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Advance Data

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Drug Utilization in Office Practice

National Ambulatory Medical Care Survey, 1990

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In 1990 an estimated 704 million office visits were made to office-based physicians in the United States. About 60 percent of the visits were classified as a "drug visit," a visit during which one drug or more was prescribed or provided to the patient. This resulted in office-based physicians prescribing or providing an estimated 759 million medications to their patients in 1990.

This report describes the drug utilization for 1 year according to data collected in the 1990 National Ambulatory Medical Care Survey (NAMCS). NAMCS, a year-long sample survey of the nation's nonfederal, office-based physicians is conducted by the Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Care Statistics. A summary of general findings from the 1990 NAMCS (1) and reports on drug utilization in office practice, 1985 (2) and 1980 (3) have been published.

The term utilization is defined as the prescribing or providing of a new or continued drug by a doctor of medicine or osteopathy in the course of an office visit. It is not an indication of the patient's compliance with the doctor's instructions. Drug utilization in this report will be described in three ways: 1) by frequency of drug use, namely, a drug visit; the proportion of visits during which medications were prescribed or provided, 2) by the intensity of drug use; the proportion of visits during which one, two, and three or more drugs were prescribed or provided, and 3) by the drug utilization rate; the average number of medications per visit. The terms "drug" and "medication" are used interchangeably and are broadly defined to include any pharmaceutical agent the doctor prescribes or provides to the patient during a visit.

Data presented in this report are based on entries in item 15 on the NAMCS Patient Record Form (figure 1) that asks the responding physician to report the names of up to five specific drugs that were prescribed or provided in the course of the office visit (drugs prescribed through telephone contact are excluded). Physicians were asked to report nonprescription and prescription drugs, to distinguish between new and continued medications, and to indicate whether the drug was intended for the principal diagnosis associated with the visit (item 10a).

Data highlights

Table 1 describes some key dimensions of the drug data base.

New or continued status—About half (51 percent) of the drugs prescribed or provided were described as continued medications.

Entry status—Seventy-one percent of the drugs prescribed or provided were specific brand or trade names.

Prescription status—A great majority (84 percent) of office-based drug therapy utilized prescription drugs.

Composition status—Seventy-five percent of the drugs were single ingredient medications.

Control status—Uncontrolled drugs represented 87 percent of the medications used in office-based drug therapy. Controlled drugs were distributed among the schedules as shown in table 1. Only 6 percent of the medications prescribed or provided by the office-based practitioner were classified as controlled substances.

The data in tables 2 and 3 show rank listings of the 50 drugs most frequently prescribed or provided by the office-based practitioner. Table 2 uses the entry names, that is, the trade or generic names entered on

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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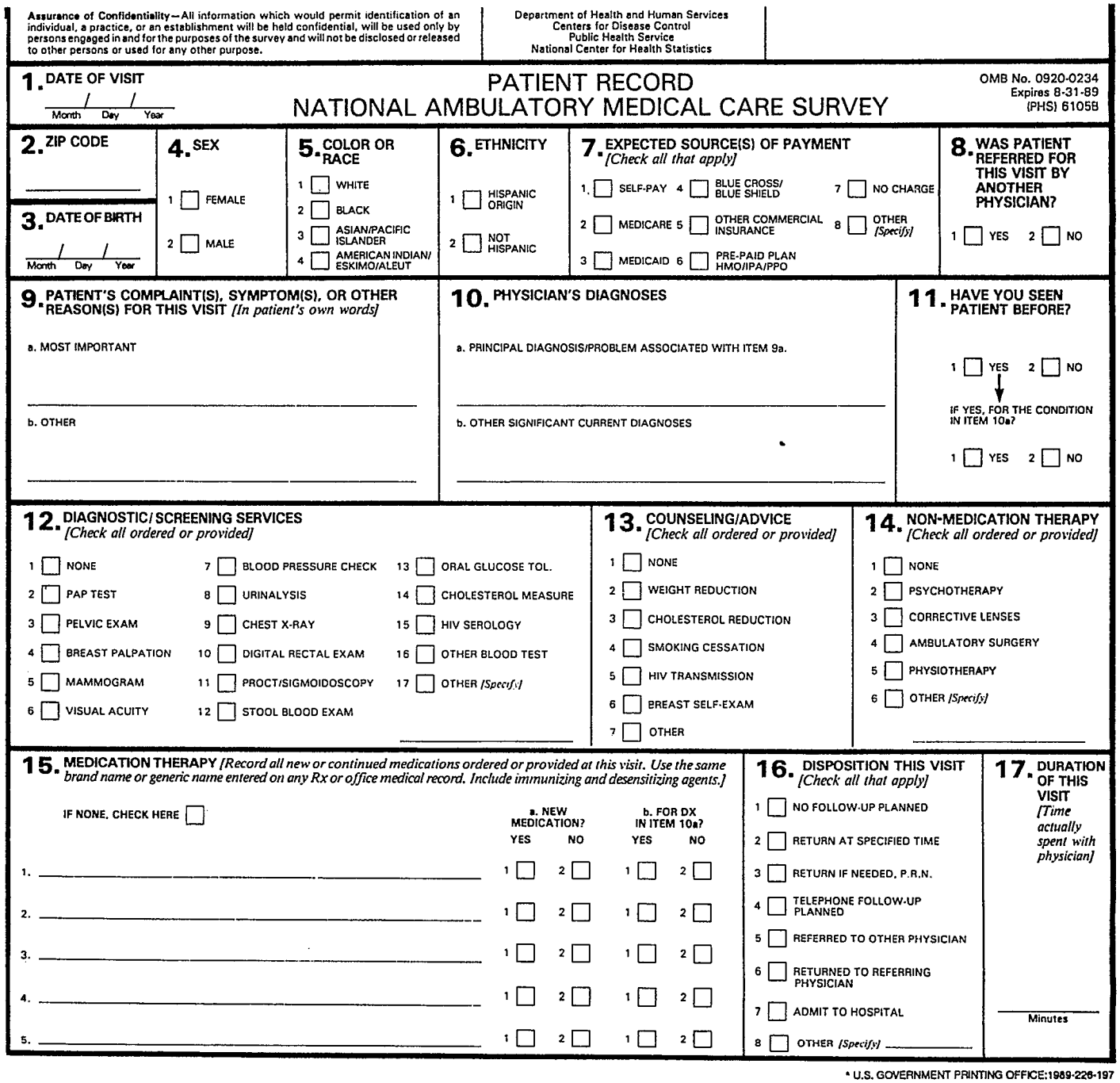
CENTERS FOR DISEASE CONTROL AND PREVENTION



