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ABSTRACT

        This report examines the nature of the conditions
presented by adolescents and the health care provided by office-based
physicians. The characteristics of patients are noted and the reason
for the visit to the doctor and the length of the visit are
summarized. Tables present information on: (1) average annual rate of
office visits of adolescents and all other age groups by sex, race,
and age; (2) number of office visits made by adolescents and all
other age groups and percent distribution by visit characteristics;
(3) number of office visits made by adolescents and percent
distribution by the 20 most frequent principal reasons for the visit;
(4) number of office visits made by adolescents and percent
distribution by the 20 most frequent principal diagnoses, according
to age; (5) number of drug mentions in office visits made by
adolescents and all other age groups and percent distribution by
therapeutic category; (6) number and percent distribution of drug
mentions in office visits made by adolescents and percent
distribution by age and most frequently named drugs; and (7) number
of generic drugs utilized in office visits made by adolescents by age
and the 30 most frequently used generic substances. (JD)

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Health Care of Adolescents by Office-Based Physicians: National Ambulatory Medical Care Survey, 1980–81

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

Introduction

Adolescents 11–20 years of age do not utilize physician services as frequently as other persons do. Among age groups of patients visiting office-based physicians in 1980 and 1981, adolescents 11–20 years of age had the lowest visit rate (figure 1). Although persons 11–20 years old constituted 17 percent of the population of the United States, they made only 11 percent of the office visits. However, this does not necessarily indicate a low incidence of illness for this group because they also had a higher incidence of acute conditions than older age groups in the population did. The low rate of office visits may be related to the self-limiting nature of most acute conditions that usually do not require as many return visits to the physician's office as chronic conditions do.

This report examines the nature of the conditions presented by adolescents and the health care provided by office-based physicians. It is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during the 2-year period January 1980–December 1981. NAMCS is a sample survey of office-based physicians conducted annually through 1981 by the National Center for Health Statistics. Data will be collected again in 1985. Because the estimates presented in this report are based on a sample rather than on the entire universe of office visits, they are subject to sampling variability. A brief description of the sample design and guidelines for judging the precision of the estimates are provided in the "Technical notes" at the end of the report. Definitions of key terms used in the survey also are provided.

Patient characteristics

Because of the many developmental changes patients 11–20 years of age undergo during this period of life, data on visit characteristics are presented for "early" adolescence, 11–14 years, and "late" adolescence, 15–20 years. Table 1 indicates that the latter group visited at a higher rate than the former, and, as in NAMCS data for other age groups, females 15–20 years of age visited at a higher rate than males the same age did. The visit rate for white adolescents exceeded that of black adolescents.

Figure 1. Average annual rate of office visits by age of patient: United States, 1980–81

Sex and race	Age			
	11-14 years	15-20 years	11-20 years	All other ages
Sex	Rate per 100 population			
Both sexes	140	179	165	281
Female	142	219	191	326
Male	138	139	139	231
Race				
White	151	192	177	291
Black....................	89	124	111	239
Other....................	95	50	67	127

Visit characteristics

Table 2 includes data on the condition and management of adolescent patients, and the specialties most likely to provide their health care. For contrast, similar information is provided on visits by all other patients. As suggested in the introduction, adolescents tend to make proportionately fewer return visits to the same physician than other patients. About half their visits were made by patients the physician had seen before, who re returning for care of old problems, compared with about 65 percent by returning patients in all other age groups. The higher than average proportion of acute problems as the major reason for visit reflects the higher incidence of acute conditions found in the adolescent population. Nonillness care is proportionately greater in late adolescence than in early adolescence because visits for prenatal care and gynecological examinations are more likely at that age. Table 3 shows the 20 most frequent reasons given by patients for their visits. Symptoms of acute illness such as cough, throat, or ear problems accounted for 13 percent of the reasons presented by the younger group. General medical examination and physical examinations for extracurricular activities and for school were reasons in 11 percent of visits. Acne, skin rash, allergy medication, and allergy, not otherwise specified, were also common reasons for visit for this group. Prenatal examination and acne account for about 15 percent of the visits by the older group. The juxtaposition of these two reasons provides some insight into the rapid changes that occur during adolescence.

