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# National Ambulatory Medical Care Survey: 2007 Summary

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# **Abstract**

*Objectives*—This report describes ambulatory care visits made to physician offices in the United States. Statistics are presented on selected characteristics of the physician's practice, the patient, and the visit.

*Methods*—The data presented in this report were collected in the 2007 National Ambulatory Medical Care Survey (NAMCS), a national probability sample survey of visits to nonfederal office-based physicians in the United States. Sample data are weighted to produce annual national estimates of physician visits.

Results—During 2007, an estimated 994.3 million visits were made to physician offices in the United States, an overall rate of 335.6 visits per 100 persons. About one-third of office visits, 34.9 percent, were made to practices with all or partial electronic medical records systems, while 85.1 percent of the visits were made to practices with all or partial electronic submission of claims. From 1997 to 2007, the percentage of visits to physicians who were solo practitioners decreased 21 percent. During the same period, visits to physicians who were part of a group practice with 6–10 physicians increased 46 percent. There were an estimated 106.5 million injury- or poisoning-related office visits in 2007, representing 10.7 percent of all visits. Medications were ordered, supplied, or administered at 727.7 million office visits, accounting for 73.2 percent of all office visits. In 2007, about 2.3 billion drugs were ordered, supplied, or administered, resulting in an average of 226.3 drug mentions per 100 visits.

**Keywords**: ambulatory care • physician office care • medications • chronic condition

### Introduction

The National Ambulatory Medical Care Survey (NAMCS), which began in 1973, was inaugurated to gather,

analyze, and disseminate information about health care provided by officebased physicians. NAMCS and the National Hospital Ambulatory Medical Care Survey (NHAMCS) are parts of the ambulatory component of the National Health Care Surveys, a family of surveys that measure health care utilization across various types of providers. More information about the National Health Care Surveys can be found at the following website: http://www.cdc.gov/nchs/nhcs.htm.

NAMCS and NHAMCS data have been used in articles examining important topics of interest in public health and in health services research. A list of publications is available from http://www.cdc.gov/nchs/data/ahcd/ publist-9-4-2009.pdf. In addition to NAMCS, other reports highlight visits to emergency departments (1) and outpatient departments (2). Annual reports are available from http:// www.cdc.gov/nchs/ahcd/ ahcd reports.htm. Public-use data files are available from <a href="http://www.cdc.gov/">http://www.cdc.gov/</a> nchs/ahcd/ahcd\_questionnaires.htm. Data from NAMCS 2007 will also be available on CD ROM. These and other products can be obtained from the NCHS Office of Information Services. Information Dissemination Staff at 1-800-232-4636, the Ambulatory and Hospital Care Statistics Branch at 301-458-4600, or by e-mail at CDCINFO@cdc.gov.

Ambulatory medical care is the predominant method of providing health





care services in the United States and occurs in a wide variety of settings (3). The National Health Care Surveys collect ambulatory medical care data from several settings, including physician offices (excluding the specialties of radiology, pathology, and anesthesiology), hospital-based outpatient departments, and emergency departments. Of these three settings, physician office visits comprised the largest segment, accounting for 83 percent of ambulatory care visits in 2007.

Services range from primary care to highly specialized medical and surgical care. This report describes care delivered in the offices of nonfederally employed physicians. It includes visits not only to private practices but also to urgent care centers, public health clinics, family planning clinics, mental health centers, community health centers, and faculty practice plans. NAMCS has always included physicians in community health centers (CHCs), but starting in 2006, CHCs were purposefully selected in NAMCS as a separate sampling stratum. Although physicians, nurse practitioners, nurse midwives, and physician assistants were sampled at CHCs, only visits to physicians were included in this report. NAMCS does not include visits to hospital emergency or outpatient departments; freestanding ambulatory surgery centers; Department of Veterans Affairs medical offices: or industrial. occupational, or institutional clinics. Many of the estimates in this report are provided separately by physician specialty, as recent research has demonstrated that certain physician practice characteristics, such as volume, ownership, revenue, and practice patterns, can be significantly influenced by physician specialty (4,5).

NAMCS includes detailed questions on chronic conditions, including a chronic condition check list, participation in disease management programs, and diagnostic and screening service items that parallel the listed chronic conditions. The survey also collects the status (new or continued) of each medication and information on

gestational age, health education, and nonmedication treatment.

### Methods

#### Data source

This report presents data on visits in terms of physician, patient, and visit characteristics. These data are from the 2007 NAMCS, a national probability sample survey of nonfederal officebased physicians conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS), Division of Health Care Statistics. The survey was conducted from December 25, 2006, through December 23, 2007. NAMCS utilizes a multistage probability sample design involving samples of 112 geographic primary sampling units (PSUs), physicians within PSUs, and patient visits within physician practices. PSUs are counties, groups of counties, county equivalents (such as parishes or independent cities), or towns and townships for some PSUs in New England. The NAMCS sample for 2007 was slightly larger than 2006 because the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) sponsored the addition of 50 primary care physicians (general or family practice, internal medicine, and obstetrics and gynecology). As in 2006, the National Cancer Institute again sponsored a supplementary sample of 200 oncologists.

In 2007, 2,399 sampled physicians were in scope (eligible to participate in the survey). Of these, 1,568 physicians participated in NAMCS, yielding an unweighted response rate of 64.7 percent (64.1 percent weighted). Sampled physicians were asked to complete Patient Record forms (PRFs) for a systematic random sample of approximately 30 office visits occurring during a randomly assigned 1-week reporting period. The total number of PRFs completed for 2007 was 32,778. Some physicians did not provide the expected number of visit records, thereby reducing the unweighted total visit response rate to 60.9 percent (60.5 percent weighted). A detailed

discussion of methodology can be found in the "Technical Notes." A sample PRF can be found at the end of this report (Figure I).

In this report, the determination of statistical inference is based on the two-tailed *t*-test. The Bonferroni inequality was used to establish the critical value for statistically significant differences (0.05 level of significance) based on the number of possible comparisons within a particular variable (or combination of variables) of interest. A weighted least squares regression analysis was used to determine the significance of trends at the 0.05 level. 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 does not mean that the difference was tested and found to be not significant.

#### Results

# Physician office utilization

- In 2007 an estimated 994.3 million visits were made to office-based physicians, an average of about 335.6 visits for every 100 persons (Table 1).
- About one-quarter of all visits were to general and family practice physicians and approximately one-third of the visits were to other primary care physicians, that is, those specializing in internal medicine, pediatrics, or obstetrics and gynecology. Visits to oncologists accounted for 1.6 percent of visits (Table 1).
- Visits are also presented by three major categories defined by specialty type. In 2007, 58.0 percent of office visits were made to primary care specialists, 22.2 percent to medical specialists, and the remaining 19.8 percent to surgical specialists (Table 1).
- Overall, 86.0 percent of office visits were made to physicians located in metropolitan statistical areas (MSAs) (Table 1).

# Physician practice characteristics

- Overall, 67.8 percent of visits were made to physicians who were owners of the practice. More visits, 83.0 percent, were to practices that were either owned by a physician or a group of physicians than other ownership arrangements. Over one-half of office visits (57.3 percent) were made to physicians who were part of a group practice, defined as having three or more physicians (Table 2).
- The percentage of U.S. physicians who own their practices has declined over the past two decades. The percentage of physicians practicing in independent, solo, or small-group practices declined while the percentage of physicians practicing in larger practices increased (6). From 1997 to 2007, the percentage of visits to physicians who were solo practitioners decreased 21 percent

- (Figure 1). During the same period, visits to physicians who were part of a group practice with 6–10 physicians increased 46 percent.
- About one-fifth, or 21.1 percent of visits occurred in multispecialty practices, and 48.4 percent were to single specialty practices. The remaining 30.5 percent of office visits were to solo practitioners (Table 2).
- About one-third of office visits, 34.9 percent, were made to practices with all or partial electronic medical records systems, while 85.1 percent of the visits were made to practices with all or partial electronic submission of claims (Table 2).

### **Patient characteristics**

• The visit rate was highest for elderly people 75 years and over (761.0 visits per 100 persons) and infants under 1 year of age (731.6 visits per 100 persons). The visit rate declined from infancy (age 1–4 years) to young

- adulthood (age 15–24 years), then rose again as age increased. Overall, women had higher visit rates than men (women had 383.8 and men had 285.3 visits per 100 persons) (Table 3).
- In 2007, patient race was missing for 31.5 percent of visits, and patient ethnicity was missing in 34.7 percent of visits; missing data for these two variables were imputed. In this report, all tables presenting patient race or ethnicity include visit estimates based on both imputed and reported race and ethnicity, as well as estimates based only on reported data. In general, there were no statistically significant differences between race or ethnicity distributions or percentages based on "imputed plus reported" data and reported data, unless specifically indicated. For example, Table 4 presents the age distributions of visits by race, based on "imputed plus reported" cases and based on only reported cases.

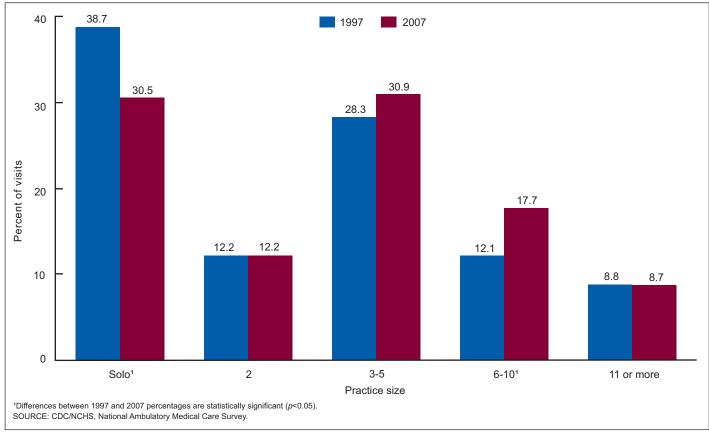


Figure 1. Percentage of office visits by practice size: United States, 1997 and 2007

- Comparison of these two distributions yielded no statistically significant differences with the exception of American Indian or Alaska Native. Similarly, the distribution of visits by Hispanic or Latino patients among "imputed plus reported" and reported cases was also statistically similar.
- Private insurance was the most frequently recorded expected source of payment, accounting for 64.5 percent of all visits (Table 5). Medicare and Medicaid/State Children's Health Insurance Program (SCHIP) were listed as a payment source for 24.0 percent and 12.3 percent of visits, and visits made by patients with both Medicare and Medicaid represented 1.8 percent of all visits. Visits by patients categorized as self-pay, no charge, or charity, an approximation of uninsured, constituted 4.9 percent of all office visits.

## Continuity of care

- In 44.0 percent of office visits, physicians indicated that they were the patient's primary care provider (PCP); for 49.2 percent, the physician was not the patient's PCP; and at 6.8 percent of visits, it was unknown whether the physician was the PCP (Table 6).
- Of the non-PCP visits, about one-third (32.7 percent) had been referred by another physician (calculated from Table 6). Visits by new patients were more likely to have been referred by another physician than visits made by established patients (46.2 percent compared with 11.1 percent). Information on whether the patient had been referred for the visit was only asked for non-PCP visits and visits with unknown PCP status. Among these visits, referral information was missing for 20.1 percent of visits (Table 6).
- Among visits to non-PCPs, the visits to the following specialties were most likely to have been referred by another physician: otolaryngology (46.9 percent), neurology (46.7 percent), general surgery

- (45.0 percent), and orthopedic surgery (40.5 percent) (Table 7).
- Starting in 2007, the number of visits made by established patients during the past 12 months was collected as a numeric field instead of a categorical one. Established patients accounted for 85.6 percent of office visits. A majority of office visits (79.2 percent) were made by established patients who had at least one previous visit in the last 12 months (calculated from Table 8), and 20.8 percent had six or more visits in the previous 12 months (Table 8).
- Primary care specialists (90.1 percent) were more likely to see established patients compared with medical (82.0 percent) and surgical (76.4 percent) specialists (Table 8).

### Reason for visit

- Examinations, including general medical, routine prenatal, gynecological, and well baby, were 4 of the top 20 categories mentioned as the patients' principal reasons for visit and accounted for 12.1 percent of all visits (Table 9). Cough was the most frequently mentioned reason (2.8 percent).
- In contrast to the patient's selfdescribed reason for visit, the provider's perspective on whether the visit was for a new problem, chronic problem, pre- or post-surgery, or preventive care is also collected. Chronic conditions, including both routine follow-up and flare-up problems, accounted for 38.8 percent of visits (calculated from Table 10). New problems, including infectious diseases and newly diagnosed chronic conditions, accounted for 33.3 percent of visits. The percentage of visits for new problems increased with age for children and then declined with age, whereas the percentage of visits for both types of chronic conditions (routine follow-up and flare-up problems) increased with patient age.
- Overall, 19.4 percent of office visits were for preventive care (Table 10).
   The preventive care visit rate for women (82.9 visits per 100 persons) was significantly higher than the rate

for men (46.8 visits per 100 persons) (Table 11). The preventive care visit rate among infants under 1 year of age (406.0 visits per 100 persons) exceeded that of all other age groups. Only 26.8 visits per 100 persons categorized as self-pay, no charge, or charity, an approximation of uninsured, were for preventive care compared with 66.5 visits per 100 persons where private insurance was the expected source of payment, 64.0 visits per 100 persons with Medicare as the payment source, and 98.5 visits per 100 persons with Medicaid as the payment source.

# Primary diagnoses and chronic conditions at visit

- The physician's primary diagnosis for 19.9 percent of visits involved the supplementary classification for preventive and follow-up care (i.e., general medical examination, routine prenatal examination, and health supervision of an infant or child, and other diagnoses not classifiable to injury or illness) (Table 12).
- The most frequent primary medical diagnoses for office visits included essential hypertension, acute upper respiratory infections (excluding pharyngitis), arthropathies and related disorders, spinal disorders, malignant neoplasms, and diabetes mellitus (Table 13).
- There were an estimated 106.5 million visits related to injury, poisoning, or adverse effects of medical treatment in 2007, representing 10.7 percent of all office-based visits (calculated from Table 9 and Table 14) and yielding a rate of 35.9 visits per 100 persons (Table 14). The injury-related visit rate significantly increased with patient age.
- Adverse effects of medical care, including surgical complications and adverse drug reactions, accounted for 8.8 million visits (8.2 percent of injury visits) (Table 15).
- The presence of chronic conditions was based on a checklist of chronic conditions, regardless of previously reported diagnoses. During data

editing, unmarked chronic condition items were edited to be present when comparable diagnoses were reported. In 2007, 52.1 percent of office visits were made by patients with one or more chronic conditions (Table 16). Hypertension was the most frequent chronic condition (23.7 percent), followed by arthritis (12.7 percent), hyperlipidemia (12.4 percent), diabetes (10.3 percent), and depression (8.6 percent).