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

1. DATE OF VISIT — Month / Day / Year

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

OMB No. 0920-0234
Expires 8-31-89
(PHS) 61058

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

the patient's prescription or medical record. The top three entry names, amoxicillin, amoxil, and ceclor, are antibiotics. In table 3 the data are presented by the generic ingredients of the drugs and provide a more complete perspective of drug utilization in the doctor's office. The most frequently used generic substance was amoxicillin (5 percent), an antibiotic. Seven other antibiotics are in the top 50 list including erythromycin and cefaclor. Other drugs frequently prescribed or provided by office-based physicians are the decongestants, phenylephrine, pseudoephedrine, and phenylpropanolamine, the broncodilators, albuterol and theophylline, and those drugs used in treating diseases of the circulatory system, hydrochlorothiazide, digoxin, furosemide, triamterene, nitroglycerin, diltiazem, and aspirin.

In table 4 the estimated 759 million drug mentions are classified by their chief therapeutic effect. Antimicrobial agents, cardiovascular-renal drugs, respiratory drugs, and drugs used for relief of pain account for 53 percent of all drug mentions.

The remaining tables describe the relationship between drug utilization and other key variables in office care: the characteristics of the attending physician (table 5), the patient's age and sex (table 6), race and ethnicity (table 7), and the principal diagnoses (table 8).

Table 1. Number and percent distribution of drug mentions by selected dimensions: United States, 1990

Drug dimension	Drug mentions in thousands	Percent distribution
All mentions	759,406	100.00
New or continued status		
New medication	327,748	43.16
Continued medication	384,009	50.57
Undetermined	47,649	6.27
Entry status[1]		
Generic name	131,893	17.37
Trade name	543,357	71.55
Undetermined	84,156	11.08
Prescription status		
Prescription drug	637,300	83.92
Nonprescription drug	68,452	9.01
Undetermined	53,654	7.07
Composition status		
Single ingredient drug	573,498	75.52
Combination drug	134,907	17.76
Undetermined	51,000	6.72
Federal control status		
Controlled drug	49,613	6.53
Schedule II drug	4,159	0.55
Schedule III drug	13,153	1.73
Schedule IV drug	23,630	3.11
Schedule V drug	8,670	1.14
Noncontrolled drug	658,729	86.74
Undetermined	51,064	6.72

[1]The trade or generic name used by the physician on the prescription or other medical records.

Physician

Ninety-four percent of the patient visits were to physicians who in the 1990 NAMCS sample identified themselves as doctors of medicine (table 5). However a slightly higher percent of visits to doctors of osteopathy (68 percent) were classified as a drug visit than those visits to doctors of medicine (60 percent). Doctors of osteopathy administered more single and multiple medications to patients than did doctors of medicine. The drug utilization rate for doctors of osteopathy was 1.3 medications per visit and 1.1 for doctors of medicine.

The physicians most likely to prescribe or provide medications were those specializing in cardiovascular disease, internal medicine, general and family practice, pediatrics, and neurology. Fifty-seven percent of the patient visits were to these five specialties and they accounted for 67 percent of all drug mentions.

The intensity in administering medication was greatest for the cardiovascular disease specialists. Seventy-eight percent of the visits to physicians specializing in cardiovascular disease were drug visits and 42 percent of the visits resulted in three or more medications prescribed or provided. Office-based orthopedic surgeons and general surgeons were the least likely to provide medications to their patients and about 18 percent of their visits resulted in administering a single medication.

The drug utilization rate ranged from 2.2 medications per visit for the cardiovascular disease specialists to 0.3 medications per visit for orthopedic surgeons. The drug utilization rate for the internal medicine specialty and "all other specialties" was about 1.4 medications per visit, followed by 1.2 medications per visit for dermatologists, neurologists, and general and family practitioners. By contrast, obstetricians and gynecologists, general surgeons, and urological surgeons have drug utilization rates of about 0.5 medications per visit, lower than the average rate for all physicians.

Patient

Patients 65 years of age and over represented 22 percent of the office visits and accounted for 28 percent of the drug mentions. Table 6 shows that the percent of drug visits and the administering of multiple medications when analyzed by patients' age are greatest for older patients. Older patients were most likely to receive multiple drug therapy while younger patients were most likely to receive only one medication. A higher percent of visits by patients 75 years of age and over (23 percent) were prescribed or provided three or more medications than their younger counterparts. By contrast, patients under 15 years of age were administered more single drug therapies (41 percent) than their older counterparts. The drug utilization rate for patients 65 years of age and over, about 1.4 medications per visit, was significantly higher than the drug utilization rate for younger patients, 1.2 and 1.0 medications per visit.

Table 6 also shows that more office visits were made by female patients (61 percent) and more drug mentions were prescribed or provided to female patients (61 percent). There was also a higher percent of drug visits by females 65 years of age and over (about 67 percent) than by males of the same age (61 percent). The drug utilization rate for female and male patients was about 1.1 medications per visit.