The distinction between the health care needs of patients in the early and late stages of adolescence is also evident in the kinds of diagnoses rendered during their visits to physicians. For the younger group, diseases of the respiratory system (21 percent) was the leading diagnostic category, followed by diagnoses in the supplementary classification (chiefly examinations, 16 percent), and injury and poisoning (16 percent, table 2). For the older group, diagnoses in the supplementary classification (25 percent) were the most common, with diseases of the skin and subcutaneous tissue ranked second with 14 percent. Diseases of the respiratory system and injury and poisoning each accounted for 13 percent.

The developmental process is more clearly exemplified by an examination of the distribution of specific principal diagnoses. The 20 most frequent principal diagnoses are shown in table 4. The variability in the degree of maturation that is typical of adolescence is reflected by the two leading diagnoses made for patients 15-20 years of age: normal pregnancy (9 percent) and diseases of the sebaceous glands (chiefly acne other than varioliformis, 7 percent). Acne accounted for 8 percent of males' visits and 6 percent of females' visits, but the difference is not statistically significant. General medical examination is prominent on the list of diagnoses for each adolescent age group. Gynecological examination and contraceptive management emerge as diagnoses in late adolescence.

Adolescents are more likely to visit dermatologists and less likely to visit internists than other patients are. It is not unexpected that visits to obstetrician-gynecologists were more likely during late adolescence (14 percent) than during the earlier period.

The diagnostic services and therapy likely to be utilized when adolescents visit office-based physicians do not differ considerably from those used when other patients visit (table 2). The higher proportion of office surgery performed for adolescents than for other age groups was probably the result of the former's greater tendency to have injuries. Family planning was included in about 5 percent of visits by patients 15-20 years of age, a higher than average proportion. However, diet counseling was relatively less frequent than average. The importance of proper nutrition at this stage of life may need greater emphasis. Physicians also tend to make proportionately fewer blood pressure measurements for patients under 21 years of age than for those older.

One or more drugs were included in about 57 percent of adolescents' visits, and a single drug was more likely to be prescribed than were two, three, or more. NAMCS data indicate that multiple drug prescription is more likely to occur during visits by middle-aged and older patients than during those by younger patients. For these young patients, antibiotics, antihistamine drugs, skin and mucous membrane preparations, and analgesics and antipyretics accounted for over 60 percent of drug mentions (table 5). The specific drugs most frequently prescribed during their visits are listed in table 6 according to the drug name recorded by the physician on the NAMCS Patient Record form (the NAMCS data collection instrument). The generic substances represented by these drugs are shown in table 7 with a description of their most common therapeutic uses.

Visits lasting less than 11 minutes were more likely for adolescents than for other age groups. About 46 percent of encounters with physicians by patients 11-14 years of age and 51 percent of those by patients 15-20 years of age were less than 11 minutes in duration, compared with 42 percent of those by all other age groups (table 2). In about 6 percent of the youngest group's visits, patients were not seen by the physician but by a member of the staff. This higher than average proportion of "0-minute" visits probably reflects the visits in which patients were given allergy relief or shots (table 6).

The disposition of the visit is often related to the likelihood of acute or chronic conditions. Generally, patients with

Table 2. Number of office visits made by adolescents and all other age groups and percent distribution by selected visit characteristics, according to age: United States, 1980–81

