Number 240 • March 10, 1994

Advance Data

From Vital and Health Statistics of the CENTERS FOR DISEASE CONTROL AND PREVENTION/National Center for Health Statistics

Office Visits to Dermatologists: National Ambulatory Medical Care Survey, United States, 1989–90

by Cheryl Nelson, Division of Health Care Statistics

Introduction

From January 1989 to December 1990, an estimated 698 million visits were made to office-based physicians in the United States. Visits to physicians specializing in dermatology accounted for 25 million (4 percent) of these visits (table 1). This report describes visits to dermatologists over this 2-year period according to data collected in the 1989 and 1990 National Ambulatory Medical Care Survey (NAMCS). NAMCS, a year-long sample survey of the Nation's non-Federal office-based physicians, is conducted by the Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Care Statistics. Other NAMCS reports or reports utilizing NAMCS data on office visits to dermatologists have been published (1–3), as have summaries of general findings from the 1989 NAMCS (4) and 1990 NAMCS (5).

The 1989 and 1990 National Ambulatory Medical Care Surveys shared identical survey instruments, definitions, and procedures. The resulting 2 years of data have been combined to provide more reliable estimates, and the reader should note that the estimates, percent distributions, and rates presented in this report reflect average annual estimates based on combined 1989 and 1990 data. The Patient Record, the survey instrument used by participating physicians to record information about their patients' office visits, is shown in figure 1.

General findings

Since 1975 the percent of visits and the visit rate to dermatologists have not changed significantly. In 1975–76, visits to dermatologists accounted for 3 percent of all visits to all physicians, with a visit rate of 9 visits per 100 persons. In 1985 visits to dermatologists represented 4 percent of all visits, and the visit rate was 10 visits per 100 persons (6).

