Both mail and telephone contacts were used to enlist sample physicians for NAMCS. Initially, physicians were sent introductory letters from the Director of NCHS (see appendix III). When appropriate, a letter from the physician's specialty

NOTE: Prepared by Thomas McLemore, Division of Health Care Statistics.

Table 1. Distribution of physicians in the 1980–81 National Ambulatory Medical Care Survey samples and response rates, by physician specialty

<i>Physician specialty</i>	<i>Gross total</i>	<i>Out of scope</i>	<i>Net total</i>	<i>Nonrespondents</i>	<i>Respondents</i>	<i>Response rate</i>
All specialties	5,805	1,124	4,681	1,005	3,676	78.5
General and family practice	1,340	289	1,051	272	779	74.1
Medical specialties	1,695	296	1,399	298	1,101	78.7
Internal medicine	871	158	713	182	531	74.5
Pediatrics	414	83	331	42	289	87.3
Other medical specialties	410	55	355	74	281	79.2
Surgical specialties	1,978	246	1,732	351	1,381	79.7
General surgery	521	75	446	115	331	74.2
Obstetrics and gynecology	484	71	413	63	350	84.7
Other surgical specialties	973	100	873	173	700	80.2
Other specialties	792	293	499	84	415	83.2
Psychiatry	414	96	318	43	275	86.5
Other specialties	378	197	181	41	140	77.3

organization endorsing the survey and urging his participation was enclosed with the NCHS letter. Approximately 2 weeks prior to the physician's assigned reporting period, a field representative telephoned the physician to explain briefly the study and arrange an appointment for a personal interview. Physicians who did not initially respond were usually recontacted via telephone or special explanatory letter and requested to reconsider participation in the study.

During the personal interview the field representative determined the physician's eligibility for the study, obtained his cooperation, delivered survey materials with verbal and printed instructions, and assigned a predetermined Monday-Sunday reporting period. A short induction interview concerning basic practice characteristics, such as type of practice and expected number of office visits, was conducted. Office staff who were to assist with data collection were invited to attend the instructional session or were offered separate instructional sessions.

The field representative telephoned the sample physician prior to and during the assigned reporting week to answer questions that might have arisen and to ensure that survey procedures were going smoothly. At the end of the reporting week, the participating physician mailed the completed survey materials to the field representative who edited the forms for completeness before transmitting them for central data processing. At this point problems of missing or incomplete data were resolved by telephone followup by the field representative to the sample physician; if no problems were found, field procedures were considered complete regarding the sample physician's participation in NAMCS.

Data collection

The actual data collection for NAMCS was carried out by the physician, assisted by his office staff when possible. Two data collection forms were employed by the physician: the Patient Log and the Patient Record form (see appendix III). The Patient Log, a sequential listing of patients seen in the physician's office during his assigned reporting week, served as the sampling frame to indicate the office visits for which data were to be recorded. A perforation between the patient's name and patient visit information permitted the physician to detach and retain the listing of patients, thus, assuring the anonymity of the physician's patients.

Based on the physician's estimate of the expected number of office visits and expected number of days in practice during the assigned reporting week, each physician was assigned a visit sampling rate. The visit sampling rates were designed so that about 30 Patient Record forms would be completed by each physician during the assigned reporting week. Physicians expecting 10 or fewer visits per day recorded data for all visits. Those physicians expecting more than 10 visits per day recorded data for every second, third, or fifth visit based on the predetermined sampling interval. These visit sampling procedures minimized the physician's data collection workload and maintained approximately equal reporting levels among sample physicians regardless of practice size. For physicians recording data for every second, third, or fifth patient visit, a random start was provided on the first page of the Patient Log so that the predesignated sample visits recorded on each succeeding page of the Patient Log provided a systematic random sample of patient visits during the reporting period.

Data processing

In addition to followups for missing and inconsistent data made by the field staff, numerous clerical edits were performed on data received for central data processing. These manual edit procedures proved quite efficient, reducing item non-response rates to 2 percent or less for most data items.

Information contained in item 6 (Patient's problem or reason for visit) of the Patient Record form was coded according to *A Reason for Visit Classification for Ambulatory Care (RVC)*.⁹ Diagnostic information (item 9 of the Patient Record form) was coded according to the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.¹⁰ A maximum of three entries were coded from each of these items. Prior to coding, Patient Record forms were grouped into batches with approximately 650 forms per batch. Quality control for the medical coding operation involved a two-way 5-percent independent verification procedure. Error rates were defined as the number of incorrectly coded entries divided by the total number of coded entries. The estimated error rates for the 1980–81 medical coding operation were 1.7 percent for

NOTE: A list of references follows the text.

item 6 and 2.3 percent for item 9. Additionally, a dependent verification procedure was used to review and adjudicate all records in batches with excessive error rates. This procedure further reduced the estimated error rates to 1.6 percent for item 6 and 2.1 percent for item 9.

The NAMCS medication data (item 11 of the Patient Record form) was classified and coded according to a scheme developed at NCHS based on the American Society of Hospital Pharmacists' Drug Product Information File. A description of the new drug coding scheme and of the NAMCS drug data processing procedures is contained in *Vital and Health Statistics, Series 2, No. 90*.¹⁵ A two-way 100 percent independent verification procedure was used to control the medication coding operation. As an additional quality control, all Patient Record forms with differences between drug coders or with illegible drug entries were reviewed and adjudicated at NCHS.

Information from the Induction Interview and Patient Record forms was keypunched with 100 percent verification and converted to computer tape. At this point, extensive computer consistency and edit checks were performed to ensure complete and accurate data. Incomplete data items were imputed by assigning a value from a randomly selected Patient Record form with similar characteristics; patient sex and age, physician specialty, and broad diagnostic categories were used as the basis for these imputations.

Estimation procedures

Statistics from NAMCS were derived by a multistage estimation procedure that produces essentially unbiased national estimates and has three basic components: (1) inflation by reciprocals of the probabilities of selection, (2) adjustment for nonresponse, and (3) a ratio adjustment to fixed totals. Each component is briefly described below.

Inflation by reciprocals of probabilities of selection.

Because the survey utilized a three-stage sample design, three probabilities of selection existed: (1) the probability of selecting the PSU, (2) the probability of selecting the physician within the PSU, and (3) the probability of selecting an office visit within the physician's practice. The third probability was defined as the number of office visits during the physician's assigned reporting week divided by the number of Patient Record forms completed. All weekly estimates were inflated by a factor of 52 to derive annual estimates.

Adjustment for nonresponse

NAMCS data were adjusted to account for sample physicians who were in scope, but did not participate in the study. This adjustment was calculated in order to minimize the impact of response on final estimates by imputing to nonresponding physicians the practice characteristics of similar responding physicians. For this purpose, physicians were judged similar if they had the same specialty designation and practiced in the same PSU.

Ratio adjustment

A poststratification adjustment was made within each of nine physician specialty groups. The ratio adjustment was a multiplication factor that had as its numerator the number of physicians in the universe in each physician specialty group and as its denominator the estimated number of physicians in that particular specialty group. The numerator was based on figures obtained from the AMA and AOA masterfiles, and the denominator was based on data from the sample.