When the data were analyzed by the patient's race (table 7), white patients have a higher percent of visits (85 percent) and drug mentions (84 percent) than black and "other race" patients. However, black patients have a higher percent of drug visits (68 percent) than did white or "other race" patients (60 percent). Sixteen percent of the visits by black

Table 2. The 50 drugs most frequently utilized in office practice by entry name, number and percent of mentions, rank, and therapeutic use: United States, 1990

Rank	Entry name of drug and principal generic substance[1]	Number of mentions in thousands	Percent	Therapeutic use
	All drugs	759,406	100.00	All therapeutic uses
1	Amoxicillin	17,891	2.36	Antibiotic
2	Amoxil (amoxicillin)	13,448	1.77	Antibiotic
3	Ceclor (cefaclor)	8,910	1.17	Antibiotic
4	Lasix (furosemide)	8,868	1.17	Diuretic, antihypertensive
5	Prednisone	7,830	1.03	Steroid replacement therapy, anti-inflammatory agent
6	Naprosyn (naproxen)	7,585	1.00	Nonsteroidal anti-inflammatory agent
7	Seldane (terfenadine)	7,251	0.95	Antihistaminic
8	Motrin (ibuprofen)	6,988	0.92	Nonsteroidal anti-inflammatory agent
9	Zantac (ranitidine)	6,501	0.86	Duodenal or gastric ulcer
10	Premarin (estrogens)	6,327	0.83	Estrogen replacement therapy
11	Lanoxin (digoxin)	6,275	0.83	Cardiotonic/digitalis
12	Vasotec (enalapril)	5,991	0.79	Antihypertensive
13	Aspirin or A.S.A.	5,896	0.78	Analgesic, anti-inflammatory, antipyretic
14	Proventil (albuterol)	5,614	0.74	Bronchodilator
15	Dyazide (triamterene, hydrochlorothiazide)	5,584	0.74	Diuretic, antihypertensive
16	Diphtheria tetanus toxoids pertussis	5,176	0.68	Immunization
17	Voltaren (diclofenac sodium)	5,160	0.68	Nonsteroidal anti-inflammatory agent
18	Tylenol (acetaminophen)	5,144	0.68	Analgesic
19	Synthroid (levothyroxine)	5,137	0.68	Thyroid hormone therapy
20	Xanax (alprazolam)	5,089	0.67	Anxiety disorders
21	Cardizem (ditiazem)	4,979	0.66	Cardiotonic/calcium channel blocking agent
22	Capoten (captopril)	4,785	0.63	Antihypertensive
23	Prozac (fluoxetine)	4,785	0.63	Antidepressant
24	Calan (verapamil)	4,755	0.63	Cardiotonic/calcium channel blocking agent
25	Ventolin (albuterol)	4,666	0.61	Bronchodilator
26	Theo-dur (theophylline)	4,600	0.61	Bronchodilator
27	Polimoyelitis vaccine	4,551	0.60	Immunization
28	Tavist (clemastine)	4,405	0.58	Antihistaminic
29	Keflex (cephalexin)	4,265	0.56	Antibiotic
30	Tenormin (atenolol)	4,231	0.56	Antihypertensive, angina pectoris
31	Vancenase (beclomethasone dipropinate)	4,106	0.54	Intranasal steroid
32	Inderal (propranolol)	3,970	0.52	Hypertension, angina pectoris, arrhythmia, migraine
33	Timoptic (timolol)	3,877	0.51	Glaucoma
34	Cipro (ciprofloxacin)	3,823	0.50	Antibiotic
35	Augmentin (amoxicillin, potassium clavulanate)	3,783	0.50	Antibiotic
36	Entex (phenylpropanolamine, phenylephrine, guaifenesin)	3,757	0.49	Cough preparation
37	Tylenol No. 3 (acetaminophen, codeine)	3,729	0.49	Analgesic
38	Procardia (nifedipine)	3,698	0.49	Cardiotonic/calcium channel blocking agent
39	Darvocet-N (propoxyphene, acetaminophen)	3,653	0.48	Analgesic
40	Duricef (cefadroxil)	3,573	0.47	Antibiotic
41	Micronase (glyburide)	3,434	0.45	Hypoglycemic
42	Tetracycline	3,383	0.45	Antibiotic
43	Ampicillin	3,310	0.44	Antibiotic
44	Erythromycin	3,260	0.43	Antibiotic
45	Coumadin (warfarin)	3,183	0.42	Anticoagulant
46	E.E.S. (erythromycin)	3,172	0.42	Antibiotic
47	Valium (diazepam)	3,168	0.42	Anxiety disorders
48	Benadryl (diphenhydramine)	3,150	0.41	Antihistaminic
49	Ortho-novum (norethindrone, estradiol or mestranol)	3,041	0.40	Oral contraceptive
50	Tagamet (cimetidine)	3,014	0.40	Duodenal or gastric ulcer

[1]The trade or generic name used by the physician on the prescription or other medical records. The use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services. Because of its nonspecific nature, the entry "Allergy relief or shots," with 4,184,000 mentions, is omitted.

patients compared with 11 percent of white and "other race" patients were prescribed or provided three or more medications during a visit. The drug utilization rate was higher for black patients, 1.3 medications per visit, compared with 1.1 medications per visit for white and "other race" patients. Three percent of the visits and 2 percent of the drugs mentioned were by patients whose race was "unspecified." Under the assumption that these "unspecified" race visits and drug mentions are distributed proportionately among white, black, and "other race" patients, the previously mentioned differences in visits, drug visits , drug mentions, and drug utilization rates do not change. However if this assumption is incorrect, and these "unspecified" race visits and drug mentions were all from black patients there is no

Table 3. The 50 most frequently utilized generic substances in office practice by number and percent of mentions, rank, and therapeutic use: United States, 1990