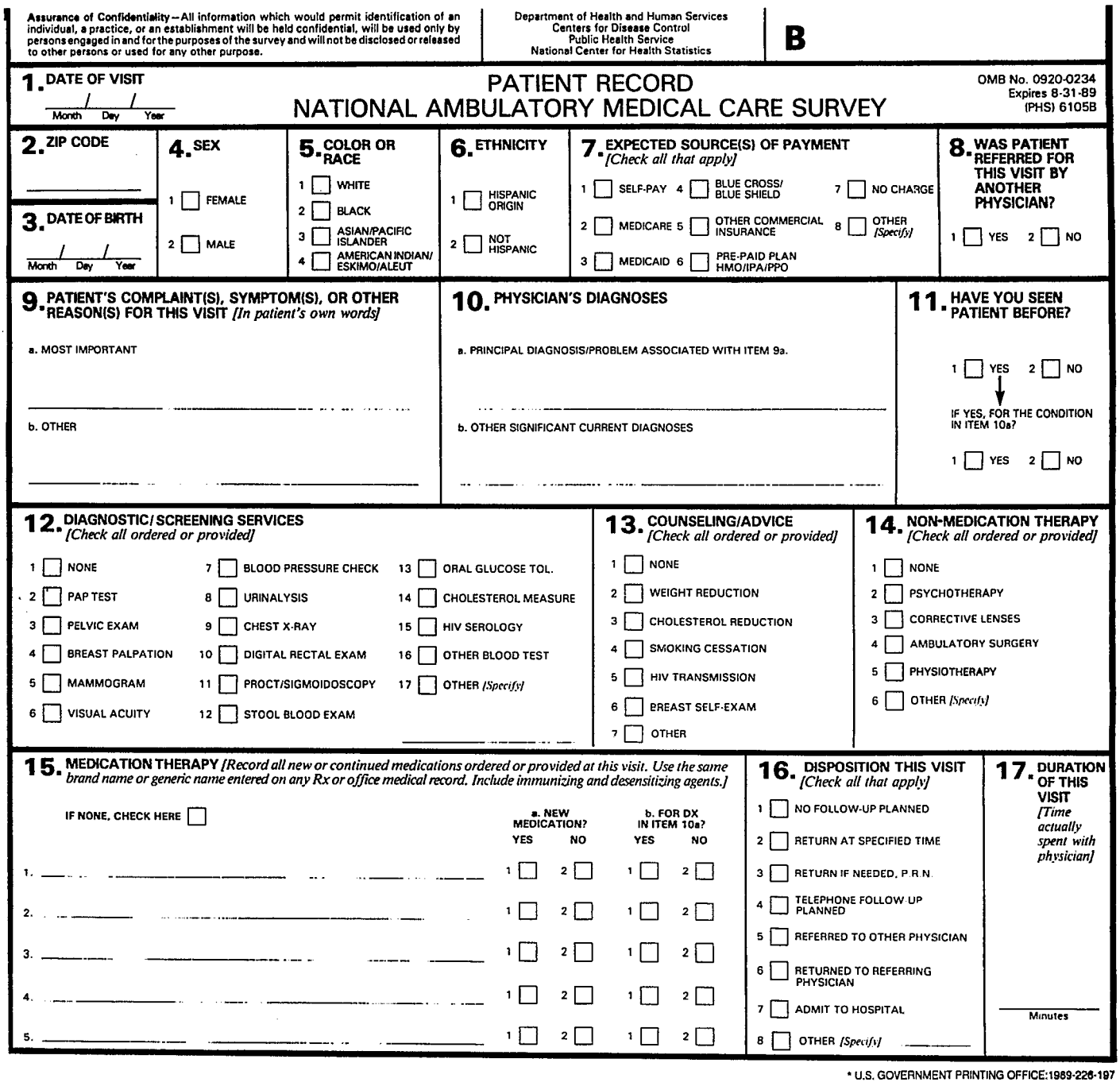
Patient characteristics

Fifty-eight percent of the patients seeking care from dermatologists were female, significantly more than male patients (42 percent) (table 2). Thirty-two percent of the visits were made by patients between the ages of 25 and 44 years, and 16 percent were made by patients 15–24 years of age. In 1975–76, the age profile of visits to dermatologists was quite different (2): During that period, patients under 25 years of age accounted for 40 percent of visits to dermatologists, compared with 24 percent in 1989–90. As expected, in private office-based settings and with other specialties, there were more visits to dermatologists by white and non-Hispanic persons than visits by other-race and Hispanic persons. Ninety-one percent of the visits to dermatologists were made by white patients, a higher percent than for "all other" specialties (85 percent). The visit rate was highest for patients 65 years of age and older (17 visits per 100 persons) and lowest for patients under 15 years of age (4 visits per 100 persons) and for black patients (3 visits per 100 persons). Table 3 shows that the major expected sources of payment were "self-payment," accounting for 37 percent of the visits, and "Blue Cross/Blue Shield," accounting for 16 percent.

The reasons patients visit dermatologists are shown in table 4. Seventeen percent of the visits were for acne or pimples, and another 12 percent were for skin rash. The 15 most

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
National Center for Health Statistics

CENTERS FOR DISEASE CONTROL AND PREVENTION



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

Department of Health and Human Services
Centers for Disease Control
Public Health Service
National Center for Health Statistics

B

1. DATE OF VISIT — Month / Day / Year

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

OMB No. 0920-0234
Expires 8-31-89
(PHS) 6105B

2. ZIP CODE

3. DATE OF BIRTH — Month / Day / Year

4. SEX
1 ☐ FEMALE
2 ☐ MALE

5. COLOR OR RACE
1 ☐ WHITE
2 ☐ BLACK
3 ☐ ASIAN/PACIFIC ISLANDER
4 ☐ AMERICAN INDIAN/ ESKIMO/ALEUT

6. ETHNICITY
1 ☐ HISPANIC ORIGIN
2 ☐ NOT HISPANIC

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

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

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

10. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 9a.
b. OTHER SIGNIFICANT CURRENT DIAGNOSES

11. HAVE YOU SEEN PATIENT BEFORE?
1 ☐ YES 2 ☐ NO
IF YES, FOR THE CONDITION IN ITEM 10a?
1 ☐ YES 2 ☐ NO

12. DIAGNOSTIC/SCREENING SERVICES *[Check all ordered or provided]*
1 ☐ NONE
2 ☐ PAP TEST
3 ☐ PELVIC EXAM
4 ☐ BREAST PALPATION
5 ☐ MAMMOGRAM
6 ☐ VISUAL ACUITY
7 ☐ BLOOD PRESSURE CHECK
8 ☐ URINALYSIS
9 ☐ CHEST X-RAY
10 ☐ DIGITAL RECTAL EXAM
11 ☐ PROCT/SIGMOIDOSCOPY
12 ☐ STOOL BLOOD EXAM
13 ☐ ORAL GLUCOSE TOL.
14 ☐ CHOLESTEROL MEASURE
15 ☐ HIV SEROLOGY
16 ☐ OTHER BLOOD TEST
17 ☐ OTHER *[Specify]*

13. COUNSELING/ADVICE *[Check all ordered or provided]*
1 ☐ NONE
2 ☐ WEIGHT REDUCTION
3 ☐ CHOLESTEROL REDUCTION
4 ☐ SMOKING CESSATION
5 ☐ HIV TRANSMISSION
6 ☐ BREAST SELF-EXAM
7 ☐ OTHER

14. NON-MEDICATION THERAPY *[Check all ordered or provided]*
1 ☐ NONE
2 ☐ PSYCHOTHERAPY
3 ☐ CORRECTIVE LENSES
4 ☐ AMBULATORY SURGERY
5 ☐ PHYSIOTHERAPY
6 ☐ OTHER *[Specify]*

