Use of Health Services for Disorders of the Female Reproductive System: United States, 1977-78

Using data from the National Ambulatory Medical Care Survey and the National Hospital Discharge Survey, statistics are presented on visits to office-based physicians for care and treatment of female reproductive disorders and on patients discharged from short-stay hospitals with related surgery. Visits are described in terms of patient, physician, and clinical characteristics. Breast and gynecological surgery is shown in terms of associated diagnoses and is charted for 1970-78.

Data From the National Health Survey Series 13, No. 63

National Center for Health Statistics

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Preface

In accordance with specifications established by the National Center for Health Statistics, the U.S. Bureau of the Census, under a contractual arrangement, participated in planning the survey and collecting the data in the National Hospital Discharge Survey.

Analysis of data and interpretation of findings contained in this report were performed by the Division of Health Care Statistics, National Center for Health Statistics.

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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

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Use of Health Services for Disorders of the Female Reproductive System

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

Introduction

Findings of the 1977-78 National Ambulatory Medical Care Survey and the National Hospital Discharge Survey, conducted by the Division of Health Care Statistics in the National Center for Health Statistics, indicate that disorders of the female reproductive system have a major impact on the utilization of at least two of the nation's health care systems: ambulatory care, exemplified by office-based medical practice, and inpatient care provided in short-stay hospitals. Extensive use of these health resources suggests that disorders of the female reproductive system account for a large portion of direct and indirect costs of health care.

The primary focus of this report is the characteristics of visits to office-based physicians by women 15 years of age and over with reproductive disorders. Rates of breast and gynecological surgery also are included and based on data collected in the National Hospital Discharge Survey from 1970 through 1978.

The category of disorders of the reproductive system used in this analysis includes neoplasms and diseases of the breast, and neoplasms and diseases of the female genital tract. It does not include infective and parasitic diseases, venereal diseases, diseases of the urinary system, and complications of pregnancy and the puerperium, although these conditions may give rise to or be associated with reproductive disorders.

Detailed tables are based primarily on the principal, or first-listed, diagnosis which the physician indicated as his evaluation of the patient's condition related to the chief complaint or other reason for the visit. Diagnoses were classified and coded according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA).[1]

Background

Utilization of health care resources by patients with specific health problems has its roots in the prevalence of these problems in the population. About 20 of each 1,000 women interviewed during the 1978 National Health Interview Survey, a population-based survey conducted by the National Center for Health Statistics, claimed they suffer from "female troubles" (not including breast problems).[a] The proportion that reported physician visits for "female troubles" was higher than that of any other chronic condition reported in the same survey, even though prevalence rates for some of the other conditions were higher than the 20 per 1,000 prevalence rate of the group of conditions characterized as "female." An estimated 92 percent of the women who reported these problems claimed to have visited a physician at least once during the past year. About one-third of the respondents reported that they had been hospitalized at some time before the survey, and 45 percent said they spent one or more days in bed during the past year because of the problem. The number of women who reported physician visits and hospital stays would be higher if breast problems, which were not reported, were included.

Data on physician visits and hospital stays also were collected in the National Health Interview Survey (NHIS), but estimates differ from those collected in the National Ambulatory Medical Care Survey and the National Hospital Discharge Survey because of differences in populations sampled, definitions, and collection procedures. Data on specific conditions reported by household participants in the NHIS, as opposed to data collected from physicians in the NAMCS, tend to be underestimated.

Measured by patient population, the physician's private office is the major setting for health care, and women are the major consumers. According to data collected in the NAMCS, women 15 years of age and over made an estimated 592 million visits to office-based physicians during the 2-year period 1977-78, an average annual rate of 3.5 visits for each woman that age group in the population. About 45.5 million, or 7.7 percent, of these visits were for reproductive dis-

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[a] Unpublished data from the 1978 National Health Interview Survey.

orders (figure 1). The relative magnitude of these problems becomes apparent when this proportion is compared with that of visits for prenatal care, which was the leading specific condition for which physician visits were made and which accounted for 7.3 percent of all visits by women 15 years of age and over.

In the hospital setting, women also are the predominant users of surgical services. Gynecological surgery (usually elective surgery related to diagnoses made in the physician's office) was the leading type of surgery performed in short-stay hospitals during 1977-78, according to data collected in the NHDS.[2] For women 15-44 years of age, the rate of 61 gynecological and breast procedures per 1,000 exceeded the rate of 48 per 1,000 for normal delivery.

Prior to data presentation, the scope of the NAMCS and NHDS and limitations of the data are described briefly to assist the reader in interpreting the estimates.
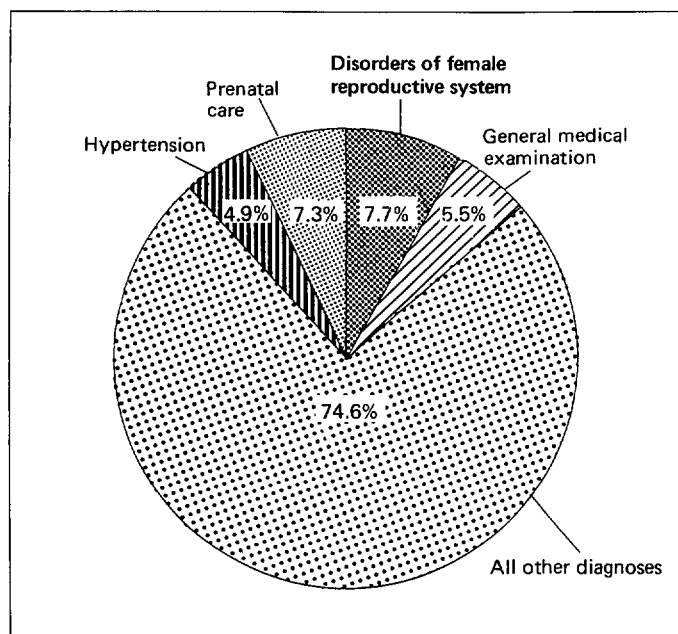
Figure 1. Percent distribution of office visits by patients 15 years of age and over for disorders of the female reproductive system and other most frequent principal diagnoses: United States, 1977-78

Description and scope of the surveys

The National Ambulatory Medical Care Survey is a sample survey conducted annually by the Division of Health Care Statistics of the National Center for Health Statistics.

Data collection and processing for the 1977 and 1978 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 American Osteopathic Association.

The basic sampling unit for the National Ambu-

latory Medical Care Survey was the physician-patient encounter or visit. The current scope of the National Ambulatory Medical Care Survey includes all office visits within the conterminous United States made by ambulatory patients to non-Federally employed, office-based physicians as classified by the American Medical Association or the American Osteopathic Association. The National Ambulatory Medical Care Survey 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. The definitions for office, physician, patient, and visit that were used to determine eligibility for the National Ambulatory Medical Care Survey are presented in appendix II.

Data presented on hospital discharges are from the National Hospital Discharge Survey, an ongoing, nationwide sample survey of short-stay hospitals in the United States. The scope of the NHDS encompasses patients discharged from hospitals, excluding military and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only hospitals that have six beds or more for patient use and in which the average length of stay for all patients is fewer than 30 days are included.

Definitions of terms relating to the NHDS may be found in appendix II of *Vital and Health Statistics,* Series 13, No. 46.[3]

Source and limitations of the data

Estimates of office visits 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 1977 and 1978 National Ambulatory Medical Care Surveys included 6,007 physicians, 973 of whom were ineligible because they were out of scope at the time of the survey. Of 5,034 eligible physicians, 3,782 (75.1 percent) participated (see appendix I).

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 98,335 visits.

Facsimiles of survey materials used in NAMCS such as the introductory letter and induction interview form were published in *Vital and Health Statistics,* Series 13, No. 44.[4]

The 1977 and 1978 NHDS samples of discharges obtained from participating hospitals included approximately 224,000 and 219,000 medical records respectively. Additional information relating to the 1977 and 1978 NHDS samples was published in *Vital and Health Statistics,* Series 13, Nos. 41 and 46.[3,5]

These reports included a facsimile of the NHDS Medical Abstract.

The appendixes to this report and the appendixes in the NHDS references should be read to properly understand and interpret the statistics presented. Appendix I contains a general description of the NAMCS methods, the sample design, and the data collection and processing procedures. Methods of estimation and imputation also are presented. The statistics in this report are based on samples of office visits and hospital discharges rather than on all visits and discharges and are subject to sampling errors. Therefore, particular attention should be given to the section on "Reliability of estimates" in appendix I and in references 3 and 4. Charts of relative standard errors and instructions for use also are shown in appendix I of this report and the NHDS references.

The 1977 and 1978 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. Therefore, the reader should note that estimates of numbers of visits contained in this report are for a 2-year period, but ratios and rates represent average annual estimates.

Highlights

- During the 2-year period 1977-78, women made an estimated 45.5 million visits to office-based physicians for care and treatment of reproductive disorders.

- Breast conditions diagnosed during visits were chiefly chronic cystic disease and other (non-neoplastic) diseases of breast.

- Diagnoses related to the uterus were the most likely conditions found in the genital tract, followed by disorders of menstruation.

- Visits for malignant neoplasms of the breast were proportionately more frequent than those of a benign nature because patients with malignant conditions made about five return visits for each visit in which the condition was presented as a new problem, but patients with benign neoplasms of breast made only about one return visit.

- Three times as many visits were made for benign neoplasms of the genital tract as for malignant neoplasms, but patients returned more frequently for care of malignancies.

- White women visited physicians more frequently than black and all other women did for breast

conditions and menopausal symptoms; the visit rate for black and all other women was higher for diseases of parametrium and pelvic peritoneum (chiefly pelvic inflammatory disease).

- Among physician specialties, general surgeons received the largest proportion of visits for breast diseases. Obstetrician-gynecologists received the majority of visits for genital tract disorders. General and family practice was the second-ranking specialty in visits for reproductive disorders.

- The rate of office visits that included a Pap test decreased as the age group of the patients advanced.

- The rate of partial mastectomy performed in short-stay hospitals declined from 1975 to 1978. Rates for complete or radical mastectomy were consistently lower than rates for the partial procedure but were more stable from 1970 to 1978.

- From 1970 to 1977, diagnostic dilation and curettage (D & C) of uterus was the most frequently performed type of gynecological surgery.

- During 1978, the rate of tubal sterilization by ligation or occlusion exceeded the rate of D & C.

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Diagnostic scope and intensity of physician utilization

The distinction between prevalence or incidence of a disease and physician visits for a disease should be noted when interpreting these data. The rate of physician visits does not necessarily reflect the degree to which a condition is present or arises in the population, notwithstanding that visits to the physician's office may be motivated by a pathological condition or the visit may result in detection of the condition. The NAMCS was designed to provide information concerning provision and use of certain ambulatory medical care services and is, therefore, a valuable source of data concerning utilization of physicians' services when visits are characterized by specific diseases. Prevalence and incidence data may be obtained from other surveys conducted by NCHS.[b]

Of the estimated 45.5 million visits made during 1977-78 for care and treatment of reproductive disorders, 8.6 million were attributed to breast conditions and 36.9 million to disorders of the female genital tract (table A).

Breast diagnoses

The majority of visits that involved breast conditions were for chronic cystic disease and other (non-neoplastic) diseases of the breast (54.7 percent). Visits for malignant neoplasms of the breast were twice as numerous as those for benign and unspecified neoplasms—2.6 million compared with 1.3 million.

Genital tract diagnoses

The most common diagnoses that involved the genital tract were related to the uterus (8.9 million visits), followed by disorders of menstruation (7.9 million).

Unlike visits for neoplasms of the breast, visits for

neoplasms of the genital organs were more likely to involve neoplasms of a benign or unspecified nature— 3.6 million visits involved conditions classified as benign or unspecified, and .9 million visits involved conditions considered malignant.

Return visit rate

The extent of utilization of physicians' services is influenced by many variables other than prevalence of diseases. Among these are availability of care, attitude toward health care, and health insurance coverage. NAMCS was not designed to provide such information. But the *intensity* of utilization for specific conditions, after the choice is made to use physicians' services, may be estimated by the return visit rate (RVR). The RVR is the ratio of return visits for continuing care to the number of visits in which the patient presented that condition as a new problem (table A). A high RVR indicates many return visits relative to the number of new problem visits. There is not necessarily a positive correlation between the RVR and the number of visits. For example, malignant neoplasms of the breast had the highest RVR in the breast conditions group (5.4), but the total number of visits (2.6 million) did not exceed the number for chronic cystic disease and other nonneoplastic diseases of breast (4.7 million). Similarly, malignant neoplasms of the genital organs exhibited the highest RVR (3.6) in the group with that condition but had the fewest number of visits (942,000). Thus these problems may be presumed more return-visit intensive than others.

On the other hand, an RVR of less than one indicates a low return-visit intensive condition because new problem visits exceeded return visits. On the average, benign and unspecified neoplasms of breast, diseases of ovary and fallopian tubes, diseases of parametrium and pelvic peritoneum, diseases of uterus, and disorders of menstruation were low return-visit intensive. It is possible that early surgical intervention

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[b]For example, see publications of NHIS (Series 10).

Principal diagnosis and ICDA code[1]	Number of visits in thousands	Percent distribution	Return visit rate[2]
Total neoplasms and diseases of breast 174, 217, 233, 610-611	8,606	100.0	1.9
Benign and unspecified neoplasms of breast 217, 233	1,261	15.1	0.8
Malignant neoplasms of breast 174	2,624	30.2	5.4
Chronic cystic disease and other (nonneoplastic) diseases of breast 610-611	4,722	54.7	1.5
Total neoplasms and diseases of female genital tract 180-184, 218-221, 234-236, 612-616, 620-629	36,901	100.0	1.2
Benign and unspecified neoplasms of female genital organs 218-221, 234-236	3,563	9.7	1.4
Malignant neoplasms of female genital organs 180-184	942	2.6	3.6
Diseases of ovary and fallopian tubes 612-615	1,734	3.1	0.9
Diseases of parametrium and pelvic peritoneum[3] 616	1,970	5.3	0.7
Infective diseases of cervix uteri and other diseases of cervix 620-621	3,305	9.0	1.6
Infective diseases of uterus (except cervix), vagina, and vulva; and other diseases of uterus 622-625	8,912	24.2	0.9
Other diseases of female genital organs 629	1,473	4.0	0.5
Disorders of menstruation 626	7,933	21.5	0.7
Menopausal symptoms 627	6,678	18.1	3.4
Sterility 628	990	2.7	2.2

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2]The ratio of return visits to new problem visits. A return visit rate of less than 1.0 indicates that new problem visits exceeded return visits.
[3]Chiefly pelvic inflammatory disease (616.0).

for some of these occasionally acute conditions (especially if bleeding is present) reduced the number of return visits to the physician. (Gynecological surgery related to these problems is discussed in the section of this report on inpatient surgery.) Because menopausal symptoms, for which surgical intervention or hospital care usually is not indicated, had a relatively high RVR (3.4), this suggestion is plausible. The relatively high RVR's for malignant conditions, for which surgical intervention and hospital care usually are indicated, seem to refute this idea. However, prolonged postsurgical monitoring is needed in these cases. Conditions related to the reproductive system were not as return-visit intensive as were chronic conditions such as diabetes mellitus (RVR = 7.7), hypertension (9.4), and chronic ischemic heart disease (12.4).[6]

Diagnostic concomitance

Although the principal, or first-listed, diagnosis is the primary emphasis of this report, second-listed diagnoses also provide information on the extent of use of physicians' services for disorders of the reproductive system.[c] Multiple related diagnoses are common in gynecology. In this event, the first- and second-listed diagnoses may be within the reproductive disorder group. These conditions also may be present in patients who visit physicians for other un-

related problems, such as hypertension, which are more closely related to the patient's chief complaint or other reason for visit. If the reproductive disorder is known to exist in the patient or it is diagnosed during the visit, it is likely to be listed second on the Patient Record. It is also instructive to examine the conditions that may coexist when the principal diagnosis is a disorder of the reproductive system, whether the conditions are in the same category or in an unrelated group.

