Data from the
NATIONAL HEALTH SURVEY

Series 13
Number 49

Characteristics of Visits to Female and Male Physicians

The National Ambulatory Medical Care Survey

United States, 1977

Based on data obtained from a national sample of office-based female and male physicians, statistics are presented on the patient and clinical characteristics of ambulatory care office visits. The focus of the report is on the utilization of medical practitioners according to the sex of the physician. Data are provided on the distribution of visits by sex, race, and age of patients; and age and specialty of the physician. Clinical aspects of the medical practices of female and male physicians are compared.

DHHS Publication No. (PHS) 80-1710

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Statistics
Hyattsville, Md. June 1980

Library of Congress Cataloging in Publication Data

Cypress, Beulah K
Characteristics of visits to female and male physicians.

(Vital and health statistics : Series 13, Data from the National Health Survey ; no. 49) (DHHS publication ; no. (PHS) 80-1710)
Includes bibliographical references.
Supt. of Docs. no.: HE 20.6209:13/49
1. Physician services utilization—United States—Statistics. 2. Women physicians—United States—Statistics. 3. Ambulatory medical care—United States—Utilization—Statistics. 4. Health surveys—United States. 5. United States—Statistics, Medical. I. Title. II. Series: United States. National Center for Health Statistics. Vital and health statistics : Series 13, Data from the National Health Survey, Data on health resources utilization ; no. 49. III. Series: United States. Dept. of Health and Human Services. DHHS publication ; no. (PHS) 80-1710. [DNLM: 1. Ambulatory care—United States—Statistics. 2. Physicians—Utilization—United States—Statistics. 3. Patients—United States—Statistics. 4. Sex factors—United States—Statistics. 5. Physicians, Women—Utilization—United States—Statistics. W2 AN148vm no. 49]
RA407.3.A349 no. 49 [RA410.7] 362.1'1'0973s
ISBN 0-8406-0191-3 [610.69'6] 80-607139 Rev.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

NATIONAL CENTER FOR HEALTH STATISTICS

DIVISION OF HEALTH RESOURCES UTILIZATION STATISTICS

Vital and Health Statistics-Series 13-No. 49

DHHS Publication No. (PHS) 80-1710
Library of Congress Catalog Card Number 80-607139

CONTENTS

Introduction 1
Background 1
Scope of the Survey 1
Source and Limitations of the Data 1

Patient Characteristics 2
Patient Sex, Race, and Age 2
Physician and Patient Characteristics 3
Physician Specialty and Patient Age 5

Clinical Characteristics 7
Principal Reason for Visit 7
Principal Reason for Visit and Diagnostic Services 7
Principal Diagnosis 8
Principal Diagnosis and Drug Therapy 8
Clinical Services and Physician Specialty 10
Clinical Services and Physician Age 11
Status of the Visit 11
Seriousness of the Problem and Disposition and Duration of Visit 11

Discussion 15

References 17

Appendixes
I. Technical Notes 19
II. Definition of Terms 27
III. Survey Instruments 31

LIST OF TEXT FIGURES

1. Annual rate of office visits to male physicians by sex and age of the patient: United States, 1977 4

2. Annual rate of office visits to female physicians by sex and age of the patient: United States, 1977 4

3. Annual rate of office visits to male physicians by age and race of the patient: United States, 1977 4

4. Annual rate of office visits to female physicians by age and race of the patient: United States, 1977 4

LIST OF TEXT TABLES

A. Number and percent distribution of office visits by sex, race, and age of the patient, according to sex of the physician: United States, 1977 2

B. Number and percent of office visits to female and male physicians by female patients 15 years and over, by age of the patient: United States, 1977 3

C. Number and percent distribution of office visits and average number of visits per week by physician specialty, according to sex of the physician: United States, 1977 5

D. Median visit age in years and standard error of the median in years, by sex and specialty of the physician: United States, 1977 6

E. Number and percent distribution of office visits by sex, age, and race of the patient, according to sex and specialty of the physician: United States, 1977 6

F. Number and percent distribution of office visits by principal reason for visit, according to sex and specialty of the physician: United States, 1977 7

G. Number and percent of office visits, by selected reasons for visit, sex of the physician, and selected diagnostic services ordered or provided: United States, 1977 8

H. Number and percent of office visits to general and family practitioners and internists, by sex of the physician and selected principal diagnoses: United States, 1977 9

J. Number of office visits and percent of visits with drug therapy, by sex of the physician and principal diagnosis: United States, 1977 9

K. Number and percent of office visits to general and family practitioners and internists, by sex of the physician and selected diagnostic or therapeutic services ordered or provided: United States, 1977 10

L. Number and percent of office visits made by women to obstetrician-gynecologists, by sex of the physician and selected diagnostic or therapeutic services ordered or provided: United States, 1977 11

M. Number and percent of office visits to general and family practitioners and internists, by sex and age of the physician and selected diagnostic or therapeutic services ordered or provided: United States, 1977 12

N. Number and percent distribution of office visits by selected visit characteristics, according to sex and specialty of the physician: United States, 1977 13

O. Return visit rate by sex and specialty of the physician: United States, 1977 14

P. Percent of new patients seen by office-based physicians and percent referred by another physician, by sex and specialty of the physician: United States, 1977 14

Q. Percent distribution of office visits by duration of visit, according to sex and specialty of the physician: United States, 1977 15

R. Mean contact duration of office visits by sex of the patient and sex and specialty of the physician: United States, 1977 15

S. Average number of hours per week spent in direct patient encounter, by sex and specialty of the physician: United States, 1977 15

SYMBOLS

Data not available	---
Category not applicable	...
Quantity zero	-
Quantity more than 0 but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

CHARACTERISTICS OF VISITS TO FEMALE AND MALE PHYSICIANS
THE NATIONAL AMBULATORY MEDICAL CARE SURVEY

Beulah K. Cypress, Ph. D., Division of Health Resources Utilization Statistics

INTRODUCTION

Background

In 1967, 4.9 percent of the nonfederally employed physicians engaged in office-based patient care in the United States were women.[1] A decade later women constituted 6.2 percent of this group.[2] However, women candidates entering medical school increased from 9 percent of the total enrollment in 1970 to 25 percent in 1977[3] portending an increased ratio of female to male physicians in the next decade. Because of the mounting interest in the performance and productivity of women in traditionally male-dominated professions, a retrospective examination was made of the utilization data collected in the National Ambulatory Medical Care Survey, with the sex of the health provider as the focal point. Previous reports based on data from this survey provided information on physician utilization without regard to the sex of the physician.

The data were collected in the National Ambulatory Medical Care Survey, which is a sample survey conducted yearly by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics. Detailed information regarding the background and methodology of the survey were published in *Vital and Health Statistics,* Series 2, No. 61.[4] Summary data for 1977 were published in *Vital and Health Statistics,* Series 13, No. 44.[5]

Data collection and processing for the 1977 National Ambulatory Medical Care Survey were the responsibility of the University of Chicago's National Opinion Research Center. Sample selection was accomplished with the assistance of the American Medical Association and American Osteopathic Association.

Scope of the Survey

The basic sampling unit for the National Ambulatory Medical Care Survey was the physician-patient encounter or visit. The current scope of the National Ambulatory Medical Care Survey included all office visits within the conterminous United States made by ambulatory patients to nonfederally employed office-based physicians classified by the American Medical Association or the American Osteopathic Association. The National Ambulatory Medical Care Survey physician universe excluded physicians practicing in Alaska and Hawaii, anesthesiologists, pathologists, and radiologists. Visits to physicians principally engaged in teaching, research, or administration; telephone contacts; and visits conducted outside the physician's office were also 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.

Source and Limitations of the Data

The estimates in this report are based on information obtained from Patient Records (see appendix III) for a sample of visits provided by a

national probability sample of office-based physicians. The sample for the 1977 National Ambulatory Medical Care Survey (NAMCS) included 3,000 physicians, 507 of whom were not eligible (out of scope) at the time of the survey. Of the 2,493 physicians who were eligible, 1,932 (77.5 percent) actually participated (see appendix I). About 5 percent of the physician participants were women. (This is roughly the proportion of similarly described female physicians in the universe.)

Sample physicians listed all office visits during a randomly assigned 7-day reporting period. Information was recorded on the Patient Record or encounter form, which supplied data on a systematic random sample of 51,044 visits. Female physicians supplied 2,339 completed Patient Record forms; male physicians provided 48,705.

Readers are urged to peruse the appendixes to this report, which contain information necessary for proper understanding and interpretation of the statistics presented. Appendix I contains a general description of the survey methods, the sample design, and the data collection and processing procedures. Methods of estimation and imputation are also presented. The statistics in this report are based on a sample of office visits rather than on all visits and are subject to sampling errors. Therefore, particular attention should be paid to the section on "Reliability of Estimates" in appendix I. Charts of relative standard errors and instructions for their use are also shown in appendix I.

Definitions of the terms used in this report and in the survey operations are presented in appendix II. Facsimiles of survey materials, such as the introductory letter and the Patient Record and Induction Interview forms are furnished in appendix III.

PATIENT CHARACTERISTICS

Patient Sex, Race, and Age

Analyses of data for the past several years have shown a clear pattern of proportionately more visits to office-based physicians by females than by males. The current analysis of patient visits according to the sex of the physician shows that not only is this pattern continuing, but also that female patients tend to visit female physicians for medical care proportionately more than they visit male physicians, i.e., the ratio of female to male patients visiting female physicians is higher than that of patients visiting male physicians. Table A shows that about 72 percent of the average female physician's patient load were females, compared with 60 percent of that of the average male physician. Table B shows that the tendency of women patients to visit women physicians prevailed for women in all age groups.