Rank	Generic substance	Number of mentions in thousands[1]	Percent	Therapeutic use
	All drugs	759,406	100.0	All therapeutic uses
1	Amoxicillin	37,011	4.87	Antibiotic
2	Acetaminophen	23,416	3.08	Analgesic, antipyretic
3	Erythromycin	19,474	2.56	Antibiotic
4	Hydrochlorothiazide	15,011	1.98	Diuretic, antihypertensive
5	Codeine	14,435	1.90	Analgesic, antitussive
6	Phenylephrine	12,297	1.62	Decongestant, vasoconstrictor
7	Ibuprofen	11,964	1.58	Nonsteroidal anti-inflammatory agent
8	Phenylpropanolamine	11,489	1.51	Decongestant, anorexiant
9	Aspirin	10,823	1.43	Analgesic, antipyretic, anti-inflammatory
10	Albuterol	10,505	1.38	Bronchodilator
11	Pseudoephedrine	10,474	1.38	Decongestant
12	Naproxen	10,354	1.36	Nonsteroidal anti-inflammatory agent
13	Furosemide	9,570	1.26	Diuretic, antihypertensive
14	Chlorpheniramine	9,197	1.21	Antihistaminic
15	Digoxin	8,924	1.18	Cardiotonic/calcium channel blocking agent
16	Cefaclor	8,910	1.17	Antibiotic
17	Guaifenesin	8,890	1.17	Expectorant
18	Trimethorpim	8,649	1.14	Antibiotic
19	Sulfamethoxazole	8,282	1.09	Antibiotic
20	Prednisone	8,035	1.06	Steroid replacement therapy, anti-inflammatory agent
21	Triamterene	7,974	1.05	Diuretic, antihypertensive
22	Estradiol	7,965	1.05	Estrogen replacement therapy, oral contraceptive
23	Theophylline	7,634	1.01	Bronchodilator
24	Hydrocortisone	7,405	0.98	Steroidal anti-inflammatory agent
25	Terfenadine	7,251	0.95	Antihistaminic
26	Beclomethasone	7,092	0.93	Steroidal anti-inflammatory agent
27	Neomycin	6,915	0.91	Antibiotic
28	Insulin	6,913	0.91	Hypoglycemic
29	Cephalexin	6,737	0.89	Antibiotic
30	Estrogens	6,645	0.88	Estrogen replacement therapy, oral contraceptive
31	Verapamil	6,616	0.87	Cardiotonic/calcium channel blocking agent
32	Ranitidine	6,501	0.86	Duodenal or gastric ulcer
33	Penicillin	6,406	0.84	Antibiotic
34	Enalapril	6,386	0.84	Antihypertensive
35	Dextromethorphan	6,106	0.80	Antitussive
36	Polymixin B	5,966	0.79	Antibiotic
37	Glyburide	5,687	0.75	Hypoglycemic
38	Captopril	5,665	0.75	Antihypertensive
39	Dexamethasone	5,655	0.74	Steroidal anti-inflammatory agent
40	Nitroglycerin	5,642	0.74	Vasodilator
41	Nifedipine	5,544	0.73	Cardiotonic/calcium channel blocking agent
42	Triamcinolone	5,518	0.73	Steroidal anti-inflammatory agent
43	Levothyroxine	5,510	0.73	Thyroid hormone therapy
44	Diclofenac sodium	5,160	0.68	Nonsteroidal anti-inflammatory agent
45	Prednisolone	5,130	0.68	Steroidal anti-inflammatory agent
46	Alprazolam	5,089	0.67	Antianxiety agent
47	Promethazine	5,060	0.67	Antihistaminic
48	Diltiazem	4,979	0.66	Cardiotonic/calcium channel blocking agent
49	Fluoxetine Hydrochloride	4,785	0.63	Antidepressant
50	Atenolol	4,780	0.63	Cardiotonic/Beta-adrenergic blocking agent, antihypertensive

[1]Frequency of mentions combines single-ingredient agents with mentions of agents in a combination-ingredient drug.

difference between the drug utilization rates by race.

Non-Hispanic patients accounted for about 88 percent of the visits to office-based physicians and 89 percent of the drug mentions. There was a slight difference in the intensity in administering medications by the patients' ethnicity. Office visits by Hispanic patients were more often administered a single medication and visits by non-Hispanic patients were more often administered three or more medications. Seven percent of the visits and 6 percent of the drug mentions were by patients of "unspecified" ethnicity. Again the assumption is that these "unspecified" ethnicity visits and drug mentions are distributed proportionately among Hispanic and non-Hispanic patients. Under this assumption the drug utilization rate for Hispanics would not significantly

differ from the drug utilization rate for non-Hispanic patients. However if this assumption is incorrect and these "unspecified" ethnicity visits and drug mentions are all from Hispanic patients, the drug utilization rate for Hispanic patients becomes significantly lower than the drug utilization rate for non-Hispanic patients.

Diagnoses

In table 8 patient visits and drug mentions are displayed according to the International Classification of Diseases (ICD) and with selected related principal diagnoses. Medications were most likely administered during visits in which the patient's diagnosis was from the major ICD categories of diseases of the respiratory system, diseases of the circulatory system, or diseases of the nervous system and sense organs. In 33 percent of the visits, the patient's diagnosis was from one of these three major ICD categories and these visits accounted for almost half of the drugs mentioned. An estimated 100 million visits to doctors' offices were those in which the patient's diagnosis was categorized under diseases of the respiratory system and 86 percent of these visits were classified as a drug visit. Drugs were administered during 79 percent of the visits in which the patient's diagnosis was categorized under diseases of the circulatory system.

The intensity in administering medication was high during those visits in which patients were specifically diagnosed with asthma. Ninety-one percent of these visits were drug visits and in almost half (48 percent) of these visits, three or more medications were prescribed or provided. Three or more drugs were also administered during those visits where patients were diagnosed with ischemic heart disease (45 percent). The drug utilization rate for visits in which patients were diagnosed with asthma or ischemic heart disease were 2.5 and 2.3 medications per visit. A high percent of drug visits was also noted when patients were diagnosed with otitis media or acute upper respiratory infection (86 percent). For those visits, in which patients were diagnosed with otitis media, 60 percent were administered a single medication. Single medications were also administered in 52 percent of the visits in which patients were diagnosed as obese.

Medications were least likely administered during visits where the patient's diagnosis was normal pregnancy. Only a third of these visits were drug visits and most (25 percent) were administered a single medication.

