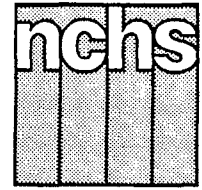


Advance Data



From Vital and Health Statistics of the National Center for Health Statistics

Office Visits to Pediatric Specialists, 1989

by David Woodwell, Division of Health Care Statistics

This report examines data concerning visits made to pediatricians sampled in the 1989 National Ambulatory Medical Care Survey (NAMCS). This survey is a year-long probability sample survey of office-based non-Federal physicians practicing in the United States and excludes visits that took place at emergency rooms or hospital outpatient departments. The NAMCS was conducted annually from 1973 to 1981, in 1985, and annually again in 1989 by the Division of Health Care Statistics, National Center for Health Statistics, Centers for Disease Control.

The figures presented in this report are estimated from a sample, not the entire universe of visits to ambulatory physicians, and therefore are subject to sampling variability. The technical notes at the end of the report provide guidelines for judging the precision of the estimates. The patient record form used for data collection is shown in figure 1, which will serve useful while reading the survey results.

During the 12-month period from March 1989 to March 1990, visits to pediatricians accounted for an estimated 87.4 million, or 12.6 percent, of the 692.7 million ambulatory care office visits made to physicians in the United States. Data from the 1989 NAMCS indicate that of the 13 largest specialties, pediatrics was the only specialty to show a significant increase in percentage of office visits received between 1985 (1) and 1989, from 11.4 percent to 12.6 percent. Visits made by patients aged 21 years and younger were mostly divided between two specialties, pediatricians and general/family practitioners, representing 74.0 percent of the total visits in this age group compared to a total of 70.2 percent in 1985. Five specialties (pediatricians, general/family practitioners, otolaryngologists, dermatologists, and orthopedic surgeons) have higher percentages of visits in the 21 and under age group than the other largest 13 specialties. Within this 21 and under age group, pediatricians

treat the largest percentage of patients aged 5 years old and under (69.4 percent) with dermatologists treating the largest percentage of patients aged 15–21 years (12.1 percent) (table 1).

Patient characteristics

In 1989, white persons aged 21 years and younger accounted for an estimated 79.4 percent of all visits to pediatricians whereas black persons aged 21 years and younger accounted for 10.9 percent of the visits; visit rates were 108 and 77 visits per 100 persons per year, respectively (table 2).

A negative relationship exists between the age of the patient and the number of office visits to pediatricians. As shown in figure 2, the number of visits decreased with each successive age group from about 60 million visits in the 5 years and under age group to about 4 million visits in the 15–21 age group. This difference is further demonstrated by the percentage of visits in the 11–14