The combined number of first- and second-listed diagnoses of selected specific disorders of the reproductive system may be obtained by adding the number of visits for a condition shown in table A to the number of visits for the same condition shown in table B. This result is divided by two to provide an average annual number of mentions of the condition. For example, there were 7.9 million principal (table A) and 1.8 million second-listed (table B) diagnoses of disorders of menstruation—a total of 9.8 million mentions, or an annual average about 4.9 million mentions of this diagnosis.

Table C shows the diagnoses that most commonly were listed second when a disorder of the female genital tract was the principal diagnosis. As expected, three types of anatomically related diagnoses accounted for approximately 12 percent of second-listed diagnoses. These diagnoses were benign and unspecified neoplasms of the genital organs, cystitis and other diseases of bladder and urinary tract, and diseases of the genital tract.

Obesity, neuroses, and hypertension also were included among second-listed conditions, but these

[c]Up to three diagnoses may be listed on the Patient Record. Because approximately 93 percent of the visits used in this report had no third-listed diagnosis, only second-listed diagnoses were used in the analysis.

Table B. Number and percent distribution of office visits for disorders of the female reproductive system, by second-listed diagnoses: United States, 1977-78

Second-listed diagnoses and ICDA code[1]	Number of visits in thousands	Percent distribution
Total neoplasms and diseases of breast 174, 217, 233, 610-611	1,465	100.0
Benign and unspecified neoplasms of breast 217, 233	*216	14.7
Malignant neoplasms of breast 174	386	26.3
Chronic cystic disease and other (nonneoplastic) diseases of breast 610-611	863	58.9
Total neoplasms and diseases of female genital tract 180-184, 218-221, 234-236, 612-616, 620-629	12,070	100.0
Benign and unspecified neoplasms of female genital organs 218-221, 234-236	1,228	10.2
Malignant neoplasms of female genital organs 180-184	414	3.4
Diseases of ovary and fallopian tubes 612-615	351	2.9
Disease of parametrium and pelvic peritoneum[2] 616	555	4.6
Infective diseases of cervix uteri and other diseases of cervix 620-621	1,142	9.5
Infective diseases of uterus (except cervix), vagina, and vulva; and other diseases of uterus 622-625	3,590	29.7
Other diseases of female genital organs 629	582	4.8
Disorders of menstruation 626	1,829	15.2
Menopausal symptoms 627	2,202	18.2
Sterility 628	*177	1.5

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2]Chiefly pelvic inflammatory disease (616.0).

Table C. Number and percent distribution of office visits for principal diagnoses of diseases of the female genital tract, by most frequent second-listed diagnoses: United States, 1977-78

Second-listed diagnoses and ICDA code[1]	Number of visits in thousands	Percent distribution
All visits for principal diagnosis	36,901	100.0
No second diagnosis listed	24,368	66.0
Benign and unspecified neoplasms of female genital organs 218-221, 234-236	536	1.5
Obesity 277	422	1.1
Anemia 280, 285	*279	0.8
Neuroses 300	*320	0.9
Essential benign hypertension 401	744	2.0
Cystitis and other diseases of bladder and urinary tract 595-599	548	1.5
Diseases of the female genital tract 612-616, 621-629	3,448	9.3
Medical or special examinations Y00	465	1.3
Surgical aftercare Y10	958	2.6
All other diagnoses . . . . .Residual	4,813	13.0

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

diagnoses may be expected in a list of diseases found during women's visits because they were among the top-ranking conditions diagnosed in all women's visits during 1977.[7] It is quite probable that one or more of these conditions would appear frequently no matter what principal diagnosis was under scrutiny.

Medical or special examinations (chiefly laboratory or pregnancy examinations) and surgical aftercare were listed second on Patient Record forms for a total of approximately 4 percent of visits.

Patient characteristics

Patient age

Table 1 presents the percent distribution and average annual visit rate per 1,000 women for disorders of the reproductive system by age and race.

Age of the patient appears to be a factor in the nature of neoplasms found during visits. When visits were made for benign and unspecified neoplasms of breast, approximately 62 percent involved women 15-44 years of age. However, when malignancies of breast were involved, approximately 84 percent of visits were by women over 44 years of age. Among specific 10-year age groups, the highest visit rate for benign and unspecified neoplasms of breast was 16.1 per 1,000 women 35-44 years of age; for malignancies of breast, the highest rate was 37.6 per 1,000 women 65 years of age and over. Women 35-44 years of age also had the highest visit rate for chronic cystic disease and other (nonneoplastic) diseases of breast (51.4 per 1,000 women).

Except for menopausal symptoms and malignant neoplasms of the genital organs, visits for genital tract disorders were proportionately more frequent among patients in their reproductive years, 15-44 years of age, than among older patients. Similar to the age division of visits for breast conditions, women 15-44 years of age were more likely to visit for benign and unspecified neoplasms of genital organs, while older women were more likely to visit for malignancies. About two-thirds of the visits for benign and unspecified neoplasms included patients 15-44 years of age, but approximately 72 percent of the visits for malignant conditions were made by women 45 years of age and over. Among 10-year age groups, the highest visit rate for benign and unspecified neoplasms was attributed to patients 25-34 years of age. Rates for malignant conditions did not vary significantly among age groups, but this probably was due to the small

sample of visits, which tended to result in large sampling error.

Patients 45-54 years of age with menopausal symptoms visited at a higher rate (151 per 1,000 women) than did any other age group for any of the specific reproductive system disorders included in this report. Women 55-64 years of age continued to visit for this problem but at about half the rate (62 per 1,000 women) of the next younger group.

Except for diseases of parametrium and pelvic peritoneum (chiefly pelvic inflammatory disease) in which the highest rate among age groups was 26 per 1,000 for patients 15-24 years of age, visit rates for other diseases of female genital organs were highest for visits made by patients 25-34 years of age. Within this age group, rates for disorders of menstruation (73 per 1,000) and diseases of uterus (72 per 1,000) were the most prominent.

Patient race

The visit rate for the total of breast conditions shown in table 1 was higher for white women than for women of all other races (54 per 1,000 white women compared to 33 per 1,000 of all other races). Because of the large sampling error for the number of visits by black and all other women with specific breast conditions, differences among those rates were not statistically significant.

The rate of white women who visited for treatment of menopausal symptoms was about twice that of black and all other women (42 per 1,000 compared with 21 per 1,000). However, women other than white visited for diseases of parametrium and pelvic peritoneum at a rate of 26 per 1,000 compared with 10 per 1,000 by white women.

Differences in other visit rates by race were not statistically significant.

Physician characteristics

Utilization by specialty

General surgeons received the largest share (47 percent) of visits for neoplasms and diseases of the breast (figure 2), but the majority of visits for genital tract disorders (57 percent) were made to obstetrician-gynecologists (OBG's) (figure 3). General and family practitioners (GFP's) were the second ranking providers—they received 32 percent of the visits for genital tract disorders and 18 percent of visits made for breast problems. Although internists received only 5 percent of all visits for diseases of the genital organs, they had a larger proportion of visits for breast conditions. The difference between the proportions of visits for breast conditions to internists (13 percent)

and to OBG's (12 percent) was not statistically significant. However, closer analysis of the data revealed that the majority of visits for breast conditions to internists was due to malignant neoplasms (58 percent); 79 percent of all visits for breast conditions made to OBG's were for chronic cystic disease (data not shown). This probably reflects the age distribution among patients who visited the two types of practitioners. Patients who visited internists were likely to be 45 years of age and over, while patients who visited OBG's generally were younger than 45 years of age. As shown in table 1, malignant neoplasms were more likely to be diagnosed for women 55 years of age and over than for younger women; chronic cystic disease and other (nonneoplastic) dis-
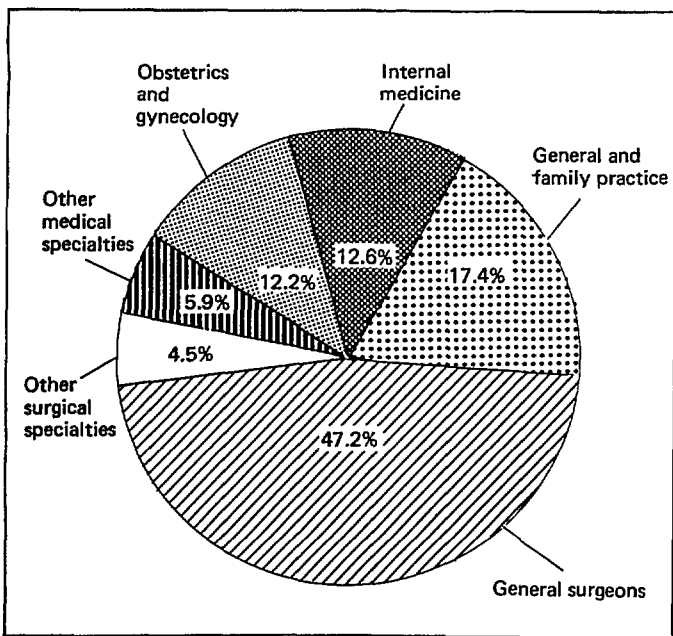

Figure 2. Percent distribution of office visits by women 15 years of age and over for neoplasms and diseases of breast, by physician's specialty: United States, 1977-78
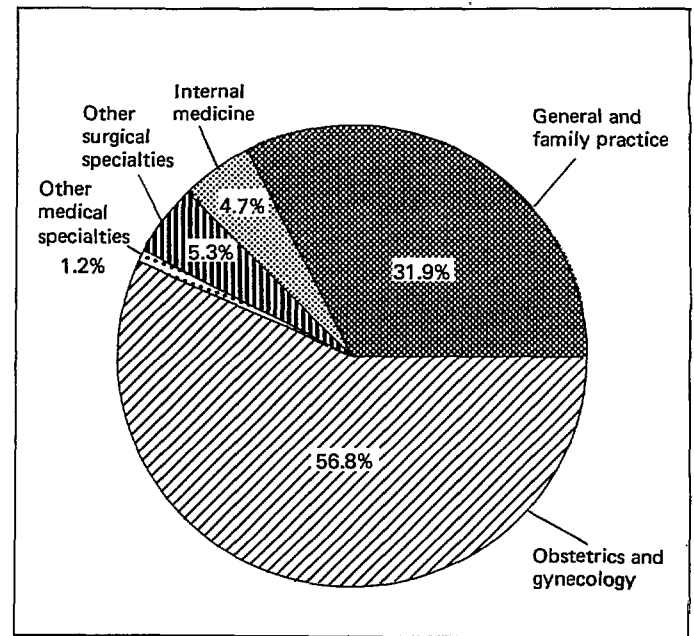

Figure 3. Percent distribution of office visits by patients 15 years of age and over for neoplasms and diseases of the female genital tract, by physician's specialty: United States, 1977-78

eases of breast were diagnosed proportionately more frequently for women younger than 55 years of age than for older women.

Proportion of physician's practice

The impact of patients with diseases of the reproductive system on the practices of various specialties may be evaluated by estimating the proportion of the specialist's practice devoted to treating these problems. Table D shows that two surgical specialties, obstetrics and gynecology, and general surgery had proportionately larger caseloads of patients with these conditions than other specialties did. OBG's saw patients with reproductive disorders in 21 percent of all visits (prenatal care and other special examinations accounted for another 57 percent). General surgeons treated patients with reproductive disorders in about 8 percent of their visits.

Because of the broad spectrum of conditions seen by GFP's, reproductive disorders accounted for only about 4 percent of all their visits. Similarly, the average internist's practice included about 2 percent of visits for reproductive disorders.

Proportions of practices were distributed similarly among the various specialties shown in Table D when the unit of measurement was the total amount of time spent in direct patient encounter. If only a member of the physician's staff saw the patient, the visit was counted, but time spent between physician and patient was considered as zero minutes and, therefore, was not included in total time for this calculation. Duration of visit is discussed further in the section "Clinical characteristics." There was a slight variation between the percentages based on time and those based on number of visits, but the comparative magnitude remained unchanged. The average duration of a visit varied by specialty but, for patients who visited for reproductive disorders, it did not differ significantly from the comparable average of all other visits for each specialty.

Table D. Number and percent of office visits, percent of patient contact time, and mean contact duration of office visits for disorders of the female reproductive system, by selected physicians' specialties: United States, 1977-78

Physicians' specialty	Number of visits in thousands	Percent of all visits	Percent of total patient contact time[1]	Mean contact duration in minutes[1]	
				Disorders of the reproductive system	All visits
All primary care specialties, except pediatrics	38,092	5.7	6.6	...	...
General and family practice	13,272	3.1	3.6	15.9	12.9
Internal medicine	2,814	2.1	2.2	19.9	19.2
Obstetrics and gynecology	22,006	21.1	25.3	16.7	14.1
General surgery	5,777	8.3	8.8	14.4	13.5
All other specialties	1,638	0.4	0.5	...	...

[1]Excludes visits without face-to-face contact between physician and patient.

Clinical characteristics

Time since onset of complaint

Table 2 shows that 55 percent of the visits for new problems of the breast and 46 percent of visits for new problems of the female genital tract were made within 3 weeks of the onset of the problem or the patient's sensory awareness of the complaint. Patient education regarding self-examination may be responsible for women seeking early care of newly detected symptoms. About 41 percent of the visits for new problems diagnosed as benign and unspecified breast neoplasms occurred within 1 week and 68 percent within 3 weeks.