Reliability of estimates

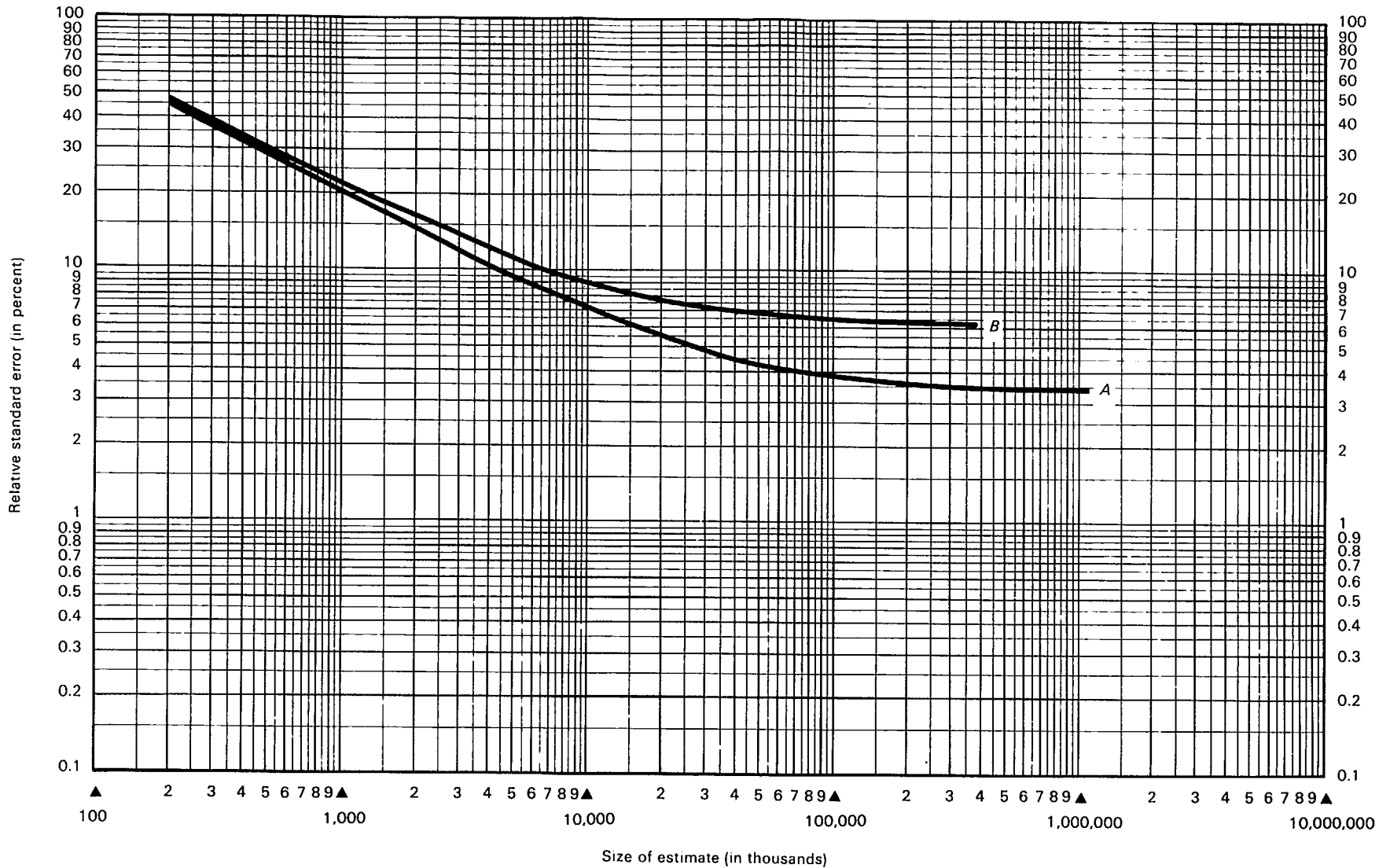
As in any survey, results are subject to both sampling and nonsampling errors. Nonsampling errors include reporting and processing errors, as well as biases due to nonresponse and incomplete response. The magnitude of the nonsampling errors cannot be computed. However, these errors were kept to a minimum by procedures built into the survey's operation. To eliminate ambiguities and encourage uniform reporting, careful attention was given to the phrasing of questions, terms, and definitions. Also, extensive pretesting of most data items and survey procedures was performed. The steps taken to reduce bias in the data are discussed in the sections on field procedures and data collection. Quality control procedures and consistency and edit checks discussed in the data processing section reduced errors in data coding and processing. However, because survey results are subject to sampling and nonsampling errors, the total error will be larger than the error due to sampling variability alone.

Because the statistics presented in this report are based on a sample, they differ somewhat from the figures that would be obtained if a complete census had been taken using the same forms, definitions, instructions, and procedures. However, the probability design of NAMCS permits the calculation of sampling errors. The standard error is primarily a measure of sampling variability that occurs by chance because only a sample rather than the entire population is surveyed. The standard error, as calculated in this report, also reflects part of the variation that arises in the measurement process, but does not include estimates of any systematic biases that may be in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error, and about 99 out of 100 that it would be less than 2½ times as large.

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. For this report, an asterisk (*) precedes any estimate with more than a 30 percent relative standard error.