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
National Center for Health Statistics
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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		A		
1. DATE OF VISIT ____/____/____ <small>Month Day Year</small>		PATIENT RECORD NATIONAL AMBULATORY MEDICAL CARE SURVEY				OMB No. 0920-0234 Expires 8-31-89 (PHS) 6105A
2. ZIP CODE _____	4. SEX 1 <input type="checkbox"/> FEMALE 2 <input type="checkbox"/> MALE	5. COLOR OR RACE 1 <input type="checkbox"/> WHITE 2 <input type="checkbox"/> BLACK 3 <input type="checkbox"/> ASIAN/PACIFIC ISLANDER 4 <input type="checkbox"/> AMERICAN INDIAN/ESKIMO/ALEUT	6. ETHNICITY 1 <input type="checkbox"/> HISPANIC ORIGIN 2 <input type="checkbox"/> NOT HISPANIC	7. EXPECTED SOURCE(S) OF PAYMENT <i>[Check all that apply]</i> 1 <input type="checkbox"/> SELF-PAY 4 <input type="checkbox"/> BLUE CROSS/BLUE SHIELD 7 <input type="checkbox"/> NO CHARGE 2 <input type="checkbox"/> MEDICARE 5 <input type="checkbox"/> OTHER COMMERCIAL INSURANCE 8 <input type="checkbox"/> OTHER <i>[Specify]</i> 3 <input type="checkbox"/> MEDICAID 6 <input type="checkbox"/> PRE-PAID PLAN HMO/IPA/PPO		8. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN? 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO
3. DATE OF BIRTH ____/____/____ <small>Month Day Year</small>		9. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT <i>[In patient's own words]</i> 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 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO ↓ IF YES, FOR THE CONDITION IN ITEM 10a? 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO
12. DIAGNOSTIC/SCREENING SERVICES THIS VISIT <i>[Check all ordered or provided]</i> 1 <input type="checkbox"/> NONE 7 <input type="checkbox"/> BLOOD PRESSURE CHECK 13 <input type="checkbox"/> ORAL GLUCOSE TOL. 2 <input type="checkbox"/> PAP TEST 8 <input type="checkbox"/> URINALYSIS 14 <input type="checkbox"/> CHOLESTEROL MEASURE 3 <input type="checkbox"/> PELVIC EXAM 9 <input type="checkbox"/> CHEST X-RAY 15 <input type="checkbox"/> HIV SEROLOGY 4 <input type="checkbox"/> BREAST PALPATION 10 <input type="checkbox"/> DIGITAL RECTAL EXAM 16 <input type="checkbox"/> OTHER BLOOD TEST 5 <input type="checkbox"/> MAMMOGRAM 11 <input type="checkbox"/> PROCT/SIGMOIDOSCOPY 17 <input type="checkbox"/> OTHER <i>[Specify]</i> 6 <input type="checkbox"/> VISUAL ACUITY 12 <input type="checkbox"/> STOOL BLOOD EXAM			13. COUNSELING/ADVICE <i>[Check all ordered or provided]</i> 1 <input type="checkbox"/> NONE 2 <input type="checkbox"/> WEIGHT REDUCTION 3 <input type="checkbox"/> CHOLESTEROL REDUCTION 4 <input type="checkbox"/> SMOKING CESSATION 5 <input type="checkbox"/> HIV TRANSMISSION 6 <input type="checkbox"/> BREAST SELF-EXAM 7 <input type="checkbox"/> OTHER		14. NON-MEDICATION THERAPY <i>[Check all ordered or provided]</i> 1 <input type="checkbox"/> NONE 2 <input type="checkbox"/> PSYCHOTHERAPY 3 <input type="checkbox"/> CORRECTIVE LENSES 4 <input type="checkbox"/> AMBULATORY SURGERY 5 <input type="checkbox"/> PHYSIOTHERAPY 6 <input type="checkbox"/> OTHER <i>[Specify]</i>	
15. MEDICATION THERAPY <i>[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.]</i> IF NONE, CHECK HERE <input type="checkbox"/>			16. DISPOSITION THIS VISIT <i>[Check all that apply]</i> 1 <input type="checkbox"/> NO FOLLOW-UP PLANNED 2 <input type="checkbox"/> RETURN AT SPECIFIED TIME 3 <input type="checkbox"/> RETURN IF NEEDED, P.R.N. 4 <input type="checkbox"/> TELEPHONE FOLLOW-UP PLANNED 5 <input type="checkbox"/> REFERRED TO OTHER PHYSICIAN 6 <input type="checkbox"/> RETURNED TO REFERRING PHYSICIAN 7 <input type="checkbox"/> ADMIT TO HOSPITAL 8 <input type="checkbox"/> OTHER <i>[Specify]</i>		17. DURATION OF THIS VISIT <i>[Time actually spent with physician]</i> _____ Minutes	
1. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			2. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			
3. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			3. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			
4. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			4. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			
5. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			5. _____ 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO 1 <input type="checkbox"/> YES 2 <input type="checkbox"/> NO			

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

Figure 1. Patient record form

and 15–21 years age groups, which make up 12.2 percent of the total visits whereas the 5 years and under and 6–10 age groups make up 86.0 percent, or just less than seven-eighths of all visits to pediatricians. Another indication of the decreasing number of visits with each successive age group is the visit rate. Patients aged 5 years old and under have a visit rate more than three times higher than the next older age group—272 per 100 persons for the 5 and under age group compared to 80

per 100 persons in the 6–10 age group (table 3).

When comparing the total number of visits to pediatricians by gender, more visits were made by males (52.4 percent) than females (47.6 percent). However, males had a higher percentage of visits only in the 5 years and under age group accounting for 54.6 percent of visits in that group. In all other age groups, the percent of female visits was about the same as that of males. Therefore, the difference between gender is

completely accounted for by the 5 and under age group (table 3).