# Services ordered or provided

- Diagnostic or screening services were ordered or provided at 87.7 percent of visits. The most frequently occurring examination was of the skin (13.9 percent) (Table 17). Women were more likely than men to have imaging ordered or provided at visits, a difference due mostly to mammography and ultrasound.
- In 2007, 5.0 percent of female visits had a Pap test ordered or provided (Table 17). In 2003, the Food and Drug Administration approved the use of a combined human papillomavirus (HPV) deoxyribonucleic acid (DNA) test and Pap test for cervical cancer screening among women over 30 years of age (7). Among visits with any Pap test ordered or provided in 2007, the percentage that was liquid-based (59.1) exceeded the percentage that was conventional (22.9) (calculated from Table 17). However, the type of Pap test was unspecified for 18.1 percent of visits.
- Patient's blood pressure (BP) was recorded at 57.3 percent of all visits (Table 17) and 64.9 percent of all visits made by adults aged 18 years and over (Table 18). Among visits made by adult patients aged 18 years and over with a BP recorded, BP within the moderately high range (140–159 mm Hg systolic, or 90–99 mm Hg diastolic) accounted for 18.8 percent of visits, and BP within the severely high range (160 mm Hg or greater systolic, or 100 mm Hg or greater diastolic) accounted for 6.5 percent of visits. The proportions of visits by age, sex, race, and

- ethnicity all follow the same pattern with mildly high initial BP occurring most frequently (majority greater than 40 percent), except for patients aged 18–24 years (Table 18). BP status was based on the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (8).
- Health education was documented as ordered or provided at 34.1 percent of visits (Table 19). Diet or nutrition (11.7 percent) and exercise (7.6 percent) were the most frequent counseling or education services documented at office visits.
- Nonmedication treatment was ordered or provided at 18.3 percent of visits (Table 20). The most frequent nonmedication treatment ordered or provided was excision of tissue (2.4 percent) followed by physical therapy (2.2 percent of visits), wound care (1.9 percent of visits), and orthopedic care and psychotherapy (both at 1.8 percent).
- An estimated 83.0 million surgical procedures were ordered or provided during office visits (Table 21). At least one surgical procedure was performed at 7.5 percent of office visits (see Table 21 footnote). The two most common procedure categories were related to the integumentary system (35.6 percent of procedures) and the digestive system (15.6 percent of procedures).

#### **Medications**

- Medications were ordered, supplied, or administered at 727.7 million office visits, or 73.2 percent of all office visits (Table 22). At 42.3 percent of all visits, two to seven drugs were ordered, supplied, or administered, and eight drugs were recorded at 6.8 percent of visits.
- In 2007, about 2.3 billion drugs were ordered, supplied, or administered in visits to office-based physicians, resulting in an overall rate of 226.3 drug mentions per 100 visits (Table 23). The percentage of visits with at least one drug mention ranged

- from 86.4 percent for psychiatrists to 43.7 percent for general surgeons.
- Drug mentions are displayed by therapeutic drug category in Table 24. The leading therapeutic category was analgesics, indicated in 11.0 percent of all drug mentions, followed by antihyperlipidemic agents (5.5 percent); antidepressants (4.8 percent); anxiolytics, sedatives, and hypnotics (3.8 percent); and antidiabetic agents (3.6 percent).
- Aspirin was the most frequently mentioned drug ordered, supplied, or administered at office visits, occurring in 2.4 percent of drug mentions (Table 25).
- Overall, drugs were more likely to be continued rather than new (68.5 percent compared with 27.1 percent). However, azithromycin (85.9 percent) and amoxicillin (83.7 percent) were both more likely to be new, while ibuprofen and acetaminophen were just as likely to be a new or as a continued drug (Table 25). Vitamin products were excluded from Table 25 due to the diversity and lack of known specific components of many multivitamins.

# Providers seen and visit disposition

- Overall, 95.8 percent of visits were attended by a physician (Table 26). Nurses (registered and licensed practical nurses) were seen at 30.5 percent of physician office visits. Physician assistants, nurse practitioners, and nurse midwives were seen at 5.5 percent of those office visits.
- Patients were told to return to the office for an additional appointment at about two-thirds of visits (67.6 percent) (Table 27). Patients were told to "return if needed" (25.1 percent of visits) or were referred to another physician (7.4 percent of visits). At 5.6 percent of visits, no follow-up was planned.

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Table 1. Number, percent distribution, and annual rate of office visits with corresponding standard errors, by selected physician characteristics: United States, 2007

Physician characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1,2</sup>	Standard error of rate
All visits	994,321	39,975	100.0		335.6	13.5
Physician specialty <sup>3</sup>						
General and family practice	227,817	18,981	22.9	1.5	76.9	6.4
Internal medicine	143,722	13,658	14.5	1.1	48.5	4.6
Pediatrics	130,832	12,294	13.2	1.2	<sup>4</sup> 189.2	17.8
Obstetrics and gynecology	74.296	7,252	7.5	0.7	<sup>5</sup> 60.7	6.0
Ophthalmology	58,994	7,505	5.9	0.7	19.9	2.5
Orthopedic surgery	51,258	6,813	5.2	0.6	17.3	2.3
Dermatology	44,874	5,258	4.5	0.5	15.1	1.8
Psychiatry	32,660	3,822	3.3	0.4	11.0	1.3
Cardiovascular diseases	32,431	4,43)	3.3	0.4	10.9	1.5
Otolaryngology	20,204	2,542	2.0	0.3	6.8	0.9
General surgery	19,636	2,905	2.0	0.3	6.6	1.0
Urology	18,914	2,492	1.9	0.2	6.4	0.8
Neurology	17,559	2,312	1.8	0.2	5.9	0.8
Oncology	15,581	1,944	1.6	0.2	5.3	0.7
All other specialties	105,543	11,577	10.6	1.1	35.6	3.9
Professional degree						
Doctor of medicine	917,359	40,634	92.3	0.9	309.6	13.7
Doctor of osteopathy	76,962	8,440	7.7	0.9	26.0	2.8
Specialty type <sup>3</sup>						
Primary care	576,650	29,742	58.0	1.5	194.6	10.0
Medical specialty	221,073	13.074	22.2	1.1	74.6	4.4
Surgical specialty	196,598	13,536	19.8	1.1	66.4	4.6
Geographic region						
Northeast	178,403	12,169	17.9	1.2	331.4	22.6
Midwest	206,546	19,232	20.8	1.7	316.2	29.4
South	415,018	29,452	41.7	2.1	383.7	27.2
West	194,354	15,139	19.5	1.4	281.7	21.9
Metropolitan status						
MSA <sup>6</sup>	855,224	40,657	86.0	2.4	343.4	16.3
Non-MSA <sup>6</sup>	139,097	25,188	14.0	2.4	294.5	53.3

<sup>...</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>Visit rates for age, sex, race, and region are based on the July 1, 2007, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau.

<sup>&</sup>lt;sup>2</sup>Population estimates by metropolitan statistical area status are based on estimates of the civilian noninstitutional population of the United States as of July 1, 2007, from the 2007 National Health Interview Survey, National Center for Health Statistics, compiled according to the December 2006 Office of Management and Budget definitions of core-based statistical areas. See http://www.census.gov/population/www/estimates.metrodef.html for more about metropolitan statistical areas definitions.

<sup>&</sup>lt;sup>3</sup>Physician specialty and specialty type are defined in the "Technical Notes."

<sup>&</sup>lt;sup>4</sup>Number of visits (numerator) and population estimate (denominator) include children under 15 years of age.

<sup>&</sup>lt;sup>5</sup>Number of visits (numerator) and population estimate (denominator) include females 15 years old and over.

<sup>&</sup>lt;sup>6</sup>MSA is metropolitan statistical area.

Table 2. Number and percent distribution of office visits with corresponding standard errors, by selected physician practice characteristics: United States, 2007

Physician practice characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
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All visits	994,321	39,975	100.0	• • •
Employment status				
Owner	674,578	35,477	67.8	1.9
Employee	291,531	20,465	29.3	1.8
Contractor	28,212	6,241	2.8	0.6
Ownership				
Physician or group	825,081	40,603	83.0	1.6
Other health care corporation	49,631	10,587	5.0	1.1
Community Health Center	27,696	5,379	2.8	0.6
Other hospital	26,876	5,998	2.7	0.6
HMO <sup>1</sup>	25,045	4,909	2.5	0.5
Medical or academic health center	*21,643	6,541	2.2	0.6
Other <sup>2</sup>	*17,492	5,562	*1.8	0.6
Blank	*		*	
Practice size				
Solo	303,441	23,055	30.5	2.0
	121,020	14,470	12.2	1.5
⊢5	307,057	25,473	30.9	2.0
i–10	175,753	17,574	17.7	1.5
1 or more	86,734	11,844	8.7	1.2
Blank	*		*	
Type of practice				
Single-specialty	480,775	25,822	48.4	2.1
Multispecialty	210,106	21,203	21.1	1.8
Solo	303,441	23,055	30.5	2.0
Office type				
Private practice	864,255	39,895	86.9	1.9
Clinic or urgicenter	63,083	17,634	6.3	1.7
Community health center	27,497	5,338	2.8	0.6
Other <sup>3</sup>	39,485	7,615	4.0	0.8
Electronic Medical Records				
'es—all electronic	196,135	19,198	19.7	1.7
es—part paper and part electronic	151,199	17,830	15.2	1.6
lo	644,515	30,385	64.8	2.0
Jnknown or blank	*2,472	1,433	*0.2	0.1
Practice submits claims electronically				
'es—all electronic	587,207	31,974	59.1	2.1
/es—part paper and part electronic	258,469	22,336	26.0	2.1
No	108,735	17,244	10.9	1.6
Jnknown or blank	39,911	6,819	4.0	0.7

<sup>. . .</sup> Category not applicable.

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>\*</sup> Figure does not meet standards on reliability on product...

\*IHMO is health maintenance organization.

\*Other includes owners such as local government (state, county, or city) and charitable organizations.

\*Other includes the following office types: HMO, nonfederal government clinic, mental health center, family planning clinic, and faculty practice plan.

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 age and sex: United States, 2007

Patient age and sex	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1</sup>	Standard error of rate
All visits	994,321	39,975	100.0		335.6	13.5
Age						
Jnder 15 years	167,481	11,369	16.8	(1.0)	275.3	18.7
Under 1 year	31,119	2,839	3.1	(0.3)	731.6	66.8
1–4 years	56,190	4,567	5.7	(0.4)	341.3	27.7
5–14 years	80,172	5,153	8.1	(0.5)	199.8	12.8
5–24 years	81,575	3,836	8.2	(0.3)	196.6	9.2
25–44 years	203,161	10,269	20.4	(0.7)	248.8	12.6
5–64 years	283,890	13,756	28.6	(0.6)	373.3	18.1
5 years and over	258,214	14,819	26.0	(0.9)	712.4	40.9
65–74 years	127,805	7,412	12.9	(0.4)	668.9	38.8
75 years and over	130,409	8,010	13.1	(0.5)	761.0	46.7
Sex and age						
- - - - - - - -	580,542	24,466	58.4	(0.7)	383.8	16.2
Under 15 years	78,653	5,615	7.9	(0.5)	264.6	18.9
15–24 years	51,992	3,124	5.2	(0.3)	253.3	15.2
25–44 years	137,558	7,498	13.8	(0.5)	333.9	18.2
45–64 years	166,269	8,306	16.7	(0.4)	425.2	21.2
65–74 years	69,824	4,520	7.0	(0.3)	675.6	43.7
75 years and over	76,245	4,906	7.7	(0.4)	734.7	47.3
Лаle	413,779	17,632	41.6	(0.7)	285.3	12.2
Under 15 years	88,828	6,456	8.9	(0.6)	285.5	20.7
15–24 years	29,583	1,811	3.0	(0.2)	141.1	8.6
25–44 years	65,602	4,258	6.6	(0.3)	162.1	10.5
45–64 years	117,621	6,151	11.8	(0.3)	318.3	16.6
65–74 years	57,982	3,450	5.8	(0.2)	660.9	39.3
75 years and over	54,164	3,729	5.4	(0.3)	801.4	55.2

<sup>...</sup> Category not applicable.

1 Visit rates are based on the July 1, 2007, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau. NOTE: Numbers may not add to totals because of rounding.

Table 4. Number, percent distribution, and annual rate of office visits with corresponding standard errors, by patient race, age, and ethnicity: United States, 2007

			Reported plu	s imputed <sup>1,2</sup>					Reported	d only <sup>3,4</sup>		
Patient characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>5</sup>	Standard error of rate	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>5</sup>	Standard error of rate
All visits	994,321	39,975	100.0		335.6	13.5						
Race and age <sup>6,7</sup>												
Reported	680,983	37,972	68.5	2.2			680,983	37,972	100.0		229.8	12.8
Imputed (missing)	313,338	23,505	31.5	2.2								
White	818,225	35,926	82.3	1.0	344.6	15.1	570,659	35,164	83.8	1.3	240.3	14.8
Under 15 years	130,970	9,236	13.2	0.9	282.7	19.9	87,709	7,262	12.9	1.0	189.3	15.7
15–24 years	66,250	3,239	6.7	0.3	206.2	10.1	45,033	2,789	6.6	0.3	140.2	8.7
25–44 years	160,033	8,523	16.1	0.6	248.2	13.2	110,854	7,852	16.3	0.7	171.9	12.2
45–64 years	236,563	12,612	23.8	0.6	375.2	20.0	165,662	12,063	24.3	8.0	262.8	19.1
65–74 years	108,735	6,953	10.9	0.5	665.7	42.6	77,308	7,089	11.4	0.6	473.3	43.4
75 years and over	115,673	7,665	11.6	0.5	764.9	50.7	84,094	7,343	12.3	0.7	556.0	48.6
Black or African American	118,338	9,048	11.9	0.8	316.8	24.2	80,566	7,588	11.8	1.0	215.7	20.3
Under 15 years	24,705	3,173	2.5	0.3	266.3	34.2	17,243	2,847	2.5	0.4	185.9	30.7
15–24 years	10,828	1,056	1.1	0.1	175.0	17.1	7,652	837	1.1	0.1	123.7	13.5
25-44 years	27,495	2,818	2.8	0.3	264.0	27.1	19,363	2,518	2.8	0.4	185.9	24.2
45–64 years	32,011	3,001	3.2	0.3	381.3	35.8	21,931	2,583	3.2	0.3	261.3	30.8
65–74 years	13,293	1,518	1.3	0.1	747.7	85.4	8,607	1,379	1.3	0.2	484.1	77.6
75 years and over	10,005	1,424	1.0	0.1	769.1	109.5	5,770	1,302	8.0	0.2	443.6	100.1
Asian	40,613	6,216	4.1	0.6	305.4	46.7	24,571	4,846	3.6	0.7	184.8	36.4
Islander	3,624	524	0.4	0.1	686.4	99.2	1,563	334	0.2	0.1	296.0	63.2
American Indian or Alaska Native	10,874	1,672	1.1	0.2	377.0	58.0	2,150	497	0.3	0.1	74.6	17.2
Multiple races	2,647	450	0.3	0.0	55.1	9.4	1,474	332	0.2	0.0	30.7	6.9
Ethnicity <sup>6,7</sup>												
Reported	649,370	37,696	65.3	2.3			649,370	37,696	100.0			
Imputed (missing)	344,952	25,001	34.7	2.3								
Hispanic or Latino	134,614	12,696	13.5	1.2	299.4	28.2	88,782	10,772	13.7	1.5	197.4	24.0
Not Hispanic or Latino	859,708	36,720	86.5	1.2	342.1	14.6	560,588	34,999	86.3	1.5	223.0	13.9

<sup>...</sup> Category not applicable.

<sup>0.0</sup> Quantity more than zero but less than 0.05.

<sup>1&</sup>quot;Reported plus imputed" includes race that was reported directly by NAMCS, and imputed values for the 31.5 percent of visits for which race was not reported.

<sup>&</sup>lt;sup>2</sup>"Reported plus imputed" includes ethnicity that was reported directly by NAMCS, and imputed values for the 34.7 percent of visits for which ethnicity was not reported.

<sup>&</sup>lt;sup>3</sup>"Reported only" calculations are based on 680,983 visits (in thousands) with race reported directly by NAMCS. The 31.5 percent of visits for which race was missing are excluded from the denominator so that readers can compare differences between estimates that include and exclude imputed race values.

<sup>&</sup>lt;sup>4</sup>"Reported only" calculations are based on 649,370 visits (in thousands) with ethnicity reported directly by NAMCS. The 34.7 percent of visits for which ethnicity was missing are excluded from the denominator so that readers can compare differences between estimates that include and exclude imputed ethnicity values.

<sup>&</sup>lt;sup>5</sup>Visit rates are based on the July 1, 2007, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau.