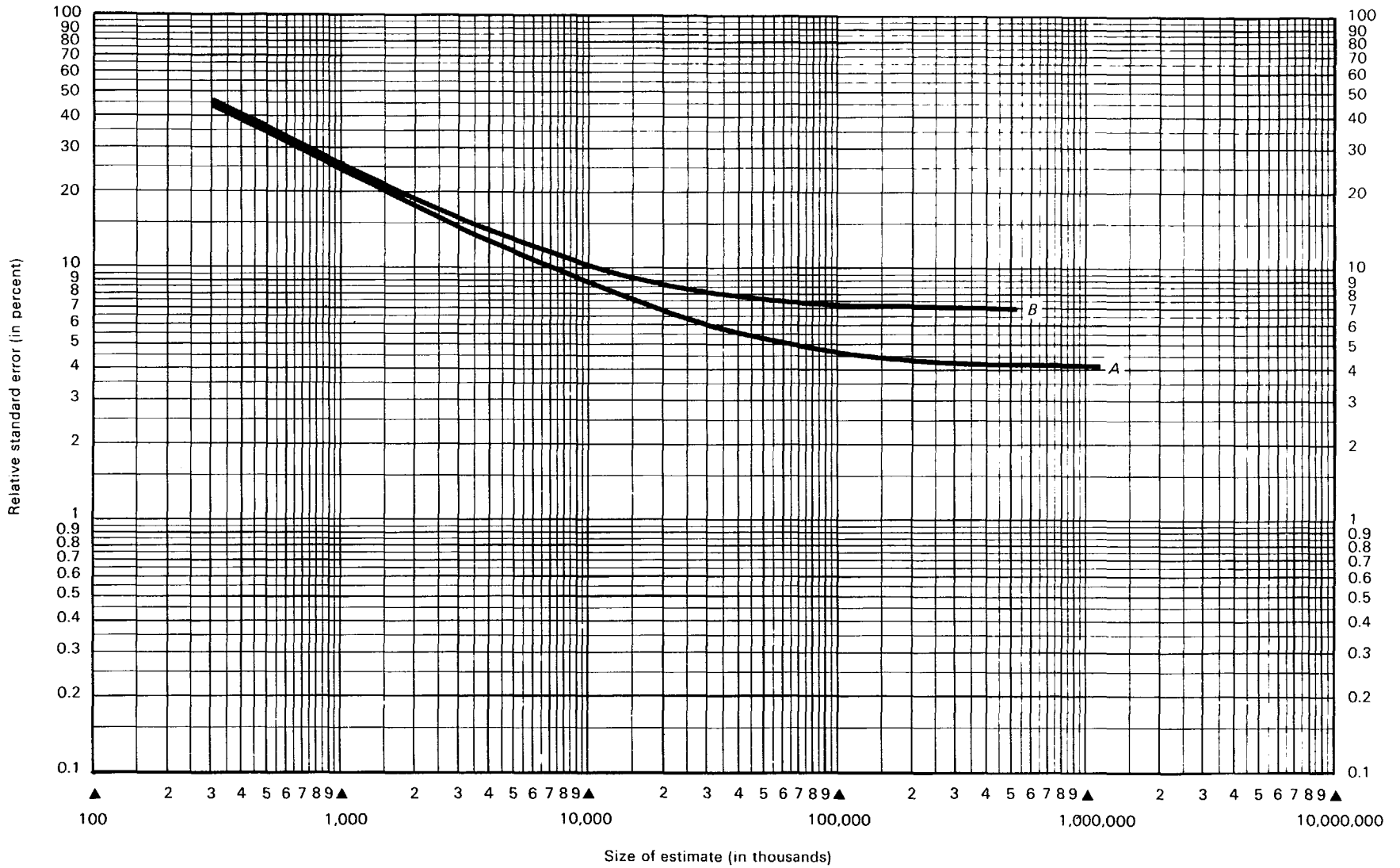
Estimates of sampling variability were calculated using the method of half-sample replication. This method yields overall variability through observation of variability among random subsamples of the total sample. A description of the development and evaluation of the replication technique for error estimation has been published.^{16,17} Approximate relative standard errors for aggregate estimates are presented in figures I and II.

NOTE: A list of references follows the text.



EXAMPLE: An estimate of 20 million office visits to general surgeons (read from scale at bottom of chart) has a relative standard error of 7.7 percent (read from curve *B* on scale at left of chart) or a standard error of 1,540,000 office visits (7.7 percent of 20 million visits).

Figure 1. Approximate relative standard errors for estimated numbers of office visits based on all physician specialties (*A*), and individual specialties (*B*), 1980-81 National Ambulatory Medical Care Survey



EXAMPLE: An estimate of 60 million drug mentions (read from scale at bottom of chart) has a relative standard error of 5.1 percent (read from curve A on scale at left of chart) or a standard error of 3,060,000 drug mentions (5.1 percent of 60 million drug mentions).

Figure II. Approximate relative standard errors for estimated numbers of drug mentions based on all physician specialties (A), and individual specialties (B), 1980-81 National Ambulatory Medical Care Survey

To derive error estimates that would be applicable to a wide variety of statistics and could be prepared at moderate cost, several approximations were required. As a result, the relative standard errors shown in figures I and II should be interpreted as approximate rather than exact for any specific estimate. Directions for determining approximate relative standard errors follow.

Estimates of aggregates

Approximate relative standard errors (in percent) for aggregate statistics are presented in figures I and II. The approximate relative standard errors for aggregate estimates of office visits are shown in figure I, and the approximate relative standard errors for aggregate estimates of drug mentions are shown in figure II. In each figure, curve *A* represents the relative standard errors appropriate for estimates based on all physician specialties, and curve *B* represents relative standard errors appropriate for estimates based on an individual physician specialty. For the specific case where the aggregate estimate of interest is the number of mentions of a specific drug, for example, the number of mentions of Dyazide, figure I, curve *B* should be used to obtain approximate relative standard errors.

Instead of using figures I and II, relative standard errors for aggregate estimates may be calculated directly using the following formulae where *x* is the aggregate estimate of interest in thousands. For visit estimates based on all physician specialties,

$$RSE(x) = \sqrt{0.001111 + \frac{39.84195}{x}} \cdot 100.0$$

For visit estimates based on an individual physician specialty,

$$RSE(x) = \sqrt{0.003757 + \frac{42.88175}{x}} \cdot 100.0$$

For drug mention estimates based on all physician specialties,

$$RSE(x) = \sqrt{0.001647 + \frac{58.48328}{x}} \cdot 100.0$$

For drug mention estimates based on an individual physician specialty,

$$RSE(x) = \sqrt{0.004696 + \frac{59.50164}{x}} \cdot 100.0$$

Estimates of percents

Approximate relative standard errors (in percent) for estimates of percents may be calculated from figures I and II as follows. From the appropriate curve obtain the relative standard error of the numerator and denominator of the percents. Square each of the relative standard errors, subtract the resulting value for the denominator from the resulting value for the numerator, and extract the square root. This approximation is valid if the relative standard error of the denominator

is less than 0.05 or if the relative standard errors of the numerator and denominator are both less than 0.10.

Alternatively, relative standard errors for percentages may be calculated directly using the following formulae where *p* is the percent of interest and *x* is the base of the percent in thousands. For visit percentages based on all physician specialties,

$$RSE(p) = \sqrt{\frac{39.84195 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

For visit percentages based on an individual physician specialty,

$$RSE(p) = \sqrt{\frac{42.88175 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

For drug mention percentages based on all physician specialties,

$$RSE(p) = \sqrt{\frac{58.48328 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

For drug mention percents based on an individual physician specialty,

$$RSE(p) = \sqrt{\frac{59.50164 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

Estimates of rates where the numerator is not a subclass of the denominator

Approximate relative standard errors for rates in which the denominator is the total United States population or one or more of the age-sex-race groups of the total population are equivalent to the relative standard error of the numerator that can be obtained from figures I or II.

Estimates of differences between two statistics

The relative standard errors shown in this appendix are not directly applicable to differences between two sample estimates. The standard error of a difference is approximately the square root of the sum of squares of each standard error considered separately. This formula represents the standard error quite accurately for the difference between separate and uncorrelated characteristics, although it is only a rough approximation in most other cases.

Tests of significance

In this report, the determination of statistical inference is based on the *t*-test with a critical value of 1.96 (0.05 level of significance). Terms relating to differences, such as "higher," and "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 regarding the difference between any two estimates does not mean that the difference was tested and found to be not significant.