15. MEDICATION THERAPY *[Record all new or continued medications ordered or provided at this visit. Use the same brand name or generic name entered on any Rx or office medical record. Include immunizing and desensitizing agents.]*
IF NONE, CHECK HERE ☐

	a. NEW MEDICATION? YES	a. NEW MEDICATION? NO	b. FOR DX IN ITEM 10a? YES	b. FOR DX IN ITEM 10a? NO
1.	1 ☐	2 ☐	1 ☐	2 ☐
2.	1 ☐	2 ☐	1 ☐	2 ☐
3.	1 ☐	2 ☐	1 ☐	2 ☐
4.	1 ☐	2 ☐	1 ☐	2 ☐
5.	1 ☐	2 ☐	1 ☐	2 ☐

16. 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]*

17. DURATION OF THIS VISIT *[Time actually spent with physician]*
Minutes

* U.S. GOVERNMENT PRINTING OFFICE:1989-226-197

Figure 1. Patient Record form

frequently mentioned reasons represented 77 percent of all reasons given. In 1975–76, 23 percent of the visits to dermatologists were for acne (2), compared with 16 percent in 1989–90. NAMCS data show that in 1975–76 and 1980–81 (7) about 24 percent of visits to dermatologists were for acne complaints, compared with 19 percent in 1985 (6) and 16 percent in 1989–90. Concurrently, acne complaints resulting in visits to general and family practitioners and pediatricians rose from 3 percent in 1980–81 to 10 percent in 1989–90. NAMCS data suggest that the decline in acne complaints to dermatologists could be due to a shift in specialties sought by patients with acne complaints—the shift from dermatologists to other physicians.

Table 5 shows that Diseases of the sebaceous glands was the diagnosis most often made (21 percent). Other top diagnoses were Other dermatoses (12 percent), Contact dermatoses and other eczema (9 percent), Other diseases due to viruses and chlamydiae (8 percent), and Benign neoplasm of the skin (6 percent). These top five diagnoses accounted for more than half (55 percent) of all diagnoses made during visits to dermatologists.

The referral status of dermatology visits in the 1989–90 NAMCS did not differ significantly from the referral status in the 1975–76 NAMCS (2). As

with other specialties, there were more nonreferral visits to dermatologists (91 percent) than referral visits (9 percent). Table 6 also shows returning patients—those visits characterized as an "old patient" returning for treatment of an "old problem"—accounted for more than half (60 percent) of the visits.

Therapy

Therapeutic services ordered or provided by dermatologists are shown in table 7. The vast majority of the visits (80 percent) did not include any diagnostic services. When diagnostic services are examined for "all visits to all specialties," an average of two diagnostic services were usually ordered or provided for patients. Obstetricians and gynecologists were the exception; they ordered or provided their patients an average of three diagnostic services. Reasons for such a disparity between dermatologists and other specialists could be due to the choices of diagnostic services listed on the Patient Record form (figure 1, item 12). However, the NAMCS Patient Record form provides another option, the "other/specify" check box, for dermatologists or for any specialty providing a diagnostic service not listed with a check box. The data show that, when diagnostic services were ordered or provided by dermatologists, it was usually for only one service, and most often the service selected was "other/specify." Seventeen percent of visits to dermatologists utilized "other/specify" for diagnostic services. In 1989–90, "other/specify" was selected in diagnostic services in an average of 176 million visits (25 percent) to all specialties. Only 2 percent of these 176 million visits were to dermatologists, compared with 25 percent to general and family practitioners and about 11 percent each to physicians specializing in pediatrics, ophthalmology, internal medicine, and obstetrics and gynecology.

Approximately 35 percent of the visits to dermatologists involved no administration of drugs. In about 65 percent of the visits, dermatologists prescribed or provided drugs for treatment. Multiple drugs were administered in 35 percent of those visits, and in the other 30 percent a single drug was administered. Table 8 shows that 57 percent of the drugs administered by dermatologists were classified as skin/mucus-membrane drugs with most of these classified as dermatological agents (55 percent). Retin–A (8 percent) was the drug most often mentioned on the patient's record (table 9). The types of drugs administered most often were acne products, antibiotics, and corticosteroids. Erythromycin (8 percent), tretinoin

Table 1. Annual number, percent distribution , and rate of office visits by physician specialty averaged over a 2-year period: United States, 1989–90

Physician specialty	Number of visits in thousands	Percent distribution	Visits per 100 persons[1]
All visits	698,653	100.0	285
General and family practice	208,044	29.8	85
Internal medicine	87,719	12.5	36
Pediatrics	84,279	12.1	34
Obstetrics and gynecology	59,812	8.6	24
Ophthalmology	41,302	5.9	17
Orthopedic surgery	34,033	4.9	14
Dermatology	25,164	3.6	10
General surgery	23,891	3.4	10
Psychiatry	18,790	2.7	8
Otolaryngology	16,957	2.4	7
Cardiovascular disease	11,040	1.6	5
Urological surgery	9,852	1.4	4
Neurology	6,167	0.9	3
Other specialties	71,603	10.2	29

[1]Based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1989, and July 1, 1990, averaged over the 2-year period.