<sup>&</sup>lt;sup>6</sup>For 2007, race data were missing for 31.5 percent of visits, and ethnicity data were missing for 34.7 percent of visits. Readers are therefore advised to treat these data with caution. In this table, estimates based on imputed race and ethnicity data are shown separately from comparison estimates using unimputed data. Missing race and ethnicity were imputed using a hot deck approach rather than the previously used cold deck strategy. The imputation process is described more fully in the 2007 publicuse file documentation (ftp://ftp.cdc.gov/pub/Health\_Statistics/NCHS/Dataset\_Documentation/NAMCS/doc07.pdf). Research is currently underway to evaluate further changes to the imputation strategy for use with 2008 data.

<sup>&</sup>lt;sup>7</sup>The race groups, White, Black or African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races, include persons of Hispanic and not Hispanic origin. Persons of Hispanic origin may be of any race. Race-specific estimates were tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percentage of visit records with multiple races indicated is small and lower than what is typically found for self-reported race in household surveys.

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

Table 5. Number and percent distribution of office visits with corresponding standard errors, by expected sources of payment: United States, 2007

Expected sources of payment	Number of visits <sup>1</sup> in thousands	Standard error in thousands	Percent of visits	Standard error of percent
All visits	994,321	39,975		
Private insurance	640,928	30,361	64.5	1.3
Medicare	239,121	15,179	24.0	1.0
Medicare and Medicaid <sup>2</sup>	17,441	1,856	1.8	0.2
Medicaid or SCHIP <sup>3</sup>	122,384	9,781	12.3	0.9
lo insurance <sup>4</sup>	48,666	5,140	4.9	0.5
Self-pay	45,560	5,071	4.6	0.5
No charge or charity	3,530	857	0.4	0.1
Vorker's compensation	12,475	2,828	1.3	0.3
Other	27,559	3,884	2.8	0.4
Inknown or blank	39,909	8,419	4.0	0.8

<sup>. .</sup> Category not applicable.

Table 6. Number and percent distribution of office visits with corresponding standard errors by selected visit characteristics, according to prior-visit status: United States, 2007

Prior-visit status, primary care provider, and referral status	Number of visits <sup>1</sup> in thousands	Standard error in thousands	Percent distribution of visits	Standard error of percent
Il visits	994,321	39,975	100.0	
isit to PCP <sup>1</sup>	437,323	25,887	44.0	1.6
isit to non-PCP <sup>1</sup>	489,282	21,656	49.2	1.5
Referred for this visit <sup>2</sup>	160,156	10,004	16.1	0.9
Not referred for this visit	256,975	15,656	25.8	1.2
Unknown if referred <sup>3</sup>	72,151	6,360	7.3	0.6
nknown if PCP <sup>1</sup> visit <sup>3</sup>	67,716	9,620	6.8	0.9
Established patient				
Il visits	851,331	35,148	85.6	0.5
sit to PCP1	418,871	25,104	49.2	1.7
sit to non-PCP1	378,747	17,267	44.5	1.5
Referred for this visit	94,122	7,796	11.1	0.9
Not referred for this visit	230,143	13,982	27.0	1.4
Unknown if referred <sup>3</sup>	54,482	5,425	6.4	0.6
nknown if PCP <sup>1</sup> visit <sup>3</sup>	53,714	8,214	6.3	0.9
New patient				
Il visits	142,990	7,525	14.4	0.5
isit to PCP <sup>1</sup>	18,453	2,123	12.9	1.4
sit to non-PCP1	110,535	6,404	77.3	1.8
Referred for this visit	66,035	4,512	46.2	1.8
Not referred for this visit	26,832	2,627	18.8	1.4
Unknown if referred <sup>3</sup>	17,668	1,721	12.4	1.2
nknown if PCP <sup>1</sup> visit <sup>3</sup>	14,002	2,274	9.8	1.5

<sup>.</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>Combined total of individual sources exceeds "all visits" because more than one may be reported per visit.

<sup>&</sup>lt;sup>2</sup>The visits in this category are also included in both the Medicare and Medicaid or SCHIP category.

<sup>&</sup>lt;sup>3</sup>SCHIP is the State Children's Health Insurance Program.

<sup>&</sup>lt;sup>4</sup>No insurance is defined as having only self-pay, no charge, or charity visits as payment sources.

<sup>&</sup>lt;sup>1</sup>PCP is patient's primary care provider as indicated by a positive response to the question "Are you the patient's primary care physician/provider?"

<sup>&</sup>lt;sup>2</sup>Referral status was only asked for visits to nonprimary care physicians or providers and visits with unknown PCP status. Among these visits, referral information was unknown for 20.1 percent of visits.

<sup>3</sup>The unknown category includes blanks.

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

Table 7. Percent distribution of office visits with corresponding standard errors by primary care provider and referral status, according to physician specialty: United States, 2007

					Visit to non-PCP <sup>1,2</sup>									
Physician specialty	Total	Visit to PCP <sup>1</sup>	Standard error	Referred by other physician	Standard error	Not referred by other physician	Standard error	Unknown if referred <sup>3</sup>	Standard error	Unknown if PCP <sup>1</sup> visit <sup>3</sup>	Standard error			
All visits	100.0	44.0	1.6	16.1	0.9	25.8	1.2	7.3	0.6	6.8	0.9			
General and family practice	100.0	82.0	2.1	1.9	0.5	6.1	1.4	3.1	0.7	6.9	1.3			
Internal medicine	100.0	76.3	4.3	1.9	0.5	*4.8	2.1	*2.5	0.8	14.4	3.8			
Pediatrics	100.0	87.6	2.8	*2.6	1.0	3.3	1.0	2.4	0.7	*4.1	1.6			
Obstetrics and gynecology	100.0	16.3	3.5	14.7	3.2	51.5	4.1	11.7	2.8	5.9	1.4			
Ophthalmology	100.0	*		28.7	4.3	52.0	5.3	12.7	2.8	*4.1	1.7			
Orthopedic surgery	100.0	*1.5	0.9	40.5	4.6	38.1	4.6	16.7	4.2	*3.3	1.3			
Dermatology	100.0	*		18.0	3.9	60.9	5.6	14.7	3.5	*6.2	2.7			
Psychiatry	100.0	*1.3	1.1	25.0	6.3	59.3	6.3	11.5	2.8	2.8	0.8			
Cardiovascular diseases	100.0	*9.4	3.4	34.1	5.2	41.0	6.0	8.1	2.2	*7.4	5.2			
Otolaryngology	100.0	*		46.9	4.3	42.0	4.4	6.0	1.8	*2.9	1.4			
General surgery	100.0	*3.0	1.9	45.0	5.1	43.0	5.0	7.3	2.2	*1.7	0.7			
Urology	100.0	*		28.8	3.2	46.5	5.2	17.8	5.2	*6.4	2.2			
Neurology	100.0	*		46.7	5.3	35.9	5.3	*9.3	3.8	*6.4	3.0			
Oncology	100.0	*6.4	2.2	31.8	5.5	46.7	5.1	*7.5	3.0	*7.6	2.7			
All other specialties	100.0	*5.5	3.3	34.8	3.7	41.9	4.8	11.3	2.7	*6.4	2.3			

<sup>\*</sup>Figure does not meet standards of reliability or precision

Table 8. Number and percent distribution of office visits with corresponding standard errors by continuity-of-care visit characteristics, according to specialty type: United States, 2007

			Specialty type <sup>1</sup>				Specialty type <sup>1</sup>	
Continuity-of-care visit characteristics	All specialites	Primary care	Surgical specialties	Medical specialties	All specialties	Primary care	Surgical specialties	Medical specialties
		Number of visits (stand	dard error) in thousands	3	Perce	nt distribution (sta	ndard error of pe	ercent)
All visits	994,321 (39,975)	576,650 (29,742)	196,598 (13,536)	221,073 (13,074)	100.0	100.0	100.0	100.0
Prior-visit status and number of visits in last 12 months								
Established patient <sup>2</sup>	851,331 (35,148)	519,806 (27,635)	150,242 (10,632)	181,282 (11,251)	85.6 (0.5)	90.1 (0.6)	76.4 (1.3)	82.0 (1.3)
None	63,710 (4,130)	36,023 (3,364)	14,531 (1,468)	13,156 (1,793)	6.4 (0.3)	6.2 (0.5)	7.4 (0.6)	6.0 (0.6)
1–2 visits	306,331 (12,572)	168,920 (9,592)	66,219 (4,739)	71,192 (5,329)	30.8 (0.6)	29.3 (0.7)	33.7 (1.0)	32.2 (1.4)
3–5 visits	274,336 (13,208)	179,287 (10,793)	44,841 (3,592)	50,208 (3,677)	27.6 (0.5)	31.1 (0.8)	22.8 (1.0)	22.7 (1.0)
6 or more visits	206,954 (11,194)	135,577 (8,830)	24,651 (2,730)	46,726 (4,632)	20.8 (0.7)	23.5 (0.9)	12.5 (0.9)	21.1 (1.8)
New patient	142,990 (7,525)	56,844 (3,974)	46,356 (4,185)	39,791 (3,630)	14.4 (0.5)	9.9 (0.6)	23.6 (1.3)	18.0 (1.3)

<sup>...</sup> Category not applicable.

<sup>....</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>PCP is patient's primary care provider as indicated by a positive response to the question "Are you the patient's primary care physician/provider?"

<sup>&</sup>lt;sup>2</sup>Referral status was only asked for visits to nonprimary care physicians or providers and visits with unknown PCP status. Among these visits, referral information was unknown for 20.1 percent of visits.

<sup>&</sup>lt;sup>3</sup>The unknown category includes blanks.

<sup>&</sup>lt;sup>1</sup>Specialty type is defined in the "Technical Notes."

<sup>&</sup>lt;sup>2</sup>Number of previous visits by established patients to responding physician in last 12 months.

Table 9. 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, 2007

					Fema	ale <sup>2</sup>	Mal	e <sup>3</sup>
Principal reason for visit and RVC code <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Percent distribution	Standard error of percent	Percent distribution	Standard error of percent
All visits	994,321	39,975	100.0		100.0		100.0	
General medical examination	74,603	5,619	7.5	0.5	7.0	0.5	8.3	0.6
Progress visit, not otherwise specified T800	60,901	5,087	6.1	0.5	5.8	0.4	6.6	0.6
Cough	27,881	2,109	2.8	0.2	2.5	0.2	3.2	0.3
Postoperative visit	27,645	2,321	2.8	0.2	2.6	0.2	3.0	0.3
Medication, other and unspecified kinds T115	21,717	2,745	2.2	0.3	2.4	0.3	1.9	0.2
Knee symptoms	19,038	2,614	1.9	0.2	1.9	0.2	2.0	0.3
For other and unspecified test resultsR700	17,765	2,494	1.8	0.2	1.6	0.2	2.0	0.3
Prenatal examination, routine	17,694	2,617	1.8	0.3	3.0	0.4		
Symptoms referable to throat	16,951	1,480	1.7	0.1	1.8	0.2	1.5	0.2
Back symptoms	14,923	1,882	1.5	0.2	1.5	0.2	1.5	0.2
Hypertension	14,741	1,869	1.5	0.2	1.3	0.2	1.8	0.3
Well-baby examination	14,644	1,530	1.5	0.1	1.2	0.1	1.8	0.2
Vision dysfunctions	13,544	3,180	1.4	0.3	1.3	0.3	1.5	0.4
Stomach pain, cramps, and spasms	13,233	1,378	1.3	0.1	1.5	0.2	1.1	0.2
Nasal congestion	13,162	1,526	1.3	0.2	1.3	0.2	1.4	0.2
Gynecological examination	12,816	2,228	1.3	0.2	2.2	0.4		
Skin rash	12,511	1,056	1.3	0.1	1.0	0.1	1.6	0.2
Fever	12,358	1,345	1.2	0.1	1.0	0.1	1.6	0.2
Earache or ear infection	12,259	1,116	1.2	0.1	1.3	0.1	1.2	0.1
Diabetes mellitus	11,035	1,581	1.1	0.2	1.0	0.2	1.3	0.2
All other reasons	564,898	23,820	56.8	0.7	56.9	0.9	56.7	0.9

<sup>...</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>Based on A Reason for Visit Classification for Ambulatory Care (RVC)(9).

<sup>&</sup>lt;sup>2</sup>Based on 580,542,000 visits made by females.

<sup>&</sup>lt;sup>3</sup>Based on 413,779,000 visits made by males.

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

Table 10. Number and percent distribution of office visits with corresponding standard errors by major reason for visit, according to selected patient and visit characteristics: United States, 2007

Patient and visit characteristics	Number of visits (standard error) in thousands	Total percent	New problem	Chronic problem, routine	Chronic problem, flare-up	Pre- or post- surgery	Preventive care <sup>1</sup>	Unknowr or blank
				Percent di	stribution (star	ndard error of p	percent)	
All visits	994,321 (39,975)	100.0	33.3 (1.0)	31.2 (1.1)	7.6 (0.4)	6.3 (0.4)	19.4 (0.7)	2.2 (0.4
Age								
Under 15 years	167,481 (11,369)	100.0	49.7 (2.1)	10.1 (1.2)	5.2 (0.7)	2.0 (0.5)	31.6 (1.5)	1.4 (0.4
Under 1 year	31,119 (2,839)	100.0	34.2 (2.5)	4.6 (1.0)	*	*	55.5 (2.6)	*
1–4 years	56,190 (4,567)	100.0	52.7 (2.7)	7.9 (1.6)	4.1 (0.8)	1.8 (0.5)	31.8 (2.1)	*
5-14 years	80,172 (5,153)	100.0	53.6 (2.3)	13.8 (1.3)	7.0 (1.0)	2.1 (0.6)	22.2 (1.7)	1.4 (0.3
15–24 years	81,575 (3,836)	100.0	39.9 (1.7)	16.7 (1.5)	6.0 (0.7)	4.4 (0.6)	30.8 (1.7)	2.3 (0.7
25-44 years	203,161 (10,269)	100.0	33.2 (1.2)	26.5 (1.4)	8.2 (0.6)	5.8 (0.5)	23.9 (1.2)	2.5 (0.5
15-64 years	283,890 (13,756)	100.0	29.2 (1.1)	38.2 (1.3)	8.7 (0.6)	7.9 (0.6)	13.8 (0.8)	2.1 (0.4
65 years and over	258,214 (14,819)	100.0	25.3 (1.2)	45.5 (1.5)	7.9 (0.6)	8.2 (0.6)	10.7 (0.9)	2.5 (0.5
65–74 years	127,805 (7,412)	100.0	26.2 (1.3)	43.7 (1.8)	7.8 (0.7)	8.7 (0.7)	10.9 (0.9)	2.7 (0.6
75 years and over	130,409 (8,010)	100.0	24.3 (1.4)	47.2 (1.7)	8.0 (0.7)	7.7 (0.7)	10.5 (1.0)	2.3 (0.4
Sex								
Female	580,542 (24,466)	100.0	32.4 (1.0)	29.7 (1.2)	7.7 (0.4)	5.9 (0.4)	21.6 (0.9)	2.6 (0.6
Male	413,779 (17,632)	100.0	34.7 (1.1)	33.3 (1.2)	7.3 (0.5)	6.8 (0.5)	16.4 (0.9)	1.5 (0.2
Race <sup>2,3</sup>								
Reported	680,983 (37,972)	100.0	32.4 (1.2)	32.4 (1.4)	8.3 (0.5)	6.0 (0.4)	19.3 (0.9)	1.5 (0.2
mputed (missing)	313,338 (23,505)	100.0	35.3 (1.5)	28.6 (1.7)	6.0 (0.5)	6.8 (0.8)	19.7 (1.4)	*3.6 (1.1
Reported plus imputed <sup>4</sup>								
White	818,225 (35,926)	100.0	33.1 (1.0)	32.1 (1.2)	7.9 (0.5)	6.5 (0.4)	18.3 (0.7)	2.1 (0.4
Black or African American	118,338 (9,048)	100.0	33.5 (1.7)	28.4 (1.9)	6.7 (0.8)	4.9 (0.7)	23.7 (1.7)	2.8 (0.6
Other <sup>5</sup>	57,759 (6,439)	100.0	36.2 (2.2)	24.8 (2.1)	4.7 (0.7)	5.4 (0.9)	26.4 (2.1)	2.5 (0.6
Reported only <sup>6</sup>								
White	570,659 (35,164)	100.0	31.9 (1.2)	33.4 (1.4)	8.6 (0.6)	6.3 (0.5)	18.4 (1.0)	1.4 (0.2
Black or African American	80,566 (7,588)	100.0	34.2 (2.2)	28.4 (2.6)	7.0 (0.9)	4.8 (0.8)	23.4 (1.8)	2.2 (0.5
Other <sup>5</sup>	29,758 (4,895)	100.0	38.1 (3.3)	23.8 (2.3)	5.3 (1.0)	4.1 (0.9)	26.1 (2.7)	*
Ethnicity <sup>2,3</sup>								
Reported	649,370 (37,696)	100.0	32.7 (1.2)	32.1 (1.5)	8.1 (0.6)	6.0 (0.4)	19.7 (1.0)	1.4 (0.2
Imputed (missing)	344,952 (25,001)	100.0	34.4 (1.4)	29.6 (1.7)	6.6 (0.6)	6.9 (0.8)	18.9 (1.3)	3.6 (1.0
Reported plus imputed <sup>7</sup>								
Hispanic or Latino	134,614 (12,696)	100.0	35.4 (2.1)	26.5 (1.9)	7.1 (1.2)	4.1 (0.5)	24.5 (1.6)	2.4 (0.4
Not Hispanic or Latino		100.0	33.0 (1.0)	31.9 (1.2)	7.6 (0.4)	6.6 (0.4)	18.7 (0.8)	2.1 (0.4
Reported only <sup>8</sup>								
Hispanic or Latino	88,782 (10,772)	100.0	36.5 (2.7)	24.9 (2.3)	7.9 (1.8)	3.5 (0.6)	25.8 (2.1)	1.4 (0.3
Not Hispanic or Latino	560,588 (34,999)	100.0	32.1 (1.3)	33.2 (1.6)	8.1 (0.5)	6.3 (0.5)	18.8 (1.1)	1.4 (0.2
Expected source of payment9								
Private insurance	640,928 (30,361)	100.0	34.5 (1.1)	29.9 (1.3)	7.6 (0.5)	6.4 (0.4)	19.9 (0.9)	1.6 (0.2
Medicare	239,121 (15,179)	100.0	24.8 (1.2)	46.2 (1.6)	8.5 (0.6)	8.1 (0.7)	10.5 (0.9)	1.9 (0.3
Medicare and Medicaid <sup>10</sup>	17,441 (1,856)	100.0	22.2 (2.5)	47.3 (3.8)	8.3 (1.9)	6.8 (1.2)	14.0 (3.2)	*
Medicaid or SCHIP <sup>11</sup>	122,384 (9,781)	100.0	34.5 (1.9)	23.8 (2.0)	8.1 (0.9)	4.3 (0.5)	28.2 (2.0)	1.2 (0.3
Self-pay, no charge, or charity	64,237 (7,737)	100.0	35.5 (2.8)	32.7 (2.8)	7.0 (0.9)	*5.2 (1.9)	18.0 (2.9)	1.5 (0.3
Other <sup>12</sup>	67,191 (10,559)	100.0	35.2 (2.2)	31.4 (2.8)	6.2 (0.9)	7.6 (1.1)	17.2 (1.9)	*2.5 (0.8