Table II. Estimates of the civilian noninstitutionalized population of the United States used in computing annual visit rates in this report by age, race, sex, and Hispanic origin: 1980-81

<i>Race, sex, and Hispanic origin</i>	<i>All ages</i>	<i>Less than 15 years</i>	<i>15-24 years</i>	<i>25-44 years</i>	<i>45-64 years</i>	<i>65 years and over</i>
Race and sex		Numbers in thousands				
All races	222,674	50,832	40,710	62,658	43,963	24,512
Male	107,429	25,976	20,076	30,487	20,849	10,042
Female	115,244	24,856	20,634	32,171	23,114	14,470
White	191,052	41,693	34,229	53,973	38,993	22,165
Male	92,640	21,366	17,012	26,558	18,637	9,067
Female	98,412	20,327	17,217	27,415	20,357	13,098
Black	26,107	7,627	5,430	6,870	4,143	2,039
Male	12,103	3,840	2,544	3,057	1,838	826
Female	14,005	3,787	2,886	3,814	2,305	1,213
All other	5,515	1,512	1,052	1,816	828	308
Male	2,687	770	520	873	375	150
Female	2,829	744	532	943	452	158
Hispanic origin						
Hispanic	114,528	4,645	3,174	4,047	1,955	706
Non-Hispanic	1208,507	46,525	38,028	58,081	42,233	23,640

¹Based on the April 1, 1980, census. Figures will not add to total.

NOTE: Excludes Alaska and Hawaii.

Figures may not add to totals due to rounding.

Population figures and rate computation

The population figures used in computing annual visit rates are presented in table II. The figures are based on an average of the July 1, 1980, and July 1, 1981, estimates of the civilian noninstitutionalized population of the United States provided by the U.S. Bureau of the Census. Because NAMCS includes data for only the conterminous United States, the original population estimates were modified to account for the exclusion of Alaska and Hawaii from the study. For this reason, the population estimates should not be considered official and are presented here solely to provide denominators for rate computations.

Estimates of numbers of visits and drug mentions in this report are for a 2-year period, but ratios and rates represent average annual estimates. For example, the average annual visit rates are calculated as follows. The numerator is obtained by dividing the estimated number of office visits for 1980-81 by 2 to obtain an average annual number of office visits. This number is then divided by the appropriate population figure to obtain an average annual visit rate. As previously discussed, estimates of reliability for average annual visit rates may be calculated from figures I and II.

Rounding of numbers

Estimates presented in this report are rounded to the nearest thousand. For this reason detailed figures within tables do not always add to totals. Rates and percents are calculated on the basis of the original, unrounded figures and may not necessarily agree precisely with percents calculated from rounded data.

Systematic bias

No formal attempt was undertaken to determine or measure systematic bias in the NAMCS data. But it should be noted that there are several factors affecting the data which indicate that these data underrepresent the total number of office visits. Some of these factors are briefly discussed below.

- Physicians who participated in NAMCS did a thorough and conscientious job in keeping the Patient Log; however, post survey interviews with participating physicians indicate that a small number of patient visits may have been accidentally omitted from the Patient Log; although this number is quite small, such omissions would result in an undercoverage of office visits.

The same post survey interviews indicate that the inclusion of patient visits that did not actually occur was infrequent and would have a negligible effect on survey estimates.

- As previously stated, the physician universe for the 1980-81 NAMCS included all nonfederal, office-based, patient-care physicians on the AMA and AOA masterfiles. The NAMCS was designed to provide statistically unbiased estimates of office visits to this designated population. Not included in the universe were physicians who were classified as federally employed; or hospital-based; or who were principally engaged in research, teaching, administration, or other nonpatient care activity. Consequently, ambulatory patient visits to these physicians in an office setting would not be included in NAMCS estimates. In an attempt to measure the number of office visits to physicians not in the NAMCS universe, a NAMCS Complement Survey was conducted in 1980. This study

involved a sample of approximately 2,000 physicians selected from among the 230,000 physicians in the AMA and AOA masterfiles who were not eligible (in scope) for the 1980 NAMCS. Details of the Complement Survey methodology and results are forthcoming. Preliminary re-

sults indicate that about 17 percent of the Complement Survey physicians saw some ambulatory patients in an office setting and that an estimated 69 million office visits were made to these physicians in 1980.

Appendix II

Definitions of certain terms used in the report

Terms relating to the survey

Office—Premises identified by physicians as locations for their ambulatory practices. The responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than with any institution.

Ambulatory patient—An individual seeking personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Physician—Classified as either:

- *In scope*—All duly licensed doctors of medicine or doctors of osteopathy currently in practice who spend some time caring for ambulatory patients at an office location.
- *Out of scope*—Those physicians who treat patients only indirectly, including physicians in the specialties of anesthesiology, pathology, forensic pathology, radiology, therapeutic radiology, and diagnostic radiology, and the following physicians:
 - Physicians who are federally employed, including those physicians in military service.
 - Physicians who treat patients only in an institutional setting, for example, patients in nursing homes and hospitals.
 - Physicians employed full time in industry or by an institution and having no private practice, for example, physicians who work for the Veterans' Administration or the Ford Motor Company.
 - Physicians who spend no time seeing ambulatory patients, for example, physicians who only teach, are engaged in research, or are retired.

Patients—Classified as either:

- *In scope*—All patients seen by the physician or a staff member in the office of the physician.
- *Out of scope*—Patients seen by the physician in a hospital, nursing home, or other extended care institution, or in the patient's home. (Note: If the physician has a private office, meeting the definition of "office," located in a hospital, the ambulatory patients seen there are considered out of scope.) The following types of patients are considered out of scope:
 - Patients seen by the physician in an institution, including outpatient clinics of hospitals, for whom the institution has primary responsibility over time.

- Patients who contact and receive advice from the physician via telephone.
- Patients who come to the office only to leave a specimen, to pick up insurance forms, or to pay a bill.
- Patients who come to the office only to pick up medications previously prescribed by the physician.

Visit—A direct, personal exchange between an ambulatory patient and a physician or a staff member for the purpose of seeking care and rendering health services.

Physician specialty—Principal specialty, including general practice, as designated by the physician at the time of the survey. Those physicians for whom a specialty was not obtained were assigned the principal specialty recorded in the physician master files maintained by the American Medical Association or the American Osteopathic Association.

Region of practice location—The four geographic regions, excluding Alaska and Hawaii, that correspond to those used by the U.S. Bureau of the Census:

Region	States included
Northeast	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
North Central . . .	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin
South	Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia
West	Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

Metropolitan status of practice location—A physician's practice is classified by its location in a metropolitan or non-metropolitan area. Metropolitan areas are standard metropolitan statistical areas (SMSA's) as defined by the U.S. Office of Management and Budget. The definition of an individual SMSA involves two considerations: first, a city or cities of specified population that constitute the central city and identify the county in which it is located as the central county; second, economic and social relationships with "contiguous" counties that are metropolitan in character so that the periphery of the specific metropolitan area may be determined. SMSA's may

cross State lines. In New England, SMSA's consist of cities and towns rather than counties.

Terms relating to the Patient Record Form

Age—The age calculated from date of birth was the age at last birthday on the date of visit.