Characteristic	Age			Characteristic	Age		
	11–14 years	15–20 years	All other ages		11–14 years	15–20 years	All other ages
	Number in thousands			Diagnostic services[2]	**Percent distribution**		
All visits........................	40,269	87,172	1,033,482	None	13.0	9.8	7.8
	Percent distribution			Limited history and/or examination	62.1	64.3	64.4
Total	100.0	100.0	100.0	General history and/or examination	15.9	15.3	15.5
Sex				Pap test........................	*0.4	4.8	4.5
Female.........................	49.4	61.3	60.6	Clinical laboratory test	20.3	23.9	21.8
Male	50.6	38.7	39.4	X-ray	9.2	7.4	7.4
				Blood pressure check............	15.8	29.5	35.4
Race				Electrocardiogram................	*0.5	0.5	3.3
White..........................	88.8	89.7	89.4	Vision test......................	8.2	5.6	5.7
Black	9.4	9.7	9.5	Endoscopy......................	*0.2	*0.4	1.0
All other	1.8	0.7	1.1	Mental status examination.........	*0.9	1.4	1.5
				Other..........................	3.3	3.9	5.1
Hispanic origin				**Nonmedication therapy[2]**			
Hispanic	4.6	5.4	4.5	None	57.3	52.9	53.8
Non-Hispanic	95.4	94.6	95.5	Physiotherapy..................	4.6	5.3	4.8
				Office surgery	13.2	11.7	6.8
Prior visit status				Family planning	*0.5	4.9	1.9
New patient	18.3	20.8	13.7	Psychotherapy or therapeutic listening	2.3	3.7	5.1
Old patient, new problem	31.7	26.1	21.6	Diet counseling.................	3.8	4.6	8.5
Old patient, old problem	50.0	53.2	64.7	Family or social counseling	2.5	2.2	2.1
				Medical counseling	19.5	20.3	23.4
Major reason for visit				Other..........................	3.4	2.4	2.5
Acute problem	47.2	41.0	35.6				
Chronic problem, routine..........	20.5	19.4	29.1	**Number of medications**			
Chronic problem, flareup	6.2	5.7	9.6	None	43.8	43.3	37.5
Postsurgery or postinjury..........	9.4	9.9	8.7	1	34.3	31.5	30.7
Nonillness care.................	16.8	24.0	17.1	2	15.3	17.0	17.9
				3 or more	6.6	8.3	13.9
Principal diagnosis category and ICD–9–CM code[1]							
				Physician specialty			
Infectious and parasitic diseases...............001–139	6.2	5.5	2.9	General and family practice	34.1	35.8	32.6
Neoplasms 140–239	*0.7	0.9	2.9	Internal medicine	2.8	5.8	13.4
Endocrine, nutritional and metabolic diseases, and immunity disorders 240–279	*0.7	1.5	4.2	Pediatrics	29.3	8.3	10.6
				Obstetrics and gynecology	*0.9	13.9	9.3
Mental disorders.........290–319	2.2	2.9	4.3	Dermatology....................	6.4	11.1	3.8
Diseases of the nervous system and sense organs...........320–389	11.1	6.3	9.6	General surgery.................	3.3	4.7	5.4
				Ophthalmology..................	4.9	3.9	5.5
Diseases of the circulatory system.................390–459	*0.5	1.1	10.8	Otolaryngology.................	2.6	2.1	2.3
				Psychiatry	1.7	2.3	2.8
Diseases of the respiratory system.................460–519	20.7	13.3	12.2	All other specialties	14.1	12.1	14.4
Diseases of the digestive system.................520–579	3.0	2.8	4.4	**Duration of visit**			
Diseases of the genitourinary system....580–629	2.7	6.0	6.0	0 minutes[3]	5.6	2.2	2.5
				1–5 minutes....................	15.6	17.8	12.1
Diseases of the skin and subcutaneous tissue.....680–709	8.7	13.6	5.2	6–10 minutes...................	30.7	32.9	29.8
				11–15 minutes..................	26.0	25.5	28.1
Diseases of the musculoskeletal system and connective tissue..................710–739	4.8	3.6	7.2	16–30 minutes..................	18.6	17.3	21.2
				31 minutes or longer	3.7	4.3	6.3
Symptoms, signs and ill-defined conditions............780–799	3.4	2.5	3.4	**Disposition of visit[4]**			
				No followup planned	19.7	17.6	10.7
Injury and poisoning......800–999	16.1	12.5	7.5	Return at specified time...........	47.2	53.2	61.8
Supplementary classification..........V01–V82	16.4	24.9	16.9	Return if needed.................	28.2	24.1	22.4
				Telephone followup planned.......	3.8	3.5	3.4
All other diagnoses	1.4	1.5	1.3	Referred to other physician	2.6	2.7	2.6
Unknown diagnoses..............	1.6	1.0	1.2	Returned to referring physician.....	*0.7	*0.4	0.8
				Admit to hospital	1.2	1.6	2.4
				Other..........................	*0.2	*0.3	0.2