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>. .</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>Preventive care includes routine prenatal, well-baby, screening, insurance, or general exams (see question 4c in Figure I).

<sup>&</sup>lt;sup>2</sup>For 2007, race data were missing for 31.5 percent of visits, and ethnicity data were missing for 34.7 percent of visits. Readers are therefore advised to treat these data with caution. In this table, estimates based on imputed race and ethnicity data are shown separately from comparison estimates using unimputed data. Missing race and ethnicity were imputed using a hot deck approach rather than the previously used cold deck strategy. The imputation process is described more fully in the 2007 public-use file documentation (ftp://ftp.cdc.gov/pub/Health\_Statistics/NCHS/Dataset\_Documentation/NAMCS/doc07.pdf). Research is currently underway to evaluate further changes to the imputation strategy for use with 2008 data.

<sup>&</sup>lt;sup>3</sup>The race groups, White, Black or African American, and Other, include persons of Hispanic and not Hispanic origin. Persons of Hispanic origin may be of any race. Race-specific estimates were tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percent of visit records with multiple races indicated is small and lower than what is tvoically found for self-reported race in household surveys.

indicated is small and lower than what is typically found for self-reported race in household surveys.

4"Reported plus imputed" includes race that was reported directly by NAMCS, and imputed values for the 31.5 percent of visits for which race was not reported.

<sup>&</sup>lt;sup>5</sup>Other race includes visits by Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races.

<sup>&</sup>lt;sup>6</sup>"Reported only" calculations are based on 680,983 visits (in thousands) with race reported directly by NAMCS. The 31.5 pecent of visits for which race was missing are excluded from the demoninator so that readers can compare differences between estimates that include and exclude imputed race values.

<sup>7&</sup>quot;Reported plus imputed" includes ethnicity that was reported directly by NAMCS, and imputed values for the 34.7 percent of visits for which ethnicity was not reported

Table 11. Number, percent distribution, and annual rate of preventive care office visits and percentage of visits to primary care specialitsts with corresponding standard errors, by selected patient and visit characteristics: United States, 2007

Patient and visit characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1</sup>	Standard error of percent	Percent of preventive care visits made to primary care specialists <sup>2</sup>	Standard error of percent
All preventive care visits <sup>3</sup>	193,342	10,407	100.0		65.3	3.5	84.2	1.7
Age								
Under 15 years	52,954	4,708	27.4	2.0	87.0	7.7	97.0	0.7
Under 1 year	17,269	1,738	8.9	0.8	406.0	40.9	99.0	0.7
1–4 years	17,894	1,948	9.3	0.8	108.7	11.8	97.6	0.8
5–14 years	17,791	1,880	9.2	0.8	44.3	4.7	94.5	1.4
15–24 years	25,109	2,024	13.0	0.9	60.5	4.9	91.9	2.2
25–44 years	48,550	3,640	25.1	1.3	59.4	4.5	88.8	2.2
45–64 years	39,133	2,725	20.2	0.9	51.5	3.6	74.6	2.6
65 years and over	27,596	2,586	14.3	1.0	76.1	7.1	58.4	4.6
65-74 years	13,921	1,265	7.2	0.5	72.9	6.6	60.0	4.5
75 years and over	13,675	1,556	7.1	0.7	79.8	9.1	56.7	5.6
Sex and age								
Female	125,446	7,015	64.9	1.6	82.9	4.6	87.7	1.5
Under 15 years	25,401	2,422	13.1	1.0	85.5	8.2	96.7	0.9
15–24 years	20,170	1,950	10.4	0.9	98.3	9.5	95.8	1.4
25-44 years	40,108	3,122	20.7	1.3	97.4	7.6	93.3)	1.4
45-64 years	23,880	1,859	12.4	0.7	61.1	4.8	78.7	2.7
65-74 years	7,343	746	3.8	0.3	71.1	7.2	65.5	5.0
75 years and over	8,544	1,144	4.4	0.5	82.3	11.0	60.3	6.2
Male	67,896	5,118	35.1	1.6	46.8	3.5	77.7	2.8
Under 15 years	27,553	2,600	14.3	1.1	88.5	8.4	97.3	0.7
15–24 years	4,939	782	2.6	0.4	23.6	3.7	76.0	7.2
25-44 years	8,441	1,483	4.4	0.7	20.9	3.7	67.4	8.2
45-64 years	15,254	1,398	7.9	0.6	41.3	3.8	68.1	3.9
65-74 years	6,578	840	3.4	0.4	75.0	9.6	53.9	5.6
75 years and over	5,131	731	2.7	0.4	75.9	10.8	50.7	7.2
Race <sup>4,5</sup>								
Reported	131,714	8,781	68.1	2.8	44.5	3.0	83.3	2.3
Imputed (missing)	61,628	6,329	31.9	2.8	20.8	2.1	86.2	2.1
Reported plus imputed <sup>6</sup>								
White	149,978	8,383	77.6	1.5	63.2	3.5	82.7	2.0
Black or African American	28,089	3,060	14.5	1.3	75.2	8.2	88.3	2.6
Other <sup>7</sup>	15,275	2,055	7.9	1.0	71.0	9.6	91.8	1.8
Reported only <sup>8</sup>								
White	105,124	7,747	79.8	1.8	44.3	3.3	81.7	2.6
Black or African American	18,834	2,319	14.3	1.6	50.4	6.2	88.5	3.1
Other <sup>7</sup>	7,756	1,387	5.9	1.0	36.0	6.4	92.3	2.9
Ethnicity <sup>4,5</sup>								
Reported	128,156	9,613	66.3	2.9	43.3	3.2	84.2	2.3
Imputed (missing)	65,186	6,191	33.7	2.9	22.0	2.1	84.3	2.6
Reported plus imputed <sup>9</sup>								
Hispanic or Latino	32,988	3,848	17.1	1.8	73.4	8.6	89.2	2.5
Not Hispanic or Latino	160,355	9,505	82.9	1.8	63.8	3.8	83.2	1.8
Reported only <sup>10</sup>								
Hispanic or Latino	22,869	3,347	17.8	2.4	50.9	7.4	90.9	2.4
Not Hispanic or Latino	105,287	8,825	82.2	2.4	41.9	3.5	82.7	2.5
0 ( )								

See footnotes at end of table.

<sup>&</sup>lt;sup>8</sup>"Reported only" calculations are based on 649,370 visits (in thousands) with ethnicity reported directly by NAMCS. The 34.7 percent visits for which ethnicity was missing are excluded from the demoninator so that readers can compare differences between estimates that include and exclude imputed ethnicity values.

<sup>&</sup>lt;sup>9</sup>Combined total of individual sources exceeds "all visits" because more than one source may be reported per visit.

<sup>&</sup>lt;sup>10</sup>The visits in this category are also included in both the Medicare and Medicaid or SCHIP categories.

<sup>&</sup>lt;sup>11</sup>SCHIP is the State Children's Health Insurance Program.

<sup>&</sup>lt;sup>12</sup>Other includes worker's compensation, unknown or blank, and payments not classified elsewhere.

Table 11. Number, percent distribution, and annual rate of preventive care office visits and percentage of visits to primary care specialitists with corresponding standard errors, by selected patient and visit characteristics: United States, 2007—Con.

Patient and visit characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1</sup>	Standard error of percent	Percent of preventive care visits made to primary care specialists <sup>2</sup>	Standard error of percent
Expected source of payment <sup>11</sup>								
Private insurance	127,847	8,032	66.1	2.0	66.5	4.2	85.5	1.9
Medicare	25,215	2,414	13.0	0.9	64.0	6.1	60.4	4.9
Medicare and Medicaid <sup>12</sup>	2,445	668	1.3	0.3			85.8	6.0
Medicaid or SCHIP <sup>13</sup>	34,520	3,975	17.9	1.8	98.5	11.3	94.3	1.8
Self-pay, no charge, or charity	11,563	2,453	6.0	1.2	26.8	5.7	86.1	3.5
Other <sup>14</sup>	11,531	2,545	6.0	1.3			64.4	12.7

<sup>...</sup> Category not applicable.

Table 12. Number and percent distribution of office visits with corresponding standard errors by primary diagnosis classified by major disease category: United States, 2007

Major disease category and ICD-9-CM code range <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All visits	994,321	39,975	100.0	
nfectious and parasitic diseases	24,399	1,850	2.5	0.2
Neoplasms	36,170	3,418	3.6	0.3
Endocrine, nutritional, metabolic diseases, and immunity disorders240–279	50,891	3,956	5.1	0.3
Mental disorders	51,461	3,872	5.2	0.4
Diseases of the nervous system and sense organs	95,689	6,867	9.6	0.6
Diseases of the circulatory system	79,697	4,721	8.0	0.4
Diseases of the respiratory system	106,961	6,960	10.8	0.6
Diseases of the digestive system	31,564	2,945	3.2	0.3
Diseases of the genitourinary system	38,298	3,041	3.9	0.2
Diseases of the skin and subcutanaous tissue	51,053	3,985	5.1	0.4
Diseases of the musculoskeletal and connective tissue	84,567	7,428	8.5	0.6
lymptoms, signs, and ill-defined conditions	63,932	4,040	6.4	0.3
njury and poisoning	45,458	3,959	4.6	0.4
upplementary classification <sup>2</sup>	197,552	12,485	19.9	0.8
Il other diagnoses <sup>3</sup>	27,582	2,880	2.8	0.3
·lank <sup>4</sup>	9,047	1,692	0.9	0.2

<sup>. . .</sup> Category not applicable

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>&</sup>lt;sup>1</sup>Visit rates for age, sex, race, and ethnicity are based on the July 1, 2007, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau. Visit rates for expected source(s) of payment are based on the 2007 National Health Interview Survey estimates of health insurane.

<sup>&</sup>lt;sup>2</sup>Primary care specialty defined in the 2007 NAMCS Public Use Data File Documentation (see ftp://ftp.cdc.gov/pub/Health\_Statistics/NCHS/Dataset\_Documentation/NAMCS/doc07.pdf).

<sup>&</sup>lt;sup>3</sup>Preventive care includes routine prenatal, well-baby, screening, insurance, or general exams (see question 4c in Figure I).

<sup>&</sup>lt;sup>4</sup>For 2007, race data were missing for 31.5 percent of visits and ethnicity data were missing for 34.7 percent of visits. Readers are therefore advised to treat these data with caution. In this table, estimates based on imputed race and ethnicity data are shown separately from comparison estimates using unimputed data. Missing race and ethnicity were imputed using a hot deck approach rather than the previously used cold deck strategy. The imputation process is described more fully in the 2007 public use file documentation (ftp://ftp.cdc.gov/pub/Health\_Statistics/NCHS/Dataset\_Documentation/NAMCS/doc07.pdf). Research is currently underway to evaluate further changes to the imputation strategy for use with 2008 data.

<sup>&</sup>lt;sup>5</sup>The race groups, White, Black or African American, and Other, include persons of Hispanic and not Hispanic origin. Persons of Hispanic origin may be of any race. Race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percent of visit records with multiple races indicated is small and lower than what is typically found for self-reported race in household surveys.

<sup>6&</sup>quot;Reported plus imputed" includes race that was reported directly by NAMCS, and imputed values for the 31.9 percent of preventive care visits for which race was not reported.

<sup>&</sup>lt;sup>7</sup>Other race includes visits by Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races

<sup>&</sup>lt;sup>8</sup>"Reported only" calculations are based on 131,714 visits (in thousands) with race reported directly by NAMCS. The 31.9 percent of preevntive care visits for which race was missing are excluded from the demoninator so that readers can compare differences between estimates that include and exclude imputed race values.

<sup>9&</sup>quot;Reported plus imputed" includes ethnicity that was reported directly by NAMCS, and imputed values for the 33.7 percent of preventive care visits for which ethnicity was not reported.

<sup>10&</sup>quot;Reported only" calculations are based on 128,156 preventive care visits (in thousands) with ethnicity reported directly by NAMCS. The 33.7 percent of preventive care visits for which ethnicity was missing are excluded from the demoninator so that readers can compare differences between estimates that include and exclude imputed ethnicity values.

<sup>11</sup> Combined total of individual sources exceeds all visits because more than one may be reported per visit.

<sup>&</sup>lt;sup>12</sup>The visits in this category are also included in both the Medicare and Medicaid or SCHIP categories

<sup>&</sup>lt;sup>13</sup>SCHIP is the State Children's Health Insurance Program.

<sup>&</sup>lt;sup>14</sup>Other includes worker's compensation, unknown or blank, and payments not classified elsewhere.