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Symbols

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

Table 4. Number and percent distribution of drug mentions by therapeutic catagories: United States, 1990

Therapeutic classifications[1]	Number of mentions in thousands	Percent distribution
All drugs	759,406	100.00
Anesthetic drugs	3,636	0.48
Local anesthetics	2,434	0.32
Antidotes	209	0.03
Antimicrobial agents	125,594	16.54
Penicillins	43,699	5.75
Cephalosporins	23,821	3.14
Erythromycins and lincosamides	22,357	2.94
Tetracyclines	10,311	1.36
Aminoglycosides	1,412	0.19
Sulfonamides and trimethoprim	9,395	1.24
Urinary tract antiseptics	6,485	0.85
Antifungal agents for systemic mycoses	2,239	0.29
Antiviral agents	2,311	0.30
Hematologic agents	9,914	1.31
Agents used to treat deficiency anemias	6,465	0.85
Anticoagulants or thrombolytics	3,356	0.44
Cardiovascular-renal drugs	111,125	14.63
Cardiac glycosides	1,514	0.20
Antiarrhythmic agents	8,998	1.18
Antianginal agents	9,063	1.19
Agents used in peripheral or cerebral vascular disorders	18,921	2.49
Agents used to treat shock	4,784	0.63
Diuretics	39,383	5.19
Coronary vasodilators	27,829	3.66
Psychopharmacologic drugs	46,402	6.11
Antianxiety agents	5,465	0.72
Antipsychotic drugs	14,826	1.95
Antidepressants	5,620	0.74
CNS stimulants, anorexiants	17,364	2.29
Radiopharmaceuticals/contrast media	5,922	0.78
Diagnostics, nonradioactive, and radiopaque	5,922	0.78
Gastrointestinal agents	31,272	4.12
Agents used in disorders of upper GI tract	16,220	2.14
Antidiarrheal agents	2,919	0.38
Laxatives	3,378	0.44
Metabolic and nutrient agents	29,448	3.88
Agents used to treat hyperlipidemia	5,286	0.70
Vitamins, minerals	14,935	1.97
Replenishers and regulators of water and electrolytes	8,601	1.13
Hormones and agents affecting hormonal mechanisms	67,549	8.89
Adrenal corticosteroids	19,703	2.59
Estrogen and progestins	12,341	1.63
Blood glucose regulators	16,322	2.15
Agents used to treat thyroid disease	7,308	0.96
Contraceptive agents	9,619	1.27
Immunologic agents	19,337	2.55
Vaccines and antiserums	19,268	2.54
Skin/mucous membrane	43,777	5.76
Dermatologics	41,188	5.42
Neurologic drugs	14,140	1.86
Drugs used in extrapyramidal movement disorders	1,630	0.21
Drugs used to treat skeletal muscle hyperactivity	7,905	1.04
Anticonvulsants	4,474	0.59
Oncolytics	5,776	0.76
Antineoplastics	4,832	0.64
Ophthalmic Drugs	30,704	4.04
Agents used to treat glaucoma	10,267	1.35
Ocular anti-infective and anti-inflammatory agents	14,992	1.97
Otologic drugs	4,734	0.62
Topical otic preparations	1,640	0.22
Drugs used in vertigo, motion sickness, and vomiting	3,095	0.41
Drugs used for relief of pain	77,444	10.20
Drugs used to treat migraine and other headaches	36,693	4.83
Drugs used in gout	37,560	4.95
Drugs used in central pain syndromes	2,521	0.33
Antiparasitic agents	1,842	0.24
Respiratory tract drugs	87,491	11.52
Bronchodilators, antiasthmatics	24,587	3.24
Nasal decongestants	22,423	2.95
Antitussive, expectorants, mucolytics	18,750	2.47
Antihistamines	21,627	2.85
Unclassified/miscellaneous	43,089	5.67

[1]Therapeutic classifications are based on the standard drug classifications used in the National Drug Code Directory, 1985 Edition (4).

Table 5. Number and percent of office visits and drug mentions, percent of office visits during which one or multiple drugs were used by physician identity and specialty: United States, 1990

Physician identity and specialty	Office visits			Drug visits[1]			Drug mentions		Drug utilization rate
	Number in thousands	Percent distribution	Drug visits[1]	One drug used	Two drugs used	Three drugs or more used	Number in thousands	Percent distribution	
All physicians	704,604	100.00	60.26	32.74	15.73	11.78	759,406	100.00	1.08
Physician identity									
Doctor of medicine	665,317	94.42	59.78	32.60	15.56	11.61	710,092	93.51	1.07
Doctor of osteopathy	39,287	5.58	68.45	35.11	18.71	14.63	49,314	6.49	1.26
Specialty									
General and family practice	209,788	29.77	68.67	36.42	20.16	12.08	251,960	33.18	1.20
Internal medicine	96,622	13.71	74.48	33.70	19.82	20.97	149,370	19.67	1.55
Pediatrics	81,148	11.52	66.85	45.90	15.82	5.13	76,370	10.06	0.94
Obstetrics and gynecology	61,243	8.69	43.78	32.30	8.89	2.59	35,687	4.70	0.58
Ophthalmology	43,842	6.22	43.78	26.56	10.83	6.40	30,808	4.06	0.70
Orthopedic surgery	32,917	4.67	26.08	20.37	4.19	1.52	11,035	1.45	0.34
General surgery	22,402	3.18	31.07	18.38	5.40	7.30	12,597	1.66	0.56
Dermatology	24,009	3.41	63.99	29.48	17.96	16.55	29,572	3.89	1.23
Psychiatry	20,963	2.98	51.31	26.88	16.22	8.21	18,516	2.44	0.88
Otolaryngology	17,959	2.55	44.64	27.95	11.23	5.46	12,341	1.63	0.69
Urological surgery	9,546	1.35	40.37	30.23	7.70	2.44	5,145	0.68	0.54
Cardiovascular disease	11,240	1.60	78.53	19.47	17.45	41.60	25,153	3.31	2.24
Neurology	6,228	0.88	66.27	33.16	18.49	14.62	7,586	1.00	1.22
All other specialties	66,696	9.47	62.70	26.05	15.33	21.33	93,265	12.28	1.40

[1]Drug visits are percent distributions of all visits.