[1] Based on U.S. Public Health Service and Health Care Financing Administration: *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM) DHHS Pub. No. (PHS) 80–1260. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1980.
[2] Percents will not total 100.0 because more than 1 service or therapy may have been provided during a visit.
[3] Visits in which there was no face-to-face encounter between patient and physician.
[4] Percents will not total 100.0 because more than 1 disposition was possible.

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Table 3. Number of office visits made by adolescents and percent distribution by the 20 most frequent principal reasons for visit, according to age: United States, 1980–81

Age, principal reason for visit, and RVC code[1]	Number of visits in thousands	Percent distribution	Age, principal reason for visit, and RVC code[1]	Number of visits in thousands	Percent distribution
11–14 years			**15–20 years**		
Total.............................	40,269	100.0	Total.............................	87,172	100.0
Symptoms referable to throat S455	2,646	6.6	Prenatal examination, routine X205	6,985	8.0
General medical examination X100	2,431	6.0	Acne or pimples.................. S830	5,811	6.7
Allergy medication T100	1,780	4.4	Symptoms referable to throat S455	4,937	5.7
Earache, or ear infection S355	1,482	3.7	General medical examination X100	2,892	3.3
Acne or pimples.................. S830	1,356	3.4	Skin rash........................ S860	2,084	2.4
Cough S440	1,196	3.0	Postoperative visit T205	1,761	2.0
Skin rash........................ S860	1,187	¯.3	Progress visit, not otherwise specified T800	1,737	2.0
Physical examination for extracurricular activities....................... A115	1,091	2.7	Cough S440	1,452	1.7
Knee symptoms S925	860	2.1	Abdominal pain, cramps, spasms S550	1,441	1.7
Progress visit, not otherwise specified T800	723	1.8	Physical examination required for school......................... A110	1,423	1.6
Physical examination required for school......................... A110	708	1.8	Allergy medication T100	1,329	1.5
Headache, pain in head........... S210	678	1.7	Physical examination for extracurricular activities....................... A115	1,268	1.5
Stomach pain, cramps and spasms... S545	670	1.7	Earache, or ear infection S355	1,239	1.4
Eye examination.................. X230	644	1.6	Knee symptoms S925	1,138	1.3
Postoperative visit T205	626	1.6	Headache, pain in head........... S210	1,120	1.3
Fever........................... S010	575	1.4	Head cold, upper respiratory infection (coryza)........................ S445	1,062	1.2
Warts, not otherwise specified S850	555	1.4	Back symptoms S905	1,044	1.2
Allergy, not otherwise specified S090	555	1.4	Eye examination.................. X230	965	1.1
Vision dysfunctions S305	543	1.3	Gynecological examination......... X225	889	1.0
Head cold, upper respiratory infection (coryza)........................ S445	491	1.2	Warts, not otherwise specified S850	878	1.0
Residual...............................	...	48.3	Residual...............................	...	52.4

[1]Based on: National Center for Health Statistics; D. Schneider, L. Appleton, and T. McLemore: A reason for visit classification for ambulatory care (RVC). *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.

chronic conditions are more likely to be scheduled for return visits than are those with acute self-limiting conditions.

Because the youngest group (11–14 years) had proportionately more acute problems than other patients, they were also least likely to be told to return at a specified time. As table 2 shows, the proportion of visits that culminated with this instruction is higher in late adolescence than in early, but both groups have lower proportions of visits in which return visits were scheduled than other age groups did.