Race—White, Black, Asian or Pacific Islander, or American Indian or Alaskan Native. Physicians were instructed to mark the category they judged to be the most appropriate for each patient based on observation or prior knowledge. The following definitions were provided to the physician:

- **White**—A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.
- **Black**—A person having origins in any of the black racial groups of Africa.
- **Asian or Pacific Islander**—A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands, including, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.
- **American Indian or Alaskan Native**—A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

Ethnicity—Category judged by the physician to be the most appropriate. The following definitions were provided:

- **Hispanic origin**—A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- **Not Hispanic**—Any person not of Hispanic origin.

Patient's complaint(s), symptom(s), or other reason(s) for this visit (in patient's own words)—The patient's principal problem, complaint, symptom, or other reason for this visit as expressed by the patient. Physicians were instructed to record key words or phrases verbatim to the extent possible, listing that problem first which, in the physician's judgment, was most responsible for the patient's visit.

Major reason for this visit—The one major reason (selected from the following list) for the patient's visit as judged by the physician:

- **Acute problem**—A visit primarily for a condition or illness having a relatively sudden or recent onset (within 3 months of the visit).
- **Chronic problem, routine**—A visit primarily to receive regular care or examination for a preexisting chronic condition or illness (onset of condition was 3 months or more before the visit).
- **Chronic problem, flareup**—A visit primarily to receive care for a sudden exacerbation of a preexisting chronic condition or illness.
- **Postsurgery or postinjury**—A visit primarily for followup care of injuries or for care required following surgery, for example, removal of sutures or cast.

- **Nonillness care (routine prenatal, general exam, well-baby)**—General health maintenance examinations and routine periodic examinations of presumably healthy persons, both children and adults, including prenatal and postnatal care, annual physicals, well-child examinations, and insurance examinations.

Diagnostic services this visit—Physicians were instructed to check any of the following services that were ordered or provided during the current visit:

- **Limited history and/or examination**—History or physical examination limited to a specific body site or system or concerned primarily with the patient's chief complaint, for example, pelvic examination or eye examination.
- **General history and/or examination**—History or physical examination of a comprehensive nature, including all or most body systems.
- **Pap test**—Papanicolaou test.
- **Clinical lab test**—One or more laboratory procedures or tests, including examination of blood, urine, sputum, smears, exudates, transudates, feces, and gastric content, and including chemistry, serology, bacteriology, and pregnancy test; excludes Pap test.
- **X-ray**—Any single or multiple X-ray examination for diagnostic or screening purposes; excludes radiation therapy.
- **Blood pressure check.**
- **EKG**—Electrocardiogram.
- **Vision test**—Visual acuity test.
- **Endoscopy**—Examination of the interior of any body cavity except ear, nose, and throat by means of an endoscope.
- **Mental status exam**—Any formal, clinical evaluation designed to assess the mental or emotional status of the patient.
- **Other**—All other diagnostic services ordered or provided that are not included in the preceding categories.

Principal diagnosis—The physician's diagnosis of the patient's principal problem, complaint, or symptom. In the event of multiple diagnoses, the physician was instructed to list them in order of decreasing importance. The term "principal" refers to the first-listed diagnosis. The diagnosis represents the physician's best judgment at the time of the visit and may be tentative, provisional, or definitive.

Other significant current diagnoses—The diagnosis of any other condition known to exist for the patient at the time of the visit. Other diagnoses may or may not be related to the patient's reason for visit.

Have you seen patient before?—"Seen before" means provided care for at any time in the past. Item 10b refers to the patient's current episode of illness.

Medication therapy this visit—The physician was instructed to list, using brand or generic names, all medications, including drugs, vitamins, hormones, ointments, and suppositories ordered, injected, administered, or provided this visit including prescription and nonprescription drugs, vaccinations, immunization, and desensitization agents. Also included are

drugs and medications ordered or provided prior to the visit that the physician instructed or expected the patient to continue taking. Medications for the principal diagnosis are listed in item 11a; all other drugs are listed in item 11b.

Nonmedication therapy—Physicians were instructed to check any of the following services that were ordered or provided during the current visit:

- *Physiotherapy*—Any form of physical therapy ordered or provided, including any treatment using heat, light, sound, or physical pressure or movement; for example, ultrasonic, ultraviolet, infrared, whirlpool, diathermy, cold, and manipulative therapy.
- *Office surgery*—Any surgical procedure performed in the office this visit, including suture of wounds, reduction of fractures, application or removal of casts, incision and draining of abscesses, application of supportive materials for fractures and sprains, irrigations, aspirations, dilations, and excisions.
- *Family planning*—Services, counseling, or advice that might enable patients to determine the number and spacing of their children, including both contraception and infertility services.
- *Psychotherapy or therapeutic listening*—All treatments designed to produce a mental or emotional response through suggestion, persuasion, reeducation, reassurance, or support, including psychological counseling, hypnosis, psychoanalysis, and transactional therapy.
- *Diet counseling*—Instructions, recommendations, or advice regarding diet or dietary habits.
- *Family or social counseling*—Advice regarding problems of family relationships, including marital or parent-child problems, or social problems, including economic, educational, occupational, legal, or social adjustment difficulties.
- *Medical counseling*—Instructions and recommendations regarding any health problem, including advice or counsel about a change of habit or behavior. Physicians were instructed to check this category only if medical counseling was a significant part of the treatment. Family planning, diet counseling, and family or social counseling are excluded.
- *Other*—Treatments or nonmedication therapies ordered or provided that are not listed or included in the preceding categories.

Was patient referred for this visit by another physician?—Referrals are any visits that are made at the advice or direction of a physician other than the one being visited. The interest is in referrals for the current visit and not in referrals for any prior visit.

Disposition this visit—Eight categories are provided to describe the physician's disposition of the case. The physician was instructed to check as many of the categories as apply:

- *No followup planned*—No return visit or telephone contact was scheduled for the patient's problem.
- *Return at specified time*—Patient was told to schedule an appointment or was instructed to return at a particular time.
- *Return if needed, P.R.N.*—No future appointment was made, but the patient was instructed to make an appointment with the physician if the patient considered it necessary.
- *Telephone followup planned*—Patient was instructed to telephone the physician on a particular day to report either on progress, or if the need arose.
- *Referred to other physician*—Patient was instructed to consult or seek care from another physician. The patient may or may not return to this physician at a later date.
- *Returned to referring physician*—Patient was instructed to consult again with the referring physician.
- *Admit to hospital*—Patient was instructed that further care or treatment would be provided in a hospital. No further office visits were expected prior to hospital admission.
- *Other*—Any other disposition of the case not included in the preceding categories.

Duration of this visit—Time the physician spent with the patient, not including time the patient spent waiting to see the physician, time the patient spent receiving care from someone other than the physician without the presence of the physician, and time the physician spent in reviewing such things as records and test results. If the patient was provided care by a member of the physician's staff but did not see the physician during the visit, the duration of visit was recorded as 0 minutes.