Time that elapses between the patient's awareness of the problem and the visit to the physician may be attributed partially to scheduling of appointments. Women reported they must wait an average of 7.8 days for an appointment with their physicians.[8] The urgency of a problem is suggested when the average time since onset is less than the average time spent waiting for an appointment. Approximately 53 percent of patients with pelvic inflammatory disease, a condition that causes great distress, were examined by physicians within 1 week and 85 percent within 3 weeks. For all new problem visits made by women, the comparable proportions were 37 percent and 55 percent.

In contrast, patients hoping to conceive wait a considerable length of time before they seek medical help. According to NAMCS data, 78 percent of visits for sterility were made 3 months or more after onset or first perception of the problem. The amount of time probably was much greater, but the Patient Record did not include a more detailed breakdown of the length of time.

Compared with the average time for all visits between onset of complaint and visit to physician, women with menstrual disorders and menopausal symptoms waited longer to see physicians. Approximately 32 percent of women with menstrual disorders visited within 1 to 3 months of onset, and 27 percent waited 3 months or longer. For women with

menopausal symptoms, 31 percent and 36 percent were the comparable proportions. For all conditions, these proportions were 14 percent and 18 percent.

Seriousness of condition

Malignant neoplasms of breast (86 percent) and of female genital organs (74 percent) more frequently were evaluated as serious or very serious by the physician than other conditions were (table 3). As mentioned, these conditions also had the highest return visit rates. Benign neoplasms were the second ranking conditions most likely to be judged serious or very serious, with 30 percent of visits for the breast site and 22 percent of those of the genital organs so classified. These proportions exceeded the average proportion of 18 percent for all conditions with the same degree of seriousness.

The majority of visits for other reproductive disorders were classified as not serious or slightly serious proportionately more often than as more serious. Menopausal symptoms and sterility—probably the least life-threatening diagnoses in the reproductive disorder group—more often were evaluated as not serious than other reproductive disorders were. The conditions of 72 percent of patients with menopausal symptoms, and 67 percent of patients with sterility problems were considered not serious by the physician compared with 51 percent of patients with diagnoses other than reproductive disorders.

Diagnostic services

A limited history and/or examination was proportionately more frequent than average when the diagnosis was chronic cystic disease and other (nonneoplastic) diseases of breast (table 4). About 72 percent of these visits included the limited type of examination compared with the average of 60 percent for all diagnoses other than reproductive disorders. The item on diagnostic services in the NAMCS did not include

breast examinations but, if a breast examination was performed during the visit, it probably was included on the Patient Record under the limited examination category option.

Pap tests were proportionately more common when reproductive disorders (except breast neoplasms) were diagnosed than when other conditions were present. Proportions of Pap tests shown in table 4 range from approximately 16 percent for patients with chronic cystic disease and other diseases of breast (excluding breast neoplasms) to approximately 40 percent for conditions diagnosed as disorders of menstruation.

Figure 4 shows the variations in the rate of visits that included a Pap test according to the patient's age group. For patients 15-24 years of age, approximately 333 visits per 1,000 women included a Pap test. The rate peaked at 530 per 1,000 for the age group 25-34, declined to approximately 382 per 1,000 for the age group 35-44 and decreased to 163 per 1,000 for women 65 years of age and over. This was a 69-percent decrease from the age group 25-34 years to the group 65 years of age and over. A reduction in the frequencies of Pap tests for older women is contraindicated by other NAMCS data and by the incidence data of cervical cancer. According to table 1,
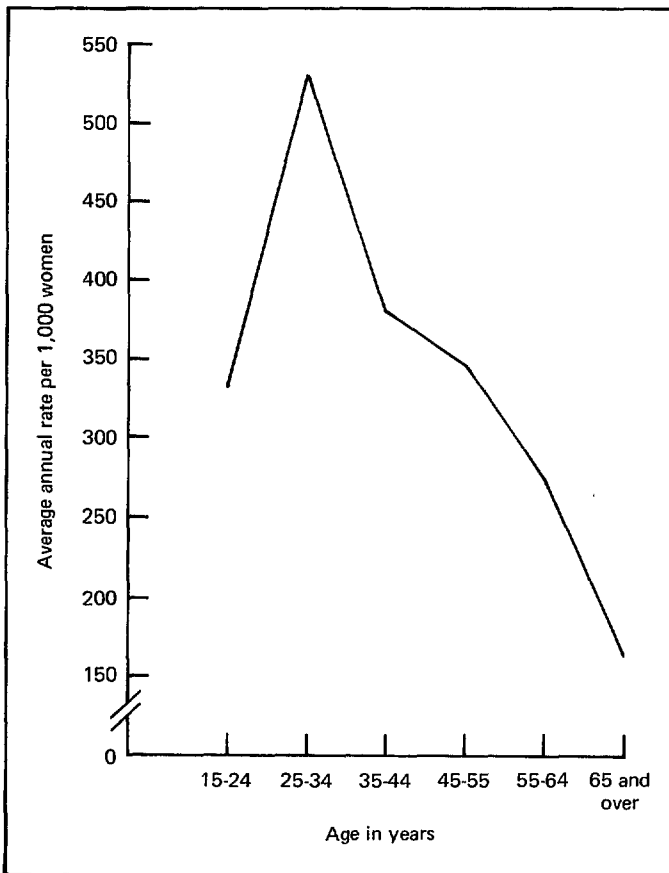

Figure 4. Average annual rate of office visits including a Pap test, by age of patient: United States, 1977-78

visit rates for many genital tract disorders (often precursors of malignant neoplasms) remained high until at least 54 years of age. Data from the National Cancer Institute indicate that, during 1973-76, incidence rates of cervical cancer increased as patients grew older—from approximately 5 cases per 100,000 women 25-29 years of age to 16 cases per 100,000 women 65-69 years of age.[9] In an analysis of 1973 data from the National Health Interview Survey, Kleinman and Kopstein reported that women 45-64 years of age were 2.8 times more likely than women 25-44 years of age to report never having undergone a Pap test.[10] Fruchter et al. found that 51 percent of women diagnosed with primary invasive cervical cancer in two hospitals between July 1976 and December 1978 were over 50 years of age, and 64 percent of those cancer patients over 50 years of age never had undergone a Pap test.[11] Yet, despite recommendations by these researchers for increased screening during ambulatory care visits, older women proportionately underwent fewer Pap tests during physician visits than younger women, at least until 1978.

Higher than average proportions of clinical laboratory tests were ordered or provided during visits for malignant neoplasms of breast and female genital organs (approximately 35 percent for each); diseases of cervix, uterus, vagina, vulva and other female genital organs (32 percent); disorders of menstruation (32 percent); and sterility (45 percent).

X-rays tended to be proportionately more frequent when breast conditions were presented than when genital tract disorders or other diagnoses were presented.

Because menopausal symptoms and hypertension correlate positively with each other and with age, it is not surprising to find that cautious physicians measured blood pressure during more than one-half of visits by menopausal women, a higher proportion than the 43 percent of visits by women who visited for problems other than reproductive disorders. In fact, blood pressure measurement was more common during women's visits for all reasons (44 percent) than men's (33 percent).[7]

Therapeutic services

NAMCS data showed that, as with other visits reported, prescription and nonprescription drugs was the most commonly used therapy for women with reproductive disorders. Most patients with menopausal symptoms were treated with drugs (78 percent), as were patients who visited for diseases of ovary and fallopian tubes and for diseases of parametrium (70 percent). However, patients with breast diseases and neoplasms of the female genital tract received less than average proportions of drug therapy. Other types of therapy for neoplasms, such as chemo-

therapy and radiation therapy, are not commonly administered in physicians' offices. Beginning in 1980, data on specific drugs ordered or administered during visits were collected in NAMCS. Future publications will include this information.

The higher than average proportions of office surgery performed during visits for some reproductive conditions reflect the high rate of gynecological surgery associated with these conditions. (Surgery rates and associated diagnoses are discussed in the section "Inpatient surgery.") Follow-up visits to the physician's office after hospitalization for major surgery related to reproductive disorders sometimes include minor surgery such as suture removal, draining of abscesses, and excision. In some cases, office visits for the latter two procedures eliminate the need for inpatient care. Approximately 16 percent of visits for all breast conditions and 11 percent of visits for diseases of cervix, uterus, vagina, vulva, and other female genital organs included office surgery, compared with the average of 7 percent for all other diagnoses.

Disposition of visit

The relationship between ambulatory care and inpatient care of reproductive disorders also is suggested by the higher than average proportions of visits that resulted in admission of the patient to a hospital. Table 5 shows that 7 percent of patients with neoplasms and diseases of breast, 7 percent of patients with neoplasms and diseases of female genital organs, and 8 percent of patients with disorders of menstrua-

tion were sent to the hospital compared with an average of 2 percent of patients who visited for all other diagnoses.

Table E shows that patients with problems judged by the physician to be serious or very serious were more likely to be admitted to the hospital than patients with less serious problems were. Approximately 11 percent of patients deemed to be in serious or very serious condition due to breast disorders and 21 percent of similarly evaluated patients with genital tract disorders were admitted to a hospital.

As with other visits reported in the NAMCS, most patients were told to return to the physician's office at a specified time. When no followup was planned, it was more likely to be for patients judged to be not in serious condition.

Patients with neoplasms and diseases of breast and female genital organs were more likely to be referred to another physician or agency than patients with other conditions were (table 5). About 6 percent of patients with breast conditions and 5 percent of patients with genital conditions were referred compared with about 2 percent with all other diagnoses.

Of all new patients referred because of breast disorders, 83 percent were examined in the offices of general surgeons (table F). OBG's examined 77 percent of patients referred with disorders of the genital tract. This referral pattern reflects the recognized specialties of these practitioners. Of 20.2 million new patients with other diagnoses who visited physicians by referral, 78 percent visited specialties other than general surgery and obstetrics-gynecology.

Table E. Number of office visits, percent by disposition of visits, and percent distribution by duration of visits, according to breast and genital tract disorders: United States, 1977-78

Disposition and duration	Breast disorders			Genital tract disorders		
	Serious or very serious	Slightly serious	Not serious	Serious or very serious	Slightly serious	Not serious
	Number in thousands					
All visits	3,184	2,560	2,862	4,336	12,343	20,223
Disposition[1]	Percent distribution					
No followup planned	*2.7	*1.3	12.9	*0.7	3.0	5.7
Return at specified time	74.1	73.4	64.4	59.2	64.4	57.9
Return if needed	*7.5	*12.3	16.4	10.9	21.5	31.6
Telephone followup	*2.2	*5.7	*1.4	*3.5	5.5	4.2
Referred to another physician or agency	*9.2	*5.0	*2.8	9.6	3.4	2.2
Admit to hospital	10.9	*6.3	*2.4	21.4	8.1	*1.0
Duration[2]						
0 minutes	*2.8	*1.5	-	*1.2	*2.5	5.3
1-10 minutes	34.3	38.3	47.8	18.7	29.3	31.1
11-15 minutes	33.5	32.9	32.0	30.0	33.0	34.9
16-30 minutes	27.3	21.5	18.0	41.5	31.3	25.3
31 minutes or more	*2.3	*5.9	*2.3	8.6	3.9	3.5

[1]Percents will not total 100.0 because more than 1 disposition was possible.
[2]Time spent in face-to-face encounter between physician and patient.

Table F. Number of new patients referred by another physician, and percent distribution by physician's specialty to which patients were referred, according to disorders of the breast and female genital tract and for all other diagnoses: United States, 1977-78

Physician's specialty	Breast disorders	Disorders of the female genital tract	All other diagnoses
	Number in thousands		
All new patients referred	952	1,590	20,247
	Percent distribution		
All specialties	100.0	100.0	100.0
General surgery	83.1	*10.6	11.5
Obstetrics and gynecology ...	*4.8	76.7	10.4
All other specialties	*12.1	*12.7	78.1

Duration of visit

The mean duration of a visit and the proportion of total visit time spent by physicians in treating patients with reproductive disorders were discussed in the section on physician characteristics. Visit duration also relates to the clinical aspects of the visit in the context of diagnoses.

Visits during which the patient saw only a member of the physician's staff were not counted in the calculation of total time spent by the physician, but these visits were included in the category zero minutes in table 5, in which visits are distributed by selected time intervals.

A higher than average proportion of patients who visited for menopausal symptoms were in the zero minutes category. This directly reflected the higher than average proportion of the same group who received drug therapy, inasmuch as many of these patients probably received an injection of medication from a nurse or other professional on the physician's staff. Administration of medication also partially may account for the relatively high return visit rate because medication usually is administered regularly to patients with menopausal symptoms.

The distribution of visits for other conditions by time interval did not vary significantly from the average.

It was not clear whether duration of visits was related to the degree of seriousness attributed to the problem by the physician (table E). When the condition of patients with breast disorders was considered not serious, visits were more likely to last from 1-10 minutes (48 percent) than for a longer period. If the degree of seriousness was correlated with visit duration, the expected corollary would be that breast disorders that were evaluated as serious or very serious would fall proportionately more often within longer intervals. But, as table E shows, this was not the case. It may be that the limited extent of breast examination does not require lengthy visits.

On the other hand, the majority of visits for serious or very serious genital tract disorders fell within longer intervals (42 percent lasted 16-30 minutes and 9 percent lasted 31 minutes or longer). However, unlike visits for breast disorders, conditions rated not serious were not noticeably associated with shorter visits. This also may be a reflection of the type and extent of examination.

Inpatient surgery

Using NAMCS and NHDS data, a direct connection cannot be shown between patients referred for hospital care of reproductive disorders and patients discharged from short-stay hospitals after breast and gynecological surgery. This is due partially to methodological differences between the two surveys. Other than methodological considerations, two obvious reasons are that (1) patients may be admitted to hospitals from many sites other than physicians' offices as defined in NAMCS, and (2) not all admitted patients undergo surgery. During 1977-78, 2.7 million office visits by women with reproductive disorders resulted in hospital referral; 5.1 million patients 15 years of age and over with the same first-listed diagnoses were discharged from short-stay hospitals.[3,5] During the same period, NHDS data showed that 8.5 million all-listed breast and gynecological procedures were performed. Counting all-listed procedures implies that more than one procedure may have been performed for a discharged patient. This method also contributes to the difficulty in comparing NAMCS and NHDS data, but it is a practical measure of utilization for hospital events.

It is reasonable to assume, however, that patients who were referred to a hospital according to NAMCS findings were represented in a subset of the discharged patients in the NHDS. Because the purpose of this section is simply to demonstrate some of the sequelae of the problems seen in physicians' offices, survey estimates need not necessarily agree.