<sup>&</sup>lt;sup>1</sup>Based on the *International Classification of Diseases*, *Ninth Revision, Clinical Modification* (ICD–9–CM) (10).

<sup>&</sup>lt;sup>2</sup>Includes general medical examination, routine prenatal examination, and health supervision of an infant or child, and other diagnoses not classifiable to injury or illness.

<sup>&</sup>lt;sup>3</sup>Includes diseases of the blood and blood-forming organs (280–289); complications of pregnancy, childbirth, and the puerperium (630–677); congenital anomalies (740–759); certain conditions originating in the perinatal period (760–779); and entries not codable to the ICD–9–CM (e.g., illegible entries, left against medical advice, transferred, entries of "none," or no "diagnoses").

Table 13. Number and percent distribution of office visits with corresponding standard errors, by the 20 leading primary diagnosis groups, according to patient's sex: United States, 2007

					Fema	ale <sup>2</sup>	Mal	e <sup>3</sup>
Primary diagnosis group and ICD-9-CM code(s) <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Percent distribution	Standard error of percent	Percent distribution	Standard error of percent)
All visits	994,321	39,975	100.0		100.0		100.0	
Essential hypertension	42,157	3,455	4.2	0.3	3.9	0.3	4.7	0.4
Routine infant or child health check	39,930	3,657	4.0	0.3	3.4	0.3	4.9	0.4
Acute upper respiratory infections, excluding								
pharyngitis	33,614	2,660	3.4	0.2	3.2	0.2	3.7	0.3
Arthropathies and related disorders	32,671	4,082	3.3	0.4	3.6	0.5	2.9	0.3
Spinal disorders	26,704	3,084	2.7	0.3	2.7	0.3	2.7	0.4
Malignant neoplasms	25,220	2,818	2.5	0.3	2.2	0.3	3.1	0.3
Diabetes mellitus	24,156	2,635	2.4	0.2	2.0	0.2	3.0	0.3
Rheumatism, excluding back	19,417	1,956	2.0	0.2	2.2	0.2	1.5	0.2
Specific procedures and aftercare V50–V59.9	19,351	2,317	1.9	0.2	1.9	0.2	2.0	0.2
General medical examination	19,162	2,373	1.9	0.2	1.9	0.2	2.0	0.4
Follow up examination	18,687	3,047	1.9	0.3	1.7	0.3	2.1	0.4
Normal pregnancy	16,871	2,351	1.7	0.2	2.9	0.4		
Otitis media and eustachian tube disorders381-382	14,771	1,378	1.5	0.1	1.2	0.1	1.8	0.2
Asthma	13,872	2,309	1.4	0.2	1.2	0.2	1.7	0.3
Gynecological examination	13,597	2,478	1.4	0.2	2.3	0.4		
Heart disease, excluding ischemic391–392.0,393–								
398,402,404,415–416,420–429	13,421	1,628	1.3	0.2	1.1	0.2	1.6	0.2
Allergic rhinitis	12,871	2,553	1.3	0.3	1.3	0.3	1.3	0.2
Ischemic heart disease	12,378	1,441	1.2	0.1	0.8	0.1	1.9	0.2
Glaucoma	11,964	2,361	1.2	0.2	1.2	0.3	1.2	0.2
Benign neoplasms	10,950	1,124	1.1	0.1	1.1	0.1	1.1	0.1
All other diagnoses <sup>4</sup>	572,557	22,439	57.6	0.7	58.1	0.9	56.8	8.0

<sup>. . .</sup> Category not applicable.

<sup>&</sup>lt;sup>1</sup>Based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM) (10). However, certain codes have been combined in this table to form larger categories that better describe the utilization of ambulatory care services.

<sup>&</sup>lt;sup>2</sup>Based on 580,542,000 visits made by females.

<sup>&</sup>lt;sup>3</sup>Based on 413,779,000 visits made by males.

<sup>&</sup>lt;sup>4</sup>Includes all other diagnoses not listed above, as well as unknown and blank diagnoses.

Table 14. Number, percent distribution, and annual rate of office visits related to injury, poisoning, or adverse effects of medical treatment with corresponding standard errors, by selected patient characteristics: United States, 2007

Patient and visit characteristics	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Number of visits per 100 persons per year <sup>1</sup>	Standard error of rate
All injury-related visits <sup>2</sup>	106,451	6,529	100.0		35.9	2.2
Age						
Under 15 years	13,858	1,302	13.0	1.2	22.8	2.1
Under 1 year	*	*	*			
1–4 years	4,140	558	3.9	0.5)	25.1	3.4
5–14 years	8,793	903	8.3	0.8)	21.9	2.3
15–24 years	11,879	1,082	11.2	0.7)	28.6	2.6
25–44 years	24,339	2,078	22.9	1.3)	29.8	2.5
15–64 years	31,370	2,427	29.5	1.0)	41.2	3.2
65 years and over	25,005	2,054	23.5	1.4)	69.0	5.7
65–74 years	13,196	1,207	12.4	0.8)	69.1	6.3
75 years and over	11,809	1,130	11.1	0.9)	68.9	6.6
Sex and age						
Female	53,272	3,439	50.0	1.2)	35.2	2.3
Under 15 years	5,716	748	5.4	0.6)	19.2	2.5
15–24	4,169	527	3.9	0.5)	20.3	2.6
25–44	12,363	1,060	11.6	0.8)	30.0	2.6
45–64	16,549	1,437	15.5	0.8)	42.3	3.7
65–74	7,284	804	6.8	0.6)	70.5	7.8
75 years and over	7,191	779	6.8	0.6)	69.3	7.5
Male	53,178	3,540	50.0	1.2)	36.7	2.4
Under 15 years	8,141	876	7.6	0.9)	26.2	2.8
15–24	7,710	877	7.2	0.6)	36.8	4.2
25–44	11,976	1,359	11.3	1.0)	29.6	3.4
45–64	14,820	1,314	13.9	0.8)	40.1	3.6
65–74	5,912	617	5.6	0.5)	67.4	7.0
75 years and over	4,619	523	4.3	0.5)	68.3	7.7
Race <sup>3,4</sup>						
Reported	69,219	5,228	65.0	3.0)	23.4	1.8
mputed (missing)	37,231	4,050	35.0	3.0)	12.6	1.4
Reported plus imputed <sup>5</sup>						
White	89,248	6,065	83.8	1.4)	37.6	2.6
Black or African American	11,595	1,182	10.9	1.0)	31.0	3.2
Other <sup>6</sup>	5,608	797	5.3	0.8)	26.1	3.7
Reported only <sup>7</sup>						
Vhite	59,005	5,019	85.2	1.5)	24.9	2.1
Black or African American	7,676	848	11.1	1.2)	20.6	2.3
Other <sup>6</sup>	2,539	428	3.7	0.7)	11.8	2.0
Ethnicity <sup>3,4</sup>						
Reported	62,398	4,743	58.6	3.2)	21.1	1.6
mputed (missing)	44,053	4,672	41.4	3.2)	14.9	1.6
Reported plus imputed <sup>8</sup>						
Hispanic or Latino	10,935	1,186	10.3	0.9)	24.3	2.6
Not Hispanic or Latino	95,515	5,981	89.7	0.9	38.0	2.4
Reported only <sup>9</sup>						
Hispanic or Latino	5,936	683	9.5	1.0	13.2	1.5
Not Hispanic or Latino	56,462	4,502	90.5	1.0	22.5	1.8

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>1/</sup>Visit rates for age, sex, race, and ethnicity are based on the July 1, 2007, set of estimates of the civilian noninstitutional population of the United States as developed by the Population Division, U.S. Census Bureau.

<sup>&</sup>lt;sup>2</sup>Injury visits included injury, poisoning, or adverse effects of medical treatment based on item 2 of the PRF. Injury visits represent 10.7 percent (SE=0.5) of all office visits.

<sup>\*</sup>Injury visits included injury, poisoning, or adverse effects of medical treatment based on item 2 of the PMF. Injury visits represent 10.7 percent (SE=0.5) of an onice visits.

\*For 2007, race data were missing for 31.5 percent of all visits, and ethnicity data were missing for 34.7 percent of all visits. Readers are therefore advised to treat these data with caution. In this table, estimates based on imputed race and ethnicity data are shown separately from comparison estimates using unimputed data. Missing race and ethnicity were imputed using a hot deck approach rather than the previously used cold deck strategy. The imputation process is described more fully in the 2007 public-use file documentation (Supplementary). Research is currently underway to evaluate further changes to the imputation strategy for use with 2008 data.

<sup>&</sup>lt;sup>4</sup>The race groups, White, Black or African American, and Other, include persons of Hispanic and not Hispanic origin. Persons of Hispanic origin may be of any race. Starting with data year 1999, race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percent of visit records with multiple races indicated is small and lower than what is typically found for self-reported race in household surveys.

<sup>5&</sup>quot;Reported plus imputed" includes race that was reported directly by NAMCS, and imputed values for the 35.0 percent of injury-related visits for which race was not reported

<sup>&</sup>lt;sup>6</sup>Other race includes visits by Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races.

<sup>7&</sup>quot;Reported only" calculations are based on 69,219 injury-related visits (in thousands) with race reported directly by NAMCS.

The 35.0 percent of injury-related visits for which race was missing are excluded from the demoninator, so that readers can compare differences between estimates that include and exclude imputed race values.

Table 15. Number and percent distribution of office visits related to injury, poisoning, or adverse effects of medications with corresponding standard errors, by intent: United States, 2007

Intent	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All injury-related visits	106,451	6,529	100.0	
Unintentional injury or poisoning	68,842	4,815	64.7	1.8
Intentional injury or poisoning <sup>1</sup>	1,677	391	1.6	0.4
Injury or poisoning of unknown intent <sup>2</sup>	27,179	2,529	25.5	1.8
Adverse effect of medical or surgical care or adverse effect of medicinal drug	8,752	785	8.2	0.7

<sup>...</sup> Category not applicable.

Table 16. Percent distribution of office visits by selected chronic conditions with corresponding standard errors, according to patient's age and sex: United States, 2007

			Patien	t age		Patie	nt sex	
Chronic conditions <sup>1</sup>	Total	Under 45 years	45–64 years	65-74 years	75 years and over	Female	Male	
		P	ercent of visits	(standard erro	r)			
All visits	100.0	100.0	100.0	100	100.0	100.0	100.0	
At least one condition	52.1 (0.9)	27.5 (0.8)	67.5 (1.1)	77.1 (1.3)	79.3 (1.3)	51.3 (1.0)	53.1 (1.1)	
None	44.6 (0.9)	68.6 (0.9)	29.4 (1.0)	20.0 (1.2)	18.1 (1.2)	44.9 (1.0)	44.1 (1.1)	
Blank	3.4 (0.5)	3.9 (0.6)	3.1 (0.6)	2.9 (0.7)	2.5 (0.5)	3.8 (0.7)	2.8 (0.4)	
Hypertension	23.7 (0.7)	5.3 (0.4)	32.4 (1.0)	44.6 (1.5)	48.1 (1.6)	22.5 (0.7)	25.4 (0.8)	
Arthritis	12.7 (0.7)	4.0 (0.3)	17.2 (0.9)	21.9 (1.5)	24.2 (1.4)	14.0 (0.8)	10.8 (0.6)	
Hyperlipidemia	12.4 (0.6)	2.8 (0.3)	17.5 (1.0)	23.7 (1.4)	23.2 (1.5)	10.9 (0.6)	14.5 (0.8)	
Diabetes	10.3 (0.4)	2.5 (0.2)	13.8 (0.7)	21.9 (1.1)	17.9 (1.2)	9.3 (0.4)	11.6 (0.6)	
Depression	8.6 (0.5)	6.9 (0.5)	12.5 (0.8)	7.4 (0.7)	7.0 (0.7)	10.1 (0.6)	6.4 (0.5)	
Obesity	6.1 (0.4)	5.0 (0.4)	9.0 (0.7)	6.4 (0.8)	3.2 (0.5)	6.8 (0.5)	5.2 (0.5)	
Cancer	6.0 (0.4)	1.1 (0.1)	6.9 (0.5)	12.8 (0.9)	14.7 (1.0)	5.2 (0.4)	7.1 (0.4)	
Asthma	5.9 (0.3)	7.0 (0.6)	5.5 (0.4)	5.3 (0.5)	3.8 (0.4)	6.1 (0.4)	5.6 (0.4)	
schemic heart disease	4.3 (0.4)	*0.4 (0.1)	4.3 (0.4)	9.1 (0.8)	13.3 (1.2)	2.9 (0.3)	6.3 (0.6)	
COPD <sup>2</sup>	3.6 (0.3)	1.7 (0.3)	3.5 (0.3)	7.1 (0.8)	6.6 (0.7)	3.3 (0.2)	4.0 (0.4)	
Osteoporosis	1.9 (0.1)	*	1.8 (0.2)	3.7 (0.4)	6.2 (0.5)	2.8 (0.2)	0.5 (0.1)	
CHF <sup>3</sup>	1.8 (0.2)	*	1.5 (0.2)	3.9 (0.6)	6.1 (0.7)	1.5 (0.2)	2.2 (0.3)	
Cerebrovascular disease	1.5 (0.1)	0.1 (0.0)	1.5 (0.2)	3.3 (0.4)	4.8 (0.5)	1.2 (0.1)	2.0 (0.2)	
Chronic renal failure	0.9 (0.1)	*	0.8 (0.2)	2.0 (0.4)	2.5 (0.4)	0.6 (0.1)	1.2 (0.2)	

<sup>. . .</sup> Category not applicable.

<sup>8&</sup>quot;Reported plus imputed" includes ethnicity that was reported directly by NAMCS, and imputed values for the 41.4 percent of injury-related visits for which ethnicity was not reported.

<sup>&</sup>lt;sup>9</sup>"Reported only" calculations are based on 62,398 injury-related visits (in thousands) with ethnicity reported directly by NAMCS.

The 41.4 percent of visits for which ethnicity was missing are excluded from the demoninator, so that readers can compare differences between estimates that include and exclude imputed ethnicity values.

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>&</sup>lt;sup>1</sup>Category includes assault, self-inflicted, and other causes of violence.

<sup>&</sup>lt;sup>2</sup>Category includes illegible entries and blanks.

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>0.0</sup> Quantity more than zero but less than 0.05.

<sup>&</sup>lt;sup>1</sup>Presence of chronic conditions was based on checkbox responses and visit diagnoses, because unmarked chronic condition items were edited as present when comparable diagnoses were reported

<sup>&</sup>lt;sup>2</sup>COPD is chronic obstructive pulmonary disease.

<sup>&</sup>lt;sup>3</sup>CHF is congestive heart failure.