Appendix III

Survey instruments



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
OFFICE OF HEALTH RESEARCH, STATISTICS AND TECHNOLOGY
HYATTSVILLE, MARYLAND 20782

NATIONAL AMBULATORY
MEDICAL CARE SURVEY

Endorsing Organizations

American Academy
of Dermatology

American Academy of
Family Physicians

American Academy
of Neurology

American Academy of
Orthopaedic Surgeons

American Academy
of Pediatrics

American Association of
Neurological Surgeons

American College of
Emergency Physicians

American College of
Obstetricians and
Gynecologists

American College
of Physicians

American College of
Preventive Medicine

American Osteopathic
Association

American Society of
Colon and Rectal
Surgeons

American Psychiatric
Association

American Society of
Internal Medicine

American Society of
Plastic and Reconstructive
Surgeons, Inc.

American Urological
Association

Association of American
Medical Colleges

National Medical
Association

The National Center for Health Statistics, as part of its continuing program to provide information on the health status of the American people, is conducting a National Ambulatory Medical Care Survey (NAMCS).

The purpose of this survey is to collect information about ambulatory patients, their problems, and the resources used for their care. The resulting published statistics will help your profession plan for more effective health services, determine health manpower requirements, and improve medical education.

Since practicing physicians are the only reliable source of this information, we need your assistance in the NAMCS. As one of the physicians selected in our national sample, your participation is essential to the success of the survey. Of course, all information that you provide is held in strict confidence.

Many organizations and leaders in the medical profession have expressed their support for this survey, including those shown to the left. In particular, your own specialty society has reviewed the NAMCS program and supports this effort (see enclosure). They join me in urging your cooperation in this important research.

Within a few days, a survey representative will telephone you for an appointment to discuss the details of your participation. We greatly appreciate your cooperation.

Sincerely yours,

Dorothy P. Rice
Director

Enclosure

C No. 499932

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

C No. 499932

PATIENT LOG

As each patient arrives, record name and time of visit on the log below. For the patient entered on line #3, also complete the patient record to the right.

PATIENT'S NAME TIME OF VISIT

1		
		a.m.
		p.m.
2		
		a.m.
		p.m.
3		
		a.m.
		p.m.

Record items 1-15 for this patient.

CONTINUE LISTING PATIENTS ON NEXT PAGE

PATIENT RECORD NATIONAL AMBULATORY MEDICAL CARE SURVEY

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

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

3. SEX
 FEMALE
 MALE

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

5. ETHNICITY
 HISPANIC ORIGIN
 NOT HISPANIC

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

 b. OTHER

7. MAJOR REASON FOR THIS VISIT [Check one]
 ACUTE PROBLEM
 CHRONIC PROBLEM, ROUTINE
 CHRONIC PROBLEM, FLAREUP
 POST SURGERY/POST INJURY
 NON-ILLNESS CARE (ROUTINE PRENATAL, GENERAL EXAM, WELL BABY, ETC.)

8. DIAGNOSTIC SERVICES THIS VISIT [Check all ordered or provided]
 NONE
 LIMITED HISTORY/EXAM
 GENERAL HISTORY/EXAM
 PAP TEST
 CLINICAL LAB TEST
 X-RAY
 BLOOD PRESSURE CHECK
 EKG
 VISION TEST
 ENDOSCOPY
 MENTAL STATUS EXAM
 OTHER (Specify) _____

9. PHYSICIAN'S DIAGNOSES
 a. PRINCIPAL DIAGNOSIS PROBLEM ASSOCIATED WITH ITEM 6a

 b. OTHER SIGNIFICANT CURRENT DIAGNOSES

10. HAVE YOU SEEN PATIENT BEFORE?
 YES NO
 IF YES, FOR THE CONDITION IN ITEM 9a?
 YES NO

11. MEDICATION THERAPY THIS VISIT NONE
[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]
 a. FOR PRINCIPAL DIAGNOSES IN ITEM 9a.
 1. _____
 2. _____
 3. _____
 4. _____
 b. FOR ALL OTHER REASONS
 1. _____
 2. _____
 3. _____
 4. _____

12. NON-MEDICATION THERAPY [Check all services ordered or provided this visit]
 NONE
 PHYSIOTHERAPY
 OFFICE SURGERY
 FAMILY PLANNING
 PSYCHOTHERAPY/THERAPEUTIC LISTENING
 DIET COUNSELING
 FAMILY/SOCIAL COUNSELING
 MEDICAL COUNSELING
 OTHER (Specify) _____

13. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN?
 YES
 NO

14. DISPOSITION THIS VISIT [Check all that apply]
 NO FOLLOW UP PLANNED
 RETURN AT SPECIFIED TIME
 RETURN IF NEEDED, P R N
 TELEPHONE FOLLOW UP PLANNED
 REFERRED TO OTHER PHYSICIAN
 RETURNED TO REFERRING PHYSICIAN
 ADMIT TO HOSPITAL
 OTHER (Specify) _____

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

Minutes

CONFIDENTIAL*
NORC-4284

Form Approved
OMB No. 68R1498

NATIONAL AMBULATORY MEDICAL CARE SURVEY
INDUCTION INTERVIEW

FOR OFFICE USE ONLY:

(BATCH NO.)

--	--

 5-6/

(LOG NO.)

--	--	--	--

 7-10/

BEFORE STARTING INTERVIEW

1. ENTER PHYSICIAN I.D. NUMBER IN BOX TO RIGHT.
2. ENTER DATES OF ASSIGNED REPORTING WEEK IN Q. 2, P. 2.

(Phys. ID Number)

--	--	--	--

1-4/

TIME _____ AM
 BEGAN: _____ PM

Doctor, before I begin, let me take a minute to give you a little background about this survey.

Although ambulatory medical care accounts for nearly 90 percent of all medical care received in the United States, there is no systematic information about the characteristics and problems of people who consult physicians in their offices. This kind of information has been badly needed by medical educators and others concerned with the medical manpower situation.

In response to increasing demands for this kind of information, the National Center for Health Statistics, in close consultation with representatives of the medical profession, has developed the National Ambulatory Medical Care Survey.

Your own task in the survey is simple, carefully designed, and should not take much of your time. Essentially, it consists of your participation during a specified 7-day period. During this period, you simply check off a minimal amount of information concerning patients that you see.

Now, before we get into the actual procedures, I have a few questions to ask about your practice. The answers you give me will be used only for classification and * analysis, and of course all information you provide is held in strict confidence.

1. First, you are a _____
 (ENTER SPECIALTY FROM CODE ON FACE SHEET LABEL.)

Is that right? Yes X
 No (ASK A) Y

A. IF NO: What is your specialty (including general practice)?

(Name of Specialty)

--	--	--	--

11-13/

*
 The National Ambulatory Medical Care Survey is authorized by Congress in Public Law 93-353, section 308. It is a voluntary study and there are no penalties for refusing to answer any question. All information collected is confidential and will be used only to prepare statistical summaries. No information which will identify an individual or a physician's practice will be released.