Examining the sources of payment (item 7 on the patient record form) for visits to pediatricians reveals that most of the visits were paid for one or more of three ways: self-payment, prepaid plan/HMO/IPA/PPO, or by “other” commercial insurance. Medicaid is the source of payment in an estimated 13.2 percent of the visits (table 4).

Table 1. Number of office visits and percent distribution of selected specialties by age: United States, 1989

Selected specialties	All ages	5 years and under	6-10 years	11-14 years	15-21 years	22 years and over
Number in thousands						
All visits	692,702	87,410	29,337	20,755	44,124	511,076
Percent distribution						
Pediatrics	100.0	69.4	16.6	7.5	4.7	1.7
General/family practice	100.0	8.6	3.9	3.4	7.7	76.5
Otolaryngology	100.0	10.5	7.3	2.6	6.6	73.0
Dermatology	100.0	2.0	2.6	4.3	12.1	78.9
Orthopedic surgery	100.0	3.2	2.6	3.9	10.2	80.0

Table 2. Number, percent distribution, and rate of office visits to pediatric specialists by race and sex for persons under 22 years of age: United States, 1989

Race and sex	Number of visits in thousands	Percent distribution	Rate per 100 persons
Total	85,922	100.0	109
Black	9,325	10.9	77
Male	4,784	5.6	79
Female	4,541	5.3	75
White	68,237	79.4	108
Male	36,329	42.3	113
Female	31,908	37.1	102
All other ¹	3,510	4.1	113
Male	1,934	2.3	125
Female	1,576	1.8	102

¹Includes: Asian/Pacific Islander and American Indian/Eskimo/Aleut.

NOTE: Detail does not equal total because the unspecified category, 4,850,000 visits, is included in total.

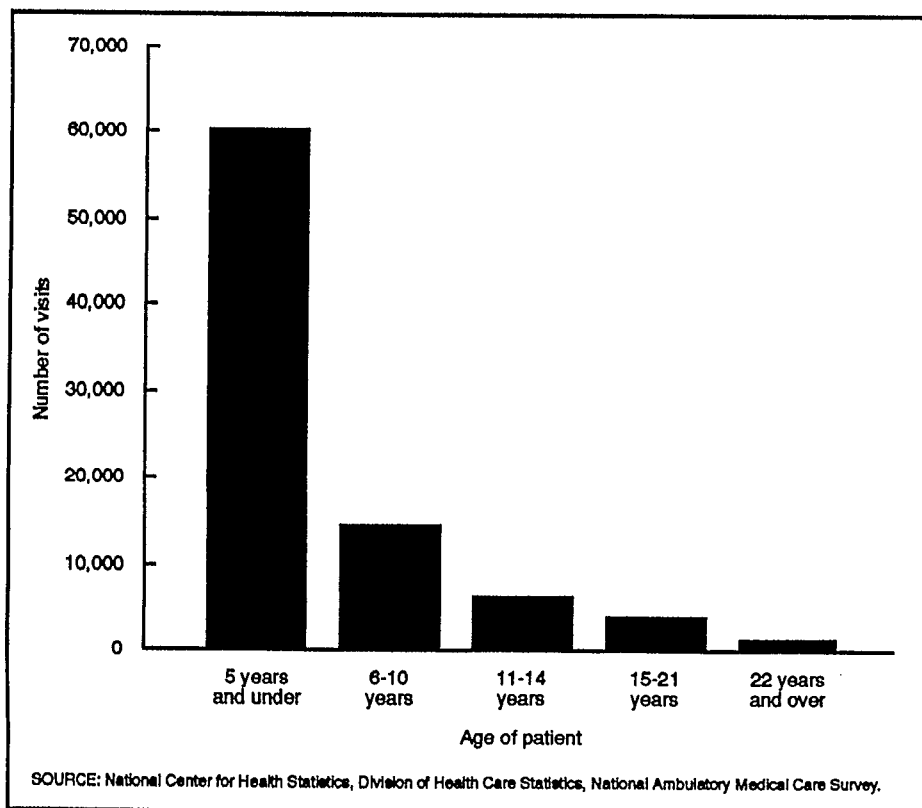


Figure 2. Office visits to pediatricians by age of patient: United States, 1989

Patient's reason for visit

The primary reason for visit to the pediatrician as expressed by the patient or patient's guardian is shown in tables 5 and 6. The principal reason for visit is the problem, complaint, or reason listed in item 9A of the patient record form. These data have been classified and coded according to the Reason for Visit Classification for Ambulatory Care (RVC) (2).