Table 17. Number and percentage of office visits with corresponding standard errors, by diagnostic and screening services ordered or provided, according to patient's sex: United States, 2007

					Fer	nale <sup>2</sup>	M	ale <sup>3</sup>
Diagnostic and screening services ordered or provided	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Percent of visits	Standard error of percent	Percent of visits	Standard error of percent)
All visits	994,321	39,975	100.0		58.4	0.7	41.6	0.7
One or more diagnostic or screening service ordered or provided	872,369	36,866	87.7	0.8	88.0	0.8	87.3	0.9
None	112,535	8,289	11.3	0.8	11.0	0.8	11.7	0.9
Blank	9,417	1,820	0.9	0.2	1.0	0.2	0.9	0.2
Examinations								
Skin	138,605	10,686	13.9	0.9	13.0	0.9	15.3	1.1
Pelvic	59,182	6,123	6.0	0.6	9.1	8.0	*1.5	0.5
Breast	53,041	5,689	5.3	0.5	8.1	0.7	*1.4	0.5
Rectal	28,538	3,483	2.9	0.3	2.7	0.4	3.1	0.4
Depression screening	14,029	3,381	1.4	0.3	1.5	0.3	1.3	0.4
Vital signs								
Weight	677,537	30,757	68.1	1.3	69.0	1.3	67.0	1.5
Blood pressure	569,466	28,299	57.3	1.2	60.1	1.3	53.3	1.3
Height	410,386	24,241	41.3	1.7	41.5	1.8	41.0 36.2	1.8
Temperature	337,972	22,472	34.0	1.8	32.4	1.8	30.2	2.0
Blood tests	440.070	0.500	44.0	0.0	40.0	0.0	44.0	0.0
CBC <sup>4</sup>	118,278	9,599	11.9	0.8	12.0	0.8	11.8	0.9
Lipids or cholesterol	75,361	6,974	7.6 5.3	0.6 0.4	6.8	0.5 0.4	8.7 5.4	0.8 0.5
Electrolytes	52,664 38,877	4,585 4,376	3.9	0.4	5.3 3.6	0.4	4.4	0.5
HqbA1C <sup>5</sup>	26,286	3,586	2.6	0.4	2.4	0.4	2.9	0.4
PSA <sup>6</sup>	17,187	2,128	1.7	0.2			4.2	0.4
Other blood test	106,882	7,083	10.7	0.6	11.1	0.7	10.2	0.7
Other tests								
Urinalysis	74,270	6,247	7.5	0.5	8.0	0.5	6.7	0.7
EKG or ECG <sup>7</sup>	29,067	5,059	2.9	0.5	2.5	0.3	3.5	0.7
Any Pap test <sup>2</sup>	28,929	3,133	2.9	0.3	5.0	0.5		
Liquid-based	17,103	3,066	1.7	0.3	2.9	0.5		
Conventional	6,612	1,035	0.7	0.1	1.1	0.2		
Unspecified	5,242	1,278	0.5	0.1	0.9	0.2		
Biopsy	16,057	1,647	1.6	0.1	1.6 1.6	0.2	1.6 1.8	0.2 0.2
Other scope procedure	16,937 9,823	2,042 1,339	1.7 1.0	0.2 0.1	1.0	0.2 0.1	0.9	0.2
Sigmoidoscopy or colonoscopy	7,887	1,475	0.8	0.1	0.7	0.1	0.9	0.1
Cystoscopy	2,077	236	0.2	0.0	0.1	0.0	0.3	0.0
Spirometry or pulmonary function test	6,893	1,831	0.7	0.2	0.6	0.2	0.8	0.2
Chlamydia test	3,904	658	0.4	0.1	0.6	0.1	*	
Pregnancy test <sup>2</sup>	3,755	651	0.4	0.1	0.6	0.1		
HPV DNA test <sup>8</sup>	2,130	593	0.2	0.1	0.4	0.1	*	
Other test or service	174,285	15,290	17.5	1.3	16.9	1.2	18.5	1.6
Imaging								
Any imaging	143,945	8,695 5,251	14.5	0.6 0.4	15.9	0.7 0.4	12.5 6.6	0.7 0.5
Other ultrasound	62,528 23,661	5,251 2,538	6.3 2.4	0.4	6.0 3.1	0.4	1.4	0.5
MRI <sup>9</sup>	18,490	2,336	1.9	0.2	1.8	0.3	2.0	0.2
Mammography	17,090	2,224	1.7	0.2	2.9	0.2	2.0	
CT scan <sup>10</sup>	14,694	1,433	1.5	0.1	1.4	0.1	1.6	0.2
Echocardiogram	11,970	1,555	1.2	0.1	1.1	0.1	1.4	0.2
Bone mineral density	3,748	578	0.4	0.1	0.5	0.1	*	
PET scan <sup>11</sup>	1,819	383	0.2	0.0	*0.2	0.1	0.2	0.0

<sup>. .</sup> Category not applicable.

<sup>\*</sup> Figure does not meet standards of reliability or precision.

O.O. Quantity more than zero but less than 0.05.

Combined total of individual sources exceeds all visits because more than one may be reported per visit.

Based on 580,542,000 visits made by females.

Based on 413,779,000 visits made by males.

<sup>&</sup>lt;sup>4</sup>CBC is complete blood count.

<sup>&</sup>lt;sup>5</sup>HgbA1C is glycohemoglobin. <sup>6</sup>PSA is prostate-specific antigen.

<sup>&</sup>lt;sup>7</sup>EKG or ECG is electrocardiogram.

Table 18. Percent distribution of initial blood pressure measurements for adults 18 years and over at physician office visits where blood pressure was recorded with corresponding standard errors, by selected patient characteristics: United States, 2007

				re <sup>1</sup>			
Patient characteristics	Number of visits in thousands	Total	Low	Normal	Mildly high	Moderately high	Severely high
				Percent of	listribution (stand	lard error)	
All visits <sup>2</sup>	518,405	100.0	5.1 (0.4)	23.6 (0.7)	46.0 (0.8)	18.8 (0.6)	6.5 (0.3)
Age							
18–24 years	36,183	100.0	10.4 (1.3)	43.6 (2.4)	38.1 (2.2)	6.2 (1.0)	*
25–44 years	143,464	100.0	6.7 (0.8)	33.0 (1.2)	44.3 (1.4)	12.4 (0.9)	3.7 (0.4)
45–64 years	181,312	100.0	3.1 (0.3)	19.5 (0.8)	48.5 (1.0)	21.9 (0.9)	7.0 (0.5)
65–74 years	78,445	100.0	3.7 (0.5)	15.9 (1.1)	47.5 (1.4)	23.2 (1.0)	9.6 (0.8)
75 years and over	79,001	100.0	5.6 (0.6)	14.5 (1.1)	45.3 (1.6)	24.8 (1.1)	9.8 (0.8)
Sex							
Female	322,814	100.0	5.9 (0.5)	26.7 (0.8)	44.9 (0.8)	16.6 (0.7)	5.9 (0.4)
Male	195,592	100.0	3.6 (0.4)	18.5 (0.9)	47.9 (1.2)	22.4 (0.8)	7.6 (0.5)
Race <sup>3,4</sup>							
Reported	363,165	100.0	4.4 (0.4)	23.4 (0.9)	46.2 (1.0)	19.1 (0.7)	6.9 (0.4)
Imputed (missing)	155,241	100.0	6.6 (0.8)	24.2 (1.1)	45.5 (1.5)	18.0 (1.0)	5.7 (0.6)
Reported plus imputed <sup>5</sup>							
White	422,947	100.0	4.9 (0.4)	23.2 (0.7)	46.7 (0.9)	18.8 (0.6)	6.3 (0.3)
Black or African American	63,117	100.0	4.9 (1.0)	21.5 (1.9)	45.4 (1.7)	19.5 (1.4)	8.7 (0.9)
Asian	22,831	100.0	7.5 (1.8)	36.4 (3.0)	36.7 (3.3)	15.2 (2.0)	*
Other <sup>6</sup>	9,510	100.0	*	24.3 (3.6)	42.2 (4.1)	20.5 (4.5)	*
Reported only <sup>7</sup>							
White	301,820	100.0	4.3 (0.4)	23.2 (0.9)	46.9 (1.0)	19.1 (0.8)	6.5 (0.4)
Black or African American	43,879	100.0	*4.1 (1.3)	19.4 (2.3)	45.5 (2.1)	21.2 (1.7)	9.8 (1.3)
Asian	14,766	100.0	8.6 (1.8)	38.4 (3.6)	33.6 (3.7)	13.6 (2.2)	*
Other <sup>6</sup>	2,699	100.0	*	26.6 (4.4)	45.0 (5.2)	20.0 (4.8)	*
Ethnicity <sup>3,4</sup>							
Reported	340,826	100.0	4.3 (0.4)	23.6 (0.9)	46.2 (1.0)	19.3 (0.7)	6.7 (0.4)
Imputed (missing)	177,579	100.0	6.6 (0.8)	23.7 (1.1)	45.5 (1.6)	17.9 (1.1)	6.2 (0.6)
Reported plus imputed <sup>8</sup>							
Hispanic or Latino	67,285	100.0	6.7 (0.9)	23.0 (1.5)	47.8 (1.9)	16.4 (1.2)	6.0 (0.8)
Not Hispanic or Latino	451,120	100.0	4.8 (0.4)	23.7 (0.7)	45.7 (0.8)	19.2 (0.6)	6.6 (0.3)
Reported only <sup>9</sup>							
Hispanic or Latino	42,905	100.0	5.0 (0.7)	24.0 (2.0)	49.6 (2.7)	15.6 (1.4)	5.8 (1.0)
Not Hispanic or Latino	297,922	100.0	4.2 (0.4)	23.5 (1.0)	45.7 (1.1)	19.8 (0.7)	6.8 (0.5)

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>&</sup>lt;sup>8</sup>DNA is deoxyribonucleic acid. HPV is human papilloma virus. Based on visits made by females

<sup>&</sup>lt;sup>9</sup>MRI is magnetic resonance imaging.

<sup>&</sup>lt;sup>10</sup>CT is comuted tomography.

<sup>&</sup>lt;sup>11</sup>PET is positron emission tomography.

<sup>.</sup> Category not applicable.

In Section 19 Community In Section 20 Processor levels were categorized using the following hierarchical definitions. Severely high blood pressure is defined as 160 mm Hg systolic or above, or 100 mm Hg diastolic or above. Moderately high blood pressure is defined as 120–139 mm Hg diastolic or 80–89 mm Hg diastolic. Low blood pressure is defined as less than 100 mm Hg systolic or less than 60 mm Hg diastolic. Normal blood pressure is defined as 100–119 mm Hg systolic and 60–79 mm Hg diastolic. Blood pressure (BP) classification was based on the "Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure" (JNC-7)(8). "Mildly high" BP corresponds to the JNC-7 prehypertensive range. "Moderately high" BP corresponds to the JNC-7 stage 1 hypertensive range. Initial blood pressure was recorded if blood pressure was taken more than once.

<sup>&</sup>lt;sup>2</sup>Visits where blood pressure was reported represent 64.9 percent (SE=1.3) of all office visits made by adults (18 years and over). In 26.1 percent (SE=1.5) of visits by children (0-17 years of age) a blood pressure was recorded.

<sup>&</sup>lt;sup>3</sup>For 2007, race data were missing for 30.0 percent of visits where blood pressure was recorded, and ethnicity data were missing for 34.3 percent of these visits. Readers are therefore advised to real treat these data with caution. In this table, estimates based on imputed race and ethnicity data are shown separately from comparison estimates using unimputed race and ethnicity were imputed using a hot deck approach rather than the previously used cold deck strategy. The imputation process is described more fully in the 2007 public-use file documentation (http://www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm). Research is currently underway to evaluate further changes to the imputation strategy for use with 2008 data.

<sup>\*</sup>The race groups, White, Black or African American, Asian, and Other, include persons of Hispanic origin. Persons of Hispanic origin may be of any race. Race-specific estimates have been tabulated according to 1997 Standards for Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The percent of visit records with multiple races indicated is small and lower than what is typically found for self-reported race in household surveys.

<sup>&</sup>lt;sup>5</sup>Reported plus imputed includes race that was reported directly by NAMCS, and imputed values for the 30.0 percent of visits for which race was not reported.

<sup>&</sup>lt;sup>6</sup>Other race includes visits by Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and multiple races

<sup>7&</sup>quot;Reported only" calculations are based on 363,165 visits (in thousands) where blood pressure was recorded with race reported directly by NAMCS. The 30.0 percent of these visits for which race was missing are excluded from the demoninator so that readers can compare differences between estimates that include and exclude imputed ethnicity values.

<sup>8&</sup>quot;Reported plus imputed" includes ethnicity that was reported directly by NAMCS, and imputed values for the 34.3 percent of visits for which ethnicity was not reported.

<sup>9&</sup>quot;Reported only" calculations are based on 340,826 visits (in thousands) where blood pressure was recorded with ethnicity reported directly by NAMCS. The 34.3 percent of these visits for which ethnicity was missing are excluded from the demoninator, so that readers can compare differences between estimates that include and exclude imputed ethnicity values.

Table 19. Number and percentage of office visits with corresponding standard errors, by health education services ordered or provided, and by patient's sex: United States, 2007

		Standard error in thousands	Percent of visits	Standard error of percent	Fer	nale <sup>2</sup>	Male <sup>3</sup>	
Health education services ordered or provided	Number of visits in thousands				Percent of visits	Standard error of percent	Percent of visits	Standard error of percent)
All visits	994,321	39,975						
One or more health education services ordered or provided	339,243	18,354	34.1	1.5	33.6	1.5	34.8	1.6
None	627,925	31,002	63.2	1.5	63.2	1.6	63.1	1.6
Blank	27,153	6,064	2.7	0.6	3.2	0.8	2.0	0.4
Diet and nutrition	116,519	8,987	11.7	0.7	11.4	0.8	12.1	0.8
Exercise	75,910	6,648	7.6	0.6	7.2	0.5	8.3	0.7
Growth and development	35,926	5,233	3.6	0.5	3.0	0.4	4.4	0.7
Weight reduction	32,944	3,216	3.3	0.3	3.2	0.3	3.4	0.4
Injury prevention	26,272	3,849	2.6	0.4	2.2	0.4	3.3	0.4
Tobacco use or exposure	26,027	2,776	2.6	0.2	2.3	0.2	3.0	0.4
Stress management	21,881	2,488	2.2	0.2	2.2	0.3	2.2	0.3
Asthma education	10,652	1,792	1.1	0.2	0.9	0.2	1.3	0.2
Other	179,876	12,325	18.1	1.2	18.2	1.2	17.9	1.3

<sup>.</sup> Category not applicable.

Table 20. Number and percentage of office visits with corresponding standard errors, by nonmedication treatment ordered or provided: United States, 2007

Nonmedication treatments ordered or provided	Number of visits in thousands	Standard error in thousands	Percent of visits	Standard error of percent
All visits	994,321	39,975		
One or more nonmedication treatments ordered or provided	181,805	11,970	18.3	1.0
None	763,554	32,320	76.8	1.1
Blank	48,963	6,644	4.9	0.6
Excision of tissue	23,650	2,253	2.4	0.2
Physical therapy	22,189	2,845	2.2	0.3
Vound care	18,805	2,302	1.9	0.2
Orthopedic care	18,209	2,944	1.8	0.3
Psychotherapy	18,046	2,925	1.8	0.3
Other mental health counseling	9,856	1,626	1.0	0.2
Durable medical equipment	6,607	1,300	0.7	0.1
Complementary alternative medicine (CAM)	*6,139	2,247	*0.6	0.2
Home health care	2,253	521	0.2	0.1
Speech or occupational therapy	1,381	291	0.1	0.0
adiation therapy	915	175	0.1	0.0
lospice care	*		*	

Combined total of individual health education services exceeds all visits because more than one may be reported per visit.

2Based on 580,542,000 visits made by females.

<sup>&</sup>lt;sup>3</sup>Based on 413,779,000 visits made by males.

<sup>...</sup> Category not applicable.

\* Figure does not meet standards of reliability or precision.

<sup>0.0</sup> Quantity more than zero but less than 0.05.

<sup>&</sup>lt;sup>1</sup>Combined total of individual treatments exceeds all visits because more than one may be reported per visit.

Table 21. Number and percent distribution of write-in surgical procedures ordered or performed with corresponding standard errors by procedure category: United States, 2007

Procedure or operation category and ICD-9-CM code range <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent
All write-in procedures	82,972	6,640	100.0	
Nervous system	2,910	833	3.5	0.9
Eye	6,869	1,817	8.3	2.0
Ear	*1,980	808	*2.4	0.9
lose, mouth, and pharynx	3,497	893	4.2	1.0
ardiovascular system	2,349	441	2.8	0.5
ligestive system	12,981	2,316	15.6	2.5
Irinary system	3,283	384	4.0	0.5
Male genital organs	734	139	0.9	0.2
emale genital organs	4,000	650	4.8	0.8
bstetrical procedures	*1,509	481	*1.8	0.6
lusculoskeletal system	11,863	1,988	14.3	2.0
tegumentary system	29,536	3,488	35.6	3.0
other procedures <sup>2</sup>	1,460	359	1.8	0.4

<sup>. . .</sup> Category not applicable.

