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National Ambulatory Medical Care Survey: 1999 Summary

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Abstract

Objective—This report describes ambulatory care visits made to physician offices within the United States. Statistics are presented on selected characteristics of the physician's practice, the patient, and the visit. Highlights of trends in physician office visit utilization from 1985 through 1999 and data on the use of New Molecular Entities (NME's) are also presented.

Methods—The data presented in this report were collected from the 1999 National Ambulatory Medical Care Survey (NAMCS). The NAMCS is part of the ambulatory care component of the National Health Care Survey, which measures health care utilization across various types of providers. The NAMCS is a national probability sample survey of visits to office-based physicians in the United States. Sample data are weighted to produce annual estimates. Trends are based on NAMCS data for 1985, 1989–90, 1995–96, 1997–98, and 1999.

Results—During 1999 an estimated 756.7 million visits were made to physician offices in the United States, an overall rate of 278.5 visits per 100 persons. Almost one-quarter of these visits were made to general and family practice physicians. Persons 75 years of age and over had the highest rate of physician office visits, 678.7 visits per 100 persons. Trend data from 1985 through 1999 indicated that the visit rate increased by 22 percent for persons 65 years of age and over, but declined by 19 percent for persons 15–24 years of age. Visit rates to general and family practice (GFP) physicians and general surgeons declined while visit rates to physicians who specialize in internal medicine and cardiology rose. Of all visits made to these offices in 1999, approximately 55 percent listed private insurance as the primary expected source of payment, and almost 30 percent were made by patients belonging to a health maintenance organization (HMO). There were an estimated 86.9 million injury-related visits during 1999 or 32.0 visits per 100 persons. At least one diagnostic/screening service was ordered or provided during 74 percent of the office visits, 32 percent of the visits had at least one therapeutic service ordered or provided, and 66 percent of the visits had at least one medication ordered, supplied, continued, or administered. NME's accounted for 3.7 percent of all 1999 drug mentions (42.4 million), and there was a positive linear trend between patient's age and likelihood of having an NME mention. Overall, 95.7 percent of visits were attended by a physician followed by medical assistants (24.1 percent). Over 93 percent of physicians had managed care contracts and 57.7 percent were involved in Independent Practice Associations (IPA's).

Keywords: NAMCS • physician office visits • diagnoses • medications • ICD–9–CM

Introduction

The National Ambulatory Medical Care Survey (NAMCS), which began in 1973, collects data on the utilization of ambulatory medical care services provided by office-based physicians. It was conducted annually until 1981, again in 1985, and resumed an annual schedule in 1989. The NAMCS is complemented by the National Hospital Ambulatory Medical Care Survey (NHAMCS), which was inaugurated in 1992 to expand the scope of data collection to the medical services provided by hospital outpatient and emergency departments. Together NAMCS and NHAMCS data provide an important tool for tracking ambulatory care utilization in the United States. A third survey, the National Survey of Ambulatory Surgery, was conducted from 1994 through 1996 to focus on the rapidly increasing use of ambulatory surgery centers that are not covered in the NAMCS or the NHAMCS. These surveys are part of the National Health Care Survey, which measures health care utilization across various types of providers. More information about the National Health Care Survey can be found at the National Center for Health Statistics (NCHS) Internet address: www.cdc.gov/nchs/nhcs.htm. For more information on the NHAMCS (hospital outpatient and emergency departments), please refer to the 1999 annual

summaries (1,2). A separate report combining NAMCS and NHAMCS data provides a comprehensive picture of ambulatory medical care utilization (3). It shows that 80 percent of ambulatory care delivered by non-Federal physicians, as identified by the NAMCS and the NHAMCS, is provided in office-based practices. Hospital ambulatory patients are known to differ from office patients in their demographic characteristics and in medical aspects.

This report presents national annual estimates of physician office visits for 1999. Physician practice, patient, and visit characteristics are described.

Data Highlights

Physician office utilization

- In 1999, 756.7 million visits were made to physician offices—about 278.5 visits per 100 persons.
- Since 1985 visit rates to general and family practitioners declined (down by 25 percent) as visits to physicians with a specialty of internal medicine increased. Visits to cardiologists increased by 34 percent, while visits to general surgeons decreased by 39 percent.

Patient characteristics

- Females 15–64 years of age had higher visit rates compared with males in the same age categories.
- Visit rates for persons 65 years of age and over rose by 22 percent from 1985 through 1999; from 485 to 592 visits per 100 persons.
- Patients who had seen the physician before accounted for 85.9 percent of office visits.

Expected source of payment

- Private insurance was the expected source of payment at 55.2 percent of all visits.
- Medicaid visits were more likely to be to the patient's primary care physician compared with Medicare or self-pay visits.

Chief complaints and diagnoses

- Fifty-two percent of all visits were made for reasons classified as symptoms.
- Thirty-five percent of visits were for an acute problem; however, among visits by persons under 15 years of age, the percentage increased to 50.8 percent.
- The three most frequent primary diagnoses related to illness conditions were essential hypertension, acute upper respiratory infection (excluding pharyngitis), and arthropathies and related disorders.

Medications and other services

- At least one therapeutic or preventive service was ordered or provided at 32 percent of all office visits.
- Medication therapy was the most commonly mentioned therapeutic service in 1999, reported at 500.6 million office visits or 66.2 percent of the total.
- Cardiovascular-renal drugs were the most frequently mentioned at office visits (15.6 percent).
- Newly marketed drugs accounted for 3.7 percent of all drug mentions in 1999; but the percent varied by physician specialty and patients age.

Providers and disposition

- Physicians were seen at 95.7 percent of all visits, and the average duration of face-to-face contact with a patient was 19.3 minutes.
- ''Return if needed'' and ''no follow-up planned'' were the dispositions at 24.2 percent and 8.4 percent of visits, respectively.

Physician-level statistics

- Forty-five percent of office-based physicians nationwide have some laboratory testing performed in their offices.
- Over 93 percent of physicians have managed care contracts and 57.7 percent are involved with Independent Practice Associations (IPA's).
- One-third of physicians do not accept charity cases; 10 percent do not accept new Medicare cases, and 21.6 percent do not accept new Medicaid cases.

Methods

The NAMCS is a national probability sample survey conducted by the Division of Health Care Statistics of the NCHS, Centers for Disease Control and Prevention. Survey dates for the NAMCS were December 29, 1998 through December 27, 1999.

The target universe of the NAMCS includes visits made in the United States to the offices of nonfederally employed physicians (excluding those in the specialties of anesthesiology, radiology, and pathology) who were classified by the American Medical Association (AMA) and the American Osteopathic Association (AOA) as ''office-based, patient care.'' Visits to private, nonhospital-based clinics and health maintenance organizations (HMO's) were within the scope of the survey, but those that took place in federally operated facilities and hospital-based outpatient departments were not. Telephone contacts and visits made outside the physician's office were also excluded.

The NAMCS utilizes a multistage probability sample design involving samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. The PSU's are counties, groups of counties, county equivalents (such as parishes or independent cities), or towns and townships for some PSU's in New England. A sample of 2,499 physicians was selected from the master files of the AMA and the AOA, and 1,728 were in scope, or eligible to participate in the survey. Sample physicians were asked to complete Patient Record forms for a systematic random sample of office visits occurring during a randomly assigned 1-week reporting period. This form appears in the Technical notes section and is intended to serve as a reference for readers as they review the survey findings presented in this *Advance Data* report. The response rate for in-scope physicians was 62.9 percent, and 20,760 Patient Record forms were completed. The

Technical notes provide more information on characteristics of nonresponding physicians.

Because the estimates presented in this report are based on a sample rather than on the entire universe of office visits, they are subject to sampling variability. The Technical notes include an explanation of the sampling errors, guidelines for judging the precision of the estimates, and information on physician and item nonresponse. The standard errors reported here are calculated using Taylor approximations in SUDAAN, which take into account the complex sample design of the NAMCS (4).

The U.S. Bureau of the Census was responsible for data collection. Data processing operations and medical coding were performed by Analytic Sciences, Inc., which is located in Durham, North Carolina. As part of the quality assurance procedure, a 10-percent quality control sample of survey records was independently keyed and coded. Coding error rates ranged between 0.1 and 1.7 percent for various survey items.

Several of the tables in this report present data on rates of physician office visits. The population figures used in calculating these rates are U.S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1999. The figures have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix. The population figures have been published (3).

In addition to describing current characteristics of physician office visits, this report provides information on trends in physician office visits for 1985–99. Where possible, 2 years of data were combined to make data points more reliable. Data points used for the trend analysis included 1985, 1989–90, 1995–96, 1997–98, and 1999. A weighted least-squares analysis was used to test for linear trends at the .01 level of significance. For more information on previous data years, refer to the annual reports (5–15).

Results

There were an estimated 756.7 million visits to office-based physicians in 1999, a rate of 278.5 visits per 100 persons. The annual number of visits increased by 19 percent since 1985 but the population-based visit rates have not changed significantly (between 270 and 310 visits per 100 persons). The number of office-based physicians increased by 43 percent during this period as monitored by the AMA, making the person-to-physician ratio smaller over the 15-year period. Selected characteristics of the encounter pertaining to the physician's practice, the patient, and the visit are described in the following text.

Physician practice characteristics

The distribution of office visits according to physician specialty is presented in table 1. About one-half of the visits were to physicians in the primary care specialties of general and family practice (GFP), internal medicine, and pediatrics (figure 1). The distribution of visits is fairly similar to the distribution of physicians with several exceptions. Dermatologists receive 4.3 percent of visits but account for only 2.3 percent of physicians, and GFP's represent 18 percent of office-based physicians but have more than 20 percent of the patient encounters. Conversely, psychiatrists make up 6.0 percent of office-based physicians but only account for 3 percent of the visits. Trends show the continued decline in visits to GFP's with a corresponding increase in visits to physicians who practice internal medicine (figure 2). Visit rate trends vary for other specialties as well. The visit rate to cardiologists increased by 32 percent, while the visit rate to general surgeons decreased by 39 percent. Additional trends show that the rate of visits to physicians grouped into the catch-all category of "other" increased by 49

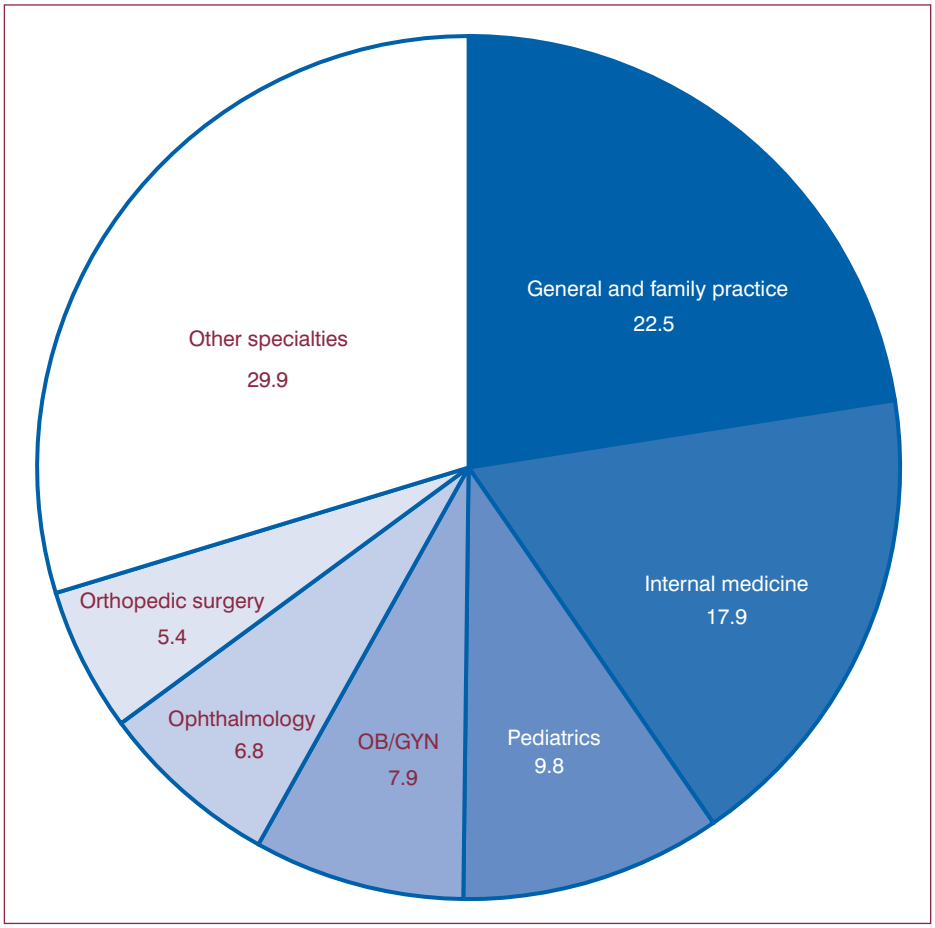
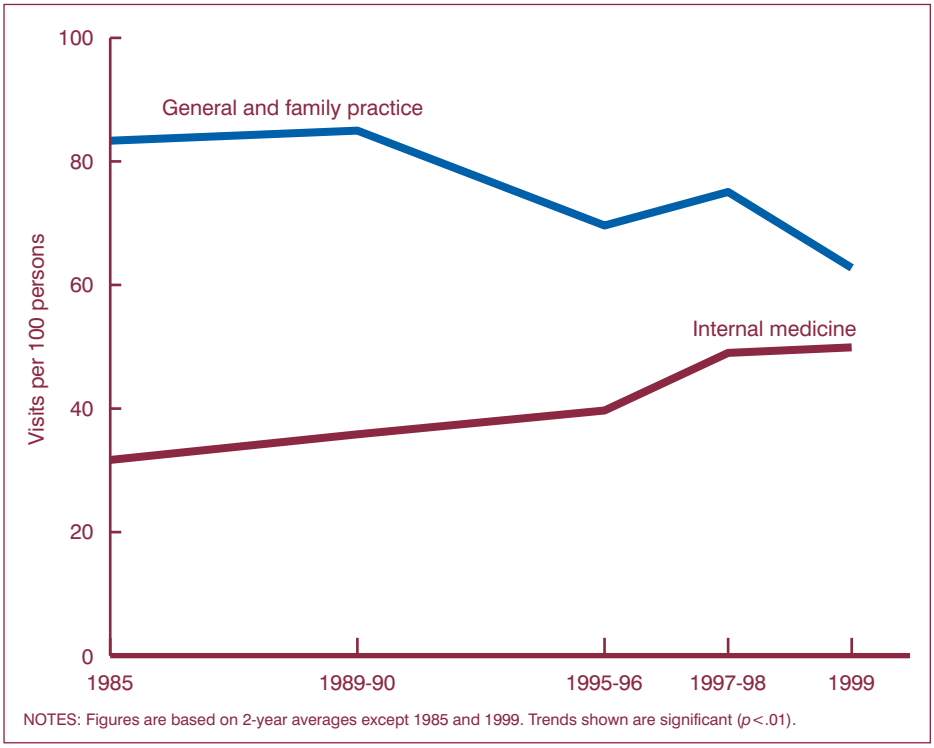
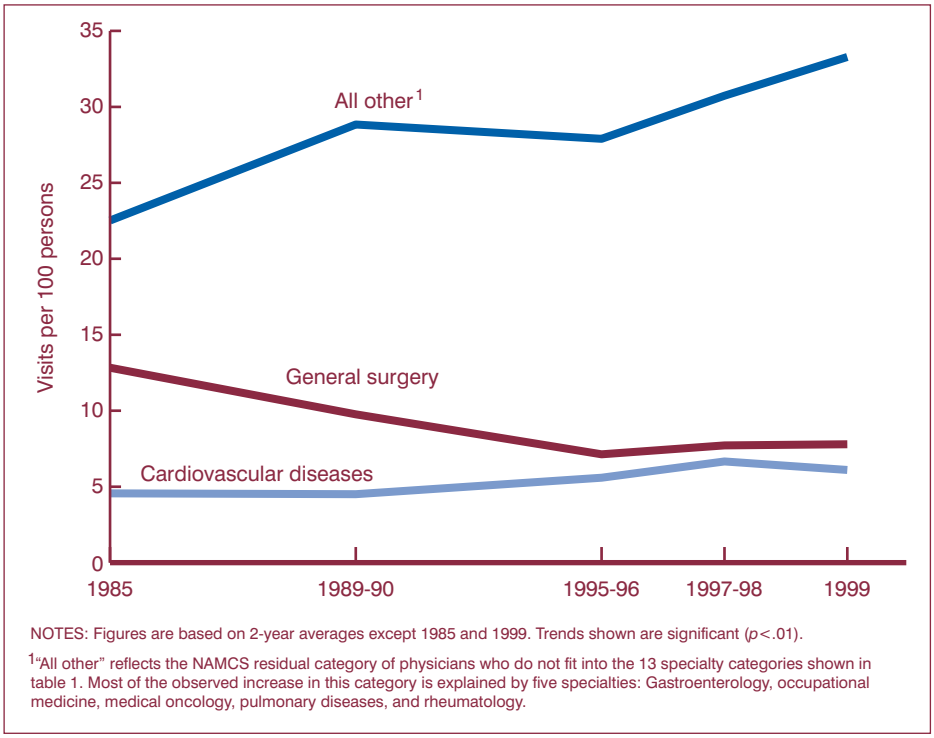


Figure 1. Percent of office visits by physician specialty, 1999



NOTES: Figures are based on 2-year averages except 1985 and 1999. Trends shown are significant ($p < .01$).