The RVC is divided into eight modules (or groups of reasons) as detailed in table 5. The symptoms module was most frequently cited, 64.0 percent, followed by the diagnostic, screening, and preventive module, 22.1 percent (i.e., general and special exams, diagnostic tests, screening and preventive procedures, and family planning).

The 15 most common reasons for visit are listed in table 6 and account for 71.5 percent of all visits to the pediatrician. Visits for the well-baby exam (13.5 percent), the most frequently reported reason, and physical exam (5.7 percent) accounted for approximately 19 percent of all visits to pediatricians. Cough, the second primary reason for visit, accounted for 11.1 percent in 1989, an increase from 7.7 percent in 1985. Fever accounted for 8.0 percent in 1989 and did not statistically differ from the 1985 percentage of 7.6. The reasons for visit have changed very little from the 1985 NAMCS. Of the top 15 reasons in 1989, 14 appeared in 1985 with the only exception being general symptoms of an infant, which did not appear in 1989.

Physician's diagnoses

Tables 7 and 8 present data on the principal diagnoses rendered by the pediatrician. This diagnosis is the first listed in item 10 of the patient record form. These data were coded and classified according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (3).

Of the primary diagnoses, the V codes (or supplementary

Table 3. Number, percent distribution, and rate of office visits to pediatric specialists by sex and age: United States, 1989

Sex and age	Number of visits in thousands	Percent distribution	Rate per 100 persons
Both sexes	87,411	100.0	36
5 years and under	60,696	69.4	272
6-10 years	14,487	16.6	80
11-14 years	6,598	7.5	49
15-21 years	4,141	4.7	17
22 years and over	1,489	1.7	1
Male	45,818	52.4	38
5 years and under	33,111	37.9	289
6-10 years	7,004	8.0	77
11-14 years	3,154	3.6	46
15-21 years	2,029	2.3	17
22 years and over	519	0.6	0
Female	41,593	47.6	32
5 years and under	27,585	31.6	253
6-10 years	7,483	8.6	84
11-14 years	3,444	3.9	53
15-21 years	2,112	2.4	17
22 years and over	970	1.1	1

Table 4. Percent distribution of office visits to pediatricians by age and expected source of payment: United States, 1989

Source of payment	All ages	5 years and under	6-10 years	11-14 years	15-21 years
	Percent distribution				
All visits	100.0	100.0	100.0	100.0	100.0
Self-pay	39.6	40.6	39.0	32.1	33.1
Medicare	0.2	0.2	—	—	0.6
Medicaid	13.2	13.9	11.0	11.0	11.1
Blue Cross/Blue Shield	8.0	7.7	10.6	5.3	9.3
Other commercial	19.0	18.9	19.1	21.0	19.0
Prepaid plan/HMO/IPA/PPO	22.9	21.5	24.5	32.7	30.1
No charge	0.9	0.7	1.5	0.2	1.0
Other	3.5	3.8	2.5	2.9	3.4
Unknown	1.6	1.5	2.3	1.7	1.7

NOTE: Detail does not add to total because more than one source of payment was possible per visit.

Table 5. Number and percent distribution of office visits to pediatric specialists, by principal reason for visit module: United States, 1989

Principal reason for visit module and RVC code ¹	Number of visits in thousands	Percent distribution
All principal reasons for visit modules	87,411	100.0
Symptom module S001-S999	55,981	64.0
Symptoms referable to respiratory system S400-S499	20,182	23.0
Symptoms referable to eyes and ears S300-S399	11,423	13.0
General symptoms S001-S099	9,060	10.4
Symptoms referable to digestive system S500-S639	5,258	6.0
Symptoms referable to skin, nails, and hair S830-S899	4,866	5.6
Disease module D001-D999	5,719	6.5
Diagnostic, screening, and preventive module X100-X599	19,291	22.1
General medical exam X100	5,003	5.7
Well-baby exam X105	11,819	13.5
Treatment module T100-T899	2,530	2.9
Injury and adverse effects module J001-J999	1,992	2.3
All other modules ²	1,818	2.2