Diagnosis and surgical procedure

Except in rare cases, breast and gynecological surgery was probably preceded by illnesses for which ambulatory care was provided. The most frequent all-listed diagnoses shown on NHDS medical records in the presence of selected all-listed breast and gynecological procedures are shown in tables G and H. These are the final diagnoses assigned by the

Table G. Number of selected all-listed breast procedures in short-stay hospitals and percent by most frequent all-listed medical diagnoses and surgical procedures: United States, 1977-78

All-listed diagnoses and ICDA code[1]	All-listed breast procedures and ICDA code[1]	
	Partial mastectomy (65.2)	Complete or radical mastectomy[2] (65.3-65.6)
	Number in thousands	
Number of procedures	16.2	11.5
	Percent[3]	
Malignant neoplasms of breast 174	11.1	85.7
Secondary and unspecified malignant neoplasms of lymph nodes 196.3, 196.9	*0.9	13.3
Lipoma 214	3.7	*0.0
Benign and unspecified neoplasms of breast 217, 233	25.8	1.6
Hemangioma (of skin) 227.0	1.8	*0.5
Chronic cystic disease and other (nonneoplastic) diseases of breast .610, 611	68.4	16.6

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2]Mastectomy, complete (65.3) also includes mastectomy, not otherwise specified.
[3]Percents will not total 100.0 because more than 1 diagnosis may have been listed on each record having one or more procedures.

Table H. Number of selected all-listed gynecological procedures in short-stay hospitals, and percent by surgical procedures and all-listed diagnoses: United States, 1978

All-listed diagnoses and ICDA code [1]	All-listed procedures and ICDA code [1]			
	Oophorectomy-salpingo, oopherectomy (67.2-67.5)	Ligation and division of fallopian tubes (68.5, 68.8)	Hysterectomy (69.1-69.5)	Dilation and curettage, diagnostic (70.3)
	Number in thousands			
Number of procedures	434	553	644	967
	Percent [2]			
Malignant neoplasms of female genital organs 180-184	11.7	-	11.9	6.2
Benign and unspecified neoplasms of female genital organs 218-221, 234-236	56.4	4.0	47.7	21.9
Iron deficiency anemias 280	2.6	-	2.7	2.5
Peritoneal adhesions 568	7.7	-	5.0	-
Diseases of ovary and fallopian tubes 613-615	27.5	1.1	12.5	4.2
Diseases of parametrium and pelvic peritoneum 616	15.0	1.0	11.0	4.1
Cervicitis and other diseases of cervix uteri 620-621	15.7	1.9	22.2	19.7
Infective diseases of uterus (except cervix), vagina, and vulva 622	-	-	-	3.8
Uterovaginal prolapse, malposition of uterus, endometriosis, and other diseases of uterus 623-625	51.3	3.7	81.2	25.4
Disorders of menstruation 626	19.0	6.1	30.2	55.3
Sterility 628	-	-	-	1.8
Other diseases of female genital organs 629	-	-	1.1	-
Pre-eclampsia, eclampsia, and toxemia, unspecified 637	-	1.2	-	-
Abortion induced for medical indications, with sepsis 640.0	-	-	-	3.0
Delivery without mention of complications 650	-	25.0	-	-
Delivery with complications 651-662	-	16.9	-	-
Adverse effects of progestogens 962.6	-	1.5	-	1.0
For sterilization Y09.0	-	32.0	-	3.0

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2]Percents will not total 100.0 because more than 1 diagnosis may have been listed on each record having one or more procedures.

physican to hospital medical records of discharged patients; they are not necessarily the principal diagnoses for which patients were admitted to the hospital for surgery. In the 1978 NHDS, up to 5 diagnoses were coded according to the ICDA.[1] In this presentation of NHDS data, a one-to-one relationship between diagnosis and procedure should not be assumed.

Although causality is not implicit in these tables, the data provide additional clinical information concerning women who receive ambulatory care for reproductive disorders. The NAMCS data showed that many diagnoses assigned to patients during visits also are assigned to hospital inpatients and are particularly evident in candidates for breast and gynecological surgery.

Diagnosis and breast surgery

Two classes of breast surgery—partial mastectomy and complete or radical mastectomy—are shown in table G. When a partial mastectomy was performed, the most frequently listed diagnosis was chronic cystic disease of other (nonneoplastic) diseases of breast (68 percent). For patients undergoing complete or radical mastectomies, malignant neoplasm of breast was the most likely diagnosis (86 percent).

Benign and unspecified neoplasms were present in about 26 percent of patients who had a partial mastectomy. Secondary and unspecified malignant neoplasms of lymph nodes were present in about 13 percent of complete or radical mastectomies. Data on complete and radical mastectomies were combined in this report. If only data on radical mastectomies had been examined, the proportion of lymph node diagnoses may have been higher. It should be noted that the ICDA code for complete mastectomy (65.3) also includes mastectomy, unspecified. Therefore, if the mastectomy procedure listed on the medical record were not qualified, it would be coded as a complete mastectomy, which it may not have been. This coding problem may account for at least part of the 17 percent of complete or radical mastectomies that were assigned a diagnosis of chronic cystic disease or other (nonneoplastic) disease of breast, generally an unlikely diagnosis for the patient who undergoes a radical mastectomy. It also may be possible that the less serious breast diagnosis was listed on the same medical record as a malignant neoplasm of the breast for which the radical procedure was performed.

Figure 5 shows that the rate of office visits for neoplasms and diseases of breast increased from 24 per 1,000 women 15-24 years of age to 81 per 1,000
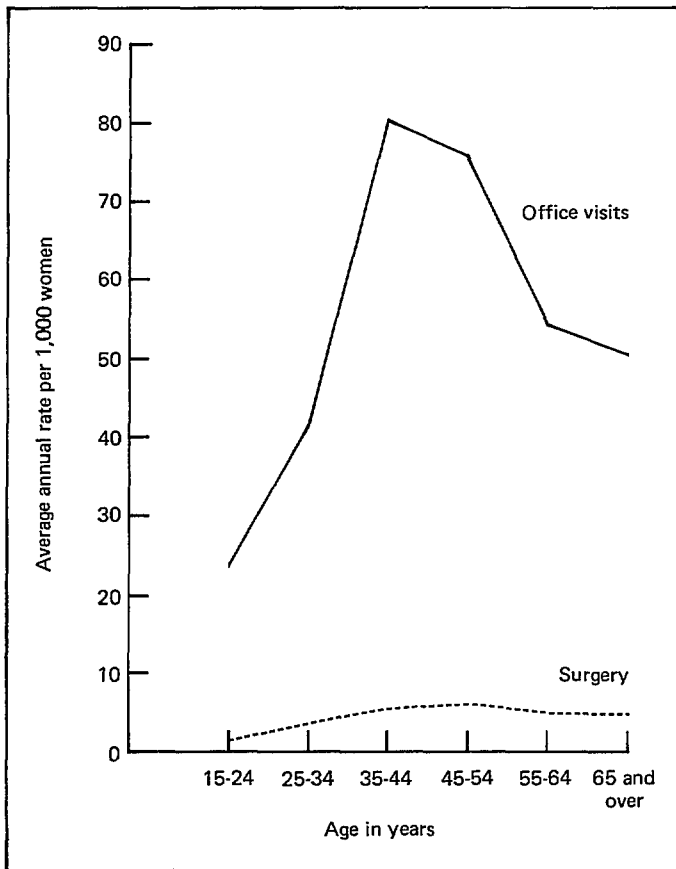
Figure 5. Average annual rate of office visits for neoplasms and diseases of breast and all-listed breast surgery in short-stay hospitals, by age of patient: United States, 1977-78
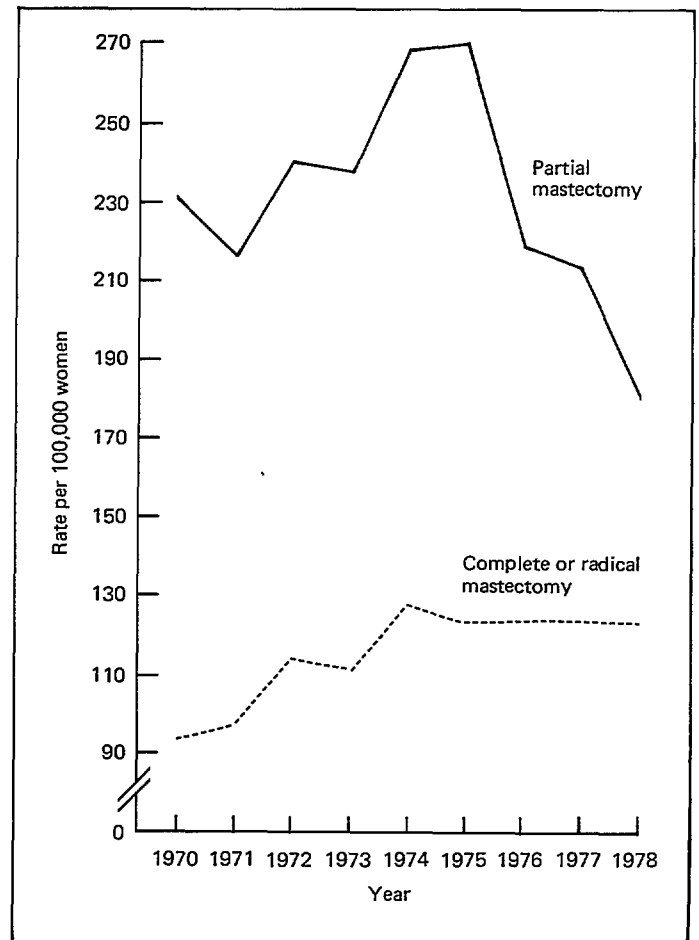

Figure 6. Rate of all-listed breast surgery per 100,000 females 15 years of age and over: United States, 1977-78

for women 35-44 years of age and decreased to 51 per 1,000 women 65 years of age and over. However, rates of breast surgery did not vary significantly based on age of the patient—rates ranged from approximately 2 per 1,000 women 15-24 years of age to approximately 6 per 1,000 women 35-54 years of age. Fluctuation in rates of breast surgery during 1970-78 were related to the type of procedure performed. Figure 6 illustrates trends in rates of breast surgery during 1970-78. Partial mastectomy increased from 217 operations per 100,000 women in 1971 to 269 in 1975 but, by 1978, the rate decreased to 181 per 100,000. Rates of complete or radical mastectomies throughout the 9-year period were much lower than rates for partial mastectomies. Rates increased from 94 per 100,000 women in 1970 to 128 per 100,000 women in 1974 and remained relatively constant until 1978. The decreasing rate of the less complex procedure from 1975 may be related to the increasing popularity of ambulatory surgery, which is discussed at the end of this report.

The average length of stay was correlated with the complexity of the surgery. In 1978, patients who had partial mastectomies stayed in hospitals an average of 4.3 days; patients who underwent complete or

radical mastectomies were discharged after approximately 9.9 days. In addition to increased costs for the longer period of hospitalization required by the more complex procedure, higher physicians' fees also contribute to the higher direct economic costs of breast cancer. For example, in the New York City area in 1980, the average prevailing charge for a partial mastectomy ranged from $248.70 to $570.00 (depending on the locality) compared to a range of $829.00 to $1,658.00 for a radical mastectomy.[12]

Diagnosis and gynecological surgery

The association between office visits for care of neoplasms and diseases of female genital organs and gynecological surgery is illustrated by the curves in figure 7. The rate of gynecological surgery increased from 25 per 1,000 women 15-24 years of age to 81 per 1,000 women 25-44 years of age and decreased to approximately 15 operations for each 1,000 women 65 years of age and over. Office visit rates for related conditions naturally were much higher but followed a similar fluctuation pattern by patient age.
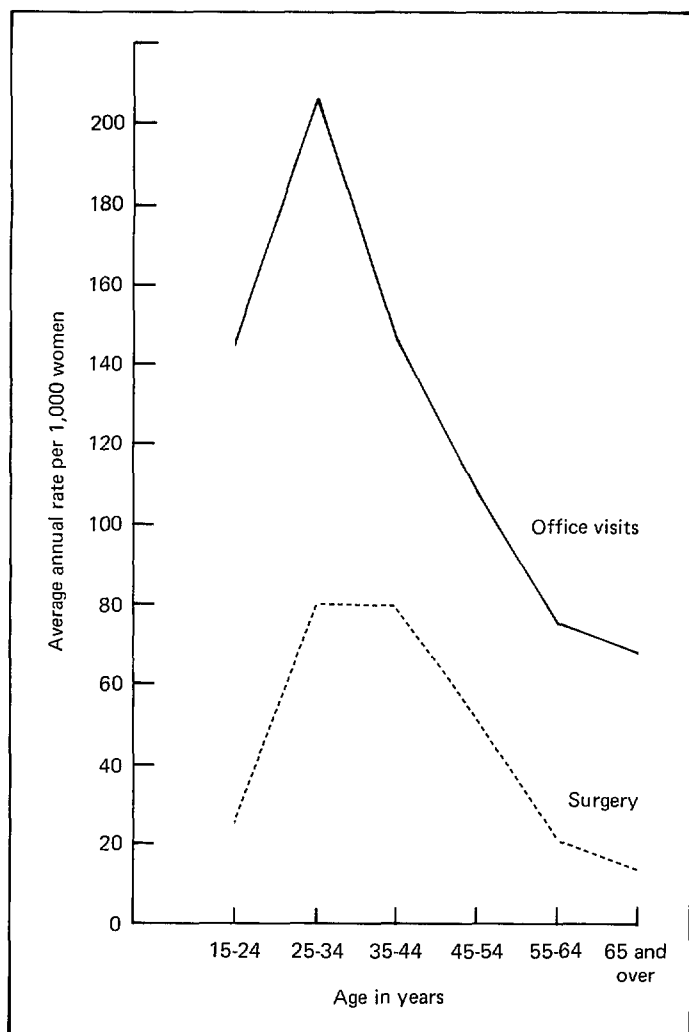
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Figure 7. Average annual rate of office visits for neoplasms and diseases of the female genital tract and rate of all-listed gynecological surgery in short-stay hospitals, by age of patient: United States, 1977-78

The diagnoses most commonly listed on hospital records when certain gynecological procedures were performed are shown in table H. Most of these diagnoses also were found frequently during women's office visits (table A). Uterovaginal prolapse, malposition of uterus, endometriosis, and other diseases of uterus were included in the lartest proportion of office visits for reproductive disorders. These conditions were the most likely diagnoses to be listed when hysterectomies were performed (81 percent). They also were prominent in oophorectomies (51 percent) and dilation and curettage (25 percent). Disorders of menstruation, which constituted the second largest proportion of office visits relative to other reproductive disorders, was more likely than other conditions were to be listed for patients undergoing D & C (55 percent). On the other hand, menopausal symptoms, which accounted for the third largest proportion of office visits, was not likely to be a diagnosis involved in gynecological surgery.