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Table 4. Number of office visits made by adolescents and percent distribution by the 20 most frequent principal diagnoses, according to age: United States, 1980–81

Age, principal diagnosis, and ICD-9-CM code[1]	Number of visits in thousands	Percent distribution	Age, principal diagnosis, and ICD-9-CM code[1]	Number of visits in thousands	Percent distribution
11-14 years			**15-20 years**		
Total...............................	40,269	100.0	Total...............................	87,172	100.0
General medical examination V70	2,832	7.0	Normal pregnancy V22	7,926	9.1
Allergic rhinitis 477	1,760	4.4	Diseases of sebaceous glands........ 706	7,306	8.4
Diseases of sebaceous glands[2]....... 706	1,629	4.0	General medical examination V70	5,457	6.3
Acute pharyngitis 462	1,297	3.2	Acute pharyngitis 462	2,439	2.8
Acute upper respiratory infections of multiple or unspecified sites 465	1,296	3.2	Acute upper respiratory infections of multiple or unspecified sites 465	2,242	2.6
Suppurative and unspecified otitis media........................... 382	1,177	2.9	Special investigations and examinations[4]..................... V72	1,756	2.0
Asthma 493	1,109	2.8	Disorders of refraction and accommodation 367	1,525	1.7
Disorders of refraction and accommodation 367	1,054	2.6	Allergic rhinitis 477	1,482	1.7
Routine infant or child health check V20.2	930	2.3	Other diseases due to viruses and chlamydiae 078	1,427	1.6
Certain adverse effects not elsewhere classified[3] 995	808	2.0	Followup examination V67	1,345	1.5
Acute tonsillitis.................... 463	791	2.0	Acute tonsillitis.................... 463	1,254	1.4
Other diseases due to viruses and chlamydiae 078	770	1.9	Contact dermatitis and other eczema 692	1,146	1.3
Contact dermatitis and other eczema 692	684	1.7	Suppurative and unspecified otitis media........................... 382	955	1.1
Fracture of radius and ulna.......... 813	551	1.4	Contraceptive management.......... V25	866	1.0
Disorders of external ear 380	527	1.3	Asthma 493	851	1.0
Curvature of spine.................. 737	460	1.1	Disorders of menstruation and other abnormal bleeding from female genital tract............................. 626	820	0.9
Bronchitis, not specified as acute or chronic 490	*435	1.1	Bronchitis, not specified as acute or chronic 490	78.8	0.9
Observation and evaluation for suspected conditions....................... V71	*422	1.0	Disorders of external ear 380	731	0.8
Other noninfective gastroenteritis and colitis 558	*413	1.0	Chronic sinusitis 473	722	0.8
Followup examination V67	*405	1.0	Neurotic disorders 300	719	0.8
Residual..............................	...	52.1	Residual..............................	...	52.3

[1]Based on U.S Public Health Service and Health Care Financing Administration. *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM). DHHS Pub. No. (PHS) 80-1260. Public Health Service. Washington. U.S. Government Printing Office. Sept. 1980.
[2]Chiefly 706.1. acne other than varioliformis.
[3]Chiefly 995.3. allergy unspecified.
[4]Chiefly V72.3. gynecological examination.

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Table 5. Number of drug mentions in office visits made by adolescents and all other age groups and percent distribution by therapeutic category, according to age: United States, 1980-81