However, age-specific visit rates (the average number of visits per 100 in the population) re-

Table A. Number and percent distribution of office visits by sex, race, and age of the patient, according to sex of the physician: United States, 1977

Sex, race, and age of patient	Sex of physician	
	Female	Male
	Number in thousands	
All visits	22,788	547,264
	Percent distribution	
Total	100.0	100.0
Sex		
Female	71.5	60.1
Male	28.6	39.9
Race		
White	81.3	90.7
Black and all other	18.7	9.3
Age		
Less than 15 years	26.9	17.8
15-19 years	8.0	6.9
20-24 years	9.4	8.1
25-29 years	8.2	8.2
30-34 years	8.8	7.0
35-39 years	4.9	5.4
40-44 years	4.1	5.1
45-49 years	5.4	5.9
50-54 years	4.2	6.5
55-59 years	5.8	6.7
60-64 years	4.5	6.1
65-69 years	3.9	5.7
70 years and over	6.1	10.7

veal an anomaly in the pattern of visits to female physicians. Figure 1 shows that rates for both female and male patients visiting male physicians increased with the advancing age group of the patient, but the visit rates to female physicians shown in figure 2 were about the same regardless of patient age group.

When the race and age of the patient are plotted, a similar result can be observed (figures 3 and 4). In this case, the proportion of visits to female physicians by patients of black and other races was about twice as high as the corresponding proportion of visits to male physicians (table A).

Table A also shows that the largest share of visits to all physicians included patients under 15 years of age, but female physicians were more likely to serve this age group than men were. About 27 percent of these visits were to females, compared with about 18 percent that were to males. Male physicians, however, tended to care for proportionately more older patients than female physicians did; 36 percent of the visits made by patients over 50 years of age were to male physicians, compared with about 25 percent to female physicians.

Physician and Patient Characteristics

The difference in proportions of visits by the youngest patients was due, in part, to the distribution of visits by physician specialty. Although general and family practice accounted for the largest, and almost equal, proportions of visits regardless of the sex of the physician, pediatricians had the second highest proportion of visits to all female physicians (about 20 percent) (table C). For male physicians, internal medicine ranked second, and proportionately more visits by patients over 50 years of age were made to internists than to any other specialty.[6] Dermatologists also ranked high on the distribution of visits to women (about 16 percent).

No women in the NAMCS sample (selected randomly by specialty) were in the specialties of orthopedic surgery, cardiovascular diseases, urological surgery, and otolaryngology, which are traditionally male-dominated fields. Relatively few women in the sample were in the specialties of general surgery, ophthalmology, and neurology—specialties rarely selected by women medical school graduates. Few women in the sample represented general surgery, ophthalmology, and

Table B. Number and percent of office visits to female and male physicians by female patients 15 years and over, by age of the patient: United States, 1977

Age of patient	Sex of physician			
	Female		Male	
	All visits in thousands	Percent of female patients	All visits in thousands	Percent of female patients
Total	16,669	79.1	449,627	62.7
15-19 years	1,825	82.6	37,682	59.0
20-24 years	2,144	86.8	44,109	69.1
25-29 years	1,870	87.1	44,938	70.0
30-34 years	2,003	80.5	38,182	67.7
35-39 years	1,112	77.1	29,541	61.1
40-44 years	936	75.8	27,747	62.2
45-49 years	1,220	80.1	32,061	61.1
50-54 years	965	74.0	35,779	58.5
55-59 years	1,319	77.5	36,591	59.2
60-64 years	1,019	62.1	33,210	56.4
65-69 years	879	74.3	31,257	59.1
70 years and over	1,377	73.7	58,529	63.3

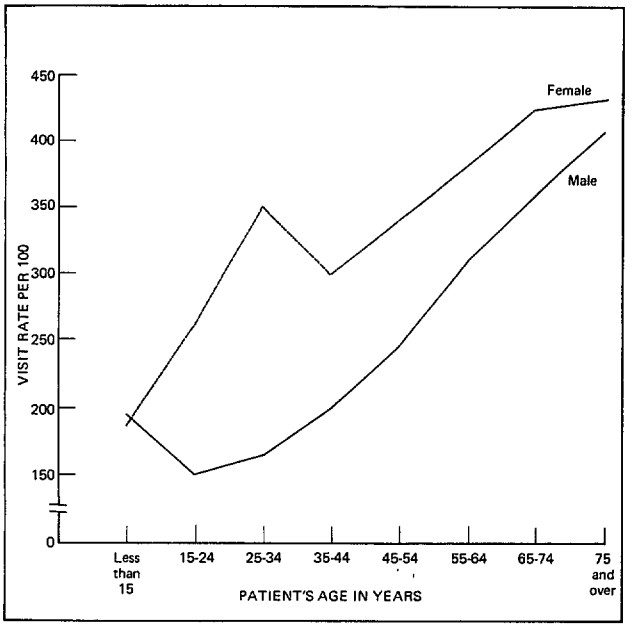


Figure 1. Annual rate of office visits to male physicians by sex and age of the patient: United States, 1977

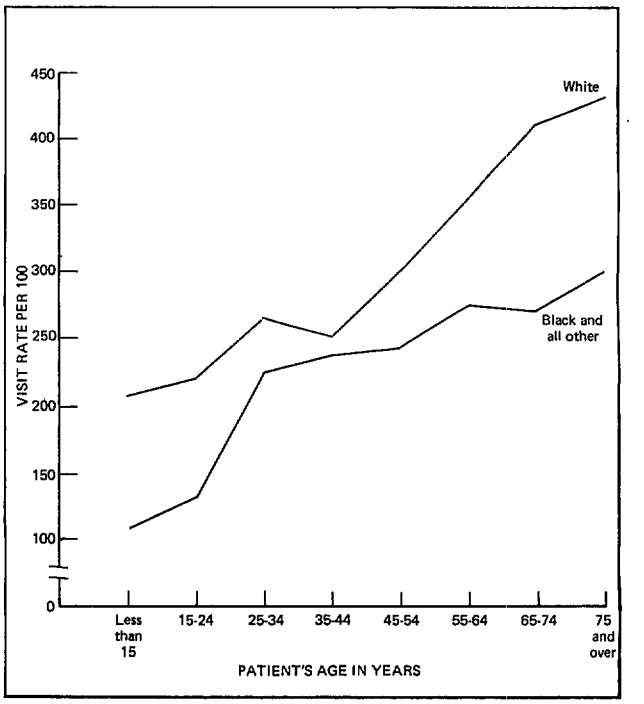


Figure 3. Annual rate of office visits to male physicians by age and race of the patient: United States, 1977

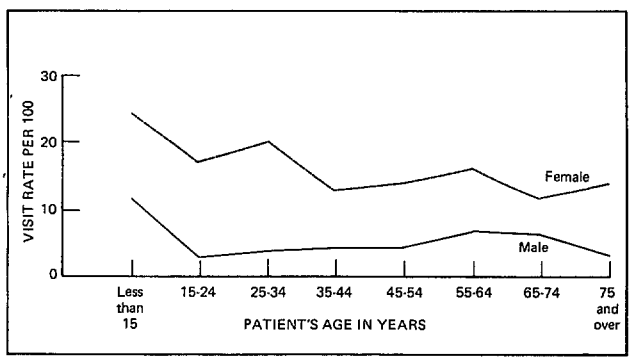


Figure 2. Annual rate of office visits to female physicians by sex and age of the patient: United States, 1977

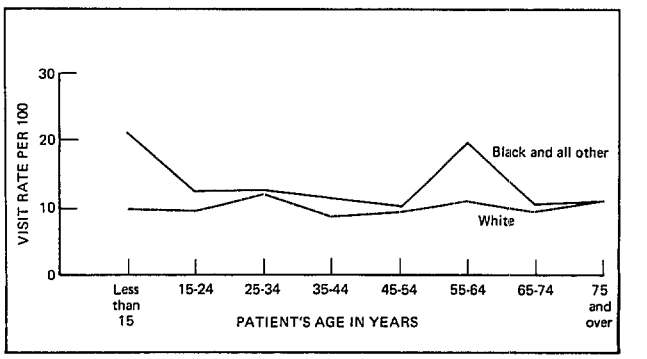


Figure 4. Annual rate of office visits to female physicians by age and race of the patient: United States, 1977

neurology, which are also specialties selected by relatively few women.

The average number of visits per week are listed by sex and specialty of the physician in table C. This rate is obtained by dividing the total number of annual visits by 52 and then by the weighted number of physicians in the sample. Except for dermatologists, male physicians in all listed specialties saw more patients on a weekly average than women did. These averages may reflect the length of the practice-week and workday and the duration of visits. Time spent

Table C. Number and percent distribution of office visits and average number of visits per week by physician specialty, according to sex of the physician: United States, 1977

Physician specialty	Sex of physician				
	Both sexes	Female	Male	Female	Male
	Number in thousands				
All specialties	570,052	22,788	547,264	22,788	547,264
	Percent distribution			Visits per week	
Total	100.0	100.0	100.0	64.3	74.5
General and family practice	39.1	34.9	39.3	77.0	110.0
Internal medicine	11.4	6.2	11.6	37.6	58.5
Pediatrics	9.6	19.9	9.2	82.1	108.0
General surgery	6.3	*1.0	6.6	*34.2	47.8
Obstetrics and gynecology	8.6	11.7	8.5	64.5	71.9
Orthopedic surgery	3.5	-	3.7	-	65.4
Cardiovascular diseases	1.1	-	1.1	-	33.6
Dermatology	2.9	15.5	2.4	149.9	120.1
Urological surgery	2.0	-	2.1	-	52.3
Psychiatry	2.8	5.8	2.7	23.2	31.5
Ophthalmology	4.7	*1.0	4.9	*45.7	79.5
Neurology	0.5	*1.1	0.5	*	27.5
Otolaryngology	2.8	-	2.9	-	82.5
Other specialties	4.7	2.9	4.5	---	---

in direct patient encounter is discussed in another section of this report. The length of the practice-week and workday will be variables used in a future publication based on the practice activity of physicians.

The specialty in which a physician practices contributes more than any other variable to differences between physicians. Therefore, comparisons between female and male physicians in this report are limited to contrasts within specialties wherever possible. The primary care specialties of general and family practice, internal medicine, pediatrics, and obstetrics and gynecology constituted more than two-thirds of the visits to both female and male physicians. Dermatology and psychiatry are fields in which many female physicians are active. Therefore, these specialties were selected for analysis. As a matter of practicality all specialties are not shown in some tables. Where a variable is not a significant factor in a particular specialty, that specialty is not shown. The reader should note the specialty names (when they are shown) in the titles of the tables.