2. Now, doctor, this study will be concerned with the ambulatory patients you will see in your office during the week of (READ REPORTING DATES ENTERED BELOW).

_____ / _____ (that's a _____ (that's a
month date Monday) through month date Sunday)

Are you likely to see any ambulatory patients in your office during that week?

Yes (GO TO Q. 3) . . X

No (ASK A) Y

A. IF NO: Why is that? RECORD VERBATIM, THEN READ PARAGRAPH BELOW

Since it's very important, doctor, that we include any ambulatory patients that you do happen to see in your office during that week, I'd like to leave these forms with you anyway--just in case your plans change. I'll plan to check back with your office just before (STARTING DATE) to make sure, and I can explain them in detail then, if necessary.

GIVE DOCTOR THE A PATIENT RECORD FORMS AND GO TO Q. 9, P. 6.

3. A. At what office location will you be seeing ambulatory patients during that 7-day period? RECORD UNDER A BELOW AND THEN CODE B.

B. FOR EACH OFFICE LOCATION ENTERED IN A, CODE YES OR NO TO "IN SCOPE."

IN SCOPE (Yes)	OUT OF SCOPE (No)
Private offices	Hospital emergency rooms
Free-standing clinics (non-hospital based)	Hospital outpatient departments
Groups, partnerships	College or university infirmaries
Kaiser, HIP, Mayo Clinic	Industrial outpatient facilities
Neighborhood Health Centers	Family planning clinics
Privately operated clinics (except family planning)	Government-operated clinics (VD, maternal & child health, etc.)

IN CASE OF DOUBT, ASK: Is that (clinic/facility/institution) hospital based?
Is that (clinic/facility/institution) government operated?

C. Is that all of the office locations at which you expect to see ambulatory patients during that week?

Yes X
No Y

IF NO: OBTAIN ADDITIONAL OFFICE LOCATION(S), ENTER IN "A" BELOW, AND REPEAT.

A. Office Location	B. In Scope?	
	Yes	No
(1) _____	1	0
(2) _____	1	0
(3) _____	1	0
(4) _____	1	0

TOTAL IN-SCOPE LOCATIONS: 14/

IF ALL LOCATIONS ARE OUT OF SCOPE, THANK THE DOCTOR AND LEAVE.

4. A. During that week (REPEAT DATES), how many ambulatory patients do you expect to see in your office practice? (DO NOT COUNT PATIENTS SEEN AT [OUT-OF-SCOPE LOCATIONS] CODED IN 3-B.)

ENTER TOTAL UNDER "A" BELOW AND CIRCLE NUMBER CATEGORY ON APPROPRIATE LINE.

- B. And during those seven days (REPEAT DATES IF NECESSARY), on how many days do you expect to see any ambulatory patients? COUNT EACH DAY IN WHICH DOCTOR EXPECTS TO SEE ANY PATIENTS AT AN IN-SCOPE OFFICE LOCATION.

CIRCLE NUMBER OF DAYS IN APPROPRIATE COLUMN UNDER "B" BELOW.

DETERMINE PROPER PATIENT LOG FORM FROM CHART BELOW. READ ACROSS ON "TOTAL PATIENTS" LINE UNDER "A" AND CIRCLE LETTER IN APPROPRIATE "DAYS" COLUMN UNDER "B."

THIS LETTER TELLS YOU WHICH OF THE FOUR PATIENT LOG FORMS (A, B, C, D) SHOULD BE USED BY THIS DOCTOR.

LOG FORM DESCRIPTION	A. Expected total patients during survey week.	B. Total <u>days</u> in practice during week.																
A--Patient Record is to be completed for <u>ALL</u> patients listed on Log. 15-17/	ENTER TOTAL FROM Q. 4-A. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> 1- 12 PATIENTS				18/ <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 20px; height: 20px;">1</td> <td style="width: 20px; height: 20px;">2</td> <td style="width: 20px; height: 20px;">3</td> <td style="width: 20px; height: 20px;">4</td> <td style="width: 20px; height: 20px;">5</td> <td style="width: 20px; height: 20px;">6</td> <td style="width: 20px; height: 20px;">7</td> </tr> </table>							1	2	3	4	5	6	7
1	2	3	4	5	6	7												
B--Patient Record is to be completed for every <u>SECOND</u> patient listed on Log.	13- 25 "	A A A A A A A																
C--Patient Record is to be completed for every <u>THIRD</u> patient listed on Log.	26- 39 "	C B A A A A A																
*D--Patient Record is to be completed for every <u>FIFTH</u> patient listed on Log.	40- 52 "	C B B A A A A																
	53- 65 "	D C B B A A A																
	66- 79 "	D C B B B A A																
	80- 92 "	D D C B B B B																
	93-105 "	D D C B B B B																
	106-118 "	D D C C B B B																
	119-131 "	D D C C B B B																
	132-145 "	D D D C C B B																
	146-158 "	D D D C C B B																
	159-171 "	D D D C C C C																
	172-184 "	D D D C C C C																
	185-197 "	D D D D D D D																
	198-210 "	D D D D D D D																
	211+ "	D D D D D D D																

* In the rare instance the physician will see more than 500 patients during his assigned reporting week, give him two D Patient Log Folios and instruct him to complete a patient record form for only every tenth patient. Then you are to draw an X through the Patient Record on every other page of the two folio pads, starting with Page 1 of the pad. The physician then completes the Patient Log on every page, but completes the Patient Record on every second page.

5. FIND LOG FOLIO WITH APPROPRIATE LETTER AND CIRCLE LETTER, ENTER FIRST FOUR NUMBERS OF THE FORM AND NUMBER OF LINES STAMPED "BEGIN ON NEXT LINE" FOR THE B-C-D LOG FORMS (if no lines are stamped, enter "0") BELOW.

FOLIO					No. Lines Stamped "BEGIN ON NEXT LINE"	FOR OFFICE USE ONLY Number patient record forms completed.
Letter	Number					
A						
B						
C						
D						

19-23/
24-26/

6. HAND DOCTOR HIS FOLIO AND EXPLAIN HOW FORMS ARE TO BE FILLED OUT. SHOW DOCTOR INSTRUCTIONS ON THE POCKET OF FOLIO, ITEMS 8 AND 11 ON CARDS IN POCKET OF FOLIO AND ITEM DEFINITIONS ON THE BACK OF FOLIO, TO WHICH HE CAN REFER AFTER YOU LEAVE.

EMPHASIZE THAT EVERY PATIENT VISIT EXCEPT ADMINISTRATIVE PURPOSE ONLY IS TO BE RECORDED ON THE LOG FOR ENTIRE REPORTING PERIOD. FOR EXAMPLE, IF A MEDICAL ASSISTANT GAVE THE PATIENT AN INOCULATION, OR A TECHNICIAN ADMINISTERED AN ELECTROCARDIOGRAM AND THE PATIENT DID NOT SEE THE DOCTOR, THIS VISIT MUST STILL BE LISTED ON THE LOG.

RECORD VERBATIM BELOW ANY CONCERN, PROBLEMS OR QUESTIONS THE DOCTOR RAISES.