	Age		
Therapeutic category[1]	11-14 years	15-20 years	All other ages
	Number in thousands		
All categories	34,950	81,382	1,214,414
	Percent distribution		
Total	100.0	100.0	100.0
Antihistamine drugs	17.7	9.0	6.1
Anti-infective agents	27.4	29.6	14.5
Antibiotics	26.3	27.2	12.2
Autonomic drugs	3.3	3.3	3.8
Blood formation and coagulation	*0.4	1.0	1.3
Antianemia drugs	*0.4	1.0	0.8
Cardiovascular drugs	*0.5	*0.7	10.9
Central nervous system drugs	7.9	9.5	16.9
Analgesics and antipyretics	5.6	6.3	9.0
Psychotherapeutic agents	*0.3	0.9	2.5
Sedatives and hypnotics	*1.0	1.5	3.8
Diagnostic agents	1.8	0.8	0.4
Tuberculosis	1.8	0.8	0.4
Electrolytic, caloric, and water balance	*0.6	1.0	8.8
Expectorants and cough preparations	5.1	3.2	2.7
Eye, ear, nose and throat preparations	5.2	3.4	3.7
Anti-infectives	2.4	1.4	0.9
Anti-inflammatory agents	*1.0	0.8	0.7
Gastrointestinal drugs	*1.5	2.2	3.8
Hormones and synthetic substitutes	4.2	8.2	8.5
Adrenals	2.7	2.6	3.0
Contraceptives	*0.4	4.2	0.9
Serums, toxoids and vaccines	4.8	3.0	3.4
Toxoids	1.9	1.8	1.3
Vaccines	2.6	1.1	2.0
Skin and mucous membrane preparations	13.9	17.6	7.0
Anti-infectives	2.8	3.2	1.7
Anti-inflammatory agents	4.4	4.1	2.9
Cell stimulants and proliferants	*1.0	1.8	0.2
Keratolytic agents	3.2	5.6	0.6
Spasmolytic agents	2.2	*0.7	1.7
Vitamins	*0.8	4.4	3.4
Other, unclassified or undetermined	2.7	2.4	3.1

[1] Based on American Society of Hospital Pharmacists, Inc.: The American Hospital Formulary Service. Washington. Jan. 1980.

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Table 6. Number and percent distribution of drug mentions in office visits made by adolescents (and percent distribution) by age and most frequently named drugs: United States, 1980–81

Age and name of drug[1]	Number in thousands	Percent distribution	Age and name of drug[1]	Number in thousands	Percent distribution
11–14 years			**15–20 years—Con.**		
Total	34,950	100.0	Retin-A	1,335	1.6
			Aspirin	1,253	1.5
Allergy relief or shots	2,878	8.2	Desquam-X (benzoyl peroxide)	946	1.2
Ampicillin	1,090	3.1	Minocin	911	1.1
Penicillin	1,032	3.0	Actifed	858	1.1
Aspirin	937	2.7	Ortho-novum	831	1.0
Tetracycline	912	2.6	Tuberculin tine test	812	1.0
Tuberculin tine test	835	2.4	E-mycin (erythromycin)	806	1.0
E.E.S. (erythromycin)	609	1.7	Pen-Vee K	777	1.0
Erythromycin	554	1.6	Prednisone	692	0.9
Amoxicillin	533	1.5	Keflex	687	0.8
Dimetapp	503	1.4	E.E.S. (erythromycin)	629	0.8
Pen-Vee K	461	1.3	Lo/ovral	624	0.8
Actifed	461	1.3	Prenatal vitamins	624	0.8
V-Cillin (penicillin)	*433	1.2	Benzac (benzoyl peroxide)	618	0.8
Cleocin	*427	1.2	Diphtheria tetanus toxoids	572	0.7
Poliomyelitis vaccine	*405	1.2	Tetanus toxoid	564	0.7
Diphtheria tetanus toxoids	*360	1.0	Dimetapp	542	0.7
Residual	...	64.6	Cortisporin	509	0.6
			Skin preparation	496	0.6
15–20 years			Benadryl	478	0.6
Total	81,382	100.0	Benzoyl (benzoyl peroxide)	476	0.6
			Sumycin (tetracycline)	471	0.6
Tetracycline	3,724	4.6	Benzagel (benzoyl peroxide)	457	0.6
Allergy relief or shots	2,354	2.9	Drixoral	457	0.6
Cleocin	2,307	2.8	Monistat	*446	0.5
Penicillin	2,195	2.7	Residual	...	60.5
Ampicillin	2,065	2.5			
Erythromycin	1,446	1.8			

[1] Based on the physician's entry on the Patient Record form.