Table 6. Number and percent of office visits and drug mentions, percent of office visits during which one or multiple drugs were used by age and sex of patient: United States, 1990

Age and sex	Office visits			Drug visits[1]			Drug mentions		Drug utilization rate
	Number in thousands	Percent distribution	Drug visits[1]	One drug used	Two drugs used	Three drugs or more used	Number in thousands	Percent distribution	
All patients	704,604	100.00	60.26	32.74	15.73	11.78	759,406	100.00	1.08
Age									
Under 15 years	138,427	19.65	61.95	40.56	16.05	5.35	124,995	16.46	0.90
15–24 years	68,918	9.78	57.46	35.45	14.59	7.42	61,974	8.16	0.90
25–44 years	194,195	27.56	54.72	31.99	14.44	8.29	174,964	23.04	0.90
45–64 years	149,786	21.26	62.08	30.31	16.75	15.01	180,623	23.78	1.21
65–74 years	86,422	12.27	64.71	28.56	16.66	19.49	118,867	15.65	1.38
75 years and over	66,856	9.49	65.88	26.82	16.54	22.51	97,982	12.90	1.47
Sex									
Female	427,151	60.62	60.78	32.93	15.87	11.97	465,574	61.31	1.09
Male	277,452	39.38	59.46	32.46	15.52	11.48	293,831	38.69	1.06
Sex and age									
Female:									
Under 15 years	65,229	9.26	62.86	41.76	16.04	5.05	59,165	7.79	0.91
15–24 years	45,165	6.41	57.09	36.01	14.45	6.64	39,248	5.17	0.87
25–44 years	132,183	18.76	54.47	32.53	13.69	8.25	117,749	15.51	0.89
45–64 years	89,697	12.73	63.24	30.79	17.37	15.08	109,908	14.47	1.23
65–74 years	51,529	7.31	66.79	28.76	18.17	19.87	73,075	9.62	1.42
75 years and over	43,349	6.15	68.45	27.05	17.91	23.48	66,429	8.75	1.53
Male:									
Under 15 years	73,198	10.39	61.15	39.48	16.07	5.62	65,830	8.67	0.90
15–24 years	23,753	3.37	58.15	34.38	14.86	8.91	22,726	2.99	0.96
25–44 years	62,012	8.80	55.25	30.85	16.02	8.38	57,215	7.53	0.92
45–64 years	60,089	8.53	60.34	29.59	15.84	14.91	70,715	9.31	1.18
65–74 years	34,893	4.95	61.63	28.28	14.43	18.93	45,792	6.03	1.31
75 years and over	23,507	3.34	61.14	26.40	14.02	20.73	31,553	4.15	1.34

[1]Drug visits are percent distributions of all visits.

Table 7. Number and percent of office visits and drug mentions, percent of office visits during which one or multiple drugs were used by race and ethnicity of patient: United States, 1990

Race and ethnicity	Office visits			Drug visits[1]			Drug mentions		Drug utilization rate
	Number in thousands	Percent distribution	Drug visits[1]	One drug used	Two drugs used	Three drugs or more used	Number in thousands	Percent distribution	
All patients	704,604	100.00	60.26	32.74	15.73	11.78	759,406	100.00	1.08
Race									
White	597,306	84.77	59.88	32.86	15.47	11.56	637,424	83.94	1.07
Black	62,317	8.84	67.91	33.18	18.83	15.90	80,536	10.61	1.29
Other	23,694	3.36	60.46	32.89	16.55	11.03	24,715	3.25	1.04
Unspecified[1]	21,287	3.02	48.21	28.04	13.33	6.84	16,731	2.20	0.79
Ethnicity									
Hispanic	35,456	5.03	62.31	36.21	16.13	9.97	37,042	4.88	1.04
Non-Hispanic	619,747	87.96	60.71	32.69	15.79	12.23	679,551	89.48	1.10
Unspecified[2]	49,401	7.01	53.07	30.91	14.75	7.41	42,813	5.64	0.87

[1]Drug visits are percent distributions of all visits.
[2]Asian or Pacific Islander, and American Indian or Alaskan Native.

Table 8. Number and percent of office visits and drug mentions, percent of office visits during which one or multiple drugs were used by physician diagnoses and ICD–9–CM codes: United States, 1990