Malignant neoplasms of genital organs, which accounted for about 3 percent of all office visits for reproductive disorders (excluding breast), was listed in about 12 percent of all oophorectomies, 12 percent of hysterectomies, and 6 percent of D & C procedures. For benign and unspecified neoplasms of genital organs, the comparable proportions of the same procedures were 56 percent, 48 percent and 22 percent.

Diseases of ovary and fallopian tubes were listed as diagnoses in 28 percent of oophorectomies (the procedure directly related to the anatomical site of the condition) and in 13 percent of the more extensive hysterectomies. Diseases of parametrium and pelvic peritoneum also were associated with oophorectomies (15 percent) and hysterectomies (11 percent), as were cervicitis and other diseases of cervix uteri (16 percent oophorectomies and 22 percent hysterectomies). Conditions of the cervix also were involved in 20 percent of D & C procedures.

Deliveries, with and without complications, were likely to be listed when the surgical procedure was tubal ligation or occlusion, which demonstrated a common preference for performing these procedures postpartum. Because the methodology used in this table yields a duplicated count of discharged patients, the 32 percent of tubal ligation or occlusion procedures that were listed "for sterilization" may well have been the same postpartum patients, that is, a second-listed diagnosis.

Iron deficiency anemia and peritoneal adhesions, which were not proportionately as frequent during office visits as other diagnoses were, are implicated commonly when the patient is a candidate for surgery.

Rates per 100,000 women 15 years of age and over for the four types of surgery shown in table H in terms of diagnoses are plotted for the years 1970-78 in figures 8 and 9. Three of the four most common types of gynecological surgery performed from 1970 to 1978 are shown in figure 8. Because they were plotted on the same scale by rate per 100,000 women, their relative frequency becomes clear—diagnostic dilation and curettage of uterus consistently had the highest rates of the three, followed by hysterectomy and oophorectomy. A striking similarity is apparent among the yearly trends, with the three procedures reaching a peak in 1975 and showing a downward trend until 1978. Minor fluctuations from year to year probably were due to sampling variability rather than real change.

Utilization measured by the average length of stay reflects the complexity or risk level of the surgery. The average stay involving D & C's was approximately 3.4 days; hysterectomy and oophorectomy each required an average stay of approximately 9 days.

The sharp increase in tubal sterilization is illustrated in figure 9. By 1974, the rate of sterilization by tubal ligation or occlusion performed on women 15-44 years of age outranked hysterectomy. By 1977,
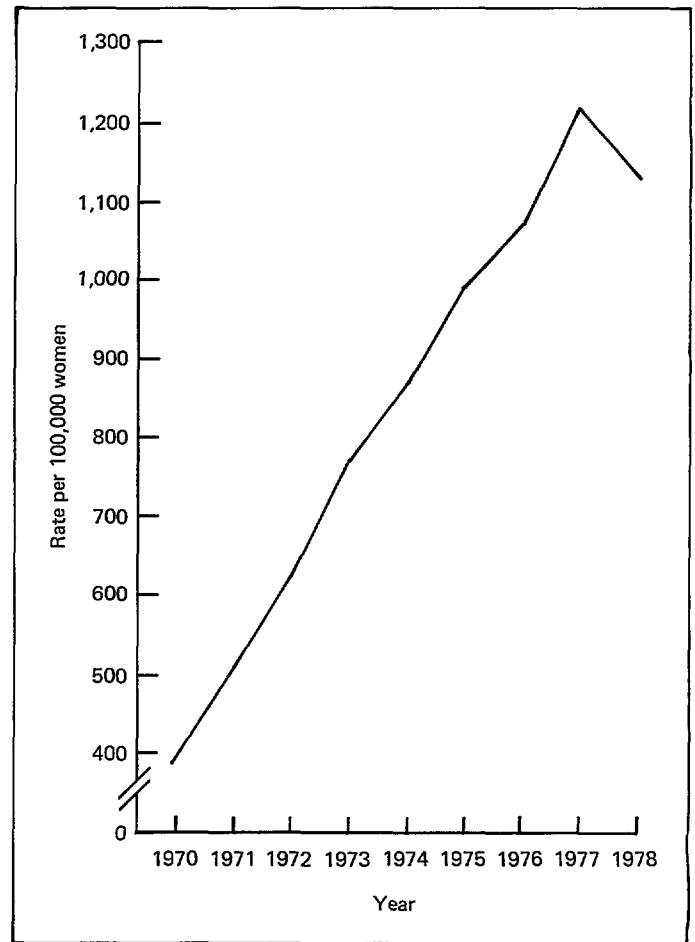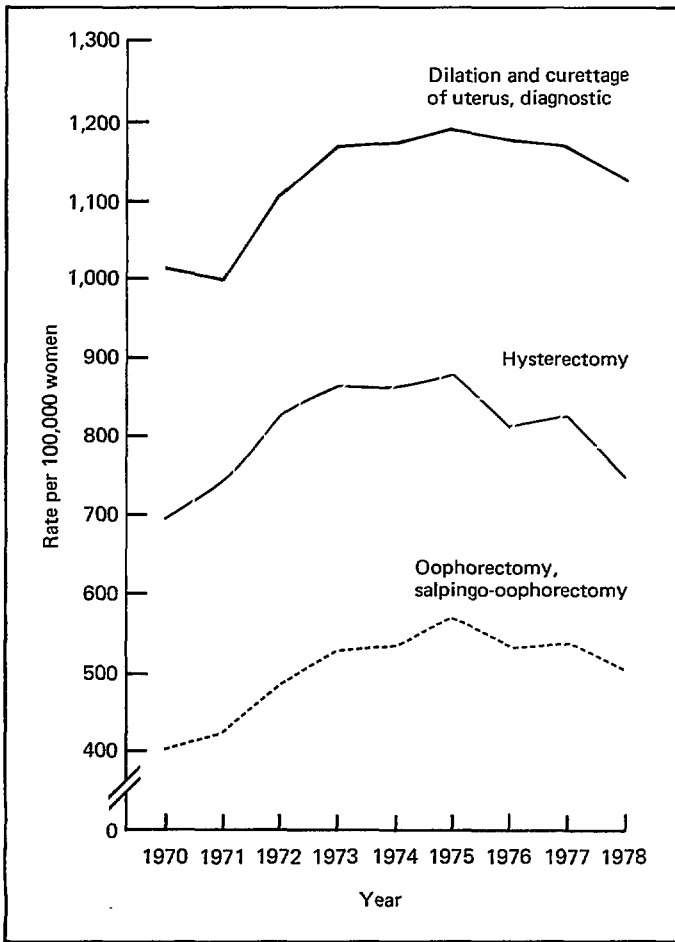
Figure 8. Rate of selected all-listed gynecological surgery in short-stay hospitals for females 15 years of age and over: United States, 1977-78

Figure 9. Rate of all-listed tubal ligation or occlusion procedures in short-stay hospitals for females 15-44 years of age: United States, 1970-78

sterilization by tubal ligation or occlusion was performed more commonly than diagnostic D & C was. The curve shows a slight downturn in 1978 (as it did for the first three operations), but it is too early to determine whether this signals the beginning of a decline in gynecological surgery. The development of simplified techniques is reflected in the average length of stay in the hospital. In 1978, the average length of stay for tubal ligation was 4.4 days, but patients who underwent the less complicated endoscopic tubal occlusion used only 2.3 days of hospital care. Patients 25-34 years of age had the highest rate of tubal sterilization (21 per 1,000), followed by patients 35-44 years of age (12 per 1,000) (data not shown).

Discussion

In every age group from 15 years and over, women constitute a higher proportion of the United States population than men do. For this reason and because of their biological role in reproduction, they are the major users of health care. This report has presented national statistics on disorders of the female reproductive system that emphasize the role of these conditions in the health care provided by office-based physicians and in short-stay hospitals.

The total contribution of these conditions to the direct and indirect economic costs of health care should not be measured solely in terms of impact on the two major health care systems discussed in this report. Of the 532.7 million physician visits (excluding telephone calls and home visits) reported by women in the 1975 NHIS, the sites of about 19 percent or about 102 million were hospital clinics, emergency rooms, other, or unknown.[13] If the distribution of visits by diagnosis in hospital outpatient or other facilities was similar to that of office-based physicians in the NAMCS, it would add another 7.8 million visits per year, or about 15.7 million visits for reproductive disorders in a 2-year period, to the 45.5 million visits estimated in the NAMCS during 1977-78.

The development of new techniques in anesthesia, drugs, and medical instrumentation, as well as recent developments in patient education and recovery methods, have encouraged the use of ambulatory surgery. Demonstrated savings in costs have accelerated the growth of ambulatory surgery in hospitals and freestanding facilities. According to a 1980 survey conducted by the American Hospital Association's Division of Ambulatory Care, ambulatory surgery accounted for an average of 18 percent of the total number of surgical procedures performed in about 1,506 non-Federal hospitals that offered such surgery in the 134 largest SMSA's in the United States in 1979.[14] This represented about 70 percent of the hospitals surveyed. According to this study, the ratio of the average number of inpatient procedures per hospital to the average number of out-patient procedures was about 5 to 1. Applying this ratio to the NHDS 1978 estimate of 20.8 million inpatient surgical procedures and correcting for the estimated proportion that offer ambulatory surgery, a rough estimate of ambulatory surgery for the NHDS sample is about 2.8 million procedures for patients of both sexes and all ages.[2]

It is apparent that, even with this crude estimate, outpatient surgery performed in hospitals is an important part of the total cost of illness. However, no national data are available on surgical case-mix or the number of breast and gynecological procedures performed in hospitals on an outpatient basis. Published reports of studies conducted at various sites reveal similarities in the frequency of certain breast and gynecological procedures. The Presbyterian Hospital of Dallas, which initiated a program of ambulatory surgery in 1970, found that D & C, breast biopsy, and tubal ligation currently are among the most frequently performed operations.[15] A report from the 526-bed Methodist Medical Center of Illinois at Peoria indicated that gynecological surgery accounted for 18 percent of all procedures performed in the Methodist Ambulatory Surgery Center in 1978.[16] Interestingly, this is the same proportion as that of inpatient gynecological surgery reported by the NHDS in 1978. When this proportion is applied to the estimated 2.8 million hospital outpatient operations, a crude estimate is yielded of 504,000 outpatient gynecological procedures per year. This does not include estimates of breast procedures, which may well equal or exceed the number of gynecological procedures.

In addition to surgery performed within organized ambulatory surgery programs in hospitals, surgery also is provided at other sites described as freestanding surgery centers that are independent of hospitals. At least 100 of these centers exist in the United States.[14] However, no statistics have been published on the number and type of operations performed. However, the frequency of breast and gynecological surgery appears to be similar to that

reported by hospitals. A report from Crouse-Irving Memorial Hospital One-Day Surgery Center, a free-standing surgical facility, lists D & C, tubal ligation, and breast biopsy among frequently performed procedures.[17] Among the nine most frequently performed surgical procedures at the Wichita (Kansas) Minor Surgery Center, another freestanding ambulatory surgical facility, were laparoscopy with bilateral tubal coagulation, D & C, and breast mass excisions.[18] According to preliminary statistics from the Freestanding Ambulatory Surgical Association, D & C was the most commonly performed surgical procedure in 36 of 69 member facilities in 1980. Tubal ligation was third. Gynecologic procedures accounted for the largest proportion (31 percent) of the total procedures reported by members.[19]

Ambulatory surgery also is performed commonly in some health maintenance organizations in which surgical services are similar to the services of free-standing facilities devoted entirely to surgery. A study of ambulatory surgery at the Kaiser-Permanente Medical Care Program in the Oregon Region compared costs and other variables related to inpatient and outpatient surgery using 10 selected procedures that accounted for 74 percent of all incisional ambulatory procedures performed during 1974.[20] Among procedures selected for the study were D & C, biopsy of breast and partial mastectomy, and trachelectomy. Rates of these procedures in the ambulatory or outpatient mode per 100,000 health plan members were higher than the comparable rates in the inpatient mode for the same procedures.

Because these statistics were derived from local studies, they are not representative of national statistics. However, they do provide an indication of the relative magnitude of surgery due to reproductive disorders at sites other than the short-stay hospitals used in this report.

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List of detailed tables

Table 1. Number of office visits for disorders of the female reproductive system and percent distribution by age and race of patients, according to principal diagnoses: United States, 1977-78