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Table 7.   Number of generic drugs utilized in office visits made by adolescents by age and the 30 most frequently used generic substances described by their most common therapeutic uses: United States, 1980-81

Age, generic substance, and most common therapeutic use	Number in thousands	Age, generic substance, and most common therapeutic use	Number in thousands
11-14 years		**15-20 years**	
Penicillin (antibiotic)	2,179	Tetracycline (antibiotic)	5,077
Erythromycin (antibiotic)	1,696	Penicillin (antibiotic)	4,031
Phenylpropanolamine (sympathomimetic)	1,645	Erythromycin (antibiotic)	3,473
Phenylephrine (sympathomimetic)	1,369	Benzoyl peroxide (keratolytic, acne treatment)	3,367
Ampicillin (antibiotic)	1,308	Estradiol (estrogen)	2,579
Pseudoephedrine (antihistaminic, cough suppressant)	1,239	Aspirin (analgesic, antipyretic)	2,461
Chlorpheniramine (antihistaminic)	1,232	Clindamycin (antibiotic)	2,347
Tetracycline (antibiotic)	1,191	Pseudoephedrine (antihistaminic, cough suppressant)	2,302
Guaifenesin (cough suppressant)	1,112	Ampicillin (antibiotic)	2,201
Amoxicillin (antibiotic)	1,097	Multivitamins prenatal (vitamins)	2,128
Aspirin (analgesic, antipyretic)	1,025	Phenylpropanolamine (sympathomimetic)	1,964
Neomycin (antibiotic)	959	Phenylephrine (sympathomimetic)	1,712
Tuberculin (tuberculosis skin test)	835	Chlorpheniramine (antihistaminic)	1,657
Hydrocortisone (anti-inflammatory)	830	Norethindrone (oral contraceptive)	1,615
Brompheniramine (expectorant)	803	Hydrocortisone (anti-inflammatory)	1,445
Benzoyl peroxide (keratolytic, acne treatment)	736	Brompheniramine (expectorant)	1,390
Codeine (analgesic, antitussive)	714	Tretinoin (keratolytic)	1,335
Polymyxin B (antibacterial)	694	Neomycin (antibiotic)	1,278
Bacitracin (antibiotic)	680	Codeine (analgesic, antitussive)	1,272
Theophylline (vasodilator)	647	Acetaminophen (analgesic, antipyretic)	1,246
Triprolidine (antihistaminic)	584	Iron preparations (iron deficiency)	1,186
Atropine (anticholinergic)	513	Polymyxin B (antibacterial)	1,059
Hyoscyamine (anticholinergic)	508	Amoxicillin (antibiotic)	1,058
Promethazine (antihistaminic)	499	Guaifenesin (cough suppressant)	1,044
Acetaminophen (analgesic, antipyretic)	498	Salicylic acid (antifungal, keratolytic)	1,021
Salicylic acid (antifungal, keratolytic)	491	Troprolidine (antihistaminic)	998
Phenobarbital (anticonvulsant, sedative, hypnotic)	463	Bacitracin (antibiotic)	983
Scopolamine (hypnotic, sedative, anticholinergic)	460	Triamcinolone (anti-inflammatory)	923
Clindamycin (antibiotic)	*427	Minocycline (antibiotic)	919
Polio vaccine (immunization)	*405	Norgestrel (oral contraceptive)	901

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Technical notes

Source of data and sample design

The estimates presented in this report are based on the findings of the National Ambulatory Medical Care Survey (NAMCS), a sample survey of office-based care conducted annually from 1973 through 1981 by the National Center for Health Statistics. The target universe of NAMCS is composed of office visits made by ambulatory patients to non-Federal and noninstitutional physicians who are principally engaged in office-based, patient-care practice. Visits to physicians practicing in Alaska and Hawaii are excluded from the range of NAMCS, as are visits to anesthesiologists, pathologists, and radiologists.

