VITAL & HEALTH STATISTICS

Medication Therapy in Office Visits for Selected Diagnoses:
The National Ambulatory Medical Care Survey
United States, 1980

Data are presented on the drugs ordered, prescribed, or administered by office-based physicians to treat patients with principal diagnoses that were among those most commonly rendered during 1980. Diabetes mellitus, hypertension, ischemic heart disease, and certain respiratory conditions are among the 15 illness-related diagnoses selected. Drugs associated with visits for three preventive care health services are also included. For each diagnosis, percents of visits in which one or more drugs were provided, drug mention rates, and drug intensity rates are reported by age, sex, and race of the patient; problem status; and major reason for visit. Drug mentions for each diagnosis are also shown by therapeutic category, physician's entry mode, and generic class.

**Data From the National Health Survey
Series 13, No. 71**

Contents

Detailed tables

Detailed tables

Detailed tables

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 (more than 30-percent relative standard error)

Figure suppressed to comply with confidentiality requirements

Medication Therapy in Office Visits for Selected Diagnoses

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Introduction

Purpose and background

The purpose of this report is to provide information about medication therapy in office visits for the 18 selected principal (first-listed) diagnoses shown in table A. Diagnostic codes and groupings are based on the *International Classification of Diseases, 9th Revision, Clinical Modification.*[1] The data were collected in 1980 by the National Center for Health Statistics by means of the National Ambulatory Medical Care Survey, a probability sample survey conducted annually by the Division of Health Care Statistics.

Two brief reports on medication therapy in the National Ambulatory Medical Care Survey have been published. They highlighted the drugs most frequently used in office-based practice, and drug utilization by sex and age of the patient.[2,3] This report explores the statistical association between certain diagnoses and the pharmacologic treatment modality, a fundamental medical relationship. A brief report on medication therapy in visits for hypertension has also been published.[4] The conditions and health services shown in table A were selected because they were among the most common diagnoses rendered during office visits in 1980. They accounted for 38 percent of all visits and 45 percent of all drug mentions. Data on the general characteristics and dimensions of drug therapy during visits for care and treatment of these diagnoses are presented in section I. The drug parameters used in the National Ambulatory Medical Care Survey include entry status (brand name[a] or generic entity), prescription status (prescription or over-the-counter drug), composition status (single ingredient or combination drug), and Federal control status (drugs under the regulatory control of the Drug

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[a]Inclusion of brand or 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.

Table A. Number and percent distribution of office visits and drug mentions by principal diagnosis: United States, 1980

Principal diagnosis and ICD–9–CM code[1]	Office visits	Drug mentions
	Number in thousands	
All principal diagnoses.....................	575,745	679,593
	Percent distribution	
Total	100.0	100.0
Diabetes mellitus........................250	1.7	2.6
Obesity and other hyperalimentation........278	1.4	2.2
Neurotic disorders or depressive disorder, NEC[2] 300, 311	2.4	1.8
Suppurative and unspecified otitis media 382	2.0	2.7
Essential hypertension 401	4.4	6.8
Ischemic heart disease...............410–414	1.8	3.9
Acute upper respiratory infections of multiple or unspecified sites (acute URI).... 460, 461, 465	2.9	4.8
Acute pharyngitis or acute laryngitis and tracheitis 462, 464	1.8	2.4
Allergic rhinitis...........................477	1.5	1.5
Bronchitis, acute; or not specified as acute or chronic 466, 490	1.4	2.4
Asthma...............................493	1.0	1.7
Diseases of sebaceous glands 706	1.8	3.1
Osteoarthritis and allied disorders or other and unspecified arthropathies.......715–716	1.4	2.1
Intervertebral disc disorders or other and unspecified disorders of back 722, 724	1.1	1.1
Sprains and strains of sacroiliac region or other and unspecified parts of back 846–847	1.3	1.0
Health supervision of infant or child V20	3.0	2.4
Normal pregnancy.......................V22	4.6	1.6
General medical examination..............V70	2.8	1.0
All other diagnoses .... Residual	61.7	54.9

[1]Based on the *International Classification of Diseases, 9th Revision, Clinical Modification.* See reference 1.
[2]NEC = not elsewhere classified.

Enforcement Agency of the U.S. Department of Justice). Sections II through VII describe drug utilization relative to visits for specific diagnoses in terms of sex, age, and race of the patient; problem status; and major reason for visit. In these sections drugs that were ordered or provided in the presence of these diagnoses are also categorized by therapeutic effect and listed by specific drug

names as well as generic substances. Therapeutic categories are based on the American Hospital Formulary Service classification system.[5] In the National Ambulatory Medical Care Survey drug file each drug entry was assigned to one American Hospital Formulary Service therapeutic category although for some drugs more than one therapeutic effect is possible. In order to report accurately what the physician prescribed, drug mentions used in this report are based on the physicians' entries on the Patient Record Form (see appendix III). These entries may be brand or generic names of prescription or over-the-counter drugs, or a therapeutic effect. "Drug mentions" include all new or continued drugs listed in item 11, parts *a* and *b*, on the Patient Record Form. Part 11*b*, it should be noted, may relate to diagnoses other than the principal or first-listed diagnosis. Therefore, it is assumed that medications described in this report were ordered for patients with the first-listed diagnosis but may not necessarily be therapeutic agents for that condition. The terms "medication" and "drug" are used interchangeably in this report. The "prescriber" is assumed to be the reporting physician. While the verb "prescribe" usually indicates a written formula or drug name to be dispensed by a registered pharmacist, in the context of this report it is used interchangeably with "ordered" or "provided." Therefore, it may also mean a recommendation by the physician for an over-the-counter drug, or the administration of a substance during the visit.

The methodology used to collect and process this drug information is described in *Vital and Health Statistics,* Series 2, No. 90.[6] A detailed description of the survey methodology was published in *Vital and Health Statistics,* Series 2, No. 61.[7] To assist the reader in interpreting the statistics in this report, the scope of the survey and the source and limitations of the data are described briefly prior to data presentation. Detailed technical notes, definitions of terms, and facsimiles of survey instruments are presented in appendixes I–III.

Scope of the survey

The basic sampling unit for the National Ambulatory Medical Care Survey is the physician-patient encounter or visit. Within the current scope of NAMCS are all office visits made in the conterminous United States by ambulatory patients to nonfederally employed office-based physicians as classified by the American Medical Association or the American Osteopathic Association. The National Ambulatory Medical Care Survey physician universe excludes physicians practicing in Alaska and Hawaii and physicians in the specialties of anesthesiology, pathology, or radiology. Visits to physicians principally engaged in teaching, research, or administration, as well as telephone contacts and visits made outside the physician's office, are excluded.

The definitions of office, physician, patient, and visit in terms of eligibility for the National Ambulatory Medical Care Survey are presented in appendix II.

Source and limitations of data

Estimates presented here are based on information obtained through the completion of Patient Record Forms (appendix III) for a sample of visits to a national probability sample of office-based physicians. The sample for the 1980 National Ambulatory Medical Care Survey (NAMCS) included 2,959 physicians, of whom 611 were found not eligible (out of scope) at the time of the survey. Of the 2,348 physicians who were eligible for participation in NAMCS, 1,869 (79.6 percent) actually participated in the survey (see appendix I).

Physicians who participated in the survey maintained a list of all office visits during a randomly assigned 7-day reporting period. For a systematic random sample of these visits, information was recorded on the Patient Record provided for that purpose. During 1980, responding physicians completed 46,081 Patient Record Forms on which they recorded 51,372 drug mentions.

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

Definitions of terms used in this report and in the survey operations are presented in appendix II. A facsimile of the Patient Record Form is reproduced in appendix III. Facsimiles of other survey materials such as the introductory letter and Induction Interview Form may also be found in appendix III.

Section I. General characteristics of medication therapy

Office visits and drug mentions

A study of medication therapy by diagnosis begins with the number of office visits, number and percent of visits in which one or more drugs were ordered or provided (drug visits), and number of drug mentions. These basic data are shown in table 1. Two rates are also provided. The drug mention rate is the number of drug mentions divided by the number of all visits for a given diagnosis. The drug intensity rate is the number of drug mentions divided by the number of drug visits for a given diagnosis.

On the average, medication therapy was used in 63 percent of all office visits in 1980, but this percent varied greatly for various diagnoses. For the 18 diagnoses in this report, proportions of drug visits ranged from a low of 29 percent for general medical examination to a high of 94 percent for certain respiratory conditions. Illness-related diagnoses in this group were more likely to be associated with drug therapy than were visits for preventive care. The highest drug mention rate was for ischemic heart disease (2.54); the two lowest were for general medical examination and normal pregnancy (0.41 each). The lowest illness-related drug mention rate (0.88) was for neurotic disorders or depressive disorder, NEC (NEC = not elsewhere classified); followed by two musculoskeletal conditions; sprains and strains of sacroiliac region or other and unspecified parts of back (0.89) and intervertebral disc disorders or other and unspecified disorders of back (1.18). The variation in rates among diagnoses is illustrated in figure 1.

Visits for some diagnoses were more drug intensive than others. Therefore, rates representing the number of drugs per drug visit may not vary in direct proportion to drug mention rates. For example, the drug intensity rate of 1.67 for neurotic disorders or depressive disorder, NEC, was not the lowest illness-related drug intensity rate, but averaging over all visits for this diagnosis drug utilization was lower than it was for other conditions in this report. Allergic rhinitis was less drug intensive than

neurotic disorders or depressive disorder, NEC, with a drug intensity rate of 1.38. This underscores the interpretive distinction between the two rates. When drugs were used for allergic rhinitis patients, the average number per drug visit was 1.38; when the patient had a neurotic disorder or depressive disorder, NEC, the average number per drug visit was 1.67, even though 52 percent of such visits included drugs compared with 90 percent of those for allergic rhinitis.

Number of medications

The proportions of visits according to the precise number of medications for each listed diagnosis is shown in table 2. The proportions shown in the "None" category are the complements of the percent of drug visits shown in table 1. Proportions of drug visits according to number of medications may be calculated by omitting this group. For example, 20.9 percent of all visits with general medical examination, or 3,360,000, had one drug entry. Dividing this number by total drug visits shown in table 1 (4,732,000) yields an estimate of 71 percent of drug visits with one medication. Visits were more likely to fall in the "None" group when patients visited for the preventive care services described in this report; neurotic disorders or depressive disorder, NEC; sprains and strains of sacroiliac region or other and unspecified parts of back; and intervertebral disc disorders or other and unspecified disorders of back. One medication was the most common number in visits for other diagnoses in table 2 except for ischemic heart disease; acute upper respiratory infections of multiple or unspecified sites (acute URI); bronchitis, acute; or not specified as acute or chronic; and diseases of sebaceous glands, where two was the likely number of drug mentions. Close to half (49 percent) of the visits for ischemic heart disease were in the total of categories three, four, or five or more drugs. Other diagnoses with a relatively high total proportion of three, four, or five or more drugs were diabetes mellitus (27 percent); obesity
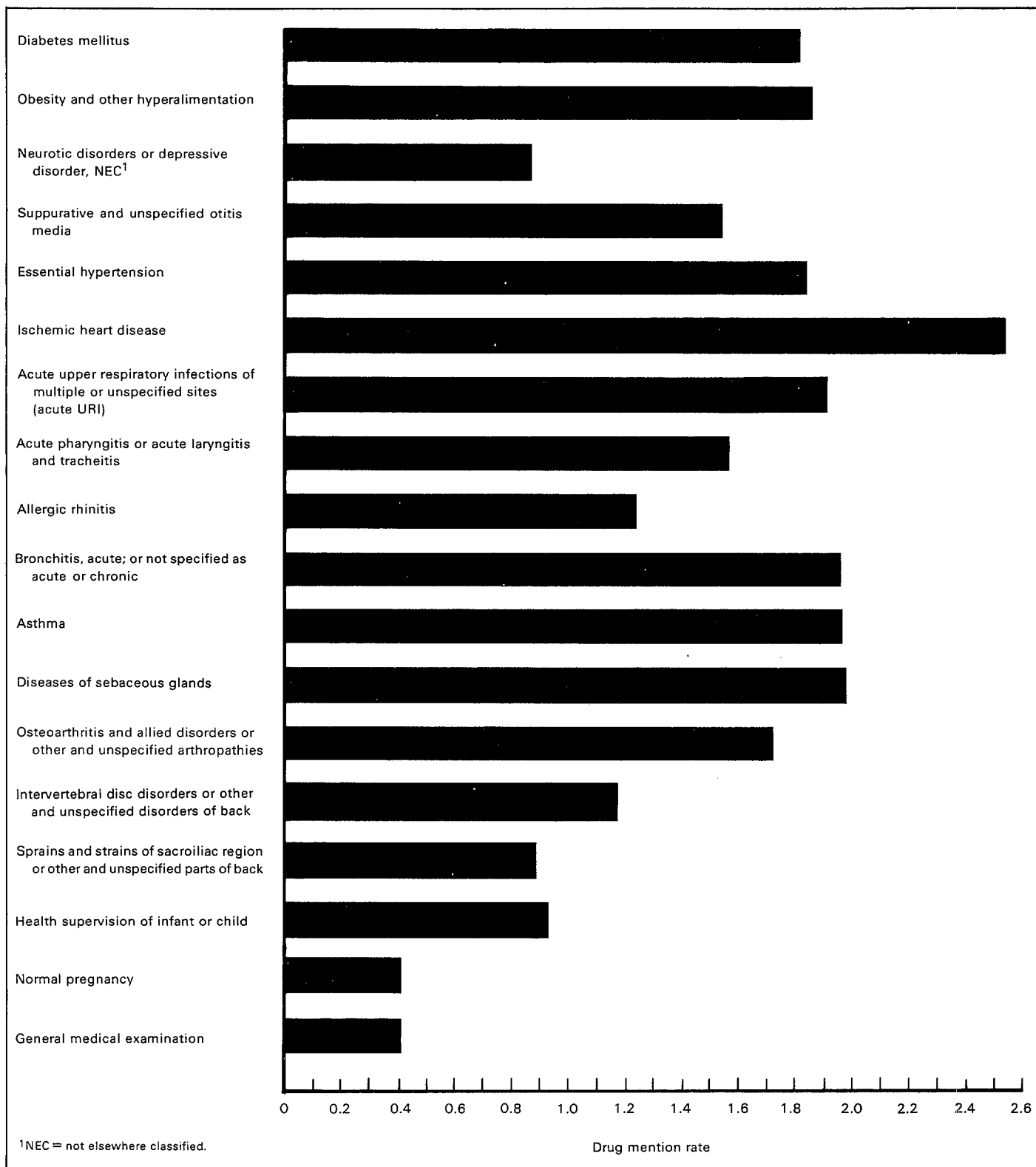
Figure 1. Drug mention rates per visit for selected diagnoses: United States, 1980

Diabetes mellitus

Obesity and other hyperalimentation

Neurotic disorders or depressive disorder, NEC[1]

Suppurative and unspecified otitis media

Essential hypertension

Ischemic heart disease

Acute upper respiratory infections of multiple or unspecified sites (acute URI)

Acute pharyngitis or acute laryngitis and tracheitis

Allergic rhinitis

Bronchitis, acute; or not specified as acute or chronic

Asthma

Diseases of sebaceous glands

Osteoarthritis and allied disorders or other and unspecified arthropathies

Intervertebral disc disorders or other and unspecified disorders of back

Sprains and strains of sacroiliac region or other and unspecified parts of back

Health supervision of infant or child

Normal pregnancy

General medical examination

0   0.2   0.4   0.6   0.8   1.0   1.2   1.4   1.6   1.8   2.0   2.2   2.4   2.6

Drug mention rate

[1]NEC = not elsewhere classified.

and other hyperalimentation (36 percent); essential hypertension (26 percent); asthma (31 percent); diseases of sebaceous glands (32 percent); and osteoarthritis and allied disorders or other and unspecified arthropathies (26 percent).

The association between the number of medications ordered or provided in the presence of selected diagnoses and other variables, such as sex and age of the patient, is detailed in the remaining sections of this report.

Entry status

On the average, 7 of 10 drug entries on the Patient Record Form were identified by brand name (manufacturer's product name). A convention adopted for this report is that an entry name is spelled with an initial capital letter. A higher than average use of brand names occurred when the diagnoses were neurotic disorders or depressive disorder, NEC (85 percent); intervertebral disc disorders or other and unspecified disorders of back (85 percent); and sprains and strains of sacroiliac region or other and unspecified parts of back (83 percent) (table 3). Although proportions of brand name entries exceeded generic[b] name entries, a higher than average use of generic names was found with diabetes mellitus (33 percent), obesity and other hyperalimentation (35 percent), acute pharyngitis or acute laryngitis and tracheitis (34 percent), health supervision of infant or child (75 percent), and general medical examination (45 percent). The relatively high proportions of generic entities mentioned with the last two diagnoses were probably due to the large number of immunizations given during their total visits. This is discussed in more detail in section VII. Similarly, the proportions of entries described by therapeutic effect when visits were for allergic rhinitis (42 percent) and asthma (13 percent) reflect the use of drugs, allergens, or other desensitizing agents administered by injection without specific identification of the pharmaceutical agent. Drug therapy for these two diagnoses is discussed in section V.

Prescription status

Brand name drugs may be prescription (a written order from the physician to be filled by a registered pharmacist) or nonprescription, also called "over the counter." Drugs identified by the physician by generic name usually require a prescription with some exceptions, notably aspirin and insulin. Eighty-three percent of all drug mentions, regardless of diagnosis, were prescription drugs and 13 percent were over-the-counter drugs (table 3). The higher than average proportion of over-the-counter drugs mentioned in visits for diabetes mellitus (25 percent) was due to the utilization of insulin (other anti-diabetic agents are prescription drugs). Over-the-counter drugs were also more frequently mentioned when acute URI (17 percent) and acute pharyngitis or acute laryngitis and tracheitis (15 percent) were diagnosed, probably due to the availability of many over-the-counter drugs used for symptomatic relief of these conditions. Another condition with a high proportion of over-the-counter drugs, in this case due to vitamin mentions, was normal pregnancy. Specific drugs mentioned with these diagnoses are discussed in subsequent sections of this report.

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[b]For some drugs the brand name used by the manufacturer to market the product is in fact the generic class of the substance. In NAMCS such drugs were classified in the generic name category.

Composition status

Composition status describes the drug entry according to whether it is a single ingredient drug, a combination drug, or a multivitamin. Single ingredient drugs include all drugs with one active ingredient. Combination drugs consist of more than one active, principal ingredient. On the average, 7 of 10 drugs mentioned were single ingredient drugs (table 4). This number was higher when the diagnoses were diabetes mellitus (85 percent); obesity and other hyperalimentation (83 percent); neurotic disorders or depressive disorder, NEC (80 percent); essential hypertension (73 percent); ischemic heart disease (88 percent); acute pharyngitis or acute laryngitis and tracheitis (74 percent); and diseases of sebaceous glands (78 percent). Although for all diagnoses, except normal pregnancy, single ingredient drugs were more likely to be ordered than combination drugs, higher than average proportions of combination drugs were associated with suppurative and unspecified otitis media (40 percent); acute URI (37 percent); bronchitis, acute; or not specified as acute or chronic (31 percent); sprains and strains of sacroiliac region or other and unspecified parts of back (38 percent); and health supervision of infant or child (37 percent). In children's health supervision visits the relatively large proportion of mentions of combined vaccines (such as diphtheria and tetanus toxoids and pertussis vaccine) contributed to the total of combination drugs (see section VII). Multivitamins were prominent in visits for normal pregnancy (60 percent).

If the physician entered a therapeutic effect rather than a drug name, it was not possible to make certain categorizations (this applies also to prescription status). Proportions in the "undetermined" category with visits for allergic rhinitis (44 percent) and asthma (15 percent) were due to the large number of entries marked "allergy relief" with no further identification of the pharmaceutical agents used (see section V).

Federal control status

Regulatory control of certain drugs rests, by law, in the Drug Enforcement Agency of the U.S. Department of Justice, which has assigned each regulated drug to one of five categories. These classifications constitute a scale based on two dimensions: potential for abuse, ranging from high (I) to low (V); and psychological or physical dependence, severe (I) to limited (V). All regulated drugs except those in schedule I have a currently accepted medical use in the United States. Classifications and examples are as follows:

● Schedule I (Heroin, LSD, Marijuana). High potential for abuse. Lack of accepted safety for use under medical supervision.

● Schedule II (Methaqualone, Meperidine, Amphetamines). High potential for abuse. Abuse may lead to severe psychological or physical dependence.

- Schedule III (Paregoric, Fiorinal, Phendimetrazine). Potential for abuse less than for drugs in schedule II. Abuse may lead to moderate or low physical dependence or high psychological dependence.

- Schedule IV (Diazepam, Flurazepam, Phentermine). Potential for abuse less than for drugs in schedule III. Abuse may lead to limited physical or psychological dependence.

- Schedule V (Lomotil, Cheracol Syrup). Potential for abuse and dependence less than for drugs in schedule IV.

About 87 percent of drugs mentioned in NAMCS were uncontrolled and about 9 percent were controlled (table 4). Higher than average proportions of controlled drugs were found in visits for five diagnoses: obesity and other hyperalimentation (32 percent); neurotic disorders or depressive disorder, NEC (33 percent); bronchitis, acute; or not specified as acute or chronic (13 percent); intervertebral disc disorders or other and unspecified disorders of back (25 percent); and sprains and strains of sacroiliac region or other and unspecified parts of back (26 percent). Controlled drugs used with these diagnoses are detailed by schedule in the sections of this report that deal with the individual diagnoses.

Table 1. Number of office visits, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by all diagnoses and selected principal diagnoses: United States, 1980

Principal diagnosis and ICD–9–CM code[1]	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits				
			Percent			
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
All diagnoses	575,745	363,489	63.1	679,593	1.18	1.87
Diabetes mellitus.. 250	9,551	7,592	79.5	17,496	1.83	2.30
Obesity and other hyperalimentation............................... 278	8,081	6,589	81.5	15,070	1.86	2.29
Neurotic disorders or depressive disorder, NEC[4] 300, 311	13,652	7,158	52.4	11,951	0.88	1.67
Suppurative and unspecified otitis media 382	11,748	10,067	85.7	18,168	1.55	1.80
Essential hypertension 401	25,137	22,282	88.6	46,484	1.85	2.09
Ischemic heart disease... 410–414	10,430	9,043	86.7	26,523	2.54	2.93
Acute upper respiratory infections of multiple or unspecified sites (acute URI).. 460, 461, 465	16,969	15,977	94.2	32,311	1.90	2.02
Acute pharyngitis or acute laryngitis and tracheitis 462, 464	10,277	9,020	87.8	16,139	1.57	1.79
Allergic rhinitis... 477	8,439	7,621	90.3	10,479	1.24	1.38
Bronchitis, acute; or not specified as acute or chronic 466, 490	8,323	7,855	94.4	16,349	1.96	2.08
Asthma... 493	5,921	5,477	92.5	11,655	1.97	2.13
Diseases of sebaceous glands 706	10,578	8,946	84.6	20,981	1.98	2.35
Osteoarthritis and allied disorders or other and unspecified arthropathies.... 715–716	8,297	6,799	82.0	14,251	1.72	2.10
Intervertebral disc disorders or other and unspecified disorders of back... 722,724	6,071	3,716	61.2	7,138	1.18	1.92
Sprains and strains of sacroiliac region or other and unspecified parts of back.. 846–847	7,393	4,411	59.7	6,586	0.89	1.49
Health supervision of infant or child V20	17,496	10,341	59.1	16,502	0.94	1.60
Normal pregnancy.. V22	26,256	8,727	33.2	10,755	0.41	1.23
General medical examination..................................... V70	16,078	4,732	29.4	6,624	0.41	1.40

[1]Based on the *International Classification of Diseases, 9th Revision, Clinical Modification.* See reference 1.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]NEC = not elsewhere classified.

Table 2. Number and percent distribution of office visits by number of medications, according to all diagnoses and selected principal diagnoses: United States, 1980

Principal diagnosis and ICD–9–CM code[1]	All visits	Number of medications						
		Total	None	1	2	3	4	5 or more
	Number in thousands	Percent distribution						
All diagnoses...	575,745	100.0	36.9	30.9	18.2	8.1	4.1	1.8
Diabetes mellitus.. 250	9,551	100.0	20.5	31.1	21.5	10.5	9.2	7.2
Obesity and other hyperalimentation............................... 278	8,081	100.0	18.5	29.3	16.6	20.7	13.3	*1.7
Neurotic disorders or depressive disorder, NEC[4] 300, 311	13,652	100.0	47.6	28.8	15.6	5.6	*1.8	*0.8
Suppurative and unspecified otitis media.......................... 382	11,748	100.0	14.3	37.2	33.5	10.6	3.6	*0.8
Essential hypertension.. 401	25,137	100.0	11.4	35.5	27.4	14.2	8.1	3.4
Ischemic heart disease... 410–414	10,430	100.0	13.3	14.5	23.4	20.0	18.3	10.5
Acute upper respiratory infections of multiple or unspecified sites (acute URI)... 460, 461, 465	16,969	100.0	5.8	33.8	36.0	15.7	6.6	*2.0
Acute pharyngitis or acute laryngitis and tracheitis 462, 464	10,277	100.0	12.2	41.1	31.1	9.2	5.9	*0.5
Allergic rhinitis... 477	8,439	100.0	9.7	68.9	12.9	6.3	*1.3	*0.9
Bronchitis, acute; or not specified as acute or chronic.............. 466, 490	8,323	100.0	5.6	24.8	49.7	12.6	*4.5	*2.8
Asthma... 493	5,921	100.0	7.5	39.4	22.0	17.4	9.6	*4.0
Diseases of sebaceous glands 706	10,578	100.0	15.4	15.7	37.4	18.1	13.2	*0.2
Osteoarthritis and allied disorders or other and unspecified arthropathies ... 715–716	8,297	100.0	18.1	36.8	19.4	13.3	8.8	*3.8
Intervertebral disc disorders or other and unspecified disorders of back... 722,724	6,071	100.0	38.8	26.3	21.1	8.2	*3.8	1.7
Sprains and strains of sacroiliac region or other and unspecified parts of back.. 846–847	7,393	100.0	40.3	37.4	15.9	5.6	*0.8	-
Health supervision of infant or child.............................. V20	17,496	100.0	40.9	31.2	21.4	6.0	*0.2	*0.3
Normal pregnancy.. V22	26,256	100.0	66.8	26.3	6.3	*0.6	*0.1	-
General medical examination V70	16,078	100.0	70.6	20.9	6.2	*1.8	*0.4	*0.1

[1]Based on the *International Classification of Diseases, 9th Revision, Clinical Modification.* See reference 1.
[2]NEC = not elsewhere classified.