Physician Specialty and Patient Age

The median visit age[a] of patients in the offices of female physicians in all specialties was 28.6 years, which is significantly younger than the median age of 36.8 years for visits to male physicians (table D). However, when visit age is adjusted for physician specialty, this statistic is clearly influenced by the large proportion of visits to women pediatricians where most patients are under 15 years of age. The median visit age of patients visiting male general and family practitioners is higher than that of patients visiting females in the same specialty, but median visit ages are about the same for patients seen by female and male internists, obstetrician-gynecologists, and psychiatrists.

Table E provides detailed statistics on visits to women and men specialists according to the sex and age of the patient and the patient's race.

[a]Median *visit* age should not be confused with median *patient* age. The median *visit* age is based on initial and return visits some of which may be by the same patient.

Table D. Median visit age in years and standard error of the median in years, by sex and specialty of the physician: United States, 1977

Physician specialty	Sex of physician			
	Female		Male	
	Median visit age in years	Standard error of the median	Median visit age in years	Standard error of the median
All specialties[1]	28.6	1.53	36.8	0.34
General and family practice	33.9	2.38	39.1	0.66
Internal medicine	56.0	4.28	56.0	0.66
Pediatrics	5.0	0.95	4.4	0.21
Obstetrics and gynecology	28.9	1.74	28.8	0.36
Psychiatry	33.2	2.21	33.9	0.74

[1]Includes visits to other specialties not shown in the table.

Table E. Number and percent distribution of office visits by sex, age, and race of the patient, according to sex and specialty of the physician: United States, 1977

Sex, age, and race of patient	Sex and specialty of physician					
	Female			Male		
	General and family practice and internal medicine	Obstetrics and gynecology	Psychiatry	General and family practice and internal medicine	Obstetrics and gynecology	Psychiatry
	Number in thousands					
All visits	9,371	2,661	1,319	278,508	46,612	14,877
	Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Sex and age						
Female	74.7	100.0	71.7	59.4	99.1	57.9
Less than 15 years	10.0	*0.9	*2.6	6.1	*0.4	*2.5
15-24 years	11.6	34.6	*11.1	9.1	29.1	8.7
25-44 years	20.3	47.6	48.4	14.6	52.9	31.9
45-64 years	20.7	*14.6	*9.7	16.6	13.8	13.3
65 years and over	12.0	*2.4	-	13.0	2.9	1.5
Male	25.3	-	28.3	40.6	0.9	42.1
Less than 15 years	6.1	-	*4.0	5.9	-	4.2
15-24 years	*3.4	-	*1.9	5.6	-	7.3
25-44 years	5.7	-	*18.8	9.4	-	20.1
45-64 years	6.5	-	*3.6	12.1	-	9.8
65 years and over	*3.7	-	-	7.6	-	*0.7
Race						
White	79.0	88.2	95.2	90.5	90.0	95.4
Black and all other	21.0	*11.8	*4.8	9.5	10.0	4.7

CLINICAL CHARACTERISTICS

Principal Reason for Visit

Information obtained in item 6 of the Patient Record form represents the reasons for visiting physicians' offices. The physician records, as nearly as possible in the patient's own words, the reason, complaint, or symptom that in his judgment was the most important reason for the patient visit. These data have been classified and coded according to *A Reason for Visit Classification for Ambulatory Care* (RVC), which has been published in Series 2, No. 78 of *Vital and Health Statistics.*[7] Detailed tables showing a summary of reasons for visit are included in Series 13, No. 44.[5] Similar tables by sex of the patient (but not by sex of the physician) were published in Series 13, No. 45.[8]

Proportionately more visits were classified in the symptom module of the RVC to female physicians than to male physicians in the specialties of general and family practice and internal medicine, and obstetrics and gynecology (table F). The larger proportion of visits in the disease module recorded by male general and family practitioners and internists reflects their relatively high proportion of visits by elderly patients. (Visits by patients with prior diagnoses of hypertension and heart disease, for example, are likely to fall in this group.)

Male pediatricians were proportionately more likely to see patients for diagnostic, screening, and preventive care (chiefly, well-baby examinations) than were female pediatricians.

Other differences in proportions of visits shown in table F are not statistically significant.

Principal Reason for Visit and Diagnostic Services

The kinds of diagnostic services ordered or provided when patients presented different types of symptoms are listed in table G. In this table complaints constituting the major part of the symptom module (S001-S999) are grouped as general symptoms or symptoms referable to selected body systems (e.g., S400-S499 represents symptoms referable to the respiratory system only).

The clinical response of female and male physicians to the presentation of these symptoms was about the same because the differences in the proportions of visits for most comparisons

Table F. Number and percent distribution of office visits by principal reason for visit, according to sex and specialty of the physician: United States, 1977

Principal reason for visit and RVC code[1]	Sex and specialty of physician							
	Female				Male			
	General and family practice and internal medicine	Obstetrics and gynecology	Pediatrics	Psychiatry	General and family practice and internal medicine	Obstetrics and gynecology	Pediatrics	Psychiatry
	Number in thousands							
All reasons for visit	9,371	2,661	4,535	1,319	278,508	46,612	50,227	14,877
	Percent distribution							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Symptom module S001-S999	68.5	36.8	69.9	71.4	59.0	25.9	53.8	60.9
Disease module D001-D999	6.1	*5.0	*6.2	*1.6	10.0	3.7	5.7	2.5
Diagnostic, screening, and preventive module X100-X599	13.2	50.4	14.4	*1.8	16.8	60.6	27.3	*2.0
Treatment module T100-T899	4.6	*5.4	*3.0	*22.9	5.6	7.5	7.7	32.5
Injuries and adverse effects module J001-J999	*1.5	*0.2	*4.2	*0.3	4.4	*0.3	2.3	*0.5
Test results module R100-R700	*1.5	*2.2	-	-	0.5	0.9	*0.1	*0.0
Administrative module A100-A140	4.4	-	*1.9	*1.2	2.6	*0.2	1.9	*1.0
Other[2] U990-U999	*0.3	-	*0.6	*0.9	1.1	1.1	1.2	*0.5

[1]Reason for visit groups and codes are based on *A Reason for Visit Classification for Ambulatory Care* (RVC).
[2]Includes blanks; problems, complaints not elsewhere classified; entry of "none"; and illegible.

Table G. Number and percent of office visits, by selected reasons for visit, sex of the physician, and selected diagnostic services ordered or provided: United States, 1977

Sex of physician and diagnostic service	Reason for visit and RVC code[1]					
	General symptoms S001-S099	Symptoms referable to the nervous system (except sense organs) S200-S259	Symptoms referable to to the respiratory system S400-S499	Symptoms referable to the digestive system S500-S639	Symptoms referable to the genitourinary system S640-S829	Symptoms referable to the musculo-skeletal system S900-S999
	Number in thousands					
All visits to female physicians	2,091	705	2,870	1,161	1,611	1,614
Diagnostic service	Percent[2]					
No diagnostic services	*9.4	*0.2	*3.9	*1.3	*2.6	38.2
Limited history and examination	56.7	62.4	70.4	63.3	56.4	43.5
General history and examination	28.9	*32.4	23.1	*31.0	36.2	15.8
Pap test	*5.4	*7.2	*0.9	*11.9	[3]31.0	*0.3
Laboratory procedure or test	22.6	*28.3	21.8	35.5	52.8	*8.7
Blood pressure check	32.0	65.7	27.4	43.0	61.7	28.4
	Number in thousands					
All visits to male physicians	41,643	18,545	59,270	26,480	29,866	51,934
Diagnostic service	Percent[2]					
No diagnostic services	8.7	7.4	6.8	5.2	5.2	8.6
Limited history and examination	57.2	58.1	68.9	59.3	61.0	65.7
General history and examination	25.8	25.6	19.5	26.9	23.1	17.2
Pap test	1.6	*1.5	*0.1	3.8	[4]16.7	0.8
Laboratory procedure or test	26.5	19.5	16.5	23.4	46.1	13.9
Blood pressure check	41.7	52.4	26.7	37.3	35.4	31.8

[1]Reason for visit groups and codes are based on *A Reason for Visit Classification for Ambulatory Care* (RVC).
[2]Percents will not add to 100.0 because most patient visits required the provision of more than 1 service.
[3]Of all visits to female physicians by female patients with genitourinary problems, 32.3 percent included a Pap test.
[4]Of all visits to male physicians by female patients with genitourinary problems, 23.4 percent included a Pap test.

in the table were not statistically significant. The only statistically significant result showed that female physicians were more likely to check blood pressure during visits for symptoms referable to the genitourinary system than were men.

Principal Diagnosis

Conditions that were proportionately most often diagnosed by female and male physicians in the specialties of general and family practice and internal medicine reflected the characteristics of the patients most likely to be seen by them. According to the data shown in table H, male physicians in these specialties treated proportionately more patients visiting principally for diseases of the circulatory system than for other diagnostic groups; female general and family practitioners and internists were more likely to see patients with diseases of the genitourinary system. The former group reflects the elderly patients who presented symptoms typical of that age group to male physicians; the latter group reflects the younger female patients who presented symptoms referable to the genitourinary system to female physicians. Other than the differences in these two categories, the practices of female and male general and family practitioners and internists were very similar in the diseases they diagnosed.

Principal Diagnosis and Drug Therapy

Drugs were ordered or provided during physician visits more than any other form of therapy (54 percent of all visits).[5] Table J shows the percents of visits in which drug therapy was indicated in the presence of the principal diagnoses. Because most differences in the proportions shown in the table are not statistically significant, female or male physicians showed little

Table H. Number and percent of office visits to general and family practitioners and internists, by sex of the physician and selected principal diagnoses: United States, 1977

Principal diagnosis and ICDA code[1]		Sex of physician	
		Female	Male
		Number in thousands	
All visits		9,371	278,508
		Percent[2]	
Infective and parasitic diseases	000-136	5.7	4.5
Neoplasms	140-239	*1.0	1.6
Endocrine, nutritional, and metabolic diseases	240-279	4.9	6.5
Mental disorders	290-315	*3.5	3.0
Diseases of the nervous system and sense organs	320-389	5.5	4.4
Diseases of the circulatory system	390-458	9.2	15.7
Diseases of the respiratory system	460-519	18.1	16.5
Diseases of the digestive system	520-577	*2.5	4.3
Diseases of the genitourinary system	580-629	10.2	5.0
Diseases of the skin and subcutaneous tissue	680-709	4.6	4.2
Diseases of the musculoskeletal system	710-738	6.9	7.5
Symptoms and ill-defined conditions	780-796	4.4	5.0
Accidents, poisonings, and violence	800-999	8.9	7.8
Special conditions and examinations without sickness	Y00-Y13	11.6	12.0

[1]Based on the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA).
[2]Percents will not add to 100.0 because all ICDA categories are not listed.