NAMCS uses a multistage probability sample design that involves a step sampling of primary sampling units (PSU's), physicians' practices within PSU's, and patient visits within physicians' practices. The physician sample (5,805 physicians for 1980 and 1981) was selected from master files maintained by the American Medical Association and the American Osteopathic Association. Those members of the sample who proved to be in scope and eligible participated at a rate of 77.3 percent. Responding physicians completed visit records for a systematic random sample of office visits made during a randomly assigned weekly reporting period. Telephone contacts were excluded. During 1980 and 1981 responding physicians completed 89,447 visit records on which they recorded 97,796 drug mentions. Characteristics of the physician's practice, such as primary specialty and type of practice, were obtained during an induction interview. The National Opinion Research Center, under contract to the National Center for Health Statistics, was responsible for the field operations of the survey.

Sampling errors and rounding

The standard error is a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. 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. In this report, any estimate that exceeds a relative standard error of 30 percent is marked with an asterisk. Table I should be used to obtain the relative standard error for aggregates of office visits or for mentions of drugs by specific name (for example, Darvon). Table II should be used to obtain the relative standard error for drug mentions expressed as drug groups (for example, the analgesic drug family).

In this report, the determination of statistical significance 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" or "less," indicate that the differences are statistically significant. Terms such as "similar" or "no difference" mean that no statistical significance exists between the estimates being compared. A lack of comment in a comparison between any two estimates does not mean that the difference was tested and was not significant.

In the tables of this report estimates have been rounded to the nearest thousand. For this reason, detailed estimates do not always add to totals.

Table I. Approximate relative standard errors of estimated numbers of office visits and of drug mentions when drug is listed by product name (for example, Darvon), based on all physician specialties: National Ambulatory Medical Care Survey, 1980–81

Estimated number of office visits or specific drug mentions	Relative standard error
Number in thousands	Percent
*200	*44.8
*400	*31.7
*450	*30.0
600	26.0
800	22.6
1,000	20.2
2,000	14.5
5,000	9.5
10,000	7.1
20,000	5.6
50,000	4.4
100,000	3...
200,000	3.6
500,000	3.5
1,000,000	3.4

EXAMPLE OF USE OF TABLE: An aggregate estimate of 35,000,000 office visits has a relative standard error of 5.0 percent or a standard error of 1,750,000 visits (5.0 percent of 35,000,000 visits).

Table II. Approximate relative standard errors of estimated numbers of drug mentions when drugs appear in groups (for example, the analgesic drug family), based on all physician specialties: National Ambulatory Medical Care Survey, 1980–81

Estimated number of grouped drug mentions	Relative standard error
Number in thousands	Percent
*200	*54.2
*400	*38.5
*600	*31.5
*650	*30.0
800	27.3
1,000	24.5
2,000	17.6
5,000	11.6
10,000	8.7
20,000	6.8
50,000	5.3
100,000	4.7
200,000	4.4
500,000	4.2
1,000,000	4.1

EXAMPLE OF USE OF TABLE: An aggregate estimate of 30,000,000 drug mentions has a relative standard error of 7.0 percent or a standard error of 2,100,000 mentions (7.0 percent of 30,000,000 mentions).

Definitions

An office is a place that physicians identify as a location for their ambulatory practice. Responsibility for patient care and professional services rendered in an office resides with the individual physician rather than an institution.

A visit is a direct personal exchange between an ambulatory patient seeking health care and a physician, or staff member working under the physician's supervision, who provides the health services.

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

An *acute problem* is a morbid condition with a relatively sudden or recent onset (within 3 months of the visit).

A *chronic problem* is a morbid condition that existed for 3 months or longer before the visit. The care indicated is of a regular, maintenance nature.

A *chronic problem flareup* is a sudden exacerbation of a preexisting chronic condition.

Nonillness care denotes health examinations and care provided for presumably healthy persons. Examples of nonillness care include prenatal and postnatal care, annual physicals, well-child examinations, and insurance examinations.

Symbols

- - -   Data not available

...   Category not applicable

-   Quantity zero

0.0   Quantity more than zero but less than 0.05

Z   Quantity more than zero but less than 500 where numbers are rounded to thousands

*   Figure does not meet standards of reliability or precision

Figure suppressed to comply with confidentiality requirements

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