Table 3. Percent distribution of drug mentions by entry status and prescription status, according to all diagnoses and selected principal diagnoses: United States, 1980

Principal diagnosis and ICD–9–CM code[1]	Total	Entry status				Prescription status		
		Brand name	Generic name	Therapeutic effect	Undetermined	Prescription drug	Non-prescription drug	Undetermined
					Percent distribution			
All diagnoses...........................	100.0	71.2	24.2	3.2	1.5	82.6	12.6	4.9
Diabetes mellitus 250	100.0	65.6	33.2	*0.7	*0.5	73.8	24.8	*1.4
Obesity and other hyperalimentation . . . 278	100.0	59.4	35.2	3.4	*2.0	89.4	5.2	5.4
Neurotic disorders or depressive disorder, NEC[4].......................300, 311	100.0	84.8	12.4	*0.9	*1.9	89.5	7.5	*2.9
Suppurative and unspecified otitis media..........................382	100.0	71.6	26.1	*2.0	*0.4	86.8	10.8	2.4
Essential hypertension................401	100.0	79.7	18.3	1.4	*0.6	91.8	6.2	2.0
Ischemic heart disease 410–414	100.0	73.6	25.0	*0.7	*0.7	90.6	8.0	1.4
Acute upper respiratory infections of multiple or unspecified sites (acute URI)..............460, 461, 465	100.0	73.3	22.9	1.8	2.0	79.7	16.5	3.8
Acute pharyngitis or acute laryngitis and tracheitis....................462, 464	100.0	62.9	34.4	2.3	*0.4	82.3	15.0	2.7
Allergic rhinitis.....................477	100.0	45.8	9.8	42.3	*2.1	49.9	5.8	44.4
Bronchitis, acute; or not specified as acute or chronic..............466, 490	100.0	70.3	27.2	*1.2	*1.4	86.0	11.5	2.6
Asthma 493	100.0	66.6	18.6	13.0	*1.8	79.1	6.1	14.8
Diseases of sebaceous glands.........706	100.0	67.4	29.7	*1.0	1.9	86.5	10.3	3.2
Osteoarthritis and allied disorders or other and unspecified arthropathies 715–716	100.0	79.5	18.3	*0.6	*1.6	83.2	14.5	*2.4
Intervertebral disc disorders or other and unspecified disorders of back . . . 722, 724	100.0	85.4	13.5	*0.3	*0.8	89.5	9.4	*1.0
Sprains and strains of sacroiliac region or other and unspecified parts of back.....................846–847	100.0	82.8	12.8	*1.7	*2.8	85.3	10.3	*4.4
Health supervision of infant or child V20	100.0	20.8	75.4	3.5	*0.4	91.5	4.7	3.9
Normal pregnancy V22	100.0	66.1	25.5	8.2	*0.2	42.9	48.9	8.4
General medical examination V70	100.0	52.1	44.6	*2.0	*1.3 .	90.3	6.4	*3.3

[1]Based on the *International Classification of Diseases, 9th Revision, Clinical Modification.* See reference 1.
[2]NEC = not elsewhere classified.

Table 4. Percent distribution of drug mentions by composition status and Federal control status, according to all diagnoses and selected principal diagnoses: United States, 1980

Principal diagnosis and ICD–9–CM code[1]	Total	Composition status				Federal control status		
		Single ingredient	Combination	Multi-vitamin	Undetermined	Controlled	Uncontrolled	Undetermined
All diagnoses	100.0	69.0	24.4	2.0	4.6	8.6	86.5	4.9
Diabetes mellitus. 250	100.0	84.9	12.6	*1.3	*1.2	4.2	94.4	*1.4
Obesity and other hyperalimentation 278	100.0	83.1	10.3	*1.2	5.4	31.9	62.7	5.4
Neurotic disorders or depressive disorder, NEC[2] 300, 311	100.0	79.7	15.9	*1.6	*2.8	32.5	64.6	*2.9
Suppurative and unspecified otitis media 382	100.0	57.0	40.4	*0.3	2.4	3.9	93.8	2.4
Essential hypertension 401	100.0	73.2	23.8	1.1	2.0	5.8	92.3	2.0
Ischemic heart disease 410–414	100.0	88.0	9.9	*0.7	*1.4	5.6	93.0	*1.4
Acute upper respiratory infections of multiple or unspecified sites (acute URI) 460, 461, 465	100.0	59.1	36.7	*0.4	3.8	9.7	86.5	3.8
Acute pharyngitis or acute laryngitis and tracheitis 462, 464	100.0	73.9	23.3	*0.1	2.7	6.9	90.5	2.7
Allergic rhinitis 477	100.0	35.1	20.5	*0.1	44.4	*1.1	54.6	44.4
Bronchitis, acute; or not specified as acute or chronic 466, 490	100.0	66.3	30.8	*0.3	2.6	12.5	85.0	2.6
Asthma 493	100.0	69.5	15.7	*0.0	14.8	4.6	80.6	14.8
Diseases of sebaceous glands 706	100.0	77.7	19.2	*0.2	2.9	*0.6	96.2	3.2
Osteoarthritis and allied disorders or other and unspecified arthropathies 715–716	100.0	80.9	16.2	*0.7	*2.2	9.7	88.0	2.4
Intervertebral disc disorders or other and unspecified disorders of back 722, 724	100.0	65.9	31.6	*1.5	*1.0	24.8	74.2	*1.0
Sprains and strains of sacroiliac region or other and unspecified parts of back 846–847	100.0	57.2	38.2	*0.2	*4.4	25.5	70.1	*4.4
Health supervision of infant or child. V20	100.0	54.2	36.7	5.3	3.9	*0.5	95.6	3.9
Normal pregnancy V22	100.0	18.7	13.3	59.6	8.4	*1.2	90.4	8.4
General medical examination V70	100.0	60.8	34.4	*1.5	*3.3	7.4	89.2	*3.3

[1] Based on the *International Classification of Diseases, 9th Revision, Clinical Modification.* See reference 1.
[2] NEC = not elsewhere classified.

Section II. Selected endocrine and metabolic disorders

Diabetes mellitus

Patients with diabetes mellitus made about 9.6 million visits to office-based physicians in 1980 (table 5). During these visits there were about 17.5 million mentions of drugs for an average of 1.83 drugs per visit. In about 80 percent of all visits, one or more drugs were utilized.

Differences in drug rates between females and males were not statistically significant. The drug mention rates for members of the black and white races were identical. However, the age of the patient was a significant factor in drug utilization. Drug therapy was more likely to be used in visits by patients 65 years of age and older (drug mention rate = 2.18) than in those by patients 45–64 years of age (1.71).

Rates were also higher when patients returned to the same physician for continuing care (old problems) than when they presented diabetes mellitus as a new problem.

Most visits for diabetes mellitus were characterized by the physician as routine chronic problems (75 percent). However, in the 8 percent of visits described as chronic problem, flareup, the drug mention rate was 2.53 compared with 1.82 in routine visits.

When visits were grouped by exact number of medications, as shown in table 6, the highest proportion was in the category of one drug regardless of the patient's sex, age, or race. However, the proportion of visits with only one medication decreased as the patient's age group increased, while proportions of visits in the categories of three, and four or more increased.

Drug mentions are distributed by therapeutic categories in table 7. (The American Hospital Formulary Service classification system is shown in appendix IV.) About 83 percent of drugs used were in four categories: cardiovascular drugs; central nervous system drugs; electrolytic, caloric, and water balance; and hormones and synthetic substitutes. The last category constituted the highest proportion (40 percent), followed by cardiovascular drugs with 19 percent. Drug mention rates, which are also shown in table 7, indicate that hormones and cardiovascular drugs were ordered proportionately more frequently for patients 65 years of age and older than for those in younger age groups.

The specific drugs entered most frequently on Patient Record Forms when diabetes mellitus was the principal diagnosis are shown in table 8. Each entry is described in this table by its principal generic ingredients and therapeutic category. Drug names are based on the physicians' entries and may be brand or generic names. If only one generic ingredient is listed, it may be because the physician ordered the drug by its generic name or because the physician's entry was a brand name of a single ingredient drug. Not all ingredients are listed for every combination drug. The NAMCS drug file lists up to five active ingredients.

It is apparent that the hormones and synthetic substitutes group consisted chiefly of insulin, which had 3.2 million mentions. Diabinese (1.7 million), Orinase (0.8 million), and Tolinase (0.6 million) were also frequently mentioned. Among cardiovascular drugs prescribed during visits by diabetic patients, Aldomet (a hypotensive agent), Lanoxin, and Digoxin (two cardiac drugs) were predominant. Lasix and Dyazide were the leading diuretics prescribed. These nine drugs, representing three therapeutic categories, accounted for about 49 percent of all drug mentions with diabetes mellitus as the principal diagnosis. The inclusion of hypotensive agents, diuretics, and cardiac drugs in this list of drug mentions reflects the two conditions frequently concomitant when diabetic patients visit: hypertension and ischemic heart disease.[8] According to NAMCS data, an anti-diabetic agent without mention of a diuretic, hypotensive agent, or cardiac drug was ordered in 46 percent of all drug visits (although other drugs may have been mentioned). An anti-diabetic agent with a diuretic but not a hypotensive agent or a cardiac drug was prescribed in 13 percent, an anti-diabetic agent with a hypotensive agent but not the other two in 6 percent, and an anti-diabetic agent with a cardiac drug alone in 5 percent. About 6 percent of visits included all four drugs. Patients 25–44 years of age were more likely to be treated with an anti-diabetic agent without one of the other three types of drugs (72 percent) than were those

aged 45–64 years (47 percent) or 65 years of age and older (37 percent).

Exogenous insulin accounted for 18 percent of all drug mentions. Diabinese, Orinase, and Tolinase, which are oral hypoglycemics, also accounted for 18 percent of the total. The 6.3 million mentions of these four anti-diabetic agents are distributed by route of administration and sex and age of the patient in table B. There were no statistically signficant differences by sex, but age was a factor in the choice of drug therapy. Proportions of oral hypoglycemics increased and those of insulin decreased as the patient's age group increased.

· Because in NAMCS the primary identification of a drug was based on the physician's entry, the specific drugs in table 8 were listed by brand or generic name, whichever the physician wrote and which may well have been the same pharmaceutical agent. For example, Lanoxin is a brand name and digoxin is a generic name, but both are the same substance. Therefore, it is also important to know the quantity of specific generic substances prescribed as single ingredients or extant in combination with other substances. The most frequently used generic substances in visits for diabetes mellitus are listed alphabetically by form of use in table 9. It should be noted that it is not possible to sum the number of uses of generic substances and arrive at a total of 100 percent of drug mentions because many generic substances are found in combination with other drugs, thus creating a duplicated count of mentions. In addition, quantities in table 9 may not agree with those in table 8. One reason for this discrepancy is that a single ingredient generic entity may be marketed under different brand names. The totals in table 9 include all mentions where the generic entity was an ingredient, whereas table 8 shows only the most frequent entries. As may be expected, the most frequent generic substance used was insulin. It was followed by chlorpropamide (represented in table 8 by Diabinese) and hydrochlorothiazide.

Control of food intake is important in the manage-

ment of diabetes mellitus, whether or not the patient requires medication therapy. Diet counseling was included in 38 percent of visits by patients with diabetes mellitus. Patients were more likely to be instructed about diet when they were on medication, however, than when drugs were not indicated during the visit. About 42 percent of visits with medication therapy included diet counseling compared with 26 percent of visits without medication.

Obesity and other hyperalimentation

Basic data on office visits and drug mentions are shown in table 10. There were about 8.1 million visits for obesity and other hyperalimentation, yielding a drug mention rate of 1.86. Most visits (83 percent) were made by women, and their drug mention rate of 1.97 was significantly higher than that of men (1.37). This was mainly because 85 percent of visits by women included one or more drugs compared with only 65 percent of those by men. The widest gap in rates by sex of the patient was associated with this diagnosis. The drug mention rates by sex of the patient for obesity and for six other diagnoses are illustrated in figure 2. Of those plotted, differences in rates for two diagnoses were not statistically significant, ischemic heart disease and neurotic disorders or depressive disorder, NEC (NEC = not elsewhere classified).

Patients 25 years of age and over made 89 percent of the visits and they were more likely to be given medication therapy than were patients less than 25 years of age.

More than twice as many visits were made by patients returning for care of the same problem than by those presenting new problems, but the drug rates were higher for new problem visits. The drug mention rate for new problems was 2.27 compared with 1.70 for old problems. The same comparison for the drug intensity rate was 2.77 and 2.09. These rates suggest an inverse relationship between the number of drugs and visit status. Of all new problem visits, 41 percent included three drugs compared with 12 percent of old problem visits with the same number. One drug was ordered in only 11 percent of new problem visits compared with 37 percent of return visits (table 11).

Drugs utilized for obesity patients were chiefly in three groups: central nervous system drugs, diuretics, and hormones and synthetic substitutes (table 12). These therapeutic categories constituted 81 percent of all drug mentions, with central nervous system drugs accounting for 39 percent. The drug mention rate of 76 central nervous system drugs per 100 visits for women was higher than that for men (56). Patients 25–44 years old were also more likely to be given central nervous system drugs than were older patients.

Chorionic gonadotropin, a member of the hormones and synthetic substitutes group, accounted for 10 percent of all mentions and, based on entry names, was the

Table B. Number and percent distribution of selected anti-diabetic agents mentioned in office visits for diabetes mellitus by route of administration of the drug, according to sex and age of the patient: United States, 1980

Sex and age	Number of selected anti-diabetic agents in thousands	Total	Oral[1]	Injection[2]
Sex		Percent distribution		
Female	3,740	100.0	51.2	48.8
Male	2,593	100.0	47.2	52.8
Age				
25–44 years............	716	100.0	21.9	78.1
45–64 years............	2,476	100.0	48.8	51.2
65 years and over	2,873	100.0	60.5	39.5

[1] Diabinese (chlorpropamide), Orinase (tolbutamide), and Tolinase (tolazamide).
[2] Insulin.
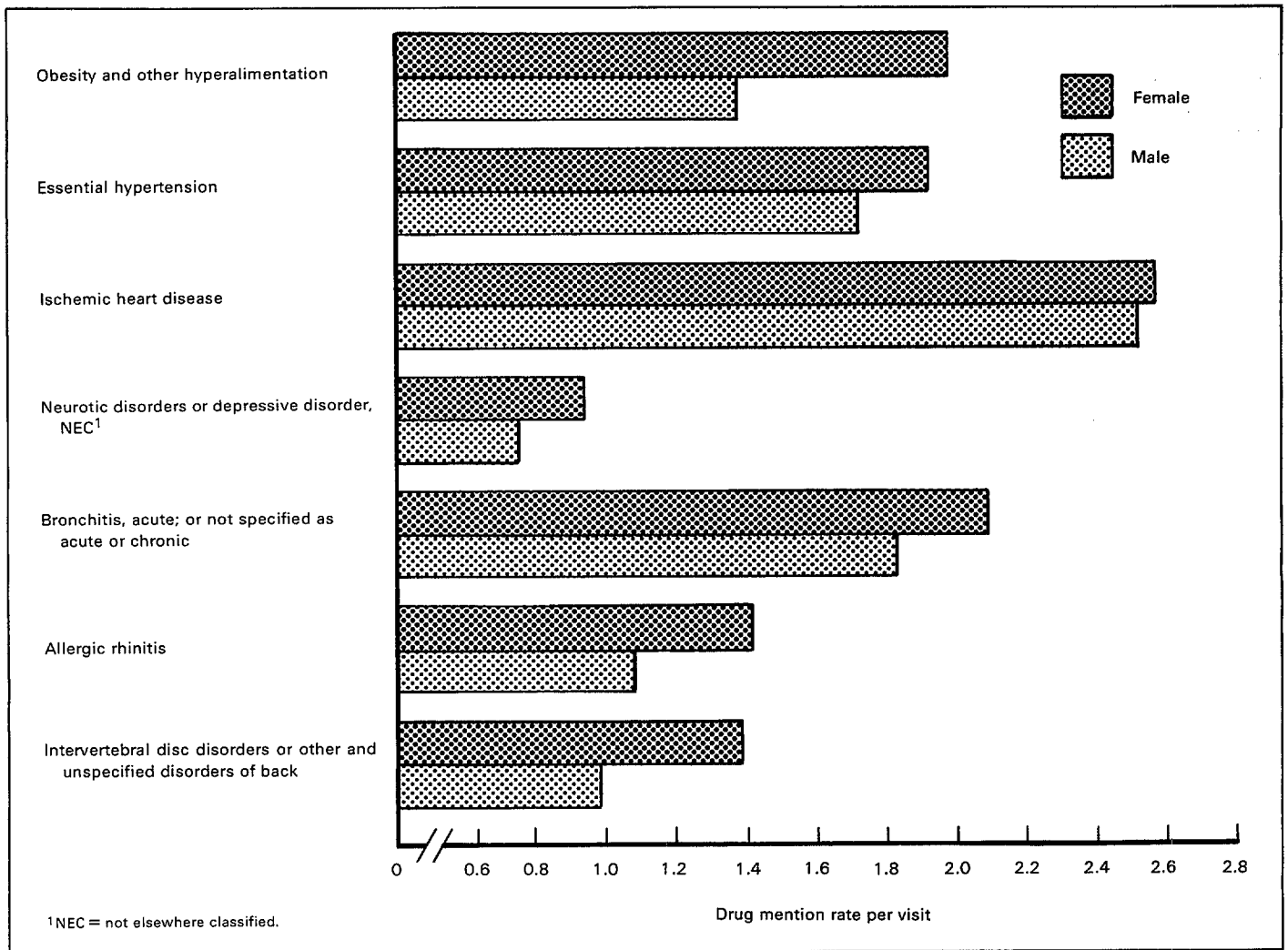
Figure 2. Drug mention rates per visit for selected diagnoses by sex of patient: United States, 1980

most frequently mentioned drug (table 13). This drug is usually administered by intramuscular injection. It was reported in the 1981 *Physicians' Desk Reference* that this hormone has not been demonstrated to be effective in attaining weight loss or appetite control.[9] *The American Drug Index, 1981* does not list obesity among the uses described for this drug.[10]

Two diuretics, Lasix and Hydrochlorothiazide, were also among the most frequent specific drugs prescribed for obesity patients (13 percent of mentions). Three anorexients with brand names Ionamin, Fastin, and Phentermine (all in the generic class phentermine) accounted for another 13 percent. Three of every four drug visits included at least one drug that was a hormone or an anorexient.

As shown in table 14, phentermine was the leading generic substance used for treatment of obesity. When entry names were listed in table 13, chorionic gonadotropin was the most frequent, but three separate brand names for phentermine were listed. Thus, phentermine was the leading generic substance used.

Table 4 showed that 32 percent of the drug mentions

(4.8 million) in visits for obesity were under the regulatory control of the Drug Enforcement Administration. This group of mentions is distributed by Drug Enforcement Administration schedule in table C. About 20

Table C. Number and percent distribution of federally controlled drug mentions in office visits for obesity and other hyperalimentation by control category: United States, 1980

Federal control category[1]	Controlled drug mentions
	Number in thousands
Total.	4,804
	Percent distribution
Total.	100.0
Schedule I.	0.0
Schedule II	19.9
Schedule III.	13.2
Schedule IV.	66.4
Schedule V	0.5

[1] Based on the classification system of the Drug Enforcement Agency of the Department of Justice.

percent of the regulated drugs were in schedule II; 13 percent in schedule III; and 66 percent, the largest group, in schedule IV. (See section I for a description of the schedules and the scale.) Among the drugs listed in table 14, four are controlled. Dextroamphetamine is in schedule II; phendimetrazine, schedule III; phentermine and diethylpropion, schedule IV. There may have been other regulated substances used in obesity visits, but their numbers did not meet National Center for Health Statistics standards of reliability for reporting.

Table 5. Number of office visits for diabetes mellitus, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
Sex	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Both sexes	[4]9,551	7,592	79.5	17,496	1.83	2.30
Female..	5,683	4,544	80.0	11,100	1.95	2.44
Male	3,868	3,048	78.8	6,396	1.65	2.10
Age						
Under 45 years....................................	1,473	1,019	69.2	1,817	1.23	1.78
45–64 years.......................................	4,108	3,138	76.4	7,030	1.71	2.24
65 years and over..................................	3,971	3,435	86.5	8,650	2.18	2.52
Race						
White...	7,923	6,226	78.6	14,545	1.84	2.34
Black...	1,510	1,290	85.4	2,774	1.84	2.15
Problem status						
New problem	871	602	69.2	1,019	1.17	1.69
Old problem	8,680	6,990	80.5	16,477	1.90	2.36
Major reason for visit						
Acute problem	1,087	879	80.9	1,831	1.68	2.08
Chronic problem, routine............................	7,122	5,660	79.5	12,962	1.82	2.29
Chronic problem, flareup............................	805	689	85.5	2,034	2.53	2.95
Post surgery/post injury.............................	*117	*39	*33.6	*95	*.81	*2.44
Non-illness care...................................	419	*324	*77.3	*574	*1.37	*1.77

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

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Table 6. Number and percent distribution of office visits for diabetes mellitus by number of medications, according to selected characteristics: United States, 1980

Selected characteristic	All visits	Number of medications					
		Total	None	1	2	3	4 or more
Sex	Number in thousands	Percent distribution					
Both sexes	[1]9,551	100.0	20.5	31.1	21.5	10.5	16.4
Female	5,683	100.0	20.0	27.3	23.1	10.9	18.8
Male	3,868	100.0	21.2	36.8	19.2	9.9	13.0
Age							
Under 45 years................................	1,473	100.0	30.8	39.9	*17.2	*4.5	*7.5
45–64 years..................................	4,108	100.0	23.6	32.5	20.7	*8.7	14.5
65 years and over	3,971	100.0	13.5	26.5	23.9	14.5	21.6
Race							
White	7,923	100.0	21.4	30.3	20.5	11.0	16.8
Black...	1,510	100.0	*14.6	35.1	28.4	*8.2	*13.7
Problem status							
New problem	871	100.0	*30.8	*38.5	*15.6	*12.8	*2.2
Old problem...................................	8,680	100.0	19.5	30.4	22.1	10.2	17.8
Major reason for visit							
Acute problem	1,087	100.0	*19.1	*30.4	*30.5	*9.0	*11.0
Chronic problem, routine.......................	7,122	100.0	20.5	31.1	20.8	11.5	16.0
Chronic problem, flareup.......................	805	100.0	*14.5	*24.7	*21.3	*7.0	*32.5
Other reasons.................................	537	100.0	*32.3	*43.4	*12.4	*5.0	*6.9

[1]Includes races other than white and black not shown as separate categories.

Table 7. Number, percent distribution, and rate per 100 visits of drug mentions in office visits for diabetes mellitus by therapeutic category, according to sex and age of the patient: United States, 1980

Therapeutic category[1]	Both sexes	Sex		Age		
		Female	Male	Under 45 years	45–64 years	65 years and over
		Number of mentions in thousands				
All therapeutic categories	17,496	11,100	6,396	1,817	7,030	8,650
		Percent distribution				
Total..	100.0	100.0	100.0	100.0	100.0	100.0
Cardiovascular drugs..	18.5	17.8	19.8	*6.0	17.9	21.7
Central nervous system drugs	9.4	9.7	*8.9	*8.8	*8.5	10.2
Electrolytic, caloric, and water balance.........................	14.8	15.5	13.6	*6.7	15.4	16.1
Hormones and synthetic substitutes............................	39.8	38.0	42.8	57.9	38.3	37.2
All other therapeutic categories...............................	17.5	19.0	14.9	20.6	19.9	14.8
		Drug mention rate per 100 visits				
Cardiovascular drugs..	34	35	33	*7	31	47
Central nervous system drugs	17	19	15	*11	*15	22
Electrolytic, caloric, and water balance.........................	27	30	23	*8	26	35
Hormones and synthetic substitutes............................	73	74	71	71	66	81

[1]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 8. Number and percent distribution of drug mentions in office visits for diabetes mellitus by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
All drugs..	17,496	100.0	...	...
Insulin	3,192	18.2	insulin	insulin and anti-diabetic agents
Diabinese...	1,728	9.9	chlorpropamide	insulin and anti-diabetic agents
Orinase...	792	4.5	tolbutamide	insulin and anti-diabetic agents
Tolinase..	621	3.5	tolazamide	insulin and anti-diabetic agents
Lasix...	621	3.5	furosemide	diuretics
Dyazide	491	2.8	triamterene, hydrochlorothiazide	diuretics
Aldomet...	479	2.7	methyldopa	hypotensive agents
Lanoxin...	*391	*2.2	digoxin	cardiac drugs
Digoxin...	*322	*1.8	digoxin	cardiac drugs
Residual..	8,858	50.6	...	...

[1]Based on the physician's entry on the Patient Record form. The entry may be a brand or generic name.
[2]If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 9. Number and percent distribution of drugs used in office visits for diabetes mellitus by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Chlorpropamide	1,733	100.0	100.0	-
Digoxin	714	100.0	100.0	-
Furosemide...	626	100.0	100.0	-
Hydrochlorothiazide...	1,331	100.0	33.7	66.3
Insulin	3,198	100.0	100.0	-
Methyldopa...	617	100.0	83.7	16.3
Tolazamide	621	100.0	100.0	-
Tolbutamide	820	100.0	100.0	-
Triamterene	491	100.0	-	100.0

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Table 10. Number of office visits for obesity and other hyperalimentation, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]8,081	6,589	81.5	15,070	1.86	2.29
Female	6,686	5,681	85.0	13,152	1.97	2.32
Male	1,395	908	65.1	1,918	1.37	2.11
Age						
Under 25 years	873	528	60.5	1,128	1.29	2.14
25–44 years	4,902	4,202	85.7	9,346	1.91	2.22
45 years and over	2,307	1,859	80.6	4,596	1.99	2.47
Race						
White	6,706	5,495	81.9	12,655	1.89	2.30
Black	1,300	1,019	78.4	2,272	1.75	2.23
Problem status						
New problem	2,351	1,923	81.8	5,336	2.27	2.77
Old problem	5,730	4,666	81.4	9,734	1.70	2.09
Major reason for visit						
Acute problem	*293	*207	*70.7	*362	*1.24	*1.75
Chronic problem, routine	5,886	4,997	84.9	11,683	1.98	2.34
Chronic problem, flareup	*186	*156	*83.7	*290	*1.56	*1.86
Post surgery/post injury	*33	-	-	-	-	-
Non-illness care	1,682	1,229	73.1	2,735	1.63	2.23

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 11. Number and percent distribution of office visits for obesity and other hyperalimentation by number of medications, according to selected characteristics: United States, 1980

Selected characteristic	All visits	Number of medications					
		Total	None	1	2	3	4 or more
Sex	Number in thousands	Percent distribution					
Both sexes	[1]8,081	100.0	18.5	29.3	16.6	20.7	15.0
Female	6,686	100.0	15.0	29.7	17.0	21.9	16.3
Male	1,395	100.0	34.9	*26.9	*14.7	*14.8	*8.7
Age							
Under 25 years	873	100.0	39.5	*24.1	*14.8	*11.6	*10.0
25–44 years	4,902	100.0	14.3	31.6	17.8	22.8	13.5
45 years and over	2,307	100.0	19.4	26.2	*14.7	19.6	20.1
Race							
White	6,706	100.0	18.1	30.2	16.0	18.8	16.9
Black	1,300	100.0	*21.6	*23.1	*20.3	*28.9	*6.1
Problem status							
New problem	2,351	100.0	18.2	*11.0	*13.4	40.7	16.7
Old problem	5,730	100.0	18.6	36.7	17.9	12.4	14.3
Major reason for visit							
Chronic problem, routine	5,886	100.0	15.1	29.7	14.2	25.7	15.3
Non-illness care	1,682	100.0	26.9	28.2	*19.9	*7.2	*17.8
Other reasons	513	100.0	*29.2	*27.5	*33.6	*6.5	*3.2

[1]Includes races other than white and black not shown as separate categories.