Table J. Number of office visits and percent of visits with drug therapy, by sex of the physician and principal diagnosis: United States, 1977

Principal diagnosis and ICDA code[1]		Sex of physician			
		Female		Male	
		Number of visits in thousands	Percent of visits with drug therapy	Number of visits in thousands	Percent of visits with drug therapy
Infective and parasitic diseases	000-136	1,299	76.1	21,369	72.4
Neoplasms	140-239	674	*24.6	13,613	28.6
Endocrine, nutritional, and metabolic diseases	240-279	639	67.3	23,647	64.5
Mental disorders	290-315	1,593	33.1	22,930	47.8
Diseases of the nervous system and sense organs	320-389	1,693	81.8	46,598	53.1
Diseases of the circulatory system	390-458	954	81.3	53,749	73.1
Diseases of the respiratory system	460-519	3,520	85.1	78,946	79.5
Diseases of the digestive system	520-577	455	70.8	17,996	57.6
Diseases of the genitourinary system	580-629	1,638	67.8	34,835	62.4
Diseases of the skin and subcutaneous tissue	680-709	3,550	74.6	28,360	65.1
Diseases of the musculoskeletal system	710-738	762	62.6	32,221	62.2
Symptoms and ill-defined conditions	780-796	877	47.2	24,818	48.9
Accidents, poisonings, and violence	800-999	1,356	35.4	42,404	35.1
Special conditions and examinations without sickness	Y00-Y13	3,288	18.6	92,720	18.4

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

apparent tendency to dispense drugs differentially. Only when the principal diagnosis concerned diseases of the nervous system and sense organs did female physicians use drug therapy proportionately more than males seeing the same conditions. This group of diseases included otitis media, which is the most common specific illness diagnosed by pediatricians.[9]

Clinical Services and Physician Specialty

It was observed from the data, however, that male psychiatrists prescribed drugs proportionately more often (33 percent of their visits) than women psychiatrists did (17 percent). This tendency of male psychiatrists to prescribe drugs was more pronounced with female patients (37 percent) than with male patients (28 percent) (not shown in table J). Estimates of visits to female psychiatrists were too small to determine if this tendency was also significant for them.

When all diagnosed conditions were considered for the specialties of general and family practice and internal medicine, both female and male physicians ordered drugs in about two out of three visits (table K).

The proportion of visits that included physiotherapy was higher for female than for male physicians, but the reverse was true of medical counseling. Differences in other therapeutic services were not statistically significant.

Blood pressure checks and Pap tests were used for diagnosis proportionately more often by these women specialists than by men. Of the approximately 7 million visits by women patients to female general and family practitioners and internists, 13 percent included a Pap test; 6 percent of the approximately 165 million visits by women patients to men in the same specialties included a Pap test. (Percents in table K are based on visits by female and male patients.)

However, about one in three visits to female and male obstetrician-gynecologists included a Pap test (table L). Men in this specialty were more likely than women were to take blood pressure measurements and order laboratory tests.

Table K. Number and percent of office visits to general and family practitioners and internists, by sex of the physician and selected diagnostic or therapeutic services ordered or provided: United States, 1977

Diagnostic or therapeutic service	Sex of physician	
	Female	Male
	Number in thousands	
All visits	9,371	278,508
	Percent[1]	
No diagnostic services	11.4	8.3
Limited history and examination	59.2	62.0
General history and examination	22.7	20.4
Pap test	9.6	3.8
Laboratory procedure or test	29.5	23.5
X-ray	6.9	8.7
Electrocardiogram	*3.1	5.0
Blood pressure check	53.6	46.7
No therapeutic services	8.3	14.9
Immunization or desensitization	7.1	4.9
Drugs (prescription and nonprescription)	66.2	65.8
Diet counseling	10.4	9.2
Family planning	*1.5	0.8
Medical counseling	17.2	23.3
Physiotherapy	11.0	2.8
Office surgery	*3.1	5.2
Psychotherapy or therapeutic listening	5.6	3.4

[1]Percents will not add to 100.0 because most patient visits required the provision of more than 1 service.

Table L. Number and percent of office visits made by women to obstetrician-gynecologists, by sex of the physician and selected diagnostic or therapeutic services ordered or provided: United States, 1977

Diagnostic or therapeutic service	Sex of physician	
	Female	Male
	Number in thousands	
All visits	2,661	46,188
	Percent[1]	
No diagnostic services	6.5	3.7
Limited history and examination	62.7	56.8
General history and examination	29.1	30.6
Pap test	34.5	37.1
Laboratory procedure or test	31.8	44.0
Blood pressure check	55.1	66.6
No therapeutic services	40.5	34.9
Drugs (prescription and nonprescription)	39.3	36.9
Diet counseling	*7.9	6.5
Family planning	*8.5	11.1
Medical counseling	*15.4	22.4
Office surgery	*3.4	5.5

[1]Percents will not add to 100.0 because most patient visits required the provision of more than 1 service.

Clinical Services and Physician Age

Women under 35 years of age specializing in general and family practice and internal medicine were proportionately more likely to indicate that no diagnostic services were used during visits (about 31 percent) than were women in other age groups of physicians or men in the same or other age groups. Therefore, most of the percents of the selected diagnostic services detailed in table M are lower for this age group of physicians than for others. The large amount of physiotherapy (38 percent) provided by them, however, is in marked contrast to the proportions of such therapy provided by other groups of female and male physicians. (These data may be related to the fact that dermatologists comprised the second largest group of female physicians under 35 years of age in the sample.)

Proportions of clinical services rendered by male physicians did not vary appreciably among the three age groups shown in table M.

Status of the Visit

Female physicians were more likely to encounter patients making initial visits (22 percent) than were males (15 percent). This relationship was true of all of the specialties listed in table N.

A return visit rate for selected medical specialties was obtained by dividing the number of visits made by patients that the physician had seen before by the number of new patients (table O). Rates of return visits to male specialists are clearly higher than those to females. These results are consistent with the increasing visit rates to male physicians shown in figures 1 and 3.

Male physicians gained proportionately more patients by referral than females did. Of the new patients seen by women, 20 percent were referred by another physician; 26 percent of all patients visiting male physicians for the first time were referred. Variation in referral by specialty is shown in table P.

Seriousness of the Problem and Disposition and Duration of Visit

Physicians were requested to judge the seriousness of the patient's problem based on the extent of impairment that might result if no care were available. A four-point scale ranging from the categories of "not serious" to "very serious" was used in the survey. However, such

Table M. Number and percent of office visits to general and family practitioners and internists, by sex and age of the physician and selected diagnostic or therapeutic services ordered or provided: United States, 1977

Diagnostic or therapeutic service	Sex and age of physician					
	Female			Male		
	Less than 35 years	35-54 years	55 years and over	Less than 35 years	35-54 years	55 years and over
	Number in thousands					
All visits	2,378	3,160	3,833	44,558	138,326	95,624
	Percent[1]					
No diagnostic services	30.8	*2.4	*6.9	6.3	9.2	7.8
Limited history and examination	37.8	62.2	69.9	66.3	61.6	60.5
General history and examination	26.5	24.5	18.7	17.0	20.5	21.8
Pap test	*2.0	*10.4	13.7	4.6	3.8	3.4
Laboratory procedure or test	18.0	39.2	28.5	22.7	24.5	22.3
X-ray	*4.1	*12.1	*4.3	7.3	9.5	8.2
Electrocardiogram	*0.9	*7.1	*1.1	2.1	6.2	4.7
Blood pressure check	34.2	52.7	66.5	46.0	45.3	49.0
No therapeutic services	*5.5	*8.5	*9.9	15.0	15.5	13.8
Immunization or desensitization	*3.0	*7.7	*9.3	4.4	4.8	5.3
Drugs (prescription and nonprescription)	59.8	64.9	71.1	62.3	64.4	69.3
Diet counseling	*1.9	*12.3	14.2	9.0	8.7	9.9
Family planning	*2.2	*1.9	*0.8	1.9	0.6	0.5
Medical counseling	*7.9	25.7	16.0	23.9	25.4	20.1
Physiotherapy	37.8	*1.4	*2.3	7.3	1.7	2.2
Office surgery	*1.8	*5.9	*1.5	4.5	5.7	4.9
Psychotherapy or therapeutic listening	*0.8	*7.3	*7.2	4.1	3.6	2.7

[1]Percents will not add to 100.0 because most patient visits required the provision of more than 1 service.

an evaluation is often highly subjective and the data should be viewed in this context.

Male physicians in general tended to assign visits to the serious or very serious category proportionately more frequently than female physicians did (about 18 percent for visits to male physicians and 14 percent for those to female physicians as shown in table N). This tendency was most pronounced for psychiatrists.

Instructions to the patient to return at a specified time was the most common disposition of visits made by all physicians in the survey, but female physicians were more likely to so instruct the patient than male physicians were (table N). Men were more likely than women were to make no followup plans. Women and men did not differ significantly in the proportions of patients that they either referred to other physicians or admitted to the hospital; the latter was a rare event for physicians of both sexes.

Table Q shows the proportions of visits estimated in discrete time categories for selected specialties. Duration of the visit is the time spent in direct physician-patient encounter. Visits where only staff see the patient are recorded as "0" minutes. A higher proportion of visits to male physicians than to female physicians consumed none of the physician's time. The proportions of such visits shown in table Q may be related to staff availability. Estimates of staffing patterns are not yet available in NAMCS, but a future publication based on practice activity of physicians will report on an investigation of this variable. As expected, psychiatrists of both sexes had the highest proportion of visits categorized as 31 minutes or more.