Figure 2. Trends in visit rates to office-based physicians by primary care specialty: United States 1985–99



NOTES: Figures are based on 2-year averages except 1985 and 1999. Trends shown are significant ($p < .01$).

[1]"All other" reflects the NAMCS residual category of physicians who do not fit into the 13 specialty categories shown in table 1. Most of the observed increase in this category is explained by five specialties: Gastroenterology, occupational medicine, medical oncology, pulmonary diseases, and rheumatology.

Figure 3. Trends in visit rates to office-based physicians by selected physician specialty: United States, 1985–99

percent since 1985 (figure 3). Three-quarters of the observed increases in visit rates to physicians in other specialties can be explained by increases in the following specialties: Gastroenterology, occupational medicine, medical oncology, pulmonary diseases, and rheumatology.

Table 1 also shows that doctors of osteopathy received 47.7 million visits during 1999 or 6.3 percent of all office visits. Visits to this specialty occurred at a rate of 17.5 per 100 persons. Visits according to geographic region and metropolitan status of the physician's practice are also displayed in table 1. Visit rates for the Northeast (326.3 per 100 persons) and West (320.2 per 100 persons) regions were significantly higher than the Midwest (230.5 visits per 100 persons), while all other comparisons were not different from one another.

Additional information on the physician's practice has been collected annually in the NAMCS by means of the Physician Induction Interview form (PII). The PII is used to obtain basic information on the practice, establish the visit sampling rate, and record the final disposition of the interview. In 1999 selected items on the physician and physician practice, including employment status, ownership, practice size, and office type were edited and weighted to produce national estimates of office visits by these characteristics. These data are displayed in table 2. Over one-third of office visits were to physicians who are in solo practice. Physicians in large practices (10 physicians or more) account for about 10 percent of the visits. Almost 70 percent of visits were to a physician who is an owner or part-owner of the practice.

Patient characteristics

Office visits by patient's age, sex, and race are shown in table 3. Females made 58.9 percent of all office visits during 1999. The visit rate increased with patient's age after age 15, and females were more likely than males to make visits in the age groups between 15 and 64 years (figure 4).

White persons represent 82 percent of the U.S. civilian noninstitutionalized population but made 86.5 percent of all office visits. The visit rate for white persons was 39 percent higher than the rate for black persons (293.2 versus 210.7 visits per 100 persons, respectively). Data from the 1999 NHAMCS indicate that a greater proportion of visits for black persons occur in hospital outpatient clinics

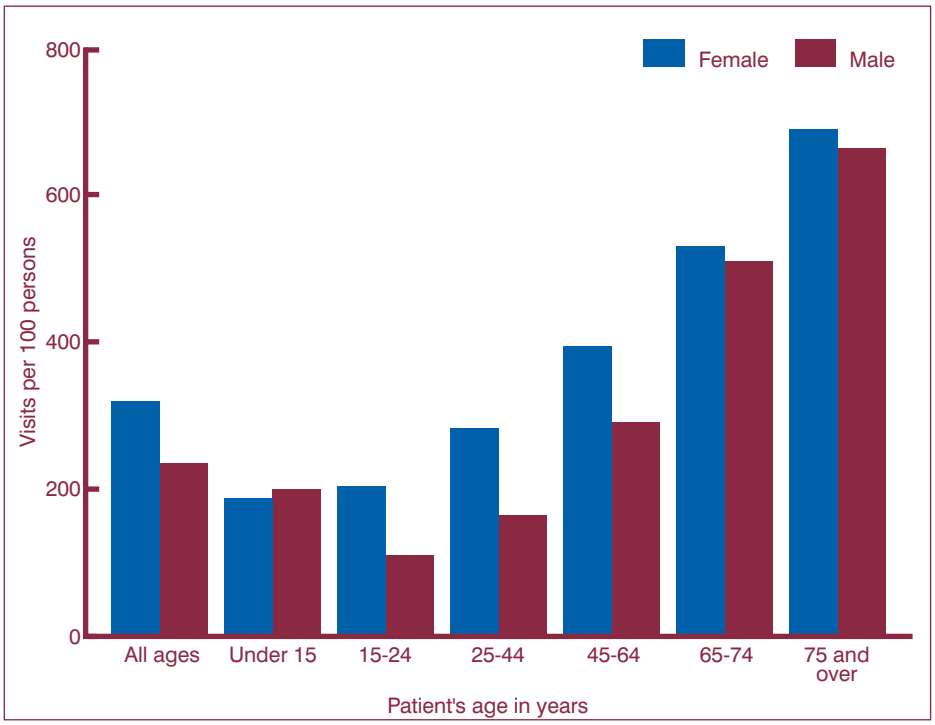


Figure 4. Annual rate of visits to office-based physicians by patient's age and sex: United States, 1999

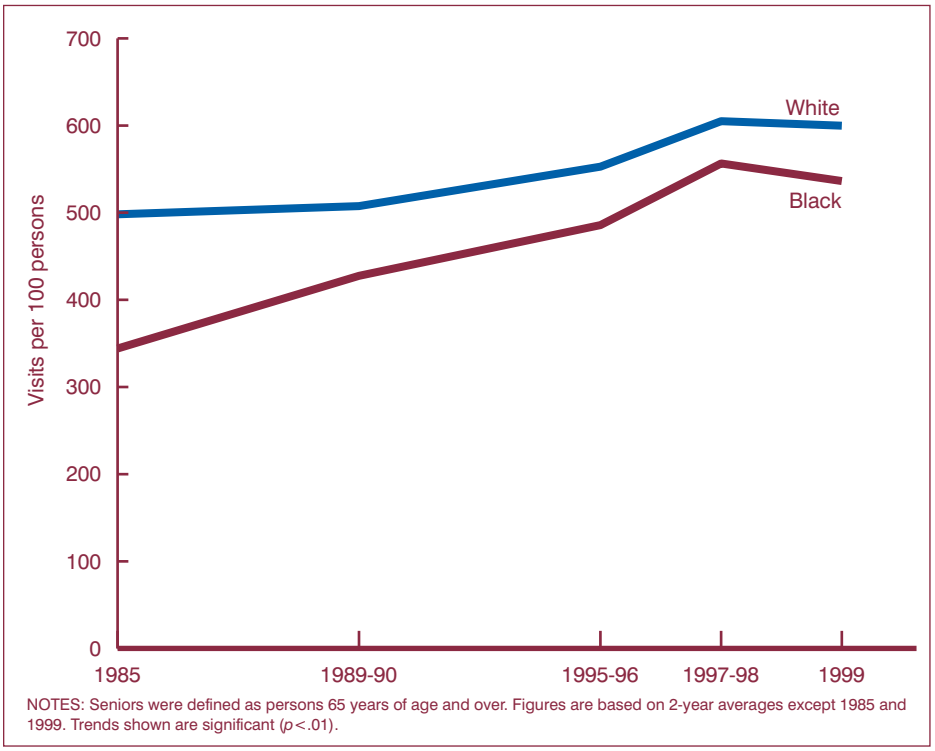


Figure 5. Trends in age-specific visit rates to office-based physicians for seniors by race: United States, 1985–99

where the visit rate for black persons is 78 percent higher than for white persons (50.7 percent versus 28.5 percent per 100 persons, respectively) (1).

Trends from 1985 through 1999 mirror the aging of the population as the mean age of patients at office-based physician visits increased by 13 percent from 39.6 to 44.7 years. Also, the visit rate for persons 65 years of age and over increased by 22 percent (from 484.8 per 100 persons to 592.1). Specifically, the observed increase was 20 percent for elderly white persons and 56 percent for elderly black persons (figure 5). The visit rate for persons 15–24 years of age declined by 19 percent from 193.3 per 100 persons to 157.3 (figure 6).

Visit characteristics

Referral status and prior-visit status—Table 4 shows data on office visits categorized by patient's referral status and prior-visit status. Overall, patients who had seen the physician on a prior occasion, "old patients," accounted for 85.9 percent of the office visits. Those patients that were referred for this visit by another physician or health plan accounted for 15.3 percent of the office visits. Forty-five percent of all visits by new patients were referred by another physician or a health plan (data not shown). About 58.1 percent of all visits were to the patient's primary care provider (data not shown).

In general, specialty care providers experienced more visits that were referrals than primary care providers (data not shown). Primary care providers for this analysis are defined as physicians with a speciality of either GFP, internal medicine, pediatrics, or obstetrics and gynecology. Table 5 shows that for visits to general and family practice physicians 1.0 percent of visits were new patient referrals and 1.9 percent were "old patient" referrals from another physician or health plan. In contrast, referrals to other types of specialties were generally much higher. For example, among neurologists, 19.6 percent were new patient referrals and 35.7 percent were "old patient" referrals from another physician or health plan. For the specialty care providers (ophthalmology through neurology), the percent of visits that were referrals ranged from 16.2 to 55.7, respectively (data not shown). Trend analysis from 1985 through 1999 indicated that the percent of visits to primary care physicians has remained stable.

Primary expected source of payment and HMO status—The expected source

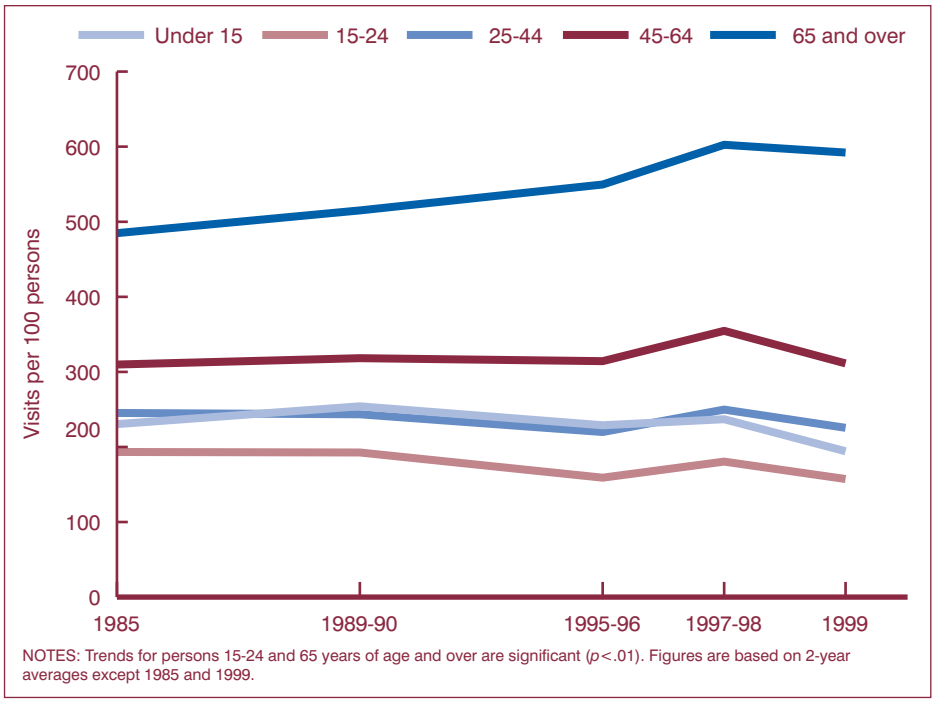


Figure 6. Trends in age-specific visit rates to office-based physicians: United States, 1985–99

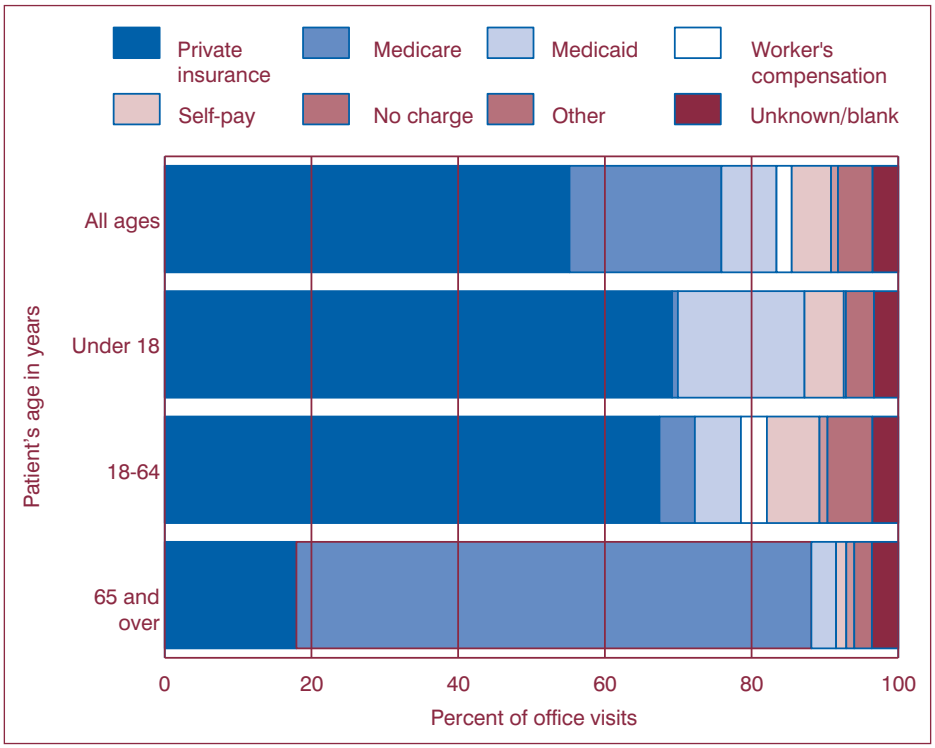


Figure 7. Percent distribution of office visits by primary expected source of payment according to patient age: United States, 1999

of payment item is concerned only with the primary expected source of payment for the office visit. Data for this item are shown in table 6 and figure 7. Private insurance was cited most frequently (55.2 percent of visits). Government sources (Medicare and Medicaid) covered 28.2 percent, most of which was Medicare. HMO members made close to 30 percent of office visits. The proportion of visits by HMO patients versus patients who were not members of HMO's varied by expected source of payment; for example, 40.5 percent of visits paid by private insurance were by members of HMO's; whereas 9.3 and 16.9 percent of visits paid by Medicare and Medicaid, respectively, were by members of HMO's. Medicaid visits were more likely to be to the patient's primary care physician (62.3 percent) compared with visits by patients with Medicare or self-payment (47.7 percent and 35.4 percent, respectively, data not shown).

Trends since 1985 suggest that there were changes in all expected sources of payment except the percent of visits with Medicaid. Self-pay declined by 86 percent, while private HMO insurance increased almost 200 percent so that by 1999, it represented one-quarter of the office visits (data not shown). Percent of visits with other private insurance (i.e., non-HMO) increased 18 percent and the percent with Medicare increased 40 percent. Because the payment item varied over the years on the survey from a multiple response to a single response format, an algorithm was used that prioritized sources to make a single response item. Medicaid and Medicare (regardless of HMO status) took precedence over HMO private insurance, other private insurance, and self-payment. In 1985 private insurance and self-payment equally covered over 70 percent of office visits, and by 1999 self-payment declined to only about 5 percent of the visits, while private insurance still covered 55 percent.

Patient's principal reason for visit—The principal reason for visit is the problem, complaint, or reason listed in item 14 on the Patient Record form. In this item, the respondents were asked to record the "patient's complaint(s), symptom(s), or other reason(s) for this visit" in the patient's (or patient surrogate's) own words. Up to three reasons for visit were coded according to *A Reason for Visit Classification for Ambulatory Care* (RVC) (16). The RVC is a NCHS-developed classification scheme that has been used for over 20 years to code patient's complaints or reasons for seeking care. The RVC includes all the reasons for which

patients see their physicians. A large percent of the visits are the result of specific symptoms the patient is currently experiencing. Other reasons include prior diagnoses, routine examinations and screening, treatment for conditions and operations, various therapies, and injures. Also included are visits to receive test results and to fulfill third-party requirements for a physical examination. All of these complaints or reasons are grouped into eight modules in the RVC, with the symptoms module further divided into actual symptoms that refer to specific body systems such as digestive or respiratory. Each section is further detailed by three-digit reason or a four-digit reason when further detail is required (for example, S845– ''Symptoms of skin mole,'' is further detailed to S845.1– ''Change in size and color,'' and S845.2– ''Bleeding mole'').