Table 12. Number, percent distribution, and rate per 100 visits of drug mentions in office visits for obesity and other hyperalimentation by therapeutic category, according to sex and age of the patient: United States, 1980

Therapeutic category[1]	Both sexes	Sex		Age		
		Female	Male	Under 25 years	25–44 years	45 years and over
		Number of mentions in thousands				
All therapeutic categories	15,070	13,152	1,918	1,128	9,346	4,596
		Percent distribution				
Total	100.0	100.0	100.0	100.0	100.0	100.0
Central nervous system drugs	39.1	38.8	40.5	*48.3	42.2	30.3
Electrolytic, caloric, and water balance	23.7	23.9	*22.2	*22.8	23.6	24.0
Hormones and synthetic substitutes	18.6	19.1	*14.7	*13.0	18.8	19.4
All other therapeutic categories	18.6	18.2	*22.6	*15.9	15.4	26.3
		Drug mention rate per 100 visits				
Central nervous system drugs	73	76	56	*62	80	60
Electrolytic, caloric, and water balance	44	47	*30	*29	45	48
Hormones and synthetic substitutes	35	38	*20	*17	36	39

[1]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 13.　Number and percent distribution of drug mentions in office visits for obesity and other hyperalimentation by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
All drugs	15,070	100.0	. . .	. . .
Chorionic gonadotropin	1,532	10.2	chorionic gonadotropin	gonadotropins
Lasix	1,321	8.8	furosemide	diuretics
Ionamin	892	5.9	phentermine	respiratory and cerebral stimulants
Hydrochlorothiazide	664	4.4	hydrochlorothiazide	diuretics
Fastin	619	4.1	phentermine	respiratory and cerebral stimulants
Thyroid	566	3.8	thyroid	thyroid and antithyroid
Vitamin B-12	540	3.6	Vitamin B-12	vitamin B complex
Phentermine	469	3.1	phentermine	respiratory and cerebral stimulants
Didrex	456	3.0	benzphetamine	respiratory and cerebral stimulants
Tenuate	424	2.8	diethylpropion	respiratory and cerebral stimulants
Dextroamphetamine	*393	*2.6	dextroamphetamine	respiratory and cerebral stimulants
Phenylpropanolamine	*304	*2.0	phenylpropanolamine	sympathomimetic agents
Residual	6,888	45.7	. . .	. . .

[1]Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name.
[2]If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 14.　Number and percent distribution of drugs used in office visits for obesity and other hyperalimentation by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Benzphetamine	456	100.0	100.0	-
Chorionic gonadotropin	1,546	100.0	100.0	-
Dextroamphetamine	675	100.0	66.1	33.9
Diethylpropion	627	100.0	100.0	-
Furosemide	1,321	100.0	100.0	-
Hydrochlorothiazide	1,167	100.0	70.4	29.6
Phendimetrazine	426	100.0	100.0	-
Phentermine	2,196	100.0	100.0	-
Thyroid	566	100.0	100.0	-
Vitamin B-12	609	100.0	100.0	-

Section III. Neurotic disorders or depressive disorder, NEC[c]

This pair of diagnoses (ICD–9–CM 300 and 311), representing 13.7 million visits, had the lowest illness-related drug mention rate (0.88) (table 15) compared with others shown in table 1. Only 52 percent of visits included one or more drugs (table 15), with no statistically significant difference between proportions of drug visits or rates for women and men. However, the proportions of drug visits increased with each advancing age group ranging from 33 percent of visits by patients under 25 years of age to 85 percent of those 65 years of age and older. Drug visits were also proportionately more frequent when patients presented new problems (66 percent) than when they returned for care of an old problem (49 percent). Drug visits were also more common when the major reason for visit was an acute problem (65 percent) or a flareup of a chronic problem (65 percent) than when it was a routine visit for a chronic problem (45 percent). These findings suggest a conservative use of drugs during ambulatory care office visits.

Psychotherapy or therapeutic listening was used in proportionately more visits (69 percent) than drug therapy was (52 percent). When psychotherapy was used, 59 percent of those visits did not include medication therapy.

For all drug visits, one was the most likely number of medications since the 29 percent of visits in this category was the highest proportion in the categories greater than zero (table 16). One drug was also preeminent in new problem visits (42 percent). The relatively high proportion of visits with no medication prescribed when the major reason for visit was a routine chronic problem suggests a decreased use of medication as the course of treatment progressed.

In 87 percent of all drug visits the prescribed drugs were in one or both of two central nervous system therapeutic categories: psychotherapeutic agents or sedatives and hypnotics. The drug mention rates of these two groups are detailed by sex and age of the patient in table D.

[c]Not elsewhere classified.

Table D. Drug mention rate per 100 office visits for neurotic disorders or depressive disorder, NEC,[1] for all central nervous system drugs and selected subcategories by sex and age of the patient: United States, 1980

Sex and age	All central nervous system drugs[2]	Psycho-therapeutic agents	Sedatives and hypnotics
Sex		Rate per 100 visits	
Female	66	33	27
Male	52	26	22
Age			
Under 25 years	*32	*17	*11
25–44 years	46	23	20
45–64 years	79	44	30
65 years and over	112	41	51

[1]NEC = not elsewhere classified.
[2]Includes analgesics and antipyretics.

Female patients were more likely to receive central nervous system drugs than male patients. The rate of sedatives and hypnotics (for example, tranquilizers) increased with the patient's advancing age group, but differences among age groups using psychotherapeutic drugs (for example, mood altering drugs) were not statistically significant.

Eight specific drugs in these two categories accounted for 36 percent of all drug mentions (table 17), Valium (9 percent), Tranxene (4 percent), Ativan (4 percent), and Librium (3 percent) were the leading drugs in the sedatives and hypnotics class. Elavil (7 percent), Sinequan (4 percent), Triavil (3 percent), and Tofranil (3 percent) were the most commonly prescribed psychotherapeutic agents. The list of generic substances in table 18 directly reflects these eight drugs. The amount of the generic substance used is higher than the number of mentions of the entry in table 17 by that generic name. That may be because another brand name drug with the same generic ingredient used singly or in combination with other ingredients was less frequently prescribed, or because infrequently the physician en-

tered the name of the generic substance. In both instances the substance would be included in table 18 but not in table 17. As has been evident in previous tables, this tends to change the ranking somewhat. In table 17 the number of mentions of Valium (diazepam) is higher than that of Elavil (amitriptyline), but in table 18 amitriptyline leads diazepam. These data provide alternative approaches to analysis depending on the research needs.

It was shown in table 4 that federally regulated drugs accounted for about one third of the drugs prescribed in the presense of neurotic disorders or depressive disorder, NEC. Of these 3.9 million mentions, 92 percent were in schedule IV (table E, see section I for a description of the Drug Enforcement Administration scale). Of the drugs listed in table 17, those in the therapeutic category of sedatives and hypnotics are in schedule IV; the others are not federally regulated.

Table E. Number and percent distribution of federally controlled drug mentions in office visits for neurotic disorders or depressive disorder, NEC[1], by control category: United States, 1980

Federal control category[2]	Controlled drug mentions
	Number in thousands
Total.	3,880
	Percent distribution
Total.	100.0
Schedule I.	0.0
Schedule II	3.6
Schedule III.	3.5
Schedule IV.	91.7
Schedule V	1.2

[1] NEC = not elsewhere classified.
[2] Based on the classification system of the Drug Enforcement Agency of the Department of Justice.

Table 15. Number of office visits for neurotic disorders or depressive disorder, NEC,[1] number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[3]	Drug intensity rate[4]
	All visits	Drug visits[2]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[5]13,652	7,158	52.4	11,951	0.88	1.67
Female.	9,029	5,010	55.5	8,477	0.94	1.69
Male	4,623	2,148	46.5	3,474	0.75	1.62
Age						
Under 25 years.	1,233	407	33.0	*495	*0.40	*1.22
25–44 years.	7,185	3,039	42.3	4,383	0.61	1.44
45–64 years.	3,809	2,500	65.6	4,352	1.14	1.74
65 years and over.	1,424	1,212	85.1	2,721	1.91	2.25
Race						
White.	12,868	6,639	51.6	11,088	0.86	1.67
Black.	734	488	66.5	820	1.12	1.68
Problem status						
New problem	2,895	1,918	66.3	3,068	1.06	1.60
Old problem	10,757	5,240	48.7	8,883	0.83	1.70
Major reason for visit						
Acute problem	3,478	2,259	65.0	3,376	0.97	1.49
Chronic problem, routine.	8,120	3,646	44.9	6,175	0.76	1.69
Chronic problem, flareup	1,738	1,123	64.6	2,147	1.24	1.91
Post surgery/post injury.	*21	*9	*43.4	*9	*0.43	*1.00
Non-illness care	*295	*121	*40.8	*244	*0.83	*2.02

[1] NEC = not elsewhere classified.
[2] A visit in which one or more drugs were ordered or provided.
[3] Drug mentions divided by number of visits.
[4] Drug mentions divided by number of drug visits.
[5] Includes races other than white and black not shown as separate categories.

Table 16. Number and percent distribution of office visits for neurotic disorders or depressive disorder, NEC,[1] by number of medications, according to selected characteristics: United States, 1980

Selected characteristic	All visits	Number of medications					
		Total	None	1	2	3	4 or more
Sex	Number in thousands	Percent distribution					
Both sexes	[2]13,652	100.0	47.6	28.8	15.6	5.6	*2.5
Female	9,029	100.0	44.5	29.8	16.7	6.3	*2.6
Male	4,623	100.0	53.5	26.7	13.3	*4.1	*2.4
Age							
Under 25 years	1,233	100.0	67.0	*26.9	*5.0	*1.1	-
25–44 years	7,185	100.0	57.7	28.0	10.6	*3.2	*0.5
45–64 years	3,809	100.0	34.4	31.0	24.9	*6.2	*3.5
65 years and over	1,424	100.0	14.9	28.3	*24.7	*19.6	*12.6
Race							
White	12,868	100.0	48.4	28.6	14.8	5.6	*2.6
Black	734	100.0	*33.5	*31.2	*28.8	*5.1	*1.4
Problem status							
New problem	2,895	100.0	33.7	41.6	*13.0	*8.8	*2.8
Old problem	10,757	100.0	51.3	25.3	16.2	4.7	*2.5
Major reason for visit							
Acute problem	3,478	100.0	35.0	43.4	14.0	*4.8	*2.8
Chronic problem, routine	8,120	100.0	55.1	23.3	14.7	5.1	*1.8
Chronic problem, flareup	1,738	100.0	35.4	26.8	24.2	*8.5	5.2
Other reasons	*316	100.0	*59.0	*19.3	*7.5	*11.1	*3.0

[1]NEC = not elsewhere classified.
[2]Includes races other than white and black not shown as separate categories.

Table 17. Number and percent distribution of drug mentions in office visits for neurotic disorders or depressive disorder, NEC,[1] by most frequently mentioned specific drug described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[2]	Drug mentions		Principal generic ingredient(s)[3]	Principal therapeutic category[4]
	Number in thousands	Percent distribution		
All drugs	11,951	100.0	...	...
Valium	1,040	8.7	diazepam	sedatives and hypnotics
Elavil	805	6.7	amitriptyline	psychotherapeutic agents
Tranxene	508	4.3	clorazepate	sedatives and hypnotics
Sinequan	441	3.7	doxepin	psychotherapeutic agents
Ativan	420	3.5	lorazepam	sedatives and hypnotics
Triavil	402	3.4	perphenazine, amitriptyline	psychotherapeutic agents
Librium	*351	*2.9	chlordiazepoxide	sedatives and hypnotics
Tofranil	*322	*2.7	imipramine	psychotherapeutic agents
Residual	7,661	64.1	...	...

[1]NEC = not elsewhere classified.
[2]Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name.
[3]If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[4]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 18. Number and percent distribution of drugs used in office visits for neurotic disorders or depressive disorder, NEC,[1] by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Amitriptyline...	1,513	100.0	68.3	31.7
Chlordiazepoxide	664	100.0	58.3	41.7 .
Clorazepate...	599	100.0	100.0	-
Diazepam	1,060	100.0	100.0	-
Doxepin...	607	100.0	100.0	-
Imipramine	454	100.0	100.0	-
Lorazepam..	425	100.0	100.0	-
Perphenazine	503	100.0	4.4	95.6

[1] NEC = not elsewhere classified.

Section IV. Selected cardiovascular diseases

Essential hypertension

Patients with this diagnosis made 25.1 million visits, the highest number of visits for an illness-related diagnosis in 1980. During these visits there were about 46.5 million mentions of drugs for an average of 1.85 drug mentions per visit (table 19).

The drug mention rate for women (1.92) was significantly higher than that for men (1.72), and drugs were more likely to be used for patients 45 years of age and older than for younger patients. However, the difference between rates for patients 45–64 years of age (1.84) and older patients (1.91) was not statistically significant.

Almost all visits were made by patients the physician had treated previously for the same problem (91 percent), and 9 of 10 such visits included medication therapy. When hypertension was presented as a new problem, drugs were less likely to be used, since about 79 percent of such visits included medication therapy compared with 90 percent in old problem visits. There was little variation in drug intensity rates among the variables listed in table 19 with averages hovering around 2.0.

It is shown in table 20 that one drug ordered or provided was the most likely event with 36 percent of the visits in that category. In another 27 percent of visits, two drugs were mentioned. Proportions of visits decreased as the number of drugs prescribed during a visit increased.

Drug mentions are shown by therapeutic categories in table 21. The majority of drug mentions were in two classes: hypotensive agents (24 percent) and diuretics (30 percent). Another 8 percent were cardiac drugs. Some beta-adrenergic blocking agents classified as cardiac drugs by the American Hospital Formulary Service (for example, propranolol and nadolol) are used to treat angina pectoris and other heart conditions as well as hypertension, thus increasing the proportion of cardiac drugs used with hypertension.

Among all therapeutic categories, only the difference between the drug mention rates of women and men who were prescribed central nervous system drugs was statistically significant. The small differences in rates of other categories were probably due to sampling variability.

A wide variety of drugs were used in hypertension visits. The 30 drugs listed in table 22 accounted for about 60 percent of all drug mentions. The reader is cautioned that the ranking may be somewhat artificial because some estimates do not differ significantly from other near estimates due to sampling variability. Of the 30 listed drugs, 10 are hypotensive agents, 9 are diuretics, 4 are cardiac drugs, and 2 are potassium replacement solutions. Only one is a tranquilizer. Dyazide (6 percent) and Hydrochlorothiazide (5 percent) were the most frequently prescribed drugs. Aldomet was the leading hypotensive agent (5 percent). Inderal (propranolol), a cardiac drug often used as an antihypertensive, also accounted for 5 percent. There were also 415,000 mentions of influenza virus vaccine and 303,000 mentions of Vitamin B-12, which suggests that preventive medicine was practiced during visits by at-risk patients.

The Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure recommends a "stepped-care" approach to drug therapy. In their four-step sequence, step 1 is a diuretic and step 2 is the addition of an adrenergic inhibiting agent (classified as hypotensive agents in this report).[11] The degree of compliance with steps 1 and 2 of the committee's recommendation may be estimated from National Ambulatory Medical Care Survey (NAMCS) data. Visits for hypertension were examined to determine how many included a diuretic without a hypotensive agent (although other drugs may have been listed), a hypotensive agent without a diuretic, both types of drugs in one visit, or neither one. The results are shown in table F. In about one quarter of all visits, neither of these therapeutic categories was mentioned. The proportionately largest group, about 29 percent, included a diuretic only, 24 percent had a hypotensive agent only, and 22 percent

Table F. Percent distribution of drug visits for essential hypertension by concomitance of two therapeutic categories, according to sex and age of patient and problem status: United States, 1980

Sex, age, and problem status	Total	Therapeutic category[1]			
		No diuretics or hypotensive agents[2]	Diuretics	Hypotensive agents[2]	Diuretics and hypotensive agents[2]
Sex		Percent distribution			
Both sexes	100.0	25.6	28.7	23.7	22.0
Female	100.0	25.6	29.8	23.9	20.7
Male	100.0	25.6	26.7	23.4	24.3
Age					
Under 45 years	100.0	22.7	32.5	21.3	23.5
45–64 years	100.0	23.6	30.3	23.2	22.9
65 years and over	100.0	28.7	25.8	24.9	20.6
Problem status					
New problem	100.0	21.5	35.3	21.8	21.4
Old problem	100.0	26.0	28.1	23.9	22.0

[1] Based on the classification system of the American Hospital Formulary Service. See reference 5.
[2] Includes propranolol, which is classified a cardiac drug by the American Hospital Formulary Service.

included both a diuretic and a hypotensive agent. Women patients were more likely to use a diuretic alone than a diuretic with a hypotensive agent, but the difference between these two categories for men was not statistically significant. A higher proportion of visits fell in the diuretics only group than in the dual category when patients visited for new problems. This suggests a degree of compliance with the recommendation to use a diuretic without other drugs in the early stage of treatment. The predominance of the diuretic only category did not change for different age groups.

It is apparent from the repetition of generic descriptors shown with the drug entries listed in table 22 that some brand name drugs consist of the same generic substances as others. The most frequently utilized generic substances are shown in table 23. Hydrochlorothiazide (10.5 million uses) was clearly the most frequently used generic ingredient.

Ischemic heart disease

There were 10.4 million visits for ischemic heart disease (table 24). The number of visits by men (59 percent) exceeded those by women (41 percent). This is one of the few conditions not related to the sex of the patient found in NAMCS where the visit rate of male patients exceeded that of female patients. However, higher visit rates do not necessarily portend higher drug mention rates since there was no statistically significant difference betwen the rates of the two sexes. But the drug mention rate of 2.54 and the drug intensity rate of 2.93, regardless of sex, were higher than any other rates in this report.

Age of the patient was a more influential variable in the use of medication therapy than the sex of the patient.

Patients 65 years and over were more likely to have drugs prescribed than younger patients were, and the average number of drugs per drug visit was also higher for older patients.

About 88 percent of all visits were made by patients returning for care of old problems, and their drug mention rate of 2.62 was significantly greater than the rate of 2.00 for patients with new problems. When the return visit was caused by a flareup of a chronic problem rather than a routine return visit or an acute problem, medication therapy was proportionately more frequent. About 95 percent of visits due to a flareup of a chronic condition included drugs compared to 86 percent of visits of a more routine nature. The mean number of medications during drug visits necessitated by the intensification of a chronic problem was 2.89, higher than the average number for all visits.

The high drug rates associated with this diagnosis were due to the relatively large proportions of visits with three, or four or more drugs (table 25). On the average, 20 percent of the visits included three drugs and 29 percent included four or more, a total of 49 percent in the highest categories of drug mentions. This total exceeded that of any other diagnosis in this report. This was particularly evident in the oldest age group with a total of 52 percent of the visits in the two highest medication categories.

Predictably, 53 percent of all medications used with ischemic heart disease were cardiovascular drugs (table 26). This therapeutic category constituted a larger proportion of visits by male patients (56 percent) than by female patients (48 percent), but the differences by age were not statistically significant. Diuretics were also prominent among therapeutic categories and accounted for 13 percent of drug mentions. This class of drugs con-

stituted a larger share of mentions for patients 65 years of age and older than it did for younger patients.

Table 27 shows that 15 drugs entered on Patient Record Forms by physicians whose patients had ischemic heart disease constituted 57 percent of their mentions. Three cardiac drugs—Inderal, Lanoxin, and Digoxin—accounted for 21 percent. As mentioned previously, the beta-blocker Inderal is widely used for both essential hypertension and ischemic heart disease. This is substantiated in tables 22 and 27. Another 20 percent comprised the vasodilating agents—Isordil, Nitrogly-cerin, Nitro-bid, Nitrostat, and Sorbitrate. Lasix, Dyazide, and Hydrochlorothiazide were the most prominent diuretics, totaling about 9 percent of drug mentions. Aspirin, Valium, and Coumadin (2 percent each) were also among the drugs most frequently prescribed. About 1 percent of mentions were influenza virus vaccine.

Nitroglycerin (about 3 million uses) and isosorbide (2.7 million) were the generic substances most frequently used as single ingredient vasodilating agents (table 28). Propranolol (2.8 million) and digoxin (2.9 million) were the leading substances used in cardiac drugs.

Table 19. Number of office visits for essential hypertension, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]25,137	22,282	88.6	46,484	1.85	2.09
Female...	15,787	14,203	90.0	30,365	1.92	2.14
Male	9,350	8,079	86.4	16,119	1.72	2.00
Age						
Under 45 years......................................	3,019	2,532	83.9	5,068	1.68	2.00
45–64 years..	11,458	10,361	90.4	21,096	1.84	2.04
65 years and over...................................	10,660	9,388	88.1	20,320	1.91	2.16
Race						
White..	22,048	19,507	88.5	40,965	1.86	2.10
Black..	2,940	2,637	89.7	5,245	1.78	1.90
Problem status						
New problem	2,155	1,692	78.5	3,380	1.57	2.00
Old problem	22,981	20,590	89.6	43,103	1.88	2.09
Major reason for visit						
Acute problem	1,985	1,611	81.2	3,218	1.62	2.00
Chronic problem, routine.............................	19,209	17,339	90.3	36,471	1.90	2.10
Chronic problem, flareup.............................	2,114	1,946	92.1	4,376	2.07	2.25
Post surgery/post injury..............................	*81	*63	*78.6	*197	*2.43	*3.13
Non-illness care....................................	1,748	1,322	75.6	2,221	1.27	1.68

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 20. Number and percent distribution of office visits for essential hypertension by number of medications, according to selected characteristics: United States, 1980

Selected characteristic	All visits	Number of medications					
		Total	None	1	2	3	4 or more
Sex	Number in thousands	Percent distribution					
Both sexes	[1]25,137	100.0	11.4	35.5	27.4	14.2	11.5
Female	15,787	100.0	10.0	34.8	28.0	14.2	13.1
Male	9,350	100.0	13.6	36.8	26.5	14.1	9.2
Age							
Under 45 years......................................	3,019	100.0	16.1	37.8	25.0	*9.7	*11.6
45–64 years...	11,458	100.0	9.6	38.0	27.9	14.2	10.4
65 years and over	10,660	100.0	11.9	32.3	27.6	15.4	12.7
Race							
White	22,048	100.0	11.5	35.8	26.4	14.2	12.1
Black..	2,940	100.0	*10.3	33.1	35.2	13.7	*7.7
Problem status							
New problem	2,155	100.0	21.5	31.4	27.7	*10.2	*9.2
Old problem..	22,981	100.0	10.4	35.9	27.4	14.5	10.8
Major reason for visit							
Acute problem	1,985	100.0	*18.8	36.5	23.3	*11.3	*10.1
Chronic problem, routine.............................	19,209	100.0	9.7	35.2	28.9	13.9	12.3
Chronic problem, flareup.............................	2,114	100.0	*8.0	32.4	27.2	21.3	*11.2
Post surgery/post injury..............................	*81	100.0	...	...	...	...	...
Non-illness care.....................................	1,748	100.0	24.4	43.0	*17.8	*11.9	*2.9

[1]Includes races other than white and black not shown as separate categories.

Table 21. Number, percent distribution, and rate per 100 visits of drug mentions in office visits for essential hypertension by therapeutic category, according to sex and age of the patient: United States, 1980

Therapeutic category[1]	Both sexes	Sex		Age		
		Female	Male	Under 45 years	45–64 years	65 years and over
	Number of mentions in thousands					
All therapeutic categories......................................	46,484	30,365	16,119	5,068	21,096	20,320
	Percent distribution					
Total..	100.0	100.0	100.0	100.0	100.0	100.0
Cardiovascular drugs..	34.8	33.2	37.7	32.5	33.3	36.8
Hypotensive agents.....................................	23.9	23.7	24.2	24.4	23.3	24.3
Cardiac drugs..	8.0	6.7	10.5	*7.1	8.3	7.9
Vasodilating agents....................................	2.5	2.6	*2.3	*0.8	*1.6	*3.8
Central nervous system drugs..............................	12.5	13.6	10.5	8.5	13.2	12.8
Analgesics and antipyretics	5.6	6.4	*4.2	*1.9	5.3	6.9
Sedatives and hypnotics................................	4.1	4.2	*3.8	*3.5	4.4	*3.8
Psychotherapeutic agents..............................	1.9	*2.0	*1.7	*1.5	*2.4	*1.5
Electrolytic, caloric, and water balance.......................	34.2	32.8	36.8	41.7	36.5	29.9
Diuretics..	29.6	28.6	31.5	34.4	32.1	25.8
Replacement solutions	4.1	4.0	*4.3	*5.6	4.1	*3.8
Gastrointestinal drugs......................................	2.8	2.9	*2.5	*2.5	*2.2	*3.4
Hormones and synthetic substitutes	4.0	4.7	*2.6	*3.2	4.2	*3.9
All other therapeutic categories............................	11.7	12.8	9.9	*11.6	10.6	13.2
	Drug mention rate per 100 visits					
Cardiovascular drugs..	35	64	65	55	61	70
Hypotensive agents.....................................	44	46	42	41	43	46
Cardiac drugs..	15	13	18	12	15	15
Vasodilating agents....................................	5	5	4	*1	*3	*7
Central nervous system drugs..............................	23	26	18	*14	24	24
Analgesics and antipyretics	10	12	7	*3	10	13
Sedatives and hypnotics................................	7	8	6	*6	8	*7
Psychotherapeutic agents..............................	*3	*4	*3	*3	*4	*3
Electrolytic, caloric, and water balance.......................	63	63	63	70	67	57
Diuretics..	55	55	54	58	59	49
Replacement solutions	*8·	*8	*7	*9	8	*7
Gastrointestinal drugs......................................	5	6	*4	*4	*4	*6
Hormones and synthetic substitutes	7	9	*5	*5	8	*7

[1] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 22. Number and percent distribution of drug mentions in office visits for essential hypertension by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
All drugs	46,484	100.0	. . .	. . .
Dyazide................................	2,583	5.6	triamterene, hydrochlorothiazide	diuretics
Hydrochlorothiazide......................	2,449	5.3	hydrochlorothiazide	diuretics
Aldomet................................	2,284	4.9	methyldopa	hypotensive agents
Inderal................................	2,090	4.5	propranolol	cardiac drugs
Hydrodiuril	1,836	4.0	hydrochlorothiazide	diuretics
Hygroton...............................	1,779	3.8	chlorthalidone	diuretics
Lopressor	1,569	3.4	metoprolol	hypotensive agents
Lasix	1,325	2.9	furosemide	diuretics
Aldoril................................	910	2.0	methyldopa, hydrochlorothiazide	hypotensive agents
Diuril.................................	869	1.9	chlorothiazide	diuretics
Ser-ap-es..............................	787	1.7	reserpine, hydralazine, hydrochlorothiazide	hypotensive agents
Aldactazide............................	786	1.7	spironolactone, hydrochlorothiazide	diuretics
Reserpine	730	1.6	reserpine	hypotensive agents
Apresoline.............................	650	1.4	hydralazine	hypotensive agents
Potassium.............................	644	1.4	potassium replacement solution	replacement solution
Slow-K	619	1.3	potassium replacement solution	replacement solution
Esidrix...............................	588	1.3	hydrochlorothiazide	diuretics
Valium................................	578	1.2	diazepam	sedatives or hypnotics
Motrin................................	557	1.2	ibuprofen	hypotensive agents
Minipress	529	1.1	prazosin	hypotensive agents
Corgard...............................	479	1.0	nadolol	cardiac drugs
Lanoxin...............................	447	1.0	digoxin	cardiac drugs
Influenza virus vaccine, type A, B	415	0.9	influenza virus vaccine	vaccines
Enduron...............................	402	0.9	methyclothiazide	diuretics
Catapres	402	0.9	clonidine	hypotensive agents
Aspirin................................	*362	*0.8	aspirin	analgesics and antipyretics
Digoxin	*353	*0.8	digoxin	cardiac drugs
Enduronyl	*344	*0.7	methyclothiazide, deserpidine	hypotensive agents
Diabinese	*319	*0.7	chlorpropamide	anti-diabetic agents
Vitamin B-12...........................	*303	*0.7	vitamin B-12	vitamin B complex
Residual	18,496	39.8	. . .	. . .