Visit duration may also be compared by using the mean contact duration. This duration is the average time spent by the physician in direct patient encounter. Visits in which the patient did not see the physician are excluded

Table N. Number and percent distribution of office visits by selected visit characteristics, according to sex and specialty of the physician: United States, 1977

Sex of physician and visit characteristic	All specialties	General and family practice and internal medicine	Pediatrics	Obstetrics and gynecology	Dermatology	Psychiatry
FEMALE	Number in thousands					
All visits[1]	22,788	9,371	4,535	2,661	3,523	1,319
	Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Status of the visit						
New patient	22.3	14.6	30.9	18.2	37.0	*14.6
Old patient, new problem	26.2	34.3	32.1	30.3	*8.6	*3.1
Old patient, old problem	51.6	51.1	37.0	51.5	54.4	82.3
Seriousness of the problem						
Not serious	57.1	47.4	72.5	81.6	69.3	*11.2
Slightly serious	29.0	37.4	25.5	*9.6	19.0	40.8
Serious or very serious	14.0	15.2	2.0	*8.8	11.8	48.0
Disposition[2]						
No followup planned	6.4	5.0	11.5	1.8	9.0	2.1
Return at specified time	66.5	66.0	45.9	84.4	66.7	89.6
Return if needed	23.4	21.9	40.9	16.7	22.1	6.4
Telephone followup planned	3.1	3.3	4.7	2.7	2.4	0.6
Referred to another physician or agency	3.7	3.8	5.8	5.3	1.5	1.1
Admit to hospital	1.4	1.5	1.1	2.8	-	-
MALE	Number in thousands					
All visits[1]	547,264	278,508	50,227	46,612	12,864	14,877
	Percent distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Status of the visit						
New patient	15.0	11.7	9.6	14.6	27.7	6.6
Old patient, new problem	24.9	31.6	40.8	19.1	13.2	1.7
Old patient, old problem	60.1	56.7	49.6	66.3	59.1	91.7
Seriousness of the problem						
Not serious	50.7	48.3	66.2	76.1	59.1	7.7
Slightly serious	30.8	34.0	26.4	17.3	27.3	22.9
Serious or very serious	18.4	17.7	7.4	6.7	13.7	69.4
Disposition[2]						
No followup planned	11.4	12.4	20.0	4.3	14.1	2.0
Return at specified time	60.5	56.5	45.3	77.0	68.8	89.9
Return if needed	22.6	25.9	28.9	18.5	13.0	6.8
Telephone followup planned	3.2	3.1	7.5	2.6	2.8	1.1
Referred to another physician or agency	2.5	3.0	2.1	2.5	0.9	0.8
Admit to hospital	2.0	1.3	0.5	2.5	-	0.6

[1]Visits will not add to total because all specialties are not shown in the table.
[2]Percents will not add to 100.0 because more than 1 disposition was possible.

from this calculation. Mean contact duration by sex of the physician and by sex of the patient is shown in table R. Female physicians tended to see patients longer than males did. The mean duration of all visits to women specialists was 17.8 minutes, compared with 15.3 to male specialists, which was chiefly due to the average time used by general and family practitioners (17.6 minutes for females in this specialty, compared with 12.7 for males in the same practice). Female physicians tended to spend more time, on the average, with female patients than with male patients; while male physicians allotted about the same time to both female and male patients.

Table O. Return visit rate by sex and specialty of the physician: United States, 1977

Physician specialty	Sex of physician	
	Female	Male
	Return visit rate	
General and family practice and internal medicine	5.86	7.54
Pediatrics	2.24	9.41
Obstetrics and gynecology	4.49	5.83
Dermatology	1.70	2.61
Psychiatry	5.86	14.13

Table C shows that female general and family practitioners had, on the average, 77 visits per week, compared with 110 for males. Female internists also had less weekly visits than males did. These visits included all patient encounters in the scope of the survey, regardless of whether the patient saw the physician or only a staff member (e.g., to have blood drawn by a technician for a laboratory test). A more realistic estimate of physician-patient activity is the number of hours per week spent in direct patient encounter. This statistic was obtained by dividing the total number of minutes the physician reported for encounters by 3,120 (60 minutes X 52 weeks), and by the number of weighted physicians in the sample. The results of this computation are shown in table S. Women and men in general and family practice and internal medicine spent about the same average number of hours per week in direct patient care despite the fact that more visits per week were to the offices of the male specialists. However, table R reveals that visits to female physicians lasted longer than those to men did. This variation may account for the difference in the number of visits; that is, female physicians saw fewer patients in the same amount of time because the visits were longer. As suggested previously, staff availability may also have contributed to these differences.

Table P. Percent of new patients seen by office-based physicians and percent referred by another physician, by sex and specialty of the physician: United States, 1977

Physician specialty	Sex of physician			
	Female	Male	Female	Male
	Percent of new patients		Percent referred by another physician	
All specialties	22.3	15.0	20.2	26.2
General and family practice and internal medicine	14.6	11.7	16.5	10.5
Pediatrics	30.9	9.6	9.7	20.8
Obstetrics and gynecology	18.2	14.6	20.0	19.2
Dermatology	37.0	27.7	28.9	35.2
Psychiatry	14.6	6.6	40.8	47.4

Table Q. Percent distribution of office visits by duration of visit, according to sex and specialty of the physician: United States, 1977

Sex and specialty of physician	Number of visits in thousands[1]	Duration of visit					
		Total	0 minutes[2]	1-10 minutes	11-15 minutes	16-30 minutes	31 minutes or more
Female		Percent distribution					
All specialties	22,788	100.0	0.5	39.7	25.3	25.1	9.4
General and family practice	7,955	100.0	-	31.1	29.9	33.2	5.8
Internal medicine	1,416	100.0	*0.7	*15.1	36.2	*27.3	*20.7
Pediatrics	4,535	100.0	-	65.2	21.7	12.9	*0.2
Obstetrics and gynecology	2,661	100.0	3.9	48.9	23.5	18.8	4.9
Dermatology	3,523	100.0	-	49.3	21.0	28.8	*0.9
Psychiatry	1,319	100.0	-	*0.2	*0.9	*17.0	81.9
Male							
All specialties	547,264	100.0	2.4	44.8	26.9	20.3	5.7
General and family practice	214,964	100.0	2.8	53.3	26.0	16.3	1.6
Internal medicine	63,544	100.0	2.2	29.4	32.2	27.0	9.2
Pediatrics	50,227	100.0	3.8	49.2	32.3	12.9	1.8
Obstetrics and gynecology	46,612	100.0	1.2	42.3	29.5	24.2	2.8
Dermatology	12,864	100.0	-	51.6	25.2	22.1	*1.1
Psychiatry	14,877	100.0	*0.1	5.0	5.8	16.6	72.6

[1]Visits will not add to totals because all specialties are not listed in the table.
[2]Includes visits during which the patient was under the care of someone other than the physician and the form entry was "zero" minutes.

Table R. Mean contact duration[1] of office visits by sex of the patient and sex and specialty of the physician: United States, 1977

Sex and specialty of physician	Sex of patient		
	Both sexes	Female	Male
Female	Mean duration in minutes		
All specialties	17.8	18.3	16.5
General and family practice	17.6	18.3	15.7
Internal medicine	23.5	24.4	20.4
Pediatrics	11.4	11.0	11.9
Obstetrics and gynecology	14.4	14.4	-
Psychiatry	48.3	48.0	49.4
Male			
All specialties	15.3	15.3	15.3
General and family practice	12.7	12.8	12.5
Internal medicine	18.7	18.5	19.0
Pediatrics	13.0	13.2	12.9
Obstetrics and gynecology	14.7	14.7	-
Psychiatry	43.9	42.7	45.5

[1]Time spent in face-to-face encounter between physician and patient.

Table S. Average number of hours per week spent in direct patient encounter, by sex and specialty of the physician: United States, 1977

Physician specialty	Sex of physician	
	Female	Male
	Hours per week	
General and family practice and internal medicine	20.5	20.9
Pediatrics	15.7	22.6
Obstetrics and gynecology	14.9	17.4
Dermatology	35.4	26.9
Psychiatry	18.7	23.0

DISCUSSION

The NAMCS data on visits to office-based physicians do not reveal any startling differences between the medical practices of women and men. Results of other research suggest that some statistically significant findings may be attrib-

uted to sociocultural influences rather than to physician behavior or judgment.

The American Medical Association reported that in 1977 office-based female physicians practiced chiefly in the specialties of pediatrics, general and family practice, internal medicine, psychiatry, and obstetrics and gynecology (in descending order); however, female urologists, otolaryngologists, and neurologists (among other specialists) were rarely found.[2] The first group of specialists were rated highest by female medical students in a 1974 study of specialty preferences, but the second group were preferred least.[10] It is no coincidence that in another study a group of male faculty physicians perceived the latter group as the least suitable for women entering medicine.[11] These cultural influences are reflected by the distribution of visits in the NAMCS.

Patient attitudes also tend to shape the character of a practice. Although female physicians encountered the full range of disease categories in office practice, examination of data on specific diseases of the genitourinary system showed that men did not visit female general and family practitioners and internists for male sex-related problems. However, women patients made visits to both female and male physicians for their uniquely feminine disorders.

Studies of the comparative productivity of female and male physicians reported in 1957 and 1969 showed that women tended to work fewer hours and saw fewer patients than men did.[12,13] In the earlier study, 57 percent of the married female physicians stated that they curtailed medical activity because of pregnancy and family problems; in the later study, 38 percent of married female physicians responded that family responsibilities limited their practices. This report has also shown that male physicians saw more patients per week than women did, but that women and men devoted about an equal amount of time to direct patient care. Availability of adequate staff (perhaps limited by economic resources of the physician, location, or type of practice) may be one factor in reporting physician productivity. Therefore, societal expectations regarding the traditional role of women or economic conditions may also be involved in the differences between the medical practices of women and men.