¹Based on "A Reason for Visit Classification for Ambulatory Care" (2).
²Includes test results and administrative modules and uncodeable and blank entries.

classification) and diseases of the respiratory system were the two most common classes of principal diagnoses rendered by the pediatrician, each representing approximately one-quarter of all primary diagnoses (table 7). The supplementary classification contains categories for diagnoses other than diseases and injuries such as general medical, well-child, and normal pregnancy exams. Because the most common reason for visit was the well-baby exam, it is no surprise that the most common diagnosis is the health supervision of infant or child, which explains 14.5 percent of all the principal diagnoses. The second and third most common principal diagnoses were suppurative and unspecified otitis media and acute upper respiratory infection with percentages of 13.9 percent and 5.2 percent, respectively (table 8). Data from the 1989 NAMCS reveal similar diagnoses in comparison to the 1985 NAMCS with minimal differences.

Diagnostic services and nonmedication therapy

One-third (32.3 percent) of the patients who visited pediatricians received one or more diagnostic tests. Of those diagnostic tests listed in item 12 of the patient record form, "other" was chosen most often with a percentage of 21.4 followed by other blood test with a percentage of 7.4 and blood pressure with a percentage of 7.0 (table 9). The "other" category was selected frequently because the specific diagnostic test categories listed on the patient record form are generally associated with adult visits and are often not appropriate for the types of problems and resulting services offered by the pediatrician. Similarly, the lists in items 13 and 14 of the patient record form are generally not appropriate to the pediatrician's practice resulting in relatively high percentages in the "other" category.

Table 6. Number and percent distribution of office visits to pediatric specialists by most common principal reason for visit: United States, 1989

Most common principal reason for visit and RVC code ¹	Number of visits in thousands	Percent distribution
All principal reasons for visit	87,411	100.0
Well-baby exam X105	11,819	13.5
Cough S440	9,725	11.1
Fever S010	7,016	8.0
Earache or other infection S355	6,411	7.3
General medical exam X100	5,003	5.7
Symptoms referable to throat S455	3,803	4.4
Other symptoms referable to the ears S365	3,225	3.7
Skin rash S860	2,860	3.3
Nasal congestion S400	2,719	3.1
Head cold, upper respiratory infection S445	2,384	2.7
Otitis media D450	2,202	2.5
Diarrhea S955	1,716	2.0
Vomiting S530	1,430	1.6
Prophylactic inoculations X400	1,199	1.4
Physical examination required for employment A100	848	1.0

¹Based on "A Reason for Visit Classification for Ambulatory Care" (2).

Table 7. Number and percent distribution of office visits to pediatric specialists by major International Classification of Diseases, 9th Revision, Clinical Modification class: United States, 1989

Principal diagnoses and ICD-9-CM code	Number of visits in thousands	Percent distribution
All principal diagnoses	87,411	100.0
Infectious and parasitic diseases001-139	6,914	7.9
Mental disorders290-319	1,055	1.2
Nervous system and sense organs320-389	15,254	17.5
Respiratory system460-519	21,886	25.0
Digestive system520-579	3,553	4.1
Genitourinary system580-629	1,253	1.4
Skin and subcutaneous tissue680-709	3,857	4.4
Symptoms, signs, and ill-defined conditions780-799	3,992	4.6
Injury and poisoning800-999	3,328	3.8
Supplementary classifications V codes	22,262	25.5
All other diagnoses ¹	2,983	3.4
Unknown or blank	1,074	1.2

¹Includes: Neoplasms; endocrine, nutritional and metabolic diseases and immunity disorders; diseases of the circulatory system; diseases of musculoskeletal system and connective tissue.