[1] Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name.
[2] If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 23. Number and percent distribution of drugs used in office visits for essential hypertension by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Aspirin	730	100.0	66.6	33.4
Chlorothiazide	1,304	100.0	69.2	30.8
Chlorthalidone	2,435	100.0	78.5	21.5
Clonidine	737	100.0	62.4	37.6
Diazepam	588	100.0	100.0	-
Digoxin	800	100.0	100.0	-
Furosemide	1,325	100.0	100.0	-
Hydralazine	1,763	100.0	44.5	55.5
Hydrochlorothiazide	10,536	100.0	46.8	53.2
Ibuprofen	557	100.0	100.0	-
Metoprolol	1,583	100.0	100.0	-
Methyclothiazide	784	100.0	53.8	46.2
Methyldopa	3,410	100.0	68.2	31.8
Metolazone	405	100.0	100.0	-
Nadolol	479	100.0	100.0	-
Prazosin	542	100.0	100.0	-
Propranolol	2,379	100.0	94.1	5.9
Rauwolfia	437	100.0	61.2	38.8
Reserpine	2,665	100.0	30.7	69.3
Spironolactone	847	100.0	7.1	92.9
Triamterene	2,612	100.0	1.1	98.9

Table 24. Number of office visits for ischemic heart disease, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
Sex	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Both sexes	[4]10,430	9,043	86.7	26,523	2.54	2.93
Female	4,249	3,787	- 89.1	10,940	2.57	2.89
Male	6,181	5,256	85.0	15,583	2.52	2.96
Age						
Under 45 years	*329	*245	*74.5	*698	*2.12	*2.85
45–64 years	4,071	3,360	82.6	9,374	2.30	2.79
65 years and over	6,030	5,437	90.2	16,452	2.73	3.03
Race						
White	9,955	8,655	86.9	25,402	2.55	2.93
Black	427	*340	79.5	967	2.26	2.84
Problem status						
New problem	1,280	995	77.8	2,565	2.00	2.58
Old problem	9,151	8,048	88.0	23,958	2.62	2.98
Major reason for visit						
Acute problem	1,380	1,201	87.1	2,948	2.14	2.45
Chronic problem, routine	6,668	5,705	85.6	17,212	2.58	3.02
Chronic problem, flareup	1,506	1,437	95.4	4,345	2.89	3.02
Post surgery/post injury	*362	*308	85.1	1,021	*2.82	*3.31
Non-illness care	514	391	76.0	998	1.94	2.55

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 25. Number and percent distribution of office visits for ischemic heart disease by number of medications, according to selected characteristics: United States, 1980

Selected characteristic	All visits	Number of medications					
		Total	None	1	2	3	4 or more
Sex	Number in thousands	Percent distribution					
Both sexes	[1]10,430	100.0	13.3	14.5	23.4	20.0	28.9
Female	4,249	100.0	10.9	18.5	23.2	18.2	29.2
Male	6,181	100.0	15.0	11.7	23.5	21.2	28.6
Age							
Under 45 years	*329	100.0	*25.6	*14.9	*16.6	*21.1	*21.9
45–64 years	4,071	100.0	17.5	17.0	21.6	18.6	25.3
65 years and over	6,030	100.0	9.8	12.8	25.0	20.8	31.6
Race							
White	9,955	100.0	13.1	14.9	22.9	19.7	29.4
Black	427	100.0	*20.5	*6.0	*30.6	*28.5	·*14.5
Problem status							
New problem	1,280	100.0	*22.2	*22.1	*18.5	*15.9	*21.3
Old problem	9,150	100.0	12.1	13.4	24.1	20.5	29.9
Major reason for visit							
Acute problem	1,380	100.0	*12.9	*21.8	28.5	*21.2	*15.6
Chronic problem, routine	6,668	100.0	14.4	11.5	23.6	20.7	29.7
Chronic problem, flareup	1,506	100.0	*4.6	*19.0	*19.8	*20.1	36.6
Post surgery/post injury	*362	100.0	. . .	. . .	. . .	. . .	. . .
Non-illness care	514	100.0	*24.0	*20.9	*17.9	*16.6	*20.6

[1]Includes races other than white and black not shown as separate categories.

Table 26. Number, percent distribution, and rate per 100 visits of drug mentions in office visits for ischemic heart disease by therapeutic category, according to sex and age of the patient: United States, 1980

Therapeutic category[1]	Both sexes	Sex		Age		
		Female	Male	Under 45 years	45–64 years	65 years and over
	Number of mentions in thousands					
All therapeutic categories	26,523	10,940	15,583	*698	9,374	16,452
	Percent distribution					
Total.	100.0	100.0	100.0	100.0	100.0	100.0
Cardiovascular drugs	52.9	48.3	56.1	*68.0	56.9	50.0
Cardiac drugs	25.6	22.2	28.1	*24.4	28.1	24.3
Hypotensive agents	4.0	*3.8	*4.1	4.0	*3.4	*4.2
Vasodilating agents	23.0	22.3	23.4	*33.3	24.9	21.4
Central nervous system drugs	11.7	12.8	11.0	*11.0	11.1	12.1
Analgesics and antipyretics	5.3	*5.8	*4.9	*5.4	*4.5	5.7
Sedatives and hypnotics	4.4	*4.4	*4.4	*5.4	*5.8	*3.5
Electrolytic, caloric, and water balance	16.1	16.8	15.6	*9.6	13.2	18.0
Diuretics	12.9	12.7	13.0	*8.1	9.6	15.0
Hormones and synthetic substitutes.	4.0	*5.5	*2.9	*1.9	*4.7	*3.7
All other therapeutic categories	15.3	16.6	14.4	*9.5	14.1	16.2
	Drug mention rate per 100 visits					
Cardiovascular drugs	135	124	141	*144	131	136
Cardiac drugs	65	57	71	*52	65	66
Hypotensive agents	10	*10	*10	*13	*8	*12
Vasodilating agents	58	57	59	*72	57	58
Central nervous system drugs	30	33	28	*23	26	33
Analgesics and antipyretics	13	*15	*12	*11	*10	16
Sedatives and hypnotics	12	*11	*11	*11	*13	*10
Electrolytic, caloric, and water balance	41	43	39	*20	30	49
Diuretics	33	33	33	*17	22	41
Hormones and synthetic substitutes.	10	*14	*7	*4	*11	*10

[1]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 27. Number and percent distribution of drug mentions in office visits for ischemic heart disease by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
All drugs.	26,523	100.0	. . .	. . .
Inderal.	2,739	10.3	propranolol	cardiac drugs
Isordil	2,188	8.3	isosorbide	vasodilating agents
Nitroglycerin.	1,835	6.9	nitroglycerin	vasodilating agents
Lanoxin.	1,665	6.3	digoxin	cardiac drugs
Lasix.	1,295	4.9	furosemide	diuretics
Digoxin.	1,201	4.5	digoxin	cardiac drugs
Dyazide.	708	2.7	triamterene, hydrochlorothiazide	diuretics
Nitro-bid.	607	2.3	nitroglycerin	vasodilating agents
Aspirin	516	1.9	aspirin	analgesics and antipyretics
Valium.	419	1.6	diazepam	sedatives and hypnotics
Nitrostat.	*394	*1.5	nitroglycerin	vasodilating agents
Coumadin.	*390	*1.5	warfarin	coagulents and anticoagulents
Sorbitrate	*366	*1.4	isosorbide	vasodilating agents
Influenza virus vaccine, type A, B.	*366	*1.4	influenza virus vaccine	vaccines
Hydrochlorothiazide.	*316	*1.2	hydrochlorothiazide	diuretics
Residual	11,517	43.4	. . .	. . .

[1]Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name.
[2]If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3]Based on the classification system of the American Hospital Formulary Service. See reference 5.

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Table 28. Number and percent distribution of drugs used in office visits for ischemic heart disease by form of use, according to most frequently used generic substances: United States, 1980

| Generic substance | Drugs used | Form of use | | |
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Aspirin...	766	100.0	83.7	16.3
Diazepam	435	100.0	100.0	-
Digoxin	2,866	100.0	100.0	-
Furosemide...	1,295	100.0	100.0	-
Hydrochlorothiazide...	1,583	100.0	65.0	35.0
Isosorbide..	2,652	100.0	100.0	-
Nitroglycerin..	2,958	100.0	100.0	-
Potassium replacement solutions	648	100.0	96.6	3.4
Propranolol...	2,841	100.0	99.9	0.1
Quinidine...	454	100.0	100.0	-
Triamterine	744	100.0	4.8	95.2
Warfarin	426	100.0	100.0	-

Section V. Otitis media and selected respiratory diseases

Suppurative and unspecified otitis media

Children under 3 years of age were the patients in 43 percent of the estimated 11.7 million visits for otitis media, and children 3–14 years of age accounted for 37 percent—a total of 80 percent of visits by patients under 15 years of age (table 29).

The drug mention rate for the youngest group (1.56) was not significantly higher than that of patients 3–14 years of age (1.46); however, if the patient was 15 years of age or older, the drug mention rate (1.67) was higher than that of patients 3–14 years.

Visits were about evenly divided between new and old problems, but 94 percent of new problem visits included drugs compared to only 78 percent of return visits. Some of the latter group were probably followup visits in which medication was discontinued.

In most of the visits the diagnosis shown on the Patient Record Form did not indicate whether the patient's case of otitis media was acute or chronic (that is, almost all were coded as ICD–9–CM 382.9, unspecified). However, table 29 shows that in about 77 percent the major reason for the visit was described as an acute problem, and 90 percent of those visits included medication therapy.

Five therapeutic categories incorporated about 90 percent of the drug mentions (table 30). The majority were anti-infective agents (51 percent). These were chiefly antibiotics. The next largest group used were antihistamine drugs (19 percent). Skin and mucous membrane preparations accounted for 8 percent; eye, ear, nose and throat preparations were named in 6 percent; and expectorants and cough preparations in 5 percent.

The entry names of 14 drugs that accounted for 86 percent of the total mentions are listed in table 31. The most frequently named antibiotics were Amoxicillin (15 percent), Ampicillin (10 percent), Amoxil (6 percent), Penicillin (6 percent), Ceclor (4 percent), and Larotid (4 percent). The leading antihistamine drugs ordered were Dimetapp (12 percent) and Actifed (4 percent). Cortisporin, a topical anti-inflammatory agent, was the fourth most frequently used drug (7 percent). Amoxicillin, with over 3 million uses, ranked first among the generic substances used to treat otitis media as shown in table 32.

Acute upper respiratory infection of multiple or unspecified sites (acute URI)

Three ICD–9–CM codes (460, 461, and 465) were combined to form this diagnostic grouping because the diseases they represent present very similar symptoms and thus medicinal use of drugs differs minimally among them.

There were close to 17 million visits for acute URI (table 33), and in 94 percent of them an average of 2.02 drugs were utilized (table 33). Patients 45–64 years of age made only 12 percent of the visits, but had a higher drug mention rate (2.54) than did patients under 15 years of age (1.65) who made 45 percent of the visits. About 50 percent of visits by members of the older age group included three, or four or more drugs, whereas only 13 percent of visits by the younger group included the same numbers (table 34).

As in most acute, self-limiting illnesses, initial visits exceeded return visits. Visits for new problems were about twice as many as those for old problems. Drug rates, however, did not differ significantly in these two situations.

The 32 million drug mentions with acute URI were mainly (80 percent) in four therapeutic categories: antihistamine drugs, anti-infective agents, central nervous system drugs, and expectorants and cough preparations (table 35). A broad spectrum of drugs from each therapeutic group was used. The relatively long list of drug names in table 36 covers only 54 percent of all mentions. When sampling error is considered, many estimates in this table do not differ significantly from other near estimates. The antibiotics Penicillin, Tetracycline, and E.E.S., which head the list, were ordered with

almost equal frequency, and together accounted for 11 percent of mentions. Actifed (4 percent) and Dimetapp (3 percent) were predominant among antihistamines. Phenergan expectorant with codeine accounted for 3 percent of drug mentions with this diagnosis.

It was noted in section I that a higher than average proportion of over-the-counter drugs was associated with visits for acute URI. Among these nonprescription drugs were Aspirin, Dimetane, Tylenol, Novahistine, Robitussin, Sudafed, and Triaminic.

Generic substances are listed in table 37. Phenylephrine, phenylpropanolamine, and pseudoephedrine are found in many drugs identified by a wide variety of trade names. Therefore, it is not surprising to find over 3 million uses of each of these substances in medication therapy for acute URI. This table reflects the principal ingredients of the most frequently named drugs in table 36, but provides a more complete total use of generic substances.

Acute pharyngitis or acute laryngitis and tracheitis

This diagnostic group was formed from ICD-9-CM codes 462 and 464. Table 38 shows that about half of the 10.3 million visits for this condition were made by children under 15 years of age. Only 13 percent were made by patients 45 years of age and over, but the drug mention rate for the oldest group (1.99) was higher than the drug mention rate for the youngest group (1.51).

New problem visits (6.8 million) exceeded old problem visits (3.5 million), and almost all visits were for acute problems (9.3 million). However, drug rates did not vary appreciably based on the type of visit.

Anti-infective agents accounted for 54 percent of drug mentions. An additional 30 percent were divided about equally among antihistamine drugs, central nervous system drugs, and expectorants and cough preparations (table 35). Table 36 shows that, by entry name, Penicillin (11 percent) and Ampicillin (7 percent) were the most frequently mentioned antibiotics. Aspirin was the chief central nervous system drug used (5 percent). Antihistamines and expectorants and cough preparations are not listed among the most frequent drug mentions because the diversity of entry names in these categories precluded high frequency for any one.

Table 39 shows that over 3.4 million drug mentions were of the generic substance penicillin. Because table 36 shows that there were 1.8 million entries called "Penicillin," it is apparent from table 39 that there were entries of various brand name drugs that used this same generic substance.

Bronchitis, acute; or not specified as acute or chronic

When acute bronchitis was specified on the Patient Record Form as the principal diagnosis it was coded ICD-9-CM 466, but when it was not qualified as to acute or chronic, it was coded ICD-9-CM 490. However, there are indications that the physician intended the diagnosis to mean acute bronchitis because the major reason for visit in these unqualified cases was almost always classified by the physician as an "acute problem." For this reason the two codes were combined for this analysis.

Of the 8.3 million visits for bronchitis, 53 percent were made by female patients and 47 percent by males—approximately the distribution of the population used in the National Ambulatory Medical Care Survey (NAMCS). The drug mention rate for female patients (2.09) was higher than that of male patients (1.82). Among age groups, proportionately more visits included patients under 15 years of age. But the drug mention rate of the youngest group (1.72) was the lowest of those associated with the age groups shown in table 40.

Drugs in the therapeutic categories of anti-infective agents (42 percent) and expectorants and cough preparations (20 percent) were the most frequently used medications (table 35). Antihistamine drugs accounted for 9 percent of drug mentions and spasmolytic agents for 6 percent. The most common treatment regimens consisted of an antibiotic alone, or an antibiotic with an expectorant or cough preparation. About 33 percent of the visits with an antibiotic noted did not include antihistamines or expectorants and cough preparations (although other drugs may have been ordered). Both an antibiotic drug and an expectorant or cough preparation were prescribed in 30 percent of drug visits. Treatment varied depending on the age group of the patient. If the patient was under 25 years or over 64 years of age, an antibiotic alone was the most likely therapy. If the patient was from 25 to 64 years old, then an antibiotic plus an expectorant or cough preparation were likely to be prescribed.

By entry name, the frequencies of the antibiotics Amoxicillin, Ampicillin, Penicillin, Tetracycline, and Erythromycin were not very different when sampling error was taken into account (table 36). Together they accounted for 20 percent of drug mentions. Phenergan and Dimetane (an over-the-counter drug) were the most commonly named antihistamines, and totaled 7 percent. Although expectorants and cough preparations accounted for 20 percent of the drug mentions, only Phenergan Expectorant with Codeine (prescription, 4 percent) and Robitussin (nonprescription, 2 percent) are included in table 36. A wide variety of prescription and over-the-counter drugs were mentioned in this category. Thus, some individual estimates did not meet National Center for Health Statistics standards of reliability. This probably reflects the availability of different drugs in this therapeutic category. The large residual of 65 percent, which includes many drugs with estimates of less than 300,000, attests to the diversity of physicians' choices.

The generic substances most often used in drugs

prescribed for patients with bronchitis are shown in table 41. Except for the antibiotics, these substances were for the most part ingredients in combination drugs.

It was shown in table 4 that about 13 percent of drugs in visits for bronchitis were under Federal control. Of these approximately 2 million mentions of controlled drugs, 74 percent (or 1.5 million) were in schedule V (the least potential for abuse and dependence). This was due chiefly to the various antitussive drugs that included a relatively small amount of codeine as a secondary ingredient. Table 41 shows that codeine was an ingredient in 1.4 million drug mentions, 96 percent of which were in combination drugs.

Asthma

Patients under 15 years of age accounted for the largest proportion of visits for asthma (39 percent of the 5.9 million visits assigned this principal diagnosis), but their drug mention rate of 1.50 was the lowest of the age groups shown in table 42. The drug mention rate increased as the patient's age group increased up to age group 45–64 years with a rate of 2.70.

The large proportion of visits by patients returning for care of old problems (80 percent) is characteristic of chronic diseases. However, problem status was not a factor in the rate of drug mentions since the difference between new and old problem rates was not statistically significant.

Table 35 shows that one fourth of the drugs mentioned were spasmolytic agents. The most frequently mentioned specific drugs in this group were Theo-dur, Slo-phyllin, and Marax, which together accounted for about 10 percent of drug mentions (table 36). Autonomic drugs (17 percent, chiefly sympathomimetic) constituted the next largest therapeutic category prescribed. Representative of this group were Alupent (5 percent) and Brethine (4 percent). Although there were 1.6 million total mentions of antihistamine drugs, there were no specific drugs in this category that were predominant. The adrenals, Prednisone and Vanceril, accounted for 9 percent of drugs used.

"Allergy relief or shots" was noted on about 10 percent of the Patient Record Forms, but it was not possible to identify the allergens used.

The relatively frequent use of the generic spasmolytic agent theophylline in treating patients with asthma is underscored by the data in table 43. About 71 percent of the 2.3 million uses was as a single ingredient drug and 29 percent in combination drugs. Slo-phyllin and Theo-dur are examples of the former use; Marax, the latter. Metaproterenol and terbutaline, which are sympathomimetic agents, are represented among specific drugs shown in table 36 by Alupent and Brethine, respectively.

Allergic rhinitis

The 8.4 million visits for allergic rhinitis shown in table 44 were equally divided between female and male patients, but the drug mention rate of females was higher than that of males. Two age groups, under 15 years and 25–44 years, accounted for 30 percent and 33 percent of visits, respectively, and their drug mention rates were about the same. The highest drug mention rate was associated with age group 45–64 years.

The major reason for two of three visits was a routine chronic problem with a drug mention rate of 1.14. But if the major reason was an acute problem, the drug mention rate rose to 1.51.

About 90 percent of the visits included medication therapy and one drug only was mentioned in 76 percent of those drug visits.

Drugs in the therapeutic category of antihistamines accounted for 62 percent of total mentions (table 35). As discussed previously, antihistamines are used in such a wide variety of prescription and over-the-counter drugs and offer so many choices to both physician and patient that specific drug entries do not accumulate in sufficient frequency in NAMCS to provide reliable data. The largest number of such mentions was for Dimetapp (table 36).

Similar to asthma visits, allergy relief or shots without further qualification was entered as medication therapy in 41 percent of mentions. However, ragweed and related pollen allergens was named in 4 percent of mentions.

Generic substances most frequently found in drugs used to treat allergic rhinitis are detailed by form of use in table 43.

Table 29. Number of office visits for suppurative and unspecified otitis media, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]11,748	10,067	85.7	18,168	1.55	1.80
Female...	5,562	4,842	87.1	8,868	1.59	1.83
Male	6,185	5,225	84.5	9,299	1.50	1.78
Age						
Under 3 years.....................................	5,032	4,405	87.5	7,851	1.56	1.78
3–14 years.......................................	4,315	3,597	83.4	6,316	1.46	1.76
15 years and over..................................	2,402	2,066	86.0	4,001	1.67	1.94
Race						
White..	11,019	9,511	86.3	17,005	1.54	1.79
Black..	518	397	76.7	877	1.69	2.21
Problem status						
New problem	5,797	5,430	93.7	10,218	1.76	1.88
Old problem	5,951	4,636	77.9	7,950	1.34	1.71
Major reason for visit						
Acute problem	9,031	8,126	90.0	15,144	1.68	1.86
Chronic problem, routine...........................	951	556	58.4	813	0.85	1.46
Chronic problem, flareup	1,214	1,064	87.7	1,731	1.43	1.63
Post surgery/post injury............................	*154	*19	*12.2	*19	*0.12	*1.00
Non-illness care...................................	*398	*302	*75.8	*461	*1.16	*1.53

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Table 30. Number, percent distribution, and rate per 100 visits of drug mentions in officie visits for suppurative and unspecified otitis media by therapeutic category: United States, 1980

Therapeutic category[1]	Drug mentions		
	Number in thousands	Percent distribution	Rate per 100 visits
All therapeutic categories..	18,168	100.0	155
Antihistamine drugs	3,429	18.9	29
Anti-infective agents..	9,265	51.0	79
Expectorants and cough preparations	919	5.1	8
Eye, ear, nose and throat preparations	1,147	6.3	8
Skin and mucous membrane preparations...	1,493	8.2	13
All other therapeutic categories..	1,915	10.5	16

[1] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 31. Number and percent distribution of drug mentions in office visits for suppurative and unspecified otitis media by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
All drugs....................	11,748	100.0	...	...
Amoxicillin...................	1,786	15.2	amoxicillin	antibiotics
Dimetapp....................	1,414	12.0	brompheniramine, phenylephrine, phenylpropranolamine	antihistamine drugs
Ampicillin....................	1,209	10.3	ampicillin	antibiotics
Cortisporin..................	870	7.4	polymyxin B, bacitracin, neomycin, hydrocortisone	anti-inflammatory agents
Amoxil	750	6.4	amoxicillin	antibiotics
Penicillin	687	5.9	penicillin	antibiotics
Septra......................	550	4.7	sulfamethoxazole, trimethoprim	sulfonamides
Actifed	520	4.4	triprolidine, pseudoephedrine	antihistamine drugs
Ceclor......................	480	4.1	cefaclor	antibiotics
Larotid	457	3.9	amoxicillin	antibiotics
Vitamin B-12	407	3.5	vitamin B-12	vitamin B complex
Gantrisin....................	*355	*3.0	sulfisoxazole	sulfonamides
E.E.S.	*326	*2.8	erythromycin	antibiotics
Auralgan....................	*306	*2.6	antipyrine, benzocaine, glycerin	local anesthetics
Residual....................	1,630	13.9	...	...

[1] Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name.
[2] If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 32. Number and percent distribution of drugs used in office visits for suppurative and unspecified otitis media by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Alcohol	1,756	100.0	-	100.0
Amoxicillin	3,078	100.0	100.0	-
Ampicillin	1,520	100.0	100.0	-
Antipyrine	410	100.0	-	100.0
Benzocaine...	404	100.0	5.6	94.4
Brompheniramine..	1,558	100.0	2.5	97.5
Cefaclor..	480	100.0	100.0	-
Chlorpheniramine..	1,013	100.0	6.3	93.7
Erythromycin...	1,140	100.0	82.5	17.5
Guaifenesin..	556	100.0	3.6	96.4
Hydrocortisone...	988	100.0	-	100.0
Neomycin	1,140	100.0	-	100.0
Penicillin...	1,256	100.0	82.7	17.3
Phenylephrine..	2,521	100.0	9.6	90.4
Phenylpropranolamine	2,347	100.0	-	100.0
Polymixin B...	1,129	100.0	0.8	99.2
Pseudoephedrine	1,136	100.0	23.6	76.4
Sulfamethoxazole..	989	100.0	1.3	98.7
Sulfisoxazole...	563	100.0	64.5	35.5

Table 33. Number of office visits for acute upper respiratory infections of multiple or unspecified sites (acute URI), number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]16,969	15,977	94.2	32,311	1.90	2.02
Female...	9,112	8,634	94.8	18,002	1.98	2.09
Male	7,857	7,343	93.5	14,309	1.82	1.95
Age						
Under 15 years...................................	7,677	7,152	93.2	12,654	1.65	1.77
15–24 years......................................	2,295	2,113	92.1	4,264	1.86	2.02
25–44 years......................................	3,594	3,463	96.4	7,169	1.99	2.07
45–64 years......................................	2,058	1,941	94.3	5,222	2.54	2.69
65 years and over.................................	1,345	1,309	97.3	3,001	2.23	2.29
Race						
White..	14,901	14,064	94.4	28,597	1.92	2.03
Black..	1,880	1,735	92.3	3,351	1.78	1.93
Problem status						
New problem	11,405	10,697	93.8	21,207	1.86	1.98
Old problem	5,564	5,280	94.9	11,104	2.00	2.10
Major reason for visit						
Acute problem	15,706	14,866	94.7	29,926	1.91	2.01
Chronic problem, routine...........................	414	*366	*88.5	*694	*1.68	*1.90
Chronic problem, flareup...........................	594	554	93.3	1,431	2.41	2.58
Non-illness care..................................	*255	*192	*75.2	*259	*1.02	*1.35

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 34. Number and percent distribution of office visits for acute upper respiratory infections of multiple or unspecified sites (acute URI) by number of medications, according to selected characteristics: United States, 1980

Selected characteristic	All visits	Number of medications					
		Total	None	1	2	3	4 or more
Sex	Number in thousands	Percent distribution					
Both sexes	[1]16,969	100.0	5.8	33.8	36.0	15.7	8.7
Female	9,112	100.0	5.2	32.0	36.6	15.9	11.2
Male	7,857	100.0	6.5	36.0	35.3	15.6	6.5
Age							
Under 15 years	7,677	100.0	6.8	38.9	40.9	9.6	*3.7
15–24 years	2,295	100.0	*7.9	33.8	33.7	14.9	*9.6
25–44 years	3,594	100.0	*3.7	33.7	34.4	19.7	*8.6
45–64 years	2,058	100.0	*5.7	20.1	24.6	27.0	22.7
65 years and over	1,345	100.0	*2.7	26.4	33.5	*24.1	*13.2
Race							
White	14,901	100.0	5.6	34.1	35.2	16.1	8.9
Black	1,880	100.0	*7.7	32.8	41.2	*11.7	*6.6
Problem status							
New problem	11,405	100.0	6.2	34.2	36.4	15.4	7.8
Old problem	5,564	100.0	*5.1	33.2	35.2	16.3	10.2
Major reason for visit							
Acute problem	15,706	100.0	5.4	33.8	36.5	16.2	8.2
Chronic problem, routine	414	100.0	*11.5	*31.1	*40.2	*13.7	*3.5
Chronic problem, flareup	594	100.0	*6.7	*31.1	*24.1	*10.9	*27.2
Non-illness care	*255	100.0	...	...	...	...	...

[1]Includes races other than white and black not shown as separate categories.

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Table 35. Number, percent distribution, and rate per 100 visits of drug mentions in office visits for selected respiratory conditions by therapeutic category: United States, 1980

Respiratory condition and therapeutic category[1]	Drug mentions		
	Number in thousands	Percent distribution	Rate per 100 visits
Acute URI.	32,311	100.0	190
Antihistamine drugs	6,180	19.1	36
Anti-infective agents	11,943	37.0	70
Central nervous system drugs.	2,311	7.2	14
Expectorants and cough preparations	5,361	16.6	32
All other therapeutic categories	6,516	20.1	...
Acute pharyngitis or acute laryngitis and tracheitis	16,139	100.0	157
Antihistamine drugs	1,747	10.8	17
Anti-infective agents.	8,713	54.0	85
Central nervous system drugs.	1,492	9.3	15
Expectorants and cough medicine.	1,648	10.2	16
All other therapeutic categories.	2,539	15.7	...
Bronchitis, acute; or not specified as acute or chronic.	16,349	100.0	196
Antihistamine drugs	1,469	9.0	18
Anti-infective agents.	6,909	42.3	83
Expectorants and cough preparations	3,187	19.5	38
Spasmolytic agents.	895	5.5	11
All other therapeutic categories.	3,889	23.7	...
Asthma.	11,655	100.0	197
Antihistamine drugs	1,620	13.9	27
Anti-infective agents.	1,443	12.4	24
Autonomic drugs.	1,970	16.9	33
Hormones and synthetic substitutes	1,289	11.1	22
Spasmolytic agents.	2,909	25.0	49
All other therapeutic categories.	2,424	20.7	...
Allergic rhinitis	10,479	100.0	124
Antihistamine drugs	6,442	61.5	76
Adrenals.	873	8.3	10
All other therapeutic categories.	3,164	30.2	...