Although a comparison of the practice characteristics of female and male physicians is inevitable, the primary objective of this report is to provide baseline statistics for use in the conduct of future research where the sex of the physician is a required variable.

REFERENCES

[1]Theodore, C. N., and Haug, J. N.: *Selected Characteristics of the Physician Population, 1963 and 1967.* Special Statistical Series. Chicago. American Medical Association, 1968.

[2]Center for Health Services Research and Development: *Physician Distribution and Medical Licensure in the U.S., 1977.* OP-054. Chicago. American Medical Association, 1979.

[3]Bureau of Health Manpower: Minorities & women in the health fields. *Health Manpower References.* DHEW Pub. No. (HRA) 79-22. Health Resources Administration. Washington. U.S. Government Printing Office, Oct. 1978.

[4]National Center for Health Statistics: National Ambulatory Care Medical Care Survey: Background and methodology, by J. B. Tenney et al. *Vital and Health Statistics.* Series 2-No. 61. DHEW Pub. No. (HRA) 74-1335. Health Resources Administration. Washington. U.S. Government Printing Office, Apr. 1974.

[5]National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1977 Summary, United States, January-December 1977, by T. Ezzati and T. McLemore. *Vital and Health Statistics,* Series 13-No. 44. DHEW Pub. No. (PHS) 80-1795. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1980.

[6]National Center for Health Statistics: Office visits to internists, The National Ambulatory Medical Care Survey, United States, 1975, by B. K. Cypress. *Vital and Health Statistics.* Series 13-No. 36. DHEW Pub. No. (PHS) 79-1787. Public Health Service. Washington. U.S. Government Printing Office, Dec. 1978.

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

[8]National Center for Health Statistics: Office visits by women, The National Ambulatory Medical Care Survey, United States, 1977, by B. K. Cypress. *Vital and Health Statistics.* Series 13-No. 45. DHEW Pub. No. (PHS) 80-1796. Public Health Service. Washington. U.S. Government Printing Office, Mar 1980.

[9]National Center for Health Statistics: Ambulatory medical care rendered in pediatricians' offices during 1975, by T. Ezzati. *Advance Data from Vital and Health Statistics,* No. 13. DHEW Pub. No. (HRA) 77-1250. Health Resources Administration. Hyattsville, Md., Oct 13, 1977.

[10]Gough, H. G.: Specialty preferences of physicians and medical students. *J. Med. Educ.* 50:581-588, June 1975.

[11]Ducker, D. G.: Believed suitability of medical specialties for women physicians. *J. Am. Med. Women's Assoc.* 33 (1):25-32, Jan. 1978.

[12]Dykman, R. A., and Stalnaker, J. M.: Survey of women physicians graduating from medical school 1925-1940. *J. Med. Educ.* 32 (pt. 2):3-38, Mar. 1957.

[13]Powers, L., Parmelle, R. D., and Wiesenfelder, H.: Practice patterns of women and men physicians. *J. Med. Educ.* 44:481-491, June 1969.

[14]National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States.* PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

[15]National Center for Health Statistics: Replication, An approach to the analysis of data from complex surveys, by P. J. McCarthy. *Vital and Health Statistics.* PHS Pub. No. 1000-Series 2-No. 14. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1966.

[16] National Center for Health Statistics: Pseudoreplication, Further evaluation and application of the balanced half-sample technique, by P. J. McCarthy. *Vital and Health Statistics.* PHS Pub. No. 1000-Series 2-No. 14. Public Health Service. Washington. U.S. Government Printing Office, Jan. 1969.

APPENDIXES

CONTENTS

I. Technical Notes 19
- Statistical Design 19
- Data Collection and Processing 21
- Estimation Procedures 22
- Reliability of Estimates 22
- Tests of Significance 25
- Population Figures 25
- Systematic Bias 26

II. Definition of Terms 27
- Terms Relating to the Survey 27
- Terms Relating to the Patient Record Form 28

III. Survey Instruments 31
- Introductory Letter From Director, National Center for Health Statistics 31
- Patient Record and Patient Log 32
- Introduction Interview Form 33

LIST OF APPENDIX FIGURES

I. Approximate relative standard errors for estimated numbers of office visits, 1977 National Ambulatory Medical Care Survey 23

II. Approximate relative standard errors for percentages of estimated numbers of office visits, 1977 National Ambulatory Medical Care Survey 24

LIST OF APPENDIX TABLES

I. Distribution of physicians in the 1977 National Ambulatory Medical Care Survey sample and response rates, by sex and specialty of the physician 20

II. Estimates of the civilian noninstitutionalized population of the United States, by age, race, and sex: United States, July 1, 1977 25

APPENDIX I

TECHNICAL NOTES[b]

This report is based on data collected in the 1977 National Ambulatory Medical Care Survey (NAMCS), an annual sample survey of office-based physicians conducted by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics.

Statistical Design

Scope of the survey.—The target population of NAMCS encompasses office visits within the conterminous United States made 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 (NORC) of the University of Chicago, the organization responsible for NAMCS field and data processing operations under contract to the National Center for Health Statistics. 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.

The 1977 NAMCS physician universe included 188,690 doctors of medicine and 10,010 doctors of osteopathy.

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, within each PSU, a systematic random sample of physicians was selected in such a way that the overall probability of selecting any physician in the United States was approximately constant.

The 1977 NAMCS physician sample included 3,000 physicians. Sample physicians were screened at the time of the survey to ensure that they met the aforementioned criteria; 507 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

[b]Prepared by Thomas McLemore, M.S.P.H., Division of Health Resources Utilization Statistics.

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

Sex and specialty of physician	Gross total	Out of scope	Net total	Non-respondents	Respond-ents	Response rate
Female						
All specialties	172	66	106	20	86	81.1
General and family practice	40	17	23	5	18	78.3
Medical specialties	67	29	38	5	33	86.8
Internal medicine	15	4	11	2	9	81.8
Pediatrics	39	19	20	3	17	85.0
Other medical specialties	13	6	7	-	7	100.0
Surgical specialties	29	7	22	7	15	68.2
General surgery	3	1	2	-	2	100.0
Obstetrics and gynecology	17	5	12	3	9	75.0
Other surgical specialties	9	1	8	4	4	50.0
Other specialties	36	13	23	3	20	87.0
Psychiatry	27	8	19	3	16	84.2
Other specialties	9	5	4	-	4	100.0
Male						
All specialties	2,828	441	2,387	541	1,846	77.3
General and family practice	700	123	577	157	420	72.8
Medical specialties	759	103	656	164	492	75.0
Internal medicine	415	61	354	97	257	72.6
Pediatrics	164	15	149	31	118	79.2
Other medical specialties	180	27	153	36	117	76.5
Surgical specialties	1,033	105	928	180	748	80.6
General surgery	299	40	259	44	215	83.0
Obstetrics and gynecology	232	16	216	51	165	76.4
Other surgical specialties	502	49	453	85	368	81.2
Other specialties	336	110	226	40	186	82.3
Psychiatry	194	39	155	29	126	81.3
Other specialties	142	71	71	11	60	84.5

of scope were that the physician was retired, deceased, or employed in teaching, research or administration. Of the 2,387 in-scope (eligible) male physicians, 1,846 (77.3 percent) participated in the study. Of the 106 in-scope female physicians, 86 participated (81.1 percent). Of the participating physicians, 265 physicians saw no patients during their assigned reporting period because of vacations, illnesses, or other reasons for being temporarily not in practice. The physicians sample size and response data by physician specialty and sex are shown in table I.

The final stage was the selection of patient visits within the annual practices of the sample physicians. This involved two steps. First, the total physician sample was divided into 52 random subsamples 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 in appendix III. During 1977, 51,044 usable Patient Record

forms were completed by physicians participating in NAMCS (2,339 by female physicians and 48,705 by males).

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 (see appendix III) 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 there were no problems, field procedures were complete with respect to 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 upon 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 was coded according to *A Reason for Visit Classification for Ambulatory Care.*[7] Diagnostic information (item 8 of the Patient Record) was coded according to the *Eighth Revision International Classification of Diseases, Adapted for*

NOTE: A list of references follows the text.

Use in the United States.[14] 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 the National Center for Health Statistics.

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

Estimation Procedures

Statistics from the 1977 National Ambulatory Medical Care Survey 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 probabilites.—Since the survey utilized a three-stage sample design, there were three probabilities of selection: (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 Records 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 was done in such a manner as to minimize the impact of nonresponse 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

Since the statistics presented in this report are based on a sample, they differ somewhat from the figures that would be obtained if a complete census had been taken using the same forms, 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 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

NOTE: A list of references follows the text.

replication technique for error estimation has been published.[15,16]

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

NOTE: A list of references follows the text.