Table 2. Annual number, percent distribution , and rate of office visits to dermatologists by patient's sex, age, race, and ethnicity, averaged over a 2-year period: United States, 1989–90

Sex, age, race, and ethnicity	Number of visits in thousands	Percent distribution	Visits per 100 persons[1]
All visits	25,164	100.0	10
Sex			
Female	14,657	58.2	12
Male	10,507	41.8	9
Age			
Less than 15 years	2,210	8.8	4
15–24 years	3,953	15.7	11
25–44 years	8,126	32.3	10
45–64 years	5,823	23.1	13
65–74 years	3,069	12.2	17
75 years and over	1,983	7.9	17
Race[2]			
White	22,874	90.9	11
Black	1,015	4.0	3
Other[3]	816	3.2	10
Ethnicity[4]			
Hispanic	887	3.5	---
Non-Hispanic	23,266	92.5	---

[1]Based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1989, and July 1, 1990, averaged over the 2-year period.
[2]Race was unknown on 459,000 patient records.
[3]Includes Asian and Pacific Islander and American Indian, Eskimo, and Aleut.
[4]Ethnicity was unknown on 1,011,000 patient records.

(8 percent), and benzoyl peroxide (6 percent) were the three generic substances most often contained in the drugs.

Disposition and duration

Table 10 shows that patients visiting dermatologists were most often told to "return at specified time" (65 percent). "Return at specified time" was also the disposition most often given by other specialties (table 11). The mean duration of visits to dermatologists was 13 minutes, compared with 22 minutes for cardiovascular disease specialists, 28 minutes for neurologists, and 42 minutes for psychiatrists.

References

1. Stern RS, Johnson ML, DeLozier J. Utilization of physician services for dermatologic complaints: the United States, 1974. Arch Dermatol, 113(8): 1062–6, August 1977.
2. Ezzati T. Office visits to dermatologists: National Ambulatory Medical Care Survey, United States, 1975–76. Advance data from vital and health statistics; no 37. Hyattsville, Maryland: National Center for Health Statistics. 1978.
3. Stern RS, Gardocki GJ. Office-based care of dermatologic disease. J Am Acad Dermatol, 14: 286–93, February 1986.
4. Schappert SM. National Ambulatory Medical Care Survey: 1989 summary. National Center for Health Statistics. Vital and Health Stat 13(110). 1992.
5. Schappert SM. National Ambulatory Medical Care Survey: 1990 summary. Advance data from vital and health statistics; no 213. Hyattsville, Maryland: National Center for Health Statistics. 1992.
6. Unpublished data: National Ambulatory Medical Care Survey, United States, 1985. Hyattsville, Maryland: National Center for Health Statistics.
7. Unpublished data: National Ambulatory Medical Care Survey, United States, 1980–81. Hyattsville, Maryland: National Center for Health Statistics.
8. Schneider D, Appleton L, McLemore T. A reason for visit classification for ambulatory care. National Center for Health Statistics. Vital and Health Stat 2(78). 1979.
9. Public Health Service and Health Care Financing Administration. International Classification of Diseases, 9th Revision, Clinical Modification. Washington, D.C.: Public Health Service. 1980.
10. Food and Drug Administration. National Drug Code directory, 1985 edition. Washington, D.C.: Public Health Service. 1985.

Table 3. Annual number and percent distribution of office visits to dermatologists by patient's expected source of payment, averaged over a 2-year period: United States, 1989–90

Expected source of payment	*Number of visits in thousands*[1]	*Percent distribution*
All visits	25,164	100.0
Self-pay	9,265	36.8
Medicare	4,281	17.0
Medicaid	1,036	4.1
Blue Cross/Blue Shield	4,145	16.5
Other commercial insurance	4,985	19.8
HMO/prepaid plan[2]	3,704	14.7
No charge	659	2.6
Other	816	3.2
Unknown	364	1.4

[1]Numbers may not add to total because more than one expected source of payment may be reported per visit.
[2]HMO is health maintenance organization.