[1] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 36. Number and percent distribution of drug mentions in office visits for selected respiratory conditions by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Principal diagnosis and name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
Acute upper respiratory infections of multiple or unspecified sites (acute URI)	32,311	100.0	. . .	. . .
Penicillin	1,353	4.2	penicillin	antibiotics
Tetracycline	1,191	3.7	tetracycline	antibiotics
E.E.S.	1,124	3.5	erythromycin	antibiotics
Actifed	1,121	3.5	triprolidine, pseudoephedrine	antihistamine drugs
Dimetapp	1,107	3.4	brompheniramine, phenylephrine, phenylpropanolamine	antihistamine drugs
Phenergan expectorant with codeine	1,022	3.2	promethazine, codeine, phenylephrine, guaiacolsulfonate	expectorants and cough preparations
Ampicillin	978	3.0	ampicillin	antibiotics
Phenergan	878	2.7	promethazine	antihistamine drugs
Amoxicillin	767	2.4	amoxicillin	antibiotics
Dimetane	746	2.3	brompheniramine	antihistamine drugs
Amoxil	674	2.1	amoxicillin	antibiotics
Erythromycin	650	2.0	erythromycin	antibiotics
Rondec	615	1.9	carbinoxamine, pseudoephedrine	antihistamine drugs
Terramycin	529	1.6	oxytetracycline	antibiotics
Aspirin	523	1.6	aspirin	analgesics and antipyretics
Naldecon	465	1.4	phenylpropanolamine, phenylephrine, phenyltoloxamine, chlorpheniramine	antihistamine drugs
Novahistine	446	1.4	phenylpropanolamine, chlorpheniramine	antihistamine drugs
Benylin Syrup	428	1.3	diphenhydramine	antihistamine drugs
E-mycin	407	1.3	erythromycin	antibiotics
Keflex	*374	*1.2	cephalexin	antibiotics
Tylenol	*359	*1.1	acetaminophen	analgesics and antipyretics
Drixoral	*341	*1.1	pseudoephedrine	antihistamine drugs
Robitussin	*329	*1.0	guaifenesin	expectorants and cough preparations
Sudafed	*323	*1.0	pseudoephedrine, chlorpheniramine	sympathomimetic drugs
Vibramycin	*308	*1.0	doxycycline	antibiotics
Triaminic	*305	*0.9	phenylopropanolamine, pheniramine, pyrilamine	antihistamine drugs
Residual	14,947	46.3	. . .	. . .
Acute pharyngitis or acute laryngitis and tracheitis	16,139	100.0	. . .	. . .
Penicillin	1,779	11.0	penicillin	antibiotics
Ampicillin	1,160	7.2	ampicillin	antibiotics
Aspirin	750	4.6	aspirin	analgesics and antipyretics
Pen-Vee-K	555	3.4	penicillin	antibiotics
Erythromycin	553	3.4	erythromycin	antibiotics
Tetracycline	452	2.8	tetracycline	antibiotics
V-cillin	447	2.8	penicillin	antibiotics
E.E.S.	430	2.7	erythromycin	antibiotics
Keflex	*377	*2.3	cephalexin	antibiotics
Celestone	*342	*2.1	betamethasone	adrenals
Amoxicillin	*304	*1.9	amoxicillin	antibiotics
Residual	8,990	55.7	. . .	. . .
Acute bronchitis and bronchiolitis or bronchitis, not specified as acute or chronic	16,349	100.0	. . .	. . .
Amoxicillin	759	4.6	amoxicillin	antibiotics
Phenergan	747	4.6	promethazine	antihistamine drugs
Ampicillin	740	4.5	ampicillin	antibiotics
Penicillin	678	4.1	penicillin	antibiotics
Tetracycline	615	3.8	tetracycline	antibiotics
Phenergan expectorant with codeine	583	3.6	promethazine, codeine, phenylephrine, potassium guaiacolsulfonate	expectorants and cough preparations
Erythromycin	432	2.6	erythromycin	antibiotics
Dimetane	421	2.6	brompheneramine	antihistamine drugs
E.E.S.	*368	*2.3	erythromycin	antibiotics
Robitussin	*342	*2.1	guaifenesin	expectorants and cough preparations
Residual	10,664	65.2	. . .	. . .

See footnotes at end of table.

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Table 36. Number and percent distribution of drug mentions in office visits for selected respiratory conditions by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980—Con.

Principal diagnosis and name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
Asthma	11,655	100.0	...	...
Allergy relief or shots[4]	1,141	9.8	undetermined	allergy relief, unspecified
Alupent	546	4.7	metaproterenol	sympathomimetic drugs
Prednisone	505	4.3	prednisone	adrenals
Theo-dur	486	4.2	theophylline	spasmolytic agents
Vanceril	441	3.8	beclomethasone	adrenals
Brethine	431	3.7	terbutaline	sympathomimetic drugs
Slo-phyllin	*354	*3.0	theophylline	spasmolytic agents
Marax	*301	*2.6	hydroxyzine, ephedrine, theophylline	spasmolytic agents
Residual	7,450	63.9	...	...
Allergic rhinitis	10,479	100.0	...	...
Allergy relief or shots[4]	4,249	40.6	undetermined	allergy relief, unspecified
Ragweed and related pollen allergens	444	4.2	pollen antigens	unclassified therapeutic agents
Dimetapp	*328	*3.1	brompheniramine, phenylephrine, phenylpropranolamine	antihistamine drugs
Residual	5,457	52.1	...	...

[1] Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name, or a therapeutic effect.
[2] If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3] Based on the classification system of the American Hospital Formulary Service. See reference 5.
[4] This was the most common mode of entry for allergy treatment.

Table 37. Number and percent distribution of drugs used in office visits for acute upper respiratory infections of multiple or unspecified sites (acute URI) by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Acetaminophen	774	100.0	70.4	29.6
Alcohol	3,517	100.0	-	100.0
Amoxicillin	1,831	100.0	100.0	-
Ampicillin	1,145	100.0	100.0	-
Aspirin	714	100.0	74.1	25.9
Brompheniramine	1,853	100.0	9.2	90.8
Carbinoxamine	623	100.0	1.3	98.7
Chlorpheniramine	2,461	100.0	11.0	89.0
Codeine	2,053	100.0	4.2	95.8
Dextromethorphan	1,156	100.0	4.5	95.5
Diphenhydramine	669	100.0	100.0	-
Erythromycin	2,777	100.0	97.4	2.6
Guaifenesin	1,892	100.0	0.8	99.2
Oxytetracycline	529	100.0	100.0	-
Penicillin	2,189	100.0	94.9	5.1
Pheniramine	430	100.0	-	100.0
Phenylephrine	3,188	100.0	2.9	97.1
Phenylpropanolamine	3,937	100.0	0.3	99.7
Potassium guaicolsulfonate	1,758	100.0	-	100.0
Promethazine	1,900	100.0	8.1	91.9
Pseudoephedrine	3,124	100.0	12.5	87.5
Pyrilamine	504	100.0	-	100.0
Sodium citrate	767	100.0	-	100.0
Tetracycline	1,686	100.0	100.0	-
Triprolidine	1,301	100.0	-	100.0

· Table 38. Number of office visits for acute pharyngitis or acute laryngitis and tracheitis, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]10,277	9,020	87.8	16,139	1.57	1.79
Female..	5,669	4,916	86.7	8,949	1.58	1.82
Male	4,608	4,104	89.1	7,190	1.56	1.75
Age						
Under 15 years....................................	5,229	4,428	84.7	7,901	1.51	1.78
15–24 years.......................................	1,646	1,483	90.1	2,392	1.45	1.61
25–44 years.......................................	2,113	1,906	90.2	3,286	1.56	1.72
45 years and over..................................	1,288	1,203	93.4	2,560	1.99	2.13
Race						
White...	9,524	8,418	88.4	14,980	1.57	1.78
Black...	625	486	77.7	972	1.56	2.00
Problem status						
New problem	6,756	5,945	88.0	10,089	1.49	1.70
Old problem	3,521	3,075	87.3	6,050	1.72	1.97
Major reason for visit						
Acute problem	9,345	8,237	88.2	14,620	1.56	1.77
Chronic problem, routine...........................	*269	*237	88.2	*488	*1.81	*2.06
Chronic problem, flareup...........................	509	427	83.8	831	1.63	1.95
Non-illness care	*153	*118	*77.5	*200	*1.31	*1.69

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 39. Number and percent distribution of drugs used in office visits for acute pharyngitis or acute laryngitis and tracheitis by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Alcohol	902	100.0	-	100.0
Amoxicillin	766	100.0	100.0	-
Ampicillin	1,533	100.0	100.0	-
Aspirin...	862	100.0	87.0	13.0
Chlorpheniramine...	882	100.0	6.7	93.3
Codeine..	669	100.0	-	100.0
Erythromycin...	1,448	100.0	99.0	1.0
Guaifenesin...	677	100.0	97.0	3.0
Penicillin...	3,421	100.0	94.0	6.0
Phenylephrine...	854	100.0	4.4	95.6
Phenylpropanolamine..	1,249	100.0	-	100.0
Potassium guaiacolsulfonate	*367	100.0	-	100.0
Promethazine	509	100.0	27.9	72.1
Pseudoephedrine	796	100.0	11.6	88.4
Tetracycline	512	100.0	100.0	-
Triprolidine...	*380	100.0		100.0

Table 40. Number of office visits for bronchitis, acute; or not specified as acute or chronic, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]8,323	7,855	94.4	16,349	1.96	2.08
Female	4,382	4,237	96.7	9,179	2.09	2.17
Male	3,940	3,618	91.8	7,170	1.82	1.98
Age						
Under 15 years	3,101	2,911	93.9	5,328	1.72	1.83
15–24 years	818	763	93.2	1,559	1.91	2.04
25–44 years	1,312	1,293	98.5	2,682	2.04	2.07
45–64 years	1,875	1,787	95.3	3,797	2.03	2.12
65 years and over	1,216	1,102	90.7	2,983	2.45	2.71
Race						
White	7,246	6,909	95.3	14,103	1.95	2.04
Black	916	850	92.8	2,086	2.28	2.45
Problem status						
New problem	5,012	4,837	96.5	9,850	1.97	2.04
Old problem	3,311	3,018	91.2	6,499	1.96	2.15
Major reason for visit						
Acute problem	7,203	6,941	96.4	14,094	1.96	2.03
Chronic problem, routine	587	447	76.1	1,277	2.18	2.86
Chronic problem, flareup	413	*364	88.0	*771	*1.87	*2.12
Post surgery/post injury	*12	*12	*100.0	*24	*2.00	*2.00
Non-illness care	*108	*91	*84.9	*183	*1.69	*2.01

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 41. Number and percent distribution of drugs used in office visits for bronchitis, acute; or not specified as acute or chronic by form of use, according to most frequently used generic substances: United States, 1980

Generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Alcohol	1,622	100.0	-	100.0
Amoxicillin	1,132	100.0	100.0	-
Ampicillin	1,023	100.0	100.0	-
Brompheniramine	590	100.0	16.9	83.1
Chlorpheniramine	966	100.0	0.4	99.6
Codeine	1,363	100.0	3.7	96.3
Dextromethorphan	454	100.0	0.9	99.1
Erythromycin	1,566	100.0	91.4	8.6
Guaifenesin	1,287	100.0	12.2	87.8
Penicillin	1,040	100.0	93.2	6.8
Phenylephrine	1,421	100.0	10.3	89.7
Phenylpropanolamine	1,265	100.0	-	100.0
Potassium guaiacolsulfonate	1,056	100.0	-	100.0
Promethazine	1,330	100.0	21.8	78.2
Pseudoephedrine	650	100.0	7.1	92.9
Tetracycline	952	100.0	96.1	3.9
Theophylline	590	100.0	35.0	65.0

Table 42. Number of office visits for asthma, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	

Selected characteristic	All visits	Drug visits Number	Percent	Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
Sex						
Both sexes	[4]5,921	5,477	92.5	11,655	1.97	2.13
Female...	3,262	2,999	91.9	6,738	2.07	2.25
Male	2,659	2,478	93.2	4,917	1.85	1.98
Age						
Under 15 years..................................	2,335	2,126	91.0	3,495	1.50	1.64
15–24 years.....................................	737	716	97.2	1,262	1.71	1.76
25–44 years.....................................	1,106	1,031	93.2	2,271	2.05	2.20
45–64 years.....................................	1,065	989	92.8	2,876	2.70	2.91
65 years and over................................	678	616	90.8	1,750	2.58	2.84
Race						
White..	5,234	4,830	92.3	10,441	1.99	2.16
Black..	648	607	93.8	1,134	1.75	1.87
Problem status						
New problem	1,204	1,148	95.3	2,616	2.17	2.28
Old problem	4,717	4,329	91.8	9,039	1.92	2.09
Major reason for visit						
Acute problem	1,653	1,518	91.9	3,243	1.96	2.14
Chronic problem, routine..........................	2,812	2,561	91.1	5,036	1.79	1.97
Chronic problem, flareup..........................	1,214	1,169	96.3	2,976	2.45	2.55
Non-illness care	*241	*228	*94.6	*401	*1.66	*1.76

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Table 43. Number and percent distribution of drugs used in office visits for asthma and allergic rhinitis by form of use, according to most frequently used generic substances: United States, 1980

| Diagnosis and generic substance | Drugs used | Form of use | | |
		Total	Single ingredient	Combinations
Asthma[1]	Number in thousands	Percent distribution		
Beclomethasone	478	100.0	100.0	-
Ephedrine	493	100.0	99.4	0.6
Epinephrine	*297	100.0	*100.0	-
Erythromycin	417	100.0	100.0	-
Guaifenesin	542	100.0	7.6	92.4
Hydroxyzine	*306	100.0	*1.6	*98.4
Metaproterenol	812	100.0	100.0	-
Prednisone	531	100.0	100.0	-
Pseudoephedrine	*263	100.0	*7.8	*92.2
Terbutaline	616	100.0	100.0	-
Theophylline	2,315	100.0	70.7	29.3
Allergic rhinitis[2]				
Alcohol	407	100.0	-	100.0
Brompheniramine	528	100.0	25.0	75.0
Chlorpheniramine	834	100.0	29.8	70.2
Dexamethasone	*331	100.0	*100.0	-
Methylprednisolone	*244	100.0	*100.0	-
Phenylephrine	733	100.0	-	100.0
Phenylpropranolamine	720	100.0	-	100.0
Pollen antigen	453	100.0	100.0	-
Pseudoephedrine	652	100.0	21.0	79.0
Triamcinolone	*284	100.0	*100.0	-

[1]About 10% of drug mentions in visits for asthma could not be identified by generic substance because the physician's entry was allergy relief or shots.
[2]About 41% of drug mentions in visits for allergic rhinitis could not be identified by generic substance because the physician's entry was allergy relief or shots.

Table 44. Number of office visits for allergic rhinitis, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]8,439	7,621	90.3	10,479	1.24	1.38
Female...	4,236	3,954	93.4	5,984	1.41	1.51
Male	4,204	3,666	87.2	4,495	1.07	1.23
Age						
Under 15 years......................................	2,552	2,340	91.7	2,861	1.12	1.22
15–24 years..	986	880	89.3	1,133	1.15	1.29
25–44 years..	2,754	2,496	90.6	3,282	1.19	1.31
45–64 years..	1,556	1,361	87.4	2,332	1.50	1.71
65 years and over...................................	592	544	92.0	871	1.47	1.60
Race						
White..	7,986	7,188	90.0	9,837	1.23	1.37
Black..	*374	365	97.4	*540	*1.44	*1.48
Problem status						
New problem	1,669	1,454	87.1	2,265	1.36	1.56
Old problem	6,770	6,167	91.1	8,214	1.21	1.33
Major reason for visit						
Acute problem	1,368	1,268	92.7	2,070	1.51	1.63
Chronic problem, routine.............................	5,626	5,176	92.0	6,426	1.14	1.24
Chronic problem, flareup	1,150	927	80.7	1,715	1.49	1.85
Non-illness care	*296	*250	*84.5	*268	*0.91	*1.07

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Section VI. Diseases of sebaceous glands and selected musculoskeletal conditions

Diseases of sebaceous glands

Two forms of this condition were commonly reported in NAMCS: acne (other than varioliformis), 8.1 million visits, and sebaceous cyst, 2.2 million visits. As may be expected, 72 percent of patients visiting for acne were under 25 years of age. When sebaceous cyst was the specific diagnosis, 84 percent of the visits were made by patients over 24 years of age. This distinction should be kept in mind when interpreting the data.

Beginning with age 15 years, proportions of visits and drug mention rates decreased as the patient's age group increased, reflecting the type of condition likely to be presented (table 45). Young patients who predominantly had acne were more likely to have medication therapy than were older patients who were likely to have sebaceous cysts, which usually require surgery but not necessarily drugs. (Thirty-seven percent of all visits for diseases of sebaceous glands included office surgery). Patients 15–24 years of age accounted for 48 percent of the visits and used an average of 2.29 drugs per visit. The group aged 25–44 years had a drug mention rate of 1.80, and those 45 years of age and over had the lowest rate (0.93). Only 54 percent of the visits by patients over 45 years of age included one or more drugs compared with 94 percent of those by patients in the 15–24 year old group. When drugs were provided, two was the typical number since 44 percent of such visits included two mentions.

Drugs were more likely to be prescribed during continuing care for an old problem (drug mention rate = 2.11) than when a new problem was presented (1.58). If the major reason for the visit was a flareup of a chronic problem, patients were given drugs at the rate of 2.39 per visit compared with 1.57 per visit for acute problems. The relatively low rate of 0.43 when the visit was post surgery supports the previous suggestion that drug therapy was not commonly associated with visits for excision of sebaceous cysts.

Table 46 shows that about 77 percent of drugs prescribed were in four therapeutic categories—antibiotics (43 percent), keratolytic agents (21 percent), anti-inflammatory agents (9 percent), and cell stimulants and proliferants (5 percent).

Tetracycline (15 percent) and Cleocin (12 percent) were the most frequently named antibiotics as shown in table 47. Other antibiotics entered on Patient Record Forms were Minicin (4 percent), Erythromycin (3 percent), and Achromycin (3 percent). Among the many keratolytic agents named were Desquam-X (4 percent), Benzac (4 percent), Panoxyl (3 percent), Persa-gel (3 percent), and Benzagel (2 percent). (The principal ingredient in the last five drugs is benzoyl peroxide.) Retin-A, from the group of cell stimulants and proliferants, appeared in 5 percent of drug mentions.

The leading generic substance used was tetracycline with 4.2 million mentions (table 48). Benzoyl peroxide, which was the principal ingredient in at least five frequently used brand name drugs, was the second most frequent generic substance with 3.6 million uses. The generic substance tretinoin was exclusively represented in office visits by the brand name drug Retin-A, which was shown in table 47.

Osteoarthritis and allied disorders or other and unspecified arthropathies

Women made 69 percent, and patients over 45 years of age, 89 percent, of the visits for this diagnosis; but drug mention rates did not differ significantly by sex or age (table 49).

Similar to visits for other chronic conditions made predominantly by the elderly, 72 percent of the visits for osteoarthritis were return visits for care of an old problem, and drugs were more likely to be used as therapy than when patients presented the condition as a new problem. It was pointed out in section I that some of the drugs may have been prescribed for conditions other than the principal diagnosis. This is particularly true of visits by elderly patients who tend to have multiple chronic conditions.

One or more drugs were mentioned in 82 percent of the visits. Of this group, 45 percent had one drug mention, 24 percent had two, and 16 percent had three (number of visits with a specific number of prescriptions divided by the number of drug visits).

Table 46 shows that 41 percent of drug mentions were in the category of analgesics and antipyretics. Cardiovascular drugs, probably used for such conditions as ischemic heart disease and hypertension, which

are frequently concomitant with arthropathies, accounted for 12 percent.

All of the generic substances listed in table 50, except reserpine and hydrochlorothiazide, are categorized as analgesics and antipyretics. Aspirin was the most frequently used drug with 1 million uses. Other frequently mentioned anti-inflammatory drugs were ibuprofen, indomethacin, naproxin, and sulindac. The brand name entries that represented these substances as single ingredient drugs, in the same order, were Motrin, Indocin, Naprosyn, and Clinoril.

Intervertebral disc disorders or other and unspecified disorders of back

Drugs were used in only 61 percent of visits for disc and other back problems, a relatively low proportion. Visits were evenly divided between women and men, but the women's drug mention rate was 1.38 compared to 0.97 for men (table 51). This was because about 66 percent of women's visits included drug therapy compared with 57 percent of those by men. On the average, 43 percent of drug visits had one drug mentioned, and 34 percent had two.

Patients were likely to be 25–64 years old (80 percent), and rates did not differ significantly for specific age groups.

The largest category of drugs used was analgesics and antipyretics, which accounted for 41 percent of all mentions (table 46). Skeletal muscle relaxants constituted another 14 percent. In the first group, aspirin, acetaminophen (with and without codeine), and phenacetin were the most commonly used generic substances (table 50). In the second group, methocarbamol and orphenadrine were the most frequent.

Tylenol with Codeine was the entry name for the 388,000 single-ingredient uses of acetaminophen with codeine. Robaxin, with 360,000 mentions, represented the 89 percent of use of methocarbamol listed as a single ingredient.

About 25 percent of mentions were federally controlled drugs. Table G shows that of these 1.8 million mentions, 15 percent were in schedule II, 42 percent were in schedule III, and 43 percent in schedule IV.

Physiotherapy was provided in 34 percent of visits for disc and back disorders. Medication therapy was also ordered in about 64 percent of such visits.

Sprains and strains of sacroiliac region or other and unspecified parts of back

Characteristics of drug therapy for sprains and strains closely paralleled those of intervertebral disc disorders or other and unspecified disorders of back (except that drug mention rates did not differ by sex of the patient). Only 60 percent of the 7.4 million visits for back sprains and strains included medication therapy (table 52), and physiotherapy was likely to be used. With this diagnosis 53 percent of the visits included physiotherapy and in

Table G. Number and percent distribution of federally controlled drug mentions in office visits for intervertebral disc disorders or other and unspecified disorders of back by control category: United States, 1980

Federal control category[1]	Controlled drug mentions
	Number in thousands
Total.	1,769
	Percent distribution
Total.	100.0
Schedule I	0.0
Schedule II	14.6
Schedule III	41.8
Schedule IV	43.4
Schedule V	0.2

[1] Based on the classification system of the Drug Enforcement Agency of the Department of Justice.

about half of such visits medication was also prescribed. About 78 percent of the visits were made by patients 25–64 years of age. The relatively low drug rates were similar for specific age groups. However, problem status made a difference in the provision of drugs. The drug mention rate for patients with new problems was 1.08 compared with 0.76 for those with old problems, suggesting a decrease in drug utilization as treatment progressed.

When patients were treated with drugs, 63 percent of such visits had one drug mention; only 24 percent had two. Drug intensity rates did not vary significantly by sex, age, or problem status.

Drug therapy consisted mainly of the two classes of drugs shown in table 46: analgesics and antipyretics (43 percent) and skeletal muscle relaxants (21 percent). The classes of generic substance used to treat this condition were very similar to those listed with the back diagnosis described previously.

The 1.7 million federally regulated drug mentions for this diagnosis are distributed by control schedule in table H, which shows that 90 percent were in schedules III and IV.

Table H. Number and percent distribution of federally controlled drug mentions in office visits for sprains and strains of sacroiliac region or other and unspecified parts of back by control category: United States, 1980

Federal control category[1]	Controlled drug mentions
	Number in thousands
Total.	1,678
	Percent distribution
Total.	100.0
Schedule I	0.0
Schedule II	9.8
Schedule III	37.7
Schedule IV	52.1
Schedule V	0.4

[1] Based on the classification system of the Drug Enforcement Agency of the Department of Justice.

Table 45. Number of office visits for diseases of sebaceous glands, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]10,578	8,946	84.6	20,981	1.98	2.35
Female...	6,171	5,341	86.6	12,959	2.10	2.43
Male	4,408	3,604	81.8	8,022	1.82	2.23
Age						
Under 15 years.....................................	1,242	1,165	93.7	2,656	2.14	2.28
15–24 years..	5,086	4,782	94.0	11,623	2.29	2.43
25–44 years..	3,157	2,404	76.1	5,689	1.80	2.37
45 years and over..................................	1,093	595	54.4	1,014	0.93	1.70
Race						
White..	9,998	8,493	85.0	20,129	2.01	2.37
Black..	430	*344	*80.1	*667	*1.55	*1.94
Problem status						
New problem	2,553	1,833	71.8	4,021	1.58	2.19
Old problem	8,025	7,113	88.6	16,960	2.11	2.38
Major reason for visit						
Acute problem	1,832	1,342	73.2	2,881	1.57	2.15
Chronic problem, routine............................	5,590	5,100	91.2	11,956	2.14	2.34
Chronic problem, flareup............................	2,423	2,275	93.9	5,794	2.39	2.55
Post surgery/post injury............................	582	*154	*26.4	*252	*0.43	*1.64
Non-illness care....................................	*150	*76	50.3	*98	*0.65	*1.29

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Table 46. Number, percent distribution, and rate per 100 visits of drug mentions in office visits by selected diagnoses and therapeutic category: United States, 1980

Diagnosis and therapeutic category[1]	Drug mentions		
	Number in thousands	Percent distribution	Rate per 100 visits
Diseases of sebaceous glands	20,981	100.0	198
Antibiotics	9,018	43.0	43
Anti-inflammatory agents	1,777	8.5	17
Cell stimulants and proliferants	1,080	5.2	10
Keratolytic agents	4,350	20.7	41
All other therapeutic categories	4,756	22.6	...
Osteoarthritis and allied disorders or other and unspecified arthropathies.	14,251	100.0	172
Cardiovascular drugs	1,666	11.7	20
Analgesics and antipyretics	5,807	40.8	70
Diuretics	944	6.6	11
Adrenals	885	6.2	11
All other therapeutic categories	4,949	34.7	...
Intervertebral disc disorders or other and unspecified disorders of back	7,138	100.0	118
Skeletal muscle relaxants	1,016	14.2	21
Analgesics and antipyretics	2,952	41.4	49
All other therapeutic categories	3,170	44.4	...
Sprains and strains of sacroiliac region or other and unspecified parts of back.	6,586	100.0	89
Skeletal muscle relaxants	1,370	20.8	19
Analgesics and antipyretics	2,818	42.8	38
All other therapeutic categories	2,398	36.4	...

[1] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 47. Number and percent distribution of drug mentions in office visits for diseases of sebaceous glands by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[3]
	Number in thousands	Percent distribution		
All drugs	20,981	100.0	...	...
Tetracycline	3,108	14.8	tetracycline	antibiotics
Cleocin	2,511	12.0	clindamycin	antibiotics
Retin-A	1,072	5.1	tretinoin	cell stimulants and proliferants
Minocin	836	4.0	minocycline	antibiotics
Desquam-X	789	3.8	benzoyl peroxide, disodium edetate	keratolytic agents
Benzac	787	3.7	benzoyl peroxide	keratolytic agents
Erythromycin	715	3.4	erythromycin	antibiotics
Panoxyl	595	2.8	benzoyl peroxide	keratolytic agents
Persa-gel	572	2.7	benzoyl peroxide	keratolytic agents
Achromycin	527	2.5	tetracycline	antibiotics
E-mycin	508	2.4	erythromycin	antibiotics
Benzagel	467	2.2	benzoyl peroxide	keratolytic agents
Kenalog	*362	*1.7	triamcinolone	anti-inflammatory agents
Staphylococcus toxoid	*346	*1.6	staphylococcus toxoid	toxoids
Sumycin	*323	*1.5	tetracycline	antibiotics
Hydrocortisone	*320	*1.5	hydrocortisone	anti-inflammatory agents
Prednisone	*315	*1.5	prednisone	adrenals
Salicylic acid	*314	*1.5	salicylic acid	keratolytic agents
Cordran	*298	*1.4	flurandrenolide	anti-inflammatory agents
Zinc	*288	*1.4	zinc topical agent	unclassified
Residual	5,928	28.3	...	...