Principal diagnosis and ICDA code[1]	Number of visits in thousands	Age of patient							Race of patient	
		Total	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over	White	Black and all other
		Percent distribution								
All diagnoses	592,100	100.0	19.0	20.7	12.8	14.1	14.3	19.2	89.4	10.6
Total neoplasms and diseases of breast ...174, 217, 233, 610-611	8,606	100.0	11.2	16.0	22.7	21.0	13.5	15.7	91.8	8.2
Benign and unspecified neoplasms of breast ...217, 233	1,261	100.0	*12.4	*18.9	31.0	*20.5	*7.9	*9.4	92.3	*7.7
Malignant neoplasms of breast ...174	2,624	100.0	-	*4.5	*12.0	18.7	27.1	37.8	91.8	*8.2
Chronic cystic disease and other (nonneoplastic) diseases of breast ...610-611	4,722	100.0	17.1	21.7	26.4	22.4	7.4	5.1	91.7	8.3
Total neoplasms and diseases of female genital tract ...180-184, 218-221, 234-236, 612-616, 620-629	36,901	100.0	23.3	26.1	16.2	20.1	8.6	5.8	86.5	13.5
Benign and unspecified neoplasms of female genital organs ...218-221, 234-236	3,563	100.0	15.5	23.7	28.0	21.3	*6.0	*5.5	84.4	15.6
Malignant neoplasms of female genital organs ...180-184	942	100.0	*10.4	*7.1	*10.9	*15.0	*25.2	*31.5	85.3	*14.8
Diseases of ovary and fallopian tubes ...612-615	1,134	100.0	37.4	46.0	*12.3	*3.9	*0.4	-	81.6	*18.4
Diseases of parametrium and pelvic peritoneum[2] ...616	1,970	100.0	52.0	26.9	*11.2	*6.5	*2.4	*0.9	72.1	27.9
Infective diseases of cervix uteri and other diseases of cervix ...620-621	3,305	100.0	26.8	39.3	19.1	*8.5	4.3	*2.0	85.5	14.5
Infective diseases of uterus (except cervix), vagina, and vulva; and other diseases of uterus ...622-625	8,912	100.0	26.5	26.9	14.2	10.9	9.7	11.8	87.3	12.7
Other diseases of female genital organs ...629	1,473	100.0	*20.7	31.7	*9.9	*18.1	*10.4	*9.3	85.3	*14.7
Disorders of menstruation ...626	7,933	100.0	34.3	30.8	15.5	15.6	*2.7	*1.1	85.4	14.6
Menopausal symptoms ...627	6,678	100.0	*0.3	*4.4	17.7	53.7	19.6	*4.3	93.3	6.7
Sterility ...628	990	100.0	*18.2	76.8	*5.1	-	-	-	88.5	*11.5
		Average annual visit rate per 1,000 women								
Total neoplasms and diseases of breast ...174, 217, 233, 610-611	...	50.8	23.9	41.4	80.4	76.0	54.4	51.1	53.5	32.8
Benign and unspecified neoplasms of breast ...217, 233	...	7.4	*3.9	*7.1	16.1	*10.9	*4.7	*4.5	7.9	*4.5
Malignant neoplasms of breast ...174	...	15.5	-	*3.5	*13.0	20.7	33.3	37.6	16.3	*1.0
Chronic cystic diseases and other (nonneoplastic) diseases of breast ...610, 611	...	27.9	20.0	30.7	51.4	44.5	16.4	9.1	29.3	18.2
Total neoplasms and diseases of female genital tract ...180-184, 218-221, 234-236, 612-616, 620-629	...	218.0	213.1	288.8	246.2	311.6	149.3	81.0	215.9	232.2
Benign and unspecified neoplasms of female genital organs ...218-221, 234-236	...	21.0	13.7	25.3	6.0	11.2	*10.0	*7.5	20.4	25.8
Malignant neoplasms of female genital organs ...180-184	...	5.6	*2.4	*2.0	*4.2	*5.9	*11.1	*11.2	5.4	*6.5
Diseases of ovary and fallopian tubes ...612-615	...	6.7	10.5	15.6	*5.8	*1.8	*0.2	-	6.3	*9.7
Diseases of parametrium and pelvic peritoneum[2] ...616	...	11.6	25.5	15.9	*9.1	*5.4	*2.3	*0.7	9.6	25.6
Infective diseases of cervix uteri and other diseases of cervix ...620-621	...	19.5	22.0	39.0	26.1	*9.9	6.7	2.5	19.1	22.2
Infective diseases of uterus (except cervix), vagina, and vulva, and other diseases of uterus ...622-625	...	52.6	58.7	71.9	52.3	40.7	40.4	39.9	52.7	52.4
Other diseases of female genital organs ...629	...	8.7	*7.6	2.0	*4.2	*5.9	*11.1	*11.2	8.5	*10.1
Disorders of menstruation ...625	...	46.9	67.6	73.3	50.7	52.1	*10.0	*3.2	45.8	53.9
Menopausal symptoms ...627	...	39.5	*0.5	*8.8	48.8	150.7	61.5	*10.9	42.2	20.8
Sterility ...628	...	5.9	*4.5	22.8	*2.1	-	-	-	5.9	*5.3

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2]Chiefly pelvic inflammatory diseases (616.0).

Table 2. Number and percent distribution of new problem office visits for disorders of the female reproductive system by time since onset of complaint, according to principal diagnoses: United States, 1977-78

Principal diagnoses and ICDA code[1]	Number of new problem visits in thousands	Time since onset of complaint					
		Total	Less than 1 week	1-3 weeks	1-3 months	3 months or more	Not applicable
		Percent distribution					
All visits	214,176	100.0	36.5	18.1	14.0	18.1	12.6
Total neoplasms and diseases of breast 174, 217, 233, 610-611	3,008	100.0	29.2	25.8	19.9	16.6	8.6
Benign and unspecified neoplasms of breast 217, 233	699	100.0	40.7	*27.7	*16.9	*4.2	*10.5
Malignant neoplasms of breast 174	408	100.0	*18.4	*14.0	*35.2	*30.2	*2.2
Chronic cystic disease and other (nonneoplastic) diseases of breast 610-611	1,901	100.0	27.3	27.6	17.7	18.2	*9.3
Total neoplasms and diseases of female genital tract ... 180-184, 218-221, 234-236, 612-616, 620-629	16,670	100.0	22.4	23.1	23.1	21.9	9.6
Benign and unspecified neoplasms of female genital organs 218-221, 234-236	1,457	100.0	*14.4	*19.7	22.0	26.1	*17.9
Malignant neoplasms of female genital organs ...180-184	*206	100.0	*33.2	*11.1	*5.6	*24.7	*25.5
Diseases of ovary and fallopian tubes 612-615	596	100.0	*21.5	*26.4	*40.6	*8.1	3.4
Diseases of parametrium and pelvic peritoneum[2] 616	1,179	100.0	52.5	32.2	*5.5	*9.8	-
Infective diseases of cervix uteri and other diseases of cervix 620-621	1,275	100.0	*11.4	24.8	29.3	14.8	19.7
Infective diseases of uterus (except cervix), vagina, and vulva; and other diseases of uterus 622-625	4,595	100.0	31.5	27.0	17.4	14.8	9.3
Other diseases of female genital organs 629	977	100.0	*25.3	40.8	*11.6	*15.4	*6.9
Disorders of menstruation 626	4,570	100.0	17.1	18.3	31.8	27.4	*5.5
Menopausal symptoms 627	1,503	100.0	*5.8	*13.4	31.3	36.0	*13.6
Sterility 628	*312	100.0	-	*2.5	-	*78.1	*19.4

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2]Chiefly pelvic inflammatory disease (616.0).

Table 3. Number and percent distribution of office visits for disorders of the female reproductive system by seriousness of the problem, according to selected principal diagnoses: United States, 1977-78

Principal diagnosis and ICDA code[1]	Number in thousands	Seriousness of problem			
		Total	Not serious	Slightly serious	Serious or very serious
		Percent distribution			
All diagnoses	592,100	100.0	51.0	30.8	18.3
Total neoplasms and diseases of breast 174, 217, 233, 610-611	8,606	100.0	33.3	29.8	37.0
Benign and unspecified neoplasms of breast 217, 233	1,261	100.0	30.8	39.7	29.5
Malignant neoplasms of breast 174	2,624	100.0	*4.2	*9.7	86.1
Chronic cystic disease and other (nonneoplastic) diseases of breast 610-611	4,722	100.0	50.0	38.3	11.7
Total neoplasms and diseases of female genital tract ... 180-184, 218-231, 234-236, 612-616, 620-629	36,901	100.0	54.8	33.5	11.8
Benign and unspecified neoplasms of female genital organs 218-221, 234-236	3,563	100.0	32.1	46.1	21.8
Malignant neoplasms of female genital organs 180-184	942	100.0	*18.2	*7.8	74.0
Diseases of ovary and fallopian tubes 612-615	1,134	100.0	55.3	34.5	*10.2
Diseases of parametrium and pelvic peritoneum[2] 616	1,970	100.0	36.8	47.3	15.9
Infective diseases of cervix uteri and other diseases of cervix 620-621	3,305	100.0	56.5	32.2	11.3
Infective diseases of uterus (except cervix), vagina, and vulva; and other diseases of uterus 622-625	8,912	100.0	58.6	32.7	8.7
Other diseases of female genital organs 629	1,473	100.0	50.3	41.2	*8.5
Disorders of menstruation 626	7,933	100.0	54.0	35.2	10.9
Menopausal symptoms 627	6,678	100.0	71.6	25.4	*3.1
Sterility 628	990	100.0	66.8	*23.4	*9.8

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

[2]Chiefly pelvic inflammatory disease (616.0).

Table 4. Number of office visits by selected disorders of the breast, female genital tract, and all other diagnoses and percent by selected disorders of the breast, female genital tract, all other diagnoses, and diagnostic or therapeutic services ordered or provided: United States, 1977-78

Diagnostic or therapeutic service	Benign and un-specified neoplasms of breast (217, 233)	Malignant neoplasms of breast (174)	Chronic cystic disease and other (non-neoplastic) diseases of breast (610-611)	Benign and un-specified neoplasms of female genital tract (218-221, 234-236)	Malignant neoplasms of female genital tract (180-184)	Diseases of ovary, fallopian tubes and para-metrium (612-616)	Diseases of cervix, uterus, vagina, and other female genital organs (620-625, 629)	Disorders of men-struation (626)	Meno-pausal symptoms (627)	Sterility (628)	All other diagnoses
					Number in thousands						
All visits	1,261	2,624	4,722	3,563	942	3,104	13,690	7,933	6,678	990	546,593
Diagnostic service					Percent [2]						
None	*10.7	*5.2	*5.4	*3.1	*7.3	*0.7	3.1	*3.5	25.2	*14.4	10.3
Limited history/examination	62.5	64.6	72.0	52.5	55.0	63.2	52.4	55.9	39.1	44.7	60.3
General history/examination	*24.1	18.1	19.7	36.9	22.8	33.8	27.6	33.4	27.5	32.8	19.4
Pap test	*4.2	*2.2	15.8	33.4	*30.7	24.5	35.6	39.8	29.4	33.2	8.2
Clinical laboratory test	*9.8	35.4	11.6	26.4	34.8	27.6	31.7	35.8	22.8	44.8	25.6
X-ray	*12.8	17.4	11.9	*3.4	*5.9	*0.5	*2.1	*1.0	*4.1	*10.2	7.5
Blood pressure check	*22.3	27.2	30.2	52.5	40.2	45.3	38.3	51.6	54.8	49.9	43.0
Therapeutic service											
None	44.8	28.5	38.8	43.3	32.6	13.1	20.0	24.2	8.5	*16.5	20.0
Drugs (prescription and nonprescription)	*11.5	40.4	20.9	26.0	45.2	69.6	57.4	51.2	77.8	*28.1	54.4
Diet counseling	*0.5	*0.4	*1.1	*1.9	*0.9	*4.2	2.9	4.1	5.3	*1.3	8.3
Family planning	-	*1.6	*0.2	*3.5	-	*3.2	4.2	8.2	*1.0	*18.7	2.5
Medical counseling	25.4	19.2	27.7	23.7	*21.5	23.3	25.1	32.9	22.3	36.9	20.0
Office surgery	*19.1	14.7	15.5	*7.4	*3.6	*2.5	11.1	5.4	*1.3	*7.9	6.7
Psychotherapy/therapeutic listening	*4.7	*2.8	*3.5	*2.9	*2.8	*4.6	2.4	4.6	7.4	*9.5	6.5

[1] Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).
[2] Percents will not total 100.0 because more than 1 service may have been ordered or provided.

Table 5. Number of office visits for disorders of the female reproductive system and all other diagnoses, and percent distribution of visits by disposition and duration of the visits, according to types of disorders: United States, 1977-78

Disposition and duration	Neoplasms and diseases of breast (174, 217, 233, 610-611)	Neoplasms and diseases of female genital organs (180-184, 218-221, 234-236, 612-616, 620-625, 629)	Disorders of menstruation (626)	Menopausal symptoms (627)	Sterility (628)	All other diagnoses
	Number in thousands					
All visits	8,606	21,300	7,933	6,678	990	546,593
Disposition[1]			Percent			
No followup planned	5.7	5.1	*3.5	*2.4	2.0	8.7
Return at a specified time	70.7	61.4	57.1	58.2	73.8	65.8
Return if needed	11.9	22.1	24.8	39.6	*20.4	20.6
Telephone followup	*3.0	3.8	8.4	*2.3	*5.6	3.2
Referred to another physician or agency	5.8	4.5	*2.0	*1.8	2.9	2.4
Return to referring physician	*1.2	*1.1	*1.2	*0.5	-	0.8
Admit to hospital	6.7	6.8	8.4	-	*0.4	1.9
Other disposition	4.2	1.7	*2.6	*0.5	*2.8	1.0
Duration[2]						
0 minutes	*1.5	*0.7	*1.1	17.9	-	3.0
1-10 minutes	40.0	28.8	28.9	30.5	*24.4	42.5
11-15 minutes	32.8	35.2	34.8	27.7	33.5	26.9
16-30 minutes	22.5	31.2	29.7	20.9	37.6	21.3
31 minutes or more	*3.3	4.1	5.5	*3.0	*4.5	6.4

[1]Percents will not total 100.0 because more than 1 disposition was possible.
[2]Time spent in face-to-face encounter between physician and patient.

Appendixes

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Appendix I. Technical notes

This report is based on data collected during 1977 and 1978 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). Because the 1977 and 1978 surveys were conducted with the same instruments, definitions, and procedures, the 2 years of data are readily combined to provide greater reliability of data. Details of the annual survey's design and procedures are presented in the following sections.

Statistical design

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

Sample design. —The NAMCS utilizes a multistage probability design that involves probability samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within practices. The first-stage sample of 87 PSU's was selected by the National Opinion Research Center 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 employed. After sorting and stratifying by size, region, and demographic characteristics, each frame was divided into sequential zones of 1 million residents, and 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 master files 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 arranged 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, with 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 1977-78 the NAMCS physician sample included 6,007 physicians. Sample physicians were screened at the time of the survey to ensure that they met the aforementioned criteria; 973 physicians did not meet all 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 5,034 in-scope (eligible) physicians, 3,782 (75.1 percent) participated in the study. Of the participating physicians, 560 saw no patients during their assigned reporting period because of vacations, illnesses, or other reasons for being temporarily not in practice. The physician sample size and response data by physician specialty are shown in table I.

The final 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

Table I. Distribution of physicians in the 1977-78 National Ambulatory Medical Care Survey sample and response rates, by physician specialty

Physician specialty	Gross total	Out of scope	Net total	Non-respond-ents	Respond-ents	Response rate
All specialties	6,007	973	5,034	1,252	3,782	75.1
General and family practice	1,496	269	1,227	365	862	70.3
Medical specialties	1,646	255	1,391	355	1,036	74.5
Internal medicine	851	126	725	193	532	73.4
Pediatrics	411	71	340	74	266	78.2
Other medical specialties	384	58	326	88	238	73.0
Surgical specialties	2,120	217	1,903	438	1,465	77.0
General surgery	586	76	510	109	401	78.6
Obstetrics and gynecology	494	43	451	115	336	74.5
Other surgical specialties	1,040	98	942	214	728	77.3
Other specialties	745	232	513	94	419	81.7
Psychiatry	441	84	357	68	289	81.0
Other specialties	304	148	156	26	130	83.3

of approximately equal size, and 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 week. The 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 by which the sampling rate was determined is described later in this appendix and in the Induction Interview form.[4] During 1977-78, 98,335 useable Patient Record forms were completed by physicians participating in NAMCS.

Data collection and processing

Field procedures.—Both mail and telephone contacts were used to enlist sample physicians for NAMCS. Physicians received introductory letters from NCHS[4] and AMA or AOA. When appropriate, a letter from the physician's specialty organization endorsing the survey and urging his participation was enclosed with the NCHS letter. A few days later, a field representative telephoned the physician to explain briefly the study and arrange an appointment for a personal interview. A physician who did not respond initially was generally recontacted via a telephone call or special explanatory letter requesting him to reconsider participation in the study.