Physician diagnoses and ICD–9–CM code[1]	Office visits			Drug visits[2]			Drug mentions[3]		Drug utilization rate
	Number in thousands	Percent distribution	Drug visits[2]	One drug used	Two drugs used	Three drugs or more used	Number in thousands	Percent distribution	
All diagnoses	704,604	100.00	60.26	32.74	15.73	11.78	759,406	100.00	1.08
Infectious and parasitic diseases 001–139	27,075	3.84	66.83	46.32	14.32	6.19	26,208	3.45	0.97
Neoplasms 140–239	21,941	3.11	37.72	17.13	9.25	11.35	17,350	2.28	0.79
Endocrine, nutritional and metabolic diseases, and immunity disorders 240–289	29,456	4.18	70.28	32.92	17.61	19.74	43,509	5.73	1.48
Diseases of the endocrine glands 240–259	19,289	2.74	74.22	30.89	18.33	25.00	32,520	4.28	1.69
Obesity 278	3,840	0.55	60.87	51.98	5.77	3.13	2,926	0.39	0.76
Diseases of blood and blood-forming organs 280–289	3,552	0.50	73.96	40.87	20.56	12.52	4,591	0.60	1.29
Mental disorders 290–319	29,929	4.25	58.79	33.12	16.02	9.65	30,276	3.99	1.01
Nonpsychotic disorders 300–316	22,612	3.21	51.31	30.48	12.98	7.85	19,566	2.58	0.87
Diseases of nervous system and sense organs 320–389	80,128	11.37	61.68	38.03	15.84	7.81	77,481	10.20	0.97
Diseases of the central nervous system 320–349	4,799	0.68	77.43	35.18	23.68	18.56	7,292	0.96	1.52
Eye disorders 360–379	38,603	5.48	48.28	29.04	11.77	7.47	30,388	4.00	0.79
Otitis media 382	21,043	2.99	86.48	59.92	20.82	5.74	25,185	3.32	1.20
Diseases of circulatory system 390–459	55,989	7.95	79.21	29.96	19.71	29.54	103,561	13.64	1.85
Essential hypertension 401	27,310	3.88	83.96	36.46	23.36	24.14	47,309	6.23	1.73
Ischemic heart disease 410–414	9,210	1.31	80.11	16.94	18.17	45.00	21,525	2.83	2.34
Diseases of respiratory system 460–519	100,294	14.23	86.35	40.01	26.58	19.77	165,963	21.85	1.65
Acute upper respiratory infection 465	18,676	2.65	85.80	43.45	31.31	11.04	27,143	3.57	1.45
Asthma 493	7,137	1.01	91.41	20.42	22.20	48.79	18,077	2.38	2.53
Diseases of digestive system 520–579	26,154	3.71	61.49	33.40	17.14	10.95	28,576	3.76	1.09
Diseases of genitourinary system 580–629	41,067	5.83	56.34	37.39	13.05	5.90	34,490	4.54	0.84
Male genitourinary system 600–608	4,479	0.64	50.38	33.68	11.06	5.64	3,370	0.44	0.75
Female genitourinary system 614–629	20,377	2.89	57.48	37.66	14.87	4.94	16,992	2.24	0.83
Diseases of skin and subcutaneous tissue 680–709	36,836	5.23	69.73	35.90	20.32	13.56	45,596	6.00	1.24
Disease of musculoskeletal system 710–739	47,101	6.68	64.68	36.53	15.48	12.68	53,395	7.03	1.13
Arthopathies 710–716	12,784	1.81	78.53	37.87	18.49	22.17	19,883	2.62	1.56
Symptoms, signs, and ill-defined conditions 780–799	27,221	3.86	52.86	29.59	13.54	9.74	25,469	3.35	0.94
Injury and poisoning 800–999	51,134	7.26	43.38	28.65	9.54	5.20	33,656	4.43	0.66
Normal pregnancy V022	23,561	3.34	32.86	24.73	6.87	1.26	9,973	1.31	0.42
Health supervision of infant or child V020	15,676	2.22	48.22	25.04	16.95	6.22	12,382	1.63	0.79
Other or undetermined[4]	87,454	12.41	33.91	21.72	7.33	4.84	46,928	6.18	0.54

[1]Based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM) (5).
[2]Drug visits are percent distributions of all visits.
[3]Includes all drug mentions whether or not associated with a principal diagnosis.
[4]Includes complications of pregnancy, childbirth and the puerperium (630–676); congenital anomalies (740–759); certain conditions originating in the perinatal period (760–767); supplementary classifications (V001–V082, excluding V020 and V022); and blanks, noncodable, and illegible diagnoses.

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) from January 1990–December 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, or physicians who are principally engaged in teaching, research, or administration. Telephone contacts, nonoffice visits, and visits made to hospital emergency or outpatient departments are also excluded.

A multistage probability sample design is used in NAMCS, involving primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. The PSU's are counties, groups of counties, county equivalents (such as parishes or independent cities), or towns and townships (for some PSU's in New England). For 1990 a sample of 3,063 non-Federal, office-based physicians were selected from master files maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for the 1990 NAMCS was 74 percent. 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 43,469 patient records and were asked to report up to 5 drugs utilized.

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.

Table I. Relative standard errors for estimated number of drug mentions: National Ambulatory Medical Care Survey, 1990

Estimated number of drug mentions in thousands	All	Specialty group			
		A	B	C	D
	Relative standard error in percent				
100	82.6	72.8	35.5	79.2	37.1
171	63.2	56.0	32.4	61.9	30.0
200	58.5	51.9	31.7	57.7	28.4
300	47.9	42.7	30.4	48.5	24.8
338	45.1	40.3	30.0	46.1	23.9
400	41.5	37.3	29.7	43.1	22.7
500	37.2	33.6	29.2	39.6	21.4
600	34.0	30.9	28.9	37.0	20.5
638	33.0	30.0	28.8	36.2	20.3
700	31.6	28.8	28.7	35.1	19.9
775	30.0	27.5	28.6	33.9	19.5
800	29.6	27.2	28.6	33.5	19.3
900	27.9	25.8	28.4	32.3	18.9
1,000	26.6	24.6	28.3	31.3	18.6
1,144	24.9	23.3	28.2	30.0	18.2
2,000	19.1	18.6	27.9	26.1	17.0
5,000	12.7	13.8	27.6	22.5	15.9
10,000	9.7	11.7	27.5	21.2	15.6

A. General and family practice, internal medicine.
B. General surgery, neurology.
C. "All other" specialties.
D. Pediatrics, obstetrics and gynecology, orthopedic surgery, cardiovascular disease, dermatology, urology, psychiatry, ophthalmology, otorhinolaryngology, and doctors of osteopathy.

Example of use of table: An aggregate estimate of 2 million drug mentions by a cardiovascular disease specialist has a relative standard estimate of 17.0 percent or a standard error of 340,000 drug mentions (17.0 percent of 2 million).

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. Relative standard errors of the estimated number of drug mentions are shown in table I and relative standard errors of the estimated numbers of office visits are shown in table II.

Alternatively, relative standard errors for aggregate drug mentions and visits may be calculated using the following general formula, where x is the aggregate of interest in thousands, and A and B are the appropriate coefficient from table V.

$$\mathrm{RSE}(x) = \sqrt{A + \frac{B}{X}} \bullet 100.0$$

Standard errors for estimated percent of drug mentions are shown in table III and for estimates of the percent of visits in table IV.