Table 4. Annual number and percent distribution of office visits to dermatologists by patient's most frequently mentioned principal reason for visit, averaged over a 2-year period: United States, 1989–90

Reason for visit and RVC code[1]	*Number of visits in thousands*	*Percent distribution*
All visits	25,164	100.0
Acne or pimples 1830	4,181	16.6
Skin rash 1860	2,975	11.8
Skin lesion 1865	1,698	6.7
Warts 1850	1,510	6.0
Discoloration or pigmentation 1835	1,392	5.5
Other symptoms referable to skin 1880	1,151	4.6
Moles 1845	1,065	4.2
Other skin growths 1855	1,028	4.1
Symptoms referable to hair and scalp 1890	834	3.3
Skin irritations 1870	767	3.0
Cancer, skin and subcutaneous tissues 2110	643	2.6
Other skin diseases 2825	640	2.5
Psoriasis 2820	593	2.4
Swelling of skin 1875	516	2.1
Eczema and dermatitis 2815	451	1.8

[1]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (8).

Table 5. Annual number and percent distribution of office visits to dermatologists by the 20 most frequently mentioned principal diagnoses, averaged over a 2-year period: United States, 1989–90

Principal diagnosis and ICD-9-CM code[1]	*Number of visits in thousands*	*Percent distribution*
All visits	25,164	100.0
Diseases of sebacous glands 706	5,251	20.9
Other dermatoses 702	2,942	11.7
Contact dermatoses and other eczema 692	2,164	8.6
Other diseases due to viruses and chlamydiae 78	1,968	7.8
Benign neoplasm of skin 216	1,438	5.7
Other malignant neoplasm of skin 173	1,354	5.4
Psoriasis and similar disorders 696	1,300	5.2
Disease of hair and hair follicles 704	965	3.8
Erythematous conditions 695	679	2.7
Other hypertrophic and atrophic conditions of skin 701	647	2.6
Other disorders of skin and subcutaneous tissue 709	467	1.9
Erythematosquamous dermatosis 690	463	1.8
Dermatophytosis 110	450	1.8
Atopic dermatitis and related conditions 691	362	1.4
Pruritus and related conditions 698	327	1.3
Malignant neoplasm without specification of site 199	247	1.0
Urticaria 708	240	1.0
Disease of capillaries 448	181	0.7
Varicose veins of lower extremities 454	173	0.7
Disorders of sweat glands 705	160	0.6

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

Table 6. Annual number and percent distribution of office visits to dermatologists by patient's referral status and visit status, averaged over a 2-year period: United States, 1989–90

Referral status and visit status	*Number of visits in thousands*	*Percent distribution*
All visits	25,164	100.0
Patient's referral status		
Referred by other physician	2,261	9.0
Not referred	22,903	91.0
Patient's visit status		
New patient	6,663	26.5
Old patient/new problem	3,421	13.6
Old patient/old problem	15,080	59.9
New-problem visits	10,084	40.1

Table 7. Annual number and percent distribution of office visits to dermatologists by number of diagnostic services ordered or provided, type of visit, and number of medications provided to patients, averaged over a 2-year period: United States, 1989–90

Diagnostic services and medication therapy[1]	*Number of visits in thousands*	*Percent distribution*
All visits	25,164	100.0
Number of diagnostic services ordered or provided		
None	20,173	80.2
1	4,752	18.9
2	226	0.9
3	*10	0.0
4	*3	0.0
5 or more	–	–
Type of visit		
Drug visits[2]	16,312	64.8
Visits without mention of medication	8,852	35.2
Number of medications prescribed or provided		
1	7,648	30.4
2	4,631	18.4
3	2,512	10.0
4	1,148	4.6
5	373	1.5

[1]Include prescription drugs, over-the-counter preparations, immunizing agents, desensitizing agents, etc.
[2]Visits at which one or more drugs were provided or prescribed by the physician.

Table 8. Annual number and percent distribution of drug mentions at office visits to dermatologists by the most frequent therapeutic classification, averaged over a 2-year period: United States, 1989–90

Therapeutic classification and NDC code[1]	Number of mentions in thousands	Percent distribution
All drug mentions	30,905	100.0
Therapeutic classification and NDC code		
Anesthetic drugs 01	732	2.4
Local anesthetics .0117	187	0.6
Medical gases .0120	545	1.8
Antimicrobial agents 03	5,111	16.5
Penicillins .0346	282	0.9
Cephalosporins .0347	454	1.5
Erythromycins and lincosamides .0348	1,249	4.0
Tetracyclines .0350	2,102	6.8
Miscellaneous antibacterial agents .0355	356	1.2
Antifungal agents for systemic mycoses .0358	488	1.6
Antiviral agents .0388	170	0.6
Central nervous system drugs 06	550	1.8
Sedatives and hypnotics .0626	495	1.6
Hormones and agents affecting hormonal mechanisms 10	1,516	4.9
Adrenal corticosteroids .1032	1,448	4.7
Skin/mucous membrane 12	17,847	57.7
Dermatologics .1265	17,138	55.5
Ophthalmic drugs 15	351	1.1
Ocular anti-infective and anti-inflammatory agents .1568	301	1.0
Respiratory-tract drugs 19	732	2.4
Bronchodilators, antiasthmatics .1940	284	0.9
Antihistamines .1944	431	1.4
Unclassified/miscellaneous 20	3,374	10.9

[1]Based on the standard drug classification used in the *National Drug Code Directory* (NDC), 1985 edition (10).