NOTE: Included are responses to the write-in fields on the Patient Record form under Diagnostic/Screening Services (item 7.23, Scope procedures; item 7.24, Biopsy; and item 7.34, Other exam/test/service) and Non-Medication Treatment (item 9.14 and 9.15, Procedures). Up to two procedures could be coded for items 7.34, 9.14, and 9.15, for a total of eight procedures per visit. In addition to the surgical procedures shown in this table, there were an additional 275,811,000 nonsurgical procedures reported (ICD-9-CM, Volume 3, codes 00, 87-99).

Table 22. Number and percent distribution of office visits with corresponding standard errors, by medication therapy and number of medications provided or prescribed, according to patient's sex: United States, 2007

					Female <sup>2</sup>		Male <sup>3</sup>	
Visit characteristic	Number of visits in thousands	Standard error in thousands	Percent distribution	Standard error of percent	Percent distribution	Standard error of percent	Percent distribution	Standard error of percent)
Medication therapy <sup>3</sup>								
All visits	994,321	39,975	100.0		100.0		100.0	
Visits with mention of medication <sup>4</sup>	727,717	30,960	73.2	1.0	73.4	1.0	72.8	1.1
Visits without mention of medication	266,604	14,337	26.8	1.0	26.6	1.0	27.2	1.1
Number of medications provided or prescribed by a physician								
All visits	994,321	39,975	100.0		100.0		100.0	
0	266,604	14,337	26.8	1.0	26.6	1.0	27.2	1.1
1	238,177	11,355	24.0	0.6	24.2	0.7	23.7	0.8
2	156,009	7,372	15.7	0.4	15.6	0.5	15.8	0.5
3	97,442	5,362	9.8	0.3	9.9	0.4	9.7	0.5
4	62,009	3,709	6.2	0.3	6.2	0.3	6.3	0.3
5	45,973	2,716	4.6	0.2	4.7	0.3	4.6	0.3
6	34,244	2,728	3.4	0.2	3.6	0.2	3.2	0.3
7	26,305	2,135	2.6	0.2	2.6	0.2	2.8	0.2
8	67,558	5,939	68	0.5	6.8	0.6	6.8	0.6

<sup>...</sup> Category not applicable.

<sup>\*</sup> Figure does not meet standards of reliability or precision.

<sup>&</sup>lt;sup>1</sup>Based on the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) (10). At least one surgical procedure was ordered or performed at 7.5 percent of office visits.

<sup>&</sup>lt;sup>2</sup>Includes operations on the endocrine system (ICD–9–CM codes 06–07), operations on the respiratory system (ICD–9–CM codes 30–34), and operations on the hemic and lymphatic system (ICD–9–CM codes 40–41).

<sup>&</sup>lt;sup>1</sup>Based on 580,542,000 visits made by females.

<sup>&</sup>lt;sup>2</sup>Based on 413,779,000 visits made by males.

<sup>&</sup>lt;sup>3</sup>Includes prescription drugs, over-the-counter preparations, immunizations, and desensitizing agents.

<sup>&</sup>lt;sup>4</sup>Also defined as drug visits.

Table 23. Number and percent distribution of drug visits and drug mentions, percentage of visits with drug mentions, and drug mention rates per 100 visits with corresponding standard errors, by physician specialty: United States, 2007

	Drug visits <sup>1</sup>			Drug mentions <sup>2</sup>				Percent of visits with drug mentions <sup>3</sup>	Drug mention rates <sup>4</sup>
Physician specialty	Number (standard error) ( in thousands		Percent distribution (standard error of percent)	Num (standar in thou	d error)	Percent distribution (standard error of percent)		Percent distribution (standard error of percent)	Number of drug mentions per 100 visits (standard error of rate)
All specialties	727,717	(30,960)	100.0	2,250,489	(115,505)	100.0		73.2 (1.0)	226.3 (7.1)
General and family practice	184,634	(15,481)	25.4 (1.7)	583,173	(51,214)	25.9	(1.9)	81.0 (1.3)	256.0 (12.2)
Internal medicine	119,312	(11,685)	16.4 (1.3)	428,297	(46,927)	19.0	(1.7)	83.0 (2.3)	298.0 (19.8)
Pediatrics	95,882	(9,308)	13.2 (1.3)	190,877	(18,978)	8.5	(0.9)	73.3 (1.6)	145.9 (6.3)
Obstetrics and gynecology	45,257	(5,859)	6.2 (0.8)	88,827	(12,248)	3.9	(0.5)	60.9 (3.3)	119.6 (8.2)
Ophthalmology	38,426	(5,736)	5.3 (0.7)	117,773	(21,308)	5.2	(0.9)	65.1 (4.2)	199.6 (23.1)
Dermatology	29,686	(3,336)	4.1 (0.5)	58,804	(7,829)	2.6	(0.4)	66.2 (4.3)	131.0 (14.3)
Psychiatry	28,210	(3,670)	3.9 (0.5)	78,871	(13,783)	3.5	(0.6)	86.4 (3.2)	241.5 (21.8)
Cardiovascular diseases	26,439	(3,633)	3.6 (0.5)	141,263	(20,778)	6.3	(8.0)	81.5 (5.5)	435.6 (36.5)
Orthopedic surgery	25,349	(3,761)	3.5 (0.5)	64,995	(12,466)	2.9	(0.5)	49.5 (3.0)	126.8 (15.9)
Neurology	14,129	(1,995)	1.9 (0.3)	47,013	(7,898)	2.1	(0.3)	80.5 (2.4)	267.8 (24.7)
Urology	11,740	(1,628)	1.6 (0.2)	31,677	(5,539)	1.4	(0.2)	62.1 (3.7)	167.5 (21.3)
Otolaryngology	11,695	(1,677)	1.6 (0.2)	29,346	(5,133)	1.3	(0.2)	57.9 (3.4)	145.3 (18.4)
Oncology	10,673	(1,281)	1.5 (0.2)	46,275	(6,898)	2.1	(0.3)	68.5 (4.7)	297.0 (31.1)
General surgery	8,581	(1,526)	1.2 (0.2)	30,274	(6,024)	1.3	(0.3)	43.7 (5.3)	154.2 (22.7)
All other specialties	77,704	(9,948)	10.7 (1.3)	313,024	(45,147)	13.9	(1.8)	73.6 (3.4)	296.6 (22.3)

<sup>.</sup> Category not applicable.

Table 24. Number and percentage of drug mentions for the 20 most frequently occurring therapeutic drug categories at office visits with corresponding standard errors: United States 2007

Therapeutic drug category <sup>1</sup>	Number of visits in thousands	Standard error in thousands	Percent of drug mentions <sup>2</sup>	Standard error of percent
Analgesics <sup>3</sup>	247,055	16,646	11.0	0.4
Antihyperlipidemic agents	123,994	8,952	5.5	0.2
Antidepressants	109,001	6,297	4.8	0.2
Anxiolytics, sedatives, and hypnotics	85,659	5,760	3.8	0.2
Antidiabetic agents	82,140	6,202	3.6	0.2
Beta-adrenergic blocking agents	77,776	6,172	3.5	0.2
Antiplatelet agents	71,193	6,056	3.2	0.2
Bronchodilators	68,049	5,993	3.0	0.2
Anticonvulsants	67,436	4,780	3.0	0.1
Dermatological agents	65,678	4,610	2.9	0.2
Proton pump inhibitors	65,092	4,458	2.9	0.1
Diuretics	63,571	5,006	2.8	0.1
Angiotensin converting enzyme inhibitors	60,847	4,057	2.7	0.1
Antihistamines	59,620	5,118	2.6	0.2
/iral vaccines	54,691	6,002	2.4	0.3
Ophthalmic preparations	47,056	7,930	2.1	0.3
Adrenal cortical steroids	44,343	3,464	2.0	0.1
Sex hormones	40,652	2,822	1.8	0.1
lasal preparations	39,813	4,427	1.8	0.2
Antiemetic, antivertigo agents	37,241	2,699	1.7	0.1

<sup>&</sup>lt;sup>1</sup>Based on Multum Lexicon second-level therapeutic drug category (see http:\\www.multum.com/lexicon.htm).

<sup>&</sup>lt;sup>1</sup>Visits at which one or more drugs were provided or prescribed.

<sup>&</sup>lt;sup>2</sup>Drug mentions are the number of drugs provided or prescribed at visits (up to eight per visit).

<sup>&</sup>lt;sup>3</sup>Percentage of visits that included one or more drugs provided or prescribed (number of visits with drug mentions divided by number of office visits multiplied by 100).

<sup>4</sup>Average number of drugs that were provided or prescribed per 100 visits (number of drug mentions divided by total number of visits multiplied by 100).

<sup>&</sup>lt;sup>2</sup>Drug mentions are based on an estimated 2,250,489,000 drugs provided or prescribed at visits in 2007.

<sup>&</sup>lt;sup>3</sup>Includes narcotic and noncarcotic analgesics and nonsteroidal anti-inflammatory drugs

Table 25. Number, percent distribution, and therapeutic drug category for the 20 drug names most frequently mentioned at office visits, by new or continued drug status, with corresponding standard errors: United States, 2007

		lumber of Percent distribution		Percent distribution (standard error of percent)					
	(standar in thou		(standard error of percent)	Total	New	Continued	Unknown	Therapeutic drug category <sup>2</sup>	
All drug mentions	2,250,489	(115,505)	100.0	100.0	27.1 (1.1)	68.5 (1.2)	4.4 (0.5)		
Aspirin	55,061	(5,053)	2.4 (0.1)	100.0	5.1 (0.7)	91.0 (1.4)	3.9 (0.9)	Analgesics or antiplatelet agents	
Atorvastatin	39,298	(3,243)	1.7 (0.1)	100.0	6.0 (1.2)	89.9 (1.9)	*4.0 (1.4)	Antihyperlipidemic agents	
Metoprolol	37,566	(3,330)	1.7 (0.1)	100.0	7.5 (1.3)	89.1 (1.6)	3.4 (1.0)	Beta-adrenergic blocking agents	
Lisinopril	37,266	(2,635)	1.7 (0.1)	100.0	9.1 (1.6)	88.0 (1.6)	2.9 (0.7)	Angiotensin converting enzyme inhibitors	
Levothyroxine	33,657	(2,525)	1.5 (0.1)	100.0	4.8 (1.1)	91.9 (1.4)	3.2 (0.8)	Thyroid drugs	
Albuterol	32,197	(2,730)	1.4 (0.1)	100.0	22.4 (2.3)	74.0 (2.3)	3.6 (0.8)	Bronchodilators	
Ibuprofen	28,397	(2,668)	1.3 (0.1)	100.0	48.7 (2.8)	46.5 (2.9)	4.9 (1.4)	Analgesics	
Furosemide	27,019	(2,381)	1.2 (0.1)	100.0	8.3 (1.4)	89.8 (1.5)	*1.9 (0.7)	Diuretics	
Metformin	26,909	(2,184)	1.2 (0.1)	100.0	9.1 (1.7)	87.7 (2.3)	*3.2 (1.3)	Antidiabetic agents	
Acetaminophen-hydrocodone .	25,506	(2,585)	1.1 (0.1)	100.0	29.2 (2.8)	68.0 (2.9)	2.8 (0.8)	Analgesics	
Simvastatin	24,501	(2,123)	1.1 (0.1)	100.0	6.1 (1.1)	89.9 (1.9)	*4.0 (1.3)	Antihyperlipidemic agents	
Hydrochlorothiazide	24,197	(2,013)	1.1 (0.1)	100.0	8.5 (1.7)	87.8 (1.8)	3.7 (0.9)	Diuretics	
Acetaminophen	21,749	(2,321)	1.0 (0.1)	100.0	49.2 (4.2)	46.6 (4.2)	*4.2 (1.5)	Analgesics	
Amoxicillin	21,578	(2,242)	1.0 (0.1)	100.0	83.7 (1.9)	12.2 (1.7)	4.2 (1.0)	Penicillins	
Atenolol	20,961	(1,714)	0.9 (0.1)	100.0	7.7 (1.5)	88.8 (2.0)	*3.5 (1.2)	Beta-adrenergic blocking agents	
Warfarin	19,119	(1,950)	0.8 (0.1)	100.0	3.5 (0.9)	92.4 (1.3)	4.0 (1.0)	Anticoagulants	
Azithromycin	18,909	(1,772)	0.8 (0.1)	100.0	85.9 (2.3)	9.0 (1.8)	5.1 (1.5)	Macrolide derivatives	
Esomeprazole	18,352	(1,555)	0.8 (0.1)	100.0	12.2 (2.1)	84.0 (2.6)	*3.9 (1.4)	Proton pump inhibitors	
Montelukast	17,906	(2,286)	0.8 (0.1)	100.0	24.7 (2.8)	73.0 (3.1)	*2.3 (0.9)	Leukotriene modifiers	
Alprazolam	17,563	(2,087)	0.8 (0.1)	100.0	13.6 (2.5)	83.6 (2.5)	2.8 (0.8)	Anxiolytics, sedatives, and hypnotics	
Other	1,702,779	(84,990)	75.7 (0.4)	100.0	29.6 (1.2)	65.7 (1.3)	4.7 (0.5)	Other	

Table 26. Number and percentage of office visits with corresponding standard errors, by providers seen: United States, 2007

Type of provider	Number of visits in thousands	Standard error in thousands	Percent of visits	Standard error of percent
All visits	994,321	39,975		
Physician	952,978	39,224	95.8	0.6
R.N. <sup>2</sup> or L.P.N. <sup>3</sup>	303,037	28,359	30.5	2.5
Physician assistant	40,917	7,557	4.1	0.7
lurse practitioner or midwife	14,219	2,663	1.4	0.3
Mental health provider	*2,234	743	*0.2	0.1
Other provider	116,749	12,022	11.7	1.2

<sup>.</sup> Category not applicable.

Table 27. Number and percentage of office visits with corresponding standard errors, by visit disposition: United States, 2007

Disposition	Number of visits in thousands	Standard error in thousands	Percent of visits	Standard error of percent
All visits	994,321	39,975		
Return at specified time	671,974	28,180	67.6	1.2
Return if needed, P.R.N. <sup>2</sup>	249,978	15,932	25.1	1.1
Refer to other physician	73,772	5,857	7.4	0.5
No followup planned	55,597	6,433	5.6	0.6
Telephone followup planned	17,405	2,945	1.8	0.3
Admit to hospital	4,818	1,154	0.5	0.1
Refer to emergency department	1,636	367	0.2	0.0
Other disposition	10,371	2,629	1.0	0.3
Blank	14,624	3,432	1.5	0.3

<sup>...</sup>Category not applicable.

\* Figure does not meet standards of reliability or precision.

Based on Multum Lexicon terminology, drug name reflects the active ingredients of a drug provided or prescribed. Based on Multum Lexicon second-level therapeutic drug category (see http://www.multum.com/lexicon.htm).

<sup>\*</sup> Figure does not meet standards of reliability or precision.

Combined total of individual providers exceeds "all visits" because more than one type of provider may be reported per visit.

<sup>&</sup>lt;sup>2</sup>R.N. is registered nurse.

<sup>&</sup>lt;sup>3</sup>L.P.N. is licensed practical nurse.

Combined total of individual dispositions exceeds "all visits" because more than one may be reported per visit.

<sup>&</sup>lt;sup>2</sup>P.R.N. is "as needed."