Table 8. Number and percent distribution of office visits to pediatric specialists by principal diagnoses most frequently rendered by the physician: United States, 1989

Most common principal diagnosis and ICD-9-CM code ¹	Number of visits in thousands	Percent distribution
All principal diagnoses	87,411	100.0
Health supervision of infant or child V020	12,679	14.5
Suppurative and unspecified otitis media382	12,151	13.9
Acute upper respiratory infection465	4,723	5.2
Unspecified general medical exam V070	4,470	5.1
Acute pharyngitis462	3,861	4.4
Disorders of nervous system and sense organs V012	2,721	3.1
Bronchitis not specified as acute or chronic490	2,599	3.0
Other and unspecified noninfectious gastroenteritis and colitis558	2,096	2.4
Acute tonsillitis463	1,915	2.2
Unspecified viral infection079	1,877	2.1
Chronic sinusitis473	1,718	2.0
Streptococcal sore throat034	1,398	1.6
Other ill-defined and unknown causes of morbidity and mortality799	1,291	1.5
Acute laryngotracheitis464	1,136	1.3
Pneumonia486	1,123	1.3
All other diagnoses	31,653	36.2

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

Medication therapy

Pediatricians administered or prescribed medication including immunizations, during an estimated 67.1 percent of their patient visits in 1989, accounting for 14.0 percent of all medication prescribed or administered in ambulatory office practices. Of those pediatric patients who received medication, 44.3 percent received only one drug, while 17.5 percent received two drugs (table 10). Pediatric patients, due to their age and commonly diagnosed bacterial infections, mainly utilized 3 of the 20 therapeutic classes of drugs. (This classification is adopted from the therapeutic categories of the National Drug Code, 1985 (4).) It should be noted that some drugs may have application in more than one therapeutic category. In that event, each drug was assigned to the category for which it is most frequently prescribed. Antimicrobial agents were most often prescribed, 33.1 percent of the time, with respiratory tract drugs and immunologic agents following with percentages of 23.6 and 16.0, respectively (table 11). Amoxicillin, erythromycin, and immunizing agents, for example, diphtheria-tetanus-pertussis and polio, head the list of the most utilized generic ingredients administered or prescribed by pediatricians (table 12).

Disposition and duration of visit

The average time spent with the pediatrician per visit was 12.6 minutes. This figure represents time actually spent in face-to-face contact between the physician and patient; it does not include visits of zero minutes. Zero minutes were recorded if the patient was seen only by someone other than the physician. Whereas many of the patients, 38.5 percent, were seen between 6 and 10 minutes, no time (zero minutes) with the physician was recorded for 0.3 percent of the patients, down from 1.9 percent in

Table 9. Number and percent distribution of office visits to pediatric specialists by number and type of diagnostic service: United States, 1989

<i>Diagnostic service</i>	<i>Number of visits in thousands</i>	<i>Percent distribution</i>
All visits	87,411	100.0
Number of diagnostic services		
None	58,694	67.1
1	19,989	22.9
2	4,632	5.3
3	2,742	3.1
4	854	1.0
Diagnostic test		
Blood test ¹	6,427	7.4
Blood pressure	6,090	7.0
Urinalysis	5,837	6.7
Visual acuity	3,305	3.8
Chest x ray	1,038	1.2
All other	6,019	6.9

¹Other than cholesterol and HIV tests.

NOTE: Detail may not add to total because more than one diagnostic service was possible during the patient visit.

Table 10. Number and percent distribution of office visits to pediatric specialists by type of visit and number of medications prescribed or ordered: United States, 1989

<i>Type of visit and number of medications</i>	<i>Number of visits in thousands</i>	<i>Percent distribution</i>
All visits	87,411	100.0
Type of visit		
Nondrug visit (0 medications)	28,738	32.9
Drug visit	58,673	67.1
Number of medications		
1	38,697	44.3
2	15,310	17.5
3	3,603	4.1
4 or more	1,063	1.2

Table 11. Number of drug mentions in office visits to pediatric specialists by age and percent distribution of therapeutic category according to age: United States, 1989

<i>Therapeutic category¹</i>	<i>5 years and under</i>	<i>6-10 years</i>	<i>11-21 years</i>
Number in thousands			
All categories	87,882	18,755	12,474
Percent distribution			
Total	100.0	100.0	100.0
Antimicrobial agents	33.1	37.3	24.9
Penicillins	12.7	17.5	11.2
Cephalosporins	3.8	4.3	3.0
Erythromycins and lincosamides	10.0	9.7	6.4
Sulfonamides and trimethoprim	6.0	5.0	2.5
Psychopharmacologic drugs	0.3	2.2	3.3
Gastrointestinal agents	1.7	6.8	0.4
Metabolic and nutrient agents	5.7	1.4	0.4
Hormones and agents affecting hormonal mechanisms	0.6	1.3	4.5
Immunologic agents	16.0	2.3	11.1
Skin/mucous membrane	6.9	9.1	12.6
Ophthalmic drugs	2.7	2.3	3.6
Otologic drugs	0.9	1.7	
Drugs for relief of pain	3.3	3.0	6.7
Respiratory tract drugs	23.6	28.9	24.1
Bronchodilators and antiasthmatics	3.6	7.6	5.2
Nasal decongestants	9.0	9.6	10.3
Antitussives, expectorants, and mucolytics	9.6	9.9	5.5
All other ²	5.2	3.7	8.4