As described earlier, up to three reasons for visit were coded according to the RVC (16), which is divided into the eight modules or groups of reasons displayed in table 7. Close to one-half of all visits were made for reasons classified as symptoms (52.0 percent). Respiratory symptoms accounted for 9.7 percent of all visits, musculoskeletal symptoms accounted for 10.6 percent, and visits for diagnostic, screening and preventive services accounted for 16.6 percent.

Approximately 1 in 10 office visits was for a general medical, well-baby, or routine prenatal examination. The 20 most frequently mentioned principal reasons for visit, representing 40.0 percent of all visits, are shown in table 8. General medical examination was the most frequently mentioned reason for visit (6.1 percent of all office visits), while cough was the most frequently mentioned reason having to do with an illness or injury (2.7 percent). Nineteen of the top 20 reasons for office visits in 1999 were also listed among the 20 most frequently mentioned reasons in 1998, albeit in different order. It should be noted that estimates that differ in ranked order may not be significantly different from each other. In 1985 general medical examinations accounted for 4.8 percent of office visits, while coughs accounted for 2.5 percent.

Major reason for this visit—The intent of this item is to provide a better picture of the general nature of the office visit—whether for an acute problem, routine chronic problem, flare-up of a chronic problem, pre- or post-surgery visit or injury follow-up, or for nonillness care including routine medical examinations. This item differs from the principal reason for visit in that it presents the physician's perspective of the major reason the patient sought care rather than the patient's reason. Overall, 35 percent of the visits were for an acute problem; however, among visits by persons under age 15, 50.8 percent were for acute problems. In general, more than one-quarter (29.6 percent) of all visits were for a routine chronic problem but that percent increased with patient's age (table 9). About 16 percent of all visits were for preventive or nonillness care, but females had a higher proportion of visits for this type of care compared with males. This reflects, in part, that preventive care includes prenatal examinations.

Injury-related visits—Although there is a separate item on the Patient Record form to indicate whether the visit was for an injury or poisoning, sometimes an injury reason for visit is specified or an injury diagnosis is rendered, without the injury item being checked. Therefore, the injury checkbox is coded to ''yes'' if any of the three reasons for visit were in the injury module or any of the three diagnoses were in the injury or poisoning chapter of the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (17). This provides a better indicator that the visit involves an injury than using the reason for visit module, ICD–9–CM injury diagnosis, or the unedited injury item alone. A more detailed discussion of this is documented elsewhere (18).

There were an estimated 86.9 million injury- or poisoning-related office visits in 1999, representing 11.5 percent of all visits and yielding a rate of 32.0 visits per 100 persons (table 10). Sixty percent of all injury visits occurred among persons 25–64 years of age. The injury-related visit rate for females was not significantly different from the rate for males nor were there differences between males and females by age. The overall injury-related visit rate for black persons (28.1 per 100 persons) was not different from the rate for white persons (33.5 per 100 persons). Small sample sizes preclude analysis by age within some racial groups. Further information on injury visits to physician offices may be found on the public-use file including E-codes and a narrative of the cause of injury.

Primary diagnosis—The Patient Record form contains an item on diagnosis where the physician was asked to record the primary diagnosis or problem associated with the patient's most important reason for the current visit as well as any other significant current diagnoses. Displayed in table 11 are office visits by primary diagnosis using the major disease categories specified by the ICD–9–CM (17). The supplementary classification, used for diagnoses that are not classifiable to injury or illness (for example, general medical examination, routine prenatal examination, and health supervision of an infant or child), accounted for 16.4 percent of all office visits. Diseases of the respiratory system (13.0 percent) and diseases of the nervous system and sense organs (10.0 percent) were also prominent on the list.

A selection of the most frequently reported primary diagnoses for 1999 is featured in table 12. The categories shown in this table are also based on the ICD–9–CM codes. The 20 diagnosis groupings in table 12 accounted for 42.1 percent of all NAMCS visits during the year. The three most frequent illness diagnoses (essential hypertension, acute upper respiratory infections (excluding pharyngitis), and arthropathies and related disorders) were not significantly different from one another. Trends indicate increases in the percent of visits for asthma, diabetes mellitus, and glaucoma, but decreases for otitis media, and vaginal yeast infections. No trends were observed for essential hypertension or prostatitis (data not shown).

Diagnostic and screening services—Physicians were asked to check boxes for examinations, tests and measurements, and images ordered or provided at visits. As table 13 shows,

the most frequently cited examinations at office visits were skin (10.0 percent of visits), visual acuity (7.8 percent), pelvic (6.6 percent), and breast (6.5 percent). Blood pressure check was the leading diagnostic and screening test (44.8 percent). At least one image was ordered or provided at 11.7 percent of office visits (data not shown), and most often it was in the form of an x ray (6.9 percent of the visits). About 26 percent of the visits had no diagnostic or screening services ordered or provided. Males were just as likely as females to have no diagnostic or screening services mentioned (28.8 percent and 24.8 percent, respectively). But females were more likely to have their blood pressure checked.

Therapeutic and preventive services—Data on therapeutic and preventive services ordered or provided at office visits (except for medication therapy, which was reported separately) were collected. As shown in table 14, at least one of these services was recorded at approximately one-third (32.1 percent) of all office visits during 1999. Counseling or education related to diet (13.7 percent) was mentioned most frequently. Psycho-pharmacotherapy, psychotherapy, and physiotherapy were reported at 3.5 percent, 2.7 percent, and 2.4 percent of office visits, respectively.

Procedures—In item 20, physicians were instructed to record up to two ambulatory surgical procedures performed at this visit. Item 18, ''Diagnostic and screening services'' and item 19 ''Therapeutic and preventive services,'' included two open-ended ''other'' categories in addition to the check box categories. After analyzing the data from the two categories and from the ambulatory surgery data reported in item 20, it was discovered that in many instances the same procedure was being recorded by different physicians in different places. Almost 1 in 5 office visits had procedures written into one of these items. Table 15 presents data from item 20 and the open-ended responses to items 18 and 19 as coded to Volume 3 of the ICD–9–CM (17). Overall, there were 175.6 million therapeutic procedures that were either ordered or performed.

Medication therapy—Visits with one or more drugs listed on the Patient Record form are termed ''drug visits'' in the NAMCS. Respondents were instructed to record all new or continued medications ordered, supplied, or administered at the visit, including prescription and nonprescription preparations, immunization and desensitizing agents, and anesthetics. Up to six medications, called drug mentions, were coded per drug visit. As used in the NAMCS, the term ''drug'' is interchangeable with the term ''medication'' and the term ''prescribing'' is used broadly to mean ordering or providing any medication, whether prescription or over the counter. A report describing the method and instruments used to collect and process drug information is available (19). Therapeutic classification of the drug mentions was determined using the *National Drug Code Directory*, 1995 edition (NDC) (20). Data on medication therapy are shown in tables 16–22. Medication therapy was reported at 500.6 million office visits or 66.2 percent of the total (table 16). Table 17 presents rates of drug mentions along with percent of visits where four medications or more were provided or prescribed. Although not all of the overall age comparisons are different from one another, there does appear to be an increasing trend in the drug mention rate by age. Drug mention rates did not vary by patient's sex or race. Four drugs or more were provided or prescribed more often at visits where the patient was 65 or over, compared with visits by other age groups.

Examining estimates of office visits by the top 20 primary diagnoses and number of medications provided or prescribed (grouped 0, 1, 2, 3 or more) showed that the majority of visits associated with four supplementary classifications or ICD–9–CM V-codes (i.e., routine infant or child health check, normal pregnancy, general medical examination, and potential health hazards) were more likely to have the physician dispense no medications (data not shown). Conversely, visits with primary diagnoses of hypertension, arthropathies, diabetes mellitus, sinusitis, cardiac dysrhythmias, and asthma were more likely to have at least three medications mentioned (data not shown).

There were about 1.1 billion drugs mentioned at visits to office-based physicians during 1999. This yields an average of 1.5 drug mentions per office visit or 2.3 drug mentions per drug visit (data not shown). Data on number of drug visits and drug mentions by physician specialty are shown in table 18. The percent of visits with drug mentions ranged from 85.0 percent for psychiatrists to 33.3 percent for orthopedic surgeons.

Trend data from 1985 through 1999 indiate that the number of drugs mentioned at physician office visits increased by 59 percent. Drugs were limited to the first five mentions for this analysis because the maximum number of drugs collected varied over the study period. The drug mention rate increased on average by one-third, from 109 to 146 drugs per 100 visits. While older patients had more drug mentions at their visits compared with younger patients, the increase in drug mention rates since 1985 was consistent across age groups (figure 8).

Drug mentions for 1999 are displayed by therapeutic class in table 19. This classification is based on the therapeutic categories used in the NDC (20). It should be noted that some drugs have more than one therapeutic application. In cases of this type, the drug was classified under its primary therapeutic use. Cardiovascular-renal drugs (15.6 percent) were listed most frequently.

The 20 most frequently used generic substances in 1999 are shown in table 20. Drug products containing more than one ingredient (combination products) are included in the data for each ingredient. For example, acetaminophen with codeine is included in the count for acetaminophen and the count for codeine. Acetaminophen was the generic substance that was most frequently used in drugs ordered or provided by the physician at office visits in 1999, occurring in 3.2 percent of drug mentions.

Table 21 presents the 20 medications most frequently mentioned by physicians in the NAMCS, according

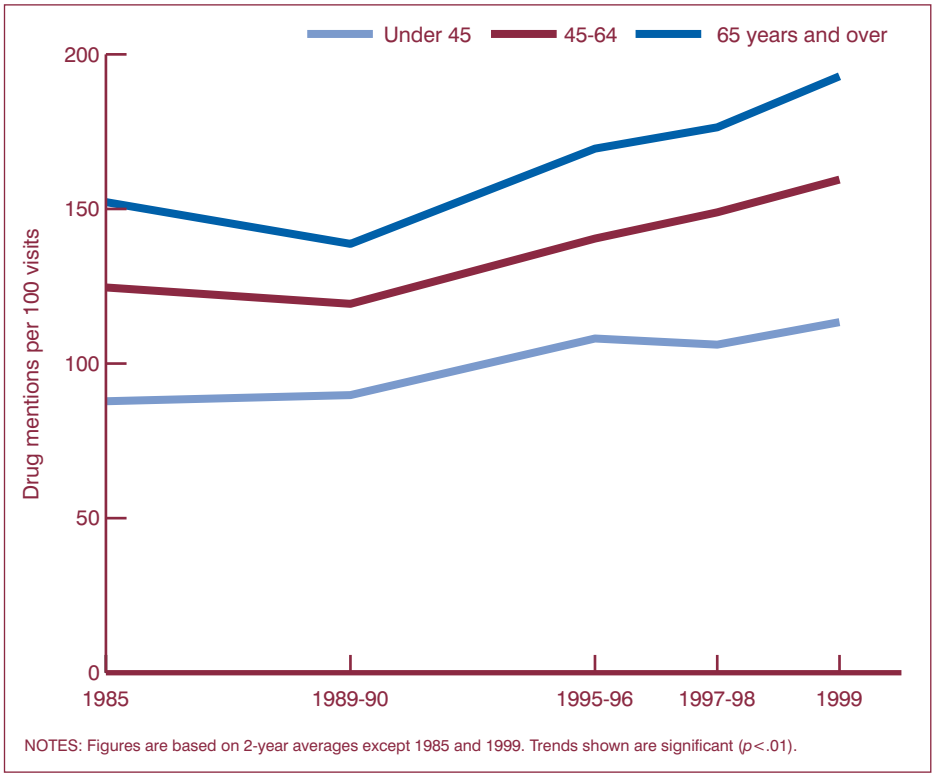


Figure 8. Trends in drug mention rates at physician office visits by patient's age: United States, 1985–99

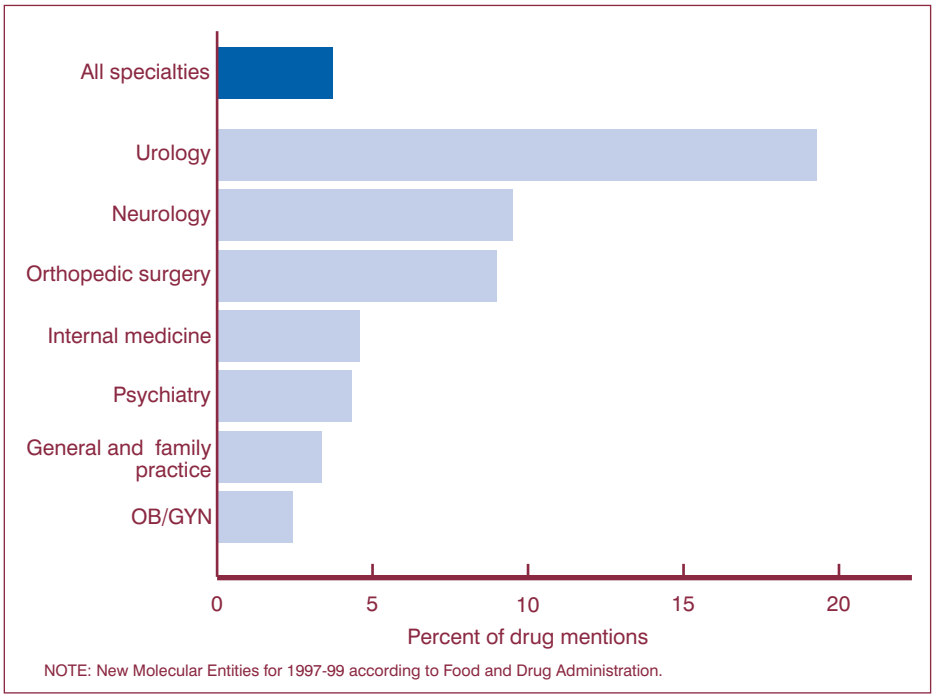


Figure 9. Percent of drug mentions for New Molecular Entities at office visits for selected physician specialties: United States, 1999

to the entry name of drug. Entry name refers to the actual designation used by the physician on the Patient Record form and may be a trade name, generic name, or simply a desired therapeutic effect. Claritin accounted for 16.0 million mentions (1.4 percent of the total) and was followed by Lasix, Prednisone, Synthroid, and Lipitor. Except for Lipitor, these drugs were among the top 10 drug entry names mentioned in 1998.

Newly marketed drugs—The 1999 NAMCS data are especially useful for looking at the diffusion of new medication therapy into physician practice patterns. The Food and Drug Administration (FDA) approved 104 New Molecular Entities (NME's) between 1997 and 1999. These drugs accounted for 3.7 percent of all 1999 drug mentions (42.4 million) but the use of these newly approved drugs varied by physician specialty (figure 9) and patient's age. There was a positive linear trend between patient's age and likelihood of having an NME mention. Patients 65 years of age and over were 13 percent more likely than children under 15 years of age to have any drug mention (72.0 percent versus 63.8 percent), but they were 558 percent more likely to have an NME mention (7.9 percent versus 1.2 percent).

NAMCS data can be used to examine market penetration of new drugs in light of factors that might influence their dissemination. Table 22 shows that of the 104 medications approved by FDA between 1997 and 1999, 11 drugs account for 81 percent of NME mentions and the most frequently mentioned drug, Celebrex, accounted for 22.5 percent. Dissemination of new medications may occur for several reasons including prevalence of the condition for which the medication is designed, dissemination of new information to physicians (21,22), changes in patient patterns of care seeking, or the attention given to drugs because of advertising. For example, pharmaceutical industry statistics on direct-to-consumer marketing (23) and new drug mention data from the NAMCS show that more than 80 percent of the newly approved drugs that were heavily marketed in 1999 were in the top 20 percent of NME's, ranked by frequency of use. In contrast, only 10 percent of the new drugs that were not heavily marketed were in the top 20 percent (Raxar, Celexa, Avapro, and Plavix). Four of the most frequently mentioned NME's at office visits (Celebrex, Vioxx, Singulair, and Detrol) contributed 12 percent of the increase in drug spending between 1998 and 1999, which is estimated at a $17.7-billion increase overall (23). With

brand-name drugs representing more than one-half of dispensed prescriptions (55.4 percent), the cost of medications will increase, particularly for elderly persons on Medicare who tend to use more drugs overall and more brand-name drugs (24).