Table 9. Annual number, percent distribution, and therapeutic classification of drugs most frequently mentioned at office visits to dermatologists, by entry name and generic substances, averaged over a 2-year period: United States, 1989–90

Entry name and generic substances	Number of mentions in thousands	Percent distribution	Therapeutic use
All drug mentions	30,905	100.0	
Entry name of drug[1]			
Retin-A	2,373	7.7	Acne product
Tetracycline	803	2.6	Antibiotic
Lidex	796	2.6	Corticosteroid
Kenalog	773	2.5	Corticosteroid
Minocin	662	2.1	Antibiotic
Generic substance			
Erythromycin	2,564	8.3	Antibiotic
Tretinoin	2,373	7.7	Acne product
Benzoyl peroxide	1,893	6.1	Acne product
Hydrocortisone	1,564	5.1	Corticosteroid
Triamcinolone	1,505	4.9	Corticosteroid
Tetracycline	1,484	4.8	Antibiotic
Betamethasone	903	2.9	Corticosteroid
Fluocinonide	801	2.6	Corticosteroid
Clindamycin	797	2.6	Acne product

[1]Trade or generic name used by physician on prescription or medical records.

Table 10. Annual number and percent distribution of office visits to dermatologists by disposition of visits, averaged over a 2-year period: United States, 1989–90

Disposition	Number of mentions in thousands	Percent distribution[1]
All visits	25,164	100.0
No followup	2,835	11.3
Return at specified time	16,317	64.8
Return if needed	5,095	20.2
Telephone followup	807	3.2
Refer to other physician	171	0.7
Return to other physician	*51	0.2
Admit to hospital	–	–
Other	*96	0.4

[1]Numbers may not add to totals because more than one disposition may be reported per visit.

Table 11. Annual number and percent distribution of office visits to dermatologists by duration of visit, averaged over a 2-year period: United States, 1989–90

Duration of visits	Number of visits in thousands	Percent distribution
All visits	25,164	100.0
0 minutes[1]	128	0.5
1–5 minutes	4,311	17.1
6–10 minutes	9,458	37.6
11–15 minutes	6,663	26.5
16–30 minutes	3,935	15.6
31–60 minutes	636	2.5
More than 60 minutes	*33	0.1

[1]Visits in which there was no face-to-face contact between patient and physician.

Technical notes

Source of data and sample design

The information presented in this report is based on data collected by means of the National Ambulatory Medical Care Survey (NAMCS) over the 2-year period 1989–90. The target universe of NAMCS includes office visits made in the United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice, but not in the specialties of anesthesiology, pathology, or radiology. Telephone contacts and nonoffice visits are excluded.

A multistage probability sample design is used in NAMCS, involving primary sampling units (PSU's), physician practices within PSU's, physicians stratified into 15 specialty groups, and patient visits within physician practices. The PSU's are counties, groups of counties, county equivalents (such as parishes or independent cities), and towns and townships (for some PSU's in New England). For 1989 and 1990, a sample of 2,535 and 3,063 non-Federal office-based physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. In 1989, 114 of these sample physicians specialized in dermatology; in 1990, 135 were dermatologists. Sample physicians were screened at the time of induction into the survey to ensure their eligibility for participation. In 1989 and 1990, 1,927 and 2,269 physicians were eligible to participate, and for both years 74 percent responded to the survey, resulting in 1,421 respondents in 1989 and 1,684 in 1990. Of the 1,927 eligible physicians in 1989, 97 were dermatologists and 78 of those responded to the survey—an 80-percent response rate. In 1990 there were 113 eligible dermatologists and a response from 79—a 70-percent response rate.

Sample physicians were asked to complete patient records (figure 1) for a systematic random sample of office visits occurring during a randomly assigned 1-week reporting period. Responding physicians completed 38,384 patient records in 1989, and 43,469 patient records in 1990. Dermatologists completed 2,774 forms in 1989, and 2,530 in 1990.

Characteristics of the physician's practice, such as primary specialty and type of practice, were obtained from the physicians during an induction interview. The U.S. Bureau of the Census, Housing Surveys Branch, was responsible for the survey's data collection. Processing operations and medical coding were performed by the National Center for Health Statistics, Health Care Survey Section, Research Triangle Park, North Carolina.