[1] Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name.
[2] If only one generic ingredient is listed, the physician's entry is the generic drug or a brand name drug that consists chiefly of a single generic ingredient. May not include all ingredients for every combination drug.
[3] Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 48. Number and percent distribution of drugs used in office visits for diseases of sebaceous glands by form of use, according to most frequently used generic substances: United States, 1980

| Generic substance | Drugs used | Form of use | | |
		Total	Single ingredient	Combinations
	Number in thousands	Percent distribution		
Alcohol	1,903	100.0	-	100.0
Benzoyl peroxide	3,587	100.0	47.1	52.9
Clindamycin	2,575	100.0	100.0	-
Edetate disodium	719	100.0	-	100.0
Erythromycin	1,364	100.0	100.0	-
Hydrocortisone	876	100.0	61.2	38.8
Minocycline	844	100.0	100.0	-
Prednisone	*315	100.0	*100.0	-
Salicylic acid	862	100.0	3.0	97.0
Sulfur (cathartic)	677	100.0	-	100.0
Tetracycline	4,168	100.0	99.6	0.4
Tretinoin	1,072	100.0	100.0	-
Triamcinolone	479	100.0	100.0	-
Zinc topical agents	*326	100.0	*88.3	*11.7

Table 49. Number of office visits for osteoarthritis and allied disorders or other and unspecified arthropathies, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate by selected characteristics: United States, 1980

| Selected characteristic | Office visits | | | Drug mentions | Drug mention rate[2] | Drug intensity rate[3] |
	All visits	Drug visits[1]				
Sex	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Both sexes	[4]8,297	6,799	82.0	14,251	1.72	2.10
Female	5,733	4,793	83.6	10,139	1.77	2.12
Male	2,564	2,006	78.2	4,112	1.60	2.05
Age						
Under 45 years	934	686	73.4	1,055	1.13	1.54
45–64 years	3,457	2,773	80.2	5,379	1.56	1.94
65 years and over	3,906	3,340	85.5	7,816	2.00	2.34
Race						
White	7,225	5,902	81.7	12,394	1.72	2.10
Black	1,038	864	83.2	1,801	1.74	2.08
Problem status						
New problem	2,286	1,687	73.8	3,339	1.46	1.98
Old problem	6,010	5,112	85.1	10,912	1.82	2.13
Major reason for visit						
Acute problem	2,041	1,786	87.5	3,563	1.75	1.99
Chronic problem, routine	3,565	3,042	85.3	6,728	1.89	2.21
Chronic problem, flareup	1,970	1,657	84.1	3,355	1.70	2.02
Post surgery/post injury	*304	*46	15.3	*81	*0.27	*1.76
Non-illness care	417	*267	*64.0	522	*1.25	*1.96

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

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Table 50. Number and percent distribution of drugs used in office visits for selected musculoskeletal conditions by form of use, according to most frequently used generic substances: United States, 1980

Diagnosis and generic substance	Drugs used	Form of use		
		Total	Single ingredient	Combinations
Osteoarthritis and allied disorders or other and unspecified arthropathies	Number in thousands	Percent distribution		
Acetaminophen	715	100.0	34.5	65.5
Aspirin	1,008	100.0	86.9	13.1
Fenoprofen	*308	100.0	*100.0	-
Hydrochlorothiazide	712	100.0	39.6	60.4
Ibuprofen	918	100.0	100.0	-
Indomethacin	663	100.0	100.0	-
Naproxen	720	100.0	100.0	-
Reserpine	*333	100.0	*18.6	*81.4
Sulindac	569	100.0	100.0	-
Intervertebral disc disorders or other and unspecified disorders of back				
Acetaminophen	613	100.0	22.3	77.7
Acetaminophen and codeine	*388	100.0	100.0	-
Aspirin	704	100.0	33.8	66.2
Caffeine	488	100.0	-	100.0
Codeine	*245	100.0	*9.8	*90.2
Ibuprofen	*276	100.0	100.0	-
Methocarbamol	406	100.0	88.7	11.3
Orphenadrine	*309	100.0	*57.4	*42.6
Phenacetin	488	100.0	-	100.0
Sprains and strains of sacroiliac region or other and unspecified parts of back				
Acetaminophen	753	100.0	10.9	89.1
Acetaminophen and codeine	*210	100.0	100.0	-
Aspirin	1,200	100.0	30.3	69.7
Caffeine	730	100.0	-	100.0
Chlorzoxazone	*247	100.0	-	100.0
Codeine	*210	100.0	-	100.0
Ibuprofen	*247	100.0	100.0	-
Methocarbamol	537	100.0	70.6	29.4
Orphenadrine	370	100.0	29.7	70.3
Phenacetin	713	100.0	-	100.0
Propoxyphene	*288	100.0	*5.2	*94.8

Table 51. Number of office visits for intervertebral disc disorders or other and unspecified disorders of back, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]6,071	3,716	61.2	7,138	1.18	1.92
Female	3,035	1,987	65.5	4,189	1.38	2.11
Male	3,036	1,729	57.0	2,949	0.97	1.71
Age						
Under 25 years	607	*323	53.1	*487	*0.80	*1.51
25–44 years	2,571	1,512	58.8	2,640	1.03	1.75
45–64 years	2,264	1,391	61.5	2,855	1.26	2.05
65 years and over	629	491	78.0	1,155	1.84	2.35
Race						
White	5,276	3,150	59.7	6,046	1.15	1.92
Black	786	562	71.6	1,088	1.38	1.94
Problem status						
New problem	2,318	1,384	59.7	2,462	1.06	1.78
Old problem	3,753	2,333	62.2	4,676	1.25	2.00
Major reason for visit						
Acute problem	2,274	1,527	67.2	3,030	1.33	1.98
Chronic problem, routine	1,479	836	56.5	1,507	1.02	1.80
Chronic problem, flareup	1,391	941	67.7	1,925	1.38	2.05
Post surgery/post injury	810	*356	*43.9	*595	*0.73	*1.67
Non-illness care	*118	*57	*48.2	*80	*0.68	*1.40

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Table 52.　Number of office visits for sprains and strains of sacroiliac region or other and unspecified parts of back, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]7,393	4,411	59.7	6,586	0.89	1.49
Female....................................	3,755	2,158	57.5	3,193	0.85	1.48
Male	3,637	2,252	61.9	3,393	0.93	1.51
Age						
Under 25 years............................	962	522	54.2	749	0.78	1.43
25–44 years..............................	3,523	2,125	60.3	3,007	0.85	1.42
45–64 years..............................	2,273	1,287	56.6	1,996	0.88	1.55
65 years and over.........................	635	478	75.3	834	1.31	1.74
Race						
White.....................................	6,147	3,713	60.4	5,620	0.91	1.51
Black.....................................	1,093	583	53.4	833	0.76	1.43
Problem status						
New problem	2,938	2,074	70.6	3,181	1.08	1.53
Old problem	4,455	2,337	52.5	3,404	0.76	1.46
Major reason for visit						
Acute problem	3,758	2,590	68.9	3,927	1.04	1.52
Chronic problem, routine...................	1,473	587	39.9	818	0.56	1.39
Chronic problem, flareup	1,118	748	67.0	1,062	0.95	1.42
Post surgery/post injury...................	938	442	47.1	*718	*0.77	*1.62
Non-illness care	*105	*44	*42.1	*59	*0.56	*1.34

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Section VII. Selected preventive care services

The three preventive care services presented in this report accounted for 10 percent of all visits to office-based physicians in 1980, but only 5 percent of drug mentions. Because, as the term implies, current illness is usually absent during preventive care visits, low drug mention rates may be expected. However, it is also worthwhile to examine the preventive measures taken with such care and to note by inference what medication is not routinely prescribed for patients visiting for non-illness care.

Health supervision of infant or child

There were an estimated 17.5 million visits by children, of which 12.5 million, or 71 percent, were for examination of children under 3 years of age (table 53).

About 59 percent of visits by children included medication therapy, with a drug mention rate of 0.94. One drug was used in 53 percent of the 10.3 million drug visits; two drugs in 36 percent. The drug intensity rate of 1.60 reflects this pattern.

Immunization is a primary concern during early childhood visits and it is seen in the National Ambulatory Medical Care Survey (NAMCS) that 67 percent of all drug mentions were in the therapeutic category of serums, toxoids, and vaccines (table 54). The Tuberculin tine test, a diagnostic agent, accounted for 15 percent. It is seen in table 55 that the most frequently mentioned biologics were Diphtheria and tetanus toxoids and pertussis vaccine (26 percent); Diphtheria and tetanus toxoids, unspecified (2 percent); Poliomyelitis vaccine, unspecified (27 percent); Vaccination, unspecified (3 percent); M-M-R (measles, mumps, rubella virus vaccines, 3 percent); and Rubella virus vaccine, live (2 percent).

These data provide information on the number of single or combination immunizing agents administered, but it is possible that more than one type was provided during a visit. Also, the same child may be immunized against disease by a series of "shots." NAMCS does not provide data on such episodes; therefore, the number of immunizations should not be interpreted as the number of immunized children.

Only one vitamin was reported with more frequency than others. Poly-vi-flor, also used for caries prophylaxis, was indicated in 2 percent of drug mentions.

Normal pregnancy

The estimated 26.3 million visits for prenatal care was the highest number of visits for any one diagnosis reported in NAMCS. The drug mention rate of 0.41 is the lowest of those in this report (table 56). Medication therapy was mentioned in only one of every three visits, and one drug was the likely number prescribed since it was indicated in 79 percent of those visits in which a drug was mentioned.

On the average there were about six return visits for prenatal care for each visit in which pregnancy was first diagnosed by the physician. Drug therapy was more likely to be used in the latter, new problem, visits (53 percent) than in return visits (30 percent). This may be due in part to the prescription of drugs to relieve nausea and vomiting in the early stage of pregnancy. Bendectin, an antihistamine drug used for this purpose, was entered in 3 percent of drug mentions.

Vitamins, which accounted for 67 percent of drug mentions, were the most commonly prescribed therapy for pregnant women (table 54). Antianemia drugs were noted in 13 percent. The vitamin preparations most frequently named by physicians are listed in table 55. In some cases the physician simply recorded "vitamins" (8 percent of mentions). The most frequently named multivitamins were Prenatal Formula (17 percent), Materna (13 percent), Stuartnatal 1 + 1 (7 percent), Pramet FA (5 percent), and Natalins (5 percent).

General medical examination

As table 57 shows, only 29 percent of the 16 million visits for general medical examination included medication therapy, a not unexpected finding. A higher propor-

tion of visits by female patients (34 percent) than by male patients (24 percent) included drugs. The relatively low drug mention rate of 0.41, matched only by the rate for normal pregnancy, may also be attributed to the fact that only one drug was mentioned in 71 percent of drug visits.

Serums, toxoids, and vaccines (consisting chiefly of poliomyelitis vaccine and diphtheria and tetanus toxoids and pertussis vaccine) were used in 27 percent of mentions. The Tuberculin tine test accounted for 17 percent. Use of these biologics was associated mainly with patients under 25 years of age. Contraceptives constituted

14 percent of all mentions with general medical examinations (20 percent of women's mentions). Putting this statistic into perspective requires information on the use of contraceptives when other diagnoses were present. Of the 7.8 million mentions of contraceptives during women's visits for all diagnoses, 65 percent were found with six diagnoses: 12 percent were associated with general medical examination; 8 percent with postpartum care; 13 percent with contraceptive management; 22 percent with gynecological examination; 5 percent with inflammatory disease of cervix, vagina, and vulva; and 5 percent with disorders of menstruation.

Table 53.   Number of office visits for health supervision of infant or child, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Sex						
Both sexes	[4]17,496	10,341	59.1	16,502	0.94	1.60
Female	8,240	5,067	61.5	8,158	0.99	1.61
Male	9,257	5,275	57.0	8,344	0.90	1.58
Age						
Under 3 years	12,499	7,642	61.1	12,214	0.98	1.60
3–5 years	2,238	1,231	55.0	2,300	1.03	1.87
6–14 years	2,204	1,194	54.2	1,578	0.72	1.32
15 years and over	555	*275	*49.5	*410	*0.74	*1.49
Race						
White	15,401	9,259	60.1	14,732	0.96	1.59
Black	1,809	933	51.6	1,539	0.85	1.65
Problem status						
New problem	4,393	2,312	52.6	4,090	0.93	1.77
Old problem	13,104	8,030	61.3	12,413	0.95	1.55
Major reason for visit						
Non-illness care	17,066	10,165	59.6	16,203	0.95	1.59
Other reason	431	*177	*41.3	*300	*0.70	*1.69

[1]A visit in which one or more drugs were ordered or provided.
[2]Drug mentions divided by number of visits.
[3]Drug mentions divided by number of drug visits.
[4]Includes races other than white and black not shown as separate categories.

Table 54. Number, percent distribution, and rate per 100 visits of drug mentions in office visits for selected health services by therapeutic category: United States, 1980

Health service and therapeutic category[1]	Drug mentions		
	Number in thousands	Percent distribution	Rate per 100 visits
Health supervision of infant or child	16,502	100.0	94
Diagnostic agents (for tuberculosis)	2,416	14.6	14
Serums, toxoids and vaccines	11,097	67.2	63
All other therapeutic categories	2,985	18.2	...
Normal pregnancy	10,755	100.0	41
Antianemia drugs	1,370	12.7	5
Vitamins	7,208	67.0	27
All other therapeutic categories	2,177	20.3	...
General medical examination	6,624	100.0	41
Diagnostic agents (for tuberculosis)	1,154	17.4	7
Contraceptives	899	13.6	6
Serums, toxoids and vaccines	1,778	26.8	11
All other therapeutic categories	2,793	42.2	...

[1]Based on the classification system of the American Hospital Formulary Service. See reference 5.

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Table 55. Number and percent distribution of drugs mentioned in office visits for selected health services by most frequently mentioned specific drugs described by principal generic ingredient(s) and principal therapeutic category: United States, 1980

Principal diagnosis and name of drug[1]	Drug mentions		Principal generic ingredient(s)[2]	Principal therapeutic category[2]
	Number in thousands	Percent distribution		
Health supervision of infant or child	16,502	100.0	...	...
Poliomyelitis vaccine, unspecified	4,480	27.1	poliomyelitis vaccine, unspecified	vaccines
Diphtheria and tetanus toxoids and pertussis vaccine ...	4,335	26.2	diphtheria and tetanus toxoids and pertussis vaccine	toxoids
Tuberculin tine test	2,416	14.6	Old Tuberculin	tuberculosis diagnostic agent
M-M-R	555	3.4	measles, mumps, rubella virus vaccines	vaccines
Vaccination, unspecified	407	2.5	undetermined	vaccines
Diphtheria and tetanus toxoids, unspecified	*372	*2.3	undetermined	toxoids
Rubella virus vaccine, live	*369	*2.2	rubella virus vaccine	vaccines
Poly-vi-flor	*327	*2.0	multivitamins, general	unclassified therapeutic agents
Residual	3,241	19.6	...	...
Normal pregnancy	10,755	100.0	...	...
Prenatal formula (vitamins)	1,801	16.7	multivitamins, prenatal	multivitamin preparations
Materna	1,387	12.9	multivitamins, prenatal	multivitamin preparations
Vitamin(s), unspecified	819	7.6	undetermined	vitamins
Stuartnatal 1 + 1	728	6.8	multivitamins, prenatal	multivitamin preparations
Pramet FA	565	5.3	multivitamins, prenatal	multivitamin preparations
Natalins	549	5.1	multivitamins, prenatal	multivitamin preparations
Bendectin	*358	*3.3	doxylamine, pyridoxine	antihistamine drugs
Filibon	*347	*3.2	multivitamins, general	multivitamin preparations
Natabec	*336	*3.1	multivitamins, prenatal	multivitamin preparations
Residual	3,866	36.0	...	...

[1]Based on the physician's entry on the Patient Record Form. The entry may be a brand or generic name, or a therapeutic effect.
[2]Based on the classification system of the American Hospital Formulary Service. See reference 5.

Table 56. Number of office visits by women for normal pregnancy, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
Age	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
All ages...	[4]26,256	8,727	33.2	10,755	0.41	1.23
Under 15 years......................................	*333	*186	*55.8	*308	*0.92	*1.66
15–24 years...	11,880	4,255	35.8	5,308	0.45	1.25
25–44 years...	13,940	4,277	30.7	5,130	0.37	1.20
45 years and over...................................	*103	*9	*8.7	*9	*0.09	*1.00
Race						
White..	22,923	7,551	32.9	9,185	0.40	1.22
Black..	2,868	1,014	35.4	1,383	0.48	1.36
Problem status						
New problem	3,814	2,003	52.5	2,672	0.70	1.33
Old problem	22,441	6,724	30.0	8,084	0.36	1.20
Major reason for visit						
Acute problem	1,074	*374	*34.8	*532	*0.50	*1.42
Non-illness care.....................................	24,879	8,208	33.0	10,054	0.40	1.22
Other reason..	*303	*145	*47.9	*169	*0.56	*1.17

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Table 57. Number of office visits for general medical examination, number and percent of drug visits, number of drug mentions, drug mention rate, and drug intensity rate, by selected characteristics: United States, 1980

Selected characteristic	Office visits			Drug mentions	Drug mention rate[2]	Drug intensity rate[3]
	All visits	Drug visits[1]				
Sex	Number in thousands	Number in thousands	Percent	Number in thousands	Rate per visit	
Both sexes	[4]16,078	4,732	29.4	6,624	0.41	1.40
Female..	9,350	3,134	33.5	4,440	0.47	1.42
Male	6,727	1,598	23.8	2,184	0.32	1.37
Age						
Under 15 years......................................	3,288	1,575	47.9	2,171	0.66	1.38
15–24 years...	4,159	1,163	28.0	1,644	0.40	1.41
25–44 years...	4,638	861	18.6	983	0.21	1.14
45–64 years...	2,612	761	29.1	1,283	0.49	1.69
65 years and over...................................	1,381	*372	*27.0	*544	*0.39	*1.46
Race						
White..	14,313	4,459	31.2	6,175	0.43	1.38
Black..	1,536	*219	*14.3	*372	*0.24	*1.70
Problem status						
New problem	7,756	1,746	22.5	2,646	0.34	1.52
Old problem	8,322	2,986	35.9	3,978	0.48	1.33
Major reason for visit						
Chronic problem, routine............................	1,241	411	33.1	*615	0.50	1.50
Non-illness care.....................................	14,221	4,158	29.2	5,667	0.40	1.36
Other reason..	615	*163	*26.5	*342	*0.56	*2.10

[1] A visit in which one or more drugs were ordered or provided.
[2] Drug mentions divided by number of visits.
[3] Drug mentions divided by number of drug visits.
[4] Includes races other than white and black not shown as separate categories.

Discussion

All of the drug data used in this report were derived from the information provided by physicians in item 11 of the National Ambulatory Medical Care Survey (NAMCS) Patient Record. Part *a* of this item was designed to elicit the medication prescribed for the principal diagnosis assigned to the patient's visit. Part *b* was provided to list medication ordered for all other reasons. In order to describe the total pharmacologic environment of patient care, both parts of item 11 were used to compute total drug mentions and to describe specific drugs prescribed in the presence of a specific diagnosis. As the data with the highest frequencies were tabulated, it became apparent that what emerged were chiefly the drugs that produced the appropriate therapeutic effects for the principal diagnosis under study. That is, medications ordered most frequently for hypertensive patients were antihypertensive drugs or diuretics, those for diabetic patients were anti-diabetics, and so forth. In some tables drugs were listed that are used for conditions often concomitant with the principal diagnosis of interest, such as cardiovascular drugs with diabetes mellitus and osteoarthritis. In other cases the aggregation of all available drug data provided information about preventive care during illness visits. Noteworthy in this respect was the provision of vitamin B-12 to patients with hypertension and the administration of influenza virus vaccine to at-risk patients with hypertension and ischemic heart disease. This is not to say, however, that this is the only appropriate analytic method. The two-part structure of the medication therapy item has the flexibility of serving different research needs.

Increasing age was a significant factor in the utilization of drugs with many of the diagnoses discussed in this report. In fact, regardless of diagnosis and on the average, drug mention rates increased with each advancing age group beginning with age group 15–24 years (figure 3). Similarly, proportions of visits that included one or more drugs increased as did the average number per drug visit.[3] However, because these rates were calculated from data in both parts of item 11, it could be argued that medication for concomitant conditions often associated with visits by elderly patients
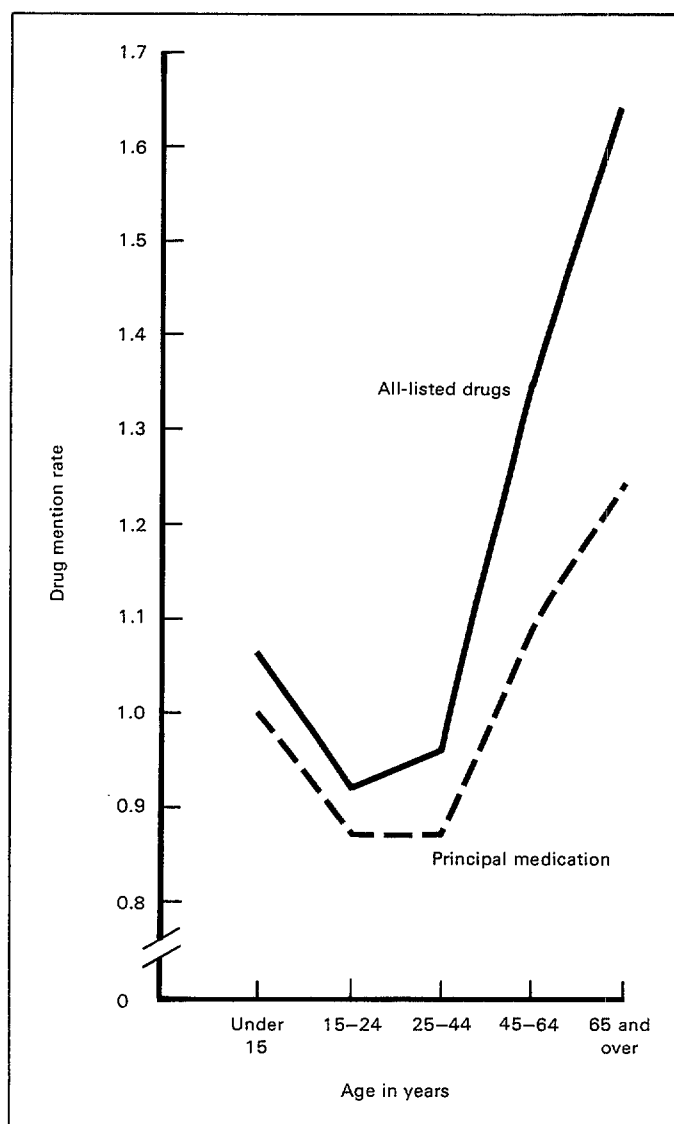
Figure 3. Drug mention rates per visit for all-listed drugs and principal medication by age of patient: United States, 1980

caused the rise in the rate (that is, elderly patients were given more drugs because they had more problems). Therefore, rates based on only part 11*a* (medication for

the principal diagnosis) were calculated and are also plotted in figure 3. As expected, rates for the principal medication were lower than those for all-listed (parts 11*a* and 11*b*) drugs, but both curves exhibit a similar pattern of increase, suggesting that rising rates were not necessarily a function of drug use for conditions other than the principal diagnosis. Similar dual curves were plotted for diabetes mellitus, essential hypertension, and ischemic heart disease (figure 4). Patients visiting with these three diagnoses tended to have interrelated concomitant conditions for which additional therapeutic classes of medication were ordered. For each diagnosis the two curves increase with increasing age groups, demonstrating that given one of these conditions, as patients age increases they are increasingly likely to have drugs prescribed for that condition.

It has been reported that no statistically significant differences were found between the drug rates of female and male patients in the 1980 NAMCS when data for all diagnoses were examined.[3] Of the 18 diagnoses in this report, the drug mention rate for female patients was higher than that of male patients for five diagnoses: obesity, hypertension, bronchitis, allergic rhinitis, and intervertebral disc disorder. Although no drug mention rates among the groups in this report were higher for male patients, there are other diagnoses where this may occur.

NAMCS drug data reflect physicians' choices among many therapeutically equivalent pharmaceutical
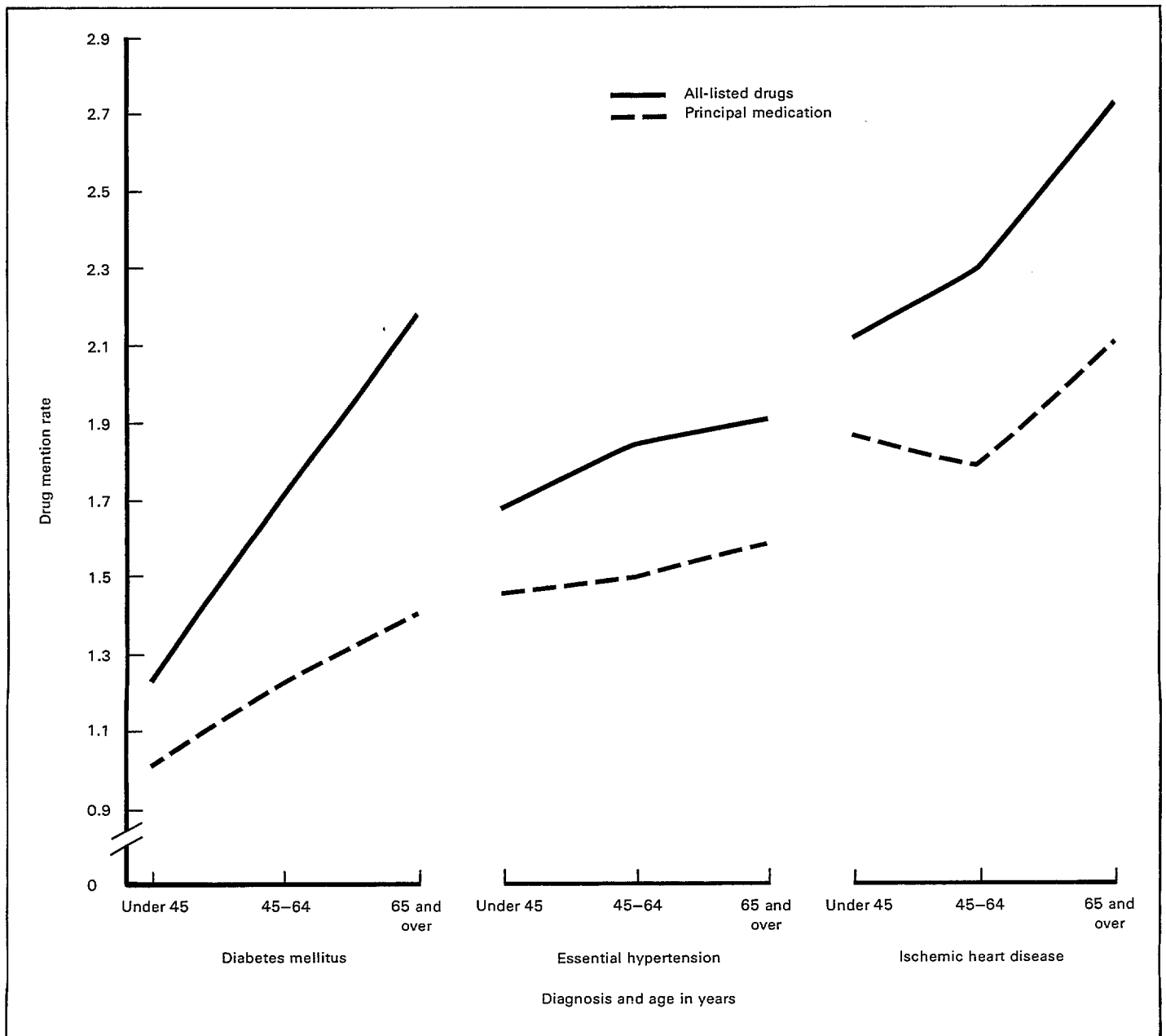
Figure 4. Drug mention rates per visit for diabetes mellitus, essential hypertension, and ischemic heart disease by all-listed drugs and principal medication and age of patient: United States, 1980

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products. In some parts of this report selections from available drugs were so diverse that it was not possible to list any one with good statistical reliability. In others, a limited number of individual drugs described almost the entire range of drug mentions. It is not known whether this was due to the number of drugs available in the pharmaceutical market, to the number of acceptable and approved generic drugs developed to treat a disease, or to physician preference for a particular brand name drug. NAMCS data indicate that physicians were most likely to order brand name drugs, since 71 percent of the drugs used were entered by manufacturer's product name. But what influenced a physician to select one brand of drug rather than an equivalent one produced by another manufacturer cannot be inferred from these data.