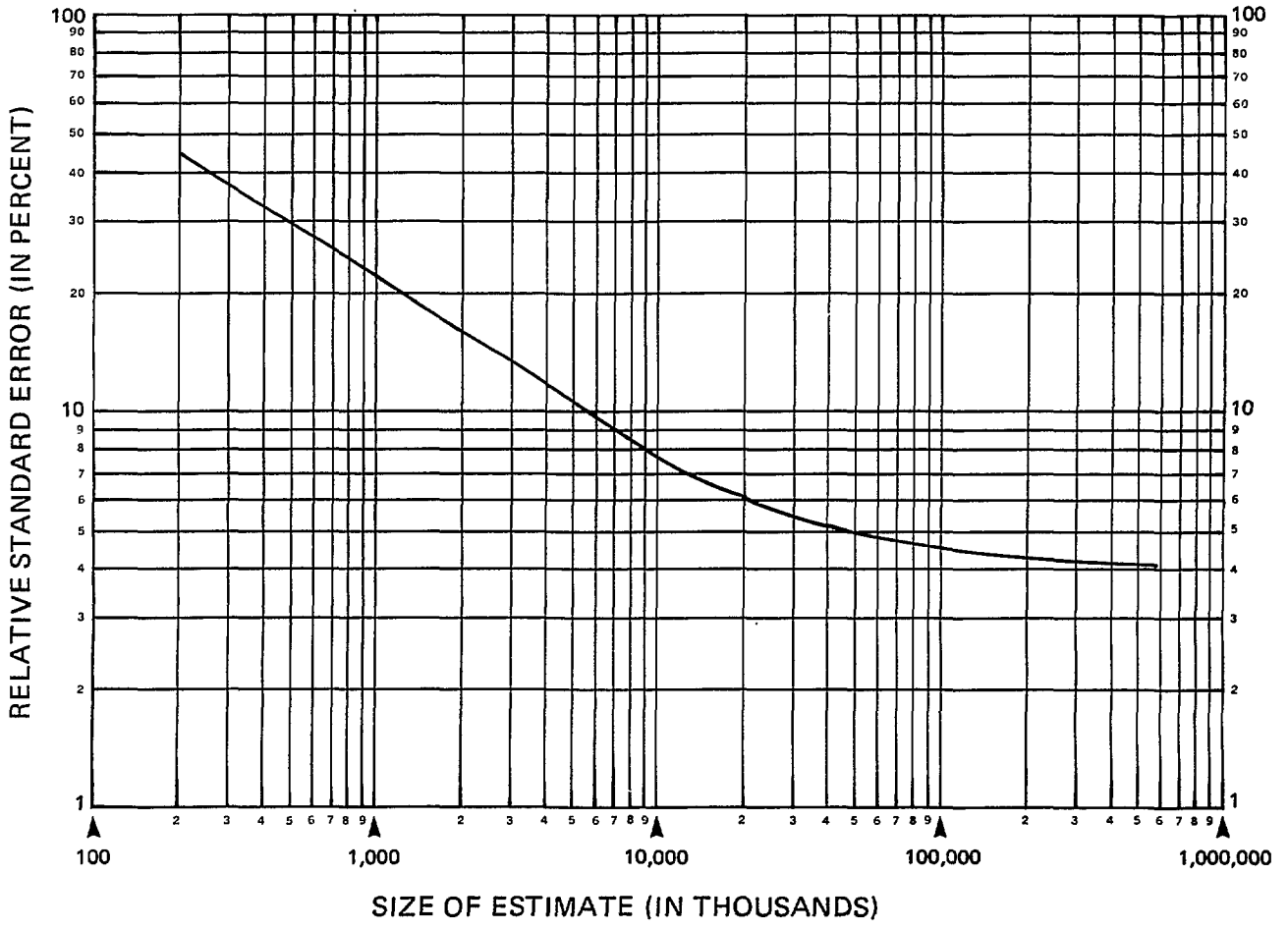
Estimates of aggregates.—Approximate relative standard errors (in percent) for aggregate statistics, such as the number of office visits with a given characteristic, are obtained from the curve in figure I or calculated by the formula:

$$\text{RSE}\ (x) = \sqrt{0.00160725 + \frac{41.31046}{x}} \cdot 100$$

where x is the aggregate of interest in thousands.

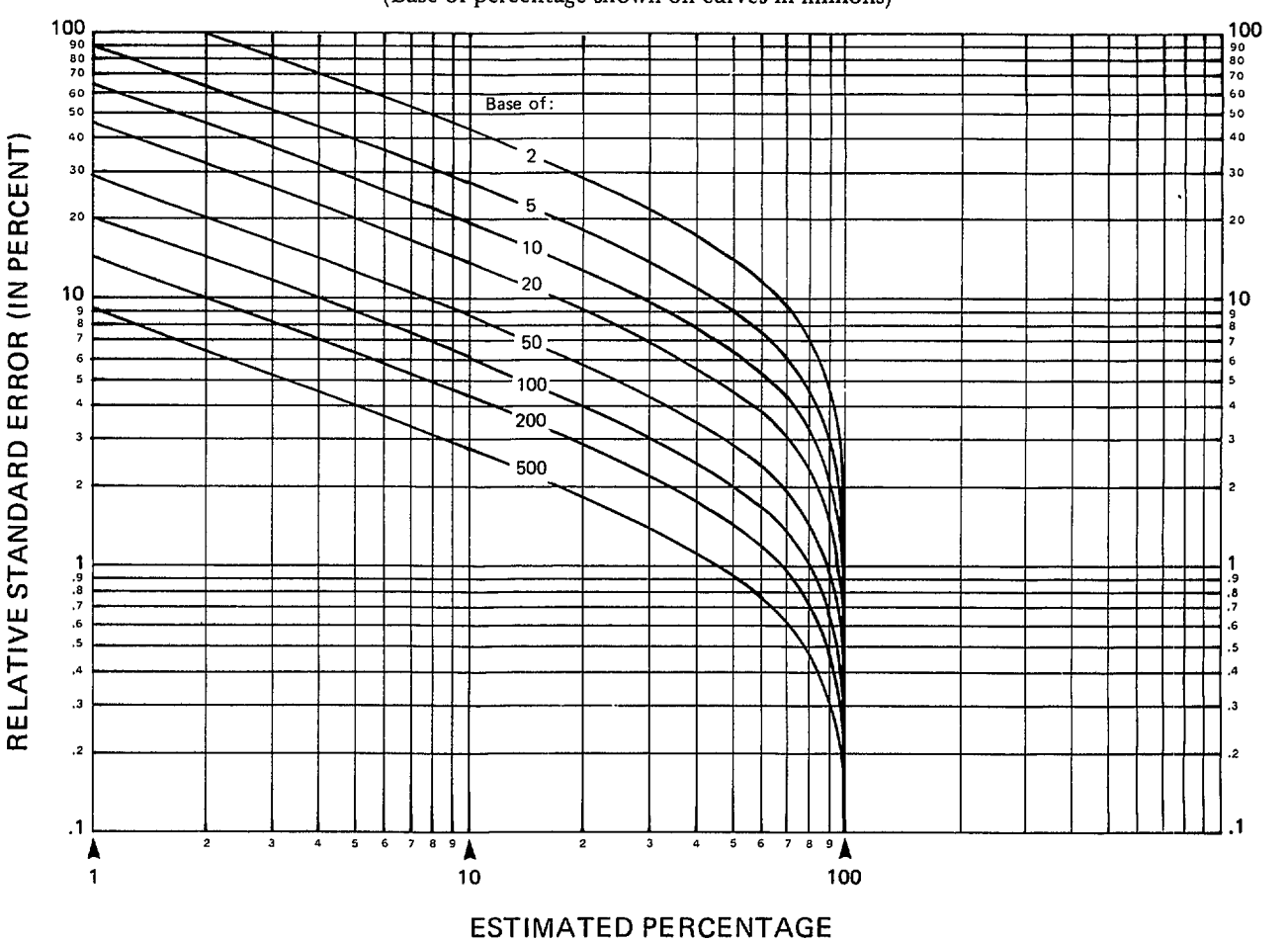
Estimates of percentages.—Approximate relative standard errors (in percent) for estimates of this type can be calculated from the curve in figure I as follows. Obtain the relative standard

Figure I. Approximate relative standard errors for estimated numbers of office visits, 1977 National Ambulatory Medical Care Survey



Example of use of this chart: An estimate of 10 million office visits (read from scale at bottom of chart) has a relative standard error of 7.6 percent (read from scale at left side of chart) or a standard error of 760,000 office visits (7.6 percent of 10 million visits).

Figure II. Approximate relative standard errors for percentages of estimated numbers of office visits, 1977 National Ambulatory Medical Care Survey



Example of use of this chart: An estimate of 20 percent (read at bottom of chart) based on an estimate of 10 million office visits has a relative standard error of 12.9 percent (read from scale at left of chart) or a standard error of 2.6 percentage points (12.9 percent of 20 percent).

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 percents and bases and is presented in figure II. Alternatively, the formula

$$\text{RSE}\ (p) = \sqrt{\frac{41.31046\ (1 - p)}{p \cdot x}} \cdot 100$$

can be used to calculate the RSE for any percent (p) and base (x, 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. There is no way to compute the magnitude of these errors. 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 in order 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

The base population used in computing annual visit rates is presented in table II. The figures are based on provisional estimates for the civilian noninstitutionalized population of the United States as of July 1, 1977, provided by the U.S. Bureau of the Census. Because NAMCS included data for only the conterminous United

Table II. Estimates of the civilian noninstitutionalized population of the United States,[1] by age, race, and sex: United States, July 1, 1977

[Used in the calculation of rates for this report]

Race and sex	All ages	Age							
		Under 15 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 years and over
	Number in thousands								
All races	210,843	51,186	39,425	31,947	22,946	23,075	20,065	14,217	7,983
Male	101,745	26,110	19,350	15,499	11,021	11,126	9,471	6,178	2,991
Female	109,098	25,076	20,075	16,448	11,925	11,950	10,594	8,039	4,992
White	182,781	42,495	33,648	27,878	20,059	20,469	18,129	12,836	7,267
Male	88,607	21,734	16,639	13,703	9,754	9,926	8,582	5,567	2,701
Female	94,174	20,761	17,010	14,175	10,305	10,543	9,546	7,269	4,565
Black	24,970	7,761	5,262	3,458	2,467	2,311	1,767	1,280	664
Male	11,610	3,911	2,465	1,512	1,060	1,038	807	556	259
Female	13,360	3,850	2,797	1,945	1,407	1,273	959	724	405
All other races	3,093	930	514	611	420	295	170	100	52
Male	1,529	464	246	284	207	161	82	55	31
Female	1,564	466	268	328	213	135	88	46	21

[1]Excludes Alaska and Hawaii.

States, the original census estimates were modified to account for the exclusion of Alaska and Hawaii from the study. For this reason the population estimates should not be considered official and are presented here solely to provide denominators for rate computations.

Systematic Bias

There have been no attempts to determine systematic bias on the data reported here. There are several factors, however, which the user of these data should understand, that indicate that these data underrepresent the total number of office visits to office-based physicians. Some of the factors are:

1. The sampling frame for the 1977 NAMCS included all nonfederally employed, "office-based, patient care physicians on the AMA-AOA master files. There are certainly physicians not so classified who, at the time of 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.

———— ooo ————

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) for the purpose of seeking care and rendering health services.

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

American Medical Association or the American Osteopathic Association.