The 1989 and 1990 NAMCS's were identical in terms of survey instruments, definitions, and procedures. The resulting 2 years of data have been combined to provide more reliable estimates. All estimates, percent distributions, and rates, unless otherwise noted, reflect 1989 and 1990 data that were averaged over the 2-year period.

Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance when only a sample, rather than an entire universe, is surveyed. The relative standard error of an estimate is obtained by dividing the standard error by the estimate itself. The result is then expressed as a percent of the estimate.

Readers wishing to utilize these tables should note that they refer to combined years of data rather than average annual estimates. Average annual estimates must be converted back to 2-year totals for use with these tables.

Relative standard errors for estimates based on all physician specialties and on dermatologists are shown in tables I and II. Standard errors for estimated percents of visits and drug mentions are shown in tables III and IV.

Alternatively, relative standard errors for aggregate estimates may be calculated using the following general formula, where x is the aggregate of interest in thousands, and A and B are

Table I. Relative standard error for estimated number of office visits by selected physician specialties: National Ambulatory Medical Care Survey, 1989–90

Estimated number of office visits in thousands	*Physician specialty*	
	All	*Dermatology*
	Relative standard error in percent	
100	72.7	31.1
110	69.7	30.0
200	51.5	23.4
593	30.0	16.3
1,000	23.2	14.4
2,000	16.5	12.9
5,000	10.7	11.9
10,000	7.9	11.5
20,000	6.0	11.3
50,000	4.5	11.2
100,000	3.9	11.2
500,000	3.3	11.1
750,000	3.2	11.1
1,000,000	3.2	11.1

NOTE: The smallest reliable estimate for visits to aggregated specialties is 593,000 visits. Estimates below this figure have a relative standard error greater than 30 percent and are deemed unreliable by NCHS standards.

For visits to dermatologists, the smallest reliable estimate is 110,000 visits.

Example of use of table: An aggregate estimate of 5 million office visits to dermatologists has a relative standard error of 11.9 percent or a standard error of 595,000 visits (11.9 percent of 5 million).

Table II. Relative standard error for estimated number of drug mentions by selected physician specialties: National Ambulatory Medical Care Survey, 1989–90

Estimated number of drug mentions in thousands	*Physician specialty*	
	All	*Dermatology*
	Relative standard error in percent	
100	90.3	36.1
155	72.8	30.0
200	63.9	27.0
500	40.6	19.7
922	30.0	16.9
2,000	20.6	14.7
5,000	13.4	13.5
10,000	9.9	13.1
20,000	7.5	12.9
50,000	5.7	12.8
100,000	4.9	12.7
750,000	4.1	12.7
1,000,000	4.1	12.7

NOTE: The smallest reliable estimate of drug mentions to aggregated specialties is 922,000 drug mentions. Estimates below this figure have a relative standard error greater than 30 percent and are deemed unreliable by NCHS standards.

For drug mentions by dermatologists, the smallest reliable estimate is 155,000 drug mentions.

Example of use of table: An aggregate estimate of 10 million drug mentions by dermatologists has a relative standard estimate of 13.1 percent or a standard error of 1,310,000 drug mentions (13.1 percent of 10 million).

the appropriate coefficients from table V.

$$\mathrm{RSE}(x) = \sqrt{A + \frac{B}{x}} \cdot 100$$

Similarly, relative standard errors for percent maybe calculated using the following general formula, where p is the percent of interest and x is the denominator of the percent in thousands, using the appropriate coefficient from table V.

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

Adjustments for nonresponse

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

Test of significance and rounding

In this report, the determination of statistical significance is based on a two-sided *t*-test. The Bonferroni inequality was used to establish the critical value for statistically significant differences. Terms relating to differences, such as "greater than" or "less than," indicate that the difference is statistically significant. 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.

In the tables, all estimates have been rounded to the nearest thousand. Consequently, estimates will not always add to totals. Rates and percents were calculated from original unrounded figures and do not necessarily agree with percents calculated from rounded data.

Table III. Standard errors for percents of estimated number of office visits to dermatologists: National Ambulatory Medical Care Survey, 1989–90

Base of percent visits in thousands	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard errors in percentage points					
100	2.9	6.3	8.7	11.6	13.3	14.5
200	2.0	4.5	6.2	8.2	9.4	10.3
500	1.3	2.8	3.9	5.2	6.0	6.5
1,000	0.9	2.0	2.8	3.7	4.2	4.6
2,000	0.6	1.4	2.0	2.6	3.0	3.3
5,000	0.4	0.9	1.2	1.6	1.9	2.1
10,000	0.3	0.6	0.9	1.2	1.3	1.5
20,000	0.2	0.4	0.6	0.8	0.9	1.0
50,000	0.1	0.3	0.4	0.5	0.6	0.7
100,000	0.1	0.2	0.3	0.4	0.4	0.5
200,000	0.1	0.1	0.2	0.3	0.3	0.3
500,000	0.0	0.1	0.1	0.2	0.2	0.2
1,000,000	0.0	0.1	0.1	0.1	0.1	0.1

Example of use of table: An estimate of 30 percent based on an aggregate of 5 million visits has a standard error of 1.9 percent or a relative standard error of 6.3 percent (1.9 percent divided by 30 percent).