The relationship between drug marketing and drug mentions is complex. For example, NAMCS data on NME's show an estimated 2.6 million mentions of Viagra (sildenafil) at physician office visits in 1999; it was mentioned at one-half of the 1.8 million visits by men 25 years of age and over for erectile dysfunction (ED) (visits with any diagnosis code of 302.72 or 607.84). One might have expected a significant rise in visits for ED after the introduction of Viagra; however, this does not appear to be the case. The ED visit rate was increasing steadily over the past 15 years from 7.7 visits per 1,000 men in 1985 to 22.3 visits per 1,000 in 1999 (figure 10) (25). Data also show that 1 in 3 Viagra mentions occur among visits for diagnoses other than ED, suggesting factors such as patient demand may be at work; however, because the NAMCS records all new or continued medications, men who were told to continue taking it may have made up the bulk of the non-ED Viagra visits. Totals for Viagra and Flomax combined led to a high NME mention rate at urology visits, accounting for 60 percent; however, urologists accounted for only 25 percent of Viagra mentions in 1999.

Providers seen—Table 23 details the providers seen during the sampled visit by physician specialty. Overall, 95.7 percent of visits were attended by a physician. Medical assistants were seen at approximately one-quarter (24.1 percent) of office visits. Mid-level providers such as nurse practitioners and physician assistants were seen at 2.9 percent of physician office visits.

Visit disposition—Multiple responses for this item could be coded for each visit. For more than one-half of physician visits (59.6 percent), patients were told to return to the office by appointment. "Return if needed" and "no follow-up planned" were indicated at 24.2 percent and 8.4 percent of visits, respectively (table 24). Patients were referred to other physicians at less than 5 percent of visits.

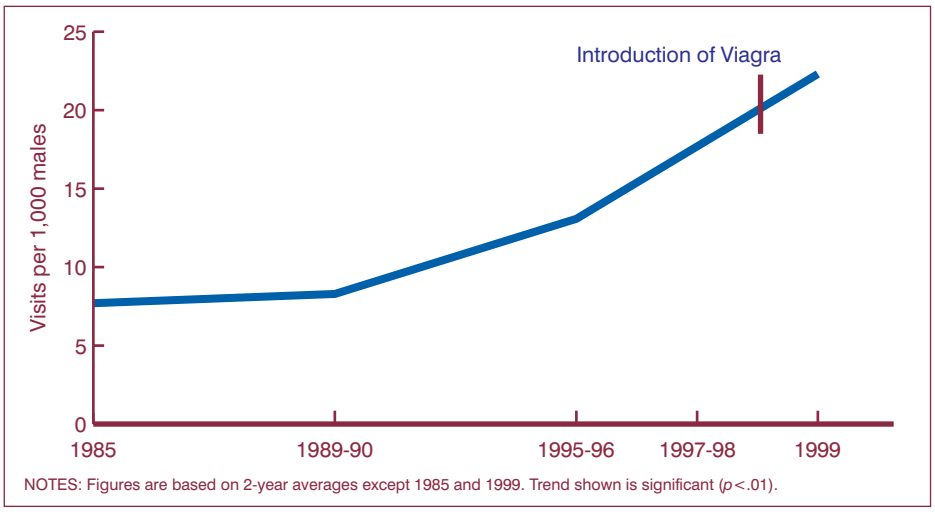


Figure 10. Trend in office visit rates for erectile dysfunction for men 25 years of age and over: United States, 1985–99

Time spent with physician—Data on the duration of office visits are presented in tables 25 and 26. Duration of visit refers to the amount of time spent in face-to-face contact between the physician and the patient. This time is estimated and recorded by the physician and does not include time spent waiting to see the physician, time spent receiving care from someone other than the physician without the presence of the physician, or time spent by the physician in reviewing patient records and/or test results. In cases where the patient received care from a member of the physician's staff but did not actually see the physician during the visit, the duration was recorded as "0" minutes. Mean time spent with the physician (table 26) includes only those visits where patients actually interacted with the physician.

In 1999, 88 percent of office visits with face-to-face contact between the physician and patient had a duration between 6 and 30 minutes (table 25). At 32.4 million visits, or 4.3 percent, there was no face-to-face contact between physician and patient. Table 26 shows that the mean duration for all visits at which the physician was seen was 19.3 minutes. The mean duration at office visits has been increasing slightly (26).

Physician-level statistics—The NAMCS can provide information on characteristics of physician offices as well as information about the frequency of office visits, the characteristics of patients, diagnoses rendered, and services provided at the visit. In the physician induction interview, participating physicians were asked several questions about their practice, such as whether laboratory testing is performed in the office, involvement with managed care contracts, and willingness to accept new patients. For example, the NAMCS estimated that in 1999 45.4 percent of office-based physicians nationwide had some laboratory testing performed in their offices. Over 93 percent of physicians had managed care contracts, and 57.7 percent were involved with IPA's. One-third of physicians did not accept charity cases; 10 percent did not accept new Medicare cases, and 21.6 percent of physicians did not accept new Medicaid cases (figure 11). Physicians in the Northeast were more likely not to accept new Medicaid patients than were physicians in the Midwest (30.7 ± 4.4 percent versus 11.4 ± 2.6 percent). Otherwise, there were no significant variations across providers based on physician's age, gender, metropolitan statistical area (MSA) status, or specialty.

Additional information about physician office utilization is available from the NCHS Ambulatory Health Care Web site: http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm. Individual-year reports and public-use data files are

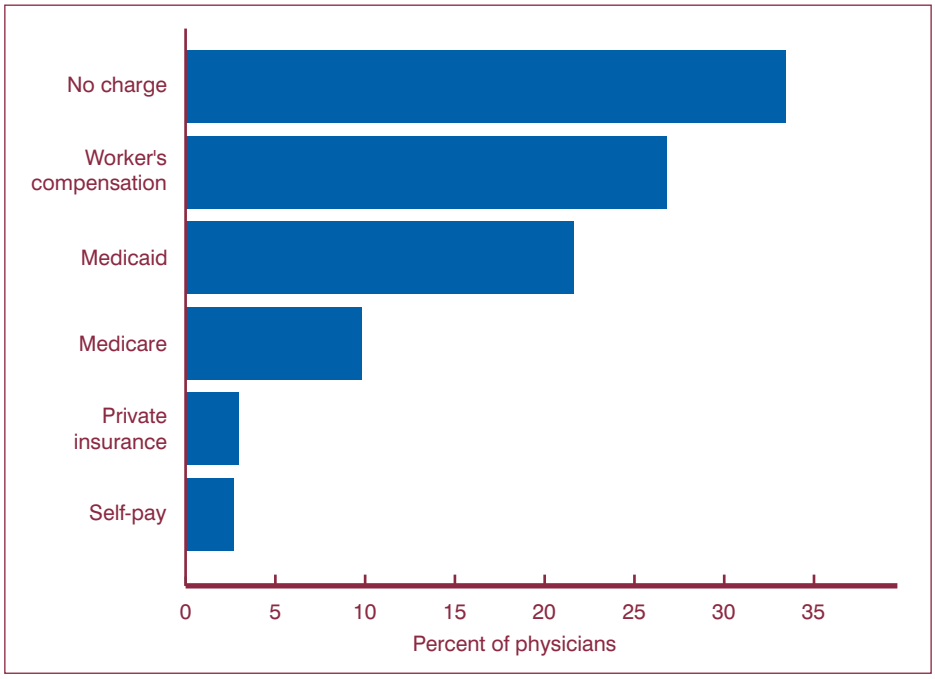


Figure 11. Percent of office-based physicians who do not accept new patients who use selected payment methods: United States, 1999

available for download from the Web site. Data from the 1999 NAMCS will also be available on a public-use data tape and CD-ROM. These and other products can be obtained by contacting the NCHS Ambulatory Care Statistics Branch at (301) 458-4600. Queries regarding NAMCS data may be sent to NCHS via nchsquery@cdc.gov.

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Table 1. Number, percent distribution, and annual rate of office visits with corresponding standard errors, by selected physician practice characteristics: United States, 1999

Physician practice characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year[1,2]	Standard error of rate
All visits	756,734	30,743	100.0	. . .	278.5	11.3
Physician specialty						
General and family practice	170,571	13,642	22.5	1.4	62.8	5.0
Internal medicine	135,607	13,097	17.9	1.5	49.9	4.8
Pediatrics	74,045	8,124	9.8	1.0	27.2	3.0
Obstetrics and gynecology	59,518	7,332	7.9	0.9	[3]21.9	2.7
Ophthalmology	51,165	5,047	6.8	0.7	18.8	1.9
Orthopedic surgery	40,516	4,289	5.4	0.6	14.9	1.6
Dermatology	32,704	3,620	4.3	0.5	12.0	1.3
Psychiatry	22,346	2,559	3.0	0.3	8.2	0.9
General surgery	21,174	2,283	2.8	0.3	7.8	0.8
Urology	17,415	2,122	2.3	0.3	6.4	0.8
Cardiovascular diseases	16,566	2,274	2.2	0.3	6.1	0.8
Otolaryngology	16,369	2,496	2.2	0.3	6.0	0.9
Neurology	8,298	1,117	1.1	0.2	3.1	0.4
All other specialties	90,440	9,450	12.0	1.2	33.3	3.5
Professional identity						
Doctor of medicine	709,071	30,172	93.7	0.6	260.9	11.1
Doctor of osteopathy	47,663	4,668	6.3	0.6	17.5	1.7
Geographic region						
South	252,538	20,618	33.4	2.1	261.7	21.4
West	178,718	12,335	23.6	1.5	320.2	22.1
Northeast	171,425	13,366	22.7	1.6	326.3	25.4
Midwest	154,054	15,018	20.4	1.8	230.5	22.5
Metropolitan status						
MSA[4]	643,409	26,415	85.0	2.1	298.4	12.3
Non-MSA[4]	113,325	17,860	15.0	2.1	202.1	31.9

. . . Category not applicable.
[1]Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July 1, 1999. Figures are consistent with the downloadable series, "U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1980–99 (with short-term projection to dates in 2000)." It is available at the U.S. Bureau of the Census Internet site: http://ftp.census.gov/population/www/estimates/nat_90s_4.html. Figures have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix.
[2]Regional and metropolitan estimates have been provided by the Division of Health Interview Statistics (DHIS), National Center for Health Statistics, and are based on U. S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States as of July 1, 1999. DHIS estimates are provisional at this time and differ slightly from monthly postcensal estimates because of differences in the adjustment process.
[3]The visit rate is 42.7 per 100 females.
[4]MSA is metropolitan statistical area.
NOTE: Numbers may not add to totals because of rounding.

Table 2. Number and percent distribution of office visits with corresponding standard errors, by selected physician office characteristics: United States, 1999

Physician office characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	756,734	30,743	100.0	. . .
Employment status				
Owner	515,702	28,810	68.1	2.3
Employee	202,609	17,957	26.8	2.3
Contractor	38,423	8,789	5.1	1.1
Ownership				
Physician/group	611,567	30,590	80.8	2.0
Hospital	59,552	9,304	7.9	1.2
Healthcare corporation	44,843	9,000	5.9	1.2
HMO[1]	25,161	6,901	3.3	0.9
Other[2]	*15,611	6,470	*2.1	0.8
Practice size				
Solo	262,780	19,072	34.7	2.2
2–4	265,525	22,380	35.1	2.5
5–9	154,843	15,117	20.5	1.8
10–49	49,667	8,004	6.6	1.0
50+	*12,540	4,185	*1.7	0.6
Blank	*11,378	3,523	*1.5	0.5
Office type				
Private practice	675,272	30,614	89.2	1.4
HMO[1]	26,660	7,219	3.5	0.9
Clinic/urgicenter	23,211	5,719	3.1	0.8
Local government clinic	19,644	5,866	2.6	0.8
Private clinic	*7,099	2,882	*0.9	0.4
Neighborhood health or mental health center	*4,848	1,911	*0.6	0.3

. . . Category not applicable.

* Figure does not meet standard of reliability or precision.

[1]HMO is health maintenance organization.

[2]Other includes owners like local government (State, county, or city) and charitable organizations.

NOTE: Numbers may not add to totals because of rounding.

Table 3. Number, percent distribution, and annual rate of office visits with corresponding standard errors, by patient's age, sex, and race: United States, 1999

Patient's age, sex, and race	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year[1]	Standard error of rate
All visits	756,734	30,743	100.0	. . .	278.5	11.3
Age						
Under 15 years	116,904	8,945	15.4	1.0	194.2	14.9
15–24 years	59,706	3,729	7.9	0.4	157.3	9.8
25–44 years	186,022	9,672	24.6	0.7	225.5	11.7
45–64 years	201,911	9,059	26.7	0.6	344.3	15.4
65–74 years	92,642	4,854	12.2	0.4	520.6	27.3
75 years and over	99,548	5,439	13.2	0.5	678.7	37.1
Sex and age						
Female	445,566	19,068	58.9	0.7	319.9	13.7
Under 15 years	55,247	4,546	7.3	0.5	187.9	15.5
15–24 years	38,521	3,045	5.1	0.3	204.4	16.2
25–44 years	119,084	6,888	15.7	0.6	283.3	16.4
45–64 years	119,424	5,594	15.8	0.4	394.3	18.5
65–74 years	51,669	3,107	6.8	0.3	529.6	31.8
75 years and over	61,621	3,503	8.1	0.3	688.8	39.2
Male	311,168	13,340	41.1	0.7	234.9	10.1
Under 15 years	61,658	4,748	8.1	0.5	200.3	15.4
15–24 years	21,185	1,382	2.8	0.1	110.9	7.2
25–44 years	66,938	4,552	8.8	0.5	165.4	11.2
45–64 years	82,487	4,405	10.9	0.4	290.9	15.5
65–74 years	40,973	2,294	5.4	0.2	509.7	28.5
75 years and over	37,926	2,379	5.0	0.3	662.9	41.6
Race and age						
White	654,712	26,596	86.5	1.0	293.2	11.9
Under 15 years	95,373	7,731	12.6	0.9	202.2	16.4
15–24 years	49,875	3,168	6.6	0.3	165.4	10.5
25–44 years	161,500	8,618	21.3	0.7	240.2	12.8
45–64 years	175,226	8,078	23.2	0.6	351.1	16.2
65–74 years	82,018	4,294	10.8	0.4	526.1	27.5
75 years and over	90,720	5,032	12.0	0.5	687.0	38.1
Black	73,972	7,909	9.8	0.9	210.7	22.5
Under 15 years	14,645	2,787	1.9	0.4	151.8	28.9
15–24 years	6,780	1,198	0.9	0.2	118.7	21.0
25–44 years	17,817	2,052	2.4	0.2	164.9	19.0
45–64 years	20,133	2,394	2.7	0.3	323.9	38.5
65–74 years	7,906	1,189	1.0	0.1	484.5	72.9
75 years and over	6,692	1,171	0.9	0.1	608.0	106.4
All other races						
Asian/Pacific Islander	25,477	4,761	3.4	0.6	233.1	43.6
American Indian/Alaska Native	1,319	355	0.2	0.0	53.9	14.5

. . . Category not applicable.

0.0 Quantity more than zero but less than 0.05.

[1]Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionized population of the United States as of July 1, 1999. Figures are consistent with the downloadable series, "U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1980–99 (with short-term projection to dates in 2000)." It is available at the U.S. Bureau of the Census Internet site: http://ftp.census.gov/population/www/estimates/nat_90s_4.html. Figures have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix.

NOTE: Numbers may not add to totals because of rounding.

Table 4. Number and percent distribution of office visits with corresponding standard errors, by patient's referral status and prior-visit status: United States, 1999

Patient characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	756,734	30,743	100.0	. . .
Referral status				
Referred by another physician or health plan for this visit	115,946	7,137	15.3	0.9
Not referred by another physician or health plan for this visit	599,591	27,629	79.2	1.1
Unknown/blank	41,197	5,156	5.4	0.7
Prior-visit status				
New patient	91,655	4,720	12.1	0.5
Old patient	650,292	27,764	85.9	0.6
Unknown/blank	14,788	2,091	2.0	0.3

. . . Category not applicable.

NOTE: Numbers may not add to totals because of rounding.