¹Therapeutic class based on the standard drug classification used in the *National Drug Code Directory*, 1985 Edition.

²Includes: Anesthetic drugs, antidotes, hematologic agents, cardiovascular-renal drugs, radiopharmaceuticals/contrast media, oncolytics, antiparasitic agents, unclassified/miscellaneous.

1985. The most common disposition of the office visit was for the patient of a pediatrician to return at a specific time, 42.7 percent, with the second most common disposition having the patient return only if needed, 32.5 percent (table 13).

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4. Food and Drug Administration. National Drug Code Directory, 1982 Edition. Washington: Public Health Service. 1982.

Table 12. Number and percent distribution of the top 15 generic ingredients most utilized by pediatric specialists: United States, 1989

Rank	Generic ingredient	Number of mentions ¹ in thousands	Percent distribution
	All drugs	121,780	100.0
1	Amoxicillin	15,232	12.5
2	Erythromycin	5,553	4.6
3	Diphtheria-tetanus-pertussis vaccine	5,049	4.1
4	Polio vaccine	4,225	3.5
5	Phenylephrine	3,646	3.0
6	Cefaclor	3,548	2.9
7	Phenylpropanolamine	3,522	2.9
8	Trimethoprim	3,149	2.6
9	Sulfamethoxazole	3,128	2.6
10	Acetaminophen	2,929	2.4
11	Sulfisoxazole	2,820	2.3
12	Chlorpheniramine	2,595	2.1
13	Albuterol	2,455	2.0
14	Pentoxifylline	2,135	1.8
15	Dextromethorphan	2,004	1.6

¹Frequency of mention combines single-ingredient agents with mentions of the agents as an ingredient in a combined drug.

Table 13. Number and percent distribution of office visits to pediatric specialists by duration and disposition: United States, 1989

Duration and disposition of visit	Number of visits in thousands	Percent distribution
All visits	87,411	100.0
Duration of visit ¹		
Zero minutes	*239	0.3
1-5 minutes	13,150	15.0
6-10 minutes	33,680	38.5
11-15 minutes	25,235	28.9
16-30 minutes	13,774	15.8
31-60 minutes	1,248	1.4
61 minutes or more	*84	0.1
Disposition of visit		
No followup planned	17,013	19.5
Return at specified time	37,326	42.7
Return if needed	28,431	32.5
Telephone followup planned	4,023	4.6
Referred to other physician	1,647	1.9
Returned to referring physician	*314	0.4
Admit to hospital	*283	0.3

¹Mean duration of visit 12.6 minutes.

Technical notes

Sources 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 from March 20, 1989, through March 18, 1990. 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 samples of primary units (PSU's), physician practices within PSU's, and patient visits within physician practices. For 1989, a sample of 2,535 non-Federal office-based physicians was selected from master files maintained by the American Medical Association and American Osteopathic Association (the sample included 166 pediatricians of which 120 were eligible for the survey). The physician response rate for the 1989 NAMCS was 74 percent (81 percent for pediatricians). Sample physicians were asked to complete patient records (see 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 (3,732 patient records were filled out by pediatricians). 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, Hospital Discharge and Ambulatory Care Survey Section, Research Triangle Park, North Carolina.

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. Approximate relative standard errors of selected aggregate statistics are shown in table I, and the relative standard errors of estimated number of drug mentions are shown in table II. The standard errors for estimated percent of visits are shown in table III.

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 similar visits to similar physicians. For this purpose physicians were judged similar if they had the same specialty designation and practiced in the same PSU.