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, color or race includes four categories: white, Negro/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 and/or prior knowledge of the patient. "Other" was restricted to Oriental people, American Indians, and persons of other nonwhite, non-Negro 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/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. "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, "onset" refers to the length of time since the 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 diagnoses.—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; "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 that 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 as to the extent of the impairment that might result if no care were 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 or 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 psychological counseling, hypnosis, psychoanalysis, and transactional therapy.

Other: Treatments ordered or provided which 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 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, etc. In the event a patient was cared for 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 INSTRUMENTS

Introductory Letter From Director, National Center for Health Statistics

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL CENTER FOR HEALTH STATISTICS
HYATTSVILLE, MARYLAND 20782

NATIONAL AMBULATORY
MEDICAL CARE SURVEY

Endorsing Organizations

American Academy of Dermatology

American Academy of Family Physicians

American Academy of Neurology

American Academy of Orthopaedic Surgeons

American Academy of Pediatrics

American Association of Neurological Surgeons

American College of Obstetricians and Gynecologists

American College of Physicians

American College of Preventive Medicine

American Osteopathic Association

American Proctologic Society

American Psychiatric Association

American Society of Internal Medicine

American Society of Plastic and Reconstructive Surgeons, Inc.

American Urologic Association

Association of American Medical Colleges

National Medical Association

Dear Dr. :

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

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

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

Many organizations and leaders in the medical profession have expressed their support for this survey, including those shown to the left. They join me in urging your cooperation in this important research.

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

Sincerely yours,

Dorothy P. Rice
Director

ASSURANCE OF CONFIDENTIALITY—All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose.

PATIENT LOG

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

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

1. DATE OF VISIT ___/___/___ Mo/Day/Yr

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 8a?
1 ☐ YES 2 ☐ NO

10. SERIOUSNESS OF CONDITION IN ITEM 8a *(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

Induction Interview Form

CONFIDENTIAL*
NORC-4233

BEGIN DECK 3

Form Approved
OMB No. 68R1498

FOR OFFICE USE ONLY:

(BATCH NO.) ____ 5-6/

(LOG NO.) ____ 7-10/

NATIONAL AMBULATORY MEDICAL CARE SURVEY
INDUCTION INTERVIEW

(Phys. ID Number) ____ 1-4/

BEFORE STARTING INTERVIEW

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

TIME BEGAN: _____ AM PM

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

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

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

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

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

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

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

Yes X
No . . . . (ASK A) . . . . Y

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

_____ (Name of Specialty) ____ 11-13/

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

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

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

Yes . . . . . (GO TO Q. 3) . . X
No . . . . . (ASK A) . . . . Y

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

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

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

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

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

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

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

Is that (clinic/facility/institution) government operated?

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

Yes X
No . . . . . Y

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

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

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

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

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

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

ENTER TOTAL UNDER "B" BELOW AND CIRCLE NUMBER IN APPROPRIATE COLUMN.

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

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

LOG FORM DESCRIPTION	A. Expected total patients during survey week.	B. Total days in practice during week.						
	ENTER TOTAL FROM Q. 4-A.	ENTER TOTAL FROM Q. 4-B. _____ DAYS						
		1	2	3	4	5	6	7
A--Patient Record is to be completed for ALL patients listed on Log. 14-16/	1- 12 PATIENTS	A	A	A	A	A	A	A
	13- 25 "	B	A	A	A	A	A	A
B--Patient Record is to be completed for every SECOND patient listed on Log.	26- 39 "	C	B	A	A	A	A	A
	40- 52 "	C	B	B	A	A	A	A
	53- 65 "	D	C	B	B	A	A	A
	66- 79 "	D	C	B	B	B	A	A
C--Patient Record is to be completed for every THIRD patient listed on Log.	80- 92 "	D	D	C	B	B	B	B
	93-105 "	D	D	C	B	B	B	B
	106-118 "	D	D	C	C	B	B	B
	119-131 "	D	D	C	C	B	B	B
	132-145 "	D	D	D	C	C	B	B
*D--Patient Record is to be completed for every FIFTH patient listed on Log.	146-158 "	D	D	D	C	C	B	B
	159-171 "	D	D	D	C	C	C	C
	172-184 "	D	D	D	C	C	C	C
	185-197 "	D	D	D	D	D	D	D
	198-210 "	D	D	D	D	D	D	D
	211+ "	D	D	D	D	D	D	D

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

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

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

17-21/
22-24/

6. HAND DOCTOR HIS FOLIO AND EXPLAIN HOW FORMS ARE TO BE FILLED OUT. SHOW DOCTOR INSTRUCTIONS ON THE POCKET OF FOLIO, ITEMS 11 AND 12 DEFINITIONS ON CARD IN POCKET OF FOLIO AND ITEM DEFINITIONS ON THE BACK OF FOLIO, TO WHICH HE CAN REFER AFTER YOU LEAVE.

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

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

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

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

25-29/
30-32/
33-37/
38-40/
41-45/
46-48/

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

Yes . . . . (ASK A) . . . X
No . . . . . Y

A. IF YES: Who would that be?

RECORD NAME, POSITION AND LOCATION.

NAME	POSITION	LOCATION

PERSONALLY BRIEF EACH PERSON LISTED ABOVE.

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

---

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

Solo. . . . . (GO TO Q. 10) . . 1 49/
Partnership . . (ASK A-C) . . . 2
Group . . . . . (ASK A-C) . . . 3
_____ <--- Other (SPECIFY AND ASK A-C) . . 4

IF PARTNERSHIP, GROUP, OR OTHER:

A. Is this a prepaid group practice? Yes . . (ASK [1]) . . . 1 50/
No 2

[1] IF YES TO A: What per cent of patients are prepaid? _____ per cent 51-53/

B. How many other physicians are associated with you? NUMBER OF PHYSICIANS: _____ 54-56/

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

	Specialty	Number of Physicians
(1)		
(2)		
(3)		
(4)		
(5)		

BEGIN DECK 4

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

A. What is the total number of full-time (35 hours or more per week) employees of your (partnership/group) practice? Include persons regularly employed who are now on vacation, temporarily ill, etc. Do not include other physicians. RECORD ON BOTTOM LINE OF COLUMN A BELOW.
(1) How many of these full-time employees are a . . . (READ CATEGORIES BELOW AS NECESSARY AND RECORD NUMBER OF EACH IN COLUMN A.)

B. And what is the total number of part-time (less than 35 hours per week) employees of your (partnership/group) practice? Again, include persons regularly employed who are now on vacation, ill, etc. Do not include other physicians. RECORD ON BOTTOM LINE OF COLUMN B BELOW.
(1) How many of these part-time employees are a . . . (READ CATEGORIES BELOW AS NECESSARY AND RECORD NUMBER OF EACH IN COLUMN B.)

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

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

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

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

11. TIME INTERVIEW ENDED . . . . . _____ AM / PM

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

COMMENTS:

INTERVIEWER NUMBER

INTERVIEWER'S SIGNATURE

FOR OFFICE USE ONLY:

No. of Patients Seen: | | | | 59-61/

*U.S. GOVERNMENT PRINTING OFFICE: 1980 311-240/21 1-3

VITAL AND HEALTH STATISTICS Series

Series 1. Programs and Collection Procedures.—Reports which describe the general programs of the National Center for Health Statistics and its offices and divisions and data collection methods used and include definitions and other material necessary for understanding the data.

Series 2. Data Evaluation and Methods Research.—Studies of new statistical methodology including experimental tests of new survey methods, studies of vital statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory.

Series 3. Analytical Studies.—Reports presenting analytical or interpretive studies based on vital and health statistics, carrying the analysis further than the expository types of reports in the other series.

Series 4. Documents and Committee Reports.—Final reports of major committees concerned with vital and health statistics and documents such as recommended model vital registration laws and revised birth and death certificates.

Series 10. Data From the Health Interview Survey.—Statistics on illness, accidental injuries, disability, use of hospital, medical, dental, and other services, and other health-related topics, all based on data collected in a continuing national household interview survey.

Series 11. Data From the Health Examination Survey and the Health and Nutrition Examination Survey.—Data from direct examination, testing, and measurement of national samples of the civilian noninstitutionalized population provide the basis for two types of reports: (1) estimates of the medically defined prevalence of specific diseases in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics and (2) analysis of relationships among the various measurements without reference to an explicit finite universe of persons.

Series 12. Data From the Institutionalized Population Surveys.—Discontinued effective 1975. Future reports from these surveys will be in Series 13.

Series 13. Data on Health Resources Utilization.—Statistics on the utilization of health manpower and facilities providing long-term care, ambulatory care, hospital care, and family planning services.

Series 14. Data on Health Resources: Manpower and Facilities.—Statistics on the numbers, geographic distribution, and characteristics of health resources including physicians, dentists, nurses, other health occupations, hospitals, nursing homes, and outpatient facilities.

Series 20. Data on Mortality.—Various statistics on mortality other than as included in regular annual or monthly reports. Special analyses by cause of death, age, and other demographic variables; geographic and time series analyses; and statistics on characteristics of deaths not available from the vital records based on sample surveys of those records.

Series 21. Data on Natality, Marriage, and Divorce.—Various statistics on natality, marriage, and divorce other than as included in regular annual or monthly reports. Special analyses by demographic variables; geographic and time series analyses; studies of fertility; and statistics on characteristics of births not available from the vital records based on sample surveys of those records.

Series 22. Data From the National Mortality and Natality Surveys.—Discontinued effective 1975. Future reports from these sample surveys based on vital records will be included in Series 20 and 21, respectively.

Series 23. Data From the National Survey of Family Growth.—Statistics on fertility, family formation and dissolution, family planning, and related maternal and infant health topics derived from a biennial survey of a nationwide probability sample of ever-married women 15-44 years of age.

For a list of titles of reports published in these series, write to:

Scientific and Technical Information Branch
National Center for Health Statistics
Public Health Service
Hyattsville, Md. 20782

DHHS Publication No. (PHS) 80-1710
Series 13-No. 49

NCHS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Statistics
3700 East-West Highway
Hyattsville, Maryland 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

For publications in the *Vital and Health Statistics* Series call 301 436 NCHS

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF H.H.S.
HHS 396

THIRD CLASS