Table IV. Standard errors for percents of estimated number of drug mentions by dermatologists: National Ambulatory Medical Care Survey, 1989–90

Base of percent drug mentions in thousands	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard errors in percentage points					
100	3.4	7.4	10.1	13.5	15.5	16.9
200	2.4	5.2	7.2	9.6	11.0	11.9
500	1.5	3.3	4.5	6.0	6.9	7.6
1,000	1.1	2.3	3.2	4.3	4.9	5.3
2,000	0.8	1.6	2.3	3.0	3.5	3.8
5,000	0.5	1.0	1.4	1.9	2.2	2.4
10,000	0.3	0.7	1.0	1.4	1.5	1.7
20,000	0.2	0.5	0.7	1.0	1.1	1.2
50,000	0.2	0.3	0.5	0.6	0.7	0.8
100,000	0.1	0.2	0.3	0.4	0.5	0.5
200,000	0.1	0.2	0.2	0.3	0.3	0.4
500,000	0.0	0.1	0.1	0.2	0.2	0.2
20,000,000	0.0	0.0	0.0	0.0	0.0	0.0

Example of use of table: An estimate of 20 percent based on an aggregate of 10 million drug mentions has a standard error of 1.4 percent or a relative standard error of 7.0 percent (1.4 percent divided by 20 percent).

Table V. Coefficients appropriate for determining relative standard errors by type of estimate and physician specialty: National Ambulatory Medical Care Survey, 1989–90

Type of estimate and physician specialty	Coefficient	
	A	B
Visits		
Overall totals	0.00009754	52.77952184
Dermatology	0.01236777	8.46452955
Drug mentions		
Overall totals	0.00157151	81.47054833
Dermatology	0.01603845	11.42009384

Definition of terms

Ambulatory patient—An ambulatory patient is an individual seeking personal health services who is not currently admitted to any health care institution on the premises.

Dermatologist—A physician who specializes in the diagnosis and treatment of diseases of the skin. The physician's specialty is self-designated in the master files of the American Medical Association (AMA) or American Osteopathic Association (AOA).

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

Drug visit—A drug visit is a visit at which medication was prescribed or provided by the physician.

Office—An office is the space that physicians identify as a location for their ambulatory practice. Offices customarily include consultation, examination, or treatment spaces that patients associate with the particular physician.

Physician—A physician is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) who is currently in office-based practice and who spends some time caring for ambulatory patients. Excluded from the NAMCS are physicians who are hospital based; who specialize in anesthesiology, pathology, or radiology; who are federally employed; who treat only institutionalized patients; or who are employed full time by an institution and spend no time seeing ambulatory patients.

Visit—A visit is a direct personal exchange between an ambulatory patient and a physician (or a staff member working under the physician's supervision) for the purpose of seeking care and rendering personal health services. Excluded are visits where medical care was not provided, such as walk-outs and visits made to drop off specimens, pay bills, and make appointments.

Symbols

- - -	Data not available
. . .	Category not applicable
–	Quantity zero
0.0	Quantity more than zero but less than 0.05
Z	Quantity more than zero but less than 500 where numbers are rounded to thousands
*	Figure does not meet standard of reliability or precision

Trade name disclaimer

The use of trade names is for identification only and does not imply endorsement by the Public Health Service, U.S. Department of Health and Human Services.

Suggested citation

Nelson C. Office visits to dermatologists: National Ambulatory Medical Care Survey, United States, 1989–90. Advance data from vital and health statistics; no 240. Hyattsville, Maryland: National Center for Health Statistics. 1994.

Copyright information

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

National Center for Health Statistics

Director
Manning Feinleib, M.D., Dr. P.H.

Deputy Director
Jack R. Anderson

*U.S. Government Printing Office: 1994 — 301-050/80022

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
National Center for Health Statistics
6525 Belcrest Road
Hyattsville, Maryland 20782

BULK RATE
POSTAGE & FEES PAID
PHS/NCHS
PERMIT NO. G-281

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

To receive this publication regularly, contact the National Center for Health Statistics by calling 301-436-8500

DHHS Publication No. (PHS) 94-1250