Table 5. Number and percent distribution of office visits with corresponding standard errors, by physician specialty, according to referral status and prior-visit status: United States, 1999

Physician specialty	Number of visits in thousands	Total	Referred by another physician or health plan for this visit		Not referred by another physician or health plan for this visit		Unknown/blank referral for this visit	
			New patient	Old patient	New patient	Old patient	New patient	Old patient
					Percent distribution[1]			
All visits	756,734	100.0	5.5	9.7	5.8	72.7	0.9	3.6
General and family practice	170,571	100.0	1.0	1.9	6.5	82.6	1.4	*4.6
Internal medicine	135,607	100.0	*	*3.4	3.9	84.9	*	*3.9
Pediatrics	74,045	100.0	*	*	3.2	90.4	*	1.9
Obstetrics and gynecology	59,518	100.0	3.6	9.8	4.9	75.6	*	*4.0
Ophthalmology	51,165	100.0	7.3	15.7	7.8	63.5	*	*3.5
Orthopedic surgery	41,516	100.0	12.4	21.6	6.9	50.1	*	*5.7
Dermatology	32,704	100.0	12.2	18.8	9.9	52.6	*	*3.4
Psychiatry	22,346	100.0	4.3	11.8	*4.0	75.6	*	*3.9
General surgery	21,174	100.0	15.9	27.1	4.8	49.3	*	*
Urology	17,415	100.0	13.4	26.4	*	49.5	*	*5.7
Cardiovascular diseases	16,566	100.0	9.7	18.2	*	64.7	*	*
Otolaryngology	16,369	100.0	14.8	15.0	9.6	55.3	*	*
Neurology	8,298	100.0	19.6	35.7	*	38.5	*	*
All other specialties	90,440	100.0	11.7	15.8	8.4	58.8	*	1.9
					Standard error of percent			
All visits	...	...	0.3	0.7	0.4	1.1	0.1	0.6
General and family practice	...	...	0.3	0.3	0.7	2.1	0.3	1.8
Internal medicine	...	...	...	1.2	0.5	2.6	...	1.8
Pediatrics	...	...	...	...	0.7	2.0	...	0.5
Obstetrics and gynecology	...	...	0.6	2.4	1.0	3.2	...	1.4
Ophthalmology	...	...	1.0	3.2	1.8	3.7	...	1.4
Orthopedic surgery	...	...	1.7	3.1	1.4	3.4	...	1.8
Dermatology	...	...	1.9	3.0	1.4	3.4	...	1.3
Psychiatry	...	...	1.0	3.4	1.2	4.8	...	2.3
General surgery	...	...	1.8	4.3	1.2	4.6	...	...
Urology	...	...	2.1	5.3	*	5.8	...	2.4
Cardiovascular diseases	...	...	1.7	2.5	*	3.0	...	...
Otolaryngology	...	...	2.4	2.4	0.8	3.7	...	...
Neurology	...	...	3.2	5.4	*	6.1	...	...
All other specialties	...	...	1.9	3.1	2.3	4.1	...	0.5

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Nonresponses for prior-visit status have been removed from the total, accounting for 14.8 million visits or 2.0 percent, overall.

NOTE: Numbers may not add to totals because of rounding.

Table 6. Number and percent distribution of office visits with corresponding standard errors, by expected primary source of payment and health maintenance organization status: United States 1999

Expected source of payment	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	756,734	30,743	100.0	. . .
Private insurance	417,620	20,056	55.2	1.4
Medicare	156,720	9,508	20.7	0.9
Medicaid	56,809	6,846	7.5	0.8
Self-pay	40,658	3,622	5.4	0.4
Worker's compensation	15,639	3,108	2.1	0.4
No charge	7,194	1,794	1.0	0.2
Other	35,616	5,236	4.7	0.7
Unknown/blank	26,478	3,962	3.5	0.5

	HMO status[1]						
	Percent distribution				Standard error of percent		
Expected source of payment	Total	HMO[1]	Non-HMO[1]	Unknown/ blank	HMO[1]	Non-HMO[1]	Unknown/ blank
All visits	100.0	29.0	59.6	11.4	1.4	1.7	1.1
Private insurance	100.0	40.5	52.1	7.4	1.9	2.0	1.0
Medicare	100.0	9.3	83.9	6.9	1.6	2.0	0.9
Medicaid	100.0	16.9	77.5	5.6	3.3	3.8	1.2
Self-pay	100.0	*5.6	77.7	16.7	1.7	3.5	3.3
Worker's compensation	100.0	6.9	40.3	*52.8	2.0	7.5	8.5
No charge	100.0	*18.6	68.8	*	4.8	9.0	. . .
Other	100.0	51.1	33.4	*15.5	6.9	5.3	6.1
Unknown/blank	100.0	12.2	11.1	76.7	3.1	2.6	4.4

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]HMO is health maintenance organization.

NOTE: Numbers may not add to totals because of rounding.

Table 7. Number and percent distribution of office visits with corresponding standard errors, by patient's principal reason for visit: United States, 1999

Principal reason for visit and RVC code[1]		Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits		756,734	30,743	100.0	. . .
Symptom module	S001–S999	393,737	16,927	52.0	0.9
General symptoms	S001–S099	46,116	3,415	6.1	0.4
Symptoms referable to psychological/mental disorders	S100–S199	24,482	2,342	3.2	0.3
Symptoms referable to the nervous system (excluding sense organs)	S200–S259	21,141	1,568	2.8	0.2
Symptoms referable to the cardiovascular/lymphatic system	S260–S299	2,890	443	0.4	0.1
Symptoms referable to the eyes and ears	S300–S399	43,923	3,101	5.8	0.4
Symptoms referable to the respiratory system	S400–S499	73,645	5,222	9.7	0.5
Symptoms referable to the digestive system	S500–S639	28,191	2,907	3.7	0.3
Symptoms referable to the genitourinary system	S640–S829	29,029	1,997	3.8	0.2
Symptoms referable to the skin, hair, and nails	S830–S899	44,423	3,183	5.9	0.4
Symptoms referable to the musculoskeletal system	S900–S999	79,898	5,365	10.6	0.6
Disease module	D001–D999	83,167	5,357	11.0	0.6
Diagnostic, screening, and preventive module	X100–X599	125,389	9,880	16.6	1.0
Treatment module	T100–T899	98,204	6,913	13.0	0.8
Injuries and adverse effects module	J001–J999	20,067	1,885	2.7	0.2
Test results module	R100–R700	15,251	2,032	2.0	0.2
Administrative module	A100–A140	5,968	1,074	0.8	0.1
Other[2]		*14,952	4,641	*2.0	0.6

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Based on *A Reason for Visit Classification for Ambulatory Care* (16).
[2]Includes problems and complaints not elsewhere classified, entries of "none," blanks, and illegible entries.
NOTE: Numbers may not add to totals because of rounding.

Table 8. Number and percent distribution of office visits with corresponding standard errors, by the 20 principal reasons for visit most frequently mentioned by patients according to patient's sex: United States, 1999

Principal reason for visit and RVC code[1]		Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Patient's sex: Female[2] Percent distribution	Female[2] Standard error of percent	Male[3] Percent distribution	Male[3] Standard error of percent
All visits		756,734	30,743	100.0	. . .	100.0	. . .	100.0	. . .
General medical examination	X100	46,039	5,230	6.1	0.6	5.8	0.6	6.4	0.8
Progress visit, not otherwise specified	T800	33,975	3,920	4.5	0.5	4.0	0.5	5.2	0.6
Postoperative visit	T205	22,513	2,364	3.0	0.3	3.1	0.4	2.7	0.3
Cough	S440	20,654	2,148	2.7	0.3	2.6	0.3	2.9	0.4
Routine prenatal examination	X205	17,899	2,682	2.4	0.3	4.0	0.6	*	. . .
Symptoms referable to throat	S455	15,315	1,612	2.0	0.2	1.9	0.2	2.2	0.2
Well-baby examinations	X105	13,111	1,978	1.7	0.3	1.4	0.2	2.2	0.3
Vision dysfunctions	S305	12,243	1,681	1.6	0.2	1.6	0.2	1.6	0.3
Knee symptoms	S925	11,778	1,266	1.6	0.2	1.5	0.2	1.6	0.2
Hypertension	D510	11,130	1,792	1.5	0.2	1.4	0.3	1.5	0.2
Earache or ear infection	S355	11,047	1,058	1.5	0.1	1.2	0.1	1.8	0.2
Back symptoms	S905	10,482	1,061	1.4	0.1	1.4	0.2	1.4	0.2
Skin rash	S860	10,446	991	1.4	0.1	1.2	0.1	1.6	0.2
Stomach pain, cramps, and spasms	S545	10,077	1,132	1.3	0.1	1.4	0.2	1.2	0.2
Fever	S010	9,963	1,159	1.3	0.1	1.0	0.1	1.7	0.2
Depression	S110	9,664	1,388	1.3	0.2	1.5	0.2	1.0	0.2
Medication, other and unspecified kinds	T115	9,284	1,108	1.2	0.1	1.2	0.2	1.2	0.2
Low back symptoms	S910	9,186	1,515	1.2	0.2	1.1	0.2	1.4	0.3
Nasal congestion	S400	9,067	1,321	1.2	0.2	1.1	0.2	1.3	0.2
Headache, pain in the head	D210	8,599	889	1.1	0.1	1.3	0.2	1.0	0.1
All other reasons		454,263	18,853	60.0	0.9	60.1	0.9	59.8	1.1

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (16).
[2]Based on 445,566,000 visits made by females.
[3]Based on 311,168,000 visits made by males.
NOTE: Numbers may not add to totals because of rounding.

Table 9. Number and percent distribution of office visits with corresponding standard errors, by major reason for visit, according to patient's age, sex, and race: United States, 1999

Patient's age, sex, and race	Total	Major reason for this visit					
		Acute problem	Chronic problem, routine	Chronic problem, flare-up	Pre- or post-surgery/injury follow-up	Nonillness care	Unknown/ blank
		Number of visits in thousands					
All visits	756,734	267,335	224,306	58,409	70,022	120,377	16,285
Age							
Under 15 years	116,904	59,421	15,449	4,350	5,508	29,580	*2,597
15–24 years	59,706	23,732	12,377	3,705	4,599	13,979	1,314
25–44 years	186,022	68,255	45,429	15,380	17,716	35,634	3,608
45–64 years	201,911	63,917	72,153	17,623	19,526	23,780	4,912
65–74 years	92,642	24,911	35,581	9,449	10,917	9,610	2,175
75 years and over	99,548	27,100	43,317	7,902	11,755	7,794	1,680
Sex							
Female	445,566	153,886	127,467	36,695	37,439	80,857	9,222
Male	311,168	113,449	96,839	21,714	32,583	39,520	7,062
Race							
White	654,712	229,754	194,995	51,127	62,145	102,214	14,476
Black	73,972	25,838	21,236	5,797	6,338	13,418	1,345
Other	28,050	11,742	8,075	1,485	1,539	4,745	*464
		Standard error in thousands					
All visits	30,743	14,276	11,350	4,117	5,367	8,356	2,746
Age							
Under 15 years	8,945	5,819	1,805	753	852	3,140	1,273
15–24 years	3,729	1,835	1,167	485	553	2,054	312
25–44 years	9,672	4,586	3,494	1,374	2,149	3,672	986
45–64 years	9,059	3,809	4,016	1,490	1,843	2,169	868
65–74 years	4,854	1,865	2,365	1,015	1,007	1,031	392
75 years and over	5,439	2,157	3,014	755	1,225	1,031	375
Sex							
Female	19,068	8,332	6,793	2,718	3,517	6,151	1,463
Male	13,340	6,660	5,146	1,694	2,777	3,404	1,444
Race							
White	26,596	12,255	9,948	3,544	4,746	7,418	2,525
Black	7,909	3,148	3,249	1,028	1,080	2,108	346
Other	4,887	2,933	1,470	367	334	997	222
		Percent distribution					
All visits	100.0	35.3	29.6	7.7	9.3	15.9	2.2
Age							
Under 15 years	100.0	50.8	13.2	3.7	4.7	25.3	*2.2
15–24 years	100.0	39.7	20.7	6.2	7.7	23.4	2.2
25–44 years	100.0	36.7	24.4	8.3	9.5	19.2	1.9
45–64 years	100.0	31.7	35.7	8.7	9.7	11.8	2.4
65–74 years	100.0	26.9	38.4	10.2	11.8	10.4	2.3
75 years and over	100.0	27.2	43.5	7.9	11.8	7.8	1.7
Sex							
Female	100.0	34.5	28.6	8.2	8.4	18.1	2.1
Male	100.0	36.5	31.1	7.0	10.5	12.7	2.3
Race							
White	100.0	35.1	29.8	7.8	9.5	15.6	2.2
Black	100.0	34.9	28.7	7.8	8.6	18.1	1.8
Other	100.0	41.9	28.8	5.3	5.5	16.9	*1.7

Table 9. Number and percent distribution of office visits with corresponding standard errors, by major reason for visit, according to patient's age, sex, and race: United States, 1999—Con.

Patient's age, sex, and race	Total	Major reason for this visit					
		Acute problem	Chronic problem, routine	Chronic problem, flare-up	Pre- or post-surgery/injury follow-up	Nonillness care	Unknown/ blank
		Standard error of percent					
All visits	. . .	1.0	1.1	0.4	0.7	0.8	0.4
Age							
Under 15 years	. . .	1.8	1.5	0.6	0.8	1.8	1.1
15–24 years	. . .	2.2	1.8	0.8	0.9	2.6	0.5
25–44 years	. . .	1.5	1.6	0.7	1.0	1.5	0.5
45–64 years	. . .	1.2	1.3	0.6	0.8	0.9	0.4
65–74 years	. . .	1.3	1.7	0.9	1.0	0.9	0.4
75 years and over	. . .	1.4	1.8	0.7	1.1	1.0	0.4
Sex							
Female	. . .	1.0	1.2	0.5	0.7	1.0	0.3
Male	. . .	1.3	1.2	0.5	0.8	0.9	0.5
Race							
White	. . .	1.0	1.2	0.4	0.7	0.9	0.4
Black	. . .	2.0	2.5	1.1	1.6	2.0	0.5
Other	. . .	4.3	3.8	1.3	1.4	2.3	0.7

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.

NOTE: Numbers may not add to totals because of rounding.

Table 10. Number, percent distribution, and annual rate of injury-related office visits with corresponding standard errors, by patient's age, sex, and race: United States, 1999

Patient's age, sex, and race	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year[1]	Standard error of rate
All injury-related visits	86,878	5,886	100.0	. . .	32.0	2.2
Age						
Under 15 years	9,058	980	10.4	1.0	15.0	1.6
15–24 years	8,820	1,062	10.2	0.9	23.2	2.8
25–44 years	28,180	2,738	32.4	1.8	34.2	3.3
45–64 years	24,043	2,059	27.7	1.3	41.0	3.5
65–74 years	7,676	717	8.8	0.7	43.1	4.0
75 years and over	9,100	891	10.5	1.0	62.0	6.1
Sex and age						
Female	43,872	3,042	50.5	1.6	31.5	2.2
Under 15 years	3,425	408	7.8	0.9	11.6	1.4
15–24 years	3,917	628	8.9	1.1	20.8	3.3
25–44 years	14,262	1,288	32.5	1.9	33.9	3.1
45–64 years	12,806	1,209	29.2	1.5	42.3	4.0
65–74 years	4,159	478	9.5	0.9	42.6	4.9
75 years and over	5,304	604	12.1	1.4	59.3	6.7
Male	43,006	3,468	49.5	1.6	32.5	2.6
Under 15 years	5,633	738	13.1	1.5	18.3	2.4
15–24 years	4,903	649	11.4	1.3	25.7	3.4
25–44 years	13,918	1,947	32.4	2.8	34.4	4.8
45–64 years	11,238	1,215	26.1	1.9	39.6	4.3
65–74 years	3,517	443	8.2	1.0	43.8	5.5
75 years and over	3,796	506	8.8	1.2	66.3	8.9
Race						
White	74,751	4,906	86.0	1.4	33.5	2.2
Black	9,870	1,548	11.4	1.4	28.1	4.4
Other	2,258	532	2.6	0.6	16.9	4.0

. . . Category not applicable.
[1]Based on U.S. Bureau of the Census monthly postcensal estimates of the civilian noninstitutionalized population of the United States as of July 1, 1999. Figures are consistent with the downloadable series, "U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1980–99 (with short-term projection to dates in 2000)." It is available at the U.S. Bureau of the Census Internet site: http://ftp.census.gov/population/www/estimates/nat_90s_4.html. Figures have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix.

NOTE: Numbers may not add to totals because of rounding.