Table 28. Characteristics of the 2007 National Ambulatory Medical Care Survey, physician respondents and nonrespondents

Physician characteristic <sup>1</sup>	Number of sampled in-scope physicians <sup>2</sup>	Total sample percent distribution <sup>3</sup> (weighted)	Responding physician percent distribution <sup>4</sup> (weighted)	Nonresponding physician percent distribution <sup>5</sup> (weighted)	Combined physician weighted response rate <sup>6</sup>
All office-based physicians	2,399	100.0	100.0	100.0	0.641
Age					
Under 50 years	1,097	45.9	45.5	46.5	0.644
50 years and over	1,302	54.1	54.5	53.5	0.638
Sex					
Male	1,815	74.5	73.5	76.1	0.634
Female	582	25.4	26.5	23.8	0.662
Unknown	2	0.1	0.0	0.2	_
Region <sup>7</sup>					
Northeast	527	21.2	17.7	26.7	0.529
Midwest	526	21.8	22.7	20.3	0.678
South	795	33.9	36.9	29.2	0.704
West	551	23.1	22.7	23.8	0.616
Metropolitan status <sup>7,8</sup>					
MSA	2,135	88.4	86.0	92.0	0.625
Non-MSA	264	11.6	14.0	8.0	0.760
Type of doctor <sup>7</sup>					
Doctor of medicine	2,079	91.9	90.8	93.5	0.635
Doctor of osteopathy	154	5.1	4.7	5.9	0.611
Community health center physician	166	3.0	4.5	0.6	0.840
Physician specialty <sup>9</sup>					
General or family practice	399	18.0	19.5	15.7	0.685
Internal medicine	165	13.4	12.9	14.3	0.635
Pediatrics	179	10.1	10.9	8.7	0.681
General surgery	122	4.0	3.9	4.3	0.639
Obstetrics and gynecology	166	8.0	8.0	8.0	0.654
Orthopedic surgery	115 155	5.1 4.2	5.2 4.2	5.0 4.1	0.617 0.620
Cardiovascular diseases	103	2.4	2.1	2.9	0.592
Urology	113	2.2	2.3	1.9	0.696
Psychiatry	172	6.0	5.1	7.4	0.548
Neurology	167	2.3	2.3	2.3	0.654
Ophthalmology	106	4.1	4.1	4.1	0.631
Otolaryngology	111	2.0	1.9	2.1	0.604
Oncology	128	1.9	1.8	2.0	0.606
All other specialties	198	16.4	15.9	17.1	0.622
Specialty type <sup>7,10</sup>					
Primary care	906	49.6	51.1	47.2	0.663
Surgical	641	22.4	23.0	21.5	0.646
Medical	852	28.0	25.9	31.3	0.598
Practice type <sup>7</sup>	E40	00.0	04.7	07.4	0.500
Solo	548 143	23.8 6.1	21.7 5.5	27.1 7.1	0.593 0.585
Group or HMO <sup>11</sup>	1,130	49.0	5.5 51.4	45.3	0.662
Medical school or government	31	1.2	1.5	0.7	0.786
Community health center	166	3.0	4.5	0.6	0.840
Other	35	1.3	1.4	1.2	0.656
Unclassified	346	15.5	14.0	17.9	0.614
Annual visit volume <sup>7</sup>					
0–25th percentile	728	27.2	32.4	19.1	0.739
26th-50th percentile	591	24.6	22.1	28.5	0.611
51th–75th percentile	541	23.9	20.9	28.6	0.540
76th–100th percentile	539	24.2	24.6	23.7	0.660

Quantity zero.

¹Characteristic information is from a combination of sources: the master files of the American Medical Association, the American Osteopathic Association, the Health Resources and Services Administration (HRSA), and the NAMCS induction form.

²In-scope physicians are those who verified that they were nonfederal and involved in direct patient care in an office-based setting or community health center (CHC), excluding the specialties of radiology, pathology, and anesthesiology.

³Total physicians are those who were selected from (a) the master files of the American Medical Association, (b) the American Osteopathic Association, and (c) physicians practicing in federally

funded or look-alike CHCs. In-scope determination was also used for inclusion in the NAMCS.

<sup>4</sup>Responding physicians were those who were in-scope and agreed to participate in the NAMCS.

Hesponding physicians were those who were in-scope and agreed to participate in the NAMCS.

Nonresponding physicians were those who were in-scope and refused to participate in the NAMCS.

Values represent a combined response rate among physicians selected from the office-based sample, and the CHC sample. Numerator is the combined number of in-scope physicians from the physician and CHC samples who participated in the NAMCS or who did not see any patients during their sampled reporting week. Denominator is all in-scope sampled physicians selected from both the physician and CHC sample.

<sup>7</sup>Chi-square test of association is significant (p<0.05) between physician response and indicated physician characteristic.

<sup>8</sup>MSA is metropolitan statistical area.

Physician specialty defined in the "Methods" section.

10Physician specialty type defined in the 2007 NAMCS Public-Use Data File Documentation (see ftp://ftp.cdc.gov/pub/Health\_Statistics/NCHS/Dataset\_Documentation/NAMCS/doc07.pdf).

<sup>11</sup>HMO health maintenance organization.

# **Technical Notes**

#### Data source

The NAMCS data collection is authorized under Section 306 of the Public Health Service Act (Title 42 U.S. Code), 242k. Participation is voluntary. The U.S. Census Bureau was responsible for data collection. Data collected in NAMCS are consistent with the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA). No personally identifying information, such as patient's name, address, or Social Security number, is collected in NAMCS. All information collected is held in the strictest confidence according to law [Section 308(d) of the Public Health Service Act (42, U.S. Code, 242m (d))] and the Confidential Information Protection and Statistical Efficiency Act (Title 5 of PL 107-347). Approval for the NAMCS protocol was renewed by the NCHS Research Ethics Review Board in December 2006. Waivers of the requirements to obtain informed consent of patients and patient authorization for release of patient medical record data by health care providers were granted.

The target universe of NAMCS is in-person visits made in the United States to the offices of nonfederally employed physicians who were classified by the American Medical Association (AMA) or the American Osteopathic Association (AOA) as "office-based, patient care." Radiologists, anesthesiologists, and pathologists were excluded. Visits to private, nonhospital-based clinics and health maintenance organizations (HMOs) were within the scope of the survey, but those that occurred in federally operated facilities and hospital-based outpatient departments were not. Telephone contacts and visits made outside the physician's office were also excluded.

In order to improve the precision of CHC physician estimates, starting in 2006, a dual-sampling procedure was used to select CHC physicians and other providers. First, the "traditional" NAMCS sample of physicians was selected using established methods and

sources. Second, a sample of 104 CHCs was selected, and within each center, up to three physicians, physician assistants, nurse midwives, or nurse practitioners scheduled to see patients during the sample week were selected for survey participation. After being selected, CHC providers followed the sampling procedure used by "traditional" NAMCS physicians in selecting patient visits. CHCs were sampled from a list of Federally Qualified Health Centers provided by the Health Resources and Services Administration and a list of Urban Indian Health clinics provided by the Indian Health Service. To ensure that CHC physicians were included only once, physicians in the "traditional" NAMCS sample who saw patients only in CHCs were omitted from the physician and visit files. Physicians in the "traditional" NAMCS sample who saw patients in both CHC and non-CHC office settings were included in the physician files, but only visits to non-CHC office settings were included in the visit files. For the purpose of this report, physicians are the only providers included from CHCs (i.e., sampled physician assistants, nurse midwives, or nurse practitioners were excluded, but estimates of these providers will be presented in a future report).

### Data processing and coding

Data processing and medical coding were performed by SRA International, Inc., 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 and 1 percent for various survey items.

Verbatim medical data collected in the survey were coded as follows:

• Patient's reason for visit—The patient's main complaint, symptom, or reason for visiting the physician's office was coded according to *A Reason for Visit Classification for Ambulatory Care* (RVC) (9). Up to three reasons could be coded per visit (Figure I).

- Physician's diagnosis—Physicians or their staff were asked to record the primary diagnosis, and up to two additional diagnoses, associated with the patient's reason for the current visit. The text of the diagnoses was then coded according to the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) (10).
- Vital signs—Physicians or their staff were asked to record the initial blood pressure if blood pressure was recorded more than once.
- Medications including immunizations—Physicians or their staff were instructed to record all new or continued medications ordered, supplied, or administered at the visit. This included prescription and nonprescription preparations, immunizations, desensitizing agents, and anesthetics. In this survey, recorded medications are referred to as drug mentions and are coded according to a classification system developed at NCHS (11). As used in NAMCS, the term "drug" is interchangeable with the term "medication." The term "prescribing" is used broadly to mean ordering or providing any medication, whether prescription or over-the-counter. Visits with one or more drug mentions are termed "drug visits" in NAMCS. Medications, including immunizations, were coded using the Multum Lexicon, a proprietary drug classification system used by NCHS beginning with the 2006 ambulatory care reports. Therapeutic classification of drugs is based on the Multum Lexicon's second-level therapeutic categories, including any drug mentions coded at third-level therapeutic categories (Available from: http:// www.multum.com/Lexicon.htm).

Drugs may have more than one therapeutic application. Although Multum allows up to five therapeutic categories per drug, in this report a maximum of four therapeutic categories for each drug is examined because the number of drugs with five therapeutic categories is small. Generic ingredients of drug mentions

were coded according to the drug\_id nomenclature included in Multum.

### Physician specialty groups

This report classifies physician specialties into two general schemes: "physician specialty" and "specialty type." NAMCS groups physicians into 16 strata, or specialty groups, for sampling purposes. The "physician specialty" classification includes the same strata as used for sampling purposes with the exception of the doctors of osteopathy stratum, which is combined with doctors of medicine. The "physician specialty" classification therefore has 15 categories. The "physician specialty" classification is created using updated information from the AMA, as well as information provided by sampled physicians. On the other hand, the "specialty type" classification divides AMA specialties into three major categories (primary care specialties, surgical specialties, and medical specialties) and puts more emphasis on specialization type. Information on specific physician specialties under the 15 categories and the specific physicians specialties included in each of the three specialty types can be found at ftp://ftp.cdc.gov/ pub/Health Statistics/NCHS/ Dataset Documentation/NAMCS/ doc07.pdf. It should be noted that "primary care specialist" differs from "primary care physician or provider (PCP)," which is reported by the survey respondent based on the question, "Are you the patient's primary care physician?" (Figure I).

#### **Estimation**

Because of the complex multistage design of NAMCS, a sample weight is computed for each sampled visit that takes all stages of design into account. The survey data are inflated or weighted to produce unbiased national annual estimates. The visit weight includes four basic components: inflation by reciprocals of selection probabilities, adjustment for nonresponse, population ratio adjustments, and weight smoothing. Starting in 2004, changes

were made to the nonresponse adjustment factor to account for the seasonality of the reporting period.

Prior to 2003, the nonresponse adjustment accounted only for nonresponse by physician specialty, geographic region, and MSA status. In recent years, the nonresponse adjustment was modified to account for nonresponse from physicians by weekly visit volume, and for the variability in number of weeks participating physicians saw patients during the year (12).

The standard error is a measure primarily of the sampling variability that occurs by chance because only a sample rather than an entire universe is surveyed. Estimates of the sampling variability for this report were calculated using Taylor approximations in SUDAAN, which take into account the complex sample design of NAMCS. A description of the software and its approach has been published (13). The standard errors of statistics presented in this report are included in each of the tables.

# Nonsampling errors

As in any survey, results are subject to both sampling and nonsampling errors. Nonsampling errors include reporting and processing errors as well as biases due to nonresponse 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 to 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.

The weighted response rate (by the inverse of the probability of selection) for the 2007 NAMCS was 64.1 percent (64.7 percent unweighted). Table 28 presents weighted characteristics of NAMCS respondents and nonrespondents, along with weighted response rates. Physician level of

responding was related to the following physician characteristics: region, metropolitan status, type of doctor, specialty type, practice type, and annual visit volume. Since NAMCS uses a nonresponse adjustment factor that takes annual visit volume, specialty, geographic region, and MSA into account, the effect of differential response is minimized in the visit estimates.

# Nonresponse rates and imputation

Item nonresponse rates in NAMCS are generally low (5 percent or less). However, levels of nonresponse can vary considerably in the survey. Most nonresponse occurs when the needed information is not available in the medical record or is unknown to the person filling out the survey instrument. Nonresponse can also result when the information is available, but survey procedures are not followed and the item is left blank. In this report, some tables include a combined entry of unknown or blank to display missing data. For items where combined item nonresponse is between 30 and 50 percent, percent distributions are not discussed in the text. However, the information is shown in the tables. These data should be interpreted with caution. For items with nonresponse greater than 50 percent, data are not presented. If nonresponse is random, the observed distribution for the reported item (i.e., excluding cases for which the information is unknown) would be close to the true distribution. However, if nonresponse is not random, the observed distribution could vary significantly from the actual distribution. Researchers need to decide how best to treat items with high levels of missing responses.

Weighted item nonresponse rates (i.e., if the item was left blank or the unknown box was marked) were 5.0 percent or less for all data items with the following exceptions: whether the physician was the patient's primary care physician (6.8 percent), among non-PCP visits and visits with unknown PCP status, whether the patient had been referred for current visit (20.1 percent),

time spent with provider (26.2 percent), tobacco use (37.1 percent), status of patient enrollment in a disease management program (37.5 percent), and specific cancer stage for visits where cancer was an indicated medical condition (57.6 percent). Item nonresponse could not be determined for the following data items: height, weight, temperature, and blood pressure.

For some items, missing values were imputed by randomly assigning a value from a PRF with similar characteristics. Imputations were performed for the following variables: birth year (2.0 percent), sex (0.9 percent), race (31.5 percent), ethnicity (34.7 percent); whether the patient had been seen in this practice before (2.4 percent) and, if so, how many visits were made in the last 12 months (11.1 percent of visits by established patients); and time spent with physician at this visit (27.3 percent of visits where a physician was seen).

Imputation for birth year, sex, seen before, and number of past visits was based on physician specialty, geographic region, and three-digit ICD-9-CM code for primary diagnosis. A new method was used to impute race and ethnicity. Race and ethnicity assignments were based, where possible, on diagnosis and patient's locality (ZIP Code or state/ county of residence). A hot deck approach (i.e., filling in missing values on incomplete records using values from similar but complete records of the same dataset) was employed rather than the previously used cold deck strategy (i.e., filling in missing values on incomplete records using values from similar but complete records of the dataset from the previous year), except in cases where a matching record could not be obtained from the current data. When race or ethnicity data could not be assigned using patient locality, the new method attempted to impute within the same physician's office wherever possible. Failing that, imputation was based on physician specialty and three-digit ICD-9-CM code for primary diagnosis, and, as a last resort, on a randomly selected record. An internal NCHS evaluation study found that this approach was more likely to correctly

identify patients' race and ethnicity than did the previous method. Further refinements to the imputation strategy are being studied for future use. Because of the high percentages of missing data for race and ethnicity in 2007, readers are advised to treat these data with caution. In the tables, both imputed and nonimputed race and ethnicity data are presented.

#### Use of tables

The tables present only the first-listed reason for visit and first-listed diagnosis. It should be noted that estimates differing in ranked order may not be significantly different from each other. For items related to diagnostic and screening services, procedures, providers seen, and disposition, physician office staff was asked to check all of the applicable categories for each item. Therefore, multiple responses could be coded for each visit.

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. 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 percentage of the estimate. Estimates based on 30 or more cases include an asterisk if the RSE of the estimate exceeds 30 percent.

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

# Population estimates

Several of the tables in this report present rates of office visits per population. The population figures used in calculating these rates are based on the U.S. Census Bureau's monthly postcensal estimates of the civilian noninstitutional population of the United States as of July 1, 2007. These population estimates are based on postcensal estimates from the 2000

census and are available from the Census Bureau. Estimates presented in the tables for specific race categories reflect visits where only a single race was reported. Denominators used in computing estimates of visit rates by expected source of payment were obtained from the 2007 National Health Interview Survey (NHIS). Individuals reporting multiple insurance categories in NHIS were counted in each category they reported, except for Medicaid and SCHIP, which were combined into a single category.

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Figure I. National Ambulatory Medical Care Survey 2007 Patient Record form

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