Similarly, relative standard errors for percent may be 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.

$$\mathrm{RSE}\,(p) = \sqrt{\frac{B \bullet (1-p)}{p \bullet x}} \bullet 100.0$$

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 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 and drug mentions 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.

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 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.

Office—Offices are the premises physicians identify as locations for their ambulatory practice; these customarily include consultation, examination, or treatment spaces that 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 visit—A drug visit is a visit in which medication was prescribed or provided by the physician.

Drug mention—A drug mention is the physician's entry 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 utilization rate—The average number of medications per visit.

Control status—Controlled medications, because of their significant potential for dependence or abuse and their possible diversion

Table II. Relative standard errors for estimated number of office visits: National Ambulatory Medical Care Survey, 1990

Estimated number of office visits in thousands	All	Specialty group			
		A	B	C	D
	Relative standard error in percent				
100	68.1	56.2	41.9	59.6	31.2
110	64.9	53.6	40.2	57.0	30.0
200	48.2	40.1	31.7	43.2	23.9
231	44.9	37.5	30.0	40.5	22.7
300	39.4	33.1	27.4	36.1	20.9
370	35.5	30.0	25.6	33.1	19.6
400	34.2	29.0	25.0	32.0	19.2
468	31.6	27.0	23.9	30.0	18.4
500	30.6	26.2	23.5	29.3	18.1
520	30.0	25.7	23.2	28.8	18.0
700	26.0	22.5	21.6	25.8	16.8
1,000	21.8	19.4	20.0	22.8	15.8
2,000	15.6	14.9	18.0	18.7	14.4
5,000	10.3	11.3	16.7	15.8	13.6
100,000	4.3	8.4	15.9	13.6	13.0

A. General and family practice and internal medicine.
B. Orthopedic surgery.
C. "All other" specialties.
D. Pediatrics, general surgery, obstetrics and gynecology, cardiovascular disease, dermatology, urology, psychiatry, neurology, ophthalmology, otorhinolaryngology, and doctors of osteopathy.

Example of use of table: An aggregate estimate of 2 million visits to a cardiovascular disease specialist has a relative standard estimate of 14.4 percent or a standard error of 288,000 visits (14.4 percent of 2 million).

Table III. Standard errors for percents of estimated numbers of drug mentions: National Ambulatory Medical Care Survey, 1990

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					
200	5.8	12.7	17.5	23.3	26.7	29.1
500	3.7	8.0	11.1	14.7	16.9	18.4
1,000	2.6	5.7	7.8	10.4	11.9	13.0
2,000	1.8	4.0	5.5	7.4	8.4	9.2
5,000	1.2	2.5	3.5	4.7	5.3	5.8
10,000	0.8	1.8	2.5	3.3	3.8	4.1
13,000	0.7	1.6	2.2	2.9	3.3	3.6
20,000	0.6	1.3	1.7	2.3	2.7	2.9
50,000	0.4	0.8	1.1	1.5	1.7	1.8
100,000	0.3	0.6	0.8	1.0	1.2	1.3
600,000	0.1	0.2	0.3	0.4	0.5	0.5

Example of use of table: An estimate of 30 percent based on an aggregate of 13 million drug mentions has a standard error of 3.3 pecent or a relative standard error of 11.0 percent (3.3 percent divided by 30 percent).

Table IV. Standard errors for percents of estimated numbers of office visits: National Ambulatory Medical Care Survey, 1990

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					
200	4.8	10.5	14.4	19.2	22.0	24.0
500	3.0	6.6	9.1	12.2	13.9	15.2
1,000	2.1	4.7	6.4	8.6	9.8	10.7
2,000	1.5	3.3	4.6	6.1	7.0	7.6
5,000	1.0	2.1	2.9	3.8	4.4	4.8
10,000	0.7	1.5	2.0	2.7	3.1	3.4
13,000	0.6	1.3	1.8	2.4	2.7	3.0
20,000	0.5	1.0	1.4	1.9	2.2	2.4
50,000	0.3	0.7	0.9	1.2	1.4	1.5
100,000	0.2	0.5	0.6	0.9	1.0	1.1
600,000	0.1	0.2	0.3	0.4	0.4	0.4

Example of use of table: An estimate of 30 pecent based on an aggregate of 13 million visits has a standard error of 2.7 percent or a relative standard error or 9.0 percent (2.7 percent divided by 30 percent).

Table V. Coefficients appropriate for determining relative standard errors by type of estimate and physician groups: National Ambulatory Medical Care Survey, 1990

Type of estimate and physician group	Coefficient	
	A	B
Drug mentions		
Overall totals	0.00259409	67.9417652
General and family practice, internal medicine	0.00856244	52.1278030
General surgery, neurology	0.07521297	5.08446943
"All other" specialties group	0.03885901	58.8324479
Doctors of osteopathy, pediatrics, obstetrics and gynecology, orthopedic surgery, cardiovascular disease, psychiatry, ophthalmology, and otorhinolaryngology	0.02306475	11.4657235
Visits		
Overall totals	0.00138387	46.1954141
General and family practice and internal medicine	0.00669347	30.8610803
Orthopedic surgery	0.02504087	15.0649723
"All other" specialties group	0.01820068	33.7058023
Doctors of osteopathy, pediatrics, general surgery, obstetrics and gynecology, cardiovascular disease, dermatology, urology, psychiatry, neurology, ophthalmology, and otorhinolaryngology	0.01684812	8.03232318

into illicit channels, are regulated under Federal law by the Department of Justice, Drug Enforcement Agency (DEA). The Controlled Substance Act of 1970 characterizes each controlled drug into one of five schedules. Schedule I drugs, like heroin and LSD, have a higher potential for abuse and no current accepted medical usefulness for treatment in the United States. Schedule I drugs are outside the scope of this report. Each successive schedule, II–V, reflects a decreasing degree of dependence and potential for abuse.

Trade name disclaimer

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

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