Table I. Relative standard errors of estimated numbers of office visits for the National Ambulatory Medical Care Survey: United States, 1989

Estimated number of office visits in thousands	All specialties	
	Specialties	Pediatrics
	Relative standard error (RSE) in percent	
100	69.7	50.5
200	49.4	36.6
300	40.4	30.6
400	35.0	27.1
500	31.4	24.7
700	26.6	21.8
1,000	22.4	19.2
2,000	16.1	15.8
5,000	10.6	13.3
10,000	8.0	12.4
50,000	5.1	11.5
100,000	4.6	11.4
690,000	4.1	...

NOTE: Pediatric 30% RSE = 313,000; all specialties 30% RSE = 547,000.

Example of use of table: An aggregate estimate of 2 million visits to a pediatrician has a relative standard estimate of 15.8 percent or a standard error of 316 thousand visits (15.8 percent of 2 million).

Table II. Relative standard errors of estimated numbers of drug mentions for the National Ambulatory Medical Care Survey: United States, 1989

Estimated number of drug mentions in thousands	All specialties	
	Specialties	Pediatrics
	Relative standard error (RSE) in percent	
100	89.6	50.1
200	63.4	37.1
300	51.9	31.5
400	45.0	28.4
500	40.3	26.3
700	34.2	23.7
1,000	28.7	21.5
2,000	20.6	18.7
5,000	13.6	16.8
10,000	10.3	16.1
50,000	6.5	15.5
100,000	5.8	15.4
200,000	5.5	15.4
700,000	5.2	...

NOTE: Pediatric 30% RSE = 343,000; all specialties 30% RSE = 912,000.

Example of use of table: An aggregate estimate of 2 million drug mentions by a pediatrician has a relative standard estimate of 18.7 percent or a standard error of 374 thousand drug mentions (18.7 percent of 2 million).

Test of significance and rounding

In this report, the determination of statistical significance is based on a two-sided *t*-test with a critical value of 1.96 (0.05 level of confidence). Terms relating to differences such as "greater than" or "less than" indicate that the difference is statistically significant. In the tables, estimates of office visits have been rounded to the nearest thousand. Consequently, estimates will not always add to totals. Rates and percent were calculated from original unrounded figures and do not necessarily agree with percents calculated from rounded data.

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.

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

Table III. Standard errors for percents of estimated numbers of office visits for the National Ambulatory Medical Care Survey: United States, 1989

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 error in percentage points						
200	4.9	10.7	14.8	19.7	22.6	24.6
500	3.1	6.8	9.3	12.5	14.3	15.6
1,000	2.2	4.8	6.6	8.8	10.1	11.0
2,000	1.6	3.4	4.7	6.2	7.1	7.8
5,000	1.0	2.2	3.0	3.9	4.5	4.9
10,000	0.7	1.5	2.1	2.8	3.2	3.5
13,000	0.6	1.3	1.8	2.4	2.8	3.1
20,000	0.5	1.1	1.5	2.0	2.3	2.5
50,000	0.3	0.7	0.9	1.3	1.4	1.6
100,000	0.2	0.5	0.7	0.9	1.0	1.1
600,000	0.1	0.2	0.3	0.4	0.4	0.5

Example of use of table: An estimate of 30 percent based on an aggregate estimate of 13 million visits has a standard error of 2.8 percent or a relative standard error of 9.3 percent (2.8 percent divided by 30 percent).

hospital based; who specialize in anesthesiology, pathology, or radiology; who are federally employed; who treat only institutionalized patients; who are employed full time by an institution; and who spend no time seeing ambulatory patients.

Office—Offices are the premises physicians identify as locations for their ambulatory practice. These customarily include consultation, examination, or treatment spaces the patients associate with the particular physician.

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.

Drug mention—A drug mention is the physician's entry of a pharmaceutical agent—by any route of administration—for prevention, diagnoses, 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 in which medication was prescribed or provided by the physician.

Symbols

- . . . Category not applicable
- Quantity zero
- * Figure does not meet standards of reliability or precision (see Technical notes)

Suggested citation

Woodwell D. Office visits to pediatric specialists, 1989. Advance data from vital and health statistics; no 208. Hyattsville, Maryland: National Center for Health Statistics. 1992.

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HUMAN SERVICES
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DHHS Publication No. (PHS) 92-1250