During the personal interview the field representative determined the physician's eligibility, ascertained his cooperation, delivered survey materials with verbal and printed instructions, and assigned a predetermined Monday-Sunday reporting period. A short 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 instruction session or were offered separate instruction sessions.

Before the beginning of and again during the week assigned for data collection, the interviewer

telephoned the sample physician to answer questions that might have arisen and to ensure that procedures were going smoothly. At the end of the survey week, the participating physician mailed the finished survey materials to the interviewer, who edited the forms for completeness before transmitting them for central data processing. Problems of missing or incomplete data were resolved at this stage by interviewer telephone followup to the sample physician, if no problems were found, field procedures were considered complete regarding the sample physician's participation in NAMCS. After the end of the survey year, each sample physician was sent a thank-you letter from NCHS along with one of the survey's statistical reports.

Data collection.—The actual data collection for NAMCS was carried out by the physician, aided by his office staff when possible. Two data collection forms were employed by the physician: the Patient Log and the Patient Record (appendix III). The Patient Log is a sequential listing of patients seen in the physician's office during his assigned reporting week. This list served as the sampling frame to indicate the visits for which data were to be recorded. A perforation between the patient names and patient visit characteristics permitted the physician to remove and retain the patient names, thus protecting the confidentiality of the patients.

Based on the physician's estimate of the expected number of office visits, each physician was assigned a patient sampling ratio. These ratios were designed so that about 30 Patient Record forms were completed during the assigned reporting week. Physicians expecting 10 or fewer visits each day recorded data for all visits, those expecting more than 10 visits per day recorded data for every second, third, or fifth visit, based on the predetermined sampling interval. These procedures minimized the data collection workload and maintained approximately equal reporting levels among sample physicians regardless of practice size.

For physicians assigned a patient sampling ratio, a random start was provided on the first page of the log, so that predesignated sample visits recorded on each succeeding page of the log provided a systematic random sample of patient visits during the reporting period.

Data processing. —In addition to completeness checks made by the field staff, clerical edits were performed on receipt of the data for central processing. These procedures proved quite efficient, reducing the item nonresponse rates to a negligible amount—2 percent or less for all 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.*[21] Diagnostic information (item 8 of the Patient Record form) was coded according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA).[1] A maximum of three entries were coded from each of these items. Quality control in the medical coding operation involved a two-way independent verification procedure with 100-percent verification. Coding differences were adjudicated at NCHS.

Information from the Induction Interview and Patient Record forms was keypunched, with 100-percent verification, and converted to computer tape (see Series 13, No. 44 for a complete listing of survey instruments). At this point, extensive computer consistency and edit checks were performed. Incomplete items were imputed by assigning a value from a Patient Record form with similar characteristics; physician specialty and broad diagnostic categories were used as the basis for these imputations.

Estimation procedures

Statistics from the NAMCS were derived by a multistage estimation procedure, which 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 described briefly.

Inflation by reciprocals of sampling probabilities. —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 a physician within the PSU, and (3) the probability of selecting a patient visit within the physician's practice. The last probability was defined to be the exact number of office visits during the physician's specified 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. —Estimates from the NAMCS data were adjusted to account for sample physicians who did not participate in the study. This adjustment was performed 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 of which the numerator was the number of physicians in the universe in each physician specialty group and the denominator the estimated number of physicians in that particular specialty group. The numerator was based on figures obtained from the AMA-AOA master files, and the denominator was based on data from the sample.

Reliability of estimates

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 by using the same forms, 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. It 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 by 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.[22,23]

Approximate relative standard errors for aggregates and percentages are presented in figures I-III. 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-III 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 figure I. Curve A presents relative standard errors appropriate for estimates based on all physician specialties, such as the number of visits by females under 15 years of age. Curve B presents relative standard errors appropriate for estimates based on an individual physician specialty, such as the number of visits to internists by males over 65 years of age.

Alternatively, relative standard errors can be calculated directly by using the following formulae. For estimates based on all physician specialties,

$$RSE(x) = \sqrt{0.000811 + \frac{30.676864}{x}} \cdot 100.0$$

Where x is the aggregate of interest in thousands. For estimates based on an individual physician specialty,

$$RSE(x) = \sqrt{0.003780 + \frac{34.575057}{x}} \cdot 100.0$$

where x is the aggregate of interest in thousands.

Estimates of percentages.—Approximate relative standard errors (in percent) for estimates of percentages can be calculated from figure I as follows. Obtain the relative standard error of the numerator and denominator. 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 calculation has been made for several percentages and bases, and is presented in figures II and III. Relative standard errors appropriate for percentages based on all physician specialties are presented in figure II. These errors may be calculated directly by using the following formula:

$$RSE(p) = \sqrt{\frac{30.676864 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

where p is the percentage of interest and x is the base in thousands. Relative standard errors appropriate for percentages based on an individual physician specialty are presented in figure III. These errors may be calculated directly by using the following formula:

$$RSE(p) = \sqrt{\frac{34.575057 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

where p is the percentage of interest and x is the base in thousands.

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 U.S. 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 figure I.

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 the 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.

In addition to sampling error, survey results are subject to reporting and processing errors and biases due to nonresponse or incomplete response. The magnitude of these errors cannot be computed. However, they were kept to a minimum by procedures built into the survey operation. Careful attention and extensive pretesting were given to the phrasing of the questions and the terms (and their definitions) employed to eliminate ambiguities and encourage uniformity of reporting. The steps taken to reduce nonresponse bias 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.

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," "less," etc., 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.

Population figures and rate computation

The base population used in computing annual visit rates is presented in table II. The figures are based on an average of the July 1, 1977 and July 1, 1978 provisional estimates for 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 census estimates were modified to account for the exclusion of Alaska and Hawaii from
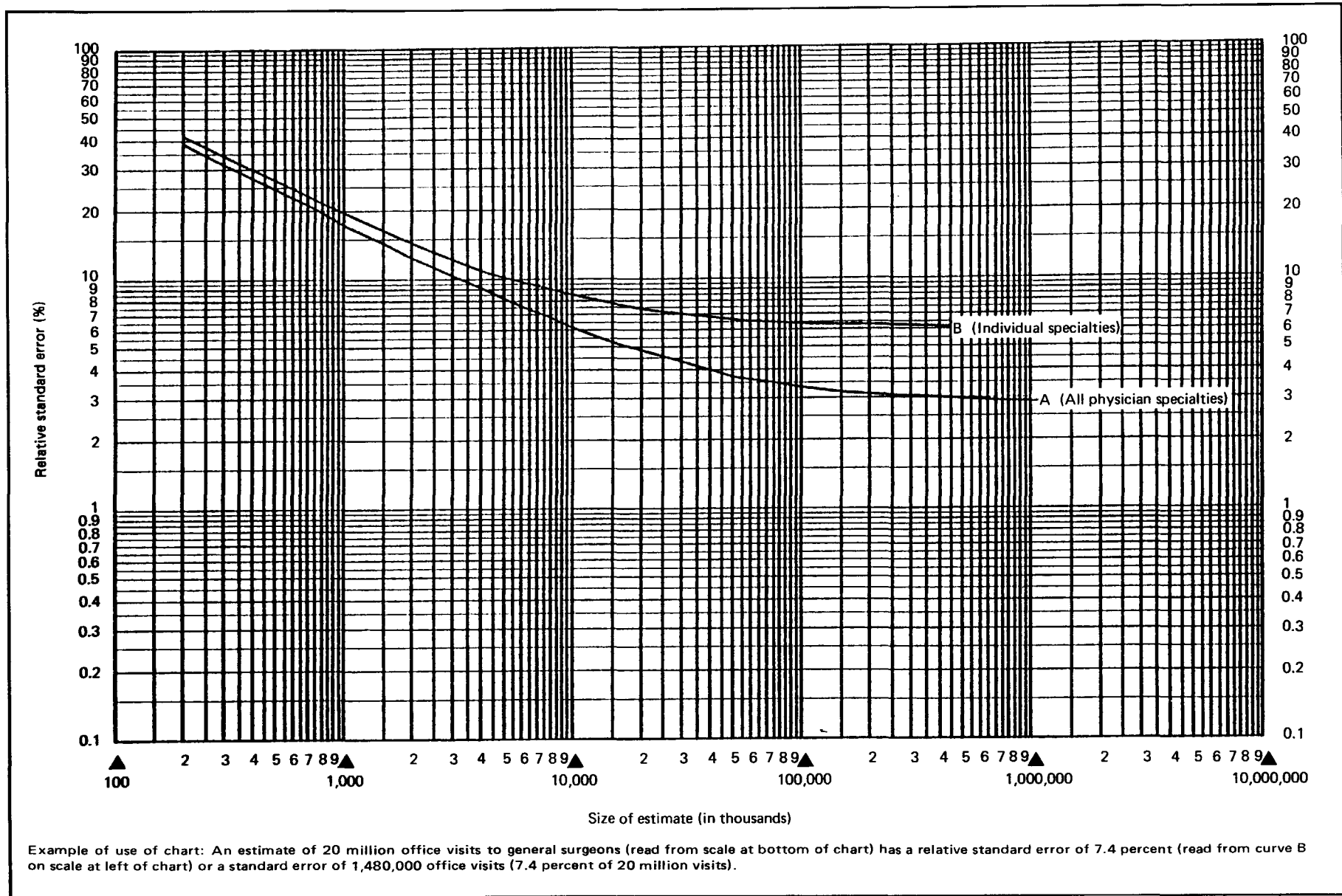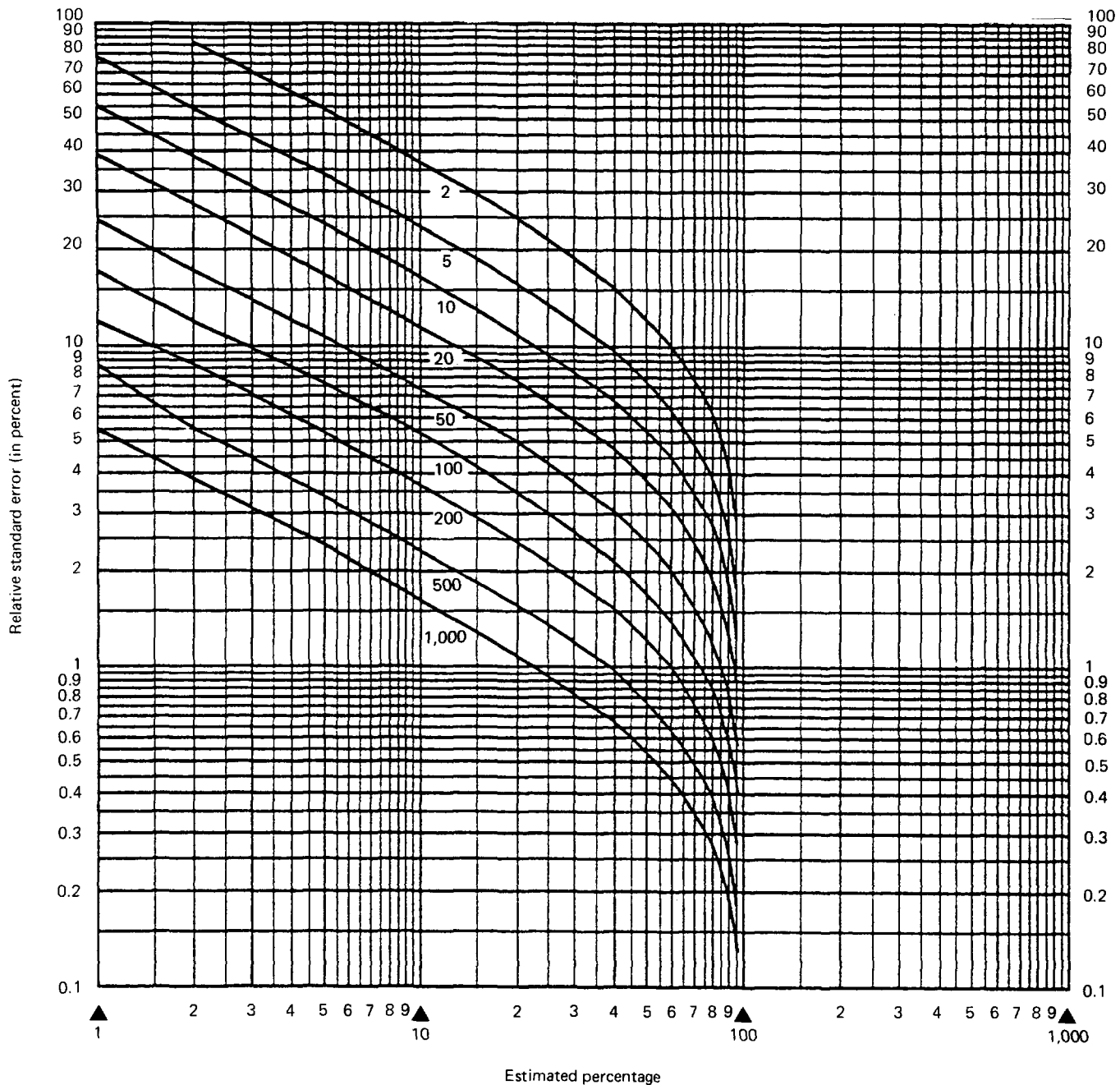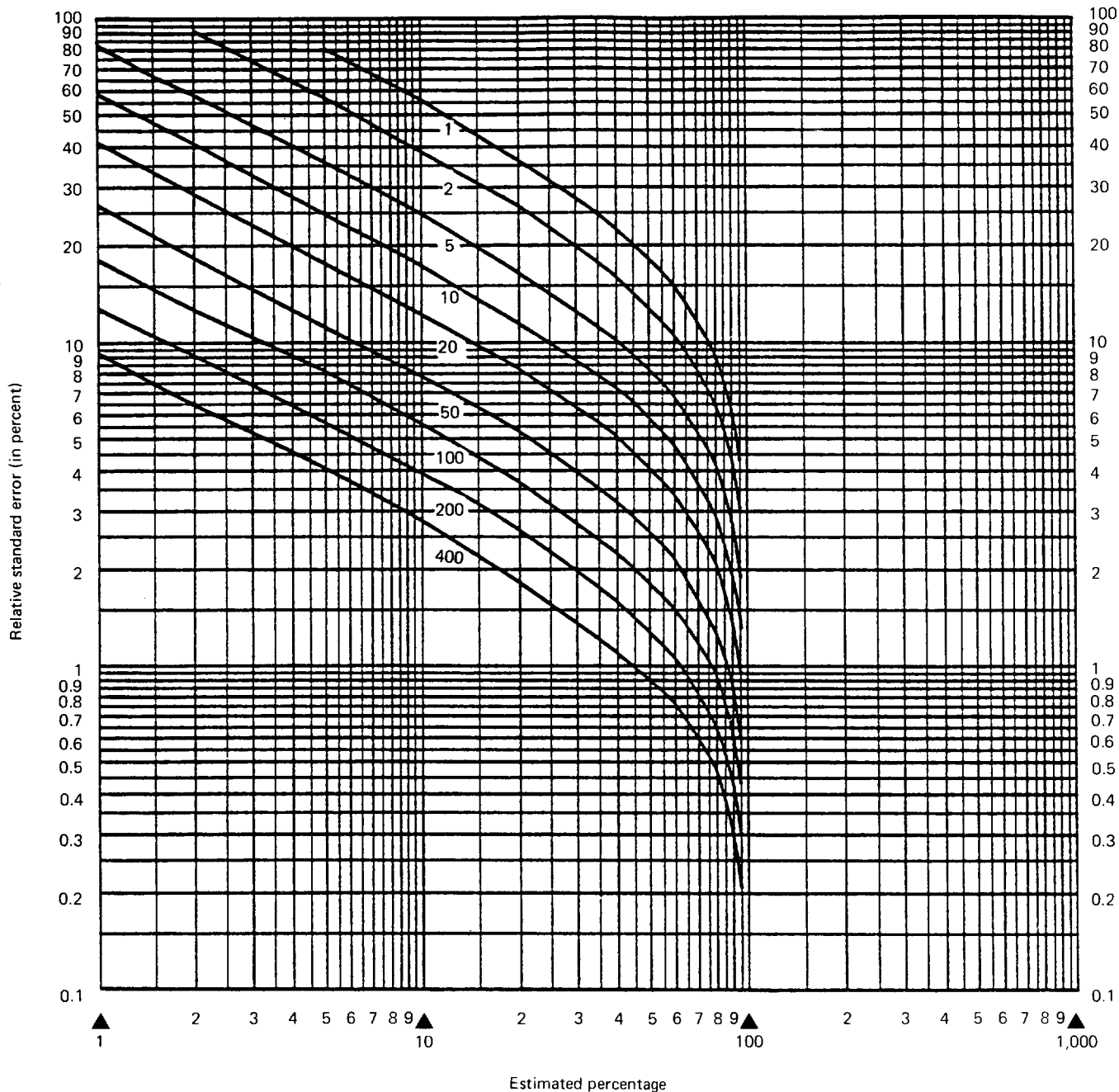
Figure I. Approximate relative standard errors for estimated numbers of office visits based on all physician specialties (A), and individual specialties (B), 1977-78 National Ambulatory Medical Care Survey