Finally, this report reflects drug utilization for the year 1980. These statistics should not be generalized to other time periods because pharmacology is an evolving science and the production of pharmaceuticals is a dynamic industry.

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Appendixes

Contents

Appendix I. Technical notes

This report is based on data collected during 1980 in the National Ambulatory Medical Care Survey (NAMCS), an annual sample survey of office-based physicians conducted by the Division of Health Care Statistics of the National Center for Health Statistics (NCHS).

Statistical design

Scope of the survey

The target population of NAMCS encompasses office visits made within the conterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office-based patient care practice, but not in the specialties of anesthesiology, pathology, or radiology. Telephone contacts and nonoffice visits are excluded.

Sample design

The NAMCS utilizes a multistage probability design that involves probability samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices.

The first-stage sample of 87 PSU's was selected by the National Opinion Research Center of the University of Chicago, the organization responsible for NAMCS field and data processing operations under contract to NCHS. A PSU is a county, a group of adjacent counties, or a standard metropolitan statistical area (SMSA). A modified probability-proportional-to-size procedure using separate sampling frames for SMSA's and for nonmetropolitan counties was used to select the sample PSU's. After sorting and stratifying by size, region, and demographic characteristics of the PSU's, each frame was divided into sequential zones of 1 million residents, then a random number was drawn to determine which PSU came into the sample from each zone.

The second stage of the survey consisted of a prob-

ability sample of practicing physicians, selected from the master files maintained by the American Medical Association (AMA) and the American Osteopathic Association (AOA) as of December 31, 1979, who met the following criteria:

- Office based, as defined by AMA and AOA.
- Principally engaged in patient care activities.
- Nonfederally employed.
- Not in the specialties of anesthesiology, pathology, clinical pathology, forensic pathology, radiology, diagnostic radiology, pediatric radiology, or therapeutic radiology.

The 1980 NAMCS physician universe included 217,500 doctors of medicine and 10,058 doctors of osteopathy (see table I).

Within each PSU, all eligible physicians were arranged by nine specialty groups: general and family medicine, internal medicine, pediatrics, other medical specialties, general surgery, obstetrics and gynecology, other surgical specialties, psychiatry, and all other specialties. Then, within each PSU, a systematic random sample of physicians was selected so that the overall probability of selecting any physician in the United States was approximately constant.

During 1980 the NAMCS physician sample included 2,959 physicians. Sample physicians were screened at the time of the survey to insure that they met the aforementioned criteria; 611 physicians did not meet all the criteria and were, therefore, ruled out of scope (ineligible) for the study. The most common reasons for being out of scope were that the physician was retired; deceased; or employed in teaching, research, or administration. Of the 2,348 in-scope (eligible) physicians, 1,869 (79.6 percent) participated in the study. The physician sample size and response data by physician specialty are shown in table I.

The final stage was the selection of patient visits within the annual practices of the sample physicians. This stage involved two steps. First, the total physician

Table I. Distribution of physicians in the 1980 National Ambulatory Medical Care Survey universe[1] and sample and response rates by physician specialty

| Physician specialty | Universe | Sample | | | | | |
		Gross total	Out of scope	Net total	Nonrespondents	Respondents	Response rate
		Number					Percent
All specialties	227,558	2,959	611	2,348	479	1,869	79.6
General and family practice	53,147	676	155	521	133	388	74.5
Medical specialties	66,692	864	172	692	138	554	80.1
Internal medicine	35,199	458	92	366	85	281	76.8
Pediatrics	16,043	204	46	158	19	139	88.0
Other medical specialties	15,450	202	34	168	34	134	79.8
Surgical specialties	77,625	1,002	131	871	164	707	81.2
General surgery	21,486	269	39	230	60	170	73.9
Obstetrics and gynecology	18,246	247	36	211	27	184	87.2
Other surgical specialties	37,893	486	56	430	77	353	82.1
Other specialties	30,094	417	153	264	44	220	83.3
Psychiatry	16,662	223	55	168	22	146	86.9
Other specialties	13,432	194	98	96	22	74	77.1

[1] Includes doctors of medicine and doctors of osteopathy.

sample was divided into 52 random subsamples of approximately equal size, and each subsample was randomly assigned to 1 of the 52 weeks in the survey year. Of the participating physicians, 249 saw no patients during their assigned reporting period because of vacations, illnesses, or other reasons for being temporarily out of office-based practice. Second, a systematic random sample of visits was selected by the physician during the assigned week. The sampling rate varied for this final step from a 100-percent sample for very small practices to a 20-percent sample for very large practices. The method by which the sampling rate was determined is described later in this appendix and in the Induction Interview Form in appendix III. During 1980, 46,081 usable Patient Record Forms were completed by physicians participating in NAMCS.

Data collection and processing

Field procedures

Both mail and telephone contacts were used to enlist sample physicians for NAMCS. Introductory Letters from the Director of NCHS (see appendix III) were sent to physicians first. When appropriate, a letter from the physician's specialty organization endorsing the survey and urging participation was enclosed with the NCHS letter. Approximately 2 weeks prior to the physician's assigned reporting period, a field representative telephoned the physician to explain briefly the study and to arrange an appointment for a personal interview. Physicians who did not respond initially were usually recontacted via telephone or special explanatory letter and requested to reconsider participation in the study.

During the personal interview the field representative determined the physician's eligibility for the study, obtained the cooperation of the physician, delivered survey materials with verbal and printed instructions, and assigned a predetermined Monday-Sunday reporting period. A short induction interview concerning basic practice characteristics, such as type of practice and expected number of office visits, was conducted. Office staff who were to assist with data collection were invited to attend the instructional session or were offered separate instructional sessions.

Before the beginning and again during the week assigned for data collection, the field representative telephoned the sample physician to answer questions that might have arisen and to insure that survey procedures were going smoothly. At the end of the reporting week, the participating physician mailed the completed survey materials to the field representative, who edited the forms for completeness before transmitting them for central data processing. At this stage, problems of missing or incomplete data were resolved by telephone followup by the field representative to the sample physician; if no problems were found, field procedures were considered complete regarding the sample physician's participation in NAMCS.

Data collection

The actual data collection for NAMCS was performed by the physician, assisted by office staff when possible. Two data collection forms were employed by the physician: the Patient Log and the Patient Record (see appendix III). The Patient Log, a sequential listing of patients seen in the physician's office during the assigned reporting week, served as the sampling frame to indicate the office visits for which data were to be recorded. A perforation between the patient's name and patient visit information permitted the physician to detach and retain the listing of patients, thus protecting the confidentiality of the physician's patients.

Based on the physician's estimate of the expected

number of office visits and expected number of days in practice, each physician was assigned a patient sampling rate. The patient sampling rates were designed so that about 30 Patient Record Forms would be completed by each physician during the assigned reporting week. Physicians expecting 10 or fewer visits each day recorded data for all visits, those expecting more than 10 visits per day recorded data for every second, third, or fifth visit, based on the predetermined sampling interval. These patient sampling procedures minimized the physician's data collection workload and maintained approximately equal reporting levels among sample physicians regardless of practice size. For physicians recording data for every second, third, or fifth patient visit, a random start was provided on the first page of the Patient Log so that predesignated sample visits recorded on each succeeding page of the Patient Log provided a systematic random sample of patient visits during the reporting period.

Data processing

In addition to followups for missing and inconsistent data made by the field staff, numerous clerical edits were performed on data received for central data processing. These manual procedures proved quite efficient, reducing item nonresponse rates to 2 percent or less for most data items.

Information contained in item 6 (Patient's complaint(s), symptom(s), or other reason(s) for this visit) of the Patient Record was coded according to *"A reason for visit classification for ambulatory care"* (RVC).[12] Diagnostic information (item 9 of the Patient Record) was coded according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM).[1] A maximum of three entries were coded from each of these items. Prior to coding, Patient Record Forms were grouped into batches with approximately 650 Patient Record Forms per batch. Quality control for the medical coding operation involved a two-way 5-percent independent verification procedure. Error rates were defined as the number of incorrectly coded entries divided by the total number of coded entries. The estimated error rates for the medical coding operation were 1.9 percent for item 6 and 2.8 percent for item 9. An additional dependent procedure was used to review and adjudicate all records in batches with excessive error rates. This procedure further reduced the estimated error rates to 1.8 percent for item 6 and 2.5 percent for item 9.

The NAMCS medication data (item 11 of the Patient Record) was classified and coded according to a scheme developed at NCHS based on the American Society of Hospital Pharmacists' Drug Product Information File. Detailed descriptions of the development of the new drug coding scheme and of the NAMCS

drug data processing procedures are contained in *Vital and Health Statistics,* Series 2, No. 90.[6] A two-way 100-percent independent verification procedure was used to control the medication coding operation. All Patient Record Forms with differences between drug coders or with illegible drug entries were reviewed and adjudicated at NCHS.

Information from the Induction Interview and Patient Record Forms was keypunched with 100 percent verification and converted to computer tape. At this point, extensive computer consistency and edit checks were performed to insure complete and accurate data. Incomplete items were imputed by assigning a value from a randomly selected Patient Record Form with similar characteristics; patient sex and age, physician specialty, and broad diagnostic categories were used as the basis for these imputations.

Estimation procedures

Statistics from the 1980 NAMCS were derived by a multistage estimation procedure that produces essentially unbiased national estimates and has three basic components: (1) inflation by reciprocals of the probabilities of selection, (2) adjustment for nonresponse, and (3) a ratio adjustment to fixed totals. Each component is briefly described in this section.

Inflation by reciprocals of the probabilities of selection

Because the survey utilized a three-stage sample design, three probabilities of selection existed: (1) the probability of selecting the PSU, (2) the probability of selecting the physician within the PSU, and (3) the probability of selecting a patient visit within the physician's practice. The last probability was defined as the exact number of office visits during the physician's assigned reporting week divided by the number of Patient Record Forms completed. All weekly estimates were inflated by a factor of 52 to derive annual estimates.

Adjustment for nonresponse

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

Ratio adjustment

A poststratification adjustment was made within each of nine physician specialty groups. The ratio ad-

justment was a multiplication factor that had as its numerator the number of physicians in the universe in each physician specialty group and as its denominator the estimated number of physicians in that particular specialty group. The numerator was based on figures obtained from the AMA and AOA master files, and the denominator was based on data from the sample.

Reliability of estimates

As in any survey, results are subject to both sampling and nonsampling errors. Nonsampling errors include reporting and processing errors, as well as biases due to nonresponse or incomplete response. The magnitude of the nonsampling errors cannot be computed; however, these errors were kept to a minimum by survey procedures. To eliminate ambiguities and encourage uniformity of reporting, careful attention was given to the phrasing of the questions, terms, and definitions, and, in addition, extensive pretesting was performed. The steps taken to reduce bias in the data are discussed in the sections on field procedures and data collection. Quality control procedures and consistency and edit checks discussed in the data processing section reduced errors in data coding and processing; however, because survey results are subject to sampling and nonsampling errors, the total error will be larger than the error due to sampling variability alone.

Because the statistics presented in this report are based on a sample, they differ somewhat from the figures that would be obtained had a complete census been taken using the same forms, definitions, instructions, and procedures. However, the probability design of NAMCS permits the calculation of sampling errors. The standard error is primarily a measure of sampling variability that occurs by chance because only a sample rather than the entire population is surveyed. The standard error, as calculated in this report, also reflects part of the variation that arises in the measurement process. It does not include estimates of any systematic biases that may be in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error, and about 99 out of 100 that it would be less than 2½ times as large.

The relative standard error of an estimate is obtained by dividing the standard error by the estimate itself and is expressed as a percent of the estimate. For this report, an asterisk (*) precedes any estimate with more than a 30-percent relative standard error.

Estimates of sampling variability were calculated using the method of half-sample replication. This method yields overall variability through observation of variability among random subsamples of the total sample. A description of the development and evaluation of the replication technique for error estimation has been published.[13,14] Approximate relative standard errors for aggregate estimates are presented in figures I and II. To derive error estimates that would be applicable to a wide variety of statistics and could be prepared at moderate cost, several approximations were required. As a result, the relative standard errors shown in figures I and II should be interpreted as approximate rather than exact for any specific estimate. Directions for determining approximate relative standard errors follow.

Estimates of aggregates

Approximate relative standard errors (in percent) for aggregate statistics are presented in figures I and II. Figure I presents approximate relative standard errors for estimates of office visits, while figure II presents approximate relative standard errors for estimates of drug mentions. (Figure I should also be used to obtain the relative standard error of a *specific* drug mention such as Dyazide. Figure II should also be used to obtain the relative standard error of a *group* of drug mentions such as *all* drugs prescribed for hypertension.) In each figure, curve *A* represents the relative standard errors appropriate for estimates based on all physician specialties, and curve *B* represents relative standard errors appropriate for estimates based on an individual physician specialty.

Alternatively, relative standard error (RSE) for aggregate estimates may be calculated directly using the following formulas, where x is the aggregate of interest in thousands. For visit estimates (or for mentions of a specific drug) based on all physician specialties,

$$RSE(x) = \sqrt{0.00164987 + \frac{36.36433}{x}} \cdot 100.0$$

For visit estimates (or for mentions of a specific drug) based on an individual physician specialty,

$$RSE(x) = \sqrt{0.00434821 + \frac{36.97024}{x}} \cdot 100.0$$

For grouped drug mention estimates based on all physicial specialties,

$$RSE(x) = \sqrt{0.00316979 + \frac{71.26431}{x}} \cdot 100.0$$

For grouped drug mention estimates based on an individual physician specialty,

$$RSE(x) = \sqrt{0.00827256 + \frac{69.54527}{x}} \cdot 100.0$$
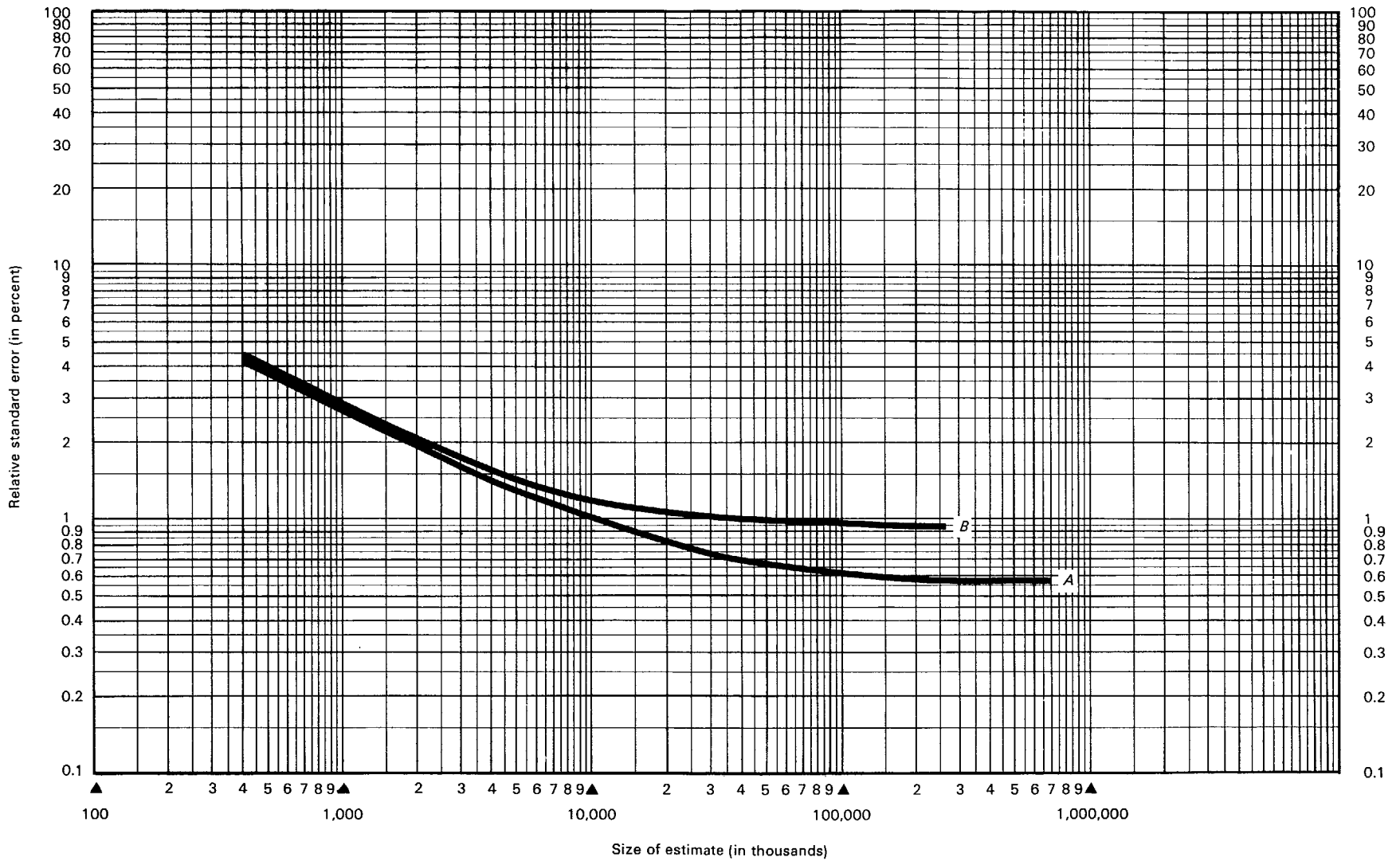
Estimates of percents

Approximate relative standard errors (in percent) for estimates of percents may be calculated from figures

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NOTE: A list of references follows the text.

Size of estimate (in thousands)
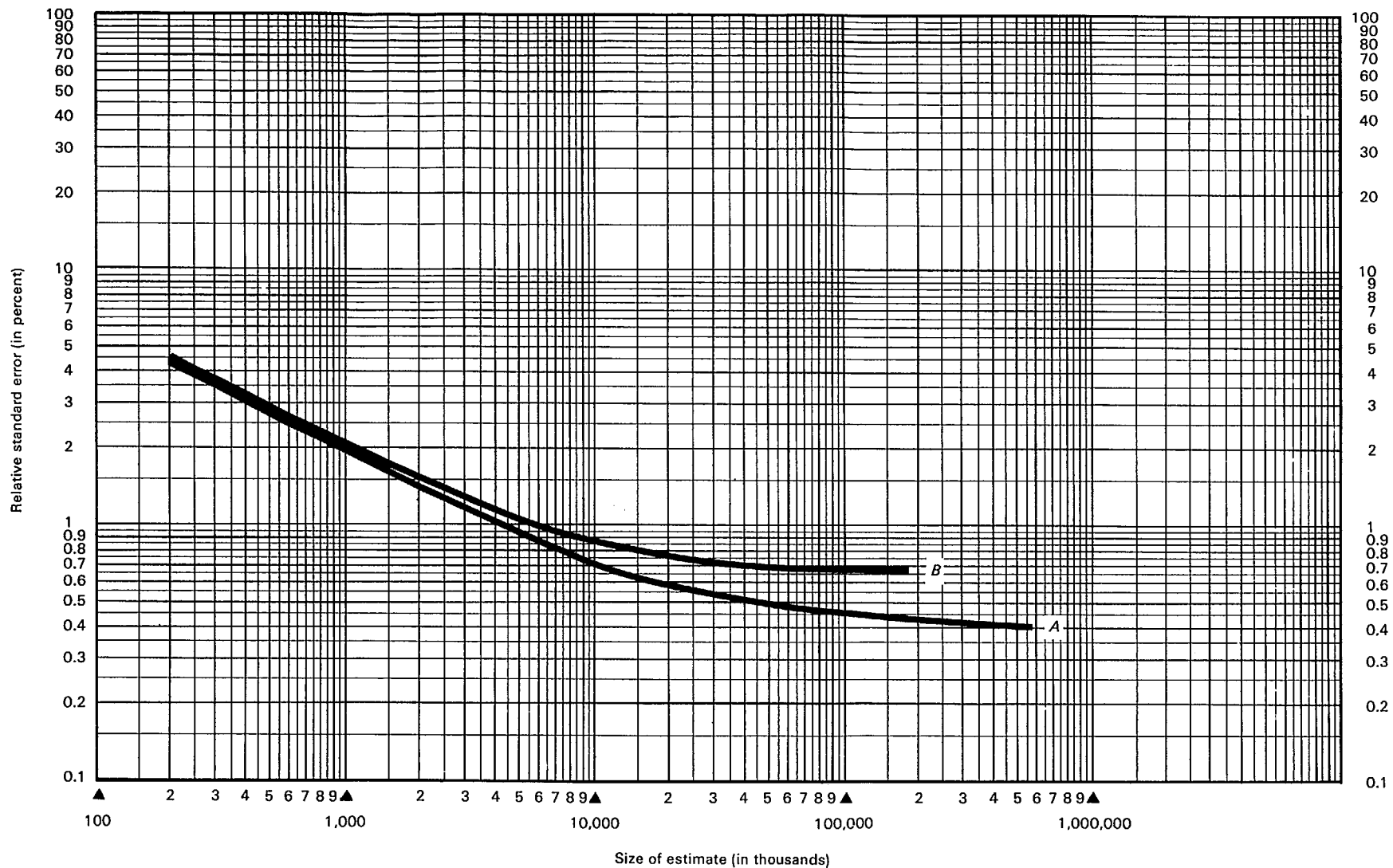
Example of use of chart: An estimate of 20 million office visits to general surgeons (read from scale at bottom of chart) has a relative standard error of 7.9 percent (read from curve *B* on scale at left of chart) or a standard error of 1,580,000 office visits (7.9 percent of 20 million office visits).

Figure I. Approximate relative standard errors for estimated numbers of office visits based on all physician specialties (*A*) and individual specialties (*B*), 1980
National Ambulatory Medical Care Survey

Figure II. Approximate relative standard errors for estimated numbers of drug mentions based on all physician specialties (A) and individual specialties (B), 1980 National Ambulatory Medical Care Survey

I and II. The relative standard error of the numerator and denominator of the percent is obtained from the appropriate curve; each of the relative standard errors is squared; the resulting value for the denominator is subtracted from the resulting value for the numerator; and the square root is extracted. This approximation is valid if the relative standard error of the denominator is less than 0.05 percent or if the relative standard errors of the numerator and denominator are both less than 0.10 percent.

Alternatively, relative standard errors for percents may be calculated directly using the following formulas, where p is the percent of interest and x is the base of the percent in thousands. For visit percents (or percents of a specific drug) based on all physician specialties,

$$RSE(p) = \sqrt{\frac{36.36433 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

For visit percents (or percents of a specific drug) based on an individual physician specialty,

$$RSE(p) = \sqrt{\frac{36.97024 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

For grouped drug mention percents based on all physician specialties,

$$RSE(p) = \sqrt{\frac{71.26431 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

For grouped drug mention percents based on an individual physician specialty,

$$RSE(p) = \sqrt{\frac{69.54527 \cdot (1 - p)}{p \cdot x}} \cdot 100.0$$

Estimates of rates where the numerator is not a subclass of the denominator

Approximate relative standard errors for rates in which the denominator is the total United States population or one or more of the age-sex-race groups of the total population are equivalent to the relative standard error of the numerator that can be obtained from figures I and II.

Estimates of differences between two statistics

The relative standard errors shown in this appendix are not directly applicable to differences between two sample estimates. The standard error of a difference is approximately the square root of the sum of squares of each standard error considered separately. This formula represents the standard error quite accurately for the difference between separate and uncorrelated characteristics, although it is only a rough approximation in most other cases.

Tests of significance

In this report, the determination of statistical inference is based on the t-test with a critical value of 1.96 (0.05 level of significance). Terms relating to differences, such as "higher" and "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 regarding the difference between any two estimates does not mean that the difference was tested and found to be not significant.

Population figures and rate computation

The population figures used in computing annual visit rates are presented in table II. The figures are based on provisional Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1980. Because NAMCS includes data for only the conterminous United States, the original population estimates were modified to account for the exclusion of Alaska and Hawaii from the study. For this reason, the population estimates should not be considered official and are presented here solely to provide denominators for rate computations.

Rounding of numbers

Estimates presented in this report have been rounded to the nearest thousand. For this reason detailed figures within tables do not always add to totals. Rates and percents were calculated on the basis of the original, unrounded figures and may not necessarily agree precisely with percents calculated from rounded data.

Systematic bias

No formal attempt was undertaken to determine or measure systematic bias in the NAMCS data. But it should be noted that there are several factors affecting the data which indicate that these data underrepresent the total number of office visits. Two of these factors are briefly discussed:

- Physicians who participated in NAMCS did a thorough and conscientious job in keeping the Patient Log; however, post survey interviews with participating physicians indicate that a small number of patient visits may have been accidentally omitted from the Patient Log; although this number is quite small, such omissions would result in an undercoverage of office visits. The same post survey interviews indicate that the inclusion of patient visits that did not actually occur was infrequent and would have a negligible effect on survey estimates.

- As previously stated, the universe for the 1980 NAMCS included all non-Federal, office-based, patient-care physicians in the AMA and AOA mas-

Table II. Estimates of the civilian noninstitutionalized population of the United States[1] used in computing annual visit rates in this report by age, race, sex, geographic region, and metropolitan and nonmetropolitan area: July 1, 1980

Selected characteristic	All ages	Age				
		Less than 15 years	15–24 years	25–44 years	45–64 years	65 years and over
Race		Population in thousands				
All races	216,580	49,542	39,760	60,140	43,318	23,820
Male	104,490	25,292	19,562	29,111	20,716	9,809
Female	112,090	24,251	20,197	31,029	22,602	14,011
White	186,513	40,792	33,622	52,080	38,455	21,564
Male	90,343	20,873	16,657	25,490	18,457	8,867
Female	96,170	19,918	16,966	26,590	19,999	12,697
Black	25,422	7,542	5,229	6,520	4,117	2,015
Male	11,845	3,804	2,438	2,877	1,890	835
Female	13,577	3,738	2,791	3,643	2,226	1,179
All other races	4,644	1,209	908	1,540	746	241
Male	2,301	615	467	744	369	107
Female	2,343	595	441	796	378	135
Geographic region						
Northeast	48,240	...	...	...	...	...
North Central	57,508	...	...	...	...	...
South	71,358	...	...	...	...	...
West	39,475	...	...	...	...	...
Area						
Metropolitan	148,203	...	...	...	...	...
Nonmetropolitan	68,377	...	...	...	...	...