Table 11. Number and percent distribution of office visits with corresponding standard errors, by physician's primary diagnosis: United States, 1999

Major disease cateogry and ICD–9–CM code range[1]	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	756,734	30,743	100.0	. . .
Infectious and parasitic diseases 001–139	22,029	1,880	2.9	0.2
Neoplasms 140–239	24,211	3,103	3.2	0.4
Endocrine, nutritional, and metabolic diseases, and immunity disorders 240–279	37,216	3,282	4.9	0.4
Mental disorders 290–319	36,106	2,964	4.8	0.3
Diseases of the nervous system and sense organs 320–389	75,416	4,464	10.0	0.5
Diseases of the circulatory system 390–459	59,965	4,653	7.9	0.5
Diseases of the respiratory system 460–529	98,501	9,324	13.0	1.0
Diseases of the digestive system 520–579	23,284	2,513	3.1	0.3
Diseases of the genitourinary system 580–629	38,740	2,852	5.1	0.3
Diseases of the skin and subcutaneous tissue 680–709	43,958	3,294	5.8	0.4
Diseases of the musculoskeletal system and connective tissue 710–739	61,717	4,945	8.2	0.6
Symptoms, signs, and ill-defined conditions 780–799	41,884	2,787	5.5	0.3
Injury and poisoning 800–999	44,032	3,316	5.8	0.4
Supplementary classification V01–V82	123,974	7,831	16.4	0.8
All other diagnoses[2]	15,302	1,446	2.0	0.2
Unknown[3]	10,399	2,500	1.4	0.3

. . . Category not applicable.

[1]Based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (17).

[2]Includes diseases of the blood and blood-forming organs (280–289); complications of pregnancy, childbirth, and the puerperium (630–676); congenital anomalies (740–759); and certain conditions originating in the perinatal period (760–779).

[3]Includes blank diagnoses, uncodable diagnoses, and illegible diagnoses.

NOTE: Numbers may not add to totals because of rounding.

Table 12. Number and percent distribution of office visits with corresponding standard errors, by selected primary diagnosis groups and patient's sex: United States, 1999

Primary diagnosis group and ICD–9–CM code(s)[1]	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Patient's sex			
					Female[2]		Male[3]	
					Percent distribution	Standard error of percent	Percent distribution	Standard error of percent
All visits	756,734	30,743	100.0	. . .	100.0	. . .	100.0	. . .
Essential hypertension 401	31,962	3,316	4.2	0.4	3.9	0.4	4.8	0.4
Acute upper respiratory infections, excluding pharyngitis 460–461, 463–466	28,553	2,910	3.8	0.3	3.7	0.3	3.9	0.5
Arthropathies and related disorders 710–719	23,202	2,910	3.1	0.4	3.5	0.5	2.4	0.3
Routine infant or child health check V20.2	22,626	2,816	3.0	0.4	2.4	0.3	3.8	0.5
Diabetes mellitus 250	19,585	2,291	2.6	0.3	2.2	0.3	3.2	0.4
Dorsopathies 720–724	17,439	2,380	2.3	0.3	2.2	0.3	2.5	0.4
Allergic rhinitis 477	*16,662	5,300	*2.2	0.7	*2.3	0.7	*2.0	0.7
Normal pregnancy V22	16,402	2,593	2.2	0.3	3.7	0.5	*	. . .
Rheumatism, excluding back 725–729	16,368	1,276	2.2	0.1	2.3	0.2	1.9	0.2
Malignant neoplasms 140–208, 230–234	15,429	2,894	2.0	0.4	1.7	0.4	2.5	0.4
Otitis media and eustachian tube disorders 381–382	14,568	1,588	1.9	0.2	1.5	0.2	2.6	0.3
Follow-up examination V67	13,814	1,959	1.8	0.2	1.8	0.3	1.9	0.3
General medical examination V70	13,405	1,707	1.8	0.2	1.8	0.2	1.8	0.3
Cataract 366	11,039	1,673	1.5	0.2	1.5	0.2	1.4	0.3
Chronic sinusitis 473	10,797	1,346	1.4	0.2	1.4	0.2	1.4	0.2
Heart disease, excluding ischemic 427,428.0, 391–392.0, 393–398,402,404,415–416,420–426,428.1–429.9	9,667	1,008	1.3	0.1	1.0	0.1	1.6	0.2
Ischemic heart disease 410–414	9,558	1,226	1.3	0.2	0.8	0.1	1.9	0.2
Potential health hazards related to personal and family history V10–V19	9,543	1,073	1.3	0.1	1.2	0.1	1.3	0.2
Asthma 493	9,498	2,170	1.3	0.3	1.2	0.3	1.4	0.4
Beign and uncertain neoplams 216–229, 235–239	8,782	910	1.2	0.1	1.1	0.1	1.2	0.2
All other diagnoses	437,837	18,202	57.9	0.9	58.8	0.9	56.5	1.1

. . . Category not applicable.

* Figure does not meet standard of reliability or precision.

[1]These groups are based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (17). However, certain codes have been combined in this table to form larger categories that better describe the utilization of ambulatory care services.

[2]Based on 445,566,000 visits made by females.

[3]Based on 311,168,000 visits made by males.

NOTE: Numbers may not add to totals because of rounding.

Table 13. Number and percent of office visits with corresponding standard errors, by diagnostic and screening services ordered or provided and patient's sex: United States, 1999

Diagnostic and screening services ordered or provided	Number of visits in thousands[1]	Standard error in thousands	Percent distribution	Standard error of percent	Patient's sex			
					Female[2]		Male[3]	
					Percent distribution	Standard error of percent	Percent distribution	Standard error of percent
All visits	756,734	30,743	. . .	. . .	. . .	. . .	. . .	. . .
None	200,097	13,182	26.4	1.4	24.8	1.5	28.8	1.6
Examinations								
Skin	75,557	6,381	10.0	0.7	9.9	0.8	10.1	1.0
Visual	59,267	5,425	7.8	0.7	7.2	0.7	8.7	0.9
Pelvic	49,720	5,262	6.6	0.6	10.3	1.0	1.2	0.3
Breast	48,835	5,299	6.5	0.6	10.3	1.0	*1.0	0.3
Rectal	30,575	3,163	4.0	0.4	4.0	0.5	4.1	0.4
Glaucoma	29,055	3,857	3.8	0.5	3.7	0.5	4.0	0.5
Hearing	12,395	2,439	1.6	0.3	1.1	0.2	2.4	0.6
Tests								
Blood pressure	339,342	22,079	44.8	1.9	47.2	2.0	41.5	2.0
Urinalysis	62,240	5,388	8.2	0.6	9.0	0.7	7.1	0.8
Hematocrit/hemoglobin	43,452	4,823	5.7	0.6	5.8	0.6	5.7	0.7
Cholesterol	27,035	2,969	3.6	0.4	3.3	0.4	4.0	0.4
Pap test	26,771	2,954	3.5	0.3	6.0	0.6	*	. . .
EKG[4]	22,593	2,286	3.0	0.3	2.4	0.3	3.8	0.4
Strep test	10,908	2,098	1.4	0.3	1.5	0.3	1.4	0.3
PSA[5]	9,640	947	1.3	0.1	*	. . .	3.1	0.3
Pregnancy test	3,061	558	0.4	0.1	0.7	0.1	*	. . .
HIV serology[6]	*2,307	859	*0.3	0.1	*	. . .	*	. . .
Blood lead level	*1,631	676	*0.2	0.1	*	. . .	*	. . .
Other STD[7]	3,322	962	0.4	0.1	*0.7	0.2	*	. . .
Other blood test	103,033	7,523	13.6	0.8	14.2	0.8	12.8	0.9
Imaging								
x ray	51,918	3,561	6.9	0.4	6.3	0.4	7.7	0.5
Ultrasound	16,609	2,037	2.2	0.3	2.5	0.4	1.8	0.2
CAT scan/MRI[8,9]	12,778	1,510	1.7	0.2	1.5	0.2	2.0	0.2
Mammography	12,733	1,657	1.7	0.2	2.9	0.3	*	. . .
Other	102,860	7,718	13.6	1.0	13.4	1.0	13.9	1.1

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Number may not add to totals because more than one service may be reported per visit.
[2]Based on 445,566,000 visits made by females.
[3]Based on 311,168,000 visits made by males.
[4]EKG is electrocardiogram.
[5]PSA is prostate-specific antigen.
[6]HIV is human immunodeficiency virus.
[7]STD is sexually transmitted diseases.
[8]CAT is computerized axial tomography.
[9]MRI is magnetic resonance imaging.

Table 14. Number and percent of office visits with corresponding standard errors, by therapeutic and preventive services ordered or provided and patient's sex: United States, 1999

Therapeutic and preventive services ordered or provided	Number of visits in thousands[1]	Standard error in thousands	Percent of visits	Standard error of percent	Patient's sex			
					Female[2]		Male[3]	
					Percent of visits	Standard error of percent	Percent of visits	Standard error of percent
All visits	756,734	30,743	. . .	. . .	. . .	. . .	. . .	. . .
None	513,788	23,494	67.9	1.3	66.6	1.5	69.7	1.4
Counseling/education								
Diet	103,885	9,417	13.7	1.0	14.4	1.2	12.8	1.0
Exercise	74,005	6,911	9.8	0.8	10.0	0.9	9.4	0.8
Injury prevention	22,842	4,442	3.0	0.6	2.5	0.5	3.8	1.0
Tobacco use/exposure	21,717	3,019	2.9	0.4	2.6	0.3	3.3	0.5
Stress management	17,320	2,914	2.3	0.4	2.3	0.3	2.3	0.5
Mental health	16,631	2,507	2.2	0.3	2.2	0.3	2.2	0.4
Growth/development	16,034	2,669	2.1	0.3	1.9	0.4	2.4	0.4
Skin cancer prevention	14,611	2,656	1.9	0.3	1.9	0.4	1.9	0.4
Breast self-examination	10,089	1,342	1.3	0.2	2.2	0.3	*	. . .
Family planning/contraception	8,428	1,216	1.1	0.2	1.7	0.2	*	. . .
Prenatal instructions	8,399	1,753	1.1	0.2	1.9	0.4	*	. . .
HIV/STD transmission[4,5]	5,034	860	0.7	0.1	0.7	0.1	0.6	0.2
Other therapy								
Psycho-pharmacotherapy	26,343	3,129	3.5	0.4	3.4	0.4	3.6	0.4
Psychotherapy	20,711	3,104	2.7	0.4	2.8	0.4	2.7	0.4
Physiotherapy	18,279	2,706	2.4	0.3	2.4	0.4	2.4	0.4
Alternative medicine	2,922	783	0.4	0.1	0.4	0.1	*0.3	0.1
Other	24,878	2,690	3.3	0.4	3.1	0.4	3.5	0.3

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Numbers may not add to totals because more than one type of therapeutic or preventative service may be reported per visit.
[2]Based on 445,556,000 visits made by females.
[3]Based on 311,168,000 visits made by males.
[4]HIV is human immunodeficiency virus.
[5]STD is sexually transmitted disease.

Table 15. Number and percent of write-in procedures ordered or performed with corresponding standard errors, by procedure category: United States, 1999

Procedure/operation category[1]	ICD–9–CM codes	Number of procedures in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All write-in procedures		175,647	10,297	100.0	. . .
Nervous system	01–05	*818	269	*0.5	0.2
Eye	08–16	*4,343	1,485	*2.5	0.8
Ear	18–20	680	188	0.4	0.1
Nose, mouth, and pharynx	21–29	1,152	230	0.7	0.1
Cardiovascular system	35–39	991	192	0.6	0.1
Digestive system	42–54	7,693	1,606	4.4	0.9
Urinary system	55–59	1,564	307	0.9	0.2
Male genital organs	60–64	971	213	0.6	0.1
Female genital organs	65–71	3,548	634	2.0	0.4
Obstetrical procedures	72–75	*	. . .	*	. . .
Musculoskeletal system	76–84	2,924	599	1.7	0.4
Integumentary system	85–86	23,899	2,323	13.6	1.2
Miscellaneous diagnostic and therapeutic procedures	87–99	124,966	8,451	71.2	1.6
Other procedures[2]		*	. . .	*	. . .

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Based on Volume III of the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (17).
[2]Includes operations on the endocrine system (ICD–9–CM codes 06–07), operations on the respiratory system (ICD–9–CM codes 30–34), operations on the hemic and lymphatic system (ICD–9–CM codes 40–41), and obstetrical procedures (ICD–9–CM codes 72–75).

NOTE: Included are responses to the ambulatory surgery item on the Patient Record form (up to two procedures could be reported), and the diagnostic and screening services item and the therapeutic/preventive services item (up to two procedures for each could be reported in the "other-specify" categories).

Table 16. Number and percent distribution of office visits with corresponding standard errors, by medication therapy and number of medications provided or prescribed, and patient's sex: United States, 1999

Visit characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Patient's sex			
					Female[1]		Male[2]	
					Percent distribution	Standard error of percent	Percent distribution	Standard error of percent
Medication therapy[3]								
All visits	756,734	30,743	100.0	. . .	100.0	. . .	100.0	. . .
Drug visits[4]	500,647	24,028	66.2	1.2	67.3	1.3	64.5	1.4
Visits without mention of medication	256,086	12,208	33.8	1.2	32.7	1.3	35.5	1.4
Number of medications provided or prescribed by physician								
All visits	756,734	30,743	100.0	. . .	100.0	. . .	100.0	. . .
0	256,086	12,208	33.8	1.2	32.7	1.3	35.5	1.4
1	209,999	10,165	27.8	0.8	28.6	0.9	26.5	0.8
2	126,738	6,351	16.7	0.5	16.5	0.6	17.1	0.6
3	70,703	4,678	9.3	0.4	9.2	0.5	9.5	0.5
4	37,807	3,094	5.0	0.3	5.3	0.4	4.5	0.4
5	22,527	2,136	3.0	0.2	3.1	0.3	2.7	0.3
6	32,874	3,213	4.3	0.3	4.5	0.4	4.2	0.4

. . . Category not applicable.
[1]Based on 445,566,000 visits made by females.
[2]Based on 311,168,000 visits made by males.
[3]Includes prescription drugs, over-the-counter preparations, immunizing agents, and desensitizing agents.
[4]Visits at which one or more drugs were provided or prescribed by the physician.

NOTE: Numbers may not add to totals because of rounding.

Table 17. Annual rate of drug mentions and percent of office visits with at least four medications provided or prescribed with corresponding standard errors, by patient's age, sex, and race: United States, 1999

Patient's age, sex, and race	Number of drug mentions per 100 visits[1]	Standard error of rate	Percent of visits with at least four drug mentions[2]	Standard error of percent
All visits	150.2	8.4	12.3	0.7
Age				
Under 15 years	116.8	13.3	5.3	0.9
15–24 years	97.6	6.7	3.0	0.5
25–44 years	117.9	7.6	5.6	0.6
45–64 years	164.7	10.8	15.0	1.1
65–74 years	194.8	15.3	21.6	1.5
75 years and over	210.7	14.9	24.6	1.6
Sex and age				
Female	153.1	9.0	12.9	0.8
Under 15 years	119.7	14.5	6.0	1.1
15–24 years	97.5	8.5	3.2	0.7
25–44 years	114.8	7.6	5.5	0.6
45–64 years	169.0	11.9	15.7	1.4
65–74 years	206.4	18.1	23.3	1.8
75 years and over	216.1	16.1	25.5	1.9
Male	146.1	8.2	11.5	0.8
Under 15 years	114.1	13.4	4.8	1.0
15–24 years	97.8	7.5	*	. . .
25–44 years	123.3	9.4	5.9	0.9
45–64 years	158.4	11.2	13.9	1.2
65–74 years	180.1	14.5	19.4	1.8
75 years and over	201.9	17.6	23.2	2.1
Race and age				
White	149.8	8.2	12.4	0.7
Under 15 years	113.6	13.8	5.2	1.1
15–24 years	97.5	7.0	3.1	0.5
25–44 years	117.0	7.7	5.5	0.6
45–64 years	162.6	10.5	14.7	1.0
65–74 years	192.3	15.3	21.3	1.5
75 years and over	211.6	15.2	24.9	1.7
Black	158.2	23.2	13.1	1.8
Under 15 years	127.5	32.9	*	. . .
15–24 years	91.8	16.7	*	. . .
25–44 years	127.9	17.8	7.3	1.7
45–64 years	182.3	29.8	17.8	3.7
65–74 years	226.6	41.7	25.4	3.9
75 years and over	219.7	47.3	25.2	4.8
All other races				
Asian/Pacific Islander	144.0	33.1	7.9	1.5
American Indian/Alaska Native	*58.6	19.9	*	. . .

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Average number of drugs that were mentioned per every 100 visits for each patient category (number of drug mentions divided by total number of visits multiplied by 100).
[2]Percent of visits for a particular patient characteristic that included four mentions or more (number of drug visits divided by number of office visits multiplied by 100).