Relative standard error (in percent)

100 90 80 70 60 50 40 30 20

2
5
10
20
50
100
200
500
1,000

10 9 8 7 6 5 4 3 2

1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1

Estimated percentage

1   10   100   1,000

NOTE: Base of percentage shown on curves in millions.

Example of use of chart: An estimate of 20 percent (read from scale at bottom of chart) based on an estimate of 100 million office visits has a relative standard error of 3.5 percent (read from scale at left of chart) or a standard error of 0.7 percentage points (3.5 percent of 20 percent).

Figure II. Approximate relative standard errors for percentages of estimated numbers of office visits based on all physician specialties, 1977-78 National Ambulatory Medical Care Survey

Figure III. Approximate relative standard errors for percentages of estimated numbers of office visits based on individual physician specialties, 1977-78 National Ambulatory Medical Care Survey

NOTE: Base of percentage shown on curves in millions.

Example of use of chart: An estimate of 40 percent (read from scale at bottom of chart) based on an estimate of 50 million office visits has a relative standard error of 3.2 percent (read from scale at left of chart) or a standard error of 1.3 percentage points (3.2 percent of 40 percent).

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, geographic region, and metropolitan and nonmetropolitan area: United States,[1] 1977-78

Race, sex, geographic region, and area	Age							
	All ages[2]	Under 15 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over
Race	Number of persons in thousands							
All races	211,679	50,804	39,554	32,365	23,331	22,965	20,200	22,460
Male	102,137	25,917	19,422	15,707	11,210	11,078	9,535	9,267
Female	109,541	24,887	20,132	16,658	12,121	11,887	10,664	13,193
White	183,351	42,111	33,719	28,207	20,405	20,343	18,238	20,327
Male	88,883	21,539	16,684	13,873	9,926	9,872	8,636	8,353
Female	94,468	20,572	17,036	14,335	10,478	10,471	9,603	11,974
Black and all other	28,328	8,693	5,835	4,157	2,927	2,622	1,961	2,132
Male	13,255	4,378	2,738	1,834	1,284	1,206	900	914
Female	15,073	4,315	3,097	2,323	1,643	1,416	1,062	1,218
Geographic region								
Northeast	48,555	. . .	. . .	. . .	. . .	. . .	. . .	. . .
North Central	56,966	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South	69,057	. . .	. . .	. . .	. . .	. . .	. . .	. . .
West	37,101	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Area								
Metropolitan	144,767	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nonmetropolitan	66,911	. . .	. . .	. . .	. . .	. . .	. . .	. . .

[1]Excludes Alaska and Hawaii.
[2]Figures may not add to total due to rounding.

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 in this report are for a 2-year period, but ratios and rates represent average annual estimates. The average annual estimates were calculated as follows. The numerator was obtained by dividing the estimated number of office visits for 1977-78 by 2 to obtain an average annual number of office visits. This number was then divided by the appropriate population figure to obtain an average annual visit rate. As previously discussed, reliability estimates for average annual visit rates may be calculated from figure I.

Systematic bias

No attempts were undertaken to determine the systematic bias on the data reported here. However, several factors, which the user of these data should understand, indicate that these data underrepresent the total number of office visits to office-based physicians. Some of these factors are:

1. The sampling frames for the 1977 and 1978 NAMCS included all nonfederally employed, "office-based, patient care" physicians on the AMA-AOA master files. Certainly physicians who were not classified thus at the time of the survey would have met the criteria for that classification. Visits to these physicians are not represented here.

2. Physicians who participated in NAMCS did a thorough and conscientious job in keeping the Patient Log; however, the probability that a patient visit was accidentally omitted from the survey is much greater than the probability that a patient was included who did not make a visit. This factor also introduces an unknown bias into the data.

Appendix II. Definition of terms

Terms relating to the survey

Office(s). —Premises identified by the physician as locations for his ambulatory practice. 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 and doctors of osteopathy currently in practice who spend some time in caring for ambulatory patients at an office location.

Out of scope: Those physicians who treat patients only indirectly, including specialists in anesthesiology, pathology, forensic pathology, radiology, therapeutic radiology, and diagnostic radiology, and the following physicians:

Physicians in military service.

Physicians who treat patients only in an institutional setting (e.g., patients in nursing homes and hospitals).

Physicians employed full time by an industry or institution and having no private practice (e.g., physicians who work for the Veterans Administration, the Ford Motor Company, etc.).

Physicians who spend no time seeing ambulatory patients (e.g., 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 member of his staff in his office(s).

Out of scope: Patients seen by the physician in a hospital, nursing home, or other extended care institution, or the patient's home. [Note: If the physician has a *private* office (fitting the definition "office") located in a hospital, the ambulatory patients seen there are considered in 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 the primary responsibility over time.

Patients who telephone and receive advice from the physician.

Patients who come to the office only to leave a specimen, pick up insurance forms, or pay their bills.

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 members of his staff) to seek care and to render 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 master physician files maintained by the AMA or the AOA.

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, Vermont
North Central . .	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

Region	States included
South	Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
West	Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Metropolitan status of practice location.—A physician's practice is classified by its location in a metropolitan or nonmetropolitan 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 a specified population which 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.

Color or race.—On the Patient Record form, color or race includes four categories: white, Negro or black, other, and unknown. The physician was instructed to mark the category, which in his judgment, was most appropriate for the patient based on observation or prior knowledge of the patient or both. The term "All other" was restricted to Orientals, American Indians, and persons of all other races.

Was patient referred for this visit by another physician?—Referrals are any visits that are made because of 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.

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.

Time since onset of complaint or symptom in item 6a.—Physicians were instructed to check the category corresponding to the length of time since the known beginning of the patient's most important problem. The term "not applicable" was used when the reason for visit was not a complaint or symptom (e.g., annual and well-baby examinations). For postoperative visits, the term "onset" refers to the length of time since surgery. For routine prenatal visits, onset refers to the length of time since conception. For a flareup of a chronic condition (e.g., arthritis), onset refers to the length of time since the flareup, not the onset of the original condition.

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 diagnosis.—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 reason for the visit.

Seriousness of problem in item 8a.—This item includes four categories: very serious, serious, slightly serious, and not serious. The physician was instructed to check one of the four categories according to his own evaluation of the seriousness of the patient's problem causing this visit. Seriousness refers to the physician's clinical judgment regarding the extent of the impairment that might result if care was not given.

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

Limited exam/history: History and/or physical examination which is limited to a specific body site or system or which is concerned primarily with the patient's chief complaint, for example, pelvic examination or eye examination.

General exam/history: History and/or physical examination of a comprehensive nature, including all or most body systems.

Pap test: Papanicolaou test, self-explanatory.

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. Radiation therapy is not included in this category.

EKG: Electrocardiogram, self-explanatory.

Vision test: Visual acuity test.

Endoscopy: Examination of the interior of any body cavity, except ear, nose, and throat, by means of an endoscope.

Blood pressure check: Self-explanatory.

Other: All other diagnostic services ordered or provided that are not included in the preceding categories.

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

Immunization/desensitization: Administration of any immunizing, vaccinating, or desensitizing agent or substance by any route, for example, syringe, needle, oral, gun, or scarification.

Drugs (prescription/nonprescription): Drugs, vitamins, hormones, ointments, suppositories, or other medications ordered or provided, except injections and immunizations. Includes both prescription and nonprescription (over-the-counter) medication.

Diet counseling: Instructions, recommendations, or advice regarding diet or dietary habits.

Family planning: Services, counseling, or advice that might enable patients to determine the number and spacing of their children. Includes both contraception and infertility services.

Medical counseling: Instructions and recommendations regarding any health problem, including advice or counsel about change of habit or behavior. Physicians were instructed to check this category only if the medical counseling was a *significant* part of the treatment. (Excludes diet and family planning counseling.)

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 therapy, and manipulative therapy.

Office surgery: Any surgical procedure performed in the office this visit, including suture of wounds, reduction of fractures, application and/ or removal of casts, incision and draining of abscesses, application of supportive materials for fractures and sprains, and all irrigations, aspirations, dilatations, and excisions.

Psychotherapy/therapeutic listening: All treatments designed to produce a mental or emotional response through suggestion, persuasion, reeducation, reassurance, or support, including psycho-logical counseling, hypnosis, psychoanalysis, and transactional therapy.

Other: Treatments ordered or provided that are not included in the preceding categories.

Disposition this visit. —Eight categories are provided to describe the physician's disposition of the case as follows:

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 his 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 referred to this physician and was now instructed to consult again with the physician who referred him.

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 that admission.

Other: Any other disposition of the case not included in the above categories.

Duration of this visit. —Time the physician spent with the patient, not including the 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 spent reviewing records, tests results, and so forth. If 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 zero.

Appendix III. Survey instrument

PATIENT LOG

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

1. DATE OF VISIT
Mo / Day / Yr

As each patient arrives record name and time of visit on the log below. For the patient entered on line #5, 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.
4	a.m. / p.m.
5 Record items 1-14 for this patient	a.m. / p.m.

CONTINUE LISTING PATIENTS ON NEXT PAGE

2. DATE OF BIRTH
Mo / Day / Yr

3. SEX
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ NEGRO/ BLACK
3 ☐ OTHER
4 ☐ UNKNOWN

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

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. TIME SINCE ONSET OF COMPLAINT/ SYMPTOM IN ITEM 6a (Check one)
1 ☐ LESS THAN 1 DAY
2 ☐ 1-6 DAYS
3 ☐ 1-3 WEEKS
4 ☐ 1-3 MONTHS
5 ☐ MORE THAN 3 MONTHS
6 ☐ NOT APPLICABLE

8. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a
_____
b. OTHER SIGNIFICANT CURRENT DIAGNOSES
_____

9. HAVE YOU SEEN PATIENT BEFORE?
1 ☐ YES 2 ☐ NO
IF YES, FOR THE CONDITION IN ITEM 6a?
1 ☐ YES 2 ☐ NO

10. SERIOUSNESS OF CONDITION IN ITEM 6a (Check one)
1 ☐ VERY SERIOUS
2 ☐ SERIOUS
3 ☐ SLIGHTLY SERIOUS
4 ☐ NOT SERIOUS

11. DIAGNOSTIC SERVICES THIS VISIT (Check all ordered or provided)
1 ☐ NONE
2 ☐ LIMITED EXAM/HISTORY
3 ☐ GENERAL EXAM/HISTORY
4 ☐ PAP TEST
5 ☐ CLINICAL LAB TEST
6 ☐ X-RAY
7 ☐ EKG
8 ☐ VISION TEST
9 ☐ ENDOSCOPY
10 ☐ BLOOD PRESSURE CHECK
11 ☐ OTHER (Specify) _____

12. THERAPEUTIC SERVICES THIS VISIT (Check all ordered or provided)
1 ☐ NONE
2 ☐ IMMUNIZATION/ DESENSITIZATION
3 ☐ DRUGS (PRESCRIPTION/ NONPRESCRIPTION)
4 ☐ DIET COUNSELING
5 ☐ FAMILY PLANNING
6 ☐ MEDICAL COUNSELING
7 ☐ PHYSIOTHERAPY
8 ☐ OFFICE SURGERY
9 ☐ PSYCHOTHERAPY/ THERAPEUTIC LISTENING
10 ☐ OTHER (Specify) _____

13. DISPOSITION THIS VISIT (Check all that apply)
1 ☐ NO FOLLOW-UP PLANNED
2 ☐ RETURN AT SPECIFIED TIME
3 ☐ RETURN IF NEEDED, P.R.N.
4 ☐ TELEPHONE FOLLOW-UP PLANNED
5 ☐ REFERRED TO OTHER PHYSICIAN
6 ☐ RETURNED TO REFERRING PHYSICIAN
7 ☐ ADMIT TO HOSPITAL
8 ☐ OTHER (Specify) _____

14. DURATION OF THIS VISIT (Time actually spent with physician)
_____ MINUTES

HRA-34-2
REV. 9-76

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
NATIONAL CENTER FOR HEALTH STATISTICS

O.M.B. #68-R1498

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