[1] Excludes Alaska and Hawaii.

NOTE: Figures may not add to totals due to rounding.

ter files. The NAMCS was designed to provide statistically unbiased estimates of office visits to this designated population. Not included in the universe were physicians classified in such categories as federally employed, hospital-based, research, teaching, administration, or other nonpatient care activity. Consequently, any ambulatory patient visits to these physicians in an office setting are not included in NAMCS estimates. In an attempt to measure the number of office visits to physicians not in the NAMCS universe, a NAMCS Complement Survey was conducted in 1980. This study involved a sample of approximately 2,000 physicians selected from among the 226,000 physicians in the AMA and AOA master files who were not eligible (in scope) for the 1980 NAMCS. Details of the Complement Survey methodology and results are forthcoming. Preliminary results indicate that about 17 percent of the Complement Survey universe saw some ambulatory patients in an office setting. An estimated 69 million office visits were made to these physicians in 1980. This indicates that the total number of office visits to all physicians during 1980 was about 645 million (69 million plus 576 million).

Appendix II. Definition of Terms

Terms relating to the survey

Office.—Premises identified by physicians as location for their ambulatory practices. The responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than with any institution.

Ambulatory patient.—An individual seeking personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Physician.—Classified as either:

- *In scope.*—All duly licensed doctors of medicine or doctors of osteopathy currently in practice who spend some time caring for ambulatory patients at an office location.

- *Out of scope.*—Those physicians who treat patients only indirectly, including physicians in the specialties of anesthesiology, pathology, forensic pathology, radiology, therapeutic radiology, and diagnostic radiology, and the following physicians:

  - Physicians who are federally employed, including those physicians in military service.

  - Physicians who treat patients only in an institutional setting; for example, patients in nursing homes and hospitals.

  - Physicians employed full time in industry or by an institution and having no private practice; for example, physicians who work for the Veterans' Administration or the Ford Motor Company.

  - Physicians who spend no time seeing ambulatory patients; for example, physicians who only teach, are engaged in research, or are retired.

Patients.—Classified as either:

- *In scope.*—All patients seen by the physician or a staff member in the office of the physician.

- *Out of scope.*—Patients seen by the physician in a hospital, nursing home, or other extended care institution, or in the patient's home. (Note: If the physician has a private office, meeting the definition of "office," located in a hospital, the ambulatory patients seen there are considered in scope.) The following types of patients are considered out of scope:

- Patients seen by the physician in an institution, including outpatient clinics of hospitals, for whom the institution has primary responsibility over time.

- Patients who contact and receive advice from the physician via telephone.

- Patients who come to the office only to leave a specimen, to pick up insurance forms, or to pay a bill.

- Patients who come to the office only to pick up medications previously prescribed by the physician.

Visit.—A direct, personal exchange between an ambulatory patient and a physician or a staff member for the purpose of seeking care and rendering health services.

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

Region of practice location.—The four geographic regions, excluding Alaska and Hawaii, that correspond to those used by the U.S. Bureau of the Census:

Region	States included
Northeast	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
North Central	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin

Metropolitan status of practice location.—A physician's practice is classified by its location in a metropolitan or nonmetropolitan area. Metropolitan areas are standard metropolitan statistical areas (SMSA's) as defined by the U.S. Office of Management and Budget. The definition of an individual SMSA involves two considerations: first, a city or cities of specified population that constitute the central city and identify the county in which it is located as the central county; second, economic and social relationships with "contiguous" counties that are metropolitan in character so that the periphery of the specific metropolitan area may be determined. SMSA's may cross State lines. In New England, SMSA's consist of cities and towns rather than counties.

Terms relating to the Patient Record Form

Age.—The age calculated from date of birth was the age at last birthday on the date of visit.

Color or race.—White, Black, Asian/Pacific Islander, or American Indian/Alaskan Native. Physicians were instructed to mark the category they judged to be the most appropriate for each patient based on observation or prior knowledge. The following definitions were provided to the physician:

- *White.*—A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

- *Black.*—A person having origins in any of the black racial groups of Africa.

- *Asian/Pacific Islander.*—A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

- *American Indian/Alaskan Native.*—A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

Ethnicity.—Category judged by the physician to be the most appropriate. The following definitions were provided:

- *Hispanic origin.*—A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

- *Not Hispanic.*—Any person not of Hispanic origin.

- *Patient's complaint(s), symptom(s), other reason(s) for this visit (in patient own words).*—The patient's principal problem, complaint, symptom, or other reason for this visit as expressed by the patient. Physicians were instructed to record key words or phrases verbatim to the extent possible, listing that problem first which, in the physician's judgment, was most responsible for the patient's visit.

Major reason for this visit.—The one major reason (selected from the following list) for the patient's visit as judged by the physician:

- *Acute problem.*—A visit primarily for a condition or illness having a relatively sudden or recent onset (within 3 months of the visit).

- *Chronic problem, routine.*—A visit primarily to receive regular care or examination for a preexisting chronic condition or illness (onset of condition was 3 months or more before the visit).

- *Chronic problem, flareup.*—A visit primarily to receive care for a sudden exacerbation of a preexisting chronic condition or illness.

- *Post surgery/post injury.*—A visit primarily for followup care of injuries or for care required following surgery; for example, removal of sutures or cast.

- *Non-illness care (routine prenatal, general exam, well-baby, etc.).*—General health maintenance examinations and routine periodic examinations of presumably healthy persons, both children and adults, including prenatal and postnatal care, annual physicals, well-child examinations, and insurance examinations.

Diagnostic services this visit.—Physicians were instructed to check any of the following services that were ordered or provided during the current visit:

- *Limited history/exam.*—History or physical examination limited to a specific body site or system or concerned primarily with the patient's chief complaint; for example, pelvic examination or eye examination.

- *General history/exam.*—History or physical examination of a comprehensive nature, including all or most body systems.

- *Pap test.*—Papanicolaou test.

- *Clinical lab test.*—One or more laboratory procedures or tests, including examination of blood, urine, sputum, smears, exudates, transudates, feces, and gastric content, and including chemistry, serology, bacteriology, and pregnancy test; excludes Pap test.

- *X-ray.*—Any single or multiple X-ray examination

for diagnostic or screening purposes; excludes radiation therapy.

- *Blood pressure check.*
- *EKG.*—Electrocardiogram.
- *Vision test.*—Visual acuity test.
- *Endoscopy.*—Examination of the interior of any body cavity except ear, nose, and throat by means of an endoscope.
- *Mental status exam.*—Any formal, clinical evaluation designed to assess the mental or emotional status of the patient.
- *Other.*—All other diagnostic services ordered or provided that are not included in the preceding categories.

Principal diagnosis.—The physician's diagnosis of the patient's principal problem, complaint, or symptom. In the event of multiple diagnoses, the physician was instructed to list them in order of decreasing importance. The term "principal" refers to the first-listed diagnosis. The diagnosis represents the physician's best judgment at the time of the visit and may be tentative, provisional, or definitive.

Other significant current diagnoses.—The diagnosis of any other condition known to exist for the patient at the time of the visit. Other diagnoses may or may not be related to the patient's reason for visit.

Have you seen patient before?—"Seen before" means provided care for at any time in the past. Item 10*b* refers to the patient's current episode of illness.

Medication therapy this visit.—The physician was instructed to list, using brand or generic names, all medications, including drugs, vitamins, hormones, ointments, and suppositories ordered, injected, administered, or provided this visit including prescription and nonprescription drugs, vaccinations, immunization, and desensitization agents. Also included are drugs and medications ordered or provided prior to the visit that the physician instructed or expected the patient to continue taking. Medications for the principal diagnosis are listed in item 11*a*; all other drugs are listed in item 11*b*.

Non-medication therapy.—Physicians were instructed to check any of the following services that were ordered or provided during the current visit:

- *Physiotherapy.*—Any form of physical therapy ordered or provided, including any treatment using heat, light, sound, or physical pressure or movement; for example, ultrasonic, ultraviolet, infrared, whirlpool, diathermy, cold, and manipulative therapy.
- *Office surgery.*—Any surgical procedure performed in the office this visit, including suture of wounds, reduction of fractures, application or removal of casts, incision and draining of abscesses, application of supportive materials for fractures and sprains, irrigations, aspirations, dilations, and excisions.

- *Family planning.*—Services, counseling, or advice that might enable patients to determine the number and spacing of their children, including both contraception and infertility services.
- *Psychotherapy/therapeutic listening.*—All treatments designed to produce a mental or emotional response through suggestion, persuasion, reeducation, reassurance, or support, including psychological counseling, hypnosis, psychoanalysis, and transactional therapy.
- *Diet counseling.*—Instructions, recommendations, or advice regarding diet or dietary habits.
- *Family/social counseling.*—Advice regarding problems of family relationships, including marital or parent-child problems, or social problems, including economic, educational, occupational, legal, or social adjustment difficulties.
- *Medical counseling.*—Instructions and recommendations regarding any health problem, including advice or counsel about a change of habit or behavior. Physicians were instructed to check this category only if medical counseling was a significant part of the treatment. Family planning, diet counseling, and family/social counseling are excluded.
- *Other.*—Treatments or non-medication therapies ordered or provided that are not listed or included in the preceding categories.

Was patient referred for this visit by another physician?—Referrals are any visits that are made at the advice or direction of a physician other than the one being visited. The interest is in referrals for the current visit and not in referrals for any prior visit.

Disposition this visit.—Eight categories are provided to describe the physician's disposition of the case. The physician was instructed to check as many of the categories as apply:

- *No followup planned.*—No return visit or telephone contact was scheduled for the patient's problem.
- *Return at specified time.*—Patient was told to schedule an appointment or was instructed to return at a particular time.
- *Return if needed, P.R.N.*—No future appointment was made, but the patient was instructed to make an appointment with the physician if the patient considered it necessary.
- *Telephone follow-up planned.*—Patient was instructed to telephone the physician on a particular day to report either on progress, or if the need arose.
- *Referred to other physician.*—Patient was instructed to consult or seek care from another physician. The patient may or may not return to this physician at a later date.
- *Returned to referring physician.*—Patient was in-

structed to consult again with the referring physician.

- *Admit to hospital.*—Patient was instructed that further care or treatment would be provided in a hospital. No further office visits were expected prior to hospital admission.

- *Other.*—Any other disposition of the case not included in the preceding categories.

Duration of this visit.—Time the physician spent with the patient, not including time the patient spent waiting to see the physician, time the patient spent receiving care from someone other than the physician without the presence of the physician, and time the physician spent in reviewing such things as records and test results. If the patient was provided care by a member of the physician's staff but did not see the physician during the visit, the duration of visit was recorded as 0 min.

Appendix III. Survey instruments

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
OFFICE OF HEALTH RESEARCH, STATISTICS AND TECHNOLOGY
HYATTSVILLE, MARYLAND 20782

NATIONAL AMBULATORY
MEDICAL CARE SURVEY

Endorsing Organizations

American Academy
of Dermatology

American Academy of
Family Physicians

American Academy
of Neurology

American Academy of
Orthopaedic Surgeons

American Academy
of Pediatrics

American Association of
Neurological Surgeons

American College of
Emergency Physicians

American College of
Obstetricians and
Gynecologists

American College
of Physicians

American College of
Preventive Medicine

American Osteopathic
Association

American Society of
Colon and Rectal
Surgeons

American Psychiatric
Association

American Society of
Internal Medicine

American Society of
Plastic and Reconstructive
Surgeons, Inc.

American Urological
Association

Association of American
Medical Colleges

National Medical
Association

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

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

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

Many organizations and leaders in the medical profession
have expressed their support for this survey, including
those shown to the left. In particular, your own spe-
cialty society has reviewed the NAMCS program and supports
this effort (see enclosure). They join me in urging
your cooperation in this important research.

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

Sincerely yours,

Dorothy P. Rice
Director

Enclosure

D 749612

Department of Health and Human Services
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Statistics

D 749612

PATIENT LOG

As each patient arrives, record name and time of visit on the log below. For the patient entered on line #5, also complete the patient record to the right.

PATIENT'S NAME	TIME OF VISIT
1	a.m.
	p.m.
2	a.m.
	p.m.
3	a.m.
	p.m.
4	a.m.
	p.m.
5	a.m.
	p.m.

Record items 1-15 for this patient.

↓

CONTINUE LISTING PATIENTS ON NEXT PAGE

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

1. DATE OF VISIT
/ /
Month   Day   Year

2. DATE OF BIRTH
/ /
Month   Day   Year

3. SEX
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ BLACK
3 ☐ ASIAN/PACIFIC ISLANDER
4 ☐ AMERICAN INDIAN/ ALASKAN NATIVE

5. ETHNICITY
1 ☐ HISPANIC ORIGIN
2 ☐ NOT HISPANIC

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

b. OTHER

7. MAJOR REASON FOR THIS VISIT *[Check one]*
1 ☐ ACUTE PROBLEM
2 ☐ CHRONIC PROBLEM, ROUTINE
3 ☐ CHRONIC PROBLEM, FLAREUP
4 ☐ POST SURGERY/POST INJURY
5 ☐ NON-ILLNESS CARE (ROUTINE PRENATAL, GENERAL EXAM., WELL BABY, ETC.)

8. DIAGNOSTIC SERVICES THIS VISIT *[Check all ordered or provided]*
1 ☐ NONE
2 ☐ LIMITED HISTORY/EXAM.
3 ☐ GENERAL HISTORY/EXAM.
4 ☐ PAP TEST
5 ☐ CLINICAL LAB TEST
6 ☐ X-RAY
7 ☐ BLOOD PRESSURE CHECK
8 ☐ EKG
9 ☐ VISION TEST
10 ☐ ENDOSCOPY
11 ☐ MENTAL STATUS EXAM.
12 ☐ OTHER *(Specify)*

9. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a.

b. OTHER SIGNIFICANT CURRENT DIAGNOSES

10. HAVE YOU SEEN PATIENT BEFORE?
1 ☐ YES   2 ☐ NO
IF YES, FOR THE CONDITION IN ITEM 9a?
1 ☐ YES   2 ☐ NO

11. MEDICATION THERAPY THIS VISIT   ☐ NONE
[Using brand or generic names, record all new and continued medications ordered, injected, administered, or otherwise provided at this visit. Include immunizing and desensitizing agents]

a. FOR PRINCIPAL DIAGNOSES IN ITEM 9a.
1. _____
2. _____
3. _____
4. _____

b. FOR ALL OTHER REASONS.
1. _____
2. _____
3. _____
4. _____

12. NON-MEDICATION THERAPY *[Check all services ordered or provided this visit]*
1 ☐ NONE
2 ☐ PHYSIOTHERAPY
3 ☐ OFFICE SURGERY
4 ☐ FAMILY PLANNING
5 ☐ PSYCHOTHERAPY/ THERAPEUTIC LISTENING
6 ☐ DIET COUNSELING
7 ☐ FAMILY/SOCIAL COUNSELING
8 ☐ MEDICAL COUNSELING
9 ☐ OTHER *(Specify)*

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

14. 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)* _____

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

_____ Minutes

PHS-6105-D (9/79)

OMB No. 68-R1498

CONFIDENTIAL*

NORC-4284

FOR OFFICE USE
ONLY:

(BATCH NO.)

5-6/

(LOG NO.)

7-10/

NATIONAL AMBULATORY MEDICAL CARE SURVEY
INDUCTION INTERVIEW

BEFORE STARTING INTERVIEW

1. ENTER PHYSICIAN I.D. NUMBER IN BOX TO RIGHT.

2. ENTER DATES OF ASSIGNED REPORTING WEEK IN Q. 2, P. 2.

(Phys. ID Number)

1-4/

TIME _____ AM
BEGAN: PM

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

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

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

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

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

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

   Is that right?

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

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

   _____
   (Name of Specialty)

   11-13/

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

                                    (that's a

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

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

                           Yes . . . . . .(GO TO Q. 3) . . X

                           No . . . . . . (ASK A) . . . . Y

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

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

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

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

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

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

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

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

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

Yes X
No . . . . Y

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

A. Office Location	B. In Scope?	
	Yes	No
(1) _____	1	0
(2) _____	1	0
(3) _____	1	0
(4) _____	1	0

TOTAL IN-SCOPE LOCATIONS: [   ]   14/

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

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

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

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

        CIRCLE NUMBER OF DAYS IN APPROPRIATE COLUMN UNDER "B" BELOW.

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

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

LOG FORM DESCRIPTION	A. Expected total patients during survey week.	B. Total days in practice during week.						
A--Patient Record is to be completed for ALL patients listed on Log. 15-17/	ENTER TOTAL FROM Q. 4-A.		18/					
		1	2	3	4	5	6	7
	1- 12 PATIENTS	A	A	A	A	A	A	A
	13- 25 "	B	A	A	A	A	A	A
B--Patient Record is to be completed for every SECOND patient listed on Log.	26- 39 "	C	B	A	A	A	A	A
	40- 52 "	C	B	B	A	A	A	A
	53- 65 "	D	C	B	B	A	A	A
	66- 79 "	D	C	B	B	B	A	A
C--Patient Record is to be completed for every THIRD patient listed on Log.	80- 92 "	D	D	C	B	B	B	B
	93-105 "	D	D	C	B	B	B	B
	106-118 "	D	D	C	C	B	B	B
	119-131 "	D	D	C	C	B	B	B
	132-145 "	D	D	D	C	C	B	B
*D--Patient Record is to be completed for every FIFTH patient listed on Log.	146-158 "	D	D	D	C	C	B	B
	159-171 "	D	D	D	C	C	C	C
	172-184 "	D	D	D	C	C	C	C
	185-197 "	D	D	D	D	D	D	D
	198-210 "	D	D	D	D	D	D	D
	211+ "	D	D	D	D	D	D	D

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

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

FOLIO		No. Lines Stamped "BEGIN ON NEXT LINE"	FOR OFFICE USE ONLY Number patient record forms completed.	
Letter	Number			
A		✕		19-23/ 24-26/
B				
C				
D				

---

6. HAND DOCTOR HIS FOLIO AND EXPLAIN HOW FORMS ARE TO BE FILLED OUT. SHOW DOCTOR
   INSTRUCTIONS ON THE POCKET OF FOLIO, ITEMS 8   AND 11 ON CARDS IN POCKET
   OF FOLIO AND ITEM DEFINITIONS ON THE BACK OF FOLIO, TO WHICH HE CAN REFER AFTER
   YOU LEAVE.

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

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

---

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

Location	FOLIO		No. Lines Stamped "BEGIN ON NEXT LINE"	FOR OFFICE USE ONLY: Number patient record forms completed	
	Letter	Number			
					27-31/ 32-34/
					35-39/ 40-42/
					43-47/ 48-50/

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

Yes . . . . (ASK A) . . . 1   51/

No 2

A. <u>IF YES</u>: Who would that be?

RECORD NAME, POSITION AND LOCATION.

NAME	POSITION	LOCATION

PERSONALLY BRIEF EACH PERSON LISTED ABOVE.

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

---

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

Solo. . . . . (GO TO.Q. 10) . . 1   52/
Partnership . . (ASK A-C) . . . 2
Group . . . . . (ASK A-C) . . . 3
<--- Other (SPECIFY AND ASK A-C) . . 4

<u>IF PARTNERSHIP, GROUP, OR OTHER</u>:

A. Is this a prepaid group practice?   Yes . . (ASK [1]) . . . 1   53/
No 2

[1] <u>IF YES TO A</u>: What per cent of patients are prepaid?   _____ per cent   54-56/

B. How many other physicians are associated with you?   NUMBER OF PHYSICIANS: _____   57-59/

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

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

D. <u>CIRCLE ONE</u>:
All physicians in this partnership/group practice have the same specialty 1   60/

More than one specialty in this partnership/group practice . . 2

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

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

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

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

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

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

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

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

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

COMMENTS:

INTERVIEWER NUMBER

INTERVIEWER'S SIGNATURE

_____

FOR OFFICE USE ONLY:

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

Total Days in Practice during Week: | | 62/

Appendix IV. American Hospital Formulary Service classification system and therapeutic category codes

AMERICAN HOSPITAL FORMULARY SERVICE CLASSIFICATION SYSTEM AND THERAPEUTIC CATEGORY CODES (AHFS#)

(Classifications in parentheses are provisional but may be used in DPIF)

AMERICAN
HOSPITAL
FORMULARY
SERVICE
CLASSIFICATION
SYSTEM

04:00 ANTIHISTAMINE DRUGS

08:00 ANTI-INFECTIVE AGENTS
08:04 Amebacides
08:08 Anthelmintics
08:12 Antibiotics
08:12.02 Aminoglycosides
08:12.04 Antifungal Antibiotics
08:12.06 Cephalosporins
08:12.08 Chloramphenicol
08:12.12 Erythromycins
08:12.16 Penicillins
08:12.24 Tetracyclines
08:12.24 Other Antibiotics
08:16 Antituberculosis Agents
08:18 Antivirals
08:20 Plasmodicides
08:24 Sulfonamides
08:26 Sulfones
08:28 Treponemicides
08:32 Trichomonacides
08:36 Urinary Germicides
08:40 Other Anti-Infective

10:00 ANTINEOPLASTIC AGENTS

12:00 AUTONOMIC DRUGS
12:04 Parasympathomimetic Agents
12:08 Parasympatholytic Agents
12:12 Sympathomimetic Agents
12:16 Sympatholytic Agents
12:20 Skeletal Muscle Relaxants

16:00 BLOOD DERIVATIVES

20:00 BLOOD FORMATION AND COAGU-
LATION
20:04 Antianemia Drugs
20:04.04 Iron Preparations
20:04.08 Liver and Stomach
Preparations
20:12 Coagulants and Anticoagulants
20:12.04 Anticoagulants
20:12.08 Antiheparin Agents
20:12.12 Coagulants
20:12.16 Hemostatics
20:40 Thrombolytic Agents

24:00 CARDIOVASCULAR DRUGS
24:04 Cardiac Drugs
24:06 Antilipemic Agents
24:08 Hypotensive Agents
24:12 Vasodilating Agents
24:16 Sclerosing Agents

28:00 CENTRAL NERVOUS SYSTEM DRUGS
28:04 General Anesthetics
28:08 Analgesics and Antipyretics
28:10 Narcotic Antagonists
28:12 Anticonvulsants
28:16 Psychotherapeutic Agents
28:16.04 Antidepressants
28:16.08 Tranquilizers
28:16.12 Other Psychotherapeutic
Agents
28:20 Respiratory and Cerebral
Stimulants
28:24 Sedatives and Hypnotics

36:00 DIAGNOSTIC AGENTS
36:04 Adrenocortical Insufficiency
36:08 Amyloidosis
36:12 Blood Volume
36:16 Brucellosis
36:18 Cardiac Function
36:24 Circulation Time
36:25 (Cystic Fibrosis)
36:26 Diabetes Mellitus
36:28 Diphtheria
36:30 Drug Hypersensitivity
36:32 Fungi
36:34 Gallbladder Function
36:36 Gastric Function
36:38 Intestinal Absorption
36:40 Kidney Function
36:44 Liver Function
36:48 Lymphogranuloma Venereum
36:52 Mumps
36:56 Myasthenia Gravis
36:60 Myxedema
36:61 Pancreatic Function
36:62 Phenylketonuria
36:64 Pheochromocytoma
36:66 Pituitary Function
36:68 Roentgenography
36:72 Scarlet Fever
36:76 Sweating
36:78 (Thyroid Function)
36:80 Trichinosis
36:84 Tuberculosis
36:88 Urine Contents

40:00 ELECTROLYTIC, CALORIC, AND
WATER BALANCE
40:04 Acidifying Agents
40:08 Alkalinizing Agents
40:10 Ammonia Detoxicants
40:12 Replacement Solutions
40:16 Sodium-Removing Resins
40:18 Potassium-Removing Resins
40:20 Caloric Agents
40:24 Salt and Sugar Substitutes
40:28 Diuretics
40:36 Irrigating Solutions
40:40 Uricosuric Agents

44:00 ENZYMES

48:00 EXPECTORANTS AND COUGH
PREPARATIONS

52:00 EYE, EAR, NOSE AND THROAT
PREPARATIONS
52:04 Anti-Infectives
52:04.04 Antibiotics
52:04.06 Antivirals
52:04.08 Sulfonamides
52:04.12 Misc. Anti-Infectives
52:08 Anti-Inflammatory Agents
52:10 Carbonic Anhydrase Inhibitors
52:12 Contact Lens Solutions
52:16 Local Anesthetics
52:20 Miotics
52:24 Mydriatics
52:28 Mouth Washes and Gargles
52:32 Vasoconstrictors
52:36 Unclassified Agents

56:00 GASTROINTESTINAL DRUGS
56:04 Antacids and Adsorbents
56:08 Anti-Diarrhea Agents
56:10 Antiflatulents
56:12 Cathartics and Laxatives
56:16 Digestants
56:20 Emetics and Anti-Emetics
56:24 Lipotropic Agents
56:40 Misc. GI Drugs

60:00 GOLD COMPOUNDS

64:00 HEAVY METAL ANTAGONISTS

68:00 HORMONES AND SYNTHETIC
SUBSTITUTES
68:04 Adrenals
68:08 Androgens
68:12 Contraceptives
68:16 Estrogens
68:18 Gonadotropins
68:20 Insulins and Anti-Diabetic
Agents
68:20.08 Insulins
68:24 Parathyroid
68:28 Pituitary
68:32 Progestogens
68:34 Other Corpus Luteum Hormones
68:36 Thyroid and Antithyroid

72:00 LOCAL ANESTHETICS

76:00 OXYTOCICS

78:00 RADIOACTIVE AGENTS

80:00 SERUMS, TOXOIDS AND VACCINES
80:04 Serums
80:08 Toxoids
80:12 Vaccines

84:00 SKIN AND MUCOUS MEMBRANE
PREPARATIONS
84:04 Anti-Infectives
84:04.04 Antibiotics
84:04.08 Fungicides
84:04.12 Scabicides and Pediculicides
84:04.16 Misc. Local Anti-Infectives
84:06 Anti-Inflammatory Agents
84:08 Antipruritics and Local
Anesthetics
84:12 Astringents
84:16 Cell Stimulants and Proliferants
84:20 Detergents
84:24 Emollients, Demulcents and
Protectants
84:24.04 Basic Lotions and Liniments
84:24.08 Basic Oils and Other Solvents
84:24.12 Basic Ointments and
Protectants
84:24.16 Basic Powders and Demulcents
84:28 Keratolytic Agents
84:32 Keratoplastic Agents
84:36 Miscellaneous Agents
84:50 Pigmenting & Depigmenting Agents
84:50.04 Depigmenting Agents
84:50.06 Pigmenting Agents
84:80 Sunscreen Agents

86:00 SPASMOLYTIC AGENTS

88:00 VITAMINS
88:04 Vitamin A
88:08 Vitamin B Complex
88:12 Vitamin C
88:16 Vitamin D
88:20 Vitamin E
88:24 Vitamin K Activity
88:28 Multivitamin Preparations

92:00 UNCLASSIFIED THERAPEUTIC AGENTS

94:00 (DEVICES)

96:00 (PHARMACEUTIC AIDS)

Vital and Health Statistics series descriptions

SERIES 1. **Programs and Collection Procedures.**—Reports describing the general programs of the National Center for Health Statistics and its offices and divisions and the data collection methods used. They also include definitions and other material necessary for understanding the data.

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SERIES 22. **Data From the National Monthly and Natality Surveys.**—Discontinued in 1975. Reports from these sample surveys based on vital records are included in Series 20 and 21, respectively.

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

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

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