7. IF DOCTOR EXPECTS TO SEE AMBULATORY PATIENTS AT MORE THAN ONE IN-SCOPE LOCATION DURING ASSIGNED WEEK, TELL HIM YOU WILL DELIVER THE FORMS TO THE OTHER LOCATION(S). ENTER THE FORM LETTER AND NUMBER(S) AND NUMBER OF LINES STAMPED "BEGIN ON NEXT LINE" FOR THE B-C-D LOG FOR THOSE LOCATIONS BELOW, BEFORE DELIVERING FORM(S).

Location	FOLIO				No. Lines Stamped "BEGIN ON NEXT LINE"	FOR OFFICE USE ONLY: Number patient record forms completed
	Letter	Number				

27-31/
32-34/
35-39/
40-42/
43-47/
48-50/

8. During the survey week (REPEAT EXACT DATES), will anyone be available to help you in filling out these records (at each IN-SCOPE location)?

Yes (ASK A) 1 51/
No 2

A. IF YES: Who would that be?

RECORD NAME, POSITION AND LOCATION.

Table with 3 columns: NAME, POSITION, LOCATION. Includes three blank rows for data entry.

PERSONALLY BRIEF EACH PERSON LISTED ABOVE.

EMPHASIZE THAT EVERY PATIENT VISIT DURING THE ENTIRE WEEK IS TO BE RECORDED ON THE LOG EXCEPT "ADMINISTRATIVE PURPOSE ONLY."

9. Do you have a solo practice, or are you associated with other physicians in a partnership, in a group practice, or in some other way?

Solo (GO TO Q. 10) . . 1 52/
Partnership . . (ASK A-C) . . . 2
Group (ASK A-C) . . . 3
<--- Other (SPECIFY AND ASK A-C) . . 4

IF PARTNERSHIP, GROUP, OR OTHER:

A. Is this a prepaid group practice? Yes . . (ASK [1]) . . . 1 53/
No 2

[1] IF YES TO A: What per cent of patients are prepaid? _____ per cent 54-56/

B. How many other physicians are associated with you? NUMBER OF PHYSICIANS: _____ 57-59/

C. What are the specialties of the other physicians associated with you? (How many of these are there?)

Table with 2 columns: Specialty, Number of Physicians. Lists 5 numbered rows for specialty and count entry.

D. CIRCLE ONE:

All physicians in this partnership/group practice have the same specialty 1 60/
More than one specialty in this partnership/group practice . . 2

10. Now I have just one more question about your practice. (NOTE: IF DOCTOR PRACTICES IN LARGE GROUP, THE FOLLOWING INFORMATION CAN BE OBTAINED FROM SOMEONE ELSE.)

A. What is the total number of full-time (35 hours or more per week) employees of your (partnership/group) practice? Include persons regularly employed who are now on vacation, temporarily ill, etc. Do not include other physicians. RECORD ON BOTTOM LINE OF COLUMN A BELOW.

(1) How many of these full-time employees are a . . . (READ CATEGORIES BELOW AS NECESSARY AND RECORD NUMBER OF EACH IN COLUMN A.)

B. And what is the total number of part-time (less than 35 hours per week) employees of your (partnership/group) practice? Again, include persons regularly employed who are now on vacation, ill, etc. Do not include other physicians. RECORD ON BOTTOM LINE OF COLUMN B BELOW.

(1) How many of these part-time employees are a . . . (READ CATEGORIES BELOW AS NECESSARY AND RECORD NUMBER OF EACH IN COLUMN B.)

Employees	A.		B.	
	Full-time (35 or more hours/week)		Part-time (Less than 35 hours/week)	
(1) Registered Nurse	_____	11-13/	_____	35-37/
(2) Licensed Practical Nurse	_____	14-16/	_____	38-40/
(3) Nursing Aide	_____	17-19/	_____	41-43/
(4) Physician Assistant*	_____	20-22/	_____	44-46/
(5) Technician	_____	23-25/	_____	47-49/
(6) Secretary or Receptionist	_____	26-28/	_____	50-52/
(7) Other (SPECIFY) _____	_____	29-31/	_____	53-55/
TOTAL:	<input type="text"/>	32-34/	TOTAL: <input type="text"/>	56-58/

* Physician Assistant must be a graduate of an accredited training program for Physician Assistants (Physician Extenders, Medex, etc.) or certified by the National Board of Medical Examiners through the Certification Exam for Assistant to the Primary Care Physician.

BEFORE YOU LEAVE, AGAIN STRESS THAT EACH AND EVERY AMBULATORY PATIENT SEEN BY THE DOCTOR OR HIS STAFF DURING THE 7-DAY PERIOD AT ALL IN-SCOPE OFFICE LOCATIONS (REPEAT THEM) IS TO BE INCLUDED IN THE SURVEY, THAT EACH PATIENT IS TO BE RECORDED ON THE LOG, AND ONLY THE APPROPRIATE NUMBER OF PATIENT RECORDS COMPLETED.

Thank you for your time, Dr. _____. If you have any (more) questions, please feel free to call me. My phone number is written in the folio. I'll call you on Monday morning of your survey week just to remind you.

11. TIME INTERVIEW ENDED _____ AM
PM

12. DATE OF INTERVIEW
(Month) (Day) (Year)

COMMENTS:

INTERVIEWER NUMBER

--	--	--	--	--

INTERVIEWER'S SIGNATURE

FOR OFFICE USE ONLY:

No. of Patients Seen:

--	--	--

59-61/

Total Days in Practice during Week:

--

62/

Appendix IV

American Hospital Formulary

Service classification system

and therapeutic category codes

AMERICAN HOSPITAL FORMULARY SERVICE CLASSIFICATION SYSTEM AND THERAPEUTIC CATEGORY CODES (AHFS#)

(Classifications in parentheses are provisional but may be used in DPIF)

AMERICAN HOSPITAL FORMULARY SERVICE CLASSIFICATION SYSTEM	36:00 DIAGNOSTIC AGENTS	60:00 GOLD COMPOUNDS
	36:04 Adrenocortical Insufficiency	64:00 HEAVY METAL ANTAGONISTS
	36:08 Amyloidosis	68:00 HORMONES AND SYNTHETIC SUBSTITUTES
	36:12 Blood Volume	68:04 Adrenals
	36:16 Brucellosis	68:08 Androgens
	36:18 Cardiac Function	68:12 Contraceptives
	36:24 Circulation Time	68:16 Estrogens
	36:25 (Cystic Fibrosis)	68:18 Gonadotropins
	36:26 Diabetes Mellitus	68:20 Insulins and Anti-Diabetic Agents
	36:28 Diphtheria	68:20.08 Insulins
04:00 ANTIHISTAMINE DRUGS	36:30 Drug Hypersensitivity	68:24 Parathyroid
08:00 ANTI-INFECTIVE AGENTS	36:32 Fungi	68:28 Pituitary
08:04 Amebicides	36:34 Gallbladder Function	68:32 Progestogens
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