Table 18. Number and percent distribution of drug visits and drug mentions with corresponding standard errors, by physician specialty: United States, 1999

Physician specialty	Drug visits				Drug mentions				Percent drug visits[2]	Standard error of percent	Number of drug mentions per 100 visits[3]	Standard error of rate
	Number in thousands[1]	Standard error in thousands	Percent distribution	Standard error of percent	Number in thousands	Standard error in thousands	Percent distribution	Standard error of percent				
All specialties	500,647	24,028	100.0	. . .	1,136,868	62,825	100.0	. . .	66.2	1.2	150.2	4.2
General and family practice	128,577	10,678	25.7	1.6	291,439	27,882	25.6	1.8	75.4	2.7	170.9	9.1
Internal medicine	109,488	11,209	21.9	1.8	303,645	32,923	26.7	2.3	80.7	2.1	223.9	11.4
Pediatrics	47,291	6,340	9.4	1.2	83,743	12,438	7.4	1.0	63.9	3.5	113.1	9.0
Obstetrics and gynecology	29,111	4,448	5.8	0.8	41,762	7,289	3.7	0.6	48.9	4.2	70.2	7.0
Ophthalmology	28,637	3,617	5.7	0.7	60,516	10,467	5.3	0.9	56.0	4.4	118.3	16.5
Dermatology	21,427	2,424	4.3	0.5	36,704	4,595	3.2	0.4	65.5	3.5	112.2	9.8
Psychiatry	18,986	2,408	3.8	0.5	40,300	6,224	3.5	0.5	85.0	3.1	180.4	12.8
Orthopedic surgery	13,510	1,808	2.7	0.4	21,664	3,088	1.9	0.3	33.3	2.9	53.5	6.2
Cardiovascular diseases	12,556	1,797	2.5	0.3	49,230	6,686	4.3	0.6	75.8	8.0	297.2	33.5
Otolaryngology	8,318	1,590	1.7	0.3	15,375	2,948	1.4	0.3	50.8	4.9	93.9	11.6
Urology	8,232	1,151	1.6	0.2	12,210	2,041	1.1	0.2	47.3	4.2	70.1	8.1
General surgery	7,269	1,337	1.5	0.3	16,251	3,457	1.4	0.3	34.3	5.2	76.7	14.7
Neurology	5,435	770	1.1	0.2	10,757	1,578	0.9	0.1	65.5	4.0	129.6	13.5
All other specialties	61,810	7,991	12.3	1.5	153,091	20,296	13.5	1.6	68.3	4.1	169.3	15.0

. . . Category not applicable.

[1]Visits at which one or more drugs were provided or prescribed by the physician.

[2]Percent of visits to specialist that included one or more drug mentions (number of drug visits divided by number of office visits multiplied by 100).

[3]Average number of drugs that were mentioned per every 100 visits to each specialty (number of drug mentions divided by total number of visits multiplied by 100).

NOTE: Numbers may not add to totals because of rounding.

Table 19. Number, percent distribution, and annual rate of drug mentions at office visits with corresponding standard errors, by therapeutic classification: United States, 1999

Therapeutic classification[1]	Number of drug mentions in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of drug mentions per 100 visits[2]	Standard error of rate
All drug mentions	1,136,686	63,340	100.0	. . .	150.2	8.4
Cardiovascular-renal drugs	176,839	13,261	15.6	0.7	23.4	1.8
Drugs used for relief of pain	122,469	7,917	10.8	0.4	16.2	1.0
Respiratory tract drugs	118,241	11,068	10.4	0.7	15.6	1.5
Hormones and agents affecting hormonal mechanisms	112,902	8,672	9.9	0.4	14.9	1.1
Antimicrobial agents	106,226	7,190	9.3	0.5	14.0	1.0
Central nervous system	100,148	7,510	8.8	0.4	13.2	1.0
Metabolic and nutrient agents	74,794	5,936	6.6	0.3	9.9	0.8
Skin/mucous membrane	65,027	4,107	5.7	0.3	8.6	0.5
Gastrointestinal agents	50,526	4,670	4.4	0.3	6.7	0.6
Immunologic agents	48,310	6,294	4.3	0.5	6.4	0.8
Ophthalmic drugs	46,563	6,571	4.1	0.6	6.2	0.9
Neurologic drugs	25,222	2,006	2.2	0.1	3.3	0.3
Hematologic agents	19,189	1,591	1.7	0.1	2.5	0.2
Oncolytic agents	10,631	2,797	0.9	0.2	1.4	0.4
Anesthetic drugs	7,780	1,056	0.7	0.1	1.0	0.1
Otologics	7,032	837	0.6	0.1	0.9	0.1
Antiparasitics	4,828	1,224	0.4	0.1	0.6	0.2
Contrast media/radiophamaceuticals	*4,093	1,564	*0.4	0.1	*0.5	0.2
Other and unclassified[3]	35,866	3,360	3.2	0.2	4.7	0.4

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Based on the standard drug classification used in the *National Drug Code Directory,* 1995 edition (20).
[2]Number of drug mentions divided by total number of visits multiplied by 100.
[3]Includes antidotes, unclassified/miscellaneous drugs, and homeopathic products.

NOTE: Numbers may not add to totals because of rounding.

Table 20. Number of generic substances and percent of drug mentions with corresponding standard errors for the 20 most frequently occurring generic substances in drug mentions at office visits: United States, 1999

Generic substance	Number of occurrences in thousands[1]	Standard error in thousands	Percent of drug mentions[2]	Standard error of percent
All generic substances	1,325,001	74,535	. . .	. . .
Acetaminophen	36,343	2,851	3.2	0.2
Amoxicillin	24,125	2,304	2.1	0.1
Hydrochlorothiazide	18,534	1,875	1.6	0.1
Albuterol	17,960	2,049	1.6	0.1
Estrogens	17,777	1,845	1.6	0.1
Hydrocodone	17,155	1,900	1.5	0.1
Ibuprofen	17,071	1,507	1.5	0.1
Loratadine	15,978	1,758	1.4	0.1
Furosemide	15,413	1,438	1.4	0.1
Guaifenesin	15,059	1,844	1.3	0.1
Aspirin	15,014	1,439	1.3	0.1
Levothyroxine	14,175	1,452	1.2	0.1
Lisinopril	13,777	1,512	1.2	0.1
Prednisone	13,024	1,654	1.1	0.1
Atorvastatin calcium	12,385	1,708	1.1	0.1
Atenolol	12,025	1,027	1.1	0.1
Omeprazole	11,811	1,449	1.0	0.1
Triamcinolone	11,256	1,239	1.0	0.1
Digoxin	11,014	1,214	1.0	0.1
Fluticasone propionate	10,035	1,744	0.9	0.1

. . . Category not applicable.
[1]Frequency of mention combines single-ingredient agents with mentions of the agent as an ingredient in a combination drug.
[2]Based on an estimated 1,136,686 drug mentions in 1999.

Table 21. Number, percent distribution, and therapeutic classification for the 20 drugs most frequently prescribed at office visits with corresponding standard errors, by entry name of drug: United States, 1999

Entry name of drug[1]	Number of drug mentions in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Therapeutic classification[2]
All drug mentions	1,136,686	63,340	100.0	. . .	. . .
Claritin	15,978	1,758	1.4	0.1	Antihistamines
Lasix	12,910	1,281	1.1	0.1	Diuretics
Prednisone	12,705	1,606	1.1	0.1	Adrenal corticosteroids
Synthroid	12,520	1,332	1.1	0.1	Thyroid agents
Lipitor	12,319	1,709	1.1	0.1	Hyperlipidemia
Premarin	11,878	1,319	1.0	0.1	Estrogens/progestins
Prilosec	11,704	1,448	1.0	0.1	Gastric antisecretory agents
Tylenol	11,366	1,583	1.0	0.1	Nonnarcotic analgesics
Amoxicillin	10,623	1,521	0.9	0.1	Penicillins
Celebrex	9,531	1,585	0.8	0.1	NSAID[3]
Norvasc	8,769	1,263	0.8	0.1	Calcium channel blockers
Albuterol sulfate	8,612	1,255	0.8	0.1	Antiasthmatics/bronchodilators
Zoloft	8,351	890	0.7	0.1	Antidepressants
Coumadin	8,081	865	0.7	0.1	Anticoagulants/thrombolytics
Prozac	7,922	843	0.7	0.1	Antidepressants
Paxil	7,858	928	0.7	0.1	Antidepressants
Atenolol	7,750	727	0.7	0.1	Beta blockers
Lanoxin	7,707	1,077	0.7	0.1	Cardiac glycosides
Motrin	7,417	1,186	0.7	0.1	Antiarthritics
Keflex	7,190	1,369	0.6	0.1	Cephalosporins
All others	935,497	51,930	82.3	0.5	. . .

. . . Category not applicable.
[1]The entry made by the physician on the prescription or other medical records. This may be a trade name, generic name, or desired therapeutic effect.
[2]Based on the *National Drug Code Directory,* 1995 edition (20). In cases where a drug had more than one therapeutic use, it was classified under its primary therapeutic use.
[3]NSAID is nonsteroidal anti-inflammatory drug.

NOTE: Numbers may not add to totals because of rounding.

Table 22. Number and percent distribution with corresponding standard errors of New Molecular Entities mentioned at office visits: United States, 1999

Trade name	Number of drug mentions in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Year FDA approved[1]	Description
All NME's[2]	42,394	3,723	100.0	. . .	. . .	
Celebrex	9,531	1,582	22.5	2.6	1998	NSAID[3] for signs and symptoms of osteoarthritis
Raxar	3,904	783	9.2	1.6	1997	Quinolone for chronic bronchitis, pneumonia, gonorrhea, cervitis, and urethritis
Celexa	3,564	607	8.4	1.4	1998	Antidepressant
Viagra	2,654	512	6.3	1.1	1998	Vascular disorders especially erectile dysfunction
Vioxx	2,625	536	6.2	1.1	1999	NSAID[3] for relieving pain and inflammation from osteoarthritis
Singulair	*2,478	790	*5.8	1.8	1998	Antiasthmatic
Rezulin	2,437	530	5.7	1.1	1997	Blood glucose regulator for type II diabetes
Avapro	1,974	453	4.7	1.0	1997	Antihypertensive for treating hypertension
Detrol	1,973	307	4.7	0.7	1998	Urinary tract antiseptics for controlling urination urgency
Plavix	1,785	398	4.2	0.9	1997	Anticoagulant for reduction of atherosclerotic events
Flomax	1,365	299	3.2	0.7	1997	Antihypertensive for treating symptoms of benign prostatic hyperplasia
Other NME's[2]	8,105	1,032	19.1	2.1	. . .	. . .

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]FDA is Food and Drug Administration.
[2]NME is New Molecular Entities.
[3]NSAID is nonsteroidal anti-inflammatory drug.

NOTE: NME is defined as a new drug approved by the Food and Drug Administration within the last 3 years (1997–99).

Table 23. Number and percent of office visits with corresponding standard errors, by providers seen: United States, 1999

Type of provider[1]	Number of visits in thousands[2]	Standard error in thousands	Percent of visits	Standard error of percent
All visits	756,734	30,743	. . .	. . .
Physician	724,357	29,456	95.7	0.6
Medical assistant	182,109	17,784	24.1	2.1
Registered nurse	102,010	12,389	13.5	1.6
Licensed practical nurse	73,752	11,432	9.7	1.4
Physician assistant	13,711	2,803	1.8	0.4
Nurse practitioner	*8,390	4,325	*1.1	0.6
Other provider	31,998	5,616	4.2	0.7

. . . Category not applicable.
* Figure does not meet standard of reliability or precision.
[1]Estimates for nurse midwives have been omitted from the table because of low frequencies in the sample data.
[2]Numbers do not add to totals because more than one provider may be reported per visit.

Table 24. Number and percent of office visits with corresponding standard errors, by visit disposition: United States, 1999

Disposition	Number of visits in thousands	Standard error in thousands	Percent of visits	Standard error of percent
All visits	756,734	30,743	. . .	. . .
Return at specified time	451,107	20,671	59.6	1.2
Return if needed, P.R.N.[1]	182,992	10,798	24.2	1.0
No follow-up planned	63,673	6,142	8.4	0.7
Referred to other physician	33,013	2,469	4.4	0.3
Other disposition	24,481	2,232	3.2	0.3
Telephone follow-up planned	17,170	2,273	2.3	0.3
Returned to referring physician	7,789	1,014	1.0	0.1
Admitted to hospital	2,604	412	0.3	0.1
No disposition	19,679	2,491	2.6	0.3

. . . Category not applicable.
[1]P.R.N. is as needed.
NOTE: Numbers may not add to totals because more than one disposition may be reported per visit.

Table 25. Number and percent distribution of office visits with corresponding standard errors, by time spent with physician: United States, 1999

Time spent with physician	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	756,734	30,743	100.0	. . .
Visits at which no physician was seen	32,377	4,903	4.3	0.6
Visits at which a physician was seen	724,357	29,456	95.7	0.6
Total	724,357	29,456	100.0	. . .
1–5 minutes	26,156	3,378	3.6	0.4
6–10 minutes	158,163	11,920	21.8	1.3
11–15 minutes	242,530	13,026	33.5	1.1
16–30 minutes	236,888	13,824	32.7	1.5
31–60 minutes	57,068	3,864	7.9	0.5
61 minutes and over	3,550	576	0.5	0.1

. . . Category not applicable.
NOTE: Numbers may not add to totals because of rounding.

Table 26. Mean time spent with physician with corresponding standard errors by physician specialty: United States, 1999

Physician specialty	Mean time spent with physician	Standard error of mean
All visits	19.3	0.3
General and family practice	17.7	0.7
Internal medicine	20.7	0.7
Pediatrics	15.4	0.9
Obstetrics and gynecology	17.9	0.9
Ophthalmology	18.4	1.1
Orthopedic surgery	16.9	0.9
Dermatology	14.9	0.7
Psychiatry	39.0	2.2
General surgery	19.2	0.9
Urology	17.8	0.6
Cardiovascular diseases	19.9	1.3
Otolaryngology	16.4	1.0
Neurology	24.4	1.4
All other specialties	22.9	1.0

Technical notes

Data collection methods

Office visit data for the 1999 NAMCS were collected from 981 reporting physicians (physician participation rate of 62.9 percent). In most cases, physician staff completed the information requested on the Patient Record forms (figure I); however, in 27.7 percent of the offices, Census field representatives abstracted the data from medical records or computer printouts. No personally identifying information such as patient's name or address was collected. Confidentiality of the data collected in the survey is protected under the Privacy Act, Public Health Service Act, and Title 42 of the United States Code, Section 242m(d).

Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance when only a sample, rather than an entire universe, is surveyed. The standard error also reflects part of the measurement error, but does not measure any systematic biases in the data. The chances are 95 in 100 that an estimate from the sample differs from the value that would be obtained from a complete census by less than twice the standard error.

As mentioned earlier in the text, the standard errors used in this report were approximated using SUDAAN software. SUDAAN computes standard errors by using a first-order Taylor approximation of the deviation of estimates from their expected values. A description of the software and the approach it uses has been published (4). The relative standard error (RSE) of an estimate is obtained by dividing the standard error by the estimate itself. The result is then expressed as a percent of the estimate. When it is not feasible to use statistical software, such as SUDAAN, for analyzing complex survey data, one may calculate approximate RSE's for aggregate estimates by using the following general formula, where x is the aggregate of interest in thousands, and A and B are the appropriate coefficients from table I.

Table I. Coefficients appropriate for determining approximate relative standard errors by type of estimate and physician specialty: National Ambulatory Medical Care Survey, 1999

Type of estimate and physician specialty	Coefficient for use with estimates in thousands		Lowest reliable estimate in thousands
	A	*B*	
Visits			
Overall totals	0.003046	84.476	972
General and family practice	0.008156	67.453	825
Internal medicine	0.014669	82.835	1,100
Pediatrics	0.014374	77.971	1,032
General surgery	0.013344	25.915	339
Obstetrics and gynecology	0.018174	83.774	1,167
Orthopedic surgery	0.011212	46.378	589
Cardiovascular diseases	0.018282	28.369	396
Dermatology	0.013570	24.229	318
Urology	0.015055	28.036	375
Psychiatry	0.012600	44.741	579
Neurology	0.017496	15.376	213
Ophthalmology	0.009916	59.314	741
Otolaryngology	0.025125	25.700	397
All other specialties	0.019494	127.569	1,810
Drug mentions			
Overall totals	0.005353	208.267	2,462
General and family practice	0.013372	149.943	1,957
Internal medicine	0.014865	270.204	3,597
Pediatrics	0.025208	142.376	2,198
General surgery	0.045385	51.056	1,145
Obstetrics and gynecology	0.026958	156.846	2,489
Orthopedic surgery	0.015313	89.841	1,203
Cardiovascular diseases	0.017471	95.094	1,311
Dermatology	0.016538	39.999	545
Urology	0.029431	38.925	643
Psychiatry	0.020901	89.727	1,299
Neurology	0.022659	28.723	427
Ophthalmology	0.029014	167.219	2,743
Otolaryngology	0.037339	53.240	1,012
All other specialties	0.025202	374.407	5,799

NOTES: These coefficients apply to the National Ambulatory Medical Care Survey (NAMCS) data where doctors of osteopathy (D.O.'s) have been aggregated with doctors of medicine (M.D.'s) according to their self-designated practice specialty. For those who wish to conduct a separate analysis on visits to doctors of osteopathy, the *A* and *B* coefficients for use with visit estimates in thousands are 0.009910 and 53.022, respectively. The corresponding coefficients for estimates of drug mentions in thousands are 0.020987 and 91.066. To perform analyses of NAMCS data on visits to M.D's only, excluding doctors of osteopathy, contact the Ambulatory Care Statistics Branch.

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

Similarly, RSE's for percents may be calculated using the following general formula, where p is the percent of interest expressed as a proportion, and x is the denominator of the percent in thousands, using the appropriate coefficient from table I.

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

The standard error for a rate may be obtained by multiplying the RSE of the total estimate by the rate.

Published and flagged estimates

Estimates are not presented unless a reasonable assumption regarding their probability distributions is possible on the basis of the Central Limit Theorem. The Central Limit Theorem states that, given a sufficiently large sample size, the sample estimate approximates the population estimate and, upon repeating sampling, its distribution would be approximately normal.

In this report, estimates are not presented if they are based on fewer than 30 cases in the sample data; only an asterisk (*) appears in the tables. Estimates based on 30 cases or more are preceeded by an asterisk if the RSE of the estimate exceeds 30 percent.

Assurance of confidentiality – All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purpose of the survey and will not be disclosed or released to other persons or used for any other purpose without consent of the individual or the establishment in accordance with section 308(d) of the Public Health Service Act (42 USC 242m).

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Health Statistics

A

NATIONAL AMBULATORY MEDICAL CARE SURVEY
1999–2000 PATIENT RECORD

OMB No. 0920-0234
Expires: 05/31/2001
CDC 64.134A

1. PATIENT'S ZIP CODE

2. DATE OF VISIT
Month | Day | Year

3. DATE OF BIRTH
Month | Day | Year

4. SEX
1 ☐ Female
Is patient pregnant?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown
2 ☐ Male

5. ETHNICITY
1 ☐ Hispanic or Latino
2 ☐ Not Hispanic or Latino

6. RACE – *Mark (X) one or more.*
1 ☐ White
2 ☐ Black/African American
3 ☐ Asian
4 ☐ Native Hawaiian/Other Pacific Islander
5 ☐ American Indian/ Alaska Native

7. WAS PATIENT REFERRED BY ANOTHER PHYSICIAN OR BY A HEALTH PLAN FOR THIS VISIT?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown

8. WAS AUTHORIZATION REQUIRED FOR CARE?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown

9. ARE YOU THE PATIENT'S PRIMARY CARE PHYSICIAN?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown

10. PRIMARY EXPECTED SOURCE OF PAYMENT FOR THIS VISIT – *Mark (X) one.*
1 ☐ Private insurance
2 ☐ Medicare
3 ☐ Medicaid
4 ☐ Worker's Compensation
5 ☐ Self-pay
6 ☐ No charge
7 ☐ Other
8 ☐ Unknown

11. DOES PATIENT BELONG TO AN HMO?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown

12. IS THIS A CAPITATED VISIT?
1 ☐ Yes
2 ☐ No
3 ☐ Unknown

13. HAVE YOU OR ANYONE IN YOUR PRACTICE/ DEPARTMENT SEEN PATIENT BEFORE?
1 ☐ Yes, established patient
2 ☐ No, new patient

14. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT
Use patient's own words.
1. Most important: _____
2. Other: _____
3. Other: _____

15. MAJOR REASON FOR THIS VISIT – *Mark (X) one.*
1 ☐ Acute problem
2 ☐ Chronic problem, routine
3 ☐ Chronic problem, flareup
4 ☐ Pre- or post-surgery/ injury followup
5 ☐ Non-illness care (e.g., routine prenatal, general exam, well baby)

16. IS THIS VISIT RELATED TO INJURY OR POISONING? *Refers to all types of injury or poisoning, including adverse drug experiences, medical misadventures, etc.*
1 ☐ Yes *(Answer a, b, c, and d.)* 2 ☐ No *(Skip to item 17.)*

a. Place of occurrence – *Mark (X) one.*
1 ☐ Residence
2 ☐ Recreation/sports area
3 ☐ Street or highway
4 ☐ School
5 ☐ Other public building
6 ☐ Industrial places
7 ☐ Other
8 ☐ Unknown

b. Is this injury intentional?
1 ☐ Yes (self-inflicted)
2 ☐ Yes (assault)
3 ☐ No, unintentional
4 ☐ Unknown

c. Is this injury work related?
1 ☐ Yes 2 ☐ No 3 ☐ Unknown

d. Cause of injury *Describe events that preceded injury (e.g. reaction to penicillin, wasp sting, driver in motor vehicle traffic accident involving collision with parked vehicle, shot with a handgun during a brawl, heroin overdose, etc.).*

17. PHYSICIAN'S DIAGNOSES FOR THIS VISIT
As specifically as possible, list diagnoses related to this visit including chronic conditions (e.g. depression, obesity, asthma, etc.).
1. Primary diagnosis: _____
2. Other: _____
3. Other: _____

18. DIAGNOSTIC/SCREENING SERVICES – *Mark (X) all **ordered** or **provided** at this visit.*
1 ☐ None

EXAMINATIONS
2 ☐ Breast
3 ☐ Pelvic
4 ☐ Rectal
5 ☐ Skin
6 ☐ Visual acuity
7 ☐ Glaucoma
8 ☐ Hearing

TESTS AND MEASUREMENTS
9 ☐ Blood pressure
10 ☐ Strep test
11 ☐ Pap test
12 ☐ Urinalysis
13 ☐ Pregnancy test
14 ☐ PSA
15 ☐ Blood lead level
16 ☐ Cholesterol measure
17 ☐ HIV serology
18 ☐ Other STD test
19 ☐ Hematocrit/ hemoglobin
20 ☐ Other blood test
21 ☐ EKG

IMAGING
22 ☐ X-Ray
23 ☐ CAT scan/MRI
24 ☐ Mammography
25 ☐ Ultrasound

ALL OTHER – *Specify*
26 ☐ _____

19. THERAPEUTIC AND PREVENTIVE SERVICES – *Mark (X) all **ordered** or **provided** at this visit. Exclude medications.*
1 ☐ None

COUNSELING/EDUCATION:
2 ☐ Diet/nutrition
3 ☐ Exercise
4 ☐ HIV/STD transmission
5 ☐ Family planning/ contraception
6 ☐ Prenatal instructions
7 ☐ Breast self-exam
8 ☐ Tobacco use/ exposure
9 ☐ Growth/ development
10 ☐ Mental health
11 ☐ Stress management
12 ☐ Skin cancer prevention
13 ☐ Injury prevention

OTHER THERAPY
14 ☐ Psychotherapy
15 ☐ Psycho-pharmacotherapy
16 ☐ Physiotherapy
17 ☐ Complementary or alternative medicine (CAM)

ALL OTHER – *Specify*
18 ☐ _____

20. AMBULATORY SURGICAL PROCEDURES
☐ None
*List up to 2 surgical procedures actually **performed** at this visit. Include biopsy.*
1. _____
2. _____

21. MEDICATIONS/INJECTIONS *List names of up to 6 medications that were **ordered, supplied, administered** or **continued** during this visit. Include R_x and OTC medications, immunizations, allergy shots, and anesthetics.*
☐ None – *No Medications/Injections*
Mark (X) next to drug name if it is from the patient's insurance formulary list.
☐ *Mark (X) here if NO drugs are from a formulary list.*
1. ☐ _____
2. ☐ _____
3. ☐ _____
4. ☐ _____
5. ☐ _____
6. ☐ _____

22. PROVIDERS SEEN THIS VISIT – *Mark (X) all that apply.*
1 ☐ Physician
2 ☐ Physician assistant
3 ☐ Nurse practitioner
4 ☐ Nurse midwife
5 ☐ R.N.
6 ☐ L.P.N.
7 ☐ Medical/ nursing assistant
8 ☐ Other

23. VISIT DISPOSITION – *Mark (X) all that apply.*
1 ☐ No follow-up planned
2 ☐ Return if needed, P.R.N.
3 ☐ Return at specified time
4 ☐ Telephone follow-up planned
5 ☐ Referred to other physician
6 ☐ Returned to referring physician
7 ☐ Admitted to hospital
8 ☐ Other – *Specify*

24. TIME SPENT WITH PHYSICIAN
If not seen by physician, enter zero.
_____ Minutes

NAMCS-30A (9-21-98)

Figure I. Patient Record form

Nonsampling errors

As in any survey, results are subject to sampling and nonsampling errors. Nonsampling errors include reporting and processing errors, as well as biases due to nonresponse and incomplete response. The magnitude of the nonsampling errors cannot be computed. However, these errors were kept to a minimum by procedures built into the operation of the survey. To eliminate ambiguities and encourage uniform reporting, attention was given to the phrasing of items, terms, and definitions. Also, pretesting of most data items and survey procedures was performed. Quality control procedures and consistency and edit checks reduced errors in data coding and processing. Coding error rates ranged from 0.1 to 1.7 for various data items.

Adjustments for survey nonresponse—The response rate for the 1999 NAMCS was lower than observed in previous years. Table II presents the characteristics of NAMCS respondents and nonrespondents. Distributions were similar, with the exception of geographic region and MSA status. Physicians in the Northeast were less likely to participate as were physicians whose practices were in MSA areas. The effect of this differential response is minimized in the visit estimates, however, because the NAMCS uses a nonresponse adjustment factor, which takes the geographic region and MSA status into account. Specifically, this adjustment was calculated to minimize the impact of response on final estimates by imputing to nonresponding physicians data from visits to similar physicians. For this purpose, physicians were judged similar if they had the same speciality designation and practiced in the same PSU.

Adjustments for item nonresponse—Weighted item nonresponse rates were 5 percent or less for all data items with the following exceptions: Is patient pregnant (26.9 percent of females 15–44 years of age), ethnicity (22.1 percent), was authorization required for care? (9.2 percent), does patient belong to an HMO? (11.5 percent), is this a capitated visit? (17.5 percent), cause of injury (24.1 percent), place of injury (49.1 percent), is this injury intentional? (22.1 percent of injury visits), is this injury work related? (51.9 percent of injury visits), and is medication from patient's formulary list? (61.3 percent). For some items missing values were imputed by randomly assigning a value from a

Table II. Characteristics of the 1999 National Ambulatory Medical Care Survey physician respondents and nonrespondents

Physician characteristics[1]	Number of sampled in-scope physicians[2]	Total sampled percent distribution	Responding physician distribution	Nonresponding physician distribution	Response rate[3]
All office-based physicians	1,729	100.0	100.0	100.0	0.629
Age					
Under 50 years	965	55.8	56.4	54.8	0.636
50 years and over	764	44.2	43.6	45.2	0.620
Gender					
Male	1,446	83.6	83.5	83.9	0.628
Female	283	16.4	16.5	16.1	0.636
Geographic region[4]					
Northeast	406	23.5	18.9	31.2	0.507
Midwest	385	22.3	21.2	24.0	0.600
South	543	31.4	34.5	26.2	0.691
West	395	22.8	25.4	18.6	0.699
Metropolitan status[4,5]					
MSA area[5]	1,506	87.1	84.5	91.6	0.610
Non-MSA area[5]	223	12.9	15.5	8.4	0.758
Type of doctor					
Doctor of medicine	1,561	90.3	90.8	89.4	0.633
Doctor of osteopathy	168	9.7	9.2	10.6	0.595
Specialty					
GFP[6]	273	15.8	17.0	13.7	0.678
Internal medicine	172	9.9	9.0	11.5	0.570
Pediatrics	84	4.9	5.5	3.7	0.714
General surgery	128	7.4	7.9	6.6	0.672
Obstetrics and gynecology	104	6.0	6.2	5.8	0.644
Orthopedic surgery	116	6.7	6.7	6.7	0.629
Cardiovascular diseases	109	6.3	5.5	7.6	0.550
Dermatology	94	5.4	5.3	5.6	0.617
Urology	88	5.1	5.0	5.3	0.613
Psychiatry	106	6.1	6.3	5.9	0.642
Neurology	113	6.5	5.6	8.1	0.540
Ophthalmology	112	6.5	6.5	6.4	0.634
Otolaryngology	86	5.0	4.7	5.5	0.593
All other	114	6.6	8.8	7.5	0.667
Specialty type					
Primary care	627	36.3	37.1	34.8	0.644
Surgical specialty	556	32.2	33.1	32.1	0.636
Medical specialty	536	31.0	29.8	33.1	0.604
Practice type					
Solo	561	32.4	32.1	33.1	0.622
2-physician	127	7.3	6.6	8.6	0.567
Group/HMO[7]	537	31.1	31.5	30.3	0.639
Medical school/government	36	2.1	2.4	1.6	0.722
Other	199	11.5	11.2	12.0	0.613
Unclassified	269	15.6	16.2	14.5	0.654

[1]Characteristic information is from the master files of the American Medical Association and the American Osteopathic Association.
[2]In-scope physicians are those who verified that they were non-Federal and were involved in direct patient care in an office-based setting, excluding the specialties of radiology, pathology, and anesthesiology.
[3]Numerator is the number of in-scope physicians who participated in the National Ambulatory Medical Care Survey or who did not see any patients during their sampled reporting week. Denominator is all in-scope sampled physicians.
[4]Significant difference in response rate $p < .05$.
[5]MSA is metropolitan statistical area.
[6]GFP is general and family practice.
[7]HMO is health maintenance organization.

Patient Record form with similar characteristics; imputations were based on physician specialty, geographical region, and 3-digit ICD–9–CM codes for primary diagnosis. Imputations were performed for the following variables: Birth year (3.6 percent), sex (0.8 percent), race (17.9 percent), and time spent with physician (18.8 percent). Blank or otherwise missing responses are so noted in the data.

Tests of significance and rounding

In this report, the determination of statistical inference is based on a two-tailed *t*-test. The Bonferroni inequality was used to establish the critical value for statistically significant differences (.05 level of significance) based on the number of possible comparisons within a particular variable (or combination of variables) of interest. Terms relating to differences such as ''greater than'' or ''less than'' indicate that the difference is statistically significant. A lack of comment regarding the difference between any two estimates does not mean that the difference was tested and found to be not significant.

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

Race

In 1999 the instruction for the race item on the Patient Record form was changed so that more than one race could be recorded. In previous years, only one racial category could be checked. The estimates for the racial groups presented in this report are for visits where only one race was recorded. Only a small proportion of records had multiple races indicated. Note that the race denominators for the population rates are based on single race response categories from the U.S. Bureau of the Census.

Physician specialty groupings

The NAMCS survey design grouped physicians into 15 strata, or specialty groups, for sampling purposes. One stratum, doctors of osteopathy, was based on information from the American Osteopathic Association. The other groups (general and family practice, internal medicine, pediatrics, general surgery, obstetrics and gynecology, orthopedic surgery, cardiovascular diseases, dermatology, urology, psychiatry, neurology, ophthalmology, otolaryngology, and a residual category of other specialties) were developed based on information from the American Medical Association. Estimates are presented in this report with doctors of osteopathy combined with doctors of medicine, unless otherwise noted.

Population figures and rate calculation

The figures represent U.S. Bureau of the Census estimates of the civilian noninstitutionalized population as of July 1, 1999. Figures are consistent with the downloadable series, ''U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: 1980–99 (with short-term projection to dates in 2000).'' It is available at the U.S. Bureau of the Census Internet site: http://ftp.census.gov/population/www/estimates/nat_90s_4.html. Figures have been adjusted for net underenumeration using the 1990 National Population Adjustment Matrix.

Definition of terms

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

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

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

Illness-related visit—A visit is considered illness-related if it was not an injury visit as defined by the definition of ''injury-related visit.''

Injury-related visit—A visit is injury-related if ''yes'' was checked in response to item 15, ''Is this visit related to injury or poisoning?'' or if a cause of injury or a nature of injury diagnosis was provided, or if an injury-related reason for visit was reported.

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

New Molecular Entity (NME)—An NME is a drug that has received Food and Drug Administration approval within the last 3 years.

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

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

Trade name